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VOLUME THIRTY-FOUR
2024 (First Issue)
**PLURALISM IN ARCHITECTURE OF
SOUTH ASIA AND OTHER REGIONS**

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JOURNAL OF RESEARCH IN ARCHITECTURE AND PLANNING

Introduction

Focusing on research works relevant to the fields of architecture and planning, the Journal of Research in Architecture and Planning (JRAP) explores issues of relevance to both scholars and practitioners in the field of architecture, urban design, urban planning, built form heritage and conservation. JRAP was initiated in 2000 as a peer reviewed journal, initially published annually, however, since 2011 its frequency has increased to biannual. In addition to the papers received through our regular submission process, the two volumes also include papers selected from those presented at the annual Conference of Urban and Regional Planning, hosted by the Department of Architecture and Planning at NEDUET. Contributions to the journal on general topics are accepted any time of the year, and incorporated in upcoming issues after going through a peer review process. A post conference review is also undertaken for the selection of conference papers, before their publication. JRAP holds the privilege of being the first peer reviewed journal in the discipline of architecture and planning, published from Pakistan. Contributions are received from across the globe and on average half the papers included in JRAP are from international scholars.

As of 2018, the category entitled 'Young Scholar's Contribution' has been included in the Journal. In this category, papers from young faculty and early career scholars are accepted and editorial assistance and peer review feedback is provided to improve the research papers. One such paper is published under the head 'Young Scholar's Contribution' within each issue of JRAP.

Aims and Scope

The primary objective of JRAP is to provide an international forum for the dissemination of research knowledge, new developments and critique in architecture, urban design, urban planning and related disciplines for the enrichment and growth of the profession within the context. The journal focuses on papers with a broad range of topics within the related discipline, as well as other overlapping disciplines. JRAP publishes a wide range of research papers which deal with indepth theoretical reviews, design, research and development studies; investigations of experimental and theoretical nature. Articles are contributed by faculty members, research scholars, professionals and other experts. The Editors welcome papers from interested academics and practicing architects. Papers published so far have been on topics as varied as Housing, Urban Design, Urban Planning, Built Environment, Educational Buildings, Domestic Architecture, Conservation and Preservation of Built Form. All back issues are openly accessible and available online on the Journal's official webpage:
http://jrap.neduet.edu.pk/online_journal.html.

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Note: All the photographs included in this issue have been taken by the authors unless otherwise mentioned.

EDITORS' NOTE

The editorial board take immense pride in introducing the following volume of Journal of Research in Architecture and Planning. This is the 34th volume and first issue of year 2024 and contains five papers contributed by international and local scholars. These papers were presented in the first International Conference on Architecture (CArch-2023), organized by Department of Architecture and Planning, NEDUET, held on 17th and 18th of November 2023. Conference was funded by Sindh Higher Education Commission (SHEC) and sponsored by Engro Corporation. In total 12 papers were presented on the theme of “Pluralism in Architecture of South Asia and Other Regions” covering many facets of the concept in the context of history of architecture.

The selected five papers that were of high scholarly content and went through journal's peer review process are published in this issue. This issue also contains the keynote address from the conference added as a commentary in the end and a book review. From the five selected and published papers two are by international scholars and three are by local scholars. Since the theme of the conference revolved around ‘pluralism’, most commonly utilized in political philosophy, this viewpoint celebrated the rich mosaic of diversity that coexists, overlaps, and impacts the built environment in the South Asian context in particular and other regions in general. All the papers therefore, touch upon the idea of pluralistic architecture and practices in/of the past one way or the other, linking ethnicity, religion, culture and other variables to history of architecture.

The first paper by international scholar deals with author's past twenty-five years' experience working in coral stone architecture. The application of marine coral stone, its use and subsequent building technology that transpires along the process, spread across Indian Ocean littoral from Swahili coast in Africa to the Maldives is the main premise of the paper. The paper argues that the technology has pre-Islamic origins in India and Indonesia and spreads across western India Ocean via Muslim travels and trade during Abbasid time and later gets consolidated with Muslim diaspora along Indian Ocean. As per the author, the marine porite coral building technology unites multiple cultures and trade, travel and refugees aided in dissemination of the unique technology.

The second paper also by international scholar brings the narrative of pluralism and history home to subcontinent and presents two jet age hotels namely the Karachi Intercontinental and Oberoi Intercontinental in New Delhi as case studies. The paper argues that these hotels for the young nations of India and Pakistan presented a new age architectural aesthetics in the design of these hotels since they were adaptations of modern architecture in vogue globally at that time. This as per author was a conscious choice reflecting postcolonial aspirations of the new nations on the stage of global architecture.

The third paper is by local scholar and talks about British colonial architecture with the backdrop of colonial superiority, establishing and maintaining hegemony using architectural style as a tool. The cases are taken from city of Karachi and its rich colonial heritage. Built in Neo classical and Neo Gothic style of architecture the colonial era buildings, as per author superimposed occident's visual and cultural language on the colony deliberately, to signify their own cultural superiority not paying much heed to the locally existing architecture.

Fourth paper of the volume again discusses Karachi but this time art deco heritage of the city is taken as the subject of the paper by the local scholar. The modernist heritage of Karachi is explored through archival sources here and collective memory takes the front stage in this scholarly, yet poetic take on art deco houses. Paper also asserts art deco style appropriated in 50's and later as heritage of Karachi city often getting neglected due to the colonial heritage of the city and taking a back stage. Here the author discusses the art deco houses in the context of modern history of the city as the protagonist in the narrative, much like paper two of the volume.

The last paper of the volume analyses vernacular houses in Sindh and Baluchistan taking hot and arid regions of both the provinces and three local rural housing typologies as case studies. This paper is mainly case study based and analyzes indigenous construction techniques and vernacular architectural tradition focusing on passive design strategies and local knowledges. The authors (co-authored paper) try and understand the effectiveness of these rural dwellings in the harsh climatic conditions and how architecture without architects can sustain for generation due to strong but rapidly diminishing oral traditions of the areas under study.

After the papers the Keynote address is added in the journal for interest of our readers, it similarly takes another facet of pluralism in architecture basing the discussion region in Asia Minor and the vicinity. With mentions of Gothic architecture, classical Greek and Roman architecture the keynote basis the premise on afterlife of buildings and how spaces have the ability to transform and transmit multiple meanings at any given time in their history or lifetime.

The volume conclude with a book review at the end, keeping the theme of history intact the book reviewed is “Of Brick and Myth: The Genesis of Islamic Architecture in the Indus Valley” by Holly Edwards, based on her extensive field work in the region of Indus Valley.

Editorial Board

THE 'TREES FROM THE SEA' - CORAL ARCHITECTURES AND INDIAN OCEAN MARITIME RESOURCES

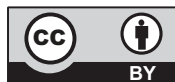
*Stephane Pradines**

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* Professor, PhD, Muslim Material Culture and Archaeology, Aga Khan University-Institute for the Study of Muslim Civilisations, London.
stephane_pradines@aku.edu

ABSTRACT

This article presents the author's experiences, over the past twenty-five years, in coral stone architecture. The use of marine porite coral is a technology that unites different cultures around the Indian Ocean, from the Maldives to the Swahili coast in Africa. The paper focuses on the use of environmental constraints and local resources for the construction of maritime mosques and coral buildings. The pre-Islamic origin of coral architecture is located between India and Indonesia around the first century AD. The diffusion of this technology was supported by Abbasid travellers and merchants in the Western Indian Ocean, and in Africa around the 9th century, as well as its globalisation under the Buwayhids and the Fatimids in the 11th century. This article shows how international maritime trade and Muslim diasporas disseminate a unique technology and how local populations assimilate material cultures, new technologies, new building material and how they share a common Indian Ocean identity.

Keywords: Coral stone, Indian Ocean, Swahili, Maldives, Islamic, Abbasids, Buddhism

INTRODUCTION

A lot of new publications and research have been undertaken across East Africa, the Arabian Peninsula and the Indian subcontinent leading to fresh insights on Indian Ocean cultures. Some of these studies focused on local and regional histories in East Africa, Yemen, Oman, and India. Most of the time, Islamic architecture is presented as a local variation or a peripheral version of the "classic" medieval Middle Eastern models. In fact, pre-Islamic trading networks played a very important role in the process of the acquisition and transfer of knowledge and technologies (Wormser, 2014: 123-136) and the cultures around the Indian Ocean should be reinterpreted on the *longue durée* and in a global context. Fernand Braudel's work on the Mediterranean is a fine example of a work to use to gain an understanding of the Indian Ocean worlds (Figure 1). Cultural contacts and exchanges were facilitated by the sea as an interface between

different regions. Stone building is generally attributed to the Greeks, Romans, Nabateans, and Sasanians and many of the Late Antiquity buildings in the Red Sea were built with fossil coral limestone found on the mainland (Power, 2012: 38-41). And this is probably where the main confusion arises: researchers and scholars call this "coral stone" limestone and fresh coral without differentiating between the fossil coral stone and the fresh marine coral. The fossil coral stone is a limestone found all along the Red Sea, the Persian Gulf and the Indian Ocean and it is the geological substratum of the coast. The littoral societies around the Indian Ocean had no other local resource than this limestone. The extraction and the use of fossil coral limestone does not differ from any other limestone found, for example, seashell limestone around the Mediterranean and therefore coral limestone buildings cannot be considered as a specificity of the Indian Ocean Cultures.

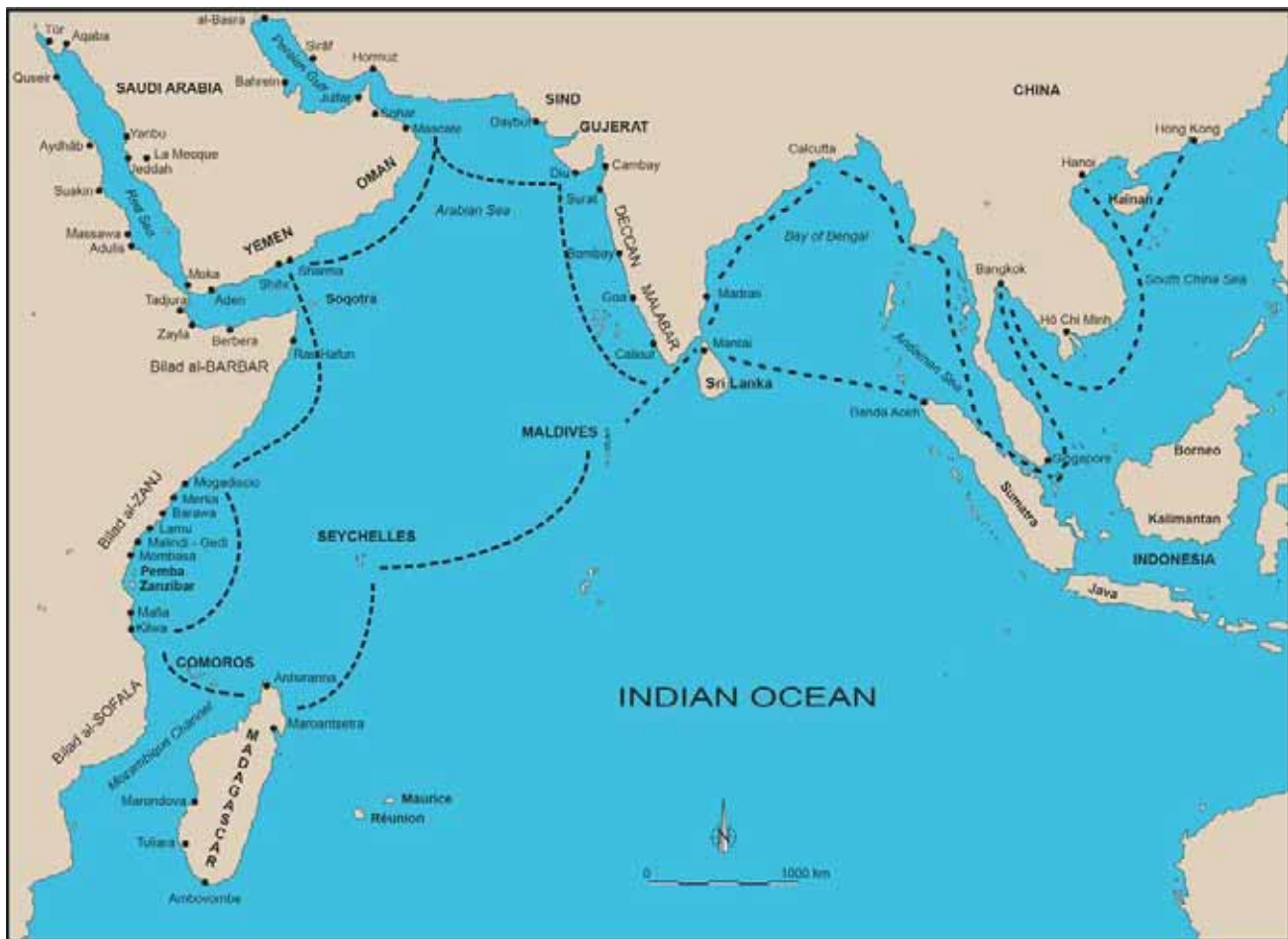


Figure-1: Map of the Indian Ocean and the sites mentioned.
Source: S. Pradines

The fresh madreporite or porite coral is a specific building material that can be related to the Indian Ocean cultures. The coral reefs are present all around the Indian Ocean, Red Sea and Persian Gulf and provide natural resources of building material (Jameel, 2016: 49-57). The use of sea coral in construction is a technique that connects different cultures around the Indian Ocean. It is clearly a technique linked to the maritime people. Probably, the fresh porite coral was originally used because of the lack of other building material resources (stone, wood and clay), as was the case in the Maldives where no other resources were available. Thereafter, this technique was introduced into other parts of the world as a cultural choice. Sea corals were used as building material for construction in the Indian Ocean. What is meant by coral stone is the fresh living organism or marine corals called coral porites or madreporite. They are dense material, spherical or hemispherical in shape. Live coral reef boulders or porite corals were removed from the seabed in the lagoon between the beach and the great barrier of

coral (reef). The porite coral can grow to a massive size, in the form of huge boulders. The smaller blocks (20cm to 50cm) were collected directly on foot at low tide. Fine madreporite coral can grow to a huge size. These huge boulders can also be found in the lagoon but never in shallow water, and the highest-quality blocks can be found around the reef (Figure 2). They were hoisted from boats by ropes and brought to the shore. Live coral reef boulders or porite coral were cut into construction blocks while still fresh and soft and then they were air-dried before being used for construction as coral starts to get harder as it's dry. Corals are eminently suitable for architectural and sculptural works as they are lightweight and easy to carve. Unfortunately, corals are also extremely fragile and prone to breakage.

The environment is extremely important, especially in remote islands with limited access to building material such as wood and earth (clay) like in the Maldives. But it is not just about ecology and determinism: the use of fresh porite coral is

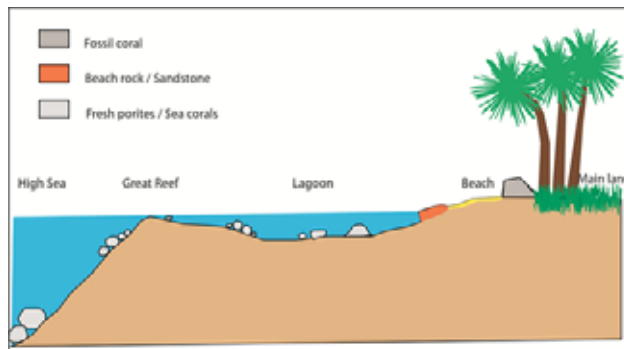


Figure-2: Section of the Indian Ocean shores from the beach to the great coral reef.

Source: S. Pradines.

also a cultural choice. People could have built their monuments using only terrestrial resources such as coconut trees and beachrock (for the Maldives) or basalt stones (for the Comoros) but they decided to use marine coral. A technique defines a culture and a population. It constitutes the way that objects and gestures are used and how raw material is shaped (Leroi Gourhan, 1945). The use of fresh porites, madrepora or marine coral is a technique and a technology around a raw construction material. This technique unites different cultures around the Indian Ocean, not only in East Africa but also on the shores of Arabia, the Maldives and Sri Lanka to build temples, mosques as well as houses.

The Indian Ocean was not on the periphery but at the centre of the Muslim worlds. During the 9th century and the Abbasids, the use of Arabic as a vernacular language was not only as a 'scaffolding' to facilitate the exchanges, but also the pivot to transform in depth local societies with the conversion to Islam of the local Elite and then the remainder of the population (Pradines, & Topan, 2023: 1-15). One religion, Islam, united different cultures from various backgrounds from the Red Sea and Arabia to Persia and the Gulf, up to East Africa, India, the Maldives, Sri Lanka, and Indonesia. This article tries to understand how Muslim diaspora, travelers, traders, and refugees disseminate technology and how local populations assimilate material cultures, new technologies and new building material. Our research methodology is based on the results of our archaeological excavations in East Africa and the Maldives, architectural history, and literature of the Indian Ocean region.

SWAHILI CORAL BUILDINGS

The Swahili Coast is a large region that extends over six modern days countries: Somalia, Kenya, Tanzania, Mozambique, Comoros, and Northern Madagascar. The word, *wa-swahili*, means the people of the 'sahel', the Arabic

term for the 'shore'. This vocabulary was introduced during the colonial period and the 19th century, although the Muslim geographers such as al-Masudi, Idrisi, Yakut and Ibn Battuta used the term of '*Zanj al-Bahr*' which referred to the 'sea of the black people' (East Africa) (Freeman-Grenville 1962: 29). The word '*Zanj*' dates to the Antiquity and from the Greeks who used the term of '*Azania*' to describe the East African coast. The Swahili described themselves according to their region, island, or town of origin. For the example, *wa-Mvita* are the people from Mombasa. Still Swahili identity remains much discussed, and it is a multifaceted culture, incorporating populations from diverse backgrounds: Austronesian, Bantu, and Nilotic. Swahili culture reflects neither a specific ethnic group nor a particular nationality.

The marginal position of the Swahili is linked to our Occidental vision of the Indian Ocean. In fact, the Indian Ocean provided a connection between Africa, Arabia, and Asia. The Swahili culture stands in-between Muslim and African worlds, resulting in the development of a unique coastal civilisation based on trade (Pouwels, 2000; Sheriff, 2002: 63-81). The Swahili were dynamic players in the Indian Ocean, equal to Arab, Persian, and Indian merchants and sailors. Nearly 500 Swahili archaeological sites have been identified in Africa, extending over 3,000 km of the coastline (Pradines 2004:18-20). The lifestyles on the East Coast, the Comoros and Madagascar were homogenous due to the dissemination of new ideas and techniques by maritime travellers. Swahilis share the same religion, Islam, the same language, the Kiswahili, the same social organisation, and the same architecture.

Coral stone construction techniques can be divided into four phases according to the archaeological excavations lead by Mark Horton in Shanga (Lamu, Kenya) and Stephane Pradines in Gedi (Kenya), as well as Sanje ya Kati (Tanzania) and Mayotte (Comoro archipelago) (Horton 1996; Horton, and Middleton, 2000; Pradines, 2010).

The first phase started between the 9th-10th centuries, first with small blocks of marine coral boulders or Porites bound together by a clay mortar. The coral blocks were collected at low tide to be used, raw and undressed, used for the foundations of walls, or they were occasionally inserted into wattle and daub walls. These techniques are recorded for the 9th and 10th centuries in Shanga in the Lamu Archipelago and Dembeni in the Comoros Archipelago (Horton, 1996:224-242 and Pradines, 2019: 113-117).

From the 11th to the 12th century, the masonry techniques suddenly changed and were highly elaborate. These new

buildings were exclusively made using dressed porite coral stones bound together by a very fine lime mortar. The dressed coral porites blocks were cut into small square ashlar and laid out in horizontal courses to construct mosques and storehouses (Pradines, 2010: 27). This type of masonry is visible on the sites of Sanje ya Kati site in Kilwa Kisiwani (Pradines, 2009: 17). In Sanje ya Kati, the houses, mosque, and fortifications form a homogeneous architectural complex with the same building techniques consisting of horizontal courses of quadrangular ashlar of marine coral (Figure 3). A high-quality lime mortar was applied between the courses and the joints of the masonry. Sanje ya Kati was a very well defined and planned architectural project, and the building techniques are remarkably skilful. Although this technique was used until the 12th century, it was a lengthy process and it was difficult to construct many buildings, as the fresh porite coral blocks needed to be dragged from the shore during low tide and the larger blocks had to be hoisted directly from the sea.

Most of the so-called “Shirazi mosques” date back to this period and these mosques seem to have had consistent proportions; for example, in Gedi, the first mosque was approximately 10m by 7 m; in Tanzania, the Great Mosque of Kilwa was erected between 1131 and 1170, and its initial rectangular plan does not differ from the model previously described, measuring 11.8m by 7.8 m (Figure 4). The mosque of Sanje ya Kati, founded in the second half of the 11th century, measures 10.21m by 9.46 m; in Shanga, the mosque, constructed measures between 10.15m and 10.35m, and forms a rectangle measuring 11.22m by 7.21m. The Islamisation of the Swahili coast was connected to Shi’a diasporas coming from Yemen, the Gulf, and the Sindh (Pradines, 2009: 19-23). In Zanzibar, the oldest-known Swahili mihrab completely preserved is indicative of these transoceanic influences. The mihrab of Kizimkazi is decorated with a passage from the Qur’an and bears the date 1107. The niche of the mihrab is decorated with floral kufic inscriptions along the capitals and within the niche.

During the 13th century, the use of fresh coral declined in favour of fossil coral limestone. The Swahili masons kept the usual carving technique of quadrangular blocks, but they abandoned marine coral in favour of masonry of fossil coral limestone blocks. The quadrangular blocks were assembled on horizontal courses with thick mortar beds and consistent levelling. The masonry of the caravanserai of Husuni Ndogo in Kilwa Kisiwani is representative of this technique and transitional period.



Figure-3: Sanje ya Kati 11th-12th century house and horizontally positioned courses of ashlar blocks carved from marine coral.
Source: S. Pradines



Figure-4: Great Mosque of Kilwa (Tanzania) Northern part 1131 and 1170.
Source: Cyark Google Arts

The fossil coral limestone forms the geological substratum of the entire Swahili coast, found also on the Red Sea and the Persian Gulf (Hawker, 2008: 56). The blocks were extracted from open-air quarries, a few hundred metres from the seashore. The limestone which is found close to the seashore cannot be used because it is too porous and too hard to carve. When the bedrock does not appear as an outcrop, the workers had to expose it by scraping away the topsoil above it. As the coral limestone is a very soft material, the extraction techniques need to be quite rudimentary, i.e. a quarry face is created in the rock mass where the workers isolate blocks by furrowing all around them using picks (Pradines, 2004: 329-331) (Figure 5). This means that the blocks can be uprooted from the natural substrate by means of leveraging using an iron bar or a mace. The blocks are then squared off using a toothed chisel or even a simple machete. The resulting offcuts and debris are then collected and used as rubble stones.



Figure-5: Workers and coral lime stones mining techniques in Manda Island, Lamu archipelago, Kenya
Source: S. Pradines

In the 13th and 14th centuries, stone architecture became widespread and eventually, mosques and houses reached large dimensions, such as that in Gedi, the great mosque measured 26m long at the end of the 14th century (Figure 6) (Pradines 2011:131-149).

From the 14th century onwards and the expansion of the Swahili stone towns, the builders started to use standard masonry techniques, which were more easy to use with irregular chips of fossil coral stone bound together in a thick lime mortar. The limestone was not cut into regular ashlars with horizontal courses as before, but rather was made up of small irregular blocks bound together in large masonry walls made using the rammed-earth technique between wooden planks. Some walls were made of red clay (instead of lime mortar) and coral limestone like in Gedi (Pradines, 2010:111-157) and other walls were made of lime mortar and coral limestone like the palace of Husuni Kubwa in Kilwa Kisiwani and the stone houses in Songo Mnara and the buildings in Kua (Pradines and Blanchard, 2015: 9-33) (Figure 7). The walls of most of the Swahili buildings were between 40cm to 54cm thick, which equates to the Swahili measurement known as *dhira* in Arabic: the distance between index and elbow (*coudée, fr.*). The masonry was composed of fossil coral limestone rubble measuring approximately 20cm in diameter each randomly placed in a red clay or lime mortar. Examples of red clay mortar were observed in Gedi. The lime is produced by the calcination, at high temperatures, of the marine or fossil coral blocks. (1000° C). The resultant calcium oxide is then hydrated, and forms slaked lime. For the fabrication of plaster, imported gypsum was replaced by the plant juice known as *kowe*. The walls have a stratified appearance as they were erected using a timber formwork which was removed after drying. They often fragment into blocks of between 60cm and 1m high creating a levelled

side at the top which is the top face of the superior wall. The sides of the walls reveal imprints from the formworks and circular or square holes spread out horizontally every metre. At the beginning of the 15th century, the houses in Gedi were pierced with a series of square holes measuring 20cm on each side, spaced out horizontally every 1m to 1.4m. The purpose of these putlog holes was precisely to fix the formwork and the holes mark the place where the lower screws were positioned and where they held the form

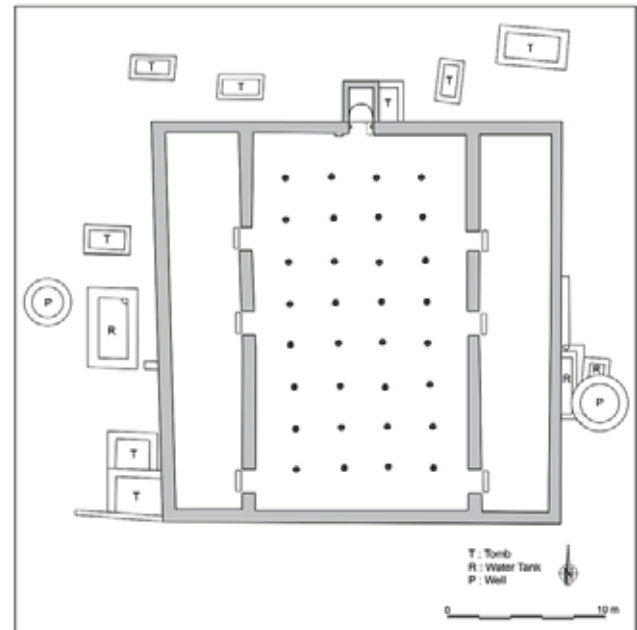


Figure-6: Plan of the 14th century Great Mosque.
Source: S. Pradines

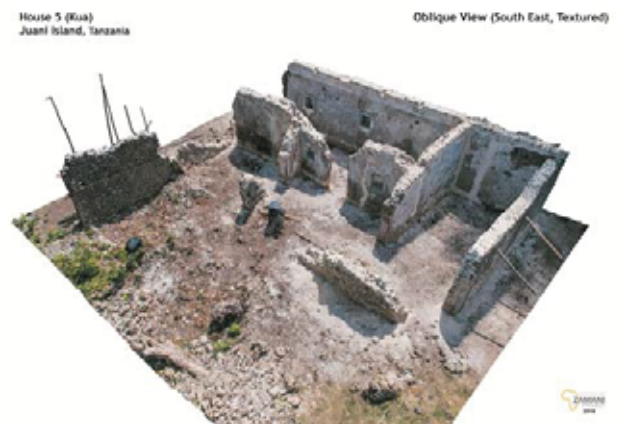


Figure-7: Rammed-earth or concrete technique with mortar and fossil coral rags in a 16th century house in Kua, Mafia archipelago, Tanzania.
Source: Zamani, AKU

ties of the panels in position during construction. The '*banches (fr.)*' are the planks of wood between which the layers of mortar and stone are laid. The timber putlogs which traversed the walls, could also have been used to hold up scaffolds which had no upright supports. These scaffoldings were indispensable when it came to supporting both the masons and their tools at great heights.

The fresh marine coral was not completely abandoned by the Swahili. From the 13th to the 17th century, the porite marine coral was still dressed and used only for fine sculptures around the mihrabs in the mosques, or for the door frames and niches in large stone houses and palaces (Pradines, 2003: 355-381; Pradines, 2010: 159-180) (Figure 8). The mihrab of the Friday Mosque and the door of the courtyard in the palace of Songo Mnara are fine examples of 15th century works (Figure 9). The quoins at the corners of the doors, the windows and niches were carved at right angles from marine coral blocks. The two visible salient were carved smoothly, with the remainder of the irregular block being immersed in the masonry. The mouldings of the arches and plaques bearing the epigraphic of the tombstones were



Figure-8: 15th century houses in Gedi and niche situated at the back of the house.
Source: Pradines

also carved from the marine coral, similar to the 15th-century pillar tombs in Gedi and the 17th-century tombs of Kua (Figure 10).

At the beginning of the 18th century the use of fresh porite marine coral was completely abandoned in favour of door frames, arches, niches (*vi-zidaka*) and mihrabs made of thick stucco mouldings and decorations like in Yemen, Oman, and Gujarat.

The coastal architecture of the Swahili is often opposed to African vernacular architecture from the hinterland, which is based on wood and earth. However, most of the Swahili houses were (and are) made of mud and thatch, only public buildings, religious buildings, palaces, and storehouses were made of coral stones. Then, the use of stone in African architecture is well-known across the High Plateaux, from South Africa to Somalia (Gillman, 1944:44-55; Gillman,



Figure-9: Fresh marine coral door frame in the palace of Songo Mnara a 15th century Swahili site.
Source: Pradines

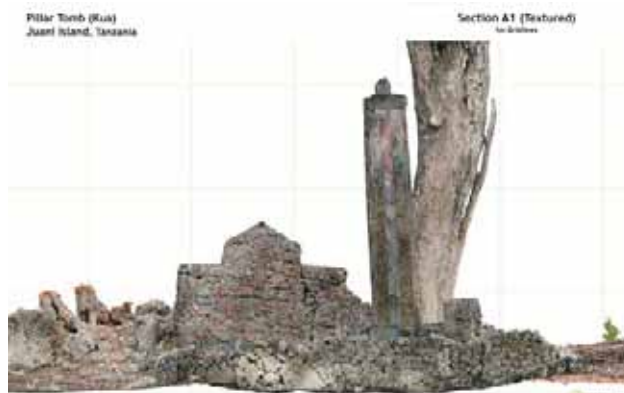


Figure-10: 17th century pillar tomb of Kus, Mafia archipelago, Tanzania.
Source: Zamani, AKU

1945: 64-66; Onjala, 1998: 22-23; Wynn Jones, 1941: 11-12; Jackson, 1948: 77-78; Fosbrooke, 1954: 115-129; Fagan, 1985: 571-599; Phillipson, 1993). What is exogenous, but also characteristic of Swahili architecture is the coral and limestone carving techniques, as well as the use of marine coral and lime mortars. The progressive use of marine coral and its introduction into coastal architecture became widespread in the 9th century with the intensification of trading relations with the Abbasids, thus creating a close link between international trade, Muslim merchants, and the spread of coral architecture in East Africa.

MALDIVIAN CORAL ARCHITECTURE

The Maldives are located offshore at the South-West of India, the archipelago is composed of atolls with 1,196 islands. The Maldivians have around 200 Friday mosques which equates to practically one mosque per inhabited island (Forbes, 1983: 67-68 and Reynolds, 1984: 61-64). The best feature of the Maldivian mosques is their building material: huge blocks of sea coral. The first serious description of Maldivian buildings was done by the French traveller, Parmentier in 1529. Parmentier provided a very good description of a stone coral mosque in Fua Mulaku Atoll. He described beautiful constructions made without using mortar. Later, between 1602 and 1607, another French sailor, Pyrard de Laval, described full of admiration the carpentry techniques of the coral mosques in Male (Forbes, 1983: 52-54). Finally, in 2016, Mauroof Jameel published the first book on Maldivian mosques with a catalogue which included plans and maps (Jameel, 2016: 97-111). According to Jameel, the first Maldivian mosques (1153-1514 AD.) were very simple and had no intricate decorative carvings (Jameel, 2016: 53 and 88-91).



Figure-11: Coral stone buildings without mortar and wood techniques with peg holes, Meedhoo island raa Atoll.
Source: S. Pradines

As mentioned previously, the exceptional architectural feature of the Maldivian mosques is the use of natural and local resource: the sea coral. As there is no stone available on the Maldives, builders had to use fresh coral from the sea and sandstone from the shore (beachrock and pudding stone). Three kinds of stones are used in the Maldives: *hiri-ga* or white porite coral, *veli-ga* or yellow sandstone and *rat-ga* or red pudding stone (Forbes, 1983: 70). The Maldivians developed their own technology without mortar, supported by their boat building skills (Figure 11). The coral stone cutting and dressing techniques were identical to the wood techniques and sewn boats with peg holes. Locally, the coral stone carpentry is known as “*hiri galu vadaan*” (Jameel, 2016: 54-55). Porite coral or *hiriga* is assembled without plaster or mortar. Interlocking techniques without mortar (dry stone techniques) emanate most probably from Gujarat in India. The carpentry techniques used for coral stones were like those used for trees. Coral is considered by Maldivians as ‘living trees from the sea’; and indeed, coral is an animal and not mineral. Four types of technologies were used for the construction: tongue and groove joints, dovetail joints, dowel, and peg joints (boatbuilding) and the lap joints (zig zag) (Figures 12 & 13). During the British colonial period, a new and faster construction technique was introduced, using chipped coral stones (porite and fossil) bound together by mortar and plaster. The coral was burned to produce lime. The use of lime was introduced in 1800 with coral chips. The coral stone in the Maldives appears to be lime washed and is very white. The exposed parts are sometimes oxidised and dark grey. Maldivians also used bedrocks from the seashore, coral sandstone and coral limestone (fossils or skeletons). Other kinds of stones were used, such as sandstone (*veligaa*) and the conglomerate (*pudding*) beachrock found on the shores, and in the island the coral bedrock called fossil coral stone or coral skeletons.



Figure-12: Coral construction dovetail joints and lap joints (zig zag), Meedhoo island raa Atoll.
Source: S. Pradines



Figure-13: Coral construction tongue and groove joints, water tank in Fenfushi.
Source: P. Pradines



Figure-14: Hukuru Miskii, Old Friday Mosque of the capital Island of Male (Kaafu Atoll).
Source: S. Pradines



Figure-15: The decorative programme of the Eid Mosque in Male (Kaafu Atoll).
Source: P. Pradines

A sandstone mosque is recorded in Fuvahmulah and dated from 1300. We found a similar monument near the great mosque in Fenfushi.

The results of our recent archaeological excavations to the north of the Maldivian atolls on Fenfushi Island, Ari Atoll and in the southernmost part of the Maldives on Hulhumedhoo Island, Addu Atoll, are showing the same thing: the Maldivian mosques have been strongly influenced by Buddhist architecture (Pradines & Balestra, 2021: 200-226) (Figures 14 & 15). However, according to our excavations, even though some mosques might have reused some building material from pre-Islamic monuments, the Maldivian mosques were not built on Buddhist temples. The coral stone mosques of the Maldives simply demonstrate the continuity and the strong influence of Buddhist architecture on the local Islamic architecture as previously mentioned by H.C.P Bell (Figures 16 & 17). These influences

consist of raised plinth podiums, the use of public wells, and bathing or water tanks (baoli) (Figure 18). The mosque's podiums have carvings and mouldings with Buddhist critical motif decorations. The Maldivian mosques are also oriented to the North like Buddhist temples instead of being turned in the direction of Mecca (qibla).

How old is the tradition of coral stone construction and where did this technique originate? One fact is confirmed, Coral stone construction methods or coral stone carpentry existed as early as the Buddhist period and it is a pre-Islamic tradition (Forbes, 1987: 281-288). The use of coral construction continued until the introduction of mortar masonry by Europeans in the late 18th century.

The first settlers in the Maldives were most probably migrants from Kerala or Sri Lanka in the 5th or 4th century BC (Forbes, 1983:43-44). Sri Lankans converted to Buddhism



Figure-16: Old Mosque of Isdhoo Island (Laamu Atoll) influenced by Buddhist traditions especially the steps at the entrances.
Source: S. Pradines

around 250 BCE and Buddhism was firmly established in the Maldives between the 1st and 2nd centuries AD. Several examples of Buddhist monasteries have been recorded in the Maldives and date from 165-345 AD (Bell, 1940: 16-17) and they were made of fine madreporae coral stone (Forbes, 1983: 46). The Buddhist architectural influences from Sri Lanka in the Maldives are visible in the monastery of Polonnaruwa, which have raised plinths and decorative stone mouldings like the Maldivian mosques (Jameel, 2016: 78-79). Undoubtedly, the coral technique arrived in the Maldives from Sri Lanka with the Buddhist culture from at least the 2nd century AD (Jameel, 2016: 51; Jameel, 2018: 17-27).

Islam was slowly introduced to the Maldives by merchants coming from the Malabar Coast between the 7th and 8th centuries (Forbes, 1983: 47; Carswell, 1976: 26-30; Carswell, 1977: 138-139). The Maldives were known and called "Dibajat" or "Dabigat" in the 9th-10th c. Arabic sources



Figure-17: Friday Mosque of Ihavandhoo (Ihavandhoo Island, Haa Alifu Atoll) and decorative Programme after the construction of the Building.
Source: P. Pradines

(Ducene, 2013:132-33). According to local traditions and the Arab traveller Ibn Battuta, all the Maldivians converted to Islam in 1153 with the conversion of the king who became the first sultan of the archipelago (Kalus & Guillot, 2005:35-36). The people of the capital city Male broke their idols, razed the Buddhist temples to the ground. According to previous research, Bell mentioned a *Pirivena* (a monk's residence) that was destroyed on Gan Island in Addu Seenu Atoll, and its foundations converted to a mosque during the 12th century (Forbes, 1983:50-51). However, even if Buddhist temples were destroyed, Maldivians kept the same building techniques and architectural traditions.

ORIGIN AND DIFFUSION OF THE CORAL STONE TECHNOLOGY IN THE INDIAN OCEAN

The last part of my paper is discussing origins, history, and cross-cultural influences in building techniques and Indian Ocean coral architecture. As described previously, the best examples of coral stone architecture can be found in the Maldives and in East Africa. Maldivians and Swahilis used the same materials, porite coral and coral limestone, but their techniques were different. Swahili architecture uses mortar and plaster, and it is much simpler than the Maldivian masonry techniques. The use of coral stone in the Maldives reached a peak that no culture of the Indian Ocean managed to attain (Figure 19), and it is also one of the oldest of her kind with evidence of Buddhist monuments built with these techniques during the 1st or 2nd centuries AD. The fusion of ancient construction techniques with new building material, the sea coral led to the emergence of the Buddhist temples and later the Muslim mosques of the Maldives (Figure 20). This architecture was forged by Indians, Sri Lankans, Malaysians, Arabs, Persians, Indonesian, and Africans (Jameel, 2012).



Figure-18: Aasaary Mosque, Friday Mosque compound on Fenfushi Island (Alifu Dhaalu/Ari Atoll).
Source: S. Pradines



Figure-19: Friday Mosque, Fenfushi Island Decorated with carved coral pannels with islamic arabesques and Malay floral interwoven patterns.
Source: P. Pradines



Figure-20: Fandiyaaru Mosque in Koagannu Cemetery's in Hulhumedhoo Island, Addu Atoll.
Source: P. Pradines



Figure-21: Fossil coral limestone buildings in Quseir al Qadim a Roman site on the Red Sea.
Source: P. Pradines

Environment had a first role to play, especially in remote islands which had only limited access to wood and not even clay for earthen constructions. The coral reefs exist all around the Indian Ocean, Red Sea and Persian Gulf and provided natural resources of building material (Jameel and Ahmad, 2016: 49-57). However, it was not only about ecological determinism; the use of fresh sea coral was a cultural choice for some populations. The builders had to collect blocks at low tide or even to pull out from boats huge coral blocks from the sea. Maldivians and Swahili could have built their mosques and houses only with coconut trees and fossil coral stone, but they decided to use fresh sea coral. Then, building materials and building techniques are two different things (Leroi Gourhan, 1945). A technique defines a culture, a population or even an individual artist. It constitutes the way that objects and gestures are used and how raw material is shaped. Coral construction technology was a cultural choice

that united different cultures around the Indian Ocean to build not only mosques, but also temples, palaces, and houses. It is a technique linked to maritime peoples.

To understand the genesis of sea coral masonry techniques, it is important to look at fossil coral or coastal limestone technologies around the Indian Ocean, Red Sea, and the Gulf. With regards to the origin of coral stone architecture, the earliest littoral stone constructions in the Red Sea are connected to Greek or Roman technologies. The Sudanese Island of Al-Rih on the Red Sea has Greek buildings, dated between BC 323 and 146 made of fossil coral stone. Coral stone buildings are also recorded in Sudan during the Late Antiquity and Medieval periods in Aydhah and Suakin. The same technology is recorded for the Yemeni coasts during the Medieval and modern periods in port cities such as Mokka, Aden... (Bonenfant, 2000). Fossil coral limestone buildings were constructed all along the shores of the Red Sea. In Egypt, Quseir al-Qadim was built with fossil coral stones during the Roman and early Islamic periods (Figure 21). In the Sinai, the Nabatean fort of Dahab was built with fossil coral limestone (Meshel, 2000:18-47); and, in al-Tur, the caravanserai of Al-Raya during the Abbasid and Fatimid periods, was constructed using the same material. During the third century, the decline of Rome left the area open to the Axumites and Sasanians, who controlled navigation in the Red Sea and the Gulf until the sixth century (Desanges, 1999: 351; Keswani, 1980, 41 and Chittick, 1980: 117-127). The Christian kingdom of Axum reached its peak between the 4th and 6th centuries and the great Aksumite port of Adulis functioned as a relay from Alexandria on the Red Sea (Ducellier, Kaplan et Martin, 1990: 54). A Greek merchant native to Alexandria, Cosmas Indicopleustes, recounted his passage through Adulis on his way to Sri Lanka in 525 (Cosmas Indicopleustes, 547 in Freeman-

Grenville, 1962: 5). Arrived in the Gulf of Aden, the Roman ships did not make a direct connection to India or Africa, but they were relayed by Aksumite or Yemeni ships (Desanges, 1999: 323 et Desanges & Reddé, 1994: 161-194). A fierce rivalry opposed in the Red Sea, the Persians and the Byzantines from 552 to 575 AD; the Persians supporting the Jewish kingdom of Hymar and the Byzantines supporting the Ethiopian kingdom of Aksum (Bowersock, 2013: 106-119).

Many buildings in the Gulf were constructed of fossil coral rock (Arabic *farush* or *hasa*; Persian *sang-i marjan*) (Kervran, Hiebert and Rougeulle, 2005; Hawker, 2008). Bahrain and Qatar used coral blocks (Hardy-Guilbert and Lalande, 1981; Hardy-Guilbert, 1985: 23; Kervran 1990:31-48). Ras al-Khaima people in the Emirates used fresh coral stones called *hajar al-bahr* or “stones of the sea”. The collection of coral from shallow water was taking place mainly in the summer months. Fossil coral stone buildings are to be found all along the shores of the Persian Gulf from at least the Sasanian period (Kervran, Hiebert and Rougeulle, 2005: 118-119, 200). Following the weakening of the Roman Empire and the disintegration of the Parthian Empire, the Sasanians became great commercial intermediaries, The king Ardashir I place subjugated the kingdoms of Kushan, Turan, Makran and Bahrayn (Fiorani and Besenval, 1990: 133-136). The Sasanians controlled all the sea routes in the Persian Gulf from the 3rd century AD. The great Sasanians ports of Sohar and Siraf at this time drained all the trade and goods transiting between Africa and India. The Sasanian king Vahram V (421-438) even married an Indian princess and received as endowment the city of Daybul (now the site of Banbhore), this port of the Indus delta was the most important crossroad at that time between Yemen and Sri Lanka. The Sassanians were in Sri Lanka during the 6th c. (Fiorani et Besenval, 1990: 140).

The Romans (196-206 AD.) and, later in the 6th century, the Sassanians had trading posts and customs in Sri Lanka and warehouses in Aden (Fiorani and Besenval, 1990:É140; McLaughlin, 2018: 170-171). On the northwest coast of Sri Lanka, the ancient port of Mantai was occupied during 1500 years of occupation until the demise of the town in the early 11th century. The development of the settlement started really from 200 to 300 AD. with complex buildings in the central part constructed with fired bricks and fresh coral. In all areas, archaeologist observed remains of destroyed buildings made of fire bricks and sea coral stones (Carswell, Deraniyagala and Graham, 2013: 157-168). Graham mentions a central building in Mantai made of sea coral stone and red bricks; excavated by Hocart in the 1920s (Carswell,

Deraniyagala and Graham, 2013: 417-418). Buddhism arrived in Sri Lanka around 250 BC. Unfortunately, the real impact that the Romans had on local Sinhalese architecture is unknown. However, it is possible to observe a strong influence of Sri Lankan Buddhism in Java (Indonesia) especially in the construction techniques. The cutting techniques in Borobudur in the 8th century were inspired by Sri Lankan monuments (Dumarçay, 2003:21-23; Seneviratna, and Polk, 1992; Lewcock, Sansoni, and Senanayake, 1998). The carpentry techniques have inspired the stone builders like in the Maldives with cramps being carved in stone in the dovetail technology. The horizontal realignment of the courses was forced by means of cornerstones (in the style of keystone). This technique, which originated in Sri Lanka, was used as from the 8th century in Mihintale (Java). New construction techniques arrived in Java with a second wave of Hinduisation in the 9th century comprising mortice and tenon joining systems. However, unlike the preceding phase, the mortice and tenon assembly was within the stones and, as in the Maldives, forms a slide. In the Maldives the two techniques are known but, currently, there is no attempt at providing a chronology of these architectural implementations. The Sri Lankan example seems to be the most likely candidate for being the origin of this carpentry technique and naval construction from stone cut applications, techniques that spread to the Maldives and Java (Indonesia) (Dawson & Gillow, 1994; Tajudeen, 2014: 121-138; Feener et al.; O'Kane, 2023).

The 11th and 12th centuries represent a period of profound economic change in the Indian Ocean networks, with numerous ports and urban centres being created at that time in East Africa and Arabia (Rougeulle, 2015:1-8). Swahili oral traditions mention frequently Shirazi and Wa-Debuli as main builders and founders of many East African cities. These people were undoubtedly refugees or merchants who came from the Ports of Siraf and Daybul. Similar traditions exist for port-cities in the Red Sea, such as Aden and Jeddah; and Ibn al-Mujawir mentioned the arrival of Persians who emigrated from Siraf after 1080 AD (Ducatez, 2003: 147, note 65). These migrants were apparently great builders responsible for the construction of many monuments such as mosques, caravanserais, wells, town walls, and cisterns. To conclude similar oral traditions, exist up to the Maldives where, a Shirazi was credited to have introduced mosque construction in the Archipelago in 1153.

India seems had an important role in the genesis of Swahili and Maldivian architectures (Donley-Reid, 1991). Maldivian architecture shares similar architectural features with South Indian temples such as raised plinths, rising stairs, exterior

decorative stone mouldings for example in the temple of Lad Khan in Karnataka, built in 500 CE, and the Brihdeswarar temple in Thanjavur, built in 1010 CE. The main difference between Maldivian mosques and Indian temples are the absence of human and animal representations. Apart from that, these monuments share similar external decorative technique *laage*, an exterior decorative element depicted in doorways, pilasters, and mouldings. Gujarati architecture was also important in the genesis and the development of the Swahili houses and mosques, notably in the plans and interior decoration from the 13th to the 14th centuries in Kilwa and Mogadishu (Lambourn, 1999 and Pradines, 2022: 232-238). White marble tomb stones were also exported from Gujarat to Mogadishu, Kilwa and the Maldives. Indian Gujarati influences are visible in the 16th and 17th centuries Maldivian mosques decoration with very delicate sculptures of especially with the mosque lamp and chain design (Fattal, 1960: pl. 17) (Figure 22). Despite Indian influences, the use of sea coral was known on the Swahili coast and in the Maldives before the introduction of a Gujarati repertoire and style. Moreover, there is no recorded use of coral stone in Gujarat (Patel, 2004) and, according to Lambourn, the marble stone quarries were located 200 km far away from the coast (Lambourn, 2006: 4-9). Finally, the Maldivian Mosques have very little in common with the Malabar or Kerala buildings in South India (Shokoohy, 2013: 137-266; Shokoohy, 2018: 314-317), except perhaps some influences on the coffered ceiling and turned woodwork. Both Maldives and Kerala might have been influenced by the stone mosques of Indonesia such as Selo Masjid in Yogyakarta (Shokoohy, 2018: 332-337; Kuria, and Pearson, 2018). The Malabar mosques convey a sense of continuity with Hindu temples and accommodation to local preferences like in the Maldives with Buddhist temples (Prange, 2018: 341-343).

CONCLUSION

First, it is important to be aware of the frequent confusion in the vocabulary used by archaeologists and architects to describe Indian Ocean architecture. Most of the time “coral stone” refers to coral limestone, and not the fresh sea coral (Madrepores and Porites). It was very important for me to create a clear differentiation of the building material used and very specific to the Indian Ocean context: a marine coral collected at low tide in a lagoon or dragged from the great reef barrier. This marine coral is not to be confused with the coral limestone from the mainland.

Coral architecture is frequently associated to the medieval period in the Indian Ocean. However, this architecture is



Figure-22: Mosque lamp and chain design in the Maldives from Indian Gujarati influences sculptures.
Source: P. Pradines

much older and dates from the Antiquity period. As we demonstrated in this article, marine coral architecture originated from an area between India and Indonesia. The Maldives and Sri Lanka seem to be the epicentres of this technique. Sri Lanka was at the confluence of different cultures and people using complex stone architecture: Romans coming from the Red Sea, Sasanians coming from the Gulf, Indians coming from the Deccan. These people brought with them their ancient knowledge on masonry techniques. Buddhism was introduced to the Maldives from Sri Lanka around 200 BC. Because of the lack of building material, it is most probable that Maldivians started to use sea coral to build their temples around this period. Sri Lanka and the Maldives had a strong impact in the genesis of coral architecture between 250 BC and 600 AD. Later the diffusion of sea coral architecture in the Western Indian Ocean seems to be connected to the Abbasids mariners and Muslim travellers during the 9th century, as well as its globalisation under the Buwayhids and the Fatimids between the 11th and 12th century and closely related to a rise in Muslim trading networks in the Indian Ocean.

This paper is just the beginning of a large-scale investigation on coral stone architecture in the Indian Ocean. In the future, two phenomena need to be identified to understand this maritime architecture. First, the history of this technology must be determined by pinpointing the places of origin of this architecture with the location of the oldest buildings built with sea coral in the Indian Ocean. Second, the diffusion of this technique across the Indian Ocean needs to be clearly traced, if it is possible, as there were a lot of multilateral technological exchanges around sea coral as a raw material.

For me, it is not an Asian technology nor an African technology, but an Indian Ocean material culture.

As a final note, the coral buildings are “stuck” in between what I call, the “global warming dilemma”. First, the building material, the coral, is now protected in marine parks, precisely because of global warming and corals in some places are considered as a species in extinction. It is very difficult to do some conservation works on historical monuments without taking new corals from lagoons, most of the time with the WMF conservation team, we tried to reuse old blocks, but sometimes we needed special agreements from local authorities to get some new corals to restore ancient monuments. It is what I call the “dilemma between nature and culture”. Second point, the coral mosques are under threat of rising sea levels and coastal erosion, if we do nothing, many sites and monuments will disappear under

the water, or they will be destroyed by coastline erosion. It is the reason why with my colleagues, heritage architects from the AKTC, the WMF and UNESCO, we are fighting to protect these monuments and Indian Ocean maritime heritage, from East Africa to the Maldives.

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A COMPARATIVE STUDY OF HOTELS OF THE JET AGE IN PAKISTAN AND INDIA: THE INTERCONTINENTAL IN KARACHI AND THE OBEROI INTERCONTINENTAL IN NEW DELHI

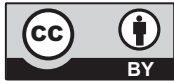
Bruce Peter*

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* PhD Professor of Design History, The Glasgow School of Art
b.peter@gsa.ac.uk

ABSTRACT

This paper focuses on the architecture, interior design, and promotion of new United States-financed international business and tourist hotels of the 1960s in Karachi and New Delhi, analysing these as transcultural spaces of modernity during the early jet age. In part, these and many other US-financed hotels in locations relatively close to the Soviet sphere of influence in Asia, North Africa and Europe were political symbols, promoting the the American way of life, but they were also symbolic of the aspirations of mainly post-colonial nations to project images of progress and national development.

The research builds upon other recent scholarship on the manifestations and experiences of modernism in architecture, planning and travel in the Indian Subcontinent in the post-Second World War era and how modern architecture and post-colonial political framework went hand in hand with each other.

Keywords: Post colonial architecture, nationalism, modern architecture, hotels, subcontinent.

INTRODUCTION

Markus Daeschel has shown that in the mid-twentieth century there arose across the north of the Subcontinent a middle-class political culture in which a fascination with world events was linked to desires for national and personal achievement. These would be realised through organisation, mobilisation and the embracing of new ways and modes of expression (Daeschel, 2006). Daeschel has also written on the Karachi city planner Constantinos Doxiadis whose work under the regime of General Ayub Khan between 1958-1968 exemplified the Pakistani government's aim of demonstrating its ability to deploy executive power through prominent building projects. (Daeschel, 2011). Fahran Karim has argued that the architecture of Doxiadis and the American Edward Durell Stone in Pakistan reflected political leaders' advocacy for a modern Islamic aesthetic to win popular favour by appearing to represent mainstream taste and beliefs. Islamic architectural elements were thus deployed as a tactic to

create a false sense of empowerment, but their use also indicated a postcolonial oscillation between Islam, the West and the Modern (Karim, 2020). Pippa Virdee has focused instead on the changing roles of Pakistani women through their employment by Pakistan International Airlines. She has observed how in the context of the Cold War and United States cultural diplomacy, female airline staff became markers of modernity and propaganda for the modernising vision of the Ayub era (Virdee, 2018). In this paper, it will be shown how hotels of the jet age in Pakistan and India represented and reflected comparable developments and tensions in relation to national representation.

In Europe, since the mid-nineteenth century and the advent of the railway age, the most prominent city centre hotels had been conceived as 'grand palaces' of sorts, accommodating wealth elites. In the U.S.A., a more meritocratic approach emerged in the early-twentieth century when the hotelier Ellsworth Milton Statler first applied mass-

standardisation to accommodate large numbers in comfort but a low unit cost. The first Statler Hotel was completed in 1907 in Buffalo, New York to a design by August Esenwein and James A. Johnson and had 300 identical rooms, each one equipped with a private bathroom – something never previously attempted on such a scale. Bathrooms for adjoining rooms were situated back-to-back adjacent to the corridor, thereby enabling each pair on every storey to share the same plumbing shafts, which were accessed from service hatches in the corridors. Public rooms were contained within the two bottom storeys, which had longer spans and higher ceilings than the bedroom floors (Davidson, 2005, 98-100).

What Statler pioneered quickly became the standard approach for hotel planning in the U.S.A. and, later on, around the world too. Until the 1930s, such hotels tended to be externally detailed in the Beaux Arts manner but thereafter Art Deco came to be preferred. After the Second World War, international modernism superseded these approaches, but the same essential layout was retained with public rooms either in a podium structure or extruded from beneath a multi-storey accommodation block. Early modernist examples were the Statler in Washington D.C., completed in 1943 to a design by William B. Tabler, a recent Harvard graduate employed in the long-established Chicago-based specialist hotel architects Holabird, Root and Burgee, and the Caribe Hilton in San Juan, Puerto Rico, designed by the US-trained local architects Osvaldo Toro and Miguel Ferrer and completed in 1949 (Architectural Forum, June 1943, 61-76; Builder, July 1948, 36-42; Architectural Forum, March 1950, 102). While the former was in essence little different from pre-war Statler designs, albeit shorn of decorative detail, the latter represented a more radical departure, the inspiration for which came in large part from Le Corbusier's as-yet unrealised proposals for 'Unités d'Habitation' mass housing blocks with integrated servicing. Although the Caribe Hilton was designed by Puerto Rican architects and was locally owned, it was paid for with United States money and operated by a newly-created international division of Conrad Hilton's successful and expanding U.S. hotel chain. With its up-to-date design, numerous bars and restaurants and its entertainment and leisure facilities, the Caribe Hilton became the model for subsequent Hilton and Hilton International hotels developed thereafter in the 1950s and 1960s, other early examples being the Istanbul Hilton (1955) designed by Gordon Bunshaft and Natalie DeBlois of Skidmore, Owings and Merrill's New York office and the Turkish modern architect Sedad Eldem, and the Beverly Hilton in Beverly Hills (1955), designed by Welton Becket Associates of Los Angeles (Architectural Forum, December 1955, 120-127).

Alongside Hilton International, the other major United States-owned hotel chain to become significantly involved in the specification and operation of new hotels around the world was Intercontinental, which had likewise been founded in the latter 1940s as the hotel division of Pan American World Airlines. During the 1930s, the airline had developed a network of routes between the U.S.A., the Caribbean, Central and South America and the subsequent development of hotels in these locations enabled passengers to be accommodated in comfort upon arrival. In the 1950s, as part of the State Department's Cold War policy of strengthening U.S. influence around the world, Intercontinental followed Hilton International's lead in expanding into Europe, Asia and Africa. Typically, the overseas hotels run by these corporations were owned by agencies of each national government and so their role was as lessee-operators (Wharton, 2001; Potter, 1996).

The Intercontinental Hotel in Karachi

In the second half of the 1950s, Intercontinental switched attention East. Its first management contract was signed in 1957 with the Lebanese businessman Najib Sala, owner of La Société des Grands Hotels du Liban. Intercontinental



Figure-1: The initial design proposal for a hotel in Karachi by Edward Durell Stone.

Source: Bruce Peter collection



Figure-2: The Intercontinental Hotel in Karachi, Designed by William B. Tabler.

Source: Bruce Peter collection

would operate a new 310-room luxury hotel to be built by Sala on a prime site next to the waterfront Corniche in Beirut's stylish Minet El Hosn district. At the same time, Intercontinental commenced negotiations in Pakistan, which the U.S. government sought as an ally, to run a hotel in the port city of Karachi, the country's main centre of business and commerce. One of Intercontinental's employees was M. Lee Dayton, formerly of the U.S. government's Economic Cooperation Administration, who was used as a 'scout' to find sites for hotels around the world. In Pakistan, Dayton was acquainted with a well-connected businessman and politician, Yusuf Haroon, whose father, Haji Abdullah Haroon, had in colonial times served as a member of the Indian National Assembly and had been knighted by the British. The Haroons owned *The Dawn*, Pakistan's leading English-language newspaper of which the nation's founder, Muhammed Ali Jinnah, had once been editor. Haroon was willing to raise local capital sufficient to cover more than half the cost of the Karachi Intercontinental Hotel project and the United States government's Export Credit Agency agreed in principle to assist in providing the remainder. A spacious site was acquired by a junction on Club Road close both to the city centre and the port (Potter, 1996, 72-73).

For both the Beirut and Karachi Hotels, Intercontinental recommended that Edward Durell Stone should be the lead architect. He had earlier designed the El Panama Hotel in Panama City, Panama which had been built concurrently with the Caribe Hilton in San Juan but completed with delay in 1951 (Architectural Forum, April 1951, 140-141). He therefore was well acquainted with the requirements of large resort-hotels located in hot, tropical climates. In his initial design for the Karachi Intercontinental, Stone recognised the advantages of traditional Islamic architectural approaches in screening buildings' facades with patterned trelliswork to protect against the scorching sun while still allowing air to circulate through, his intention being to enclose the entire exterior of the hotel with perforated concrete blocks, patterned with an Islamic star design. At first floor level, a flat over-sailing canopy, supported on slender columns would be built over the entire site, beneath which the lobby, public rooms and service spaces would be located. Only the lido terrace and pools would be partly exposed to sunlight filtering through what Stone described as a 'lath garden' comprising more trelliswork intertwined with plants. Rising above in the centre would be a twelve-storey bedroom block with the rooms set back by around three feet to create balconies between their fronts and the surrounding trelliswork enclosure of the façades (Hunt, 1960, 228-229). Stone's referencing of Islamic design reflected a long-standing western tradition of admiration for the architects and artists of the near east, the beauty and practicality of whose work had inspired their European counterparts since the latter eighteenth century. In the minds of subsequent

generations of progressive architects and designers – such as Stone – taking inspiration from Islamic approaches continued to seem highly appropriate and particularly so when building in a Muslim country such as Pakistan. In referencing the vernacular within an overall modernist framing, Stone's design aligned with wider approaches within architectural modernism in tropical and postcolonial contexts at that time.

Stone's design for the Karachi Intercontinental was unrealised as political events overtook the project. Instability and public disorder led President Iskander Mirza to impose martial law and, a short time after, a coup d'état was led by the powerful army Commander-in-Chief, Mohammad Ayub Khan. These occurrences caused investors to shy away from providing sufficient largesse to enable the scheme to be accomplished. Nonetheless, in the context of the Cold War, Pakistan remained strategically important for the U.S.A. Intercontinental and the hotel's financiers and developers therefore continued slow negotiations, hopeful that a satisfactory resolution might eventually be reached, enabling a scaled-down version of the project to go ahead (Potter, 1996, 72-73). Stone, however, ceased to be involved with its subsequent development.

At that time, Stone had newly overseen the completion in 1957 of his design for the new United States Embassy in the Indian capital, New Delhi and he had since gained further highly prestigious commissions for a State Legislative building in Raleigh, North Carolina, a headquarters for the National Geographic Society in Washington D.C., an art gallery in Puerto Rico and, in Pakistan, premises for the Institute of Nuclear Science and Technology in Nihore. With such a portfolio of projects to contend with, he surely would not have been particularly bothered about wasting additional energy on cost-cutting schemes for commercial hotel premises.

In Pakistan, meanwhile, Intercontinental had worked with Yusuf Haroon to achieve a compromise whereby their desired new hotel there could be afforded. Pakistan International Airlines, the national carrier with which Pan American had a code-sharing agreement, became an additional major investor to make up the remaining budget shortfall. A heavily revised scheme with only 306 bedrooms was prepared by William B. Tabler and his assistants E.R. Branning and J.B. Robinson. This would in fact be Tabler's sixth hotel for operation by Intercontinental, others being the El Salvador Intercontinental in San Salvador and the El Ponce Intercontinental in Puerto Rico, both of which were resort hotels for mainly American holidaymakers, plus smaller business-orientated hotels in Dublin, Cork and Limerick in

the Republic of Ireland (Potter, 1996, 72-73). Tabler was, of course, very well known within the hotel industry in the United States as an efficiency expert with the thorough knowledge of hotel construction and operation to cut costs wherever possible while still presenting a satisfactory-looking solution.

For Karachi, Tabler retained Edward Durell Stone's Islamic-style trellis screening surrounding the by now somewhat smaller bedroom block, which retained only nine floors of rooms rather than the original twelve. He also greatly reduced the amount of communal space on the ground floor, though leaving the key facilities in situ. Where Stone had wished to cover nearly the entire site in a canopy roof, Tabler initially reduced its extent by half, then reworked the plans again to remove it altogether, leaving most of the public rooms' surroundings open to the sun. At the entrance he instead proposed to replicate Sedad Eldem's 'flying carpet' portecochère design from the Istanbul Hilton. The ground floor frontages were given arcades with openings featuring pointed heads, also referencing Islamic design, but much more simply than Stone's trellises would have done. Advice from the structural engineer Wayman C. Wing led Tabler and his assistants to realise that in Pakistan it was unnecessary to build in accordance with United States regulations, and so the dimensioning of the main framework of the accommodation block could be reduced from eight- and ten-inch diameters to just five- and six-, thereby sparing yet more money and meaning that the final cost of the project would be just 7.4 million dollars (Architectural Record, September 1961, 136-137). Construction of the Karachi Intercontinental began in 1962 with completion scheduled for two years thereafter.

In the Architectural Record, Tabler acknowledged and responded to critics of the Karachi Intercontinental's bringing to Pakistan the same attention to efficient staffing as he had applied when designing hotels in the U.S.A., his argument being that whereas at that time wages were very low in in the Indian subcontinent, meaning that much larger staffs theoretically could be employed, it was his hope and expectation that they would sooner or later catch up with levels in the United States and so the hotel needed to be designed from the outset with that possibility in mind (Architectural Record, September 1961, 136-137).

The interiors of Intercontinental-operated hotels were almost invariably devised by the operator's in-house designer, the Texas-born Neal Prince, who was an architectural graduate of Rice University in Houston and who had initially worked as a theatre manager and set designer. Typically, his schemes combined modernist elements with attempts to reflect local

character, signifying to American, local and global audiences ideas of aspirational modern luxury, tempered by traditional references, commissioned artworks and attention-grabbing 'talking points' for guests and visitors to find 'cute' or interesting. Prince was an exponent of the 'picturesque' in interiors, his earlier theatrical career having been a good training for the filling of hotels around the world with diverse scenography. When the Karachi Intercontinental's interiors came to be designed, however, Prince was involved in so many other hotel projects in Europe and the Americas that he instead outsourced the Karachi interiors to acquaintances of his, the husband-and-wife designers Dale and Patricia Kellner, whose design approach was very similar to his own. In the early-1950s they had studied interior design together at the University of Washington in Seattle, following which Dale Kellner – who was greatly interested in Japanese design and had taught himself the language – took a post-graduate degree in architectural history at Tokyo University Graduate School in Japan, during which he familiarised himself more thoroughly with South East Asian approaches. Patricia, whom he met thereafter, was at that time working for Raymond Loewy Inc. in New York. The Karachi Intercontinental was the first of many interior design projects they carried out for the growing chain. A caption on the reverse of a press photograph issued at the time of the hotel's completion in 1964 emphasises that Pakistan was essentially controlled by twenty powerful families, of whom the Haroons were one, and that the hotel's public rooms had been designed primarily to provide spaces in which they could entertain and socialise. The ballroom – which was the hotel's largest indoor space – was divisible by sliding partitions into a series of smaller dining venues for the private parties they would host. The hotel's interiors made reference to Mughal themes and otherwise continued the Islamic detailing of the exterior. According to the official history of Intercontinental, *A Room with a World View*, the Karachi Intercontinental's design:

'...Reminded many of a confection coated in spun sugar, clad as it was in sparkling white molded cement lattice work tiles; others were reminded of a giant harem screen. The bedrooms featured tiled floors covered with handmade woollen area rugs, and original watercolour artwork by a soon to be famous local artist. Following the example of the national airline, the hotel engaged educated young men and women for all customer service positions. Female room maids were designated stewardesses and waiters were stewards, for the first time elevating these jobs to a position of respect not heretofore known in south Asia. For a while one stewardess brought her maid from home to perform the room-cleaning tasks while the mistress sat in the corridor

doing petit point.’ (Potter, 1996, 99)

When President Ayub Khan opened the hotel in May 1964, he inspected all of it very thoroughly, meeting employees in each department, enquiring about training programmes and examining bedrooms on every floor. The guests from overseas were taken on a rail and air tour of Pakistan which included ‘a hair-raising side trip via Ariana, the 49 per cent Pan Am owned national airline of Afghanistan, to Kabul and Kandahar.’ (Potter, 1996, 99)

The design of the Karachi Intercontinental, as completed was an intriguing hybrid of Edward Durell Stone’s tropical modernism, melded with the commercial expediency of William B. Tabler and the Kellners. Elements of the latter’s thematic decorative contributions also arguably represented early examples of postmodernism in international hotel interiors.

THE OBEROI INTERCONTINENTAL HOTEL IN NEW DELHI

The project for a new hotel in New Delhi originated not from within Intercontinental itself, but instead was offered to it by an up-and-coming Indian hotel entrepreneur, Rai Bahadur Mohan Singh Oberoi, who in the mid-1950s had initiated the planning and construction of a prestige American-style example there which he had intended to name the International. Oberoi had commenced the project upon discovering that in 1956 India would be hosting a major UNESCO conference and he realised that there was a lack of suitable premises to host the important attendees coming from around the world (Karakariya, 2009, 13).

In 1952, Oberoi and his family had visited Puerto Rico to stay at the recently completed Caribe Hilton. Its modern

appearance, diverse facilities and efficient layout with a single kitchen serving several outlets greatly impressed him and so he resolved that his proposed hotel for New Delhi would be comparable in these regards (Karakariya, 2009, 84-85). The Punjabi-born entrepreneur had first entered the hotel trade in Shimla in the early-1920s, initially as an employee and then as the owner of the Hotel Carlton there. In 1934, he founded Oberoi Hotels and during the ensuing decades his chain expanded to encompass the major Indian cities and, following partition, some in Pakistan too. These were for the most part established venues designed by British architects at the height of the Raj in the twentieth century’s early decades. In New Delhi, he already leased the Imperial Hotel which dated from 1931 and, being located close to the government buildings, was very popular with visiting dignitaries (Karakariya, 2009, 105-108).

New Delhi had been planned in the early twentieth century on a grand scale by the British with a diffuse grid of wide boulevards to privilege movement by car but a great deal of traffic remained pedestrian, bicycle or drawn by animals. The city’s buildings tended to be set well back from the bustle and squalor of the streets, each within its own private compound, surrounded by high perimeter walls (the exteriors of which locals tended to use as latrines). Since independence, a new diplomatic zone had been developed on the city’s periphery at Chanakyapuri, which was cleaner and comparatively well-manicured. There, Edward Durell Stone was designing the United States Embassy and, nearby, Oberoi acquired a five-acre site for his hotel. The Indian government, however, decided that it, rather than Oberoi, should be responsible for the project and so he was forced to hand over the land. The Ashoka Hotel was soon built there to a design by the Mumbai architect E.B. Doctor with traditional jharokas and jaali work and was completed in 1956 in time for the UNESCO conference (Karakariya, 2009, 113). Oberoi was consequently required to find an alternative location for his own hotel and the best solution in the circumstances was to purchase an open area adjacent to Delhi Golf Course. Taking inspiration from his recollections of the Caribe Hilton, he planned to build India’s first major modernist example (Karakariya, 2009, 113).

Since independence, Indian architects had embraced Le Corbusier’s brutalist idiom which lent itself to local construction practices. The 350-room hotel was designed by the prominent US-educated Indian modernist architects Durga Bajpai, Piloo Mody and his wife Lavina Colgan. Bajpai and Mody had first encountered each other as children attending Doon School in Dehradun, an elite British-style public school. Subsequently, Bajpai had studied at the Massachusetts Institute of Technology and then in Sweden,



Figure-3: The Oberoi Intercontinental Hotel in New Delhi, Designed by Durga Bajpai, Piloo Mody and Lavina Colgan.

Source: Bruce Peter collection

working thereafter in the Stockholm office of the Finnish architect Alvar Aalto, who had taught and inspired him at M.I.T. Shortly thereafter, the Parsi Baronet, Sir Cowasji Jehangir, commissioned Bajpai to design the Jehangir Art Gallery in Mumbai (Bajpai, 2020). Mody and Colgan had first met in the Architecture School of the University of California at Berkeley; the former was the son of the influential Parsi businessman Sir Homi Modi of the Tata Steel company. As a student, Mody had shared a room with the future prime minister of Pakistan, Zulfikar Ali Bhutto. In the early 1950s, Mody and Colgan worked for Le Corbusier and Pierre Jeanneret on buildings for the new capital of the Indian Punjab, Chandigarh, thereafter establishing practice in New Delhi, where they designed flats for Tata senior staff. Next, they gained a commission for an air-conditioned apartment building in Bombay – a novelty in India at that time but a project that led to further commissions for similarly-equipped corporate headquarters and also for Oberoi's hotel in New Delhi.

The design and layout of the hotel obviously reflected Le Corbusier's influence; the facades of the 10-storey accommodation block featured a *brise soleil* containing balconies on one side while the *porte-cochère*, located at one end of the accommodation block, was held aloft on sculptural concrete uprights. Parts of the lower ranges – containing some of the public rooms, the banqueting suite plus a fitness centre adjacent to the outdoor pool – featured curved roof overhangs in moulded concrete (Indian Builder, June 1966, 19-64). Unfortunately, when building work was well underway, Oberoi ran out of capital and, after six years of inactivity, in 1963 the municipal authorities threatened to seize the empty shell and finish it for their own purposes. In desperation, Oberoi sought out Intercontinental Hotels Corporation as project partners and, fortunately for him, they agreed to assist with completing the hotel and to become involved in its operation (Karkariya, 2009, 112-117). Pan American World Airlines by this point operated regular flights to India and Pakistan and even carried passengers on the connecting leg of its long-haul services between the two nations. Recently, in relation to these developments, Intercontinental had made its own attempts to enter the Indian hotel trade but had been rebuffed by the government of Jawaharlal Nehru which argued that existing Indian hotel operators alone were well capable of satisfying the market there. Besides, many were suspicious of the United States' motivations and in the wake of British rule, there was a wider anti-imperialist sentiment within Indian politics and society. For their part, Intercontinental and the U.S. State Department were well aware of the need to tread cautiously in their dealings with India and to avoid as best as possible appearing in any way imperialistic. Consequently, the hotel

would be both owned and operated by Oberoi with Intercontinental having just a token shareholding. Nonetheless, as was their usual practice, they provided the specifications for the building's facilities and style of operation.

With Intercontinental's involvement, it became possible for Oberoi to access funding via the United States Export-Import Bank and this meant that the project could be achieved (Potter, 1996, 83, 103). By then, Durga Bajpai's health was in decline due to a progressive neurological disorder and so it was Mody and Colgan who oversaw the building's completion. It was inaugurated in, nearly a decade later than Oberoi had initially intended. Durga Bajpai's younger brother, Kayatyani Shankar Bajpai, who was a diplomat, recalls that:

'Oberoi often spoke admiringly of Durga, adding that the hotel was the easiest of all to run, such aids to management as corridor-to-usable space ratios having been carefully thought out. I gather it was also the first time a high rise was built in Delhi not on piling but, but as Durga proudly claimed, "floated" on a bed of concrete. Durga, however, felt rather frustrated with the assignment as he had his own ideas for designing it, but Oberoi kept saying "do what you like but it must look like the Hilton in Istanbul" which was then much in the news as a supposedly great design.' (Bajpai, 2020)

Apart from a striking bas relief panel in the lobby by Satish Gujral, the hotel's interiors were almost entirely the work of Intercontinental's Neal Prince, and these included the Taj and Moghul restaurants and the Café Chinois coffee shop, all of which, as their names suggested, used orientalist thematic treatments. The Houseboat Bar, meanwhile, attempted to evoke 'a Kashmir lake setting.' Prince also created designs for tapestries depicting peacocks to adorn the walls of the Taj Restaurant which were made by local craft weavers. The apparent aim was to have art that was modern-looking in the eyes of western visitors but which also referenced local tradition. On the rooftop, meanwhile, the Skylark Lounge was 'a birdland paradise... with a panoramic view of the seven cities of Delhi.' (Oberoi Intercontinental brochure, 1968) The latter was contained in a structure with a wavy concrete roof – the crowning Corbusian reference in Bajpai, Mody and Colgan's very accomplished design.

CONCLUSION

The designs of the Intercontinental Hotel in Karachi and of the Oberoi Intercontinental in New Delhi reflect different hybridisations of national elites' aspirations to achieve images of modernity and American and international spatial

and aesthetic hegemonies. The Karachi Intercontinental's Islamic-inspired perforated cladding, selected by its American architects, demonstrated a desire to echo the hotel's locale for both practical and stylistic reasons. By contrast, the Oberoi Intercontinental's Corbusian-inspired brutalism was one of many instances of this aesthetic being selected in India as it was considered a signifier of postcolonial status and identity. In both instances, the hotels' interiors were hybrids of modernist planning, servicing and style with thematic design by American interior designers, who attempted also to reflect elements of the hotels' cultural locales. This approach followed a pattern typical of US-operated hotels around the world, the interiors of which contained references to the more 'exotic' elements of

European, Middle Eastern and Pacific Rim cultures. Viewed in a positive light, some of the designs might arguably be said to constitute an early and interesting body of 'globalised' design and decorative practice – albeit one viewing the world's visual cultures through an American filter and placing them at the service of commerce and hospitality. Designed for elite consumption, the hotels were primarily intended to attract specific clienteles who were wealthy, cosmopolitan and often very well-connected, but nonetheless they also spoke to wider, postcolonial aspirations. Such histories are of importance in helping to understand the modernist experience in post-independence Pakistan and India.

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(UN) COVERING KARACHI: THE CREATION OF A BRITISH VISUAL LANGUAGE IN SINDH

*Amal Hashim**

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ABSTRACT

Karachi, a city of 14000 people, was evolving as an important port for strategic geopolitical reasons and increasing trade at the time of the British conquest in 1843. However, it was not equipped with the infrastructure — such as an all-weather port — required for its continued economic progress. The fort town had a Chabutra (Custom House), shrines, temples, and caravanserais interspersed among the large *havelis* and houses of Hindu merchants and government functionaries. Neither the fort nor the Chabutra survived British colonial rule in Sindh. In fact, in keeping with their plans for the city, the British demolished these structures fairly early on in their rule of Sindh. The subsequent establishment of British institutions and political infrastructure was reinforced by the construction of buildings and monuments that looked distinctly European in style. This was not only because of the architectural styles employed in these buildings but also in the choice of ornamentation. For example, by patronizing artisans that were well versed in stone engravings and sculpture making, the British shifted attention away from the art of traditional frescoes, painting, and glazed tiles. This paper explores how the Occident imported architectural and visual cultural styles and forms into their colonies to create an entirely new visual language for their colonized subjects in South Asia. It argues that this was done deliberately to ensure political legitimacy in the eyes of their subjects as well as to highlight their own cultural superiority. The lack of native creative expression and the emergence of the modernist movement eventually led to their disappearance from structures built after Independence. This was a colonial project deeply entrenched in discourses of racism and inequality.

* MRCS, Planning and sustainability, University of Tours Polytc.
amal97.hashim@gmail.com

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INTRODUCTION

For decades mainstream scholarship on Karachi has claimed that the region was little more than a small fishing village whose harbour provided it with the opportunity to also work as a transit centre for other, more economically vibrant cities in the region. As such its residents have been portrayed as little more than fishermen. However, recent scholarship and previously unexamined historical documents have brought to light just how developed the city was. Even in 1843, on the eve of the conquest, Karachi's population (within the town's fortification walls) numbered 14,000 people (Captain T. G. Carless, 1979) – constituting a city rather than a town

even by today's standards.

These people, and the port which was one of their main sources of livelihood, would necessarily have had some sort of functioning political, economic, and social infrastructure. More importantly this would have been necessarily articulated in a built environment conducive to their needs and work. As such the city has been documented, by British travellers, geographers, and soldiers among others, to be equipped with a *chabutra*, a *sabzi mandi*, a fort and lighthouse at Manora, as well as several sites of religious significance for its Hindu, Muslim, and Jewish communities.

In addition to this, several communities living in Karachi or part of the Sindhi diaspora have claimed their ancestors lived in what is now Karachi well before the British arrived in the region. Hindu and Jewish communities have claimed the existence of *shamshan ghats* and cemeteries dating to the 1700s and later. One of these graveyards is now known as Mewa Shah after the saint that is supposed to have led resistance against the British. A popular shrine in Lyari, Miran Maa, is said to have been originally built in the mid-1600s by migrants from Baghdad (Hashim, 2022).

In 1839, Rear Admiral Sir Frederick Maitland levelled the Manora Fort on the pretence that it had fired the first shot. In 1843, Sindh was one of the last regions to be conquered by the British, under General Napier, and added to the British Raj in India. The British were the first to undertake major works of engineering and urban planning within Karachi and its harbour to create the port they envisioned and needed. Karachi was to be the deepwater port that would help counteract Russian influence in the region and act as a buffer between mainland India and Persia and Afghanistan. The British East India Company had developed Bombay, from an archipelago of small islands to a thriving port city in the Gothic style, as the gateway to India but Karachi was to be the gateway to Afghanistan and the rest of Central Asia before Russian influence could dominate the region (Lentin, n. d.).

Focusing just on their built heritage, however, points already to an enormous project undertaken by them. Calcutta, for example, was adorned by Classical public buildings and monuments and later by the Victorian Gothic Revival – both following in the direction of debates and trends in Britain



Figure-1: Alexander Baillie's 1838 map of Karachi.
Source: (Hasan A. n.d.)



Figure-2: Pre-British Conquest Sites in Karachi Region.
Source: Arif Hasan, Karachi Before the British Conquest (Institute of Historical and Social Research, 2022)

(Stamp, n.d.). Throughout the Empire, successive governments, whether controlled by the government or the East India Company, created several monuments and buildings in the European style as part of their civilising mission in the East. This in itself is an important matter to deconstruct. However, in this paper, I go a step further and posit that the use of European architectural styles and decorative elements wasn't just to civilise the native population. There was a distinct sense of needing to legitimise their rule in front of native populations that might have rebelled against them. In Sindh, this was an urgent matter since the trading community was already averse to the benefits the English had managed to extract from the Talpurs (Cook, 2021).

On the other hand, this was also a common practice among the colonising West. Throughout the colonised world, the Occident imported architectural and visual cultural styles and forms into their colonies. In the case of the British Raj in Sindh and Karachi, the late 19th century was a period of an overly European architectural stance. This changes only in the second decade of the 20th century when a hybrid style emerges. Even then, however, there existed a native elite that wished to emulate their colonial overlords in every way possible. Thus, buildings and monuments primarily for native use are also created in one of the many European architectural styles known to and coveted by them.

Karachi on the Eve of the Conquest

Karachi has been mentioned by various names in historical documents. Shah Abdul Latif's *Sur Ghato*, in fact, talks about a fishing community near the coast which could be the settlement along the Lyari River. The fort town encountered by the British, however, was not established till at least 1729, when Kharak Bundar, the old port, silted up and forced the merchants to look for another suitable location.

However, since its establishment, Karachi faced multiple attempts at takeovers by the Talpurs but had defended itself successfully. The city was home to successful Hindu and Muslim merchants who traded in a wide variety of products with their ships travelling to places like Bombay, Muscat, and ports in the Deccan, among other places. (Hasan A., 2022) For all these activities, as mentioned earlier, the local population had built a physical and economic infrastructure that would allow the smooth operation of their business. This included commercial and governmental buildings, as well as residential spaces. Unfortunately, none of these structures survive in their original condition today.

Important buildings in Karachi, as with other towns in Lower Sindh, were made of stone with rich "designs in colour and texture" (Mumtaz, 1989). Architecture here was influenced largely by Persian sources as well as neighbouring Gujarat and Rajasthan from where the masons were sourced. Important structures like the Chabutra, the Manora Fort, and the Round Tower were all built from the Gizri stone, quarried nearby. Residences and other structures were constructed of timber or mangrove wood and mud since those materials were easily available. Even houses of influential persons would have been made from wood. Important to note here is the range and use of vegetative and animal motifs in the decorative elements of these buildings. In the use of colour, the most extensive use of glazed tilework is seen in the Jami Mosque in Thatta (also known as the Shah Jehan Mosque) (Mumtaz, 1989).

The Built Form as Language

Why is Islamic architecture called "Islamic"? Why are labels given to any architectural movement – Gothic, Revivalist, Central Asian? Why are religions and social and cultural movements thought to influence the built form and environment?

Historians of architecture have sought to group together and categorize different architectural styles and influences according to the ideologies they are based on. Ideologies, in turn, communicate the thoughts, ideas, and processes of their founders and followers. Therefore, and although this is debated widely among architects and historians of architecture, the built form necessarily communicates, through the choice of style, a preferred ideology (Whyte, 2006).

In 2000, for instance, when the Karachi Strategic Plan 2020 was being developed, the then Mayor explicitly stated that the city should be envisioned as a "world class city". Infrastructural developments and choice of architectural styles for public buildings and spaces were, therefore, to emulate that which was internationally celebrated rather than locally required.

Interestingly, throughout history, empires have also found the answer to some of their questions concerning legitimacy and the acquiescence of conquered peoples to be through the built form that they patronized and encouraged. The straightforward way, of course, was suppression and intimidation through violence but rulers have also used subliminal messaging as a way of demonstrating their power, legitimacy, and authority (Darlve, 2022).

Neither of these methods were new or unique to the colonizers. In fact, there are several examples of Arab/Muslim invaders having employed similar tactics. For example, one of the earliest questions faced by Muslim conquerors was of the ways in which they could “impress upon local populations...the sense of a true and lasting faith” (Gorges, 2017) as they moved further and further away from the Arabian heartland where the religion had original flourished. Although, Alain George ascribes noble intentions to their need to ensure their legitimacy in the eyes of the peoples they had conquered, the tactics they eventually employed have been used by almost all known political and religious entities of the world. Howard Crane and Lorenz Korn note that “the period was one of striking political, social, ethnic, and religious change which cannot but have had a profound impact on the visual culture of the eastern Islamic world.” (Cranl and Korn, 2017)

A well-documented method of demonstrating one’s physical might and cultural superiority was the use of spolia when building new monuments, palaces, and religious and profane structures. Successive Muslim empires in the Middle East and Central Asia over the last 1400 years used spolia as a means to demonstrate “conquest, destruction, and construction in the name of Islam” (Yureki, 2017) while the Roman and Byzantine empires also did the same in the lands they conquered.

The use of spolia is but one way to impress a message upon the minds of people. The Ottomans, for example, carried out public works building public baths, kitchens, fountains, and caravanserais in major cities that they conquered. Sometimes older structures were left intact with new, Ottoman-patronized monuments and structures built adjacent to them as a way to “integrate their presence” in the new community (Darke, 2022).

Colonialism through architecture

Why did the British destroy the Chabutra in Karachi and build the Custom House instead? (Hasan, 2022) The answer lies in Umberto Eco’s statement: “we commonly do experience architecture as communication, even while recognizing its functionality.” (Whtye, 2006). The Chabutra acted as a Customs House under the Talpurs. It was the main center for goods to be processed for taxation purposes and all goods entering or leaving the Karachi port had to pass through the Chabutra. According to historical records, the building of the Chabutra “consisted of a large hall raised on five impressive arches” (Burton, 2017).

The British saw in the Chabutra evidence of a previous, well-functioning economic, political, and social order but one that was very distinct from the British way of commerce and politics. What was known to them, familiar to them, thought superior by them, was the Custom House and the infrastructure it implied, both tangible and intangible. The new Custom House’s “arrangement of space” and “choice of style” was proof of a “vision of empire” (Metcalf, 2005).

The upheaval across the Persianate world in the 7th and 8th centuries bears striking similarity at least in political and cultural terms, to the age of empire from the 18th century onwards. By the 20th century, Europe collectively held “roughly 85 percent of the earth as colonies...” (Said, n.d.) The imprint of this scale of imperialism is found through various tangible and intangible means even now in the 21st century.

Since “architecture has always been...used as a vehicle for the communication of ideas,” (Mumtaz, 1989) the question that arises relates to the kind of message(s) that colonial powers wanted to send across to their subjects. In Africa, scholars claim that “colonial buildings in Kenya...spoke to Africans” about the superiority of the Europeans and the latter’s expectations from the former (Amutabi 2017). In India, the establishment of the Public Works Department (PWD) in 1854 was the result of a strong feeling that the “presence of (the British) should be beheld with respect and even with admiration by the natives.” (Stamp, n.d.)

In Sindh, particularly, the British, to show the immense wealth at their disposal, imported stone from Jaipur and other places to be used in some of their grander, more monumental buildings thus moving away from the widespread use of easily available Gizri stone. It cannot be denied that the British Raj deliberately created “monumental architecture...which constituted the public face of the empire.” (Treadwell L., 2017) This had been done previously in Madras, Calcutta, and Bombay – cities intricately connected to the Indian heartland. The need to do the same in Sindh came about as the result of a realization that “Karachi...had her own position” – one that would far surpass that of the aforementioned cities (Ahmed, 2017).

The well-documented colonial perspective, regarding all things native and indigenous, was that the Indian subcontinent had nothing of value to offer to the British or to Western civilization as a whole. The wholesale use of “contemporary European mainstream” architectural styles and influences as the official style of the Empire was thus justified (Mumtaz, 1989).

As late as 1886, Lockwood Kipling, then Principal of the Mayo School of Art in Lahore, noted that “not a single native draughtsman turned out from this school has been taught the architecture of this country.” (Manji, 2021) Although this is a story of the Punjab, it can be applied to the rest of the subcontinent – colonial ideas of cultural superiority pervaded almost all thought and action. For instance, despite his critique that the PWD “and its highly centralized system,... prescribes the form of all buildings in one uniform pattern” (Stamp, n.d.), the PWD existed in Karachi, too, under the Superintending Engineer of the Province (Khuhro, n.d.) (R. Metcalf and Stamp, n. d.) point to debates between architects, engineers, and planners regarding the styles to be adopted for the buildings commissioned by the Raj. Several were convinced that a crucial aspect of “Empire” was the “national style” which should be “upheld as a rallying cry.” (Stamp, n.d.) Still others were of the belief that European architectural styles would have to be modified (considerably according to some) to suit the distinctive climate of the subcontinent. It is not until after 1857 and the War of Independence that genuine interest in the local architectural traditions of the region is shown by the British Raj and its officers (Stamp, n.d.) because “regardless of their commitment to a particular style, all architects...concern with political effect.” (Metcalf, 1997)

As mentioned earlier, Sindh was one of the last regions to be formally brought under British colonial rule in 1843. Nevertheless, the British wasted no time in impressing upon the locals what it meant to be ruled by them. “Coloniality as a process of subjectification” (Prakash., 1994) expressed through architecture was successful in intimidating local peoples and cultures by controlling the physical space and having the exclusive power to build upon it in the way they chose.

In the 21st century, postcolonialism demands that we deconstruct colonial sites of power – colonial articulation through language, histories, literature, geography, as well as the built form. The way our cities were organized and what was used to organize them – what were the pertinent questions being answered when the British decided to break the walls and gates of the Karachi Fort in 1843? What was the impact on the local psyche when the British army created the Saddar Bazaar soon after blasting through the Manora Fort? The latter was, in fact, similar to the way garrisons were initially established in Africa before colonial powers had divided up the entire continent among themselves (Demissie, 2017).

Moreover, in Africa, “architecture was mobilized to create

a cultural environment to express the grandeur of the empire, to police social and racial borders and to preserve the identity of the European settler population.” (Demissie, 2017) In Karachi, an example of this is the creation of Saddar Quarter as distinct from the Karachi Fort.

Thus, homes and other buildings within the previous Karachi Fort were visually distinct from the built environment of Saddar which focused on large-scale use of Gizri stone. Where the city inside the Fort had grown organically, with only one main road running from Kharadar to Mithadar, and had many small, narrow, winding lanes connecting neighbourhoods to each other, Saddar was created on a grid pattern.

Additionally, the demography of the new town was also different – it was “inhabited primarily by the Europeans, Goans, and Parsis” while the old city retained its Hindu and Muslim residents (Hasan, 2004). This creation of a “European city” fully furnished with a “commercial area where European ladies could shop in a not too unfamiliar environment” was another mark of the colonial city (Hasan, 1986).

The local elite, initially a very small non-Muslim, non-Hindu populace, eventually conformed to colonial cultures and expressions as a means of increasing personal social power, thus admitting the “superiority” of the British. The visual distinction between the native quarters (see Fig 2: **Old Town**) and the growing boundaries of the new city was more than just the pattern upon which the new quarters were laid out and planned.

This “dual city” is again a reiteration of political, moral, economic, social, and religious superiority that the colonial administration wished their subjects would never forget. One author has described a similar setting in Accra (1873): “many pretentious houses, whitewashed, attracting attention from their prominence above the clay-brown huts among them.” (Amoah, 2000) Moreover, several scholars have pointed out the “exclusive” nature of the colonial venture in India: “spatial segregation was a key feature of in a typical colonial urban setting.” (Ahmed, 2015)

Another feature was the distance at which initial European residential “zones” or “quarters” were planned from the original native town. As seen in Figure 3, the Old Town Quarters are on the opposite end of Saddar Bazaar Quarters and the Cantonment, the two zones initially set up by the British for the soldiers, officers, and their families. The Figure also shows the Infantry Lines bordering the Saddar

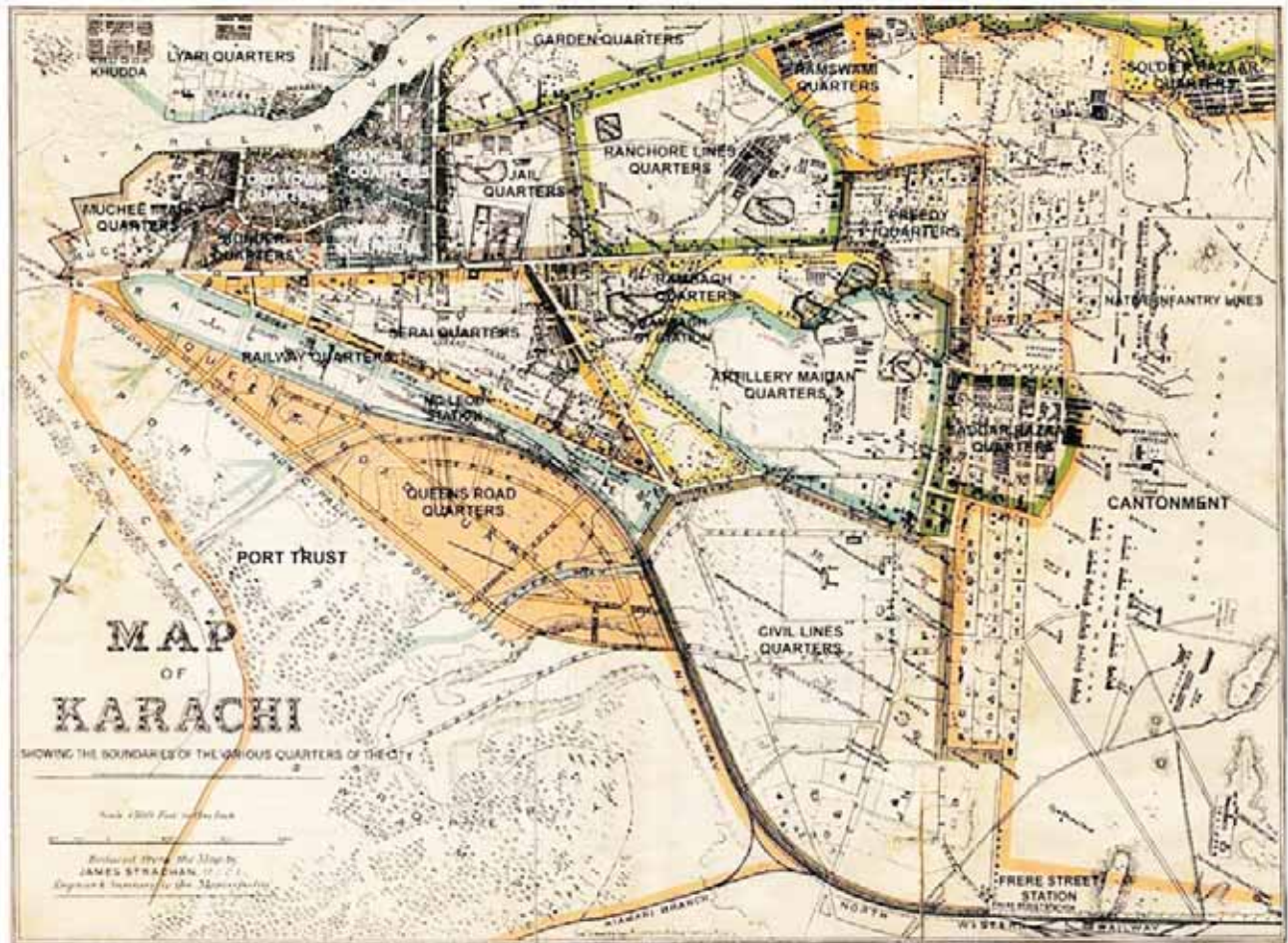


Figure-3: Baillie's Map of Karachi's quarters in 1890.
Source: (Hasan A. n.d.)

Bazaar and the Cantonment areas which further reinforces the idea of control and power wielded by the colonizers (Kosambi, M. & Brush, J. E. 1988).

Walking through Colonial Saddar

The following monuments/buildings/spaces, based primarily in Karachi's Saddar area, have been chosen for a visual representation of the "timeline" discussed above – from European to a hybrid architectural style with representation of local and indigenous elements. This section is to show readers the "grandeur" of empire, the means at the disposal of the colonial government, and its political motivations. The inclusion of native-patroned buildings in the following section is to highlight how their use of the same materials, motifs, and architectural styles played into their need to be accepted by their colonial masters.

Additionally, it should be noted that the purpose of the



Figure-4: A Scene of busy street in Karachi Taken by an Unknown Photographer in C. 1900.

building/monument was not as internalized by the people as what the façade represented. Take for example the St. Joseph's Convent School – set up by the Daughters of the Cross, this was a very different educational system from



Figure-5: St. Joseph's Convent School started in 1862 by the Belgian Sisters of the Cross. Picture taken from Heritage of Sindh.

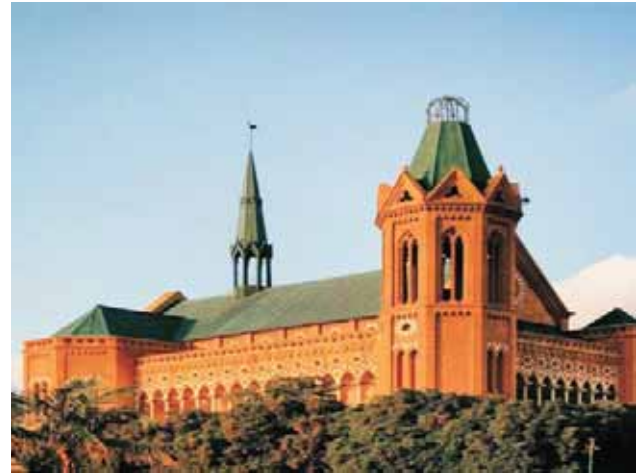


Figure-6: Frere Hall, Completed in 1865, Designed by Henry Saint Clair Wilkins.



Figure-7: Details on the Merewether Memorial Tower. The Star of David can be seen clearly here. Picture taken from Heritage of Sindh.



Figure-8: Merewether Memorial Tower, known as Tower by Karachiites, constructed in 1884-1892. Picture taken from Heritage of Sindh.

what the locals were used to. And yet by the end of British rule in the subcontinent, native elites preferred to send their children here and other schools like it rather than the traditional schools of the region.

A similar instance is of the Khalikdina Hall and Library. Why should local patrons of a library use a European architectural style rather than Indo-Saracenic or Indo-Persian? The various European styles were employed by local patrons who desired to climb the social hierarchy and felt conformity with the British, in every way possible, would help them.

Both the monuments above were built in what is known as limestone (or yellow-stone, in layman terms). In the case of Frere Hall, the stone was imported from the nearby region of Jungshahi (Author unknown 2003).” The sloping, conical roofs seen on both structures are practical elements in use

particularly in colder regions in the world. However, in the warmer, more temperate weather of Karachi, this element was not just very new, it was also severely out of place. Both buildings are firmly from the Italian Renaissance and Venetian-Gothic architectural styles (Lari, 2001), respectively.

The construction of Merewether Memorial Tower finished in 1892 – a time when pockets of resistance to European architectural traditions were popping up in select regions across the Indian subcontinent. Merewether Tower is quite possibly the most distinct architectural structure still existing in Karachi. The figural (human) representation in a building, seen in figure 8, was the first of its kind for any religious or ethnic community in Sindh, much less Karachi. Furthermore, the Tower is built in the English Medieval style and also showcases the Star of David as part of its



Figure-9: Dayaram Jethmal (D.J.) Sind College, 1893. Picture taken from Heritage of Sindh.



Figure-10: DJ Sindh College Front Entrance Porch.

decoration. It is quite possible that no other structure in Karachi could have possibly evoked more real memories of England than James Strachan's Merewether Memorial Tower.

The Dayaram Jethmal (D.J.) Sind College completed in 1893 was designed by the same architect who designed Merewether Tower, James Strachan. However, as the pictures above show, the stylistic elements used and inspiration for the College is completely different from that of the Tower. In fact, Strachan used Italian architectural style for this building. Its main, front façade, as seen in Picture 4b, is very close to the main front of Khalikdina Hall built in 1906 (see below). Both have been designed according to the Palladian architectural style and strive to invoke a sense of grandeur.



Figure-11: DJ Sindh College Side View.



Figure-12: Khalikdina Hall Built in 1906.

On the other hand, the adoption of British, or Indo-Greek styles by the native elites soon gave evidence to the fact that the new imperial language had been accepted. The natives had also accepted that “native architecture was never...equal to European architectural traditions (Lari & Lari, 2001).”

Built in 1906, Khalikdina Hall and Library was named after its chief benefactor and is the “first building built by local Muslim philanthropists (Lari & Lari, 2001)” primarily for use by the natives. Unlike other buildings constructed in this manner, this building was situated in Ranchore Lines so that the natives could come there easily. However, this does not mean that local architectural elements were used in its design and construction. The stone used in its construction is again yellow-coloured limestone and the architectural style is Palladian. The “Iconic portico, a high podium and a...triangular pediment (Lari & Lari, 2001)” were chosen specifically to immediately impose the sense of grandeur on behalf of the audience.



Figure-13: Bristol Hotel built in 1910.

The Bristol Hotel (figure 13) was a part of a quartet of Railway Hotels built in Karachi in the early 20th century. However, it was initially built as a mansion for a rich Parsi, hence the spacious rooms. Built in the Italian Renaissance style, this building was the first from its surroundings to be a three-storey building – the first effects of overpopulation were being felt in the city around this time.

However, it must be noted here that Sindh was one of the last regions to be made part of the British Indian Subcontinent and other regions such as Madras had already developed a hybrid form of architectural style after decades of debate and conflict. This style, popularly known as Anglo-Mughal, incorporated stylistic and practical elements from the local arena as well as European architectural traditions. Popular in some regions, though not all, it was still largely absent from the Karachi architectural scene in which “‘Italianate’ buildings were still popular (Lari, 2001).” It was only until 1930 that these ‘hybrid’ buildings began to appear in Karachi. The first of these was the Karachi Municipal Office Building (figure 14) completed in 1931.

The KMC building was the first of its kind in Karachi. Its architect deliberately merged ‘Oriental’ or ‘Islamic’ architectural styles with European Renaissance styles. This



Figure-14: Karachi Municipal Corporation (KMC) Office Building completed in 1931. Picture taken from Heritage of Sindh.

is seen in the number of domes, “arched forms”, and cupolas but the “U” shaped building plan is quite distinctly inspired from that of Queen’s College in London (Lari & Lari, 2001).

The clock tower pictured above takes up center space and can be seen from a distance. Unlike that of the Merewether Memorial Tower, the inscription on this building is quite distinct and can be seen properly. The main entrance to the building, under the clock tower, is flanked by Indo-Saracenic domes, a distinctly ‘Islamic’ feature.

Current Perceptions

In 1994 the Government of Sindh passed the Sindh Cultural Heritage Preservation Act which introduced protective measures for buildings and monuments in the province included on a special Protected Heritage List (The Sindh Government Gazette, 1994). Aside from the problems with the Act itself, in which certain clauses are either contradictory

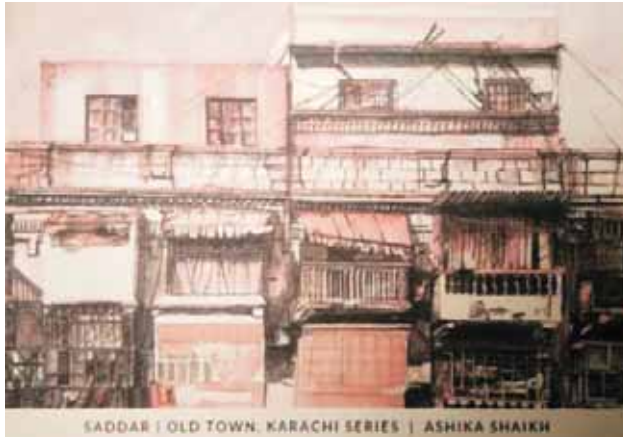


Figure-15: Old Town, Karachi Series I. The artist has managed to capture additional rooms built on top of the original building.

or ambiguous within their implementation, the government showcases a lack of willingness when it comes to the protection of built heritage. In recent years, the demolition of pre-partition buildings and homes has accelerated, with several scholars, activists, and members of civil society voicing their concerns. In their place, tall residential and commercial buildings have come up, completely changing the face of the city (Ali n. d.).

The impudence with which both owners and real estate developers have continued to destroy the built heritage of the city is a result of the negligence of the government as much as it is a result of their complicity. The government-bureaucrat-developer nexus has meant that all land in Karachi is viewed as a commodity that needs to be developed to its full economic potential.

On the other hand, a new generation of artists, writers, and civil society activists have taken up the cause of the city's built heritage. Through postcards, artwork, art installations, biennales, maps, and other forms of cultural expression, the younger generation has made these movements central to the way Karachi is depicted in popular media. This is important since for too long, Karachi's image in popular culture has been dominated by politics and ethnic and civil strife.

The postcards depicted in (Figures 15-18) were drawn by Ashika Shaikh as part of her Old Town Series. According to her, the ornamentation of these buildings gives them a "more subjective, personal sort of quality and architecture today is too neat, manicured, and robotic." (Hashim, 2020) The way Shaikh sees Karachi's heritage – colourful, varied, "subjective" – is clearly seen in Figure 18, the most colourful of the Series.



Figure-16: Old Town, Karachi Series II. The top left-hand corner shows a child peering out of their balcony. This postcard focuses on the different grilles and balcony styles.

CONCLUSION

In the colonial city, buildings and monuments were not innocent of politics – they acted as sites of power and domination in favour of the colonizer. They were intended to "hold up a high standard of European art" (Demissie, 2017) and intimate to the beholder European values, culture, justice, and law among others. Among this was the belief that the Indians lacked "public virtue" and that it was the responsibility of the British to educate them in it through various means. (Metcalf, 1997) This, from the perspective of the colonisers, made sense since their mission in India was as much a "civilizing" one as it was economic. Therefore, only European styles could reflect that civility. This feeling was prevalent among the British as late as 1873 (Demissie, 2017).

Given Karachi's economic importance to the British, scholars would agree that it was colonial center at par with other



Figure-17: Old Town, Karachi Series III. The balcony in the top is shown as broken but still being used as can be seen by the woman on it.

cities like Bombay, Madras, and Calcutta in the rest of the Indian subcontinent. Even though Karachi had a sizeable population before its conquest by the British, this fact is almost completely forgotten in history – the history the British narrated was one of “discovery”. Therefore, Karachi became a mere “fishing village” that the British then developed into a major hub and imparted knowledge and civility to. Almost all traces of the indigenous city were wiped out very early on after the conquest.

Although she focuses largely on Madras, Susan Nields (1979) view that cities established or developed by Europeans “stood apart from precolonial urban centers” can also be applied to Karachi. She also addresses the “dual social and spatial structure” of these cities which differed from non-colonial cities in the rest of the subcontinent. Again, as can be seen throughout the images presented in this paper, there was a distinction, especially and immediately visual, between



Figure-18: Old Town, Karachi Series IV. The broad range of colors seen above is exactly as they are in reality. Green shutters (for windows and doors) and other brightly colored aspects of a building were common earlier.

the European zones and the native zones of the city. Figure 4 depicts a scene in a busy street in Karachi. Notice the walls and balconies of the buildings in the street compared to the stone walls of buildings like Frere Hall or St. Joseph’s Convent. Locals used materials they could easily and cheaply source whereas the British could afford to import stone from as far as Jaipur.

Additionally, by refusing to participate in the market structures of Karachi’s Fort Town, the British colonisers were sending out a clear message of the difference between the population. A difference that they always wanted to emphasize and magnify. What use did the locals, largely Hindu and Muslim, have of Easter and Christmas decorations sold in the Saddar Bazaar? This politics of exclusion was practiced not only through the market but also through visual set up of the city. Saddar Quarter’s wide roads, grandiose buildings, tall church towers and spires, all pointed to a new era, a new ruler, a new language. In pre-partition Karachi, “the churches and town halls with their tall spires and clock towers unequivocally declared the supremacy of the alien culture (Lari Y. 2001).”

However, there existed another strand of thought within the colonial administration which felt that Britain’s role in India should be more “paternalistic” (Mumtaz, 1989) and “incorporate certain elements of indigenous aesthetics in the design of public buildings to quell local resistance.” (Demissie, 2017) For this group, the goal was not to intimidate the natives into submission but to win them over and thus make them accept the British as legitimate rulers. In Delhi this exercise was carried out by architects and planners like Lutyens “to legitimize colonial rule.” (Demissie, 2017)

On the other hand, the native “measured his (own) superiority by his ability to mould himself after the white sahib’s fashion.” (Mumtaz, 1989) This continued even as they fought for their independence, resulting in the D.J. Sindh College and the Khalikdina Hall and Library. Native attitudes towards their own forms (traditional) of art and architecture were considered ugly and inferior. The native elite that had managed to climb the social hierarchy and had come to think of himself as belonging to the ruling British class became critical of his own cultural heritage (Mumtaz K. K. 1989).

Furthermore, students trained in schools “based on the western model” (Mumtaz, 1989) were unable to connect with or understand the long-standing arts and architecture tradition of the subcontinent of which they were a product.

Thus, despite the discontinuation of European styles of architecture, colonization in the Indian subcontinent had been successful in severing generations from their history.

However, soon after the Independence of the subcontinent, these architectural styles were largely discontinued, whether due to a lack of financial resources or because the principal architects for such projects were largely British/European. This points to an architectural language having been imposed on a people and space that could not connect to it. The lack of native creative expression in the monuments around them eventually led to their disappearance from future structures. This was a colonial project deeply entrenched in discourses of racism and inequality.

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MODERNIST HERITAGE OF KARACHI: AN ARCHIVAL OF A COLLECTIVE MEMORY FROM AN ART DECO LENS.

Ghania Shams Khan*

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ABSTRACT

“To look at emotion and desire in architecture is not to discount the simple fact that most buildings have a practical purpose. But that practical purpose is rarely pursued with perfect detachment or indifferent calculation. To build and to inhabit are not small actions, and it is hard to undertake them with coolness.”

Rowan Moore's text ‘Why We Build’ talks about desires shaping and giving form to the spaces we inhabit (Moore, 2013). Practicality is always underlined by a necessity that gives rise to a desire. In my grandparent's house from the '50s, all the interior spaces of the house were clustered around a *sehen*¹. The spaces were connected by a seamless concrete floor, commonly present in most houses built in the '50s and '60s. This had a very practical purpose to it. Every summer the whole house was hosed down with water. Because of a seamless floor that connected all the rooms to the lounge and the lounge to the *sehen*, water could easily flow outside into a drain in the *sehen*. It proved to be sustainable in many ways as it lowered the temperature of the whole house for most of the day. There is a very simplistic desire behind a concrete floor.

Domestic spaces of such a typology are nostalgic and a part of a collective memory of houses and apartments from the 50s and 60s. Many houses in Karachi within areas like North Nazimabad, P.E.C.H.S., and Bahadurabad are examples of a regional language that developed in these two decades. When it comes to nostalgia and memory we often find the built spaces that preserved a memory were heritage from the colonialist period. A built reminiscent of power and dominance. But there is another kind of collective memory that talks about the simplistic details shared earlier. This detail is a part of a typology that speaks to another kind of heritage. A heritage that we reclaimed in post-colonial times. Using the lens of Art Deco homes, the paper studies the transformation of a global movement into a local aesthetic. By recording the narrative of the inhabitants of these structures, this research can create a conversation about the sensitivities we have towards these vernacular techniques that developed a modern and brutalist-inspired heritage for the city of Karachi. These modernist structures present another kind of heritage, unique to the architectural vocabulary of Karachi, and represent a climatic sensibility that developed over the 20th century, building a modernist identity of Karachi's architecture.

Keywords: Modern Architecture, Art Deco, Post-Colonial, Collective Memory Nostalgia.

* Architect, Visiting Faculty, Department of Architecture and Planning, NEDUET, Masters., Indus Valley School of Art and Architecture.

¹ A local term for a semi covered space that opens into a courtyard.

INTRODUCTION

Karachi in its built form has a diverse history. The majority of its historical landmarks are known through the colonial remnants and have always been the object of archival study and preservation, to preserve a kind of *history*. Post-independence, the city of Karachi reclaimed its freedom from the colonial structures by creating its own identity in built spaces, specifically domestic space. The 1940s and '50s served as a time when art and architecture were heavily inspired by the Art Deco movements. The city adopted this style quickly - as it was already being applied to the many monumental landmarks in the developing metropolitan city - into its domestic spaces. Much of our memories today are nostalgic for the local implementation of such a global art movement. This paper is an attempt to *archive* a heritage which defines the post-colonial modernisation of our city. A modernisation that re-thinks the hegemony of modernity by understanding a global artistic movement -Art Deco- from the lens of vernacular architecture.

To study Art Deco within the region of Karachi, most of the data found was in the form of primary data including oral histories, and on-site investigations. Very little secondary research or literary sources were found on the influences of art-deco in Karachi, particularly in a domestic context. With the key theme of this research, looking at these domestic spaces in the category of collective memory, interviews and oral narratives of the inhabitants of these spaces are used as research data to create an argument of Art Deco as a modernist heritage for the city of Karachi. Further, a lot of the sources are based on an article published by Marvi Mazhar in 2020 called 'How Art Deco Helped Karachi Shake its Colonial Look' published online on (Samaa English). This article also creates a foundation for the argument of looking past the colonial ruins as a heritage to see what heritage means in a post-colonial context. Much documentation has also been done in the sister city of Karachi, Bombay. When Art Deco entered the sub-continent region in the 1930s. Karachi and

Bombay as trading hubs, were being developed as cosmopolitan cities as well. This aesthetic also resonated as a sign of wealth due to its Western origins as well and became a part of aspirations for the built spaces (Mazhar M. 2020).² As per the article by Maya Sorabjee for 'Art Deco in Mumbai' this aspiration developed in the regional context as well when local architects began to utilize these aesthetics in domestic spaces (Sorabjee M., 2019)³ resulting in a hybrid that was neither a complete replica of the Western-built form nor identical to the indigenous ways of looking at the built.

For this research, choosing Art Deco as a lens, domestic spaces in the city of Karachi have been documented. This research by archiving spaces of a post-colonial period, looks beyond the heritage of the colonial empire to establish a modern heritage unique to the sub-continent and in the case of this research, the city of Karachi. I explore the question if these modernist structures are a part of the heritage now. Do such techniques need to be preserved or revived to preserve an architectural vocabulary that is possibly unique to this metropolitan city? This paper also looks at the shift in desire towards our built spaces. Art Deco is an internationally recognized aesthetic, it made its home in our regional techniques because of the desire to build a cosmopolitan city post-independence. While documenting these spaces, the modifications done to these structures talk about a new desire and a new way of living that is our aspiration now.

A CRITICAL HISTORICAL BACKGROUND OF KARACHI'S ARCHITECTURAL AESTHETICS

It's a well-known fact that Karachi has a strong architectural presence from the colonial period. What is known as heritage today, is the ruins of a colonial empire that developed the city into a duality of native quarters and the British quarters. Calling it 'ruins' is not a nostalgic memory of the past but a ruin that symbolizes an oppressive power that plundered

² Art Deco became a worldwide symbol of luxury and modernity, representing the very qualities that an increasingly restless set of Indians aspired towards. At the moment of its introduction in the subcontinent, Art Deco was seen as a simultaneously Western and universal style: Western in its geographic origins but universal in its wide-ranging visual inventory and eventual ubiquity. Its ability to occupy both these categories made the style an appealing choice for aspirational Indians. On the one hand, the eclectic motifs of Art Deco made it easier to inflect buildings with varying degrees of Indian iconography. Art Deco's lingering associations with Europe and the United States allowed its Indian strain to benefit from the hegemonic status of Western culture.

³ They modified the style in response to an Indian cultural and geographic context, resulting in a formal mixture of foreign and regional design. Although Art Deco's curvilinear geometry, setback volumes, and nautical motifs were often still visible, specific climatic and urban conditions prompted architects to adjust its distinct spatial compositions and to commission bas-reliefs depicting mythological Indian imagery. In its application in Bombay, the symbolism of the new architecture straddled two opposing political discourses, expressing neither a reverence for the colonizing world nor a total return to local roots.

the sub-continent for a long time. A concept borrowed by Ann Stoler in her volume 'Imperial Debris: On Ruins and Ruination', where she critiques the colonial remains as something to not memorialize as a monument, but to see in the context of their political history.(Stoler, 2013)⁴ Lari in her book 'The Dual City' mentions the alien rule which disrupted the indigenous ways of life (Lari, 1996)⁵. This is not seen in most regimes before the British as they would intermix and intermarry (Lari, 1996)⁶ with the natives. This is also a known fact that because of Karachi's strategic link to the Arabian Sea, it is an important location for trade, commerce, and economic opportunities. This location attracted different empires as well. With such an influx, this city hosts the remains of architectural aesthetics from multiple different periods in history. The most prominent architectural presence is from the colonial period. If the British Empire left architectural remnants that have a visual language of power and dominance, and little to do with the local ways of living. At one point with the end of the colonial power, the city began to reclaim its architecture by reclaiming it with the local aesthetic vocabulary. Places like Empress Market grew around itself an organic market which in recent times has been unfortunately demolished. This act of reclaiming Western aesthetics into our local vocabulary is an important lens to move forward from a heritage bounded by the colonial period. In this scenario the lens of this paper is not colonial architecture and its post-colonial presence, but a more concrete form of a global-to-local translation of Western aesthetics that started to develop in the early 40's

and 50's. The architecture of this time had a unique visual vocabulary under the Art Deco movement and became synonymous with metropolitan cities like Karachi and Bombay in the Sub-continent. This paper looks at a brief history of this movement and sees the translation of Art Deco vocabulary in the domestic context. Art Deco very obviously translated into commercial buildings, for example, The Karachi Cotton Exchange building built in 1936 earmarking the start of Karachi's modernist landscape of architecture (Mazhar 2013)⁷. This paper aims to look at these visual aesthetics translated into domestic spaces as this is the typology where modernist and brutalist architecture sinks into everyday built practices. These domestic spaces are evidence of how an international movement that made its way to the Sub-continent, intermixed with the local narrative and generated a local typology. While maintaining the climatic sensibilities of the region in its spatial language. It created a hybrid, unique to our context and seen in multiple residential areas of Karachi that developed in the late 40s and early 50s.

FROM GLOBAL TO LOCAL: A TYPOLOGICAL ANALYSIS OF ART DECO HOMES

Art Deco is an international movement that originated in France post World War I. Post-war architecture was reduced to functional spaces and was pushed to become standardized. This visual culture was pushed back by traditionalists who

⁴ But in thinking about "ruins of empire," this volume work is explicitly against the melancholic gaze to reposition the present in the wider structures of vulnerability, damage, and refusal that imperial formations sustain. Nor is it the wistful gaze of imperial nostalgia to which we turn. Walter Benjamin provides the canonical text for thinking about ruins as "petrified life," as traces that mark the fragility of power and the force of destruction. But we are as taken with ruins as sites that condense alternative senses of history, and with ruination as an ongoing corrosive process that weighs on the future. Unlike Benjamin's focus, a focus on imperial debris seeks to mark the "trail of the psyche"—a venture he rejected—as much as it seeks to follow his acute alertness to the "track of things."

⁵ The city where alien rule brought about an upheaval in cultural norms and affected the entire living pattern of the indigenous urban society, became the most visible manifestation of the colonists' reign. The new city pattern that emerged reflected their attitude towards the native population: the traditional sections of the city were relegated as 'backwards' or inferior parts while the new cantonment, Staff and Civil Lines became the 'progressive' sections, synonymous with the modern city.

⁶ The case of British settlers was quite different. Barring the early period, they remained aloof throughout the three centuries of their contact with the Subcontinent, secure in their feelings of cultural and military superiority. As Governor-General William Cavendish-Bentinck pointed out to the British Parliament after leaving India, 'In many respects the Mohammedans surpassed our rule; they settled in the countries which they conquered; they intermixed and intermarried with the natives; they admitted them to all privileges; the interests and sympathies of the conquerors and the conquered became identified. Our policy has been the reverse of this; cold, selfish and unfeeling; the iron hand of power on the one side, monopoly and exclusion on the other' (Moorhouse 1984: 75).

⁷ In the meantime, while traveling across India, Bombay's merchants found themselves attracted to Karachi's port. In a DAWN article, Mohammad Salman states that the gradual growth of enterprises and cotton trade on Karachi's port led to the creation of the Karachi Chamber of Commerce, earmarking Karachi's genesis as a business hub. Soon cotton trade shot up, resulting in the organisation of the Cotton Association in 1933, and its formalisation in 1936 as a physical structure: . This building adopted Art Deco and revolutionized the architectural scope for Karachi's landscape, effectively transitioning from Art Nouveau and Revivalist architecture to a newer and diverse array of designs as part of .

believed in the craft and the decorative elements of architecture (Mazha 2020)⁸. Art Deco came as a movement that revived the decorative arts back into architecture. The visual culture was inspired by aeronautics, the post-industrial age, and the geometric imitation of cars and aeroplanes. This inspiration translated into the aerodynamic forms of Architecture. As it brought back the decorative elements into the built spaces, the designs mimic these dynamic details as well. Usually applied with concrete they adorn the facades of many Art Deco buildings found in our context. The concrete adornments take up linear or radial designs. Showcasing a geometrical understanding inspired by Greco-Roman Classicism, yet a modern aesthetic prevailing due to the simplification or the reduction of geometry into minimal patterns.

As the premise of this research is the domestic spaces that were built during this period, we can draw out a basic typology that is unique to Art Deco homes and remains common in most of the houses documented. This documentation also takes into account the narrative of a personal and collective memory of these spaces as well. It is an important aspect of this archiving as the majority of these spaces have undergone massive renovations as well.

The earliest memory of my childhood home is of a *sehen*. This space connected the courtyard and the bedrooms and served as a threshold between the public and private spaces, functioning as a semi-public space. Interchangeable with the modern-day lounge, this space was the locus of everyday life. The layout of the whole house emerged from this locus and had many functional and sustainable merits to it which are important factors part of the discussion later in the essay. An important part of this childhood memory is of the summers spent in this house. The house was located on the outskirts of the city of Malir. Though evenings were pleasant as it was further from the dense urban landscape, the afternoons have always been of a significant heat index in this city. To cool off the spaces, every room was hosed down in the summer. The waters would just drain out into the *sehen*, further draining into the courtyard. It was a passive way to cool down the house and the seamless concrete floor in my grandparent's home and in some other cases, a terrazzo floor ran from the rooms into the *sehen*, making sure the water



Figure-1: Art Deco Home in PECHS Block 3.

could flow easily. The layout of the house and this flooring detail were effective in cooling down the temperature of the interior spaces.

The house mentioned above was built in the early 50's and the layout of most of the homes from this era is always around a central courtyard. There is a verandah between the courtyard and the interior rooms which serves as the living area as well in most cases. The daily life activities play out in these verandahs, from lounging around to meeting visitors. The private spaces are usually interconnected with each other in this layout and there is rarely a concept of an attached bathroom. A bathroom is usually a shared one on each floor.

The spaces observed also had significantly higher ceilings, most of them around 12 feet. This high ceiling modifies the proportion and details of the doors and windows as well. They are always accompanied by clerestory windows which ensure the circulation of air even if the doors are closed. A sustainable and vernacular way to regulate air around the house. Every door and window is designed with the decorative elements of Art Deco. Dynamic and linear patterns are found on panelling within the interior spaces in addition to the facade.

Another material and visual, unique to these spaces is the terrazzo floors. This flooring technique emerged in both Karachi and Bombay post-partition as they became

⁸ The Art Deco design movement originated in France postWorld War I, and can be traced back to the 1925 International Exhibition of the Decorative Arts (Exposition Des Arts Decoratifs et Industriels) in Paris. With the arrival of the Machine Age and Functionalism, many design fields such as architecture had started focusing on creating functional, machine made and standardized designs for the masses. This caused pushback from conservatives who wanted to retain traditional arts and craftsmanship by delving into decorative arts, which is where Art Deco was introduced to the world. This design movement, though widely criticised as solely indulging the wealthy, dominated various fields such as decorative arts, architecture, interior design, furniture, and graphics.



Figure-2: Dyer's Family Home. The Proportion of a Door in an Art Deco Home.

independent of reliance on British imported goods (Mazhar, 2020)⁹. Every other house seen comprises these terrazzo floors in multiple different kinds of vibrant patterns. In South Asia, another major Art Deco influence was the emergence of Terrazzo flooring. Terrazzo's presence in the Indian Subcontinent has its origins in Mumbai, where it became extremely popular from 1950-1970. The company Tiles, , was one of the first to pioneer Art Deco floors in Mumbai, installing Terrazzo tiles in the iconic cinema houses and Art Deco buildings of Marine Drive, Oval, Malabar Hill and more. Jamshed Nusserwanji, the first elected mayor of Karachi, established a tile factory in Karachi that was the inspiration for their sister-factory Bharat Tiles. Today terrazzo can be found in many homes and buildings across Karachi, and in the childhood memories of Karachiites. Terrazzo flooring feels nostalgic, comfortable and familiar to most, and is a local craft that artisans have to train to create. In some on the columns themselves. In recent years this trend



Figure-3: Terrazzo Floor in Dyer's Family Home.



Figure-4: Terrazzo Wrapped up on Columns.

has made a comeback in architectural practices as well. Grooves with glass inlays are found in intervals in the flooring to avoid cracking of the concrete as well.

Art Deco homes are also identified by their dynamic forms. Most commonly found are the rounded balconies accompanied by ribbon windows on the facade. Below these balconies are shaded verandahs or entrances as well. Now hidden behind walls added because of security reasons.



Figure-5: Entrance to Sana Naqvi's Home.

Following are a few homes documented in the past few months and are shared here as per the permission of the owner. The domestic spaces documented for this study are located in two areas PECHS and SMCHS. Residential growth in these areas started post-partition in the early 50's. One of the documented homes is of Sana Naqvi, located in PECHS Block 3.

Her house was built in 1954 by her paternal aunt. She is currently living in this home with her mother and her brother's family. The area was called the teachers housing society⁹ and the plots were given to such professionals by the government post-independence. Every house in this area is of a similar typology as mentioned earlier. The signature courtyard is surrounded by living spaces. In the case of Sana, as told by her. Multiple houses were built in this area following a standard layout, with freedom towards the decorative elements. Every home had an interior courtyard around which the private spaces were arranged. The courtyard of the two houses shared a single wall as well. It was a more communally cohesive way of lifestyle where at all times one was visually connected to one neighbor. A lot of modifications have been made to the home as well. The courtyard is now covered on top by a poly fibre sheet. The wall that is shared has been raised to completely cut off the visual connection with the house next door. The terrace on the first floor that looks into the courtyard has been walled off as well with a metal sheet.

Another home that was documented is located in SMHCS. Like PECHS it developed into a residential area post-partition. This house is on a 1200 sq yard of land and was built in 1954 as well. With a significantly larger square footage than



Figure-6: Sana Naqvi's Home in PECHS Block 3.

the previous home, one of its entrances opens up to the main Shahrah-e-Faisal. The plots on both sides of the house which may have been residential till some time, are now replaced by high rises.

Its ownership distributed between the family is evident in the modifications the house has gone through as well. Previously the house was built around a common courtyard from which all the interior spaces are accessed. Now the first floor has little to no access to the courtyard and a small staircase has been added on the external facade at the back

⁹ Excerpt from the Interview.



Figure-7: Additions are Marked in Red.



Figure-8: House Documented in SMCHS.



Figure-9: House Documented in SMCHS, View from a Pedestrian Bridge on the Main Road.

for access. The doors and windows accompanied by the clerestory windows are usually kept shut now because of the traffic pollution and noise from the main Shahrah infiltrating the private spaces.

Another house documented in PECHS belongs to the Dyer family. An industrialist family in textile owns this plot of 4000 sq. yards on which four houses are built of a little less than 1000 sq. yards. All four of them are of the similar typology of an art deco home with its decorative features in great condition.

From an exquisite terrazzo floor to the courtyard and roof tiles. The house is in great condition even today. What is even more interesting about these four houses is a shared roundabout in between. Replicating the typology of an individual house to a street character as well. The walls around them are low in height and nothing like the walled-off houses present in contemporary times. Upon asking, they take care of security measures by hiring a guard rather than dealing with it architecturally and constructing more walls.



Figure-10: Plan of House Documented in SMCHS. Courtesy Tashfeen Shuneed.



Figure-11: Dyer's Family Home is Documented in PECHS Block 3.



Figure-12: Entrance to One Unit and Shared Courtyard Between Four Units.

This particular house had a unique street character that has been maintained from the point it was built in the late 40's. The owner of the house talked about not changing a single thing from the day it was built.

A SHIFT IN DESIRE TOWARDS THE BUILT

Through the archiving of the three homes above and from

the oral narratives of the residents, one can understand a shift in the ways of life of the people within this city. Post-partition the homes carried forward a communal way of life which is a part of the sub-continental ways into the architecture. This is what translated a global movement into a local vocabulary as well. In today's time and as observed by the modifications done to these homes, the aspirations and our desires towards built spaces are becoming more and

more individualistic. We desire to always increase the private square footage as much as we can. Buildings today do not have a street character or any relationship to the street at all. The boundary walls seen in the Dyer family home are porous to the urban environment. Not directly but strategically placed to not have a living space open visually to the public, but still inviting enough to maintain its relationship to the street.

Most of these homes are also subjected to property disputes or disputes within families. Leading to further modification of homes by giving separate entrances, raising walls, and covering the courtyard. Patching over the actual typology of an Art Deco home. This has led to a courtyard losing its meaning and a verandah or a *sehen* almost vanishing from the built practices. Speaking to these homeowners, they reminisce about a time when families lived together in these compounds. They tell stories of evening tea and hot summers spent in the verandahs. They speak about kids playing within the courtyard and wandering into the streets and the adults would be comfortable knowing that they won't go out of a visual reach.

In today's built spaces, such an idea is quite unfamiliar as private spaces become more and more isolated. The wall heights increase to cut off from the streets entirely and the only relationship it has to the urban environment is of security barriers. What this documentation and the arguments lead us to is, are these homes the modernist heritage of Karachi? If the social patterns have changed in today's time implicating a change in the built environment, archiving such domestic spaces becomes important. It is an important documentation of a time when the city reclaimed its power for a colonial empire. In this case, are colonial buildings the only remaining heritage of the city which in actuality is a ruin of a colonial regime?

The definition of modernity is not a single definition that begins from the West. Modernisation took its unique shape throughout the world, localised in many vernacular languages. J. Robinson (2009) in an essay 'Dislocating Modernity' referenced Timothy Mitchell;

Mitchell agrees, and hopes that these tactics might deprive modernity of 'any essential principle, unique dynamic, or singular history' (2000: 12). We need to find ways to write modernity outside of the historical time of the West. The only way to do this is to ensure that there are grounds for appreciating and experiencing



Figure-13: Dyer's Family Home is Documented in PECHS Block 3 Approach form the Main Street.

the modern without necessary reference to the West, or Western capitalism. This means disconnecting the social transformations and cultural valorisations indicated by theories of modernity from assumptions about progress and from any fixed geographical referents. Decentring the West in theories of modernity means seeking to understand the sources and sites of social transformation wherever they may be and allowing for newness and innovation, along with their cultural valorisation, to emerge and exist anywhere.

Art Deco buildings in Karachi are one example of a way to re-think what modernity means and to move past the colonial remnants as the singular idea of *heritage*. To look for the Art Deco in domestic spaces is also a way to get to the root of the localisation of such a global movement and in the above-mentioned quote a way to 'Decenter the West in theories of modernity'. Archiving Art Deco homes as a heritage offers us a step towards such a decentring.

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ANALYSING THE VERNACULAR ARCHITECTURAL TYPOLOGY OF SINDH AND BALOCHISTAN: DWELLINGS AND THEIR VERNACULAR DESIGN

Ifrah Asif,* Sidra Khokhar,**

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* Lecturer, The School of Art, Design and Architecture (SADA), NUST, Islamabad, Pakistan.
ifrah.asif@sada.nust.edu.pk

** Lecturer, The School of Art, Design and Architecture (SADA), NUST, Islamabad, Pakistan.
sidra.khokhar@sada.nust.edu.pk

ABSTRACT

This paper analyzes the vernacular architecture in the hot-arid regions of Balochistan and Sindh to identify indigenous construction techniques and design strategies that have been part of the vernacular architectural tradition of the aforementioned regions. The paper aims to connect the age-old oral traditions of the remote region concerning construction techniques and materiality that have been translated into the vernacular architectural language/construction methodologies, dwelling layouts, and the overall identity of the region. Through a case study methodology of the local housing typologies found in the selected regions, the research will analyze various dwelling archetypes and their construction materials found in the highlighted region, such as the Chapper House, Kothi House, Chaunro House, built using rammed earth, compressed earth blocks, bamboo, and adobe. Furthermore, the research methodology also involves the analysis of relevant passive design strategies found in the identified vernacular case studies, such as verandahs, courtyards, clustering of houses, ventilation, and *jaalis*, which will be identified and analyzed to understand their effectiveness as vernacular design strategies in combating the challenges of the harsh desert climate.

Keywords: Vernacular architecture, passive design, dwellings, extreme climate, vernacular materials, Pakistan.

DEFINITIONS

Vernacular Architecture For the purpose of this research, vernacular architecture is defined as design based on local needs, availability of construction materials, and the reflection of local traditions.

Passive Design For the purpose of this research, passive design is defined as traditional sustainable building design strategies that favor the use of available climatic resources such as the sun, rain or wind.

Dwelling For the purpose of this research, a dwelling is defined as a building, specifically a house where people live.

Traditional Building For the purposes of this research, traditional buildings are defined as buildings that use common, regional, and local forms, materials, and building knowledge in construction.

INTRODUCTION

Regarding the geographical location of the typologies of vernacular architecture found in Balochistan and Sindh, their respective climatic conditions have much to contribute to the architectonics and design strategies that have evolved over the years (AlSayyad, 1995). In recent years, Pakistan has been extremely vulnerable to the effects of climate change and global warming. With the current prevalent climatic concerns of an unprecedented rise in temperatures,

excessive rainfall, flash flooding, and drought spells, the constraints concerning the documentation of established dwellings in the rural areas of Sindh and Balochistan that are retrofitted to adapt to these weather changes need to be addressed and consequently documented.

The vernacular architecture and its derivation from the cultural identity of the region being explored as a part of this research inquiry (AlSaiyyad, 1995), namely in the regions Sindh and Balochistan, is also closely related to its climate. With extremities in a climate where average temperatures exceed 44 degrees (Centigrade), a critical understanding of comprehending and highlighting the underlying influences of the vernacular oral traditions about the dwelling typologies and their materiality of the aforementioned regions is vital. To understand the process behind the evolution of dwellings in Sindh and Balochistan, the creation of living conditions over time that are acceptable to its inhabitants is also important to study (Oliver, 2003).

Keeping in mind this intricate relationship between the built environment and its people, this research inquiry explores how existing local dwelling archetypes in the highlighted regions of Sindh and Balochistan, utilize relevant vernacular passive design strategies within these dwellings and their layouts as the research methodology. The case studies that are presented in this paper look into the vernacular response to harsh climatic conditions as a derivation from the oral traditions of the local community of the afflicted areas

thereby informing the resultant building typology and material selection. The selection of the case studies as the research methodology for this paper namely the Chapper, Kothi, and Chaunro dwellings/houses is executed to understand how dwellings are conceived in such climatic environments with their available resources as an architectural response. This research exercise intends to comment on this indigenous building practice for archival and even practical purposes in the future which can then be utilized within the contemporary architectural and construction industry in Pakistan.

LITERATURE REVIEW

The Zero Carbon Culture Centre (The Makli Foundation), Makli, Sindh: Yasmin Lari.

The Zero Carbon Culture Centre (map shown in Figure 1 below), also known as the Makli Complex, is a pioneering initiative by Architect Yasmin Lari that intends to highlight the vernacular and social culture of Makli and its inhabitants (Lari, 2015). One of the main reasons why this case study has been selected for perusal is because of its geographical location and architectural response as per the site context. The culmination of the entire built semantics in the form of the Makli Foundation is a prime example of inclusive architecture that is geared towards safeguarding yet integrating the people from the prevalent and foreboding environmental concerns of the region that are a by-product



Figure-1: Map showing the location of the Zero Carbon Culture Centre in Makli. The unique location of the centre amidst a peri-urban site shows the dynamic nature of the centre.

Source: Google maps, accessed on 31/03-2024

of natural disasters. This center has been carefully curated in a rural region with multiple villages that are barren, face poverty, and lack shelter, water and sanitation services, and basic infrastructure. The complex incorporates environmental, cultural, and technical dimensions for bringing about social change that aims to eradicate the mindset of the people from a cycle of dependency to a culture of self-reliance and pride in traditional methods of dwelling and rehabilitation. Furthermore, the local integration within the construction process of this complex has also enabled the creation of a circular economy that allows them to earn from providing their services as builders, artisans, weavers, and laborers, for both men and women.

The Zero Carbon Culture Centre harbors various spaces that are not only communal in their spatial layout but are also designed to conduct hands-on workshops for locals to reinforce their workmanship skills and celebrate the vernacular heritage of the construction techniques and material knowledge that they hold as intangible knowledge (Crook, 2021). These spaces are directly informed by the intangible local oral tradition and practices that have ultimately shaped their public spaces of interaction over time, which is the main premise for Crook's (2021) suggestion for the celebration of the vernacular.

The main pavilion itself is a manifestation of the local craftsmanship paired with vernacular building methodologies and material utilization. These vernacular building techniques include the utilization of bamboo, limestone, and mud brick, all local materials that are long-term, durable, and easily sourced by the local builders themselves. As a part of the proposed strategies by the Heritage Foundation's Final Report for the Shelter Project in Sindh (2011), the main idea is to use local materials to avoid environmental degradation and to ensure the longevity of the built structures. The main pavilion of the complex takes the form of a huge hangar topped by a large, thatched roof and surrounded by bamboo screens that replicate local artisanal patterns. This is also a means for them to showcase their identity and local heritage. Throughout this complex, a variegated typology of rooftops is explored concerning their shape as a vernacular building strategy. These include flat, conical, and pitched roofs (Heritage Foundation, 2011). As suggested by the Heritage Foundation after several experiments, this roof structure also known as the 'Karavan Roof' consists of four to six bamboo joists that are placed on lime concrete ring beams on the top of leveled walls. Furthermore, these joists are constructed by local builders where it is fabricated on-site, and then installed with professional guidance from the Heritage Foundation (2011) as well. The Zero Carbon Culture

Centre acknowledges the indigenous wisdom and techniques for low-carbon and low-cost construction that responds sensitively to the climate and context of its locale. The entire development of the complex, as suggested by the Heritage Foundation in their Final Report (2011), has been a by-product of local surveys, experiments, and cross-communication between professionals and the intel from the locals of the complex.

The architectonics of the building ensures that the space remains cool and usable throughout the hot summers without any air conditioning as shown in Figures 2 and 3. Vernacular cooling techniques informed by traditional practices within the local region over time include the usage of local materials, experimentation with orientation with respect to sun direction, incorporation of courtyards, and usage of vegetation for cooling. (Further details of the environmental impact of these vernacular passive cooling strategies will be discussed in the research methodology section). Other surrounding facilities include accommodation for visitors and a series of igloo-like structures which are used as additional workshop spaces and single room shelters.

Thatched roofs, as shown in Figures 2 and 3, act as natural insulators and ventilators for internal environment control. The surrounding bamboo bracings, as shown in Figure 2, are used for structural support of the building. Furthermore, the utilization of the verandah typology, or 'sehans,' within the Makli complex amidst the surrounding igloo-like structures serving as shelter spaces, makes use of mud-plaster construction techniques, as shown in Figure 3, which aid in the overall internal climatic control. Additionally, climatic sensitivity in correlation with oral tradition is seen through the usage of smaller-sized windows instead of roof vents for sunlight and ventilation. This also aids in the reduction of thermal gain, alongside the extension of the roof structure as shading devices, to formulate semi-covered spaces, as demonstrated in Figures 2 and 3

"This complex also capitalizes on the usage of readily available local materials, namely clay soil, bamboo, and lime, to create buildings that can withstand the effects of climate change, to which the site is particularly prone. To execute this without contributing further to global warming, the sustainable properties of the materials mentioned above are paired with the idea of participatory design, where inhabitants and artisans of the complex, mainly women, contribute to the construction process and engage in self-subsistent activities such as organic soap-making and raised bed farming (Lari, 2015)."



Figure-2: Usage of domed thatched rooftops and bamboo bracings for enabling thermal comfort and structural support as a part of the vernacular building tradition.
Source: INTBAU 2019

Building construction that applies vernacular material knowledge construction i.e., of bamboo, serves as a highly durable sustainable resource that sequesters Carbon dioxide throughout its life (Heritage Foundation, 2011). Bamboo as a material allows the local artisans to easily manipulate it according to their construction methodologies informed by traditional norms (Heritage Foundation, 2011) to create contemporary architectural elements. These include prefabricated bamboo panels and cross-braced ‘Dhijji’ frames as shown in Figure 4 below.

Moreover, the type of vernacular bamboo structural framework shown in Figure 4 ensures functionality in the face of natural disasters such as allowing stilt foundation construction during flooding and providing structural support in case of earthquakes as well. Apart from bamboo, the use of lime as a building material reduces the overall carbon footprint of the built structures as it continues to decarbonate and slowly turns back into limestone.

In conclusion, the Zero Carbon Culture Centre at Makli acts as a blueprint for a shelter designed by Yasmin Lari specific to the Southern region (Sindh/Balochistan in particular) of Pakistan. This project demonstrates how rural inhabitants embody their sense of cultural identity in the built environment using traditional construction techniques. Most importantly, it is an example of creating comfortable living conditions for the people whilst instilling a sense of autonomy within them. Through indigenous materials, this ultimately results in contextually relevant and climatically responsive buildings produced by local artisans and laymen that aid in not only rehabilitation of people affected by natural disasters



Figure-3: Usage of conical thatched rooftops for enabling thermal comfort as a part of the vernacular building tradition paired with mud plaster construction.
Source: Lari, 2015

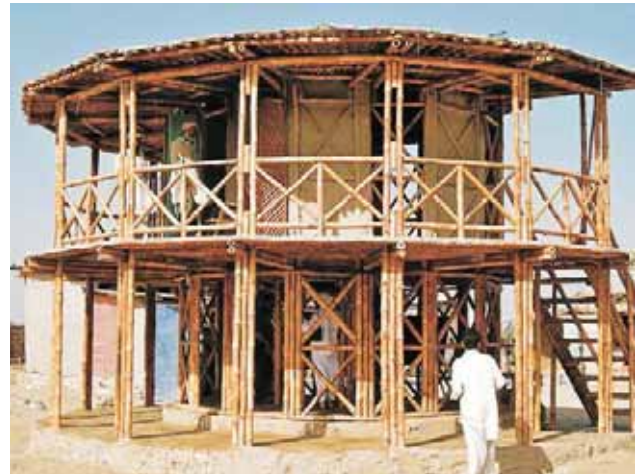


Figure-4: Employment of the ‘Dhijji’ framework at the Makli complex as a structural support system.
Source: Lari, 2015

i.e., floods and earthquakes, but also create an economic regeneration within the local community leading to improved livelihoods in the rural region.

Gourna Village, Luxor, Egypt: Hasan Fathy.

Hasan Fathy’s project of renewing the Gourna Village at Luxor is a potent example of how he transformed the village settlement for the better whilst staying true to the Egyptian vernacular roots. Using the architectural language of the region to rekindle the Egyptian cultural identity, this project aligns with this research paper because of multiple reasons. "Furthermore, it must be noted that this case study is a classic example that has been referred to by various academics

and researchers, such as Attia, S. Ahmed*, when commenting on the vernacular built environment and climatic conditions of similar regions." This is one of the primary reasons why this case study has been examined for the research inquiry being made for this research paper.

Firstly, the geographical, climatic, and cultural context of the Gournia Village and how Hasan Fathy sought to reclaim it reiterates the importance of regional vernacularism and its deeply rooted construction methodologies. Moreover, the semblance this case study holds about the research setting of this paper is also relevant due to the commonalities seen in the climate and vernacular material culture of both regions i.e., between Sindh/ Balochistan and Egypt as demonstrated by Figure 5a and 5b respectively. The average temperature for both regions is 41 degrees with minimum rainfall overall. This substantiates the similar harsh climatic conditions of both regions under speculation and as discussed further, also creates a mutual usage of vernacular materials such as clay, brick, and mud that are climate responsive for both Egypt and Pakistan.

Hasan Fathy in this project made use of local Egyptian architectural elements, materials, and construction methodologies which not only reduced the overall carbon footprint of the built structure but also ensured a comfortable indoor micro-climate for the inhabitants of the village without any intrusion of artificial temperature controlling mechanisms.

With the help of mud construction, domes, as demonstrated in Figure 6a below, have been incorporated as a prominent visual architectural element of the village settlement. This building technology (i.e. the usage of domes, different-sized apertures, and mud as a cooling material as shown in Figure 6b) ensures that the internal thermal capacity of the buildings is kept low and consistent and promotes efficient air circulation within the buildings of the village (Figure 6b). Moreover, the mud-brick domes have been fitted with specially designed windows with small openings oriented towards the windward direction that form a steady and more pressurized wind stream.

The Gournia Village also reflects Egyptian vernacularism within the spatial planning and overall zoning of the community itself. Courtyards and an intricately woven network of pathways promote the proximity of the strong communal ties of the Egyptian community which Fathy has embedded in the redesign of the village. Despite introducing a revamping of the space, the socio-cultural traditions of the village have been given due diligence. Places of worship such as the mosque and social congregation i.e., marketplace

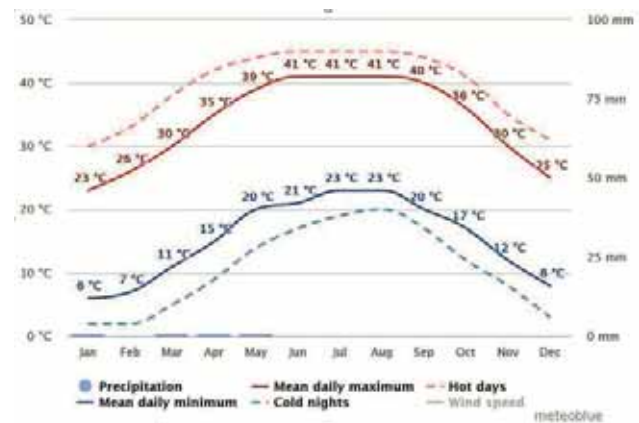


Figure-5a: The annual temperature and precipitation patterns observed in Luxor, Egypt.
Source: Meteo Blue, 2023

and theatre have been placed as equidistant epicenters on the northern side of the village from the living quarters thereby creating a sense of connection and immediacy for the people that aligns with their lifestyle as shown in Figure 7.

This Egyptian vernacularism as highlighted in the Gournia Village project is also further exemplified via the domain of participatory design as observed in the previous case study of the first literature review. Being a predominantly communal setup, the presence of grouped activities focused on the employment of local craftsmanship is a pertinent theme of the rural region and is also seen evidently in Luxor as well. The integration of the local village members in the construction and redesign of the Gournia Village project also created a similar means of employment for the poverty-stricken individuals. Moreover, this mechanism instills a sense of cultural pride in the people and serves as a means of restoring and preserving their Egyptian vernacular heritage. This aspect of participatory design does not only align with the design methodologies for the previous case study (The Zero Carbon Centre by Lari) but also aligns with the ideology and design conception behind the case studies that are further discussed in the research methodology section of this paper.

In conclusion, this case study as a part of the literature review has close ties with the vernacular and climatic context under speculation of this research paper. Ranging from the similarity in material culture, specifically baked bricks and mud plaster construction, in addition to the harsh climatic conditions (primarily higher temperatures with low annual rainfall) and a socio-cultural context where the concept of 'pardah' privacy is also enunciated, the Gournia Village proves to be a relevant exemplar to this research to

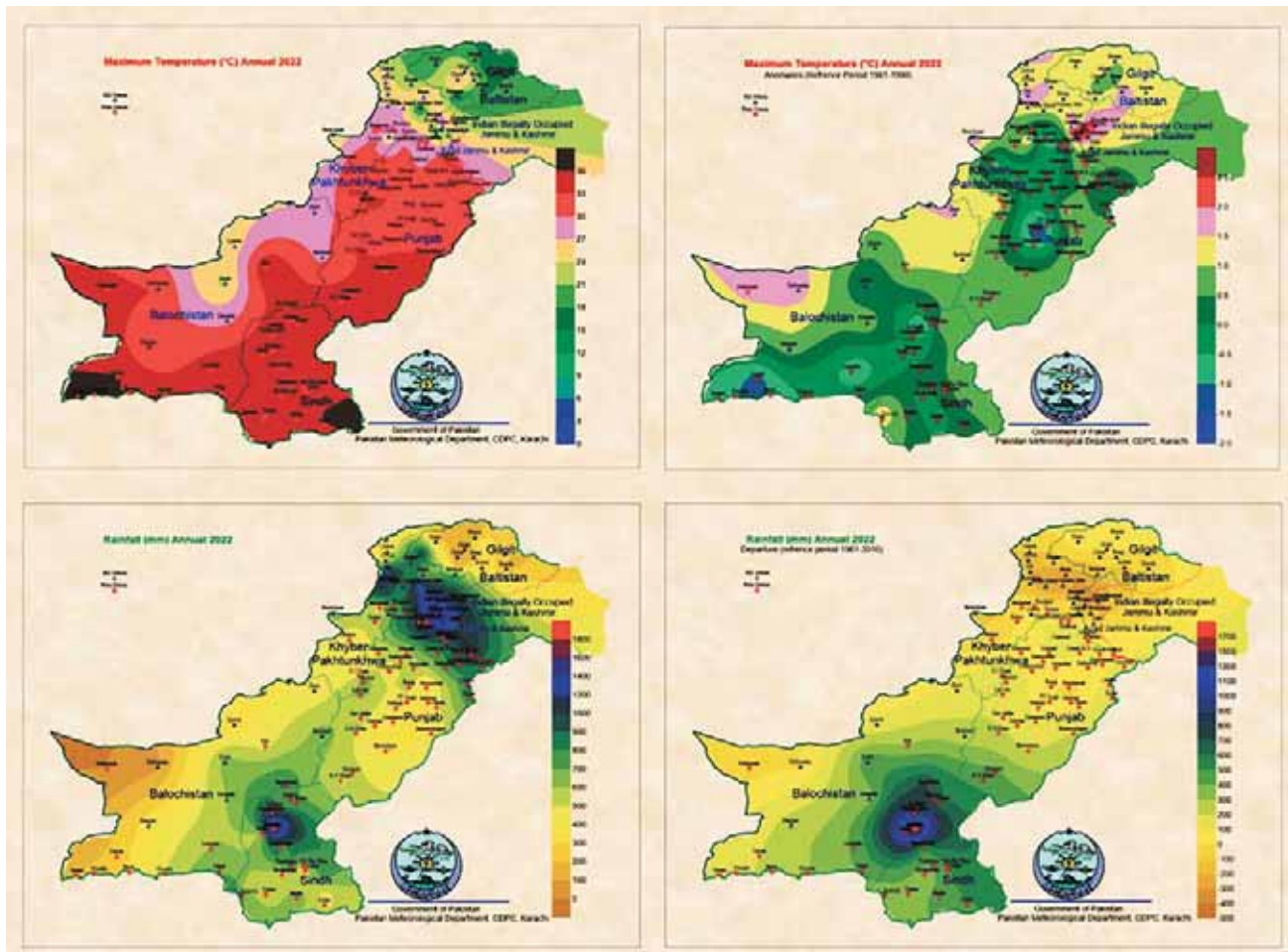


Figure-5b: The annual temperature and precipitation patterns as observed in Sindh and Balochistan.
Source: Pakistan Meteorological Department, 2022



Figure-6a: Mud domes with smaller sized apertures ensure a more pressurized wind stream.
Source: Laylin, 2010

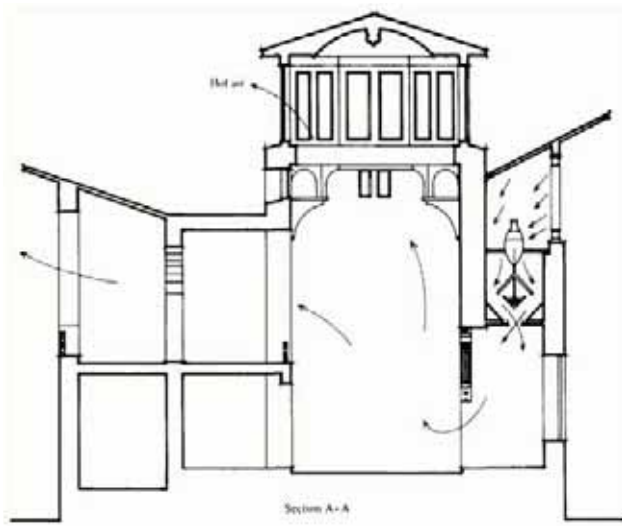


Figure-6b: Mud domes with smaller sized apertures showcase air flow within the building complex.
Source: Laylin, 2010

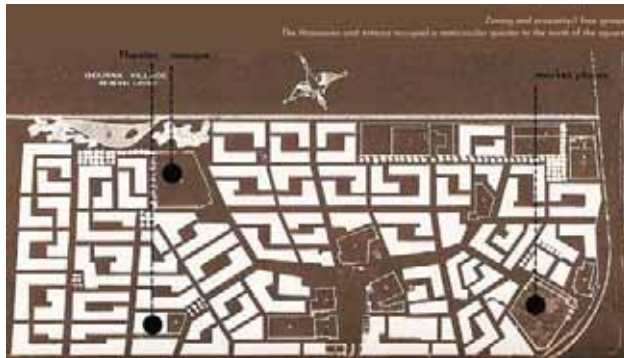


Figure-7: The master plan of Gourn Village illustrates the spatial zoning of the dwelling units and the social spaces stitching them altogether
Source: Vault, 2010

comprehend the vernacular traditions and their impact on dwellings in the context of the Balochistan and Sindh regions in Pakistan.

Context: Climate, Topography, and Living patterns

Analyzing the physical context of the research setting in Balochistan and Sindh regions of Pakistan, these areas face harsh climatic conditions characterized by wavering summer temperatures of an average high of 45 degrees as shown in Figures 8a and 8b respectively in Sindh and Balochistan.

These high temperatures as shown in Figures 8a and 8b have resulted in unprecedented disasters which prove to be fatal for the inhabitants of the area. As such, understanding the prevalent conditions of this region and evaluating them to create dwelling units based on oral traditions that are responsive to their region's climate is imperative. Both regions being examined are known for their persistent hot temperatures, socio-cultural tribal lifestyle, and proximity to the Western Mountain ranges of Pakistan's barren terrain.

"With temperatures set to surge in the coming years due to the increase in global warming, the sun's position and daylight in Sindh and Balochistan, as demonstrated in Figures 9a and 9b below, indicate that direct sunlight is observed during the daytime for up to 9 hours on average. This not only intensifies the harsh and hot weather of the region but also increases the need for locally informed active and passive cooling techniques, as well as shading devices, to be integrated into the built fabric of the rural settlements". Furthermore, the intense sunshine hours paired with the lack of cloud cover, shade, and little rainfall from both the Monsoons and Western Depressions, the harsh climatic condition of the region stated earlier is substantiated.

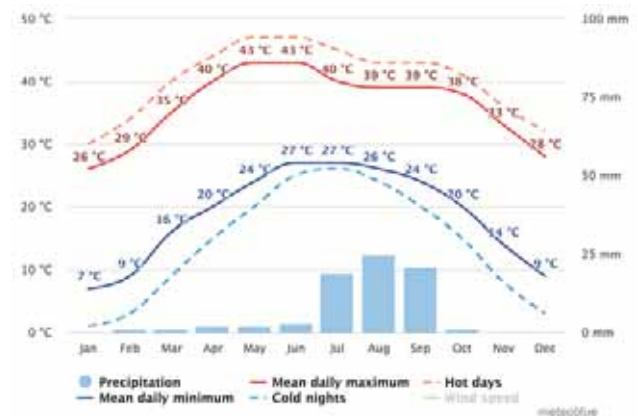


Figure-8a: Temperature variances for Sindh demonstrate arid climatic conditions throughout the year.
Source: Meteo Blue, 2023

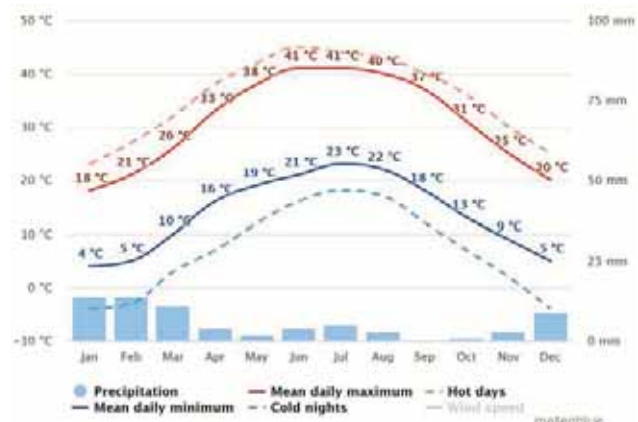


Figure-8b: Temperature variances for Baluchistan demonstrating arid climatic conditions throughout the year.
Source: Meteo Blue, 2023

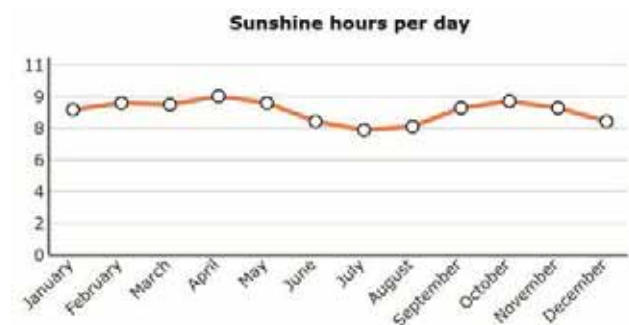


Figure-9a: Sunshine hours as observed in Sindh annually which shows April as the sunniest month of the region creating an overall hot climate with no cloud cover.
Source: World Data 2023.

Concerning the local vegetation of the area, the abundance of Babul trees as forests alongside grass and shrubs serves as a potential local material for construction in the region. However, in contrast, one sees the lack of wood in the Balochistan region which is made up for by the presence of soil with a higher clay and sand content thereby enabling efficient local construction through mud-clay brick. Moreover, the sedimented soil in this area also provides structural support for the consequential vernacular construction methodologies which have been further elaborated upon in the research methodology section of this paper.

Regarding the socio-cultural setup of both regions, one observes a predominantly tribal setting with a rich history of tradition. The cementing factor of the living patterns of the people of both Balochistan and Sindh is their religion and cultural traditions, which provide a base for their community, social order, and most importantly the architectural style of the built environment and spatial semantics of their vernacular dwelling spaces.

Decoding the traditional values that contribute to the creation of a familiar environment for the inhabitants of the region (Nanavati, 2018) is derived from the fundamental rulings of the spatial semantics of their dwelling spaces. This includes the concept of 'pardah' or segregation between the males and females and the utilization of recreational activities as a means of knitting together the village community. The determining process of the anthropometrics of their dwelling spaces is done so concerning the size of their families, cattle, and utilization of living areas which is based on their traditional foods and cooking methodologies. Being a tribal setting where families live in proximity, barricading their private quarters with exterior walls of mud and stone to add further security and privacy to their villages is also seen. Nomadic tents with the use of reinforced fabric are also common materials used which add to the living comfort of the rural community (Oliver, 2005).

When analyzing the independent vernacular in the vicinities of Sindh and Balochistan, the predominant overall characteristics of the settlements (Government of Balochistan Secondary Education Department, 2019) can be traced back to the typical features of their respective rural dwellings. The most apparent spatial qualities that are observed in the vernacular dwelling units that are a derivative of the local culture, as shown in Figure 10 include the presence of connectivity between interior spaces through partitions, inculcation of 'pardah', centralization of communal zones and a very distinct divide between the public and private zones.

The spatial planning and quality of the aforementioned living spaces as shown in Figure 10 directly correlate with the thermal capacities of the household located in a region facing constant hot climatic conditions. The incorporation of vernacular architectonics in these dwelling units such as the orientation of the dwellings, *verandahs*, *Jharoka's*, *Mashrabiya's* (screens), courtyards, and *Mangh*, all enable thermal comfort (Laghari et. al., 2019).

Paired with these vernacular construction techniques and the use of locally sourced materials that are also climate

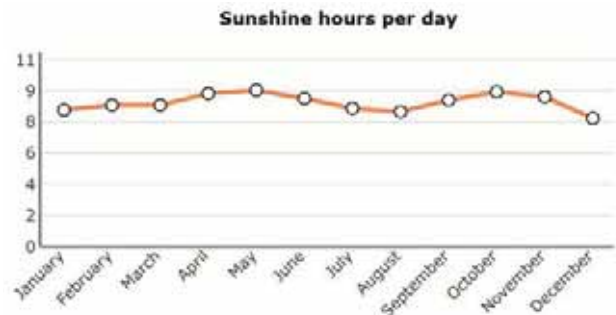


Figure-9b: Sunshine hours as observed in Balochistan annually which shows May as the sunniest month of the region creating an overall hot climate with no cloud cover.
Source: World Data 2023.

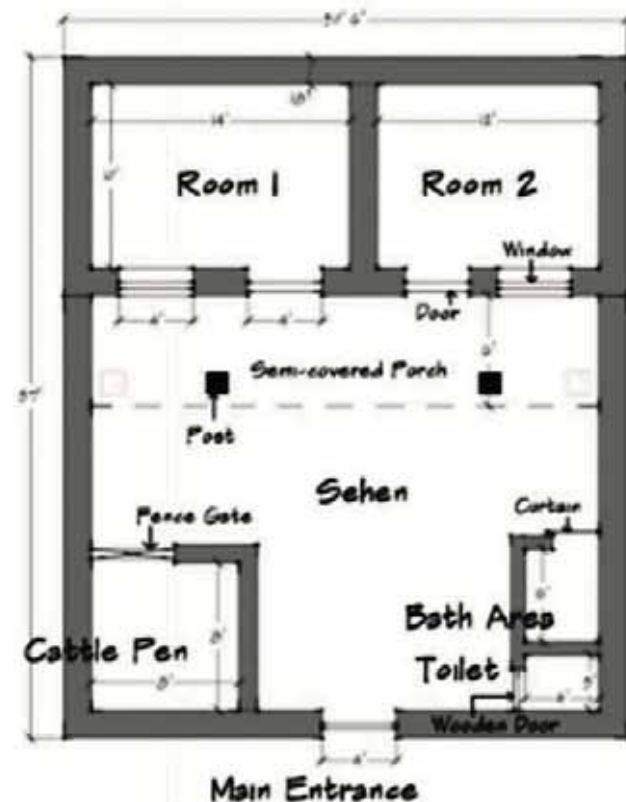


Figure-10: Typical Adobe house plan observed in the rural areas of Sindh.
Source: World Housing Encyclopedia, 2012

responsive to the region of Sindh and Balochistan, the sense of space within a rural setup is further enhanced both tectonically and visually (T, Bahari).

VERNACULAR TYPOLOGIES

Three types of vernacular rural dwellings in Sindh and Balochistan are analyzed: Chapper House, Kothi House, and Chaunro House.

Chapper House

The Chapper House is a basic house type commonly found in rural Sindh. It generally consists of one or two rooms called *Landhi*, with a courtyard and a verandah acting as a passive cooling strategy. An informal kitchen space is located in the courtyard in the shade of a verandah or a tree. The courtyard also houses the cattle pen. The overall compact design of the house minimizes the total surface area exposed to the harsh sun thereby ensuring thermal comfort within the house as well. Additionally, the non-habitable spaces of this housing typology are placed towards the East-West orientation that receives maximum daylight (Safiruddin, 2005).

The Chapper house is categorized into three types based on its construction materials and techniques.

- Bamboo Chapper House, where walls are constructed of bamboo and plastered with mud and husk. Wooden logs are used for the roof framing, filled with a layer of *sar* and *kanna* and plastered with a layer of mud as shown in Figure 11.
- Mat and Log Chapper House (Figure 12), where walls are constructed using wooden framing, covered with matting, and plastered with mud. A hip-roof frame is constructed with matting laid over a wooden frame, which is then covered with *sar* and *kanna* for protection against heat and rain.
- Mat and Mud Brick Chapper House (Figure 13), constructed with mud bricks, laid in with mud and lime mortar and plastered with a mixture of rice straw and mud to provide strength and insulation. The roof is constructed using a wooden frame, covered with a layer of thatch matting, and plastered with mud and straw for protection against rain and heat.

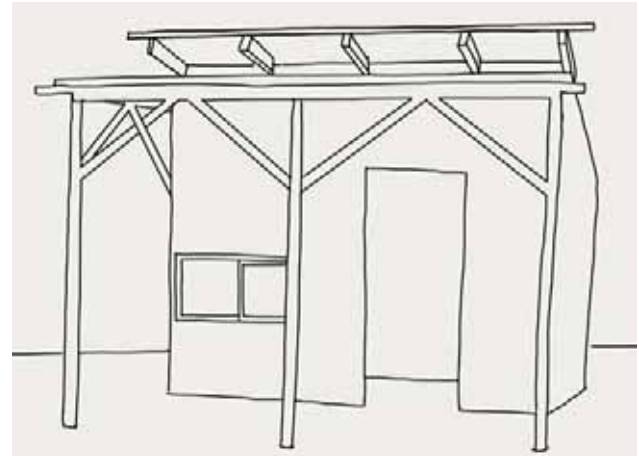


Figure-11: Visual Representation of the Bamboo Chapper House.

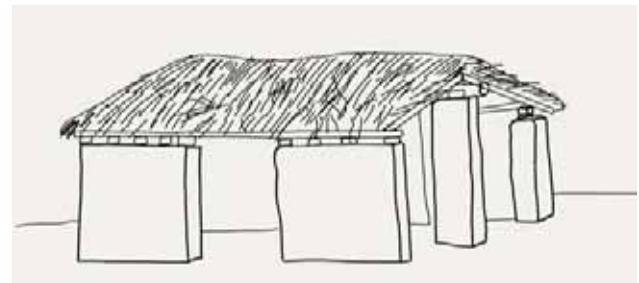


Figure-12: Visual representation of the Mat and Log Chapper House.

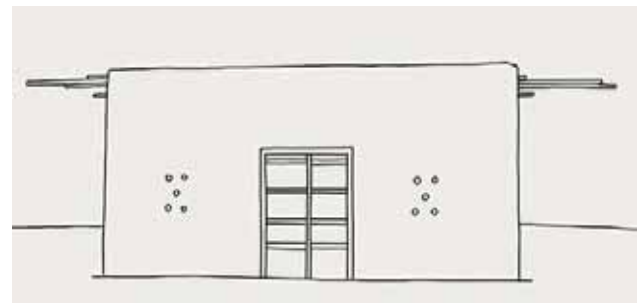


Figure-13: Revisualization of the Mat and Mudbrick Chapper House.

KOTHI HOUSE

Kothi house, constructed of mud brick with a thatched roof, is a vernacular house typology of rural Balochistan. It generally consists of two rooms with a verandah in front serving as the living room. A courtyard extends beyond the verandah and serves as open space for the family under the shade of the trees. The courtyard also houses an informal kitchen and cattle pen. Apart from serving as the main design feature and dwelling space, the courtyard is also used here as a passive cooling strategy to reduce heat gain (Safiruddin, 2005).

The Kothi house is categorized into three types based on its construction materials and techniques.

- Mud Kothi House is constructed of mud walls and a flat thatched roof. The walls are constructed using wooden framing, filled with a mixture of mud and rice straw. Wooden logs are used to build a frame for the roof, on top of which wooden planks are laid out and plastered with a mixture of mud and rice straw. As visualized in Figures 14 and 15, the interior layout of the house is also simplified to fit the basic square shape of the structure (Keinay, 2010) keeping in mind the rudimentary nature of the building materials being utilized.
- Mud brick Kothi house (Figure 15) is constructed of mud bricks and mud plaster. The walls of this house are constructed using sun-dried mud bricks. Girders and wooden planks are used to provide strength to the walls. Tiers are laid over the girders to provide framing for the roof. Mud bricks are laid on top and plastered with mud and straw to provide strength and protection from rain and heat.
- The baked brick Kothi house (Figure 16) is constructed of baked bricks laid in cement, using tiers, girders, and wooden logs as support, and plastered with cement. The roof is built using a framework of tiers and girders, over which a mixture of cement, sand, and brick powder is poured. The use of baked or fired bricks in dwellings may be an indication of relative prosperity. They may also be an indication of caste, as well as class distinctions.

Chaunro House

Chaunro house, as shown in Figure 17, is primarily a round structure with a conical thatched roof. It categorizes itself within the vernacular house typology of the Thar desert. The round structure of the house helps to deflect strong desert winds. It generally consists of one or two rooms, and a courtyard encircled by a bush fence. The structure is built using a mud brick or wood foundation, with mud-brick walls covered with a layer of cotton plant sticks, dry grass, and mud plaster. A conical roof is constructed using a wooden frame. Wooden sticks, straw, hay, and grass are laid over the roof frame and tied with ropes (Safiruddin, 2005).

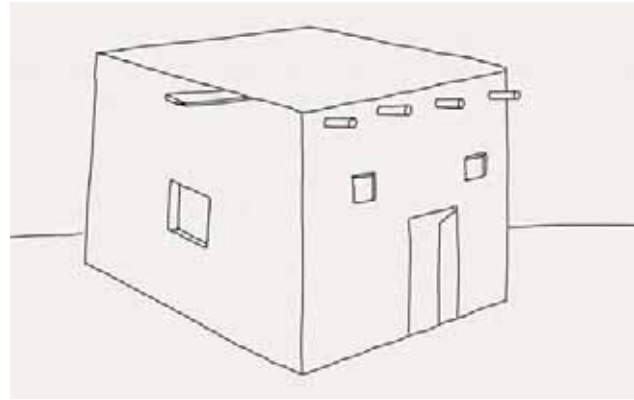


Figure-14: Mud Kothi House.



Figure-15: Mud Brick Kothi House.

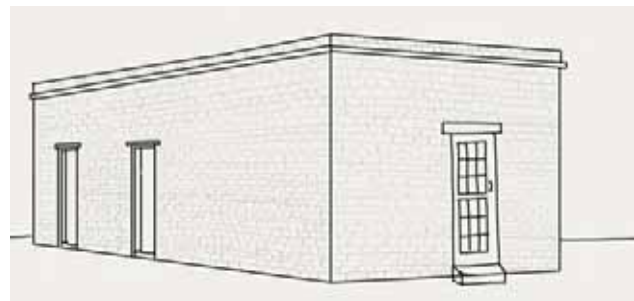


Figure-16: Baked Brick Kothi House.



Figure-17: Chaunro House.

PASSIVE DESIGN STRATEGIES

Courtyard and Verandahs for Passive Cooling

The courtyard and verandah, in the vernacular typologies discussed above, serve as passive cooling strategies by providing shade and encouraging natural airflow, which helps to lower the indoor temperature. Additionally, the verandah is designed to face a dominant wind direction to maximize shade and airflow and to optimize passive cooling effects.

Use of Natural Materials

The vernacular houses mentioned above are constructed with locally available materials such as mud bricks, wood, dry grass, thatched roofs, and mud plaster, which have high thermal mass and insulation properties, contributing to passive cooling and thermal comfort. These materials provide natural insulation, keeping the interior cooler in hot weather, reducing the need for mechanical cooling systems, and enhancing sustainability while reducing embodied energy and environmental impacts.

Orientation and Layout

Placing non-habitable spaces towards the East-West orientation in the Chapter house allows them to receive maximum heat during the day, reducing the need for cooling during the day and enhancing energy efficiency. Additionally, the overall compact design of the vernacular houses reduces the total surface area exposed to the sun, thus minimizing heat gain and ensuring thermal comfort indoors. Furthermore, the round shape of the Chanuro house is designed to deflect strong desert winds, reducing wind pressure and minimizing heat loss through convection.

Vegetation for Cooling

The use of vegetation for passive cooling involves strategically incorporating trees, shrubs, and plants into building design and outdoor spaces to mitigate heat. These vernacular houses usually incorporate vegetation, in the form of trees grown in courtyards, which provide shade,

reduce heat gain through evapotranspiration, act as windbreaks, and help mitigate the adverse effects of heat.

CONCLUSIONS

Extreme climatic conditions require efficient design solutions. The house typologies discussed with regards to the materials used in their construction, may also be examined for their climatological performance. These typologies, however, have not been subjected to scientific analysis. The use of these construction techniques in these particular regions is based on vernacular knowledge and tradition. According to Paul Oliver, buildings do not control climate. He argues that the materials used in dwellings, their forms, volumes, and layout contribute to the “micro-climate” a house generates. (Oliver, 2003) Most of the dwellings discussed use local building materials such as mud bricks, baked bricks, wood, clay, thatch, either sourced from the region, or produced on site, except for bamboo. These dwellings combine simple, vernacular, and passive design strategies to generate a relatively comfortable micro-climate. The regions discussed experience hot temperatures during the day and cooler temperatures during the night. The courtyard shaded by native trees and vegetation contributes to regulating the micro-climate of the dwellings and provides an outdoor living space for the family. Trees are important climate modifiers. Moisture in vegetation helps reduce air temperature through evaporative cooling, while transpiration of leaves assists in lowering temperature and increasing humidity levels in hot desert temperatures. (Oliver, 2003) The courtyard is also used by people to sleep during the night when the temperatures cool down. Adobe walls, when exposed to the sun, absorb the heat, and slowly transmit the heat to the interior. The thermal mass of adobe and mud plaster keeps the interior cool during the day. Even though little scientific investigation and data exist on thermal comfort achieved using adobe and mud plaster in these dwellings, their continuous use in traditional dwellings may suggest that they may be effective in achieving thermal comfort. Grass, straw, and plant sticks are efficient cladding materials for walls and roofs, often tied together or used in combination with mud plaster. Thatch, widely used in the roofing of these dwellings, is resistant to water penetration and provides a thermal barrier due to its poor conduction of heat.

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NEGOTIATING ARCHITECTURAL FRATERNITY AND CHANGE

Suna Guven*

KEY NOTE ADDRESS

On a gloomy, downcast day earlier this year in February, several thousand people flowed into the open space in front of Lala Mustafa Pasha Mosque in the port city of Famagusta (Gazi Ma?usa) in the northern part of Cyprus (the Turkish part). And more kept coming. People not only from Famagusta but also other towns and villages from all over the country were continuously pouring in from every street leading to the religious building in the center of the old town. Eyes were teary and the air was heavy like lead. Despite the enormous shuffling and moving crowd, no talking was heard, the only sound being that of intermittent muffled sobs and silent crying.

For the casual onlooker, the resplendent, soaring, vertical Gothic façade with the tell-tale rose-window, finely carved triple portals, towers above the aisles and traceried gables might suggest a locale in France, or somewhere in Europe. As described in her survey book, *Medieval Architecture* published in the renowned Oxford History of Art series, Nicola Coldstream traditionally assigns buildings such as these to a religious culture defined by Christianity. She also adds that this spiritual and rather authoritative style of Medieval European architecture "existed, and still exists, outside western Europe". And her spectacular illustration chosen to make the point - Figure 3 on p. 13 - is no other than the former Latin Cathedral of St. Nicholas, now Lala Mustafa Pasha Mosque in Famagusta, a seaside town in the easternmost island of the Mediterranean boasting a prosperous medieval past.

So, contrary to what one might expect at first glance, the site on the screen is not in western Europe, nor are the people gathered there of Christian faith. Needless to say, the religious services and prayers are not to Christian saints either. As the minaret informs, this is a mosque converted from the 14th c. medieval cathedral of S. Nicholas when the Ottomans



Figure-1: February 2023 People Gathered in Front of Lala Mustafa Pasha Mosque, Famagusta, Cyprus.

took hold of Cyprus from the Venetians in the 16th century. While the style and frontal impact of the impressive façade have remained largely the same, liturgical modifications in the interior which include the addition of features like the mihrab (prayer niche in the direction of Mecca), mimbar (pulpit) and mahfil (private pew) in order to meet the requirements for Islamic worship were incorporated later.

For nearly five centuries now, the Islamic function of this former Latin building as a central location of prayer has been in uninterrupted daily use. Inside the church, the vaulted ceiling had once evoked the canopy of heaven for Christians. Today Muslim men and women in Famagusta continue to pray under the same original groin vaulted Gothic ceiling of the converted mosque. What is more, and I would like to emphasize this, they do not appear to have qualms such as having had to make do with a less than appropriate spatial or functional quality in their current Islamised religious setting. Their non-custom made space for praying still bears highly conspicuous architectural traces of a Christian religious building type in design and decoration well-known and recognized wherever in the world.

* Ph D., Professor, Middle East Technical University, Ankara, Turkey.

By any standard, the physical difference, especially in the outward appearance which is clearly associated with another religious faith is hard to miss here. This tolerant attitude toward embracing difference may be clearly attested by the longevity of religious use - and still continuing - under Islam. Here I would like to add that brand new mosques built outside the walled city of Famagusta have not put the older, converted mosque of Lala Mustafa Pasha out of use. Elsewhere on the island too, there are numerous instances where mosques converted from former standing Christian churches continue to be used alongside new constructions. Interestingly, the boom in building new mosques in great scale with multiple minarets in the Turkish Republic of North Cyprus in recent years has not favored modern design like Vedat Dalokay's Faisal Mosque in Islamabad but a more traditional outlook like the Hala Sultan Mosque in Nicosia. But this involves an agenda beyond the scope of my presentation today.

Now back to the congregated crowd standing patiently in monumentalized solidarity. The people in the crowd are mostly, if not entirely Turkish Cypriot Muslims. Parents, families, friends, neighbours, citizens, they were all there and united in bidding farewell to the departed souls of the champion basketball team of local pride that tragically perished in the devastating earthquake in southeastern Turkey where thousands were killed or went missing. Young boys and girls, now collectively known with the affectionate epithet, *Şampiyon Melekler* - Champion Angels - were in a national tournament, accompanied by their coaches and class teachers in southeast Turkey when the earthquake struck. In the early hours of the morning, in only a few seconds, they were buried under the many tons of pulverized rubble from the demolished hotel where they were staying. The infamous Isias Hotel in Adıyaman, Türkiye, had crumbled like sand, destroying hopes, visions and futures for all involved.

My aim here is to highlight the significance of place in this poignant but resilient gathering and its setting. Because what is unusual in this case is not the communal cohesion itself but the discrepant setting which became the stage for this cohesion. The agency in this process warrants exploration. So, what does this particular episode signify in architectural history?

To begin with, very often in architectural history, we tend to concentrate on segmented analysis which facilitates definition, classification and the understanding of salient characteristics in structuring a plausible and sustainable narrative based on facts and rational thinking. Hence,

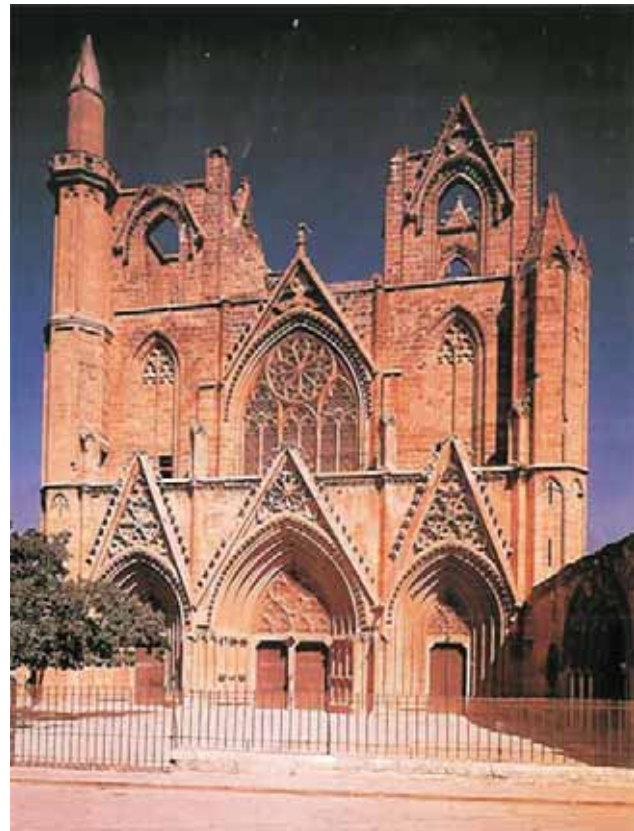


Figure-2: St. Nicholas Cathedral, c. 1300, Now Lala Mustafa Pasha Mosque, Famagusta, Cyprus.

medievalists, or Ottomanists studying the Lala Mustafa Pasha Mosque will usually see the building through the lens of their own area of expertise. They will try to identify what is Gothic or Ottoman and the degree of convergence or aberrations from the norm that will enable the construction of understandable historiographic narratives. While this is undoubtedly necessary in establishing, clarifying and confirming individual issues of style and dating, it is a somewhat myopic scholarly endeavor which tends to obscure underlying continuities. For me, one of the most powerful expression of architecture resides in the capacity of any building to endure change. Acknowledging this brings a more kinetic vision and expanded ways of viewing architecture than traditional pigeon-holed perceptions. Yet more pluralistic thinking with multi-focal lenses is not simply to expect or hope for Christians and Muslims living together or building churches next to mosques. It is a mindset that allows the co-habitation of hybrid forms of memory where there is room to accommodate difference where change occurs.

The mosque of Lala Mustafa Pasha does not exist without the eye-catching presence of the former cathedral. In reverse, the material existence of the cathedral has not disappeared with its conversion to a function it had obviously not been designed for initially. Needless to say, history is full of examples to the contrary where mosques and churches have been ruthlessly razed to the ground with the explicit aim of rupture, obliteration and erasure of everything reminiscent of the by-gone era to be replaced by what is desired for the future. Famagusta clearly does not belong in this category of enforced oblivion. On the contrary, what can be observed in the Lala Mustafa Pasha Mosque is an enhancement of physical continuities. If we consider that buildings exist both in the mind, as well as on the ground, then the power of architecture in binding memories together and giving them flesh through its materiality becomes apparent. In this sense, architecture has the capacity to act as repositories of memory. Here I might mention that for the Romans in particular, as indicated in the rhetorical treatise *De Oratore* of Cicero, training techniques for memorizing speeches involved architectural associations. In other words, orators imagined architectural spaces in compartmentalizing and learning their speeches by heart. Given the power of architecture in shaping experience, it becomes apparent that the intuitive nature of "place" cannot be adequately understood within the limited frameworks of formal spatial models only. The "spirit of the place" has to be taken into consideration. And this is where the "genius loci" according to Christian Norberg Schulz is constructed by the combination of "meaning, identity and history."

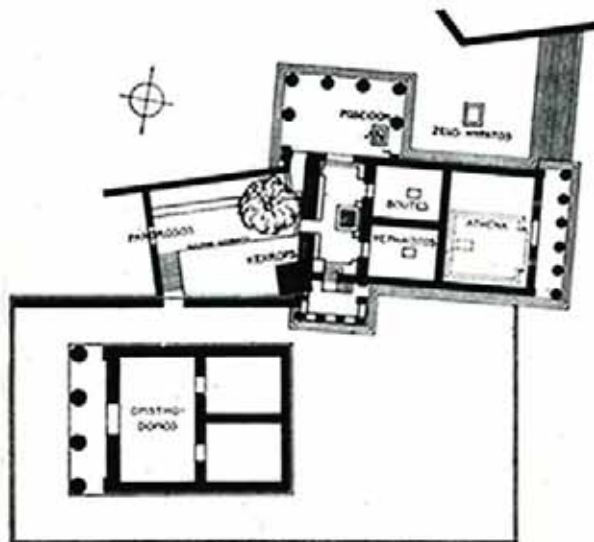
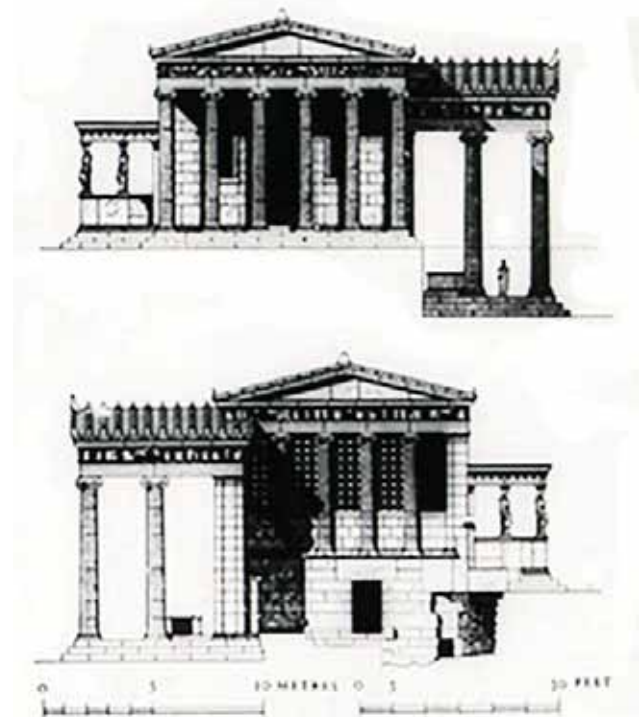


Figure-3-4: Erechtheion, Plan and East, West Elevations.
Source: Dinsmoor 1975 p. 188, p.192

In the solemn congregation of masses of people awaiting the coffins of the Champion Angels in Famagusta, there are no saints or angels in the literal Christian sense. Yet the spirituality of dead souls departing from the land of the living in the prime of youth and at the peak of national success pervades the air. Their spirituality merges with that of the Moslem sacred ritual emanating from the converted mosque. The resilient materiality of the building had endured change over several centuries. While the building itself withstood the ravages of time where it had always been, it was the change in religion and society that grew once again around the same core when Christian became Moslem. Residents of Famagusta today including the Champion Angels also lived and grew up in the same town with the center dominated by the majestic architectural presence of the now Lala Mustafa Pasha Mosque. People forget. Memories may also overlap and change over time. But the imprint in the collective consciousness of the unprecedented funeral in Famagusta and the memory of the Champion Angels become enhanced, in a way immortalized, through the continuities that resonate in the resilience of architecture.

At this point, I would like to make a dramatic chronological shift and turn the clock back to classical Athens in the fifth century B.C. On the screen, you are now looking at the site



of the Erechtheum on the Acropolis of Athens. As I am sure you all know from your traditional surveys in architectural history, the Erechtheum is a structure that defies the idealizing design aesthetic of ancient Greek architects which resides in striving for ever greater perfection and refinement in the correct use of the different orders, Doric and Ionic in particular.

From this point of view, the Erechtheum is a temple that looks like no other in the ancient Greek world. In fact, it does not even look like a temple but rather, it seems to consist of a conglomerate accumulation of conspicuously disparate architectural entities derived from and also representing several different temples, shrines or holy spots. Built entirely in Pentelic marble, the running frieze with gay coloured figures attached on black Eleusinian marble functions as a unifying element. Otherwise, the Ionian style throughout manifests a chequered application with a melange of both free-standing and engaged columns having no uniformity of overall scale and which possess miscellaneous dimensions in diameter with variegated surface articulation, all coming together in the same structure. Above all, there is no peristyle. Four entrances at different levels allow access from the outside while subterranean corridors facilitate connection between irregular but specific cultic spaces inside.

In Greek temple design, normally, the aim is to attain the best elevation, layout, scale and proportion in traditional architectural elements. At least, that is what I myself and others I know, have taught for years. Creativity or originality for its own sake is usually not an issue to pursue for the conservative-minded ancient Greek architect. Along this line of thinking, it is generally claimed that the creative impulse of the architect in the Erechtheum finds a voice through necessity rather than choice. While the ingenuity of the Greek architect in the face of adverse topography and other difficulties in the design scenario are not to be minimized, this is a rather reductive approach that overlooks the special significance of the building in negotiating afterlives. Unlike the converted mosque of Lala Mustafa Paşa in Famagusta in the medieval period, we may never be able to know the precise nature of the prehistoric or more recent predecessors here except for sacred locality. Sedimented layers of memory from the Bronze Age or Mycenaean past found an outlet in the built form of the Erechtheum that transcended the past. Through the tactile materiality of architecture, these distant mythological memories came within the range of those living in the classical present to be experienced by them.

In this god-filled land soaked with mythological figures, the challenge of architecture on the site of the Erechtheum was to accommodate all by creating bridges between the mortal and the divine. This was where Athena and Poseidon had grappled for the hold of Athens. Marks of the trident of Poseidon on the rock and his salt sea in a well were still to be seen in Roman times according to Pausanias. Athena's sacred olive tree grew in the sanctuary of Pandrosus. Again, we learn from Pausanias that the Caryatids on the south porch are carrying what Athena gave them on their heads. While this may seem like a curiosity chest of mythological vignettes thrown together haphazardly, the individual spaces they occupy rise above being neutral relics, acquire a life of their own and turn into a collective place with character through their extended continuity. My claim is that the legitimacy of the architecture of the Erechtheum lay in the preservation of these memories through architectural fraternity, not only in facilitating but ensuring their continuity in the present.

From the Erechtheum, I would now like to move on to another monument, the Parthenon, which is quite near, both spatially and temporally. Although the Erechtheum and the Parthenon are neighbours on the Acropolis of Athens, I have chosen the two for comparison in order to demonstrate quite opposite responses to links with the past. I realize that I may also be accused of arbitrary selection in highlighting episodes of my choice from the long history of the Acropolis of Athens but this is on purpose - for the sake of clarity in demonstrating different ways of negotiating with architectural fraternity. My aim is to show how the fusion of the Mycenaean and Classical past in the Erechtheum differs from the fission of the Classical and post-classical i.e. the Byzantine, Frankish and Ottoman past in the Parthenon as restored and visited by thousands today. What is displayed for the perception of all who go there today, is the pristine, polished and sanitized glory of the classical era. This is an outcome of the surge in patriotism and the process of nation-building in Greece after its independence from Ottomans in 1820. And this goes hand in hand with Eurocentric archaeological ideals in positioning Greece within an elevated status in European heritage. Seen from this angle, investing a more conspicuous place of significance for the Parthenon as the quintessential peak of the Doric style in the Periclean era is understandable. But it should not be forgotten that Romans, Byzantines, Franks and Ottomans were also present in the biographical lineage of the Acropolis.

On the screen are engravings and reconstructed views of the Acropolis of Athens from different times of the Ottoman post-classical era. Minarets are there. A mosque constructed

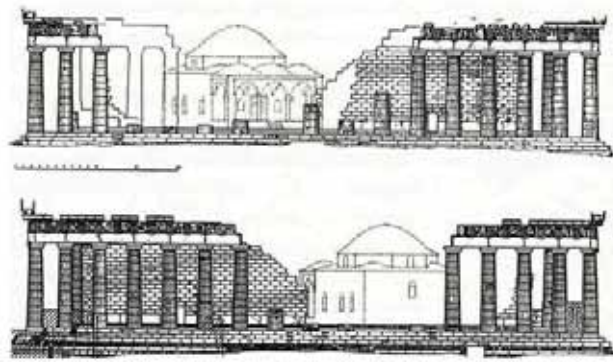


Figure-5: Section, Acropolis, Athens, Temple and Mosque.

during the late 17th or early 18th century can be seen within the cella. This was also used as a museum but was demolished during the clearance of the Acropolis. Within the current archaeological landscaping, it so appears that there is no intention, nor any desire to provide a panorama with multiple pasts via the site of the Parthenon in the long history of the Acropolis. Hence, in contrast to the Erechtheum where ethereal distant pasts are fused and brought together in a unique architectural solution, the architecture of the Parthenon rises above deliberately erased pasts with unchallenged splendor.

What the Parthenon may be for Greeks on a scale of universal archaeological heritage, the Res Gestae, sometimes known as the Queen of Inscriptions, may be said to be the same for Romans. It is the only surviving document about the deeds of the first Roman emperor, Augustus, written from his own mouth in the first person. There is no surviving copy in Rome where one would expect it to be. This important document of universal significance due to its being a testimony pertaining to the foundation of an Empire that once ruled all over the Mediterranean (Mare Nostrum) is found inscribed on the walls of the Temple of Augustus in Ankara, Türkiye. There is a copy in Latin at the entrance of the temple and a Greek version along the south façade. And we know that there once was a copy inscribed by the entrance of the Mausoleum of Augustus in Rome, only because the Latin inscription in Ankara says so.

So, the Temple of Augustus in Ankara and its precinct is the third monument I would like to show to you. Unlike the conversion of Lala Mustafa Pasha Mosque, the fused hybridity of the Erechtheum or the deliberate erasure in the restored Parthenon, the site of the Temple of Augustus in Ankara reveals an extraordinary instance of in situ remains where one can see the transparent chronological layering of the extant heritage. This is a precinct where the Temple of Augustus and the Mosque and türbe of Hac? Bayram-I Veli



Figure-6: Hacı Bayram Veli Mosque and Augustus Temple, Ankara. Source: Author

stand side by side. In the religious life of Ankara today, funerals and daily prayer bring sizeable crowds to the area especially on Fridays. Worshippers coming to the mosque intermingle with local and foreign visitors to the temple.

Without doubt, the degree of material continuity involving more than one culture impregnates the site here with the evidence of human experience from the Phrygian, Hellenistic, Roman, Byzantine and Ottoman to the present, all in the same location which points to an uninterrupted holy aura.

Conversion of the pagan temple to the Byzantine church - like the case of the Latin Lusignan to the Islamic in Lala Mustafa Pasha Mosque - extended the religious use of the building. Latticed arched windows were carved out of the south wall, the paving of the cella was removed and lowered while the back wall was extended to create a congregational space. Inscribed crosses were believed to keep away demons lurking in the walls. Religious occupation in the same location continued in the form of Islamic worship when an iwan and underground chamber for seclusion were added after conversion to a medrese in the early Ottoman period. In the first quarter of the 15th century, the Mosque of Hac? Bayram-I Veli was built next to the Temple of Augustus. Although the temple is now an archaeological ruin, what is preserved declares an outstanding marriage of different pasts, especially through the physical contact of its north east wall with the mosque.

The Muslim worshippers spilled outside the mosque here are neither resisting nor antagonistic to the pagan monument right before them which was also once a Christian Basilica. But they are not embracing it either. Then are they tolerating it? It would be correct to say that they are largely oblivious. However, this does not change the fact that, whether conscious or not, the pagan temple is always in their field of vision. No view of the mosque in this direction is possible without this pagan monument in the background or in the vicinity.



Figure-7: Muslim Worshippers Spilled Outside the Mosque Haci Bayram Veli Mosque and Augustus Temple, Ankara.
Source: Milliyet, 19-02-2010

On a final note, I would like to reiterate that time and memory become visible through architecture. In this respect, buildings are larger than standing walls. In the bill-boards announcing concerts on the occasion of commemorating Atatürk on the screen, no picture of Atatürk is to be seen. An?tkabir, the mausoleum of Atatürk looms in the background of the posters, even though the venue for the concerts is not there but, in the park, nearby. The mausoleum here is not only a place where Atatürk is put to eternal rest but a living space through which he continues to live on through the architectural experience of the visitors at multiple levels.

Visitors to An?tkabir including families with their children and students of every age can be seen there every day of the year. Crowds reach unprecedented numbers on commemorative days. On the 29th of October this year, on the Centennial of the foundation of the Republic of Turkey, the record for a single day exceeded one million four hundred people. All came waving their flags entirely on their own accord with no official ceremony.

Oscar Niemeyer once said: "Let me tell you frankly: Life is more important than architecture. What really counts is to build a better world. I think that architecture is only a profession." Niemeyer's prognosis based on praxis may be taken much further through the history of architecture. If we realize that nothing is more consistent than change, the fraternity of architecture in negotiating capricious borders may enable more widespread utilization of pluralistic outlooks



Figure-8: Roof of Haci Bayram Veli Mosque Resting on Wall of Augustus Temple, View 1 Ankara.
Source: Author



Figure-9: Roof of Haci Bayram Veli Mosque Resting on Wall of Augustus Temple, View 2 Ankara.
Source: Author

that can navigate along continuities between past, present and future. This is not altruistic rhetoric. An ability to see through afterlives in architectural production will save traces of past architecture from becoming static entities frozen in the past but as part of an ongoing evolution of continuing architectural experience in the present.

OF BRICK AND MYTH

Holly Edwards

Reviewed by Naila Khan*

BOOK REVIEW

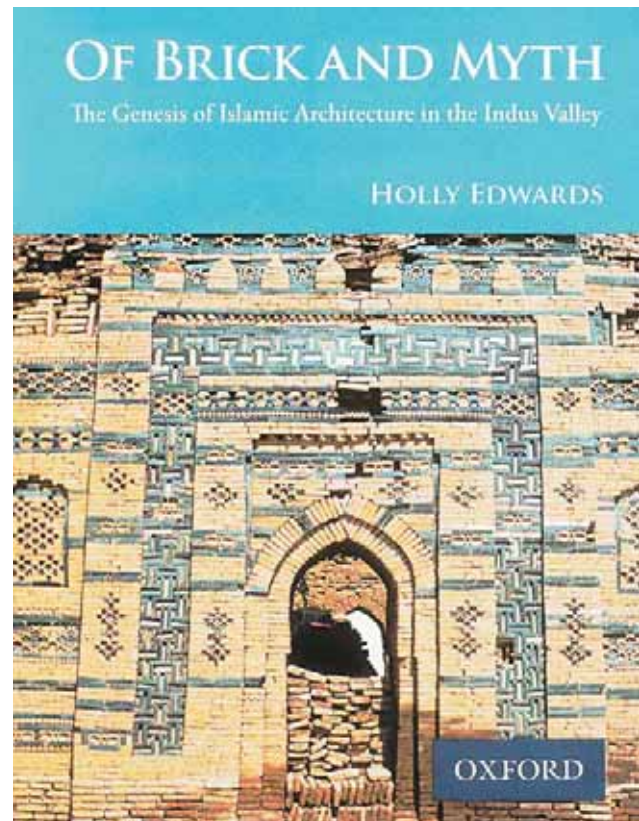
This book is a very comprehensive and detailed treatise on the birth and development of Islamic Architecture in the Indus Valley region of present day Pakistan by Prof Holly Edwards, senior lecturer in Arts Department of Williams College New York. Edwards is historian, scholar, critic and prolific writer on the subject of Islamic art and architecture, she explains in her own words: *"I am interested in the cracks between cultures and the genesis of new traditions"*. Her interests are in portraiture and iconoclasm, its perception and representation; also the study of funerary architecture in Indus valley which has resulted in the book: *Of Brick and Myth*, published in 2015 by OUP Pakistan.

This book is a body of research work that was developed over many years, the research strategy is two pronged:

1. It traces the brutal history of the Indus valley area from its pre-Islamic idol worshipping and Buddhist times through its many conflicts and wars to 14th century when Islam spread and found consolidation in the Indus valley and beyond.
2. In parallel, it addresses the earliest development of forms of funerary architecture particularly tombs, across Sindh. These simple structures developed from vernacular local traditions of simple mud brick architecture and culminated to a high quality of faience tile work, carrying influences from Afghanistan, Iran and Central Asia.

The appropriateness of the title of the book suggests and encompasses these two important strands found throughout the book: brick architecture and myths of history.

The book is a journey of historical documentation of real structures that depict multiple layers of historical interludes between local and foreign culture and building traditions. Emphasis is on the impact of a conscious and continuous



morphing of vernacular cultural traditions in art and architecture with external forces and influences brought by interactions with neighboring military encounters.

The forms of structure and styles of decoration, particularly in the funerary architecture examples, speak of this plurality and fusion of ideas. This absorptive capacity of existing secular thought aligned the development to a new identity

* Ph D., Candidate, UET, Lahore.

of the regional architecture. The shift from non Muslim to Muslim Sufi funerary architecture is the full scope of this historical journey.

The Introduction captivates the reader with an ancient anecdote about a local Raja Dalu Rai in Sindh plain, how his immoral inclinations for lust and power bring his downfall. Though this folk tale is verified by more than one reference, it is based on verbal discourses rather than documented references, which is an underlying truth for most of the historical data present for the early civilizations of Indus valley and Punjab.

The story goes like this: the lecherous raja's eyes fall on two young and beautiful maidens named Duagan (the praying one) and Suhagan (the bride) who, fearing for their captivity by the raja, engage in prayer to be saved. The prayer is answered, the river Indus a sustaining force for countless villages along its sinuous path recedes from the raja's lands and the raja is forced to leave his seat and move to a far off location. The tombs of these two girls almost identical still stand in Sukkur near the Rohri canal besides Indus. These structures date back to the earliest examples of funerary architecture in Sindh, and are constructed using mud bricks of a fine quality, square in plan with four arches on four sides capped by a dome and the interstices plugged in by four squinches. The interiors of the tombs are plain while the exteriors are textural with brickwork creating geometrical patterns. The brickwork at this early stage is of fine rendering: motifs show a geometrical complexity and sensibility of local craftsmen to morpheme with Hindu traditions that was a vernacular tradition. Recounting this tale sets the context creatively for the reader by starting a discourse on architectural development of Indus valley against historical events spanning over centuries of power struggles in the region.

The reader is introduced to different building typologies: religious and secular, resulting forms and decorative styles. Selected building examples are documented extensively in subsequent chapters both by text and graphics providing valuable insights of processes of design conceptualization in the early stages of architectural thought. The writing style of relating historical context to building form is intentional and essential to keep the reader focused in the author's objective of seeing the link between history and architecture.

In the following chapters after Introduction, the narrative is about the people and places of Indus valley; dating back to pre Islam Samaa rule of 4th cent with multi religionism at its cultural core. Speckled with wars and conflicts it is a troubled history till mid 8th cent when Sind saw a period of peace which gave impetus to its cultural efflorescence. Early

examples of funerary architecture show the much overlapped cultural and building practices prevalent with mud brick as a vernacular element of building design. Invasions by Arabs and the arrival of Muhammad Bin Qasim to Deebal establishing Dar Ul Islam, and Islam took root as a monotheist religion in a land of multiple faiths. The author also explains the ethos of Sindh by the ethnic, religious, political nature of marriages that took place between Hindu Rajputs and Sind Soomros resulting in a hybrid ethnicity and its implications on the funerary architecture that developed here.

Later chapters focus on Multan and Mansura, two historical cities that were centers of opulence and literary scholars as the new religion of Islam spread. From Afghanistan the armies of Ghaznavids in 977 ce, captured Multan and it went through transformation from idol worshipping to a city of Islam and later with Turkish interactions, finally to Sufism. Being at the crossroads of trade and pilgrimage, a continuous flow of ideas and craft skills were absorbed in local traditions refining architectural thought and establishing the fluidity of territorial boundaries. The following chapters cover more historical ground to the point when in 10th cent, after many hundreds of years of invasions of the Afghan warlords they establish their government in Lahore and pronounce it as capital city of Punjab. Yet sanctioning it a title of a monolithic Ghaznavid capital is misleading because of its variety of religious sects. The conclusion to the chapter on Multan and Mansura renounces the author's admittance to the weakness in the historical data about Multan and Lahore, stating "...it is neither definitive nor detailed: it is impressionistic and partial..."

The introduction to Islam of the Indus valley by the coming and conquest of Muhammad Bin Qasim did not entail a radical change in the social order but a revalidation of the status quo. Change was brought about conscientiously by the Ghaznavids who regularized Islamic ascendancy not by the socio cultural order but by introducing economic illustrators like gold and silver coins bearing Quranic inscriptions the use of which was carried on later to architecture.

The chapter about the Ghaurids, coming from Afghanistan centered in Ghûr mid-12th- early 13th cent, is a gem- it succinctly tells a historical tale yet engages the reader about information on buildings built by them clearly endorsing the author's objective of showing the impact of foreign invasions on the changing fabric of local architecture. The typology of a Qalaa and Qasr are discussed, a type of fortified structure that was built on difficult to access mountain tops for safety from enemy advances. One particular example shows how the design of such a building was carefully planned on the

twelve zodiac signs in astrology, aligning its openings to capture precisely the rise of the sun. Another building type was the solitary tower of circular plan, cylindrical in form and its surface divided visually into bands that bore fine textural rendering with intricate brickwork, such as the tower of Jam in Afghanistan. The mosque, mausoleum and khanqah complex is another building typology developed and built by the Ghaurids. It was a commemoration of the dead patron alongside a place of prayer, devotion, rest and provision for travelers enroute a long journey for trade or hajj purposes.

While the Qasr- Qala being a testimony of power, the solitary tower as a symbol of victory, the mosque complex had both religious and secular connotations at the core of its design. The fine points in design clearly show that the Ghaurid courts patronized learned men of scholarship and their knowledge was duly incorporated in the design of buildings. “These examples are architecturally rendered and self conscious aspirations rooted in the natural landscape.....” the author writes. The later chapter on a detailed description of Ribbat of Karmakh, consolidates the author’s position that “...architectural form was consciously developed as a tool by the Ghaurids to promote advance, consolidate and safeguard their political and social hegemony.”

Traditional burial practices in design start with an octagonal platform, with tapering walls capped by a dome with decorative squinches. The building is a single chamber with arched openings on sides, decorative mihrab and a relatively plain interior but a visually interesting and decorative exterior. However, though it shows similarities with 12th cent Ghazni with differences and irregularities, using both rough and fine bricks, confirm the involvement of local traditions and craftsmen that were not as yet well experienced. The details of the mihrab are not location or time specific, infusing local non-Islamic with Islamic traditions of Central Asia. The mihrab of Karmakh is a complex artifact in itself, the author’s incisive reading of the subtle nuances of meanings derived from its analysis is commendable. The author tabulates the tri lobed arched form from Hindu tomb traditions, Quranic inscriptions bordering the mihrab from Muslim faith, floral decorations such as the purna gatha (overflowing vase) on adjoining pillars and gavaksha (window) also from Hindu and Buddhist temples.

The selected composition of Quranic inscriptions (verse 9 of surah Tauba) are investigated on three levels:

1. Face level- seeing the inscription as randomly selected text from Quran just for decorative purpose.

2. Profoundly- seeing the text as a significant selection that correlates historical time of building with a similar parallel event described in Quran.

3. Metaphorically- seeing the text as a carefully selected and planned personal message by the patron, his understanding of the text transfer to the viewer as a personal message.

The mihrab composition is the result of conscious thought and careful planning being unique for that early time; it elevates the design thinking to a higher level of sophistication.

Although the use of calligraphic inscriptions was in practice here on epitaphs, but the use of Quranic inscriptions on building parts as conceived in Mihrab of Karmakh, had a profound impact on commemorative and religious architectural buildings such as tomb and mosque. This tradition reached far and manifested in the works such as Quwwatul Islam in Dehli and Dhaj din ka Jhonpra in Ajmer.

This perspective provided by the author is very significant in understanding and appreciating Islamic architecture that developed in North India, not only in Ghaurid dynasty but subsequently to the Tughlaq and Moghul periods. The Ghaurids had mystical tendencies that show complex relationships with Sunnism and Sufism, patronizing such renowned Sufi saints as Moeen ud din Chishti, khwajah of Ajmer, this is evident in the building projects that they undertook during their reign. “Hence the Ghaurids synthesized tribal, Muslim, regional and mystical convictions in a unity that would have a profound impact on the ethos and architecture of the Indus valley”, Edwards concludes.

The full blooming of the style is visible in the most well known shrine complex, that of Shah Rukn e Alam in Multan of 14th cent, land of the Sufi saints. It is an imposing three tiered structure in brick, topped with a large dome. The building rises from an octagonal base with tapering walls held together by cylindrical bastions. Arches and openings punctuate the walls, an ambulatory open to the sky circulates and surrounds the second story commanding the view of palm trees in the expanses beyond. The magnificence of this building is embedded in its graceful form and proportions, stage wise floors much in the tradition of the Tower of Jam, adorned with bands of ceramic tiles or glazed and unglazed brickwork. Dazzling in the strong Punjab sun, colors of blue, white and turquoise communicate the completion of a circle- a culmination of the building traditions traced from the earliest pre Islamic periods to the matured Islamic Sufi traditions in the Indus valley.

Although the author here differs from the conclusions of another renowned scholar Hillenbrand who has documented this building extensively; Edwards here hypothesizes and concludes that after penning down all the evidences of the birth and development of tomb architecture, starting from the square base plan to the octagonal base and techniques of brickwork, it shows a continuum of local tradition and craft rather than a hybridization of local and foreign roots afar in Turco- Iranian or Central Asian regions.

It is up to the reader to draw their final verdict on this- to me I tend to agree with Hillenbrand as the links cannot be easily ignored, albeit the impossibility of extricating the real truth by conjecture. So closing this discussion, I believe without going into the academic validation of whether the

brickwork and architecture of funerary traditions is more local than foreign- its impact and importance in imparting a unique identity of Islamic culture in the Indus valley, goes beyond its historical truths. Whether we approach the subject as historical myth or mythical history of the region of Indus valley- it seems to be shrouded in the fog of myth- then let it be so.

The scholarship is valuable to the student of history of the Indus valley- its art architecture and its culture and traditions knit together like a uneven yet interesting patchwork making a unified whole. The narrative is engaging and reads fluidly with anecdotes and graphics giving glimpses of a real place in a real time.



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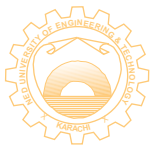
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City Campus | Maulana Din Muhammad Wafai Road, Karachi - 74200 PAKISTAN
Phone | (9221) 99213058 (9221) 32620793 **Fax** | (9221) 99213058 & 99261255
Email | jrap@neduet.edu.pk crd@neduet.edu.pk
Website | www.jrap.neduet.edu.pk



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Department of Architecture and Planning,
NED University of Engineering and Technology,
University Road, Karachi-75270.
Tel: (92-21) 99261261-68 Fax: (92-21) 99261255
www.neduet.edu.pk
crd@neduet.edu.pk