

The Kalhora Dynasty: A Period of Islamic Architecture, From the Early Throne to the Present

Rabia Khaskheli¹, and Mazhar Hussain Abbasi²

¹Lecturer, Architecture Department, Shaheed Allah Buksh Soomro University of Art, Design and Heritages, Jamshoro, Sind, Pakistan

²Master of Engineering (Mechatronics), Faculty of Engineering, University of Malaya, Kuala Lumpur, Malaysia

Correspondence Author: Rabia Khaskheli (Rabia.khaskheli@sabsu.edu.pk)

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Abstract

Since the architecture of the Kalhora period has long piqued the curiosity of academics, several works have been published examining the evolution of the style and its persistence in the region. The Mughals were retreating from most parts of the subcontinent as disturbances began to appear on the political scene in Sindh. However, during the Mughal and Kalhora periods, the methods of decorative art and architecture were essentially the same. On the other hand, buildings of the Kalhora period lack such evidence; which is generally present to varying degrees in buildings of other periods in Sindh. Here, an attempt has been made to see how the various phases of architecture during the Kalhora rule influenced other spheres of life. Along with the history of the Kalhora rule, the various stages of development of mosques and tomb architecture are also discussed, along with the new architectural features added by the Kalhoras and other patterns much admired in Indian architecture. One of its aims is to provide data on the archaeological architecture of the Indus and to be helpful to students studying archeology. Local patterns related to the construction of publications are ignored. This paper aims to address the knowledge gap about local architecture.

Index Terms: Decorative Art, Kalhora Architecture, Kalhora Period, Mughal, and Sindh Culture.

I. INTRODUCTION

The Kalhoras, who identify as the descendants of the Holy Prophet's (SAW) uncle Hazrat Abbas, traveled from Arabia to Makran in the army of the second righteous Caliph. Later, in the 12th century A.D., under Naseeruddin Qubacha's rule, they settled in Sindh [1]. However, Kalhora Dour-e-Hakoomat's author disputes this, saying that Bakhar was the center of the Kalhoras' original ownership by Sindh [2]. According to historians, Mian Odhano was the first member of the family to arrive in Makran from Arabia. He was survived by numerous children and grandchildren. The Kalhoras, who established their center near Sehwan, have a prominent name in their genealogy: Thal, who is the fifth generation of Mian Odhano. Following Thal's demise, his son Bahal, also known as Bhala, took over [3]. After becoming somewhat well-known, his son Channey Khan left Kaher Belo and relocated to Khambat Pargana, where he lived with the Odheja tribe until passing away. The Channey Khan tomb is located in Khuhra village, which is north of Gambat town in Khairpur. Gambat town is well-known for the tomb of Mian Channey Faqir (see Figure 1).

Mian Channey had eighteen sons and twelve wives. At about 1220 A.D., he founded the city of Jhangara-Bajara, which is located west of Sehwan. After almost nine generations of Mian Odhano, Mian Adam Shah Kalhoro (see Figure 2, and Figure 3) emerged and historians have records of their generation.

The majority of authors contend that Mian Yar Muhammad Kalhoro led the Kalhora dynasty in seizing political power. On the other hand, the author of Kalhora Dour-i-Hukoomat believes that the first dynasty ruler was Mian Naseer Muhammad Kalhoro, who ruled during the final quarter of the 17th century (see Figure 4) [4]. Sindh has a lot of sites related to its cultural and religious heritage that could be popular tourist destinations. The necropolis of Mian Naseer Muhammad Kalhoro, which is situated in the Dadu district's Khairpur Nathan Shah taluka approximately 28 km to the west, is one such location. This necropolis has four mosques, sixty domed buildings, and thousands of graves. Some of the tombs' domes have collapsed. Murals adorn every one of the domed buildings. The tombs of Kalhora and her supporters are located in this cemetery; most of them lost their lives in battle against the Mughals and their allies. The shrine of Mian Naseer Muhammad Kalhoro is the primary destination for pilgrims in the necropolis, drawing hundreds of his followers each day. In the third and fourth quarters of the seventeenth century, Mian Naseer Muhammad Kalhoro, the leader of Mianwal Tariqa, outgrew his forebears in terms of both religious and political authority and influence in upper Sindh. A descendant of the Mianwal Tariqa, Mian Naseer Muhammad Kalhoro (d. 1692) laid the foundation for Kalhora's domination over Sindh. The first Kalhora leader to establish the Kalhora dynasty was Mian Naseer Muhammad Kalhoro. During his leadership, he attracted more disciples. He seized control of numerous areas and instituted his rule there. He ruled over the areas that are now the districts of Larkana, Dadu, Naushero



Feroz, some portions of Nawabshah, and some areas of Jhal Magsi and Kamber-Shahdadt [5].

In 1692 A.D., Mian Naseer Muhammad passed away. After that, Mian Din Muhammad held the position until died in 1700 A.D (see Figure 5). Both Din Muhammad and Mian Naseer Muhammad are interred in Garhi, which is located west of the town of Khairpur Nathan Shah. At the time, Mian Naseer Muhammad built a university in Garhi where students received training for joining his army in addition to religious instruction (see Figure 5).

Later, Mughal Emperor Aurangzeb appointed Mian Yar Muhammad Kalhoro (see Figure 6), the successor to Din Muhammad Kalhoro, as Governor of Sibi and the surrounding areas. In the modern-day Dadu district, Khudabad is where Mian Yar Muhammad established his capital. He passed away in 1718 A.D.

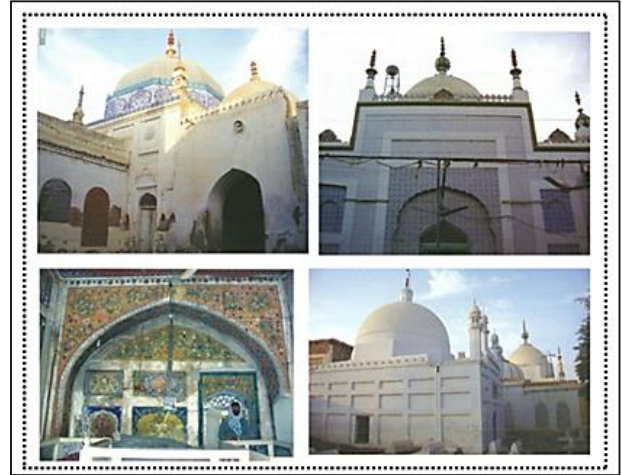


Figure 1: Perspective Views of the Tomb of Channey Khan, Gambat, Khairpur, Sindh

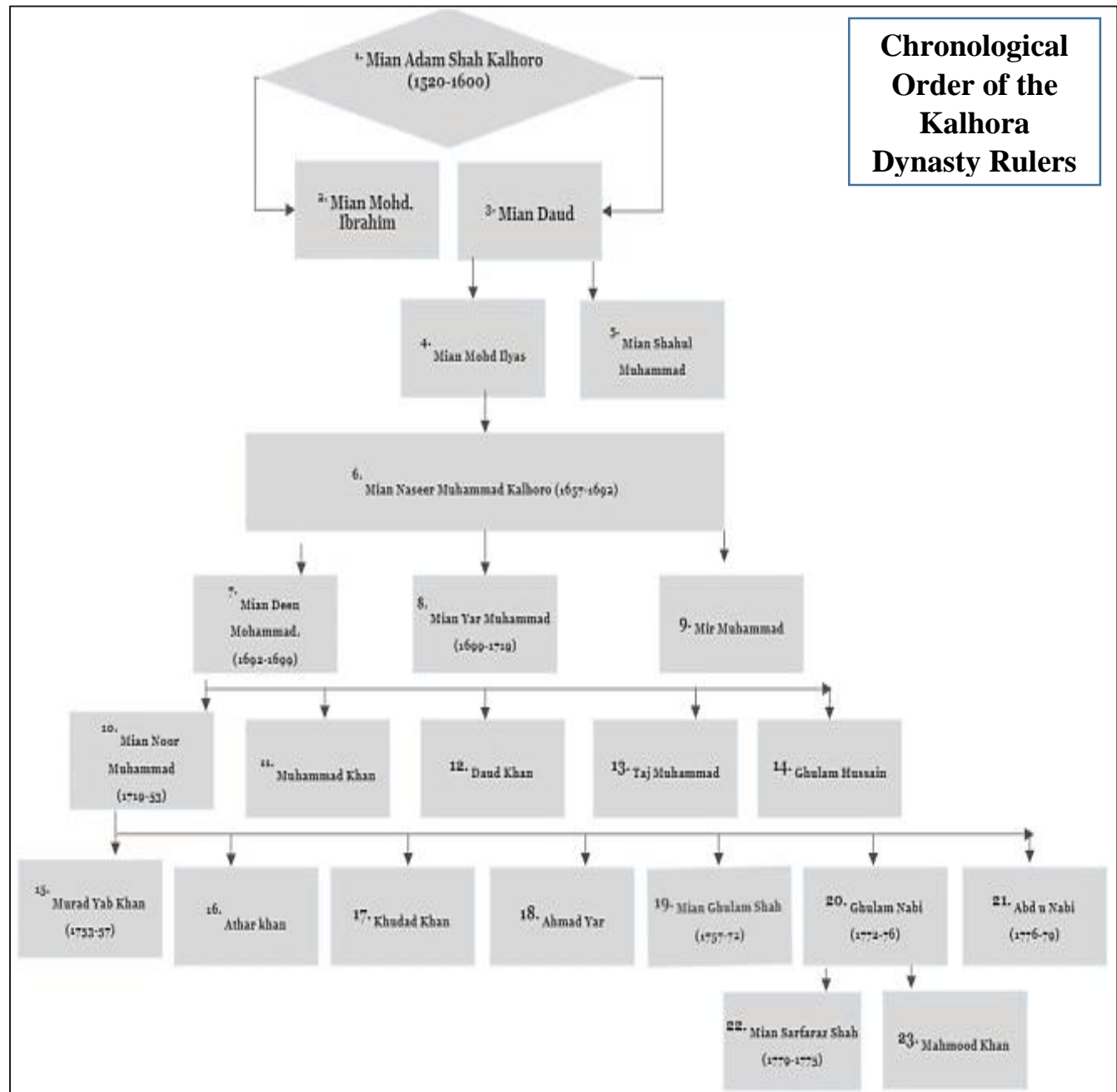
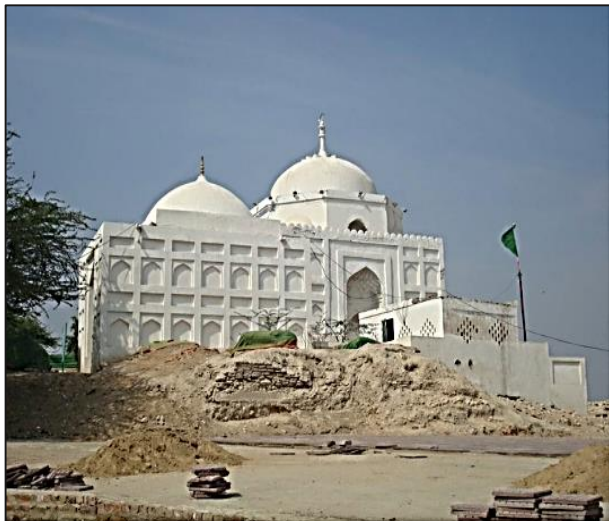


Figure 2: Chronological Order of the Kalhora Dynasty Rulers

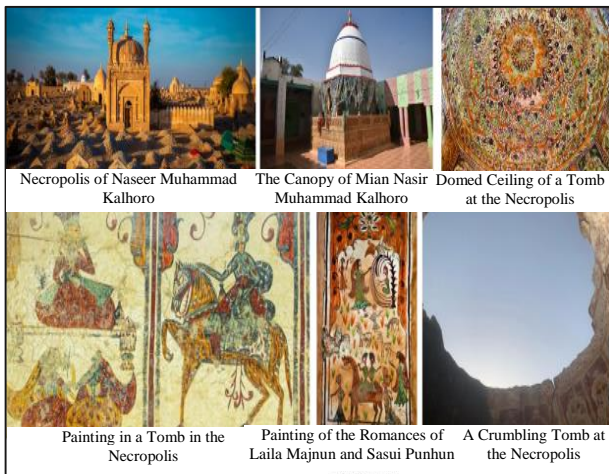


Tomb of Mian Adam Shah Kalhoro (Outside View)



Tomb of Mian Adam Shah Kalhoro (Inside View)

Figure 3: The Tomb of Mian Adam Shah Kalhoro, Sukkur, Sindh



Necropolis of Naseer Muhammad Kalhoro

The Canopy of Mian Nasir Muhammad Kalhoro

Domed Ceiling of a Tomb at the Necropolis

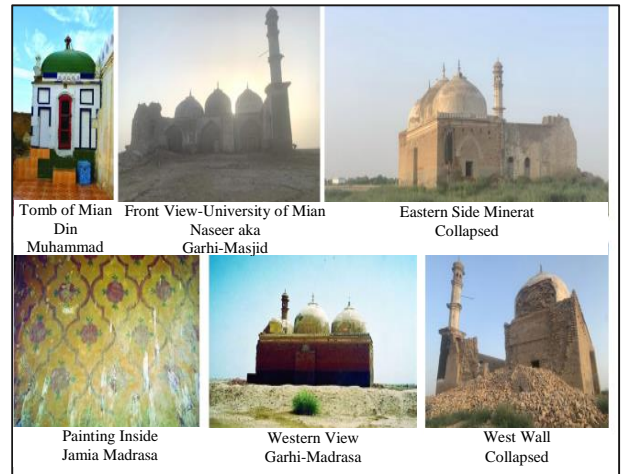
Painting in a Tomb in the Necropolis

Painting of the Romances of Laila Majnun and Sasui Punhun

A Crumbling Tomb at the Necropolis

Figure 4: The Necropolis of Mian Naseer Muhammad Kalhoro, Kaacho, Sindh

His son, Mian Noor Muhammad Kalhoro (see Figure 7), succeeded Mian Yar Muhammad but died in 1753 A.D. His father was replaced by Mian Ghulam Shah Kalhoro, the most competent head of the Kalhora family. He established Hyderabad and built a fort there in 1768. After fourteen years as the city's ruler, he died in 1772. He is regarded in history as the Kalhora dynasty's final and most powerful envoy. His successors lost their political clout after his passing, but they ruled until 1783 A.D. [6].



Tomb of Mian Din Muhammad

Front View-University of Mian Naseer aka Garhi-Masjid

Eastern Side Minaret Collapsed

Painting Inside Jamia Madrasa

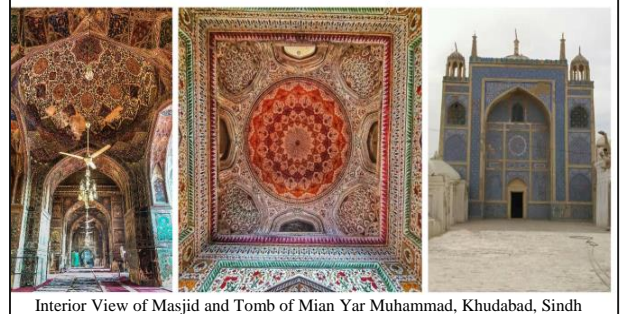
Western View Garhi-Madrasa

West Wall Collapsed

Figure 5: The Tomb of Mian Din Muhammad and the University of Mian Naseer Muhammad also known as Garhi-Masjid, Garhi, Kaacho, Sindh

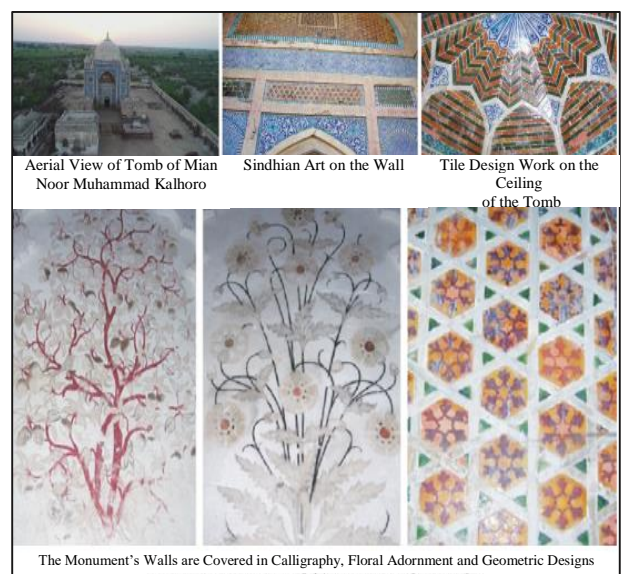


Aerial and Closer View of Khudabad Masjid



Interior View of Masjid and Tomb of Mian Yar Muhammad, Khudabad, Sindh

Figure 6: Jamia Masjid Khudabad and Tomb of Mian Yar Muhammad Kalhoro, Khudabad, Dadu, Sindh



Aerial View of Tomb of Mian Noor Muhammad Kalhoro

Sindhian Art on the Wall

Tile Design Work on the Ceiling of the Tomb

The Monument's Walls are Covered in Calligraphy, Floral Adornment and Geometric Designs

Figure 7: Mian Noor Muhammad Kalhoro's Tomb is Notable for its Exquisite Artwork

II. RESEARCH METHODOLOGY

To attain study objectives, rigorous review was conducted [7-10]. The data was collected using qualitative research methodology that included interviews performed for the current study in addition to textual and visual analysis [11], and [12]. Numerous field inspections and surveys of the monuments from the Kalhora period were used to get the data [13], and [14]. Regarding the history, specifics of the prior conservation, and the function of the Department of Culture, Tourism, Antiquities, and Archives concerning the chosen heritage site, qualitative interviews with the management, experts, and caretakers were undertaken. To further reinforce the data, a compilation of books, articles, websites, and journals was used. Recommendations for the chosen heritage site were developed using guidelines from case studies and a gazette from the British era.

III. LITERATURE REVIEW

One type of art that eloquently captures the way of life of a specific society at a certain period is architecture. When it comes to the history of Islamic architecture, it is said that Sindh was fortunate to receive a new style of architecture with a focus on simplicity with the arrival of Islam. Islamic architecture evolved as a result of religious influences, and the structure originally intended to be a mosque was surely the prototype for all other Islamic architectural designs. Islam placed a high value on the mosque. The prayer hall and Mihrab, which show which way the Ka'bah is, were originally included in the design of the mosques to aid and accommodate the populace. Masjid-e-Nabavi originally had no mihrab; instead, a big stone block served as the Qiblah marker. As mosque architecture evolved, more structural components—such as minarets—were added to the overall design. In the Basra mosque, there was the first minaret [15]. The eighth century saw the introduction of religious architecture to the South Asian Subcontinent by the Arabs, who had already established their dominance in Syria, Egypt, North Africa, Spain, and Iran. The current aesthetic form is the result of fusing fundamental Islamic requirements with the rich architectural tradition of those lands [16]. There are examples of this new architectural style throughout Sindh, particularly in the northwest districts, where it takes the form of mosques, tombs, shrines, and temples of varying sizes. Some of the architectural elements of the funerary buildings were influenced by the architecture of mosques. Eventually, later tombs constructed for aristocrats came to define Islamic design. The exact date of the construction of the first funerary building is unknown. Scholars generally agree that the first square building with a dome chamber was the mausoleum of Abbasid Khalifa Al Muntasir, who died in 862 A.D [17].

Furthermore, it's unclear when work on the tombs covering Muslim graves started. In most cases, people build mausoleums over graves to preserve the memory of their ancestors. Millions of people from all castes and creeds visit the tombs and shrines of Sindh's saints, who are highly esteemed and respected. With the Arab conquest in the eighth century A.D., Islam arrived in Sindh. The structures that exemplify early Islamic funerary architecture are no longer standing. The funerary architecture can be

categorized into three groups based on periodic field research conducted by various institutions: (a) Exposed or naked brick architecture, which is thought to be the oldest in the area, (b) Mughul architecture (c) Regional style, such as Sammas, Tarkhans, Kalhoras. Naked brick monuments, also known as exposed brick monuments, are rare examples of the earliest architecture in the region and can be found in various parts of Sindh and Baluchistan. The Ghaznavids are credited with introducing the cut brick ornamentation that adorns the exterior surfaces of these monuments, which come in countless patterns and designs (see Figure 8). The origin of this kind of ornamentation is in Central Asia (Shaikh 2001) [18].

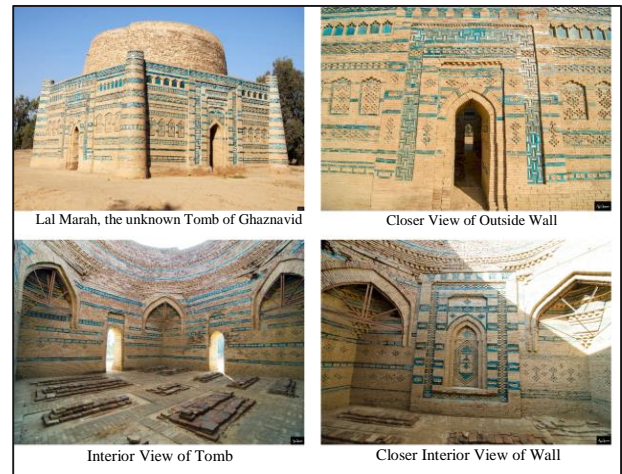


Figure 8: Prehistoric-Ghaznavids Era Tomb, Dera Ismail Khan, Pakistan

Any nation or region's architectural legacy is inextricably linked to its native customs. In addition, the types of building materials that are readily available in the area and the local climate have a big impact on architectural style. Nonetheless, outside factors do play a role in forming an architectural style. The merging of cultural elements from Sindh, Central Asia, Iran, and Afghanistan was brought about by Arghun, Tarkhan, and Mughul rule. Numerous architectural style innovations were the outcome of this interaction. Squinches, pendentives, and interlaced arches were used to enhance the dome construction process. Additionally, the applications of load-bearing structures particularly arches were presented. It is a fact that nearly every Muslim ruling dynasty originated in Central Asia, and the region it bordered contributed new architectural features based on precise construction principles [19]. Buildings and other physical structures are planned, designed, and built using the term "architecture" to describe the process and outcome. The enduring architectural accomplishments of the historical dynasties are frequently used to identify them. When the Kalhoras of Sindh consolidated their dominance over the area in the eighteenth century, they made a magnificent contribution to it. Throughout the Kalhora era, they demonstrated their exceptional appreciation of art despite numerous crises. They were also excellent patrons of the arts and sciences. Over their domain, they constructed numerous structures, the majority of which were mosques, tombs, and forts, among other things [20].

The majority of the tombs from the Kalhora period have square plans, though there are also a few small numbers of octagonal mausoleums, and Main Naseer Muhammad Kalhora's tomb is designed like a pillared canopy. According to Professor R. Nath, who has written several books on architecture, square tombs were typically constructed for aristocrats, while octagonal tombs were customarily reserved for royal figures and relatively few of these kinds of monuments were discovered during fieldwork. The inclusion of a mosque in each of the tombs, constructed during the Kalhora period, is one of their primary characteristics [16].

During the Kalhora period, many tribes or the ruling class built funerary complexes. These structures' façades were designed to give the idea that the building was multistory. Three ornamental stories have been added to either side of the wall to achieve this. There are two blind arches on either side of the entry, one above the other. The first application of this technique, which involves using blind arches to create the illusion of a multi-story facade, dates back to Alai Darwaza Dehli in 1311 A.D (see Figure 9).

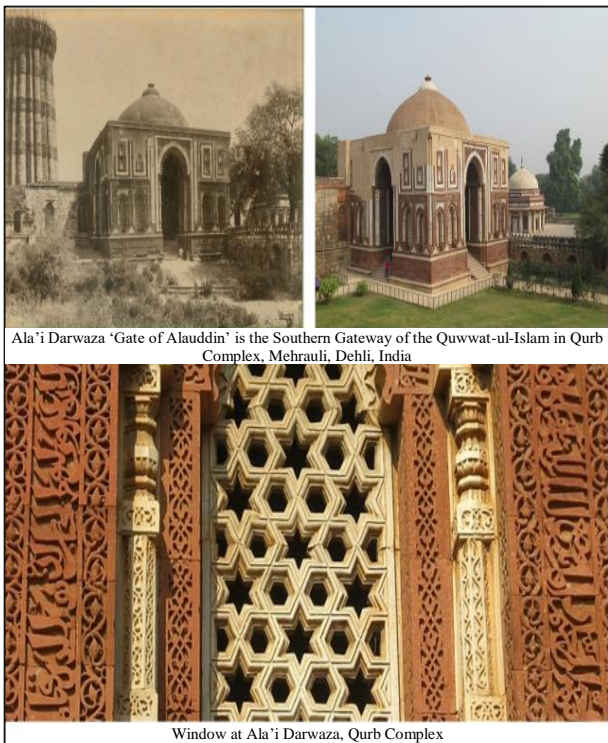


Figure 9: Ala'i Darwaza, Dehli, India [21]

According to Ghulam Muhammad Lakho, the author of *Kalhora Dour-e Hukoomat*, Sindh was under financial strain during the Kalhora period because buildings were built in smaller quantities and of lower quality than during the Samma and Tarkhan periods. This could have been caused by the dominance of Iran, Afghanistan, and the Mughals [4].

The author of *Sindh's Art and Architecture* argues that the Kalhoras built magnificent structures during their rule (1680 – 1783). Numerous mausoleums and mosques were constructed. In addition to the monarchs, the area also saw the construction of religious and funeral monuments by their ministers, nobles, and commanders. The newly

undertaken documenting of monuments by various organizations and people makes it evident that, in less than a century, the ruling elite and several tribes built large-scale structures throughout Sindh. They were refined by combining a few new architectural components and the usage of Kashi tile and burnt bricks in place of stone was increased [22].

IV. RESULTS AND DISCUSSION

The tombs, mosques, and forts that remain are reminders of the Kalhoras. These monuments' architecture is unique in both style and character. A new architectural style known as Sindhi Islamic architecture has emerged as a result of the unique fusion of foreign and indigenous building techniques. This is evident from the standing monuments in the planned region, as well as from the magnificent mosques, tombs, and colossal building constructions that serve as a living reminder of the indulgence and patronage of its patrons. The people who built these monuments were either powerful members of the community or high-ranking authorities [15].

There is an obvious connection between the Kalhora period's architectural style and pattern and earlier periods. The majority of the monuments are constructed from burnt bricks and embellished with mosaics made of glazed tiles or Kashi art. The Kalhoras appear to have given up using this decorative technique later on and switched to using lime, or Chiroli, to plaster the walls plainly.

The art of architecture is the arrangement of space through construction based on scientific principles to achieve certain goals. It has consistently been a valuable resource preserved for future generations. The Mehargarh people of Baluchistan left behind architectural evidence that is believed to be the earliest in South Asia to assess and value their cultural standards. This evidence is found in Pakistan. The two local dynasties, the Sammas and the Soomras, who were presumably Sindh's first occupants, each inherited a somewhat diverse architectural background. Buildings constructed by Arghoon and Mughul governors show that they were influenced by Central Asian and Iranian styles. The Kalhoras enter about halfway between them and the end of British control in the Subcontinent. Except for numerosity, scholars believe that Kalhoras' contribution to Sindh architecture was little more than the continuation of earlier customs.

The utilization of the period's bricks, which were made in a range of shapes from rectangular to geometrical, results in a work of extraordinary excellence. Some scholars have referred to the Kalhoras as the Mughuls of Sindh because of the amount and quality of the monuments of various sorts that have been created over the entirety of the state. In addition to making room for the ancient, they are also credited for bringing in or making popular architectural features that were either unique to Sindhi design or uncommon prior to their domination. Some of these features are reckoned as follows.

A. Enclosure Wall

With the exception of Mian Adam Shah Kalhor's tomb, there is a fortress surrounding the tombs of the ruling class in Kalhora. These tombs of the rulers have enclosure walls, which are highly uncommon and unique in Sindh. Such an

architectural feature can be found outside the tombs of Ibrahim Shah in the Naushero Feroz district and Mian Noor Muhammad Kalhoro in the Benazir-Abad district (the sources are quiet regarding the history of the saint) (see Figure 10).

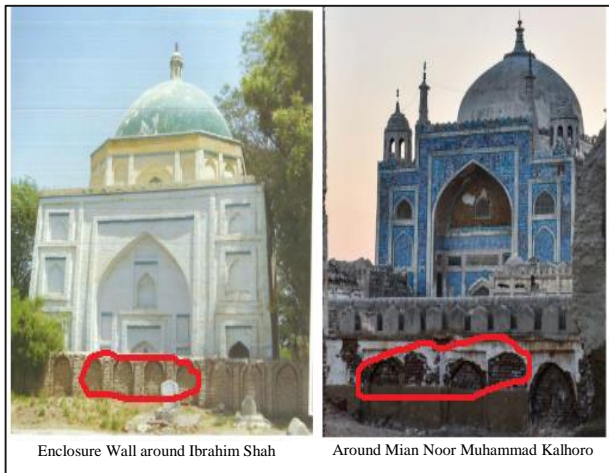


Figure 10: Enclosure Wall Around Mian Noor Muhammad Kalhoro and Ibrahim Shah

B. Lantern

The unique architectural aspect of the tomb, which was brought to Sindh by the Kalhoro lords, is an ornamental lantern that sits above the dome (see Figure 11). In addition to the tombs of the rulers, many notable members of the Kalhoro court also have tombs that exhibit the unique characteristics of the Kalhoro architecture. The unique feature is located in the Larkana district beside the grave of Shah Bharo, the commander of the Kalhoro army.



Figure 11: Crowned Lantern Art on Tombs

C. Gallery at Squinch Level

The squinch-level gallery is constructed according to the wall thickness. Thatta was the location of the feature's introduction, and that kind of opening was external. However, the higher galleries in the tombs of the Kalhoro rulers are closed from the outside and are constructed over the thickness of the chamber walls. Such an architectural layout is present at the summit of Jamia Masjid Khudaabad, district Dadu, and on the tomb of Essa Khan Tarkhan which is located in Thatta (see Figure 12).

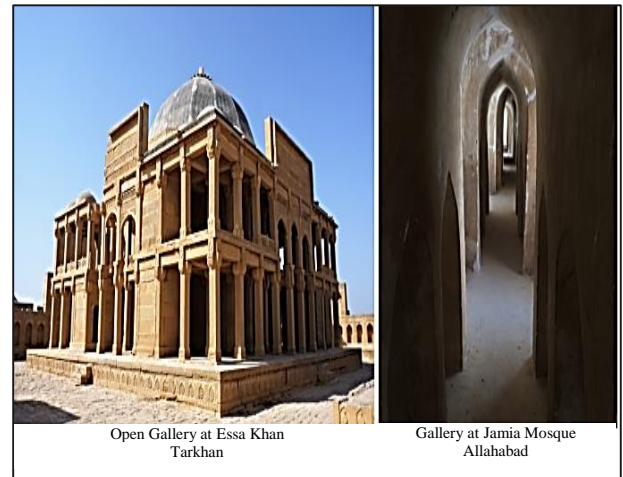


Figure 12: Open Gallery at Essa Khan Tarkhan, Thatta, and Gallery at The Headquarters of Mian Yar Muhammad Kalhoro, Khudaabad, Sindh

D. Small Corner Spires

The majority of the architectural decoration on the pre-Kalhoro era building was located on its corners. Generally speaking, they lack corner spires or parapets. The spires were first used by the Kalhoras to decorate the corners of tombs and mosques and to become a standard architectural element. The Qutub Shahi tomb in Hyderabad and the Mubarak Shah Syed mausoleum in Delhi, both built in 1443 A.D., have similar architectural embellishments (see Figure 13).



Figure 13: Small Corner Spires Architecture at Qutb Shahi Tomb, Hyderabad, and Mubarak Shah Syed Tomb Delhi, India

E. Corner Kiosks

One more step Corner kiosks are a visually appealing architectural element that was first introduced to Sindh by Kalhoras. Some Indian temples had already begun to use the function. It initially showed up in a proper manner in 1443 A.D. at Mubarak Shah Syed's mausoleum. For the first time, Kalhoras in Sindh produced this element in their tombs. Chotey-Khan-ka-Gumbad in Kotla Mubarakpur Delhi and the mausoleum of Mian Noor Muhammad Kalhoro, close to Moro, both have similar architectural embellishments (see Figure 14).



Figure 14: Corner Kiosk at Mian Noor Muhammad Kalhoro, Sindh and Chotay Khan-ka-Gumbad, Delhi, India

F. Monumental Gate

It is in Sindh and is actually a fairly ancient architectural feature. It has its unique importance and debuted in Makli. However, because of their elevated position, monuments created during the Kalhora period are rather spectacular. The architects were inspired to create the imposing gate with its dome by the buildings of the Kalhora period. Though initially established by the Mughals, this architectural feature gained popularity in Sindh during the Kalhoras. Additionally, during the Talpur and British periods, this trait persisted. Mihrab Ji Masjid in Halani town, Naushero Feroz district, has a similar architectural layout (see Figure 15).

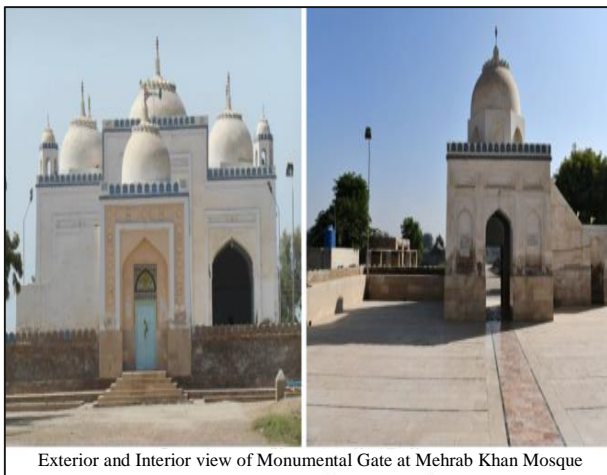


Figure 15: Monumental Gate at Mehrab Khan Mosque, Halani, Sindh

G. Painted Decoration

The skill of building decoration was already well-known worldwide. Before the Kalhoras, Kashi tiles, plaster moldings, or stone sculptures were used as architectural accents on buildings built in Sindh. However, Kalhoras appear to be creating distinct geometric, floral, botanical, scenic, and even human representations in their building almost everywhere in Sindh. The wall murals, which primarily featured folktales, scenes from rural or social life, combat scenes, etc., were what made the Kalhora period unique. Numerous tombs contain wall paintings from the Kalhora period, whose style is referred to as the Sindhian

School. It is said that these paintings began to take shape during the Samma period and reached their pinnacle in the eighteenth century, during Kalhoras' rule (see Figure 16).

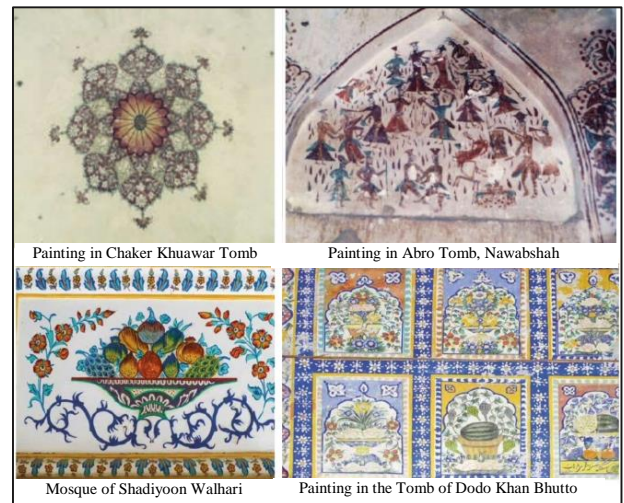


Figure 16: Painting Decorations in Kalhora Period in Different Places

H. Use of Marble

In Sindh, tomb-stones and cenotaphs with exquisitely carved stone slabs are placed over the tombs of kings, governors, saints, and academics. However, marble was rarely used for this purpose prior to the Kalhoras assuming power. On the other hand, Kalhoras employed the marble stone for chronograms, chhatris, cenotaphs, and tombs (see Figure 17).



Figure 17: Marble Cladding and Calligraphy on the Graves Inside the Tomb of Mian Ghulam Shah Kalhoro, Hyderabad and Sohrabani Talpur Necropolis, Sukkur, Sindh

I. Cusped Arches

The element may have originated in the Sher Shah Suri era, or it may have originated earlier in the late imperial or Delhi style. Regardless, it gained popularity in Sindh during the Kalhoras period, and an example of this kind of architectural embellishment is seen in Mehrab Ji Masjid, which is located in the Naushero Feroz area (see Figure 18).



Figure 18: Multi Cusped Arch in Mehrab Ji Masjid, Halani, Sindh

J. Merloned Parapet

Although the feature was ubiquitous in the Subcontinent before Kalhoras, battlemented parapets were unusual in Sindh, especially in pre-Kalhara era structures. The embattled parapet of almost every monument from the Kalhara period adds to the building's splendor. The tomb of saint Sahki Allahyar, son of Makhdoom Muhammad Kabeer, located in Kotri Kabeer hamlet in Naushero-Feroz region, and the Mian Noor Muhammad Kalhara tomb near Moro town both have similar architectural decorations on their parapet walls (see Figure 19).



Figure 19: Merlons at Mehrab Mosque, Halani and Sakhi Allahyar Tomb

K. Tracery Stone Element

The most elegant, and most striking is the tomb of Ghulam Shah Kalhara, with high mud walls and bastions around the tomb and courtyard, giving the impression that this is a military outpost rather than a monarch's final resting place.

The fortification wall's core was filled with mud bricks and was constructed using burned bricks layered in mud mortar. It has a base width of 14 feet and a maximum height of 25 feet. The mausoleum spans 118 feet by 114 feet and is constructed on an elevated rectangular platform that is three feet ten inches high. The building is situated on an elevated platform surrounded by a low parapet wall made of thin panels of perforated stone. Little pillars positioned at regular intervals divide the panels. Similar work at Fatehpur Sikri can be seen in the cornerstones' surface tracery and the panels' perforated designs (see Figure 20). The raised platform at the masons has another intriguing feature: there are mason's marks carved into the platform's flagstones.

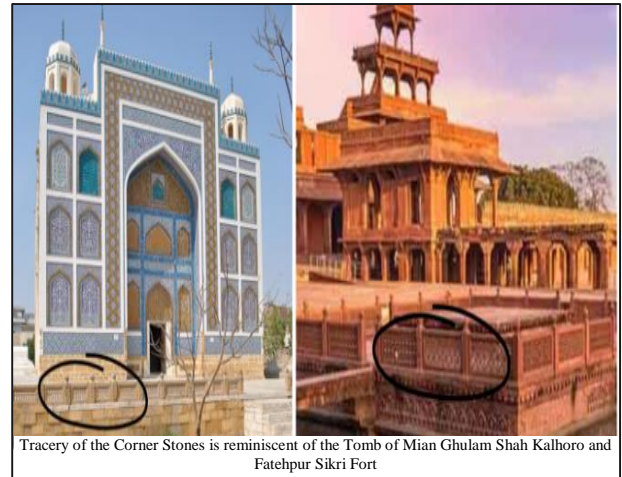


Figure 20: The Perforated on the Panels of the Surface Tracery of the Corner Stones Are Reminiscent of Similar Work

L. Funerary Memorial Architecture

Particularly for members of the royal family, tombs are typically built in an obvious location. Occasionally, after a royal's death, the gardens they had created during their lifetime were turned into tomb gardens. The main burial chamber was located in the garden's central pavilion. The innovative concept of building a tomb inside a castle emerged during the Sultanate Period. The first colossal tomb in the Indo-Pakistan subcontinent is Sultan Garhi, which is located in Delhi next to Mehrauli. Sultan Garhi appears more like a fortress than a mausoleum because of its tall pedestal, sturdy bastions at the corners, and towering encircling walls. When creating several of their graves, the Kalhara family adhered to this exact approach. According to research, most tombs constructed in our area before the middle of the 12th century AD have square plans. The graves were later built on the octagonal base as well. Sainly individuals have tombs built on octagonal bases. According to the opposing viewpoint, octagonal tombs were traditionally reserved for royal personages, whereas square tombs were mostly constructed for nobles. Hillenbrand claims that Sunni respect for the four Caliphs was associated with the square tombs.

The authentic mausoleum of Ghulam Shah Kalhara is a massive, square structure that is 36 feet high and 56 feet wide on each side. The west-facing main arched entrance leads to the tomb's main chamber. It is constructed on a square layout. From within, the tomb has an octagonal shape. There are recessed panels on the tomb's front. Each

of the four sides has an identical panel. The tomb's exterior gives the impression that the building is three stories high. The facade's three ornamental stories on each side have been divided to accomplish this. There are two blind arches on either side of the entry, one above the other.

The tomb's front is adorned with an amulet design. Glazed blue tiles above it enhance the facade's charm. The Kalhoras utilized a lot of blue tiles in their structures (see Figure 21, and Figure 22).

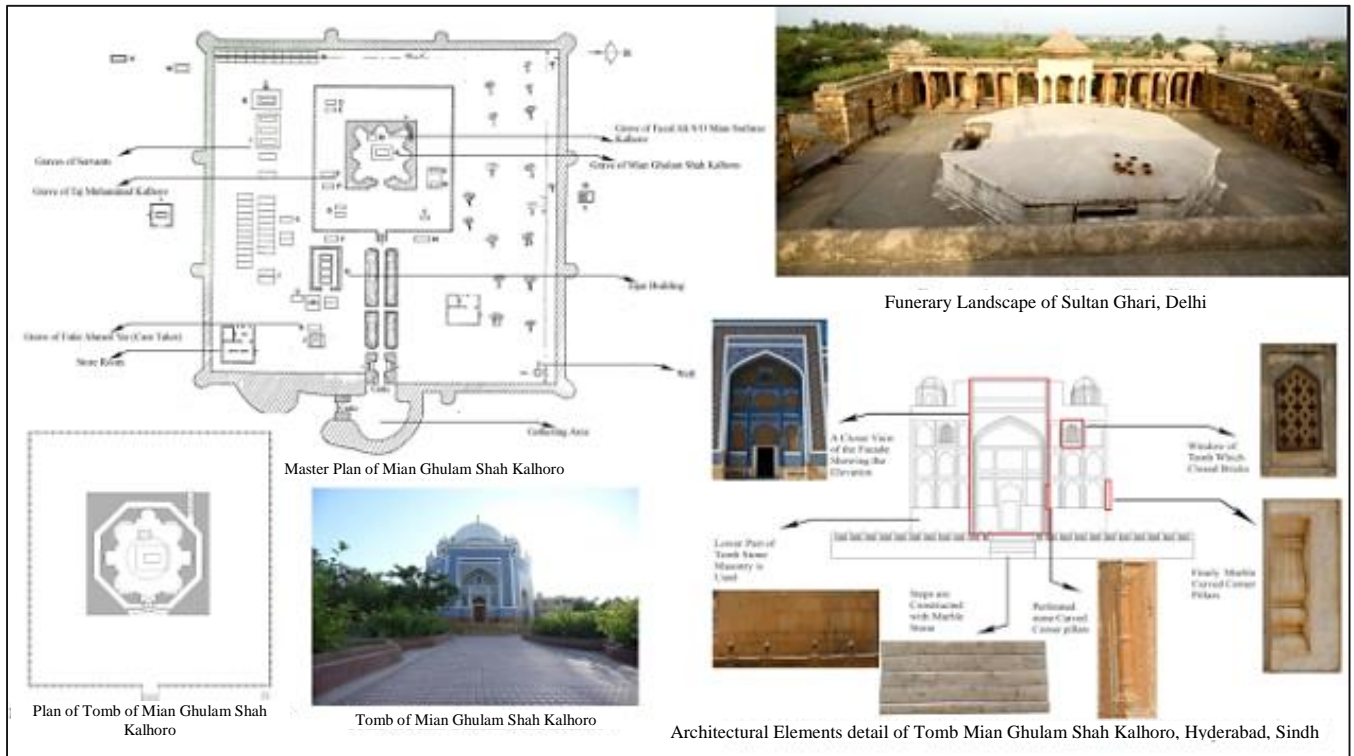


Figure 21: Funerary Landscape of Sultan Ghari, Delhi and Ghulam Shah Kalhoro, Hyderabad, Sindh

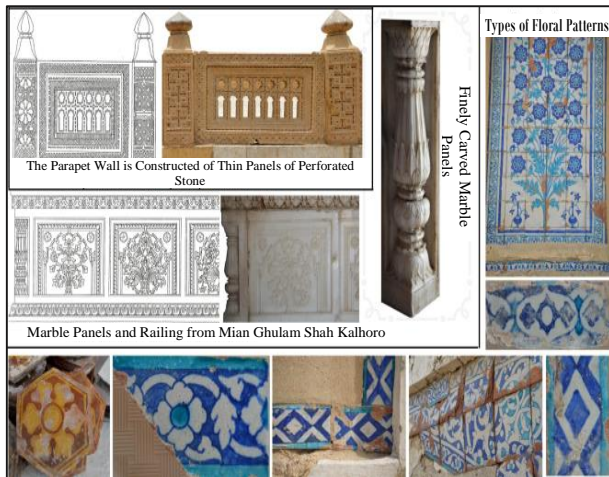


Figure 22: Parapet Stone Pattern and Floral Tile Pattern at Ghulam Shah Kalhoro

V. CONCLUSION

The Kalhoras, a group of rulers in Sindh, are known for their unique architectural style and pattern, which is a blend of foreign and indigenous building techniques. These monuments including mosques, tombs, and forts, serve as reminders of the patronage and indulgence of their patrons. The architecture of the Kalhora period is characterized by its use of burnt bricks and mosaics made of glazed tiles or Kashi art. The Kalhoras' contribution to Sindh architecture is considered the continuation of earlier

customs, with the use of bricks in various shapes and geometrical designs. Some notable features of the Kalhora period include enclosure walls, lanterns, galleries at squinch level, small corner spires, corner kiosks, monumental gates, painted decoration, marble use, and cusped arches. Enclosure walls are highly uncommon and unique in Sindh, while lanterns are an ornamental feature brought to Sindh by the Kalhora lords. Corner kiosks were first introduced to Sindh by the Kalhoras and have become a standard architectural element.

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Authors Contributions

Both authors equally contributed to this research work.

Conflict of Interest

The authors declare no conflict of interest and confirm that this work is original and not plagiarized from any other source, i.e., electronic or print media. The information obtained from all of the sources is properly recognized and cited below.

Data Availability Statement

The testing data is available in this paper.

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