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

EDITORS' NOTE

This issue of JRAP includes five papers, with most of the papers related to heritage conservation. Although heritage conservation is an overriding theme of this issue but the scale at which it is reviewed in the papers is different and ranges from individual buildings to urban areas. The impacts of heritage conservation reviewed also vary from physical, to social, to economic, to ecological integration within the larger context. The physical and social relevance of heritage is also critically reviewed in these papers for today's reality.

The first paper by Dr. Abdul Rahman and Talib Hussain documents six mosques built during the rule of Ikhtiar Khan in Lower Punjab during the 18th century and analyses the importance and architectural contribution of these edifices to the built form of the region. This is the first time that these mosques have been documented and their significant contribution in mosque architecture analyzed. Until now these mosques had not received adequate attention in any scholarship because of their location and difficult access. The second paper documents the conservation process of Spal Bandai Village Community Mosque in 2013 in northern Pakistan and the social and cultural impacts of this physical intervention. The conservation process followed as much as possible, the international principles for conservation work, including the preservation of authenticity, documentation and reversibility of additions. Community participation was a big component of this project which generated a sense of ownership of the project within the local residents.

The third paper discusses the aesthetic relevance of contemporary house and urban design practice in the context of Lahore and questions the adaptation of western design into the local context without understanding its physical, environmental and social impacts. The fourth paper is set in the context of Hyderabad and reviews the current state of Colonial buildings in the city, highlighting the design, planning and aesthetic lessons that can be drawn from these edifices that have fallen prey to neglect and are under threat of being demolished.

The last paper also dwells on the issue of urban conservation but from the perspective of policy making. The focus of this paper is to review the public policy on urban area conservation in Pakistan with respect to its concept, approach and practices in Pakistan, identify the gaps and give some policy recommendations.

This issue of JRAP has a book review of 'Architecture after Independence: 55 Architects of Pakistan' authored by Mutaza Shikoh and Zain Mankani.

Editorial Board

ARCHITECTURAL CONTRIBUTION OF IKHTIAR KHAN IN LOWER PUNJAB

*Abdul Rehman**

*Talib Hussain***

ABSTRACT

There are few persons in the history of architecture in Pakistan who have contributed significantly by constructing mosques, wells or other welfare projects of public convenience at different locations, but their contributions are not fully acknowledged. Ikhtiar Khan, was one of such important noble who built mosques in Liaquatpur and Khanpur tehsils of Rahim Yar Khan District, in Lower Punjab Pakistan, during his rule, sometimes around third quarter of the eighteenth century.

Rahim Yar Khan District has been discussed in the modern sources with reference to historic settlements and residential and funerary architecture. The historic mosques particularly in Liaquatpur and Khanpur Tehsils have not received adequate attention in any scholarship because of their location and difficult access to each individual site. At the same time there is not a single publication on Ikhtiar Khan and his architectural contributions. These mosques are mostly located in far-flung areas and have recently been identified by the authors.

This paper documents six of these mosques and analysis the importance and architectural contribution of these edifices to the built form of the region. The research methodology is based on physical and photographic documentation and mapping of these mosques.

Keywords: Ikhtiar Khan, Punjab, Mosques, Architectural contribution

INTRODUCTION

Ikhtiar Khan took the possession of Garhi Shadi Khan during the declining years of Kalhora in Sind in 1753, and named it after his own name Garhi Ikhtiar Khan. Ikhtiar Khan Mandhani at that time settled in Mauza (village) Gondhi. Ikhtiar Khan Mandhani belonged to Mandhani Daudpotras

who derived the name from Mandhu Khan, who was a pious Muslim. He constructed several mosques, some of them were Garhi Ikhtiar Khan (Din, 2001), Chanjni, Ghauspur (Din, 1904), Trinda Madhu Khan. He also excavated a canal named Ikhtiar Wah to irrigate the lands around Garhi Ikhtiar Khan (Rehman, 1943). According to Rehman, (1943: 86) when the canal got completed he announced that the opening ceremony will be performed by that person who has not missed any prayer during his youth. After the announcement nobody came forward, therefore he himself came forward and performed the opening ceremony. It is also mentioned that he used to offer *tahajud* prayer without any interruption.

Historically Rahim Yar Khan District used to be part of the Bahawalpur State which was connected to Persia and Khurasan in the west and Rajasthan Desert in the east. The development of canal irrigation changed the landscape of the area. The lush green fields of wheat, cotton, sugar cane with occasional gardens of date palm enriched the landscape.

Currently, the influence of both east and west is also seen in the mosque architecture of lower Punjab. These mosques have some unique qualities which differentiate them from the mosques of upper Punjab and from the mosques of Multan. All the mosques have three bays, except Trinda Madhu Khan, which has a single central dome and wagon vaults on the end bays. These mosques have been built with bricks using lime mortar. The mosques are finished either with fair-face brickwork or covered with glazed plaster of *pucca kali*. Internally the mosques are furnished with fair-face brickwork or with glazed plaster. Another important feature of the mosques are the entrance gateways. Except for the mosques of Trinda Madu Khan and Basti Mianwali, all other mosques have entrance gateways. The size of gateways is proportional to the size of the mosques. The bigger the mosque, the larger the gateway.

The architecture and decorative features of each individual mosque are discussed in this research paper.

* Dr. Abdul Rehman, Department of Architecture, University of Gujrat, Lahore.
Email correspondence: arch.rehman@gmail.com

** Talib Hussain, Walled City of Lahore Authority, Lahore.

Mosque of Trinda Madho Khan

This mosque is located in a small village named Trinda Madho Khan. It is the smallest but most important among all mosques of the region. The architecture shows the culmination of influences coming from east (Rajasthan and Gujarat) and west (mainly Iran) creating a strong architectural design vocabulary (Figures 1, 2). The mosque comprises of

three bays, the middle one is a square bay, while two on the north and south are smaller (Figure 3). The central bay has a dome while the two on the either side are covered with wagon vaults. There is a staircase in the south east corner that leads to the roof top. The staircase is accessed from a small niche, created within the thickness of the wall in the inner chamber, so as to maintain symmetry between east and west bay.



Figure 1: Mosque Trinda Madho Khan: West façade



Figure 2: Mosque Trinda Madho Khan: East façade

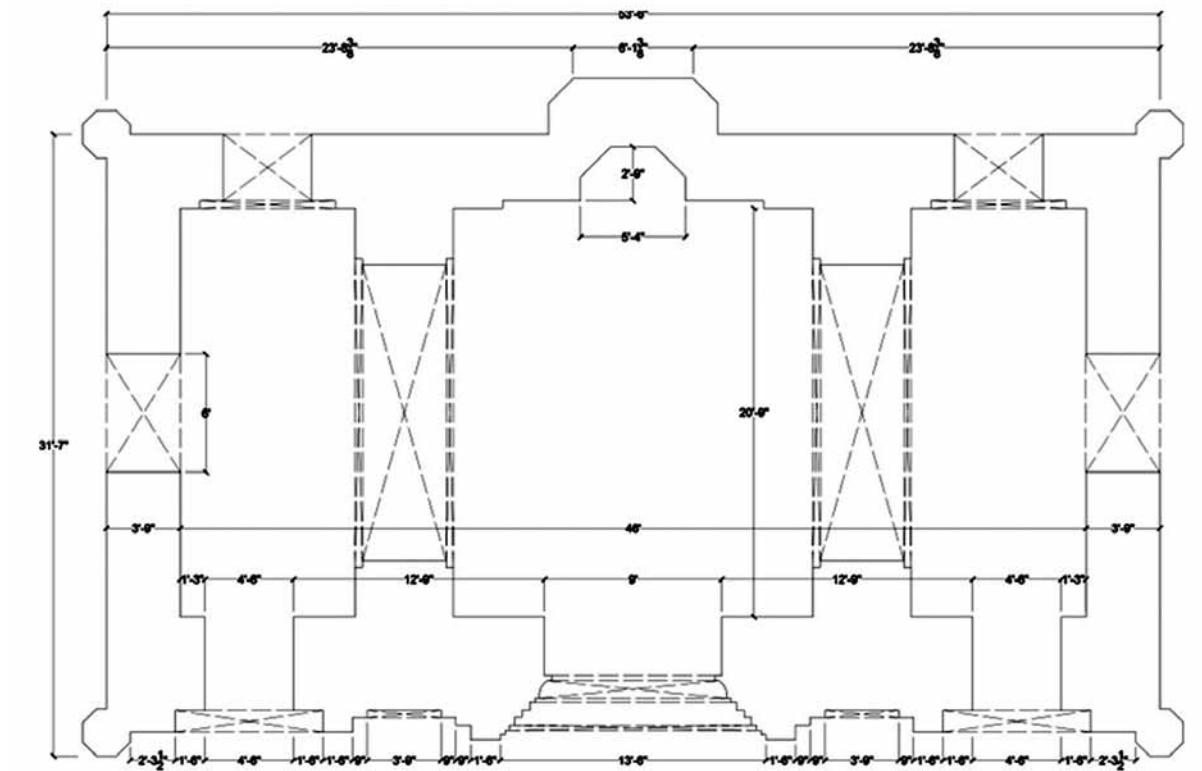


Figure 3: Plan of mosque Trinda Madho Khan

The exterior facades of the mosques are very carefully designed and neatly executed in fair face brickwork. The north south façade has Rajastani and Persian design features which is unique in the region. The western façade is divided into three parts with water spouts and furnished with glazed plaster following the internal planning (Figure 4). The facade has a protecting *mihrab* (niche) which terminates at the top with a panicle. The gradual vertical transition from wide *mihrab* into a panicle has neat proportions and therefore visually very pleasing. The *mihrab* is executed in cut and dressed brick work. Each division of the *mihrab* corresponds with the horizontal lines of frames and borders. There are two domed niches flanking the either sides of the *mihrab*. The idea of these niches finds its origin in Jain architecture of Gujarat and Rajasthan.

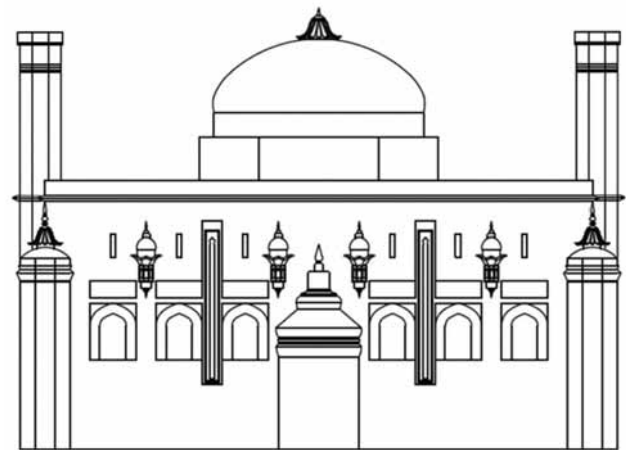


Figure 4: Western elevation of mosque Trinda Madho Khan

The front façade is vertically divided into solid fair face brickwork followed by pointed arched niches. The recessed horizontal panels are placed on top of arched niches. Two semi-octagonal towers both for strength and aesthetic reasons are placed at both ends of the western facades. These corner towers are finished at the top with domelets and panicles.

The north and south portions between the water spouts and corner towers on both sides have two arched panels separated by wide vertical band (Figure 5). The pigeon holes above the vertical bands are prominent features of the two sides. The *mihrab* is flanked by wide vertical bands with two pigeon holes on the top. On the either sides of the bands there is an arched panel followed by merlons. There is a horizontal projection above the solid brick work.

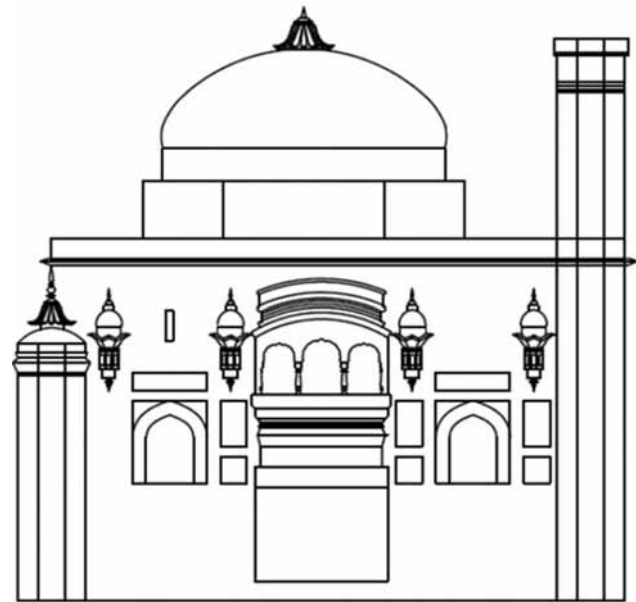


Figure 5: North elevation of mosque Trinda Madho Khan

The north and south facades have segmental arches in the middle of the façade. These projections are typical Rajasthani (of North Indian origin) in form and are usually found above the *Jharokas*. The horizontal lines bordering the arched niches form the base of the entire composition. This portion is divided into three recessed panels crowned by arches supported by bluster columns. The central arched panel is wider and higher than the two on the either side. Each arch panel has a deep niche in the middle of the central one, providing light to the interior, while the side ones are false. Above these niches lies *chahar khani* (four squares) pattern, which found its roots in Persian Architecture. The base of this false *Jharoka* (wooden balcony) is also in the form of architectural composition and comprises of series of moldings. On the other side of this central composition there are two niches flanking either sides, one close to the central composition and the other close to the corner tower which adorns the brick facade. In between the two niches there are

recessed arched panels. Horizontal panels line up in conformity with the panels located in the western wall.

There are two windows in the middle of the north and south walls. The upper limits of these windows are in the line with the base of arched panels. The eastern side of south wall is plastered with lime mortar. The horizontal and vertical frames are finished in brick imitation work, while the recessed panels of arched niches are treated with floral design in frescos. The north side is completely furnished in fairface brick work. The corner towers are also finished in lime plaster.

The east or front facade is designed to show the majesty and elegance of the structure. It is composed within two minarets located at the extreme ends and divided into three parts following the basic plan. The central part is higher and projected from two flanking sides and terminates at engaged pillarets. Each part has *pishtaq* but the central or main one is wider and has an entrance, while the two located on the either sides are smaller and have blind arches. Each *pishtaq* is framed within a series of rectangular and square panels. Similarly the internal upper portions of *pishtaq*s are also decorated with blind arches created with stucco plaster. In order to make the central portion monumental and prominent, two small cupolas are provided at roof level, aligned with the vertical bands framing the *pishtaq*. Only one cupola has survived.

The front façade is completely decorated with fresco paintings using red color. The spandrels of *pishtaq*s have vines, while rest of the structure is decorated with floral designs. At the upper portion of the projecting mass the word Allah has been inscribed in merlons, created with frescos. In general the mosque is a beautiful example of local Mughal as well as Rajasthani tradition.

Chitti Mosque

Chitti Mosque was so named as it is finished internally and externally with lime plaster. This dilapidated and abandoned mosque is situated in the Village Qadirpur. It is the largest and most elaborate historic mosque situated in Liaquatpur Tehsil. It has three bays. The central one is almost square in plan measuring 20 feet 9 inches by 18 feet 2 inches, while two bays on the north and south sides are smaller (Figures 6 and 7). There are three entrances set within *pishtaq*s (archway). The central *pishtaq* and arched entrance set within it are larger and higher than the two *pishtaq*s designed in the side entrances. Each entrance is set within rectangular frames. These frames terminate at the springing point of the arches of *pishtaq*s. Internally the three bays are separated from each other with the help of arches and provide base for overhead domes.

The wall area between the central entrance and the side entrance is vertically divided into blind recessed panels. The first and the third panels have blind recessed arches. The central bay has half octagonal *mihrab*. Two openings, 6 feet wide, are provided in the middle of the north and south walls for lighting and ventilation.

The mosque has a typical construction system of the region. The zone of transition of central bay starts from the roof



Figure 6: Chitti Mosque: Gateway



Figure 7: Chitti Mosque: View of mosque and gateway

level. The zone of transition has squinted arches, while the dome rests over it. The domes on the side bays are smaller and lower in height and therefore rest on pendentives created through series of arches set over one another (Figure 8).

The most important feature of this mosque is the entrance structure located at a distance of 42 feet 9 inches on the east side of the mosque, thus forming a courtyard in between the two structures (Figure 9). The entrance structure comprises of three rooms with an independent door on the east and west sides. The central room serves as the main entrance foyer. A staircase, 3 feet 3 inches wide, is set within southern wall of the central room and leads to the first floor.

The central bay is covered with a hemispherical dome. The octagonal zone of transition begins from roof level which has a low circular dome over which the hemispherical dome rests. There are two openings on the east and west sides in the zone of transition. The side bays have four centered pointed vaults with slopes on east and west side.

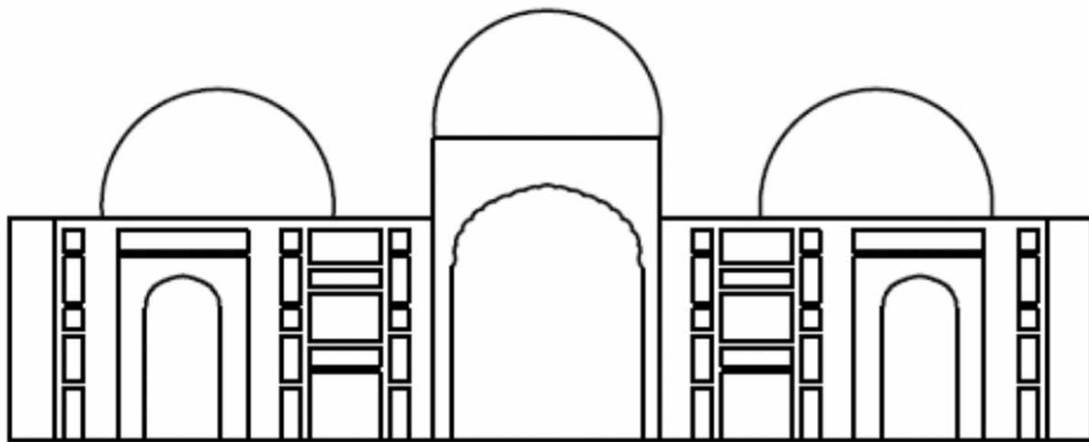


Figure 8: Front elevation of Chiti Mosque

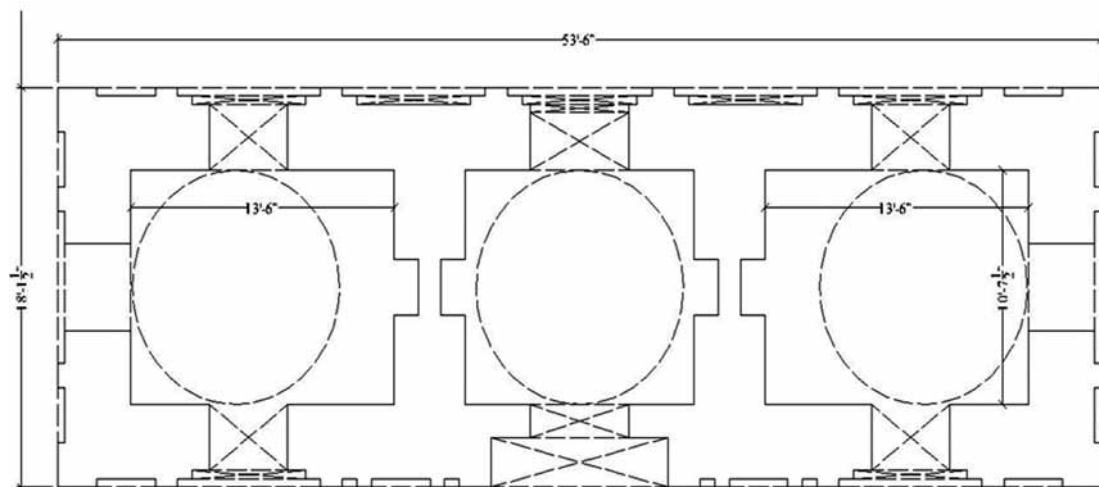


Figure 9: Chiti Mosque: Plan of Gateway

Basti Mian Wali Mosque Near Ghauspur

This tiny mosque is situated in a small rural settlement of Mianwali near Ghauspur, 2 km northwest of Zahir Pir. Close to the mosque is the tomb of Shah Abdul Aziz. A large portion of the mosque on the northern side fell some years ago and was rebuilt (Figure 10).

The mosque is impressive because of its imposing structure and high drum and dome. The mosque is 56 feet 10 inches wide and 30 feet deep (Figure 11). It consists of three bays. Each bay is accessed by a separate entrance. The central bay is 18 feet square by 20 feet 6 inches. Each bay is separated by an archway. Externally the mosque has a semi octagonal towers at both corners of the eastern façade. The south eastern corner tower no longer exists. The main entrance

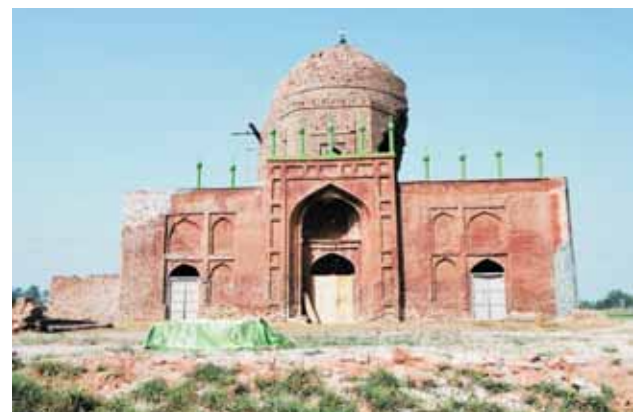


Figure 10: Front façade of Mosque Mian Wali

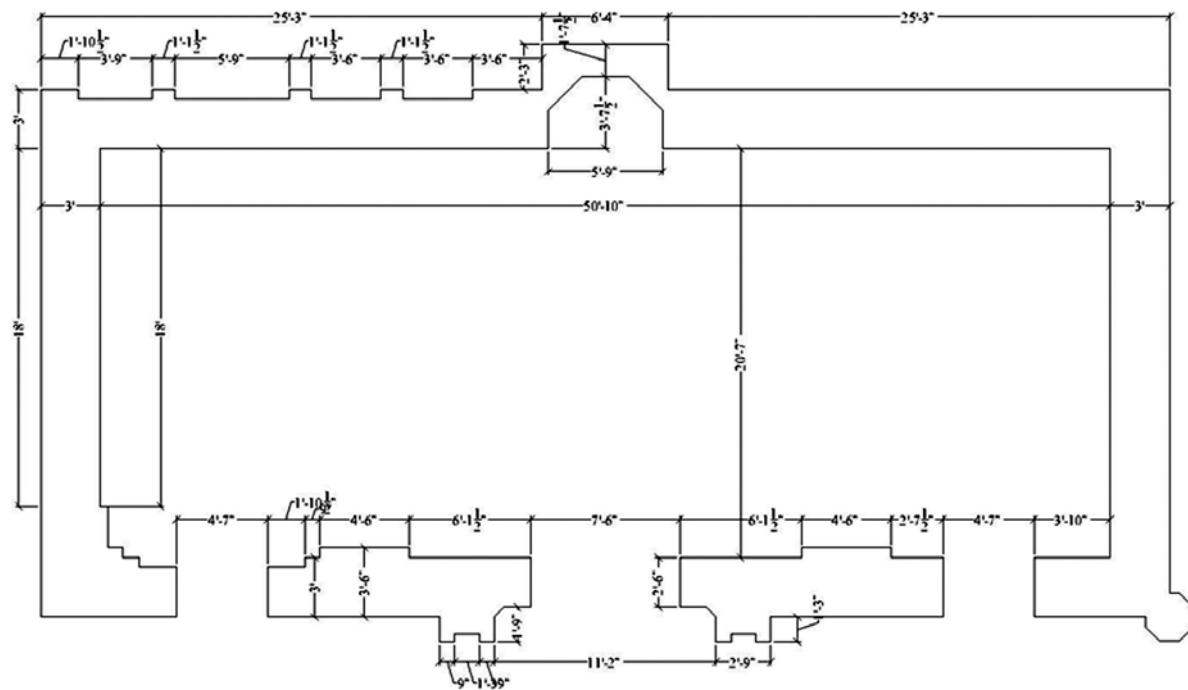


Figure 11: Plan of Mosque in Mianwali

leading to the central axis is set within a rectangular projection, which is higher from the roof level. The central *pishtaq* is framed within a rectangular projection. The wide border having vertical rectangular panel alternates by square panel forms which is an important feature of the bordering frame running all around the *pishtaq*.

There are two sets of blind arches on the either sides of the main entrance. These pointed blind arches are set in recession within the square and rectangular frames. The blind arches vary in size. The arches close to the main entrance portal are smaller, while on the extreme ends are wider. The doors are placed in lower arches which are located in the middle of the side bays. The north and south facades are treated with blind arches. There are five blind arches at the top and five at the lower level. The central arches are wider.

On the western façade there is a rectangular projection in marble measuring 2 feet 3 inches deep and 6 feet 4 inches wide. This is an important feature of the mosque. The *mihrab* is crowned with merlons. The rest of the façade is divided into blind recessed arches. These arches correspond to the basic plan of the mosque. Each side bay has a wider rectangular blind arch at the lower level, while at upper level a blind arch has been set within a square recessed panel. These arches are flanked by blind arches set with

vertical rectangular panels. The central bay has two blind arches on the either side of the *mihrab*. In this way each side of the arch has four blind arches at the lower and upper level.

Within the interior there are recessed arches at the corner of the side bays to form the zones of transition in the form of pendentives, while the central bay has squinted arches at the roof level. The octagonal zone of transition is high while the circular drum is smaller on which the hemispherical dome rests. The exterior walls of the mosque are divided by recessed panels made from bends of brickworks. The recessed panels and bands are lime plastered. The construction system was inspired from the tomb of Shah Rukh-e-Alam in Multan.

The entire mosque, including the interior of the mosque, is executed in fair face brickwork. The west side wall facing the *qibla* (direction of prayer) also has a *mihrab* with projected rectangular frames and blind arches set within them.

This mosque was once an imposing structure but over time the structure has fallen prey to neglect and parts of the domes and side bays have collapsed.

Chanjni Mosque

This mosque is 60 feet 9 inches wide and 27 feet 3 inches deep. The central bay is 17 feet 9 inches wide and 19 feet and 11 inches deep. The side bays are 12 feet wide. Each bay is covered with a dome. The central one is higher than the side ones (Figure 12). These bays are separated from each other with four centered arches in order to provide support to the overhead zones of transition. The mosque also has a small entrance gateway which has partially fallen down. It is 64 feet 3 inches away from the main prayer hall. The area in between is used as a courtyard. The main entrance to the mosque is via a 9 feet wide archway which rests on 4 feet wide brick masonry wall on each side. The main entrance leading to the entrance foyer is 5 feet 5 inches wide, while the entrance foyer is square in plan measuring 10 feet 4 inches on each side (Figure 13).

The front façade comprises of five arches set within the masonry wall. Three arches are 5 feet wide and they form the entrance to the three bays, whereas rest of the two arches are blind arches which have been designed just for aesthetic purpose. A staircase 2 feet 8 inches wide on the south eastern corner provides access to the roof top.

The side bays have window openings on the north and south sides. These openings are 3 feet 9 inches wide.

The main entrance to the prayers chamber lies in the central *pishtaq*. This is protruding out and is higher than the rest of the structure. It is pronounced with engaged pillars at the corner. The zones of transition of three domes start from the roof level. The square plans are converted into octagonal plans with zones of transition archived with the help of pendentives. The zone of transition comprises of squinched arches set within the thickness of the walls. The circular drum has low neck and is surrounded by a hemi-spherical dome.

The *mihrab* lies in the central bay. It is half octagonal in plan. The interior of the main bay was once decorated with *oker kari* work. Above the *mihrab* false arches, made from narrow bands of plaster, decorate the wall. A rectangular frame borders the *mihrab* from the top. The horizontal rectangular panels have been inscribed with “Ya Allah” (O! Allah) and “Ya Muhammad” (O! Muhammad). Below these inscriptions floral waives enrich the rectangular panel.

All the three outer façades of the mosque are divided into recessed panels created with the help of brickwork. An octagonal *mihrab* projects out from the western wall and



Figure 12: Side view of Chanjni Mosque

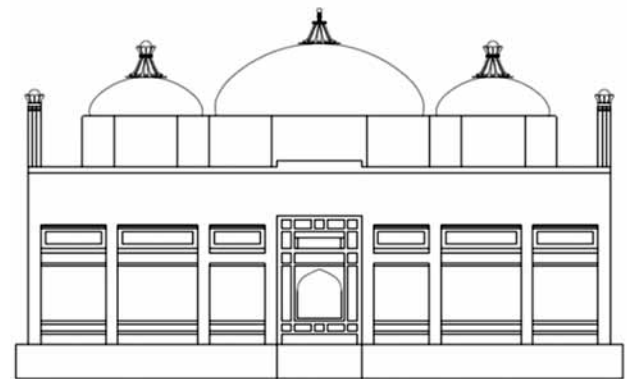


Figure 13: Chanjni Mosque

forms the main feature of the western façade. The exterior walls of the mosque were recently conserved by the Department of Archaeology, Punjab.

Janpur Mosque

The Janpur Mosque has similar architectural features as the Chanjni Mosque (Figure 14). It also has a small gateway measuring 54 feet 3 inches, and located away from the mosque. A verandah on the east side of the prayer chamber seems to have been added lately. The construction technique of outer walls on the three sides has been inspired from Persian architectural design tradition (Figures 15, 16). The mosque is 61 feet wide on the exterior, but the interior prayer hall is 55 feet 5 inches wide.

The prayer chamber consists of three bays each separated from one another by semi-circular arches. It is the only mosque in the region where semicircular arches have been used. The central bay is larger than the side bays. The central bay is 18 feet 8 inches wide and 20 feet 7 inches deep, while the side bays are 11 feet 3 inches wide. The side bays have



Figure 14: Front facade of Janpur mosque

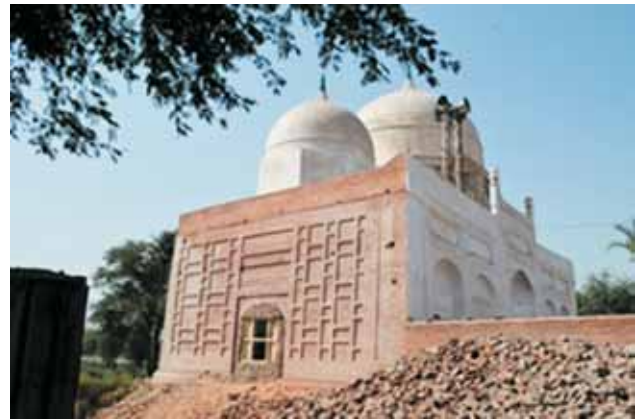


Figure 15: Side view of Janpur mosque

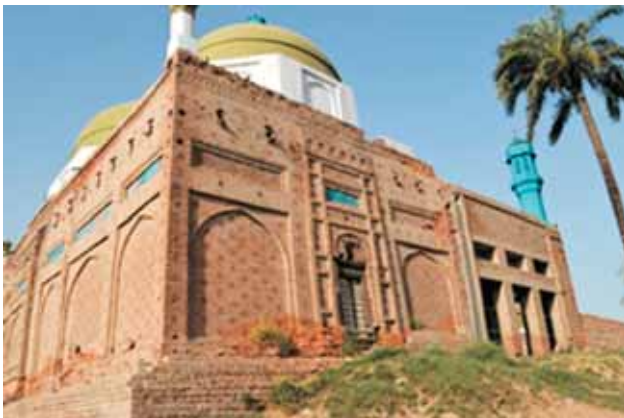


Figure 16: View of Chanjini mosque

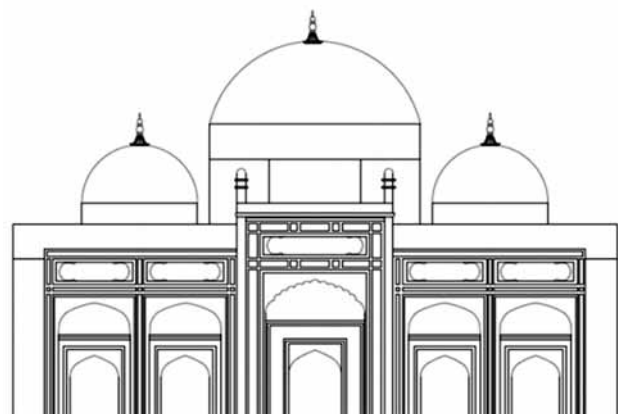


Figure 17: Janpur mosque: Front elevation

openings on north and south walls for cross ventilation. These openings are 6 feet 3 inches wide. In front of the mosque a verandah measuring 18 feet 6 inches deep has been lately added. The verandah is supported with circular posts. The distance varies from 8 feet to 9 feet. These posts are placed 9 feet 4 inches away from prayer chamber. The verandah has a flat roof.

Each bay of the prayer hall is covered with a dome (Figure 17). At the roof level the square plan is converted into octagon with squinched arches. A low neck drum supports the overhead dome.

The exterior walls of the mosque display the most elaborate and eloquent use of geometrical compositions. This type of composition, although found in residential architecture of the region, rarely exists in mosque architecture. The most beautiful geometrical composition is found on the western façade. All the facades have fair faced brickwork.

The facades are vertically divided into three parts. The lower portion consists of blind arches, set within rectangular panels, finished with blue glazed tiles. Above the tiles, there is a row of detailed design in brick work. Finally the upper most part contains niches for the birds as seen in the mosque of Trinda Madho Khan. These niches are surrounded by *seh khani* (three stories) pattern.

The western façade is horizontally divided into seven parts. The projecting rectangular mass of the *mihrab* is located in the middle. The main feature of the *mihrab* is a blind arch framed by rectangular panels, executed in fair faced brickwork. The upper portion of the arch (from springing point to the crown level) has *chahar khani* (Four squares) pattern arranged diagonally. Each pattern is separated by corbelled bricks. The lower portion of the arched panels has

geometrical *girah* (lace) work executed with the help of bricks.

There are two smaller arched panels on each side of the *mihrab*, followed by two wide arched panels on the extreme ends. The panels are separated by vertical bands of brick work. These bands also have *seh khani* pattern separated one over the other. The smaller arched panels are filled by *seh khani* pattern arranged diagonally.

The larger panels are divided in *shush khani* (six stories) pattern, arranged diagonally and separated by single brick, arranged one above the other. In the middle of each *shush khani* square pattern, there is a *do khani* (two stories) pattern. In this way the entire panel is completely filled with geometric brick patterns. The arched panels on two extreme ends have *seh khani* patterns arranged diagonally one over the other. By doing this the first row has four patterns followed by three patterns on the second row and the same system continues upwards. The vertical division of north and south façade is the same as seen in the west façade. Horizontally each façade is divided into three parts. The central part has a projecting mass having a wooden door in the middle and a small square ventilator at the top. The floor is framed within rectangular and square panels which continue just below the roof level. The north and southwestern arched panels are furnished with *seh khani* pattern placed diagonally one above the other. The southeast and northeast arched panels also have *seh khani* pattern arranged in a similar manner, as mentioned in the case of the west walls.

Mosque of Garhi Ikhtiar Khan

This important mosque is situated on the south side of the village of Ikhtiar Khan. It is one of the most ornate mosques amongst all the mosques of the region. The prayer hall comprises of three bays with a verandah on the east side (Figure 18). The verandah has a flat roof and seems to have been built in the later period. This mosque also has a courtyard. The main entrance to the courtyards is flanked by two minarets, which is another unique feature of this mosque.

The verandah walls, as well as the interior of the mosque, are beautifully decorated with fresco paintings. The prayer chamber of the mosque is 34 feet wide and 26 feet deep from the exterior. Horizontally, the mosque is divided into three bays with the help of pointed arches. The central bay is larger and wider than the two on the either sides. The central bay is 13 feet 8 inches wide and 14 feet 11 inches deep, while the side bays are 7 feet 9 inches wide. The square

plan is converted into an octagon with the help of pendentives, over which the octagonal drum of the dome rests. There are four windows placed in all cardinal directions for light and ventilation.

The mosque is finished with fair face brickwork on the three sides, while the verandah on the east side is finished with plasterwork. The walls on the three sides are divided into horizontal and vertical recessed panels with projected brickwork. The parapet wall is furnished with merlons. Below the parapet lie small niches or pigeon holes. These niches are a common feature in the design of the mosques in South Punjab, although the design of these niches is simple. There is half of an octagonal mihrab in the center of the western wall which is crowned by a pointed half dome.

The central bay has an octagonal zone of transition. Each corner has a squinched arch which spans over two walls. These half octagonal squinch arches have beautiful *qalib kari* (web design) work in the domelets and are profusely decorated with floral paintings. Internally, the mosque is completely decorated in floral designs and calligraphy. The dome is decorated with fresco paintings in geometric arabesque, while the sides of the octagonal drum are decorated with bouquet of flowers placed in vases and plates. However, a circular band over the pendentives and below the octagonal drum, is inscribed with verses from the Holy Quran.

The pendentives are decorated with floral designs and six pointed stars with *Sura Ikhlās* (Chapter from the Quran) inscribed in Tughra style (Ottoman Turkish calligraphy) in the middle of the hexagon.

Analysis and Discussion

The study of mosque architecture of Lower Punjab reveals some important facts. Firstly, these mosques have maintained their own identity over the years as compared to the general architectural tradition. These mosques are medium in size and their plan are fairly consistent, thus maintaining the general character of architectural form. The central bays of these mosques are generally bigger in size while the side bays are smaller and are covered with smaller domes. This arrangement creates a majestic outlook for the structures, because of the ability to construct bigger and higher domes in the middle of the plan which are flanked by smaller domes. The mosque of Trinda Madho Khan is the smallest of all the mosques and therefore its side bays are covered with wagon vaults instead of domes.

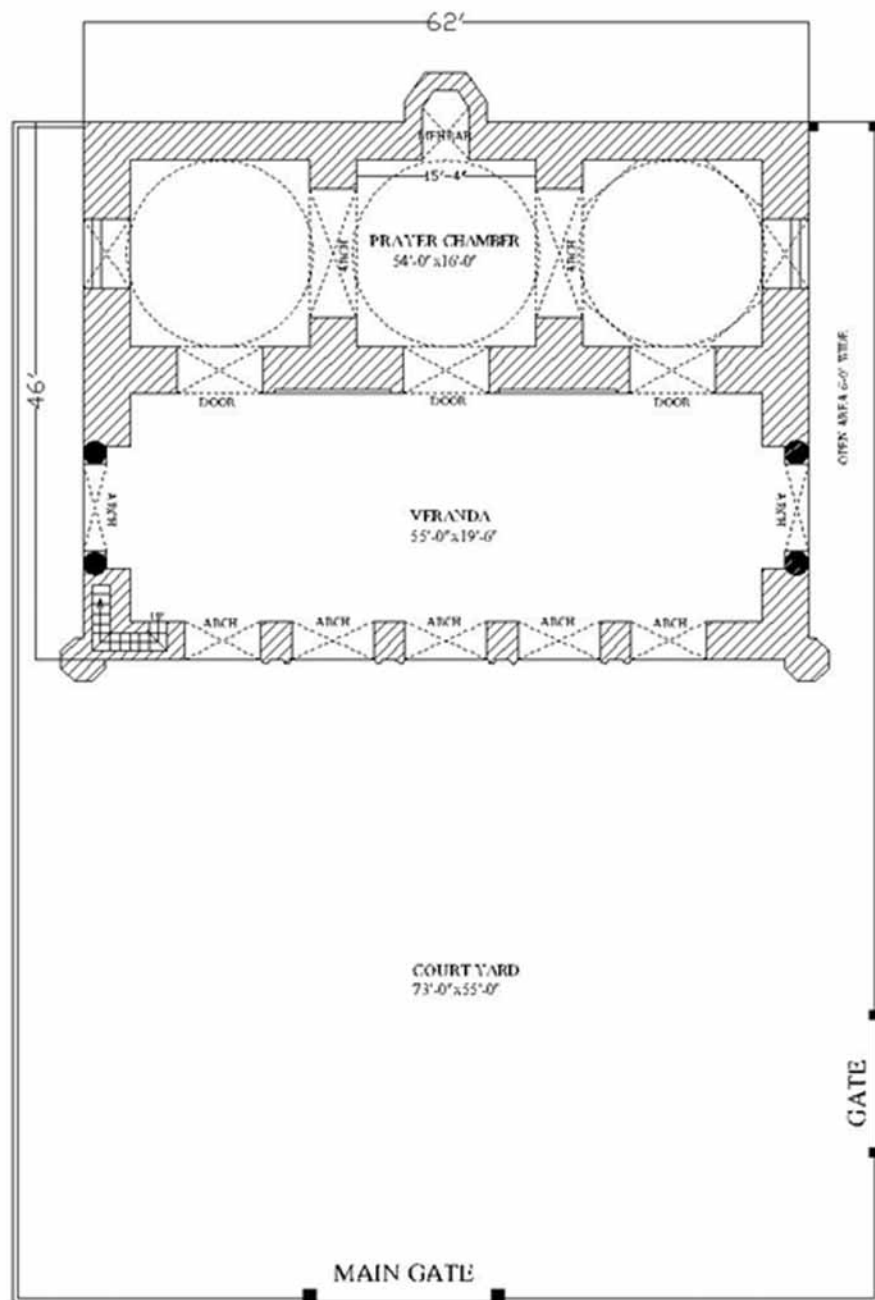


Figure 18: Ground Floor Plan of Mosque Ikhtiar Khan

There is not any specific tradition of minarets in the whole region as it exists in mainstream Mughal Architecture. There is only example of the Derawar Mosque where one can find a small minaret. No such example exists in the nearby city on Uch as well (Rafiq, 1997; Khan, 1980). However, the Mosque of Trinda Madho Khan is the only example where one can see minarets in the two corners of east façade but they are without domelets. The buttresses in the corners of the rear side strengthen the structure, define and frames the building façade. There are corner buttresses in the Mosques of Chitti, as well as in the Mosque of Basti Mian Wali.

The form of the domes in the Chitti Mosque is also different from other mosques. Hemispherical domes rest on circular drums. In other mosques, the shape of the domes is slightly onion shaped, where the outer curvature is convex at the zone of transition. The mosques are generally finished in fair faced, however, in most of the cases lime plaster has been applied on the front facades in later period. The Chiti Mosque is an exception where plaster is applied on the main building as well as on the gateway.

The architectural features and art forms of the mosques in Lower Punjab are quite different from upper Punjab or Lower Sind. These mosques provide important links on one hand with Iran and on the other hand with Rajasthan in India. The patterns created in bricks show their relation with Persia (Gonul, 1987). However, the niches created below the parapet walls have strong connection with Rajasthan. These niches are only found in tombs and mosques of Lower Punjab. Such niches are also found in the tombs of Uch Sharif particularly, in the tomb of Bibi Javindi and Baha ul Halim. The style of fresco decoration under the soffit of the domes is inspired from Persian tradition. The Mughal Mosque contains *qalib kari* (web design) and star patterns as decorations, whereas the mosques of Lower Punjab contain geometric arabesque. The exterior walls, divided into panels, are also a common feature of the mosque architecture of South Punjab.

The tradition of decorative brickwork, known as *hazarbaq*, as found in the mosques discussed above has its origin in Persia and Central Asia. Between tenth and twelfth centuries, during Seljuk times, an ornamental building technique became fashionable in Persia and this has been a characteristic of Persian Architecture ever since (Schroeder, 1967). In the 13th century this technique was imported into what is now Pakistan via southern passes, particularly through Bolan and Gomal Passes. The arrival of the Mongols in Central Asia and Near East, migration of craftsmen and the transfer of building technology in the late 13th century bought a

major change in the architecture of the area under study. This was the time when Nasir ud Din Qabacha was ruling in Uch and Multan. The master builders created contrast between light and shade that resulted from alternating flush and recessed bricks to create decorative *seh khani*, *punj khani* and *sat khani* patterns. These patterns were part of the structure of the buildings. Carved brick plugs to create the effect of rotating squares were developed to enhance the overall effect.

Glazed bricks were also found in the the Mosque of Chanjni. Glazed bricks are a Pre-Islamic tradition inherited from Babylonian and Achaemenid times. The earliest example in eastern Muslim provinces dates back to early 12th century, when molded tiles or end plugs were used to contrast with the natural buff color of bricks. These tiles were used in inscription bands. The color was introduced in brick architecture to enhance the complexity of decorative and to make the inscription friezes more legible from a distance. Under the Ilkhans (1256-1352) these tiles became a prominent feature of monumental architecture as the large surfaces were covered in decorative compositions of glazed bricks and tiles. The most commonly used colors were turquoise and blue. However, yellow has been extensively used in the tomb of Tahir Khan Nahar at Sitpur. The earliest use of glazed tiles and glazed bricks in Pakistan is found in the Tomb of Baha ud Zakariya, and four anonymous tombs located at Lal Mara Sharif in Dera Ismail Khan. Subsequently, its application is found in the famous tomb of Shah Rukan-e Alam in Multan.

CONCLUSION

Ikhtiar Khan, built many mosques in Liaquatpur and Khanpur Tehsils of Rahim Yar Khan District in Lower Punjab Pakistan, during his rule around third quarter of the 18th century. These mosques however remained undocumented and they had not been analyzed for their architectural significance mainly because of their location and difficult access. These mosques were identified by the author and documented in the process of this research. These mosques provide interesting case studies for the study of different influences from the east and west, and the adaptation of these influences to the local context and the development of a new vocabulary of architecture.

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THE MOSQUE CONSERVATION PROJECT IN PERSPECTIVE

*Sameeta Ahmed**

ABSTRACT

The Spal Bandai Village Community Mosque in Swat, Pakistan, a fine example of traditional architecture, was under threat of demolition. It is the only community owned property in the village. With the support of Prince Claus Fund (PCF) this mosque was recently restored by professional architects and the building was returned to its original splendour. This paper documents the conservation process highlighting the special physical features of the mosque and the role of the community in the process.

Keywords: Community, Mosque, *Jumaat* (assembly), Conservation

INTRODUCTION

The Spal Bandai Village Community Mosque in Swat,

northern Pakistan, is a classic example of traditional Swati Mosque architecture, with exquisitely carved wooden columns, wood structural frame, stone masonry and winter and summer prayer areas (Figures 1, 2). The mosque as a building type and institution has historically served social functions in Muslim societies, besides that of being a place of worship. There are also regional variations or interpretations to its use or built expressions. The word used for mosque in the local Pushto language is *jumaat*, which implies a gathering place. The Spal Bandai mosque truly is a community mosque serving the village for larger Friday and Eid prayer congregations and some social gatherings, besides everyday five-time prayers. It also has the distinction of being the only community owned property in the village.

The trustees were recently struggling to meet the spatial needs of a fast growing 'catchment' community, which spans



Figure 1: Location of Spal Bandai village community mosqu in Swat

* Sameeta Ahmed, .Architect in private practice in Karachi.
Email correspondence: sameetaahmed@gmail.com

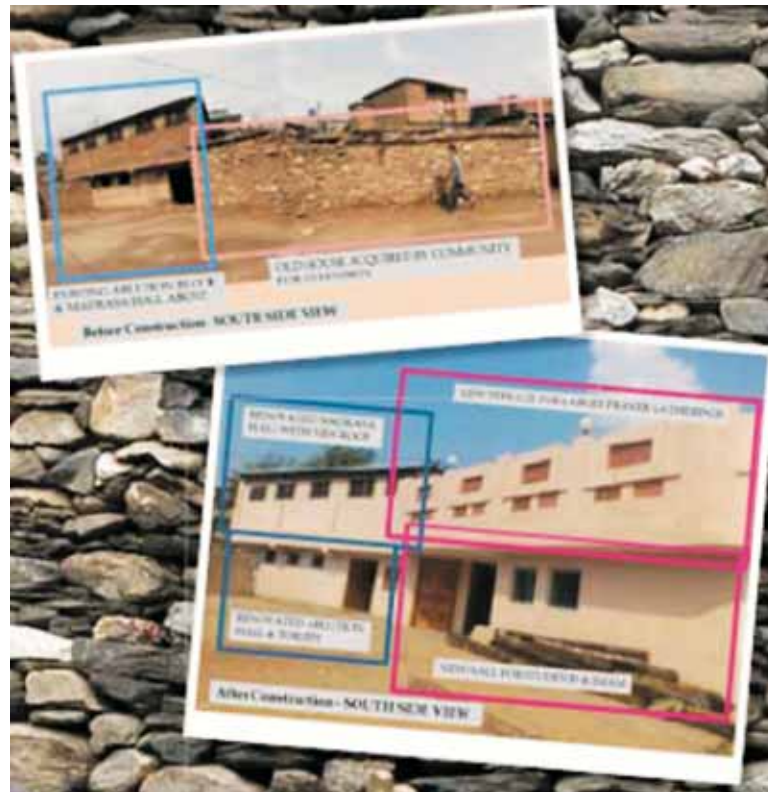


Figure 2: Images taken before and after the renovation of the mosque.

the extensions of the village into the countryside. Some of its portions had also become damaged and so the structure was being considered too dangerous for further use. Having recently gone through the trauma of conflict, the villagers were running scarce on the traditionally gathered resources for maintenance. Thus the mosque, now one of the few traditional Swati mosques still standing, could have been doomed to demolition.

With the support of the Prince Claus Fund (PCF), Swat Participatory Council (SPC) professionally engaged architects as Project Managers and Project Coordinators an attempt was made to save this building from demolition. It was successfully restored to its original glory through a formal Conservation and Extension project carried out in 2013. There was an effort to follow, as much as possible, the international principles for conservation work, including the preservation of authenticity, documentation and reversibility of additions (Chitty, 2016; Albert, et.al, 2015).

An extension component as well as some upgradation of the mosque and its surrounds was planned. An attempt was made in this effort to preserve the original overall character

of the heritage structure. Positive new interventions were carried out only where deemed necessary. Community participation was made an essential component of the project by both PCF and SPC and was very much appreciated by the villagers.

There was also much community support in the endeavour. Financially, villagers raised funds to acquire additional land for the extension and provided hospitality to all the workers throughout the project cycle. Managerially, the mosque committee worked with the SPC team and, socially, they instilled a new sense of pride in the village regarding their rich local heritage.

This paper documents the process of restoration and conservation of the mosque, the impact on the community and their engagement in the process.

DOCUMENTATION

The documentation phase was carried out in the beginning with the SPC technical team preparing the measured CAD drawings of the mosque and related documents for the

Conservation Plan. These were further reviewed and updated as work continued. Special patterns and details were recorded (Figures 3 - 5). Through this project it became possible to record a rich body of cultural knowledge about the history of the related crafts and craftspersons. The Prince Claus Fund supported the gathering of all this precious information in the form of a book as a separate venture (Ahmed, 2015).

CRAFTSMANSHIP AND CONSERVATION

Recently the typical Swati crafts had become endangered, with a negligible number of craftsmen of the traditional wood crafts and traditional artefacts, such as carpenters, carvers and masons, who were masters in the traditional techniques, being visible in the market. Many had switched

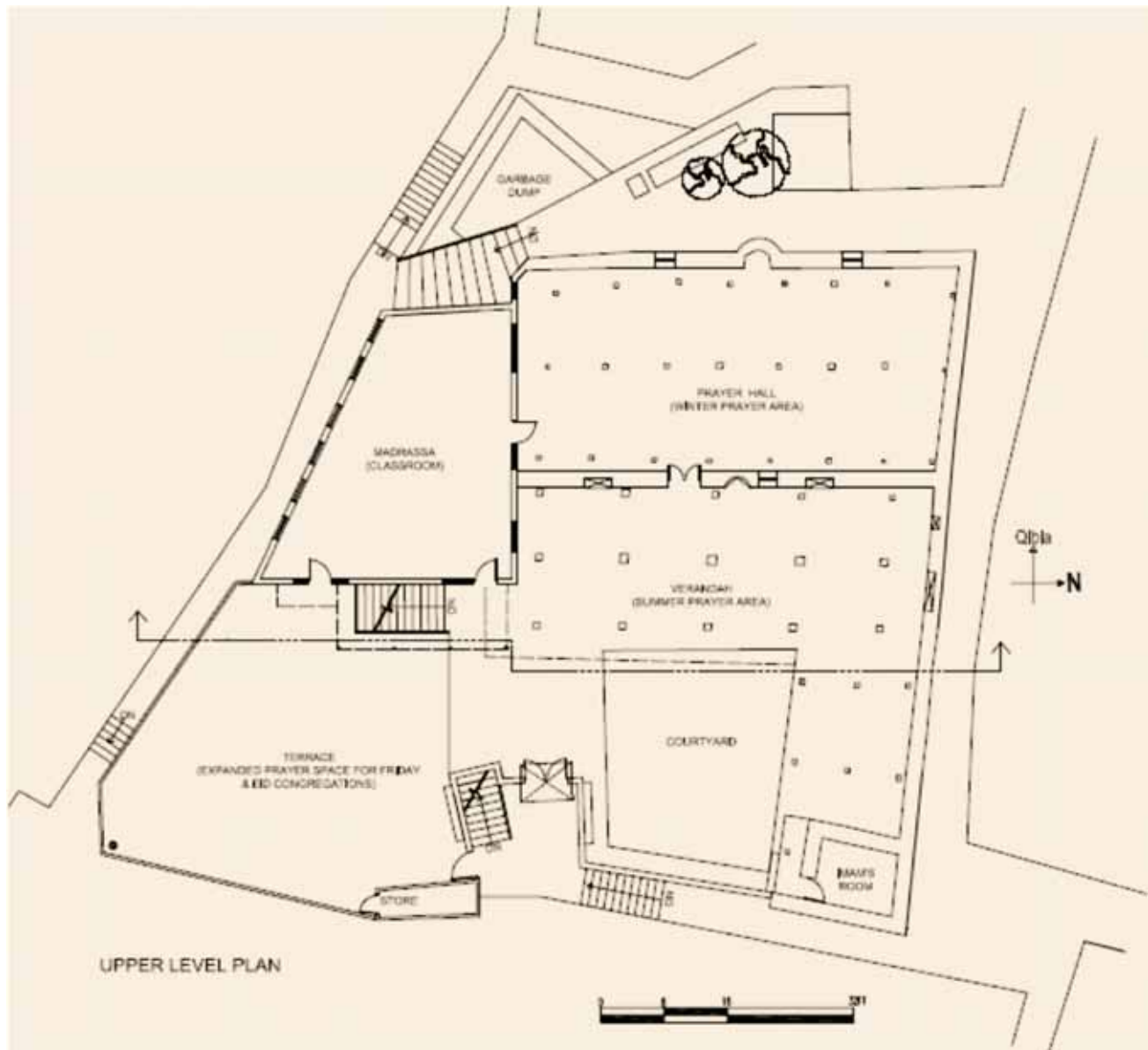


Figure 3: AutoCad plan of the mosque.

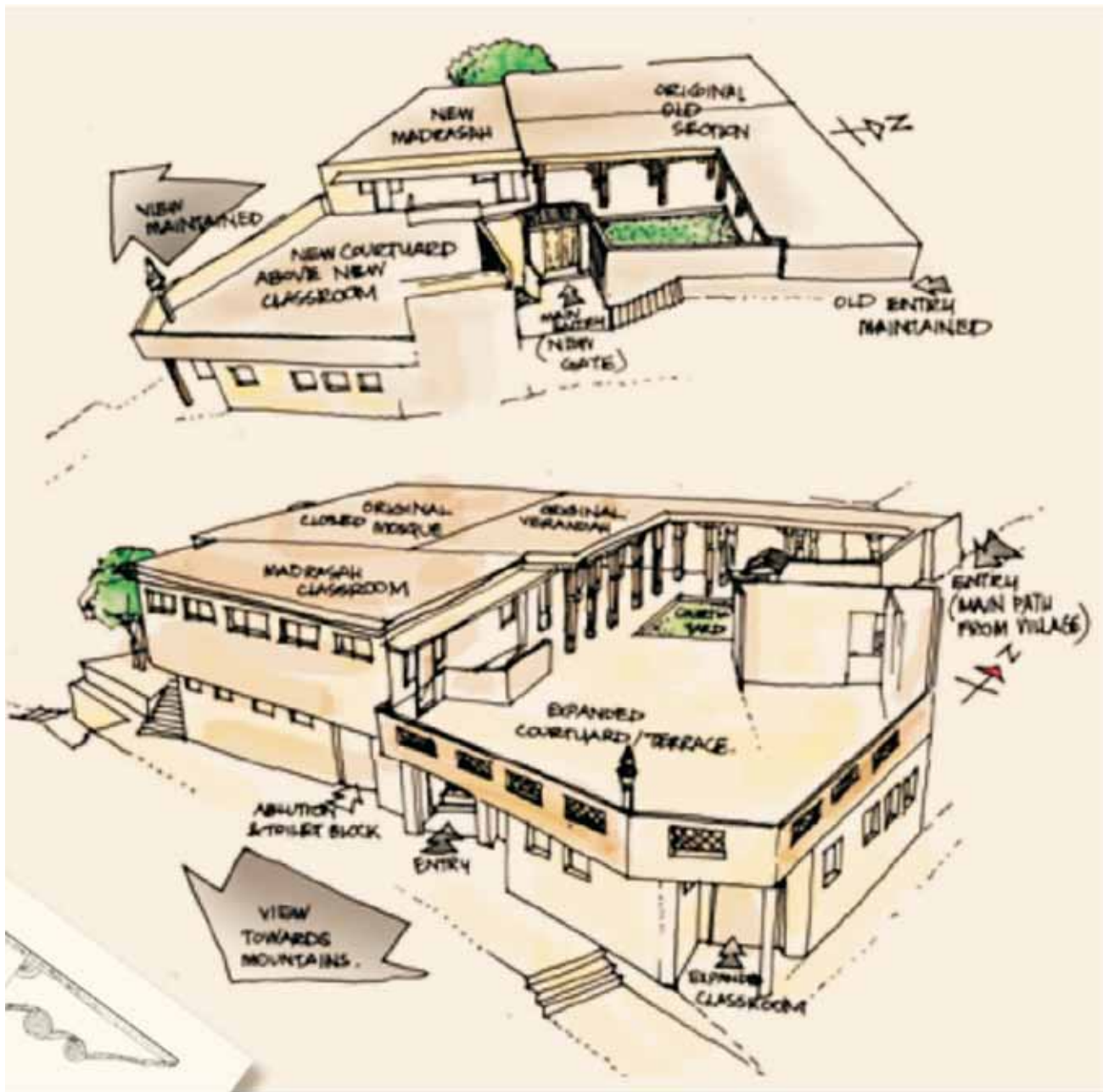


Figure 4: Three dimensional sketches of the mosque.



Figure 5: Documentation of built elements of the mosque.

over to either modern or other regional styles to follow market trends. The demand for wood utensils and household products had diminished considerably as new, cheaper materials became common. The past few conflict-ridden years had exacerbated this predicament further. In this context, the search for relevant craftspersons, materials and techniques for this conservation project has been a challenging but rewarding process. Especially needed were professionals who were familiar with the art of carving patterns in the Swati style repertoire (Figure 6).

A very valuable spin-off occurred in this search for skilled, traditional wood carvers – one with an excellent knowledge of regional pattern-making was found in a neighbouring sub-valley of Swat. He was hired throughout the length of the project and also paired with carpenters from the village,



Figure 6: Interior courtyard of the mosque.

who learned and worked with him. This master carver, embellished the structure greatly and was even able to create a new, designed and carved gate, as well as carved doors and windows for the mosque and its extension, in the traditional style (Figure 7). These replaced later adhoc interventions including a makeshift metal gate as well as carving in non-regional styles.

The master carver was asked to generate more samples of typical Swati regional patterns and motifs on sample panels, to be preserved as a record. It seemed as if this mosque project, which preserved the old carved columns and created new interventions in the same style, had served to revive the almost-dead art of Swati wood carving and its rich and ancient range of motifs and patterns in a classic, historic setting. The team was also able to provide professional engagement to local stone masons and carpenters, who were familiar with traditional work and showed their mettle in the project.



Figure 7: Exhibiting a range of sample carving patterns in typical Swati style.



Figure 8: Prayer hall of the mosque.

Structural repairs were carried out selectively to consolidate masonry and the wooden column framework. A damaged column was replaced with a brand new one using traditional methods. It was carved in the original styles, but not competing with the old. The surface carving of a few columns, which was missing, was restored. The process also revealed the immense diversity of traditional detail in ornamentation (Figure 8).

Later interventions of modern paint with non-authentic colour schemes were successfully removed from the original wood elements in the mosque, and the old woodwork was restored and repaired as and where needed, while giving them protective polish.



Figure 9: Safer pathways and steps designed as an extension of the project.

SITE UPGRADATION

Safety factors, or a Disaster Risk Reduction approach, were further addressed as much as possible in the project in proposing safer pathways and steps, emergency exits, and space for the smooth flow of users between blocks in and around the mosque compound (Figure 9). The traditional seating where elders gather along the mosque wall exterior was also preserved (Figure 10). In view of the immediate needs of the community, the extension and site upgradation phase was carried out first.

The systematic re-organization of the ablution and toilet block according to architectural standards was greatly

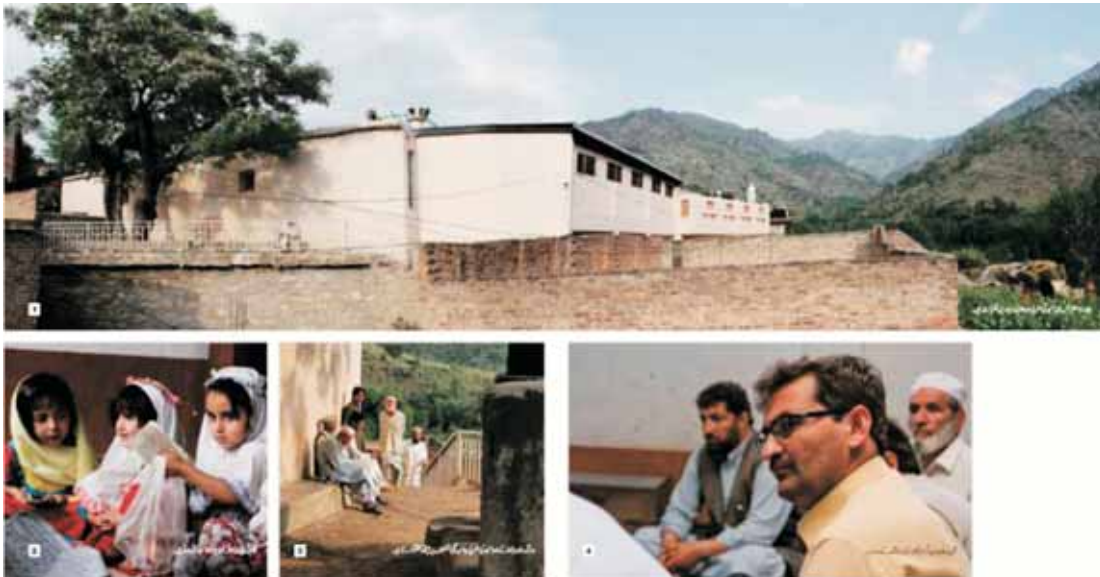


Figure 10: Elders socialising on steps and benches outside the mosque.

appreciated by the local community. Through this block, a great side benefit has been the ease of accessing piped water for some neighbouring villagers who might not have had the facility at their doorstep. Young females in the vicinity who usually collect water for their homes from other sources were benefitted directly. A proper garbage dump was built near the mosque complex to replace the older one, which had become an eyesore. Some male and female sitting spaces were also constructed in the waiting areas of the local village bus stops, as part of the project.

COMMUNITY CONSULTATIONS

SPC successfully carried out various workshops for consultation, awareness-raising and capacity-building. The project started with a community orientation workshop followed by regular community consultations (Figure 11). This project has greatly benefitted from the good footing that SPC and the project management had with the village community. The project planning has directly involved community members through official committees in project development, decision-making and implementation.

Introducing a cultural heritage conservation project in the village was an interesting new experience for all, especially coming soon after the conflict when most support was being offered only at the subsistence level. As the project progressed, the media played its role in highlighting the conservation, and local youth became more aware of the value of their heritage. The mosque even started attracting tourists from other cities of Swat.

The SPC team's general pro-people and community development approach led them to build into the project a 'Village Planning Workshop'. The Project Architect, who was both Project Manager and a member of the village, along with Mohammad Roshan, Executive Director of SPC, co-conducted the workshop and shared an initial mapping of the village and its resources with participants. The aim of this workshop was to find out the problems of the community, to highlight other issues and point towards more environment and culture conservation efforts needed through open discussion.

CRAFTSPERSONS WORKSHOPS

Introductory Capacity Building Workshops for masons, carpenters and wood carvers were designed to familiarize the skilled labour with the approach to traditional materials and methods to be used in the mosque conservation from the start (Figure 12). They were welcomed by the community,



Figure 11: Community consultation workshop with locals.

and there was a mutual and rich exchange of information about the building's history and the methods employed in it. This contributed to the enhancement of knowledge and the fine-tuning of conservation techniques which were applied by the technical team. An elderly carpenter from the village, who participated in the workshop, informed the team about how in his childhood his father had carved one of the standing columns of this mosque when it was replaced at that time. He also recollected how certain wood members were replaced in 1970, after the princely Swat State was disbanded and the embargo on cutting trees from nearby forests was annulled.

INVOLVEMENT AND IMPACT

Many responsible villagers and youth led by the mosque committee played an active role in the conservation project



Figure 12: Capacity building workshop with craftspeople.

(Figure 13, 14). While the village planning workshop was a first in making the mosque space a forum for development planning, another first was that a woman Project Coordinator, was a leading member of the mosque conservation team and her presence was welcomed in what is a traditional men's space in Pukhtun culture.

Introducing cultural heritage conservation as a theme has been interesting for all concerned. Watching a dying structure being resuscitated back to life, in all its glory, especially after the traumatic social experiences of war and flood devastation, has generated new energy and spirit in the village and its environs, and seems to have created hope and shown a way for the future.

CONCLUSION

In essence the project was a conservation project of a physical building but the impacts of the project were many folds. Firstly the process of the project bought the entire community on one platform and instigated a sense of pride and positive spirit in the community. Other positive outfalls of the project



Figure 13: Interaction of architects with local community elders.

were attraction of tourists, ease of accessing piped water for the neighbouring village and recognition by the youth of the heritage value of the local buildings. The project not only succeeded in reviving the age old art of wood carving, it also created many public places for social interaction amongst the community, in the process thus enhancing a sense of ownership, pride and community.

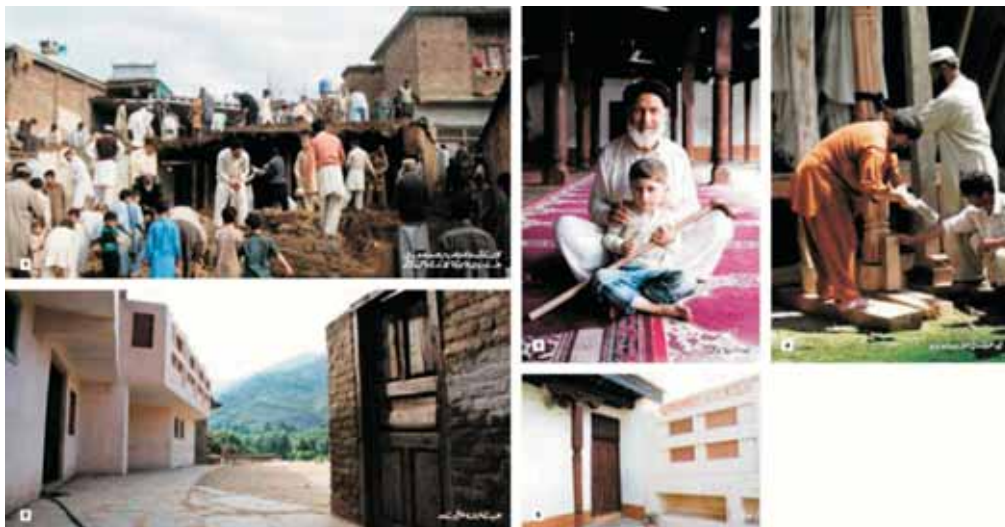


Figure 14: Involvement of local community at various stages of the conservation project.

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CONTEMPORARY BUILT FORM IN PAKISTAN: AN ANALYSIS OF RESIDENCES AND URBAN AREAS OF LAHORE

*Muiz Ahmed**

ABSTRACT

The world is changing rapidly on socio, politico and economic grounds. Art is the reflection of societies and the changes in a society are reflected in all art forms. Pakistan is also affected by the global changes and it is the need of the day to conceptually understand the contemporary art of Pakistan. Out of many forms of art, architecture is discussed in this research paper and an effort is made to find the direction in which the contemporary domestic architecture and urban design of the mega cities of Pakistan is heading towards. Data is not only gathered and analyzed from books and already published research papers on the particular and supplementary subjects but, interviews of architects, urban designers and general public have also been conducted in order to get the first hand knowledge about the subject under study.

Keywords: Contemporary architecture, Urban design, Global, Pakistan

INTRODUCTION

The contemporary world is changing rapidly. This change has given new shape to the societies of the world. The rich are becoming richer and poor are becoming poorer with 2.5 billion people living under poverty line today. There is mass migration of population from the south to the north, resulting in change of economy and ecology. Economic growth generally means ecological decline that results in global warming (Jencks, 2000).

As art is a reflection of a society, the change in the societies is reflected in all of the art forms whether painting, sculpture, design, architecture of Pakistan being part of the globe is also affected by these changes and these effects get reflected in the built form of the country. It is the need of the day to

understand the contemporary architecture of Pakistan in order to understand the effect of the global changes and to identify the direction in which the contemporary architecture of Pakistan is heading.

This research paper deals with two branches of architecture i.e. building design and urban design, in the mega or metropolitan cities of Pakistan. Even within the parameters of building design, only domestic architecture is studied. The objective of this research is to analyze the contemporary architecture in Pakistan and understand the reasons behind this practice. The research methodology is based on literature review, qualitative interview of architects and photographic documentation and analysis of architectural projects.

THEORETICAL FRAMEWORK

For the purpose of this paper it is important to understand the term, 'contemporary'. The word, may be described as something belonging to the same time or equal in age (Pathak, 1938). It is also described as concurrent or synchronic with time (Oxford Thesaurus of English, 2006). Another description of "contemporary" is, something which is modern or up to date or ultra modern (Oxford Thesaurus of English, 2006).

Referring to these definitions the one that is closest to the meanings used in this research is, 'ultra modern' or 'post modern'.

Art and architecture of any society depicts the ideology of that society at a particular time. In order to understand current design trends, one has to turn to the philosophy that asks a very basic question, what is truth? or what is reality? The answer to this question will in-fact define what are the current design trends as explained by Architect Kamil Khan Mumtaz in an interview conducted by the author in 2015.

* Muiz Ahmed, University of Punjab, Lahore.
Email correspondence: khalifaahmedmuiz@gmail.com

The modernity project has been part and parcel of modern European history, the history of its political economy, its science and technology and particularly its philosophy. From Descartes through Kant, and Hegel to Marx, European philosophy has moved from speculation on the nature of God to rational analysis of the nature of man, from intuitive and inspirational experience of the abstract, to phenomenal experience of the concrete, from idealism to dialectical and historical materialism, from faith and vision of a heavenly kingdom to altruist ideologies of a utopian fraternity of man, to phenomenalism, existentialism and pluralism. In this process, European philosophy has reduced the truth from, the absolute to self evident cause, to a logical postulate, from mental construct to a relative personal truth and finally to a meaningless game of semantics.

At the same time, modern science began by reducing man, made in the image of God, to man the thinking animal, and then proceeded to de-sanctify his myths and archetypes to the level of the collective subconscious, bringing his loftiest emotions and profoundest thoughts down to the level of animal sensuality and sexuality. It then proceeded to assign even these animal reflexes and responses to the machinations of molecular chemistry and genetic codes.

With each stage in this downward spiral, European man's penetration into the depths of the material, physical, phenomenal world has been reflected in his art and architecture; from the inspired cathedrals and icons of the Middle Ages, to the humanist harmonies and proportions of the Renaissance; from the calculus and perspective of the Baroque; to the analytical and scientific theories and machine aesthetics of the Modern Movement; and from the iconoclastic puns and sensual delights of the Post Modernists to the nihilist anarchy of the De-Constructivists.

Of course there have been other developments as well like secularism, the nation state, democracy and the new social contract. The spirit of inquiry, the scientific, empirical method, the rapid development of the means of production and the means of communications, not to mention the means of destruction, coercion, exploitation and domination, which have enabled man not only to conquer nature but, other men as well, and to acquire much material wealth. Indeed, these are the achievements which have been held up as proofs of the efficacy of modernity, spurring man on to ever greater conquests and acquisitions.

Naturally, all of these developments have had an impact on the non-European world. But this impact has been largely

superficial and has neither penetrated sufficiently into the deepest layers of these cultures nor transformed them to the extent that it has the west. Under an often deceptive veneer of modernity, these cultures have retained much of their traditional values, beliefs and social behavior patterns.

If the understanding of truth is subjective, and relative to time and place and if its representation requires a language and symbols operative in a given collectivity, then for art and architecture to be relevant and meaningful, it must represent the 'truth' as defined within its own specific cultural context, and in doing so must employ a language which is operative in its own specific culture (Mumtaz, 1999).

Up till now, many developments have been made to answer the very basic question i.e. what is reality? The answers are still unknown and even the Quantum physics remained unable to answer this question. In order to answer the question quantum mathematics was evolved that made it possible for the scientists and philosophers to answer, what is reality? e.g. quantum mathematics asks, what is the square root of a negative number?

Physics cannot define the physical universe. It can only describe what it observes, thus nothing is certain. Philosophers say that when nothing is certain, there is no absolute reality, there is no absolute truth. Truth has become subjective therefore, there is no right or wrong and that is the reality of modernism or contemporary (Mumtaz, 2015).

EVOLUTION OF DOMESTIC URBAN ARCHITECTURE OF THE HIGH INCOME GROUPS IN PAKISTAN

Contemporary (domestic) architecture is defined by various contemporary architects, based on their experience and philosophy of design and all definitions are correct. Some of the definitions are given below. These definitions help understand conceptually the contemporary architecture of Pakistan.

Wasif Ali Khan, a Lahore based architect defines architecture as, "I love the geometric patterns inherent in our traditional architecture" (Husain, 2006:221).

Yasmeen Cheema, another Lahore based architect says, "I believe a house should be modest, comfortable, pleasing and built from local materials. I would use a lot more colour today colour is an important part of our culture" (Husain, 2006: 107).

Naeem Pasha, an architect from Islamabad describes architecture as, "I try to communicate the nature, purpose and cultural implications of the architecture I create. My continuing search has been to enable my work to endure as a true expression of our time" (Husain, 2006: 114).

Shaukat Nawaz Raja, an architect from Lahore says, "we cannot negate time and change. Our heritage remains a profound source of inspiration. Well assimilated, it transpires through the most contemporary of our works and behavior, and should do so. That my work reflects Ghoragali, U.E.T. and L'ecole des Beaux Arts, that I imbibe from the strong geometry of the Renaissance as well as the Mughals is only wonderful. I believe my house reflects my beliefs" (Husain, 2006: 162).

Suhail Ashfaq Abbasi from Islamabad defines his house as, "The house was made so that one does not see a completed space, there is always a promise (or surprise) around the corner" (Husain, 2006:196).

The control of many traditional societies in Asia, Africa and Latin America by European Colonial power commenced the process of modernization. As far as the Indian subcontinent is concerned, the dynamics of the societies in different states after independence in 1947 was shaped by cultural dualism, which was a result of hundred years of British rule. This paved the way for contemporary cultural dialogue in Pakistan in which the conflicting cultural demands for modernity and tradition appeared as a core issue but, the individual feelings of architects, builders and clients adjusted the way in which the concept of modernity and tradition has been practiced in architecture.

The feelings of architects were governed by the academic training. Modernization has fractured the local, indigenous and those institutions which had traditionally supported the profession of architecture. When the modern institutions empowered the traditional system of education, it made the architects sensitive towards contemporary European concerns like form, function and aesthetics and made them less concerned about the syntax and grammar of their indigenous architectural heritage.

The feelings of the client show the cultural dualism of the society more clearly. On one hand the westernized client tends to promote architecture which reflects his modern and progressive scientific views and taste. On the other hand there are clients who are clear in demanding indigenous architecture that is deep rooted in their culture and history (Mumtaz, 1999).

In the post modern era of 1980s industrially advanced societies challenged the modernist model. The modernist model was also challenged by the countries of the south but for different reasons. The question of national identity and culture had been closely related to national liberation movements in the Post Colonial societies. The corrupt and materialistic culture and the negative impact of irresponsible industrialization paved the way for emergence of regionalism and demand for alternative strategies for development as global issues.

Most of the architects have not responded to these changes thoughtfully. The old international style became the new international style. The foreign qualified architects, on their return to Pakistan, practiced architecture in Post Modern idiom e.g. Ijaz Ahad, Arshad and Shahid Abdullah, Tariq Hassan, Obaidullah Ghayyur and Amjad Mukhtar. On the other hand, architects such as Ameer Ali Qamar, Qayyum and Willayat Khan and Sajjad Kausar have practiced architecture within the regional vocabularies of form for an expression that is relevant to their culture.

There are certain architects who remained indecisive as what style to follow. Despite their academic training, they were motivated to follow the contemporary expression which related to regional realities on one hand and to the meaning of their culture on the other. These architects have two disadvantages; the academic training has never provided them with the base by which they can analyze historical data, traditional design principles and building techniques and secondly they are not provided with the tools for independent scientific inquiry (Mumtaz, 1999).

According to Architect Kamil Kham Mumtaz the west has taken a stand on the bases of the historical experience that they had for the contemporary style of architecture and have followed the philosophy after understanding it. But many of the architects practicing in Pakistan have copied the work without giving serious thought to the native style, technology and methods of construction and planning. Here it should also be noticed that only architects are not responsible for what is going on in the field of architecture in cities like Lahore and Karachi. The client is equally responsible for the crisis. The client being wealthy enough can collect examples from around the world and then dictate the architect to incorporate those elements and style upon the liking of the client and not on merit. This combined practice of the architect and the client has also caused damage to the architecture and built environment of cities.

Urban life in Karachi or Lahore is perhaps more similar to life in London, Paris or New York than to the life in Mirpur Sakro or Chichawatni in Pakistan. As citizens of a metropolis, one is subject to similar tight schedule of work, shopping, entertainment and leisure, but do not face the infrastructure breakdowns of middle sized towns of Pakistan like power shut downs, water shortages and transport crises.

Looking at houses built during the last fifty years in Pakistan, one can see various evolutionary trends. These are not merely stylistic trends but more significantly technical and social trends in the way houses are planned and furnished. What they reflect of the client, his/her families, heritage and gradual assimilation into a global culture. They also reflect insensitivity to certain basic social and environmental concerns.

Life, particularly among the affluent, has changed noticeably over the last fifty years. Kitchens have become cleaner places, with modern appliances, storage cabinets and polished granite counters. Cooking on wooden fire or coal has become redundant. The shift from cooking on noisy kerosene oil stove to today's gas burners, from electronic toaster-ovens to the microwave is related to a long story in a short time of span. From the ice box to the fridge and onto chest freezers is yet another example. Bathrooms are no longer wet area but most elegantly tiled, mirrored and lighted room with sophisticated fixtures and other high-tech accessories.

The old multi-purpose courtyard has virtually disappeared from most city houses. In its place, the T.V. lounge has become the favourite haunt, as a family room and living area all in one, as well as a place for casual visitors. The rooms in our houses including the many bathrooms, are getting larger and larger. Meanwhile, the families are shrinking, and people are getting more heavily programmed for work, outdoor activity and foreign vacations.

As the daily routine and relationships have changed, so have the homes in Pakistan. Where once the occupants were happy with grey or red cemented floors in the hall, terrazzo slab counters in the kitchen, even a terrazzo tub or sink, brass taps, door handles and locks and a simple plastered exterior, the houses today usually support polished marble or granite, or at least ceramic or porcelain tile flooring. Counters have changed from cement slabs first to plastic-laminated tops, then to marble or granite. The fixtures have progressed from brass to chrome to stainless steel to synthetics, to other high-tech alloys and coatings. The exteriors are frequently clad in machine cut blocks or stone, or metal cladding and the windows are glazed in half inch

thick tinted-glass panels.

The houses today are different not just due to new planning concepts and new materials from across the world. The change in social setups is also responsible for the change in house typology with the advent of the nuclear family, fewer children and working women who are away from home each day as long as the men folk. Children are no longer growing up merely to join the family business. They pass high school and want to go to college at distant places. With this phenomenon comes the empty-nest syndrome, large houses recently completed, but the kids are gone and visit the family annually only. So, the houses often have fewer family members but a large number of servants required for the upkeep and running of the houses.

Today's Pakistani house is conceptually different, built with a different intent and purpose. It is not merely shelter, or a place to stay, it is as often a show room for the collection of art work, expensive souvenirs and bric-a-brac. It is a statement of the social arrival of the occupiers. Imported products are flooding the homes along with imported ideas, such as the open plan kitchen, the sky-lit atrium, and a variety of period furniture and ethnically inspired interior from Egyptian to Scandinavian to Chinese to Mughal. More recently, there is a trend to have home-based offices too.

In this process, there is a lack of concern for the waste of precious resources e.g. land, water, electricity, which could have been used more intelligently by building more compact, easily manageable houses. There is rarely a consideration for water recycling to minimize water consumption or properly sized and positioned windows to cut down the dependence on artificial lighting and mechanical means of ventilation, heating and cooling. Walls and roofs are properly insulated to reduce air conditioning costs. There is utter disregard of the abundance of solar energy available in Pakistan.

The houses reflect the social values and cultural scenario. These also reflect the growing sense of insecurity. A good house nevertheless stands out by its functionality, simplicity, judicious and creative use of limited palette of local materials and a degree of environmental consciousness.

According to the interview of Karachi based architect Mukhtar Hussain if the current trend of mindlessly copying the west and ignoring local realities continues then houses of the wealthy in Pakistan will soon be fully computerized, unwired, remote controlled, solar powered homes. The robots will be making the beds and cleaning up and the lights and



Figure 1: Houses in London

air conditioners will turn on and off in harmony with the usage pattern, time of the day and heat gains from the sun, eventually leading to an e-house in which space and energy may be at a premium but modern comforts of various kinds will be available in abundance.

Houses in the UK have pitched or sloping roofs for maximum heat gains as the surface area increases in pitched and sloping roofs (Figure 1). These houses have maximum openings i.e. windows towards the sun in order to attract maximum sun. This aesthetics works for the UK as the techniques used are responsive to the local climate.

The houses in Lahore try to emulate the houses of UK in terms of aesthetics and outlook and have a variety of new materials displayed on the front façade (Figures 2-4). South-west solar orientation is the most challenging orientation in Lahore as the sun is low but still very hot. This makes the solar penetration deep into the buildings through openings like windows and doors. Designing openings towards south-west side is a tricky job. As the job is not done by the designer thoughtfully or the design is dictated by the client, the result is permanently closed windows with drawn curtains. As the heat intake is severe reflective coating and extra protection to cut the glare has to be provided. It looks as if the windows are designed for maximum heat gains just like the houses in UK mentioned above, although the local climatic requirements are different.

Designing houses with pitched roofs also does not the sloping roof has a larger surface area and that means more heat gains through the roof. These roofs seems to have been an



Figure 2: House with South-West facing windows in Lahore



Figure 3: House with South-West facing windows in Lahore



Figure 4: House with South-West facing large windows in Lahore



Figure 5: House with large windows towards South-West



Figure 6: House with pitched roof

inspiration from the west without giving a serious thought to the functionality (Figures 5, 6).

Another house in Lahore uses a different design approach and is based on a climatically responsive design (Figure 7). This example clearly depicts that there are also other ways to design an elevation besides giving large windows illogically. Well designed various architectural elements that are picked from the history and culture of Lahore, along with a logically designed parapet wall enhances the aesthetic and logical value of the design of this house.

CONTEMPORARY URBAN DESIGN OF PAKISTAN

Till the 19th century, the Indo-Pak subcontinent had its own culture. The cities had their own tradition then. For example the walled city of Lahore had *bazaars* (market), *mohallas* (neighbourhood) and *guzrs* (street ways) e.g. Mohalla Kashmirian, Bazaar e Hakimian (Bajwa and Khan, 2013). There was a natural surveillance system by the local inhabitants of a certain area, as there was a mixed development with residence, shops, cottage industry, all located within the same neighbourhood and the people used to move in the streets till late at night. There was an ownership of the area as a clan living in an area did not allow any body to pollute their neighbourhood or to make a social evil. The people used to meet several times a day in the street, in houses, at shops or in the mosque. Everybody knew each other. Social bonding was strong and the kids of a *mohalla* were under supervision of all elders and were trained and educated by all of the elders of the *mohalla*.

This time period was followed by Colonial empowerment. The British came with their own culture and architectural style and as rulers they imposed their culture and style upon



Figure 7: Climatic responsive design of a house

the local context. They designed localities and constructed buildings in the way they knew. Large and open houses with pitched roofs and private lawns were built without giving a serious thought to the climate and culture of cities of Pakistan. Various buildings built by the British in Lahore, for instance, had pitched roofs. Punjab University, Tollinton Market, General Post Office, Lahore High Court and Mayo Hospital.

Town planning and urban design was also done in the colonial way. Sectors or blocks took charge of the *mohalla* system e.g. Model Town, Lahore. Mixed use of the area was changed and land use zoning with residential and commercial sectors was implemented. The residential sectors had residences only and all kind of commercial activity was shifted to the commercial sector e.g. The Mall Road and Liberty Market in Lahore.

The change in the urban design pattern of Lahore also changed the values of the society. The ownership of the area

was diminished to non-existent. Dependence on transport was increased as the houses, offices, shops and schools were located apart (Rahman, 2013). Larger infrastructure was built to support this new development and the city expanded tremendously along with the emergence of a new skyline for Lahore and other cities.

After independence of the sub-continent in 1947, the same urban design patterns were irrationally followed. Byelaws were prepared and the city was expanded on the same pattern as was done in the Colonial time. This became the contemporary urban design of not only Lahore but all of the mega cities of Pakistan.

Over the years Lahore and other big cities of Pakistan have experienced the deterioration of inner city areas and development of amenities and other facilities in the suburbs, resulting in daily commute of many of the inner city residents to the peripheries of the city causing traffic issues. The increasing population of the city, because of rural-urban migration, adds to the woes of commuting. The government relies of the construction of new wider roads to address this issue. The large nuclear houses further add to this trauma and areas like Johar Town, Model Town and Defense Housing Authority in Lahore, Defense Housing Authority and KDA Scheme 1 in Karachi, Sectors E-7, F-7, F-10 in Islamabad, with population density of 160 persons per hectare consume about 80 % of the land and resources (Bajwa, 2013). As the houses in these areas have private lawns, the dependence on public green spaces has reduced to a minimum. Because of this factor when there is a need to cut down trees and reduce the green road shoulders in order to widen the road so that the pressure of the traffic can be accommodated, people accept it whole heartedly without considering the fact that the green plot ratio of Pakistan is 4 % against that of Asia's 25 % and world's 29 %. The widening of Canal Road in front of Punjab University's new campus is a recent example.

Superstores have taken the place of *muhalla* markets or community market. This has also disturbed the sense of ownership and surveillance of the area by the locals. It has also contributed to the loss of the sense of ownership of the *muhalla*. With the loss of land and place ownership, the ownership of the neighbourhood children has also diminished which was once the beauty of the culture of the subcontinent. The natural surveillance by the locals of the passerby has also diminished, as there is no concept of mixed development in the newly designed urban areas of Pakistan. Due to this reason the individual house is bound to have its own security in the form of surveillance cameras and security guards. The

commercial and office areas become deserted after a certain time and become the hub of crime and social evils (Figures 8 - 9). As these areas are not owned by anybody so no one cares about what happens in these areas.

In developments with mixed use planning life initiates very early e.g. Anarkali Bazaar, Androon Lohari Gate Bazaar (Figures 10 - 11). The areas which are designed for a specific purpose like Liberty Market and M. M. Alam Road, remain deserted unless and until the specific activity commences. The commercial activity in Lahore commences in the afternoon and goes on till midnight so from midnight till afternoon, the next day, the purposefully designed commercial spaces are deserted.

The urban design of the Post Modern residential areas of big cities of Pakistan has led to a state of fear, uncertainty and distrust because the design does not promote interaction amongst neighbours. As a result people are unaware of who is living in their neighbourhood. Children are not allowed



Figure 8: Deserted liberty market at 11.00 hrs



Figure 9: Empty parking lot of liberty market at 11.00 hrs



Figure 10: Anarkali bazaar at 11.00 hrs

to play outside because of the lack of surveillance by the elders of the locality (Rahman, 2013). As a result the generations grow up without knowing each other and the cycle continues. This has another implication. As the children are not allowed to play physical games in play grounds (as there are no play grounds in the area or the children are not allowed to go to the play ground), they get attracted to watch television or surf the internet. Besides entertainment, children also learn violence and are becoming mature at an early stage (Figures 12 - 13).

CONCLUSION

As the research paper discusses the term ‘contemporary’, and unfolds the contemporary practice of architecture and urban design in Pakistan, the following conclusions are drawn in the light of the facts that the paper has tried to establish.



Figure 12: A beautiful scene of children playing together which is rarely seen in the contemporary developed areas



Figure 11: Androon Lahori gate at 11.00 hrs

The irrational and illogical following of the west as far as contemporary domestic architecture and urban design are concerned has the following effects on our built environment and urban context.

Larger and open sided houses instead of a compact house as in the Walled City of Lahore, has allowed the harsh sun of Lahore to penetrate into the building from all sides and the roof at maximum. A house built in Lahore’s harsh climate fails to act as a habitable space without the use of mechanical means of cooling. Same is the case with other cities like Karachi, Faisalabad, Islamabad and Peshawar.

In order to look different, many houses in cities like Lahore and Faisalabad have pitched roofs without giving a serious consideration to the fact that about 70 % of the heat gains in Lahore and Faisalabad are through the roof. Pitched roofs



Figure 13: Contemporary developed residential area with no designed space for pedestrians

have larger surface area than the flat roof and a larger surface area simply means more exposure to the sun that ultimately results in getting more heat gains.

Likewise, windows and openings in a house are approached very casually and are designed without giving much consideration to the solar orientation with respect to a particular site. Whereas, correct positioning and size of the window in a house can lessen the need of mechanical lighting, cooling or heating.

Courtyard houses are history now. Courtyard was an important element of the local culture, that was not only used as a device to tie the family in a strong bond but was also an efficient way of ventilation. Irrational following of Colonial houses with open designs and lawns at the front has snatched a cultural element of the traditional house, which was well suited to the local climate.

The contemporary houses have left behind comfort and have become show pieces of art work and expensive souvenirs. The introvert design of the houses has made people isolated from the neighbourhood. It seems that there is a rat race of using new and imported materials and applying new ideas on the façade. In this race, hardly any consideration is given to the local materials and culture. Open plan kitchen and sky lit atriums catch the eye without knowing the fact that these are good techniques for making a house warmer. This was the necessity of the west to trap the heat in order to make their houses warmer against the chilling cold. These

elements have been adopted locally for the sake of being contemporary.

Instead of following the west irrationally, one should have given serious thought to local problems. Conservation of land, water and electricity should be considered while designing a house. Recycling of water is another issue that should be considered seriously.

A global view makes evident that different geographical locations have similar behaviour and cultural patterns of the central plains with cultivable land have a tendency of openness, friendliness and hospitality, and so is the behavior of Lahorites. If one takes Lahore as an example of the mega cities of Pakistan and compares the traditional and contemporary urban design of Lahore, the traditional urban design with mixed use development having compact houses with *bazaars*, *muhallas* and *guzrs* allowed the people to come out, meet, play and relax. The contemporary urban design on the other hand, adopted as a continuity of what was offered by Colonial period, with extrovert house design having private lawns, separate residential and commercial areas, fails to provide the cities of Pakistan with a design that responds to the behavior of Lahorites. Yet, it shows its relevance with the people of cold climate where getting shelter in a warm house is the only option against cold. That is why, even today, though most of people live in the contemporary designed areas they get attracted by the life of the Walled City of Lahore.

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AESTHETICS AND ORGANIZATION OF SPACES”

A CASE STUDY OF COLONIAL ERA BUILDINGS IN HYDERABAD, SINDH

*Zahida Rehman Jatt**

ABSTRACT

Architecture not only provides shelter but also mirrors a society's standard of living, norms and values. The old buildings are not mere tangible realities rather they provide clues to human understanding and living patterns, including aesthetic sense. This research work aims to document some residential buildings built in colonial era in the old neighborhoods of Hyderabad (Sindh) and to explore the ornamentation patterns, usage of spaces (by different genders) and how the inhabitants have used, altered or retained the built structures. The research methodology involved in this study uses photographic, descriptive and ethnographic documentation. As most of the old buildings are threatened and are being rapidly destroyed to be replaced by modern structures, this study has been helpful in documenting their important features and various aspects of colonial architecture that are getting lost with the passage of time and replacement of the old buildings by contemporary architecture.

Keywords: Architecture, Society, Norms, Ornamentation, Spaces, Colonial, Hyderabad

INTRODUCTION

The city of Hyderabad in Sindh has remained an important center of urban life during the colonial era. It has gradually evolved from being a small fishing village, that was called *Neroon Kot* in the past to a great colonial city whose merchants were famous all around the world and were commonly called Sindh Workies. Although, now the city is largely inhabited by Muslims, but it once was a multicultural center and people from a large number of ethnic and religious backgrounds inhabited it. The past magnificence of this city can be witnessed from physical landmarks that are still standing at various locations in the old neighbourhoods of the city.

Looking into retrospect, the history of Hyderabad goes back to the times of Kalhora ruler Mian Ghulam Shah Kalhoro

(1757-1772), who made it the capital of Kalhora Dynasty (Bullo, 2013). Later on, it was captured (by Talpurs) and remained a capital city under the rule of Mirs or Kings of Sindh upto 1843 (Thomas, 1954). Eventually, when Sindh was annexed by the British by defeating Talpur forces at the battle ground of Dubbo in 1843, the city went into British hands.

During the reign of Talpurs (1783-1843), the city of Hyderabad flourished and grew. Many Muslim and Hindu clans migrated from other parts of Sindh to settle in the budding urban center (Bullo, 2013). The same trend continued in the British era, it further accelerated owing to various socio-economic opportunities that were offered by the new government. According to the census held in 1911, the Muslims population of Hyderabad was 781,219 and the Hindu population was 245,941 or 24 percent of the total population (Smyth, 1920).

The first decades of 20th century saw unprecedented growth in the economy of the city and consequently, it raised the life standard of people living in Hyderabad. In those days when famous Bengali poet and Nobel Laureate Rabindranath Tagore visited Hyderabad he described it as ‘the most fashionable city in India’ (Malkani, 2006).

Two groups within the Hindu population of Hyderabad, namely *Amils* and *Bhaibands* controlled the economy of the city. The *Amils* (meaning the educated ones) operated as revenue collectors and consultants to the Talpur Mirs. The *Bhaibands* (traders, money lenders, shopkeepers) dominated the economy outside the court (Kothari, 2004).

The prosperous citizens of Hyderabad built magnificent buildings that bespeak of their wealth, status and aesthetic sense. Although, this phenomenon did not happen in isolation but same kind of buildings can also be found in other colonial cities i.e. Calcutta (now Kolkata), Karachi and Bombay (now Mumbai) and it's a continuation of a style that was in vogue at that time.

* Zahida Rehman Jatt, Lecturer at Department of Anthropology and Archaeology, University of Sindh, Jamshoro.
Email correspondence: zahida.jat@usindh.edu.pk

Before 1947, there were many clusters of beautiful buildings that were scattered across the city however, the number has dwindled to just a few and even these few are threatened. But even in this diminished state, the buildings of colonial era present a graceful picture with all their past grandeur still evident in motifs and decorative elements that adorn their facades (Figure 1).

For example, there are various motifs like floral and geometric designs, trellises, highly ornamented ceilings, decorative arches and other such elements that add to the beauty of these edifices. There are some added environmentally and socially responsive features like wind catchers and covered staircases that shelter residents from hot weather, sun and rain exposure and balconies and *jharokas* from where one can see outside without being seen from people in the street. These features add to the experience of the buildings because they enable women to have a connection with the street without having to step out of their homes.

In order to study these buildings, a multidisciplinary research methodology has been used which focuses on the following:

1. Documentation: through photographs and qualitative interviews.
2. Cataloguing of the salient features of each building through site documentation.
3. Informal discussions and interviews with present inhabitants and people from the neighborhood.

COLONIAL AND PRE-PARTITION BUILDINGS

Like every colonial city of the subcontinent Hyderabad has also under gone development in the name of modernization. It is one of those cities where the past silently trudges along with a noisy present. Apart from its new face, where it is adorned with high rise buildings, bustling markets thronged with heavy locomotive traffic; there is another face where the past lurks behind the colonial buildings, hiding under electric wires and large hoardings (Jatt, 2016).

This dichotomy can also be seen in the modern posh areas of Auto Bhan Road, Gul Center and Saddar compared to

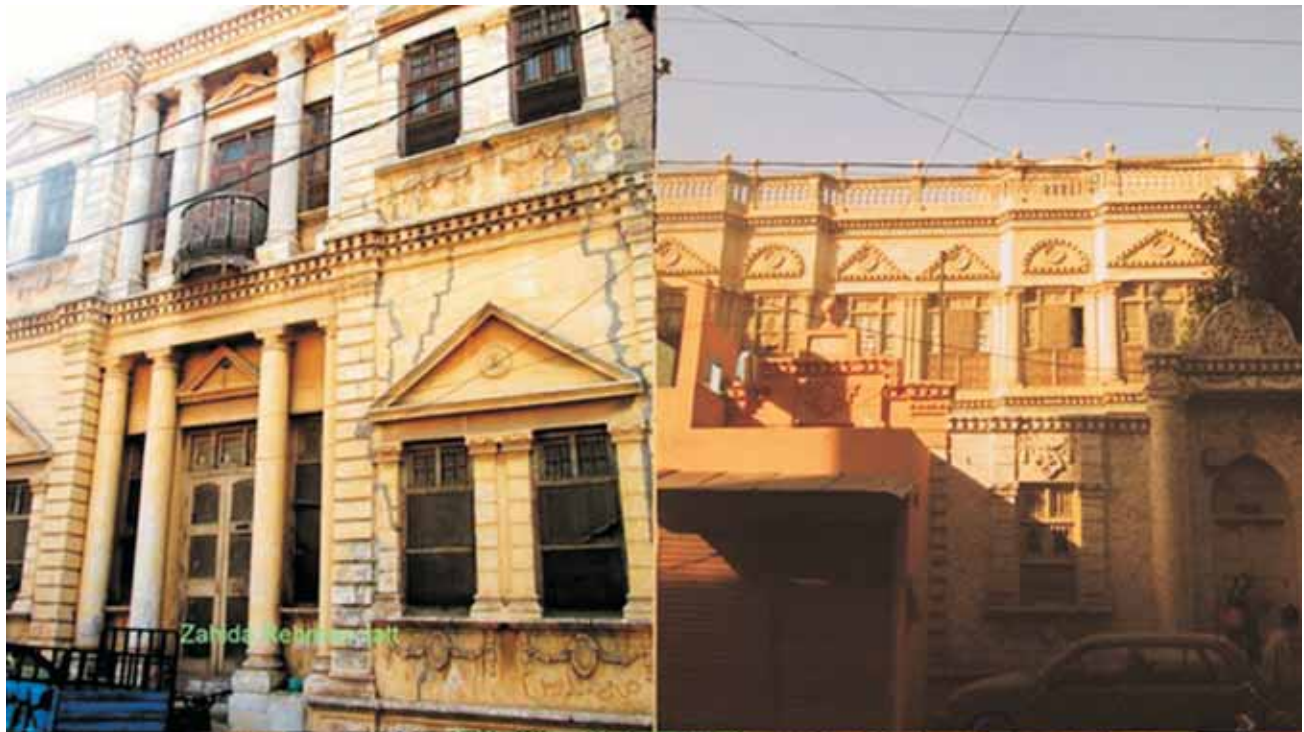


Figure 1: Watoomal Dadlani (R) and another building in Tower Market area of Hyderabad

the downtown old areas of the city like *Navalrai Hiranand* Tower Market, *Resham gali* (lane), *Gari Khata*, Old Campus, *Pakka Qila* locality, *Foujdari Road*, Press Club Area, Tilak Incline, *Chhoti Ghitti* (small lane) and many more (Figure 2).

A number of buildings have been visited and documented for this work in Old Campus neighborhoods, *Heerabad* and Tower market.

The buildings that have been studied, their locations are given in Figure 3 and other data is described in the Table 01.

In the Sindh Government Gazette, sixty nine buildings of Hyderabad have been declared as Protected Heritage under Sindh Cultural Heritage (Preservation) Act of 1994. However, the above mentioned buildings are not among the listed buildings (The Government of Sindh, 2011).

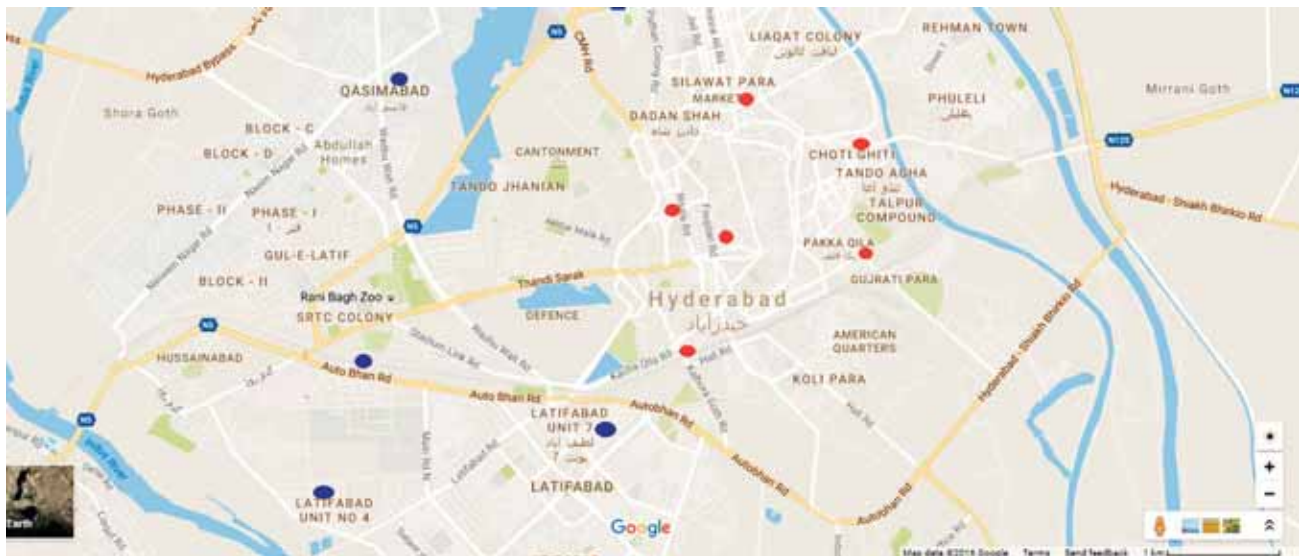


Figure 2: Hyderabad; the blue marks indicate newly developed areas of Hyderabad while the red ones are the older localities

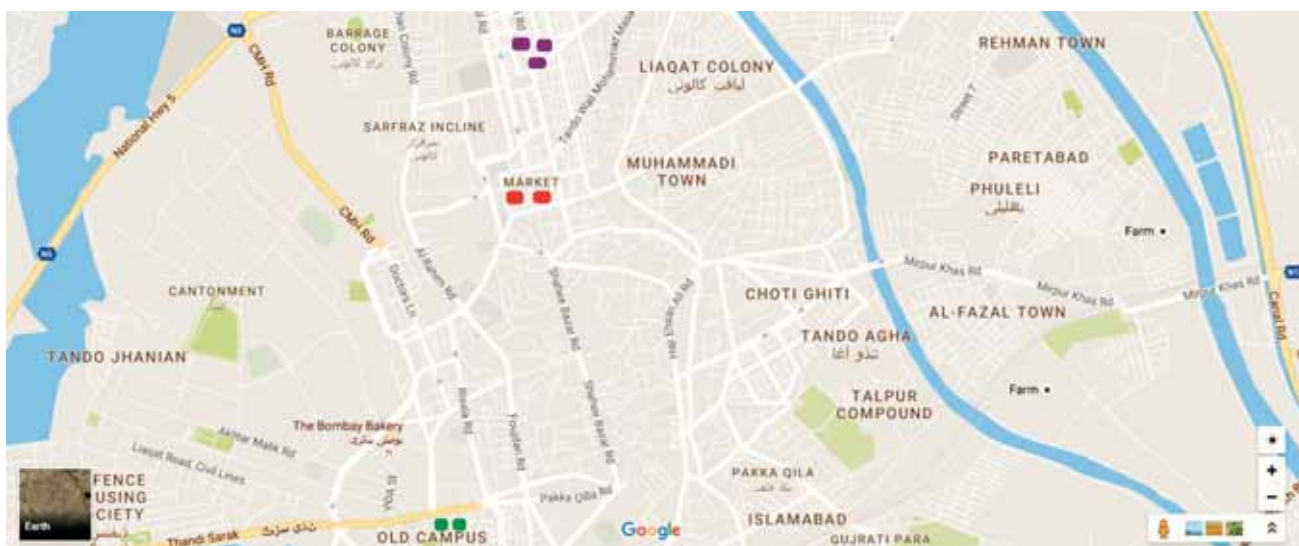


Figure 3: The approximate locations of seven buildings that have been studied are indicated by colored marks

Table 1: Documentation and Analysis of the Buildings Studied

Name of the Building	Year of Construction	Locality	Remarks
Karamchand Devchand Mehboobani Building (Also called A-1 Hotel)	1940	Tower Market	This building is in a very fragile state and the upper storey has almost collapsed.
Sobhraj Bherumal Building	1932	Near Old Campus of Sindh university (former Vidyala High school)	This building has been completely altered. Only the front facades show the original picture.
Dr. Gulab Rai Tekchand Building	1930	Heerabad	The lower storey of this building is in original form but the upper stories have been totally altered and rebuilt.
Bherumal Ghanumal Building	1932	Near Old Campus, University of Sindh	This building is in better condition but the front facade is rapidly decaying due to salinity that is emanating from open sewers that run very near the building throughout its length.
Lilaram Thawardas Building	Not clearly visible	Tower market	This huge building has many sections and is inhabited by a number of families. Three of its portions are better kept, rest are decaying.
Vishinsingh Sajansingh Advani	Not mentioned	Heerabad	This building has changed hands many times and there have been a few alterations in the original structure. But the present owners are taking care of it.
Watumal Dadlani Building	Not mentioned	Heerabad	This was originally a very beautiful building but it has been effected by a number of social and environmental factors and needs restoration.

STYLISTIC AND PLANNING DIFFERENCES OF COLONIAL AND INDIGENOUS BUILDINGS

Differences in climate, topography and geology gave the indigenous settlements and dwellings of India a varied regional character. The majority were walled cities with a fort built during medieval times for defense (Desai et al., 2011). However, this situation changed when the British occupied India whereby “[it went].....from a one- two or more storeyed courtyard type dwelling with rooms giving inwards onto the courtyard and structurally joined to similar houses on one or more sides to a free standing courtyard-less outward facing one or two storeyed European style bungalow” (Desai, 2011:26).

In the Gazetteer of Sindh, it is mentioned that ‘although most of the houses were made of mud, wattle, low walls

and covered with a thatched roof but with the rise in whole standard of living , houses built of burnt (*pakka*) bricks and even stone are becoming more common in large villages. In rural houses of old type, windows are regarded superfluous but wind sails through the roof (*mangh or badgir*) are very common and almost a necessity (Aitken, 1907:192).

This revolution in housing typology resulted in the construction of many beautiful buildings that have survived vagaries of weather and time. The same trend prevailed in other cities of Sindh. Regarding Shikarpoor, Naeem (2011) writes ‘the residential unit became an expression of wealth for the merchants of Shikarpoor who employed master craftsmen to embellish their houses, especially during latter half of the 19th century (Naeem, 2011:6).

While the indigenous houses were simple and designed to meet the utilitarian needs of the residents, the colonial buildings were built around stylistic and aesthetic principles (Figure 4).

It is still interesting to see the organization of various architectural elements as well as spaces and how they were incorporated into various colonial era buildings in Hyderabad. The blend of various indigenous and colonial styles culminated into a new style that is also called 'Indo-Saracenic', a style which combines elements from both styles. While most of indigenous buildings catered to domestic and private needs, with the advent and progress of colonialism, buildings for public purposes were also built across the empire.

A public works member of the viceroy's council in 1877 wrote:

".....there can be little doubt that buildings for native purposes , such as the following should be built in some form of native architecture : temples , mosques , colleges ,schools , markets , asylums ; whilst those especially for the comforts and wants of Europeans such as residences , churches , offices ,railway buildings etc. are more appropriate for some European style adapted to the various climates of India" (Ashraf et al., 2009:25). However, with the advent of colonial bungalow the style and various components of residential structures changed as a result of borrowing from colonial styles. A number of design elements have been researched and analysed here and are discussed in the following sub heads.

Windows of Colonial Buildings

As in Dutch households, windows are very special components of oriental domestic architecture of South Asia and Sindh. Due to a long and hot summer in the subcontinent, windows are an essential feature of houses built in the region (Ali, 2012). Hyderabad is a hot region but it is famous for its winds that reduce temperature to a tolerable level. In domestic architecture a large number of windows serve to let the fresh air in, ventilate the interior and reduce the intensity of heat. While windows were also used in indigenous architecture mostly for ventilation purpose, with the advent of colonialism they were increasingly built in various aesthetically pleasing styles with multi-colored Venetian glass and other imported materials. The tall, multi-sectioned windows with stained glass panes were the hallmarks of the colonial era buildings in Hyderabad (Figure 5).



Figure 4: Doors having ornamental designs

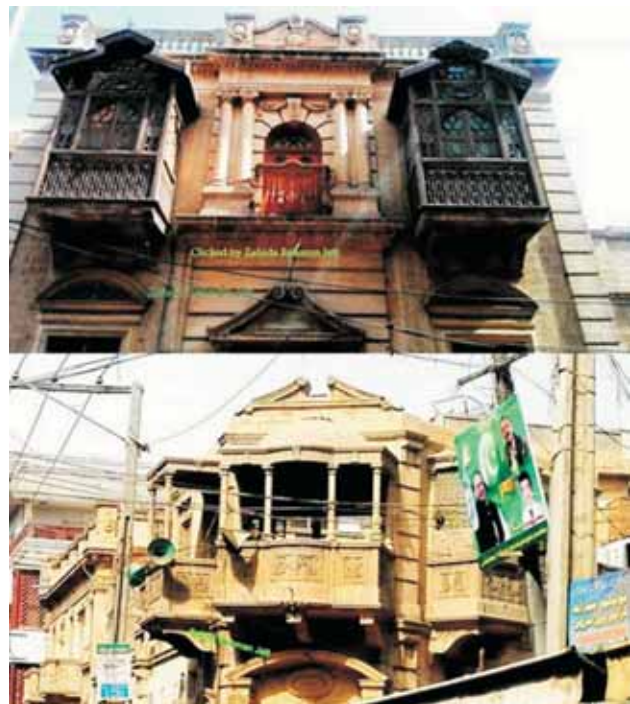


Figure 5: Colonial buildings with multi coloured windows and other decorative features

In most of the buildings studied here, there were four to ten or even more windows in every room. Likewise, in some buildings there were two large windows flanking the central façade, but in some cases the entire facades were covered by rows of windows.

The utility of windows is also related to the social and gender aspects in the society. Most of South Asian societies observe *purdah* and female seclusion to varying degrees, so was the case in Hyderabad (it is even true today to some extent). The outer space is considered males' domain, while the interior space is the female-space where they can operate freely. So, the windows were used to create covered interior space from where females could peep into the uncovered exterior and enjoy the street scenes without being seen.

In addition, windows also served as marks of status and prestige; the larger a house would be, the more windows there would be. It was especially relevant in the houses of wealthy Hindus (Sindh workies and *Bhaibands*) who were engaged in trans-oceanic trade and earned large sums of money. They used that capital by building palatial edifices for their families that also showed off their wealth, aesthetic sense and taste and would be appreciated by visitors.

Balconies of Colonial Buildings

Though, balconies were present in Mughal and other indigenous architectural styles, however during British times, the styles and functions of balconies also underwent a change. Heitzman (2008) describes the implication of balcony like structures in colonial structures "its [Indo-Saracenic] features included the wide-projecting cornice (*chhajja*); the projecting balcony (*jharoka*); the pierced stone lattice-screen (*jail*) and the canopied roof turret (*chhatra*)" (Heitzman, 2008:137).

Many different variations of the indigenous balcony styles are seen in the colonial architecture of Hyderabad. A number of balcony styles can also be seen in the colonial buildings in Hyderabad.

Balconies in Hyderabad are made of cast-iron railings or wood trellises. Most of the balconies open on to the street side and provide a panoramic view of the surrounding area. In the days preceding heavy locomotive traffic and noise, looking out at the semi-paved street with its horse driven carts and *tongas* would have been a very pleasant experience. Some of the balconies were partially covered with a *jharoka* and were used by the females, from where they could enjoy glimpses of the outside world.

According to Kalhoro (2015) '*Jharoka*, an important architectural element of the *Havelis* in Potohar also received special treatment both by the owner and the artist. These are generally used in upper floors. In the hot and cool weather of Potohar, *jharoka* was used by males as well as females. However, the central *jharoka* was always occupied by males while the flanking *jharoka* was used by women' (Kalhoro, 2015:3).

There is an interesting point at play here; in olden days the wedding procession, also called *Barat* or *Janjh*, was a very pompous affair accompanied by flute players, dancers and gaily dressed people. Everyone wanted to see it and it was especially interesting for young girls and women who were mostly confined to monotony of the house chores. But they could not see it by standing on the street which would not be approved. So, in order to enjoy this scene, young girls and women would either peep from a window or *jharoka* or climb up the roof, and see from there by using special perforated boundary walls. This practice is followed even today in small villages and towns (Figure 6).

Covered Staircases of Colonial Buildings

Spiral narrow staircases with steps made of wood planks, flanked by cast-iron railings and covered by a shed to protect it from sun light, heat and rain are common type of staircases in the old areas of Hyderabad (Figure 7).

These staircases are found in almost every well-to-do house built in old areas like *Heerabad* and Tower Market. These staircases serve two purposes, on the one hand they provide protection from the weather and secondly they are used to stand, without being seen from the street.



Figure 6: View of a roof having perforated walls from which one can outside or below in the street



Figure 7: Covered staircases in old areas of Hyderabad

Images, Carvings and Decorative Features of Colonial Buildings

The trend of paintings and other embellishments in buildings is not new for South Asia, as traditionally this art flourished under local rulers of India as well. Beautiful art work in various old mansions can be seen across the length and breadth of the Indian subcontinent. However, the art of paintings and other imagery saw unprecedented growth under colonial era. Along with English painting styles, the Greco-Roman influence is seen as well.

Because of people's day to day interaction with colonial administration, the buildings of colonial era were also inspired by European forms and techniques. It is not surprising that after Sindh was annexed by Charles Napier in 1843 A.D , the native population, whose fortunes depended on the British, aspired to emulate the rulers in every way possible and most of all in their houses and buildings which were the most obvious reflection of their desires and aspirations (Lari, 1989). Thus, the wealthy Hindu merchants of Hyderabad used mixed features in their buildings which manifested the indigenous styles along with their colonial exposure. It also holds true of various decorative features implied on colonial buildings. These features are very diverse,



Figure 8: Some beautiful motifs right above entrance doors

arranged in vertical or horizontal bands or are freestanding, including floral, faunal, geometric designs or images (Figure 8).

The ornamental pillars are another feature of the colonial buildings that enhance the beauty of the structure. Most of the old buildings have very beautifully decorated pillars that not only act as support but also are used for ornamentation. Some have capitals with floral wreaths, leaves and designs, others are double-colonnaded. The front façades usually rise high and culminate into decorated finial that generally bears the name of the owner along with the date of construction. The facades are very lavishly decorated with some common motifs like rosette, floral wreaths or geometric designs on blue *kashi* or glazed tiles. These include both embossed and engraved motifs which are made in plaster of paris and wood (Figure 9).



Figure 9: Painted and carved doors, wooden cabinets and bird images are common decorative features in old buildings of Hyderabad

The interior of the houses have paintings, images and carvings on doors, windows, balconies, ceilings and cabinets. The images range from religious icons, to landscapes, birds and floral motifs. As most of Sindhi Hindus were Nanakpanthis¹, so they also had Guru Nanak's images, along with Hindu deities on glass and wooden cabinets. Most of these images are now either faded or defaced, especially if these images are religious icons, but the landscapes images are left intact. The wealth and opulence of the owners is evident from these paintings and images.

The paintings are landscapes and seascapes encased in oval shaped glass and fitted over the cabinets, doors or windows. The wood used in these cabinets is expensive like Burma teak and the texture is still very shiny and opulent. The cabinets have glass handles and there are wooden images of birds, like sparrows or cranes, on the panes.

A few houses have icons made of plaster of paris that are attached to the ceiling. One such icon is the shape of a fairy found in Sobhraj Bherumal building. According to the owner, there were four such images, three of which got destroyed over the years and only one was left. This fairy or nymph shows European influence as evident from the pleats of her dress, hairstyle and physical slimness (Figure 10).

Flooring in most of these buildings is made of marble, chequerd, glazed or multicolored tiles. Some of the materials used in the buildings are imported and are of very high quality.

***Mangh* / Wind Catchers of Colonial Buildings**

The colonial architecture blended many local features and kept the architectural climatic responsive elements that helped in coping with the hot climate. A very interesting example is the incorporation of wind catchers into the buildings built in colonial era in Hyderabad. The wind catchers are one of the most important characteristic features of architecture in Sindh, especially in the delta and lower Sindh region.

Mir Atta Muhammad Talpur reminisces, "once the most striking feature of Hyderabad was its peculiar skyline dominated by wind-catchers. These wind catchers or *Manghu*, as they are called in the local Sindhi language, were fixed on housetops, to catch the southwesterly breeze in the hot



Figure 10: The 'Fairy' from Sobhraj Bherumal building

summer days and evenings. The breeze entering the wind-catchers would penetrate into the room and keep it cool. Due to the numerous wind catchers, Hyderabad became famous as *manghan jo shahar* or the city of wind catchers" (Talpur, 2007:59). One wind catcher is seen on the top of each house in the city of Hyderabad (Bahramzadeh et. al., 2013). It is locally called *badgir*, *mangh* or *badkhor* (Figure 11).



Figure 11: Two small, white structures with slightly upturned openings are famous wind catchers of Hyderabad

1 Followers of Baba Guru Nanak. A sect that combines Hindu and Sikhs beliefs, however its adherents do not wear turban like Sikhs proper.

Most of the buildings that were studied had wind catchers; however some of them were also now closed or covered. The wind catchers opened into bed rooms and provided cooling air and ventilation that was a blessing in days preceding electricity. However, as nowadays electric fans, air coolers and air conditioners are in vogue, so the significance of wind catchers has plummeted. Their usage is however still appreciated in case of power break downs.

Organization of Spaces in Colonial Buildings

The concept of spaces and their usage is very interesting to study as it focuses on gender specific aspects of various components of a built domestic structure (Cieraad, 1999). In her study of cognitive classifications in several cultures the English social anthropologist Mary Douglas (1979) draws attention to the ways in which these classifications are materialized and obeyed in daily life (Cieraad, 1999:32). The classification of various domestic spaces is also very important especially when one looked at from public-private perspective. According to Gennep, “society is like a house with rooms and corridors. Threshold symbolizes beginning of new statuses” (Rosselin, 1999:53).

Gendered spaces are those ‘particular locales that cultures invest with gendered meanings, sites in which sex-differentiated practices occur or settings that are used strategically to inform identity and produce and reproduce asymmetrical gender relations of power and authority’ (Low et. al., 2003:19).

In old houses of Punjab, the spaces were generally organized in a very orderly manner, keeping in view the public and private dichotomy. In most of the houses, there would be steps leading up to the raised threshold, contrary to today’s iron gates with no remarkable threshold. Then a large wooden gate would lead to a *deorhi* (a small covered narrow hallway), alongside it or beside it there would be a *baithak* or drawing room for the male guests, after which an open courtyard would lead to the private space where the inner private space would start and be maintained.

Similarly in the pre-partition buildings of Hyderabad, the spaces were also arranged according to social norms, keeping in view the daily routine of the inhabitants. Here the houses were not built individually but were designed within a large area in multiple storeys or floors, with two floors being very common. It was owing to the fact that extended families were preferred and people wanted to live inside the same building albeit in separate portions. Most of the old houses

in Hyderabad have been converted in a way that the ground floor has shops which opens on the main street or market. Besides it is a small door leading to a narrow staircase connecting to the main domestic space on the upper levels, where more than one family lives jointly. However, there are also individual houses without any shops attached to them, in this case there are raised steps leading to the gate and the other spaces are similar to the houses found in old areas of Punjab.

The most striking feature of these houses is the centrality of space. For example, in most of the houses there is a central room or hall in which doors of all the other rooms open. It is also the place where visitors are entertained if they are acquaintances, otherwise they are shown into the outer drawing room. However, it is not only an entrance room to welcome visitors but also protective and neutralizing zone to prevent or ease transition from the public to the private world (Rosselin, 1999:53).

In older days, this central hall was also used as a gathering place for extended families. When men would arrive from work in the evening, all the members would sit there and enjoy each others company, after which they would go to their own portions. The rooms had more than one door and a number of windows, in that way they were interconnected and not isolated, as it is generally preferred today in order to maintain privacy.

COLONIAL BUILDINGS OF HYDERABAD AND THEIR PRESENT STATE

Hyderabad, which was once compared to Paris owing to its gardens, palatial mansions and public buildings, is now increasingly losing its old charm and opulence. Pir Husamuddin Rashdi poignantly recalls, ‘they (Hindus) brought to it (Sindh) wealth from four corners of the earth. They built great houses. Today we cannot even maintain them’ (Malkani, 2006:70). Today, most of the elegant buildings have either been razed to the ground, changed beyond recognition or are being dismantled in order to make a plaza or a market. Large patches of vacant space and rubble from the recently demolished buildings can be seen in all the old localities of the city. The colonial buildings are threatened by the surge of being replaced with modern structures, without any regard of the historical values.

There are many issues related to the overall decay of colonial buildings, some of which are presented here:

Lack of Sense of Ownership

If a large building is inhabited by three or four families, every family feels responsible for the upkeep of their portion and are concerned with that particular area only. But the roof, and other structures that are not owned by any family fall into disrepair and are eventually destroyed. The lack of ownership towards a property that is not built by the resident but was handed over to them in the aftermath of partition, is a natural cause of the indifferent attitude of the residents.

Poverty and Lack of Awareness

Most of the families that reside in colonial buildings are not aware of their historical value; thus they unknowingly damage some of the very important features of the buildings. The second issue is of poverty; most of the families presently occupying the buildings belong to lower middle class and they are too poor to look after and properly maintain these beautiful buildings. For example the type of stone masonry, cast iron, glass, wood and other things are too costly to maintain. Repair works are challenging and it is difficult to find masons and other skilled labour to maintain the edifices because of a change in construction technology of the years.

Sometimes, the owners keep on renting the property where multiple parties keep on interfering with the original structures, dividing and partitioning it until the buildings get changed beyond recognition.

The lack of awareness is an issue that is only not relevant for the residents of the buildings, but for the general public as well. For example, it's a common sight in Hyderabad that an old, stone building is being obscured by a modern, unruly brick construction over the original one.

Another similar case is the erection of large bill boards, mesh of electric wires and other publicity features that not only reduce the beauty of a historical structure but sometimes pose danger as well.

Commercial and Financial Issues

During an interview a resident of a pre-partition building told that 'as soon as someone knows a building in which he/she is living is going to be a protected property, they either sell it or dismantle it to build something new in its place. It is because, once a building becomes a protected site, its market value dwindles rapidly'. According to him one of his cousin's who lived in a colonial era building near *Resham gali*, (which was one of the finest buildings in town)

heard that there is a likelihood of the building being declared a heritage site, the building was immediately razed to ground and now a plaza stands in its place.

Then even when a building is declared a protected property, there is an almost ever-present lack of funds that interfere with rehabilitation efforts. An interesting case is the planned auction of Sindh Provincial Cooperative Bank, which was forestalled by Culture Department's and activists' efforts (Ali, 2012).

The ground floors of most of the colonial era houses in Hyderabad are now converted into shops and thus they also serve commercial purposes. The owners have changed these buildings according to the commercial needs altering the original structures. So, it becomes even more complex to preserve the essence of these historical buildings.

The process of changing the plan and facades of these buildings has accelerated in the last decade. Although, there are government interventions (like the preservation and conservation of *Mukhi* house) but these are not enough, compared to the swift rate of damage being done to these buildings.

CONCLUSION

This research study is based on fieldwork in old localities of Hyderabad conducted in the winter of 2015. It revealed some very interesting architectural features of the colonial buildings that are now out of use and increasingly becoming extinct. It is especially relevant in the context of old buildings of Hyderabad, which were built in another era and represents social values and norms of that time frame.

There is an urgent need to document these old edifices and to take some effective measures to preserve these structures that are an essential part of our heritage. Tangible heritage once lost cannot be restored at all. If these old but elegant buildings are renovated and restored, they can present an opportunity to promote tourism in the region and be of economic benefit.

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DEVELOPING COMMUNITY GARDENS AND MANAGING THE MODMESTIC ORGANIC WASTE CASE STUDY: SULTANABAD, KARACHI

*Lubaina Adnan Soni**

ABSTRACT

One of the most important dilemmas of the growing city of Karachi is access to green spaces for a large majority of the population. Over-crowding and congestion has made it hard for the common people to connect with open spaces, gardens and landscape areas. As a result, they are unable to resolve their health, nutrition and hygiene issues.

This study considers the various options for community greening in the developing world. More particularly, Karachi is focused for managing and promoting community betterment, health and hygiene through community-level organic farming. Sultanabad and Hijrat Colony, two low-income neighborhoods in Karachi, have been used as case studies to enable an analysis of the problems of community greening and composting and its solutions.

The aim of this study was to explore the practice of community-level composting out of organic waste, along with urban gardening in the developing world through a case study methodology. A review of narrative literature and a live project at Sultanabad was conducted consecutively in order to achieve this.

The literature review revealed that community-level composting combined with urban gardening is the most effective and valuable technique available for the management of organic waste. Furthermore, it was found that this technique could play a positive role in terms of easing the financial and administrative burden on municipalities as well as building of community income resources. Ultimately, this would not only save money for the low income groups, rather it would generate a source of income for them. The case study, however, revealed a number of threats to composting and urban gardening including: illiteracy, water shortage, extreme weather events, an unregulated waste economy and land unavailability. This study argues that

community-level composting and community gardening is an important means of generating food and income within the communities of Karachi.

Keywords: Community gardens, community-level composting, organic waste management

INTRODUCTION

A proposal has been conceived in this paper to create 'space' for a community where open green spaces, in terms of environmental improvement and improvement of household health and hygiene, would be promoted and implemented practically. The generated spaces and activities can promote greater harmony and bonding among the residing communities.

Precisely, community vegetable gardens and kitchen gardens in the urban context of Karachi for low income group could help initiate the idea of connecting them with the earth and cultivate / grow on their own land. The main idea is to ensure that communities and users are provided with sufficient awareness and given land possessions to grow on their own land.

A vegetable garden benefits from growing vegetables and other useful plants for human consumption. Gardening is a great way to make productive involvement of a family and the overall community to create unity among its member and to overcome the food crisis, low earnings and inflation. The proposed project is considered to initiate social mobilization and community work to ensure spread of the project benefits to the entire locality and add sustainability component to the intervention. This would be inculcating 'values' of selfless help and positive community bonding in their future generations to provide long term sustainability to the initiated intervention. Also a 'culture' of community self-help and viable models of community-government

* Architect Lubaina Adnan Soni, Lecturer at Department of Architecture and Planning, Dawood University of Engineering and Technology, Karachi
Email correspondance: lubainaadnan@gmail.com

interaction for civic improvements would be established.

WASTE MANAGEMENT SYSTEM IN KARACHI

Karachi's rubbish laden streets confirm that one of the most neglected services is solid waste management (Ali and Hasan, 2004). Furthermore, the lack of green spaces confirms the negligence of flora and fauna in the city's landscape.

The waste management sector in Karachi has developed into a complex economic system in its own way. In 2001 the recycling industry was providing employment to 55,000 families and had an annual turnover of 1.2 billion Pakistani rupees (PKR) (600,000 USD), and these figures are likely to be significantly greater today (Ali and Hasan, 2004). Three thousand waste pickers and their families live and work in Jam Chakro landfill site alone (CDGK, 2007).

The solid waste management has been accorded low priority by the government of Pakistan, and in particular by the government of Karachi (Ali and Hasan, 2004). Every proposal for the improvement of the waste management system put forward by various groups was either not implemented at all or once started was not completed, despite the projects

being feasible. The reason most commonly cited for failure was the lack of government interest and support (CDGK, 2007). The four most significant of these proposals are summarized in Table 1.

From the failure of the proposals given by the various groups of experts the following can be deduced:

- There are inadequate funds: The system is heavily reliant on aid in the form of grants and loans (CDGK, 2007). Budget allocations are also inadequate and inappropriate. There is very little capital expenditure as the majority of the total budget is spent on maintenance costs (Ahmed, 2009).
- The existing transportation facilities are inadequate and inappropriate (CDGK, 2007). Refuse vehicles currently make two to three journeys to a dump site every day, sometimes covering sixty kilometers despite many areas still receiving no waste collection service at all (CDGK, 2007).
- There is a significant shortage of employed staff. For example, there are 1.06 sweepers for every one thousand people. Furthermore, the existing staff are poorly trained (CDGK, 2007).

Table 1: Past proposals for the improvement of the waste management system

YEAR	PROPOSER	PROPOSAL TITLE	SUMMARY
1980	Farooq Ahmed Saleem	Farooq Compost Fertiliser Corporation Plant	Proposal to convert one thousand tonnes per day of organic waste into compost in a large composting facility on the outskirts of the city (Ahmed and Zurbrugg, 2002)
1994	NED University of Engineering and Technology, Karachi	The Garbage Train Project	Proposal to integrate the inner circular railway system into the existing truck based waste transport system to improve the transfer of waste to the landfill site, as well as the upgrading of the city dumpsite into a sanitary landfill site (Anwar, 2000)
2001	NED University of Engineering and Technology, Karachi	Eco-scavenging: an environmentally friendly manual	Proposal that all recycling activities should be moved to the city's two official landfill sites and that concrete scavenging platforms should be constructed at the sites for waste separation in order to increase efficiency as well as to make the job more dignified
2001	Urban Resource Centre, Karachi: Mansoor Ali, Arif Hasan	Integrated recycling and disposal system for solid waste management in Karachi	Proposal that all recycling activities should be conducted in the city's two official landfill sites and all waste pickers be relocated to the landfill sites where they would be provided with land, housing, electricity and basic sanitation services (Ali and Hasan, 2004)

- The government staff managing the system lack technical and managerial skills.
- The data available on the quantity and consistency of the waste generated in Karachi is outdated and inaccurate (Ali and Hasan, 2001). ‘Mechanisms for citizens’ participation, consultation and dialogue are extremely limited and are mostly restricted to the practice of registration of complaints and their subsequent follow-up. Channels for meaningful communication with civic officials and active citizens’ involvement in the affairs of the civic bodies do not exist’ (Ali and Hasan, 2004: 7).
- Low-income areas, including slums, are not provided with a waste collection service by the government. ‘Middle-

and upper-income settlements receive a higher priority due to overall political influence and clout in urban affairs’ (Ahmed, 2009: 171).

- There is lack of awareness among citizens and communities regarding the importance of proper waste management (Ahmed, 2009).

COMPOSTING AND URBAN GARDENING IN KARACHI

The situation of composting and urban gardening in Karachi is reviewed with regards to the five aspects put forward by Cofie, et. al. (2006) that are described in Table 2. In addition, examples of composting and urban gardening activities

Table 2: Feasibility of composting and urban gardening in Karachi
Source: CDGK, 2007; Khalid, 2005

Supply	Demand	Institutional, legal and communal framework	Economics	Processing
<ul style="list-style-type: none"> • Organic waste in Karachi: food waste, abattoir waste, agricultural and garden waste, human and animal waste, agro-industrial waste • Sources of organic waste in Karachi: Households, vegetable market, fish market, wood market, gardens, Eid-ul-Adha (annual holy festival), slaughter houses, agriculture, restaurants and hotels, food industries, sewage treatment plants • Over 50% of Karachi’s total waste is organic which totals to over 5000 tonnes • Organic waste is currently disposed off along with other waste streams, including hospital waste, resulting in contamination • Organic waste currently has no market value in Karachi 	<ul style="list-style-type: none"> • Pakistan = agricultural country- 100,000 tonnes of fertilizer shortage by 2004 • Studies of citizens’ perceptions of composting/ demand for compost/ willingness to pay for compost are needed • Composting is practiced in homes and has previously been tried at city level indicating composting may be culturally acceptable 	<ul style="list-style-type: none"> • Laws and regulations are outdated and none specifically relate to composting • No constraining or supportive government policies are present • Composting is now mentioned in the government’s ‘Karachi Strategic Development Plan 2020’, but no plan for its implementation is suggested. The document just says composting is a ‘long term goal’ but in the interim organic waste will be land-filled • Constraint – land availability • The current government system is non-participatory 	<ul style="list-style-type: none"> • Total cost of implementation must be calculated for the specific system introduced • Economic benefits: provision of jobs, revenue generation through sale of compost, savings through access to fruit/vegetables 	<ul style="list-style-type: none"> • Data in this area is lacking – feasibility study needed • Composting capacity required: 4000-5000 tonnes

currently taking place in Karachi are explored on the basis of these categorizations.

Although urban organic waste is generally poorly managed in Karachi, there are a number of examples of composting and urban gardening taking place in this metropolis city. Composting and urban gardening activities are practiced on different scales and are organized in a variety of ways (figure 1). These activities are poorly documented so can only be briefly summarized as opposed to discussion in depth.

Individual Level

Although no official survey has been conducted into the number of households practicing composting in Karachi, there is evidence to suggest that households are using their organic waste to produce compost, and the number of households doing so is rising. Composting is however predominately carried out within middle- and high-income households due to their increased environmental awareness through education, combined with the fact that they have the time and resources to invest in composting. Furthermore, these individuals and families often have a garden where they grow ornamental and increasingly edible plants and therefore they have a use for the compost they produce (Sehri, 2013) (figure 2). Low-income households however, seldom practice composting for a number of reasons: their biggest concern is often where the money is going to come from to feed their families, so the environment is not a prime concern; there is often no space for a garden, leading these households to believe that they have no use for compost; or they simply lack awareness and have little or no knowledge

of composting (Sehri, 2013).

A small number of socially and environmentally conscious high-income individuals also purchase plots of land for the development of model gardens or farms in which composting is practiced and used to fertilize the soil, as opposed to chemical fertilizers. These individuals allow interested community members to visit their gardens and even participate in the gardening (Sehri, 2013).

Community Level

One important community level initiative is the development of a 'Guerrilla Gardening' group. Guerrilla Gardening refers to gardening on a piece of land without permission. This began when a group of individuals from a middle- to high-income locality were refused permission to develop a community garden on an unused plot of land in their neighborhood that was officially designated as space for a public park. The group transformed a barren island in the middle of the road adjacent to the plot into a vegetable garden, using the compost produced within their own homes and water from their houses, which they carried to the area in wheelbarrows. The leader of the Guerrilla Gardening Project explained that they wanted to provide food for poor passersbys, raise awareness about organic vegetable gardening, bring their community together and show the authorities that a community garden could work in Karachi.

In addition, a community of gardening enthusiasts in Karachi, predominantly high-income women, joined to form Karachi

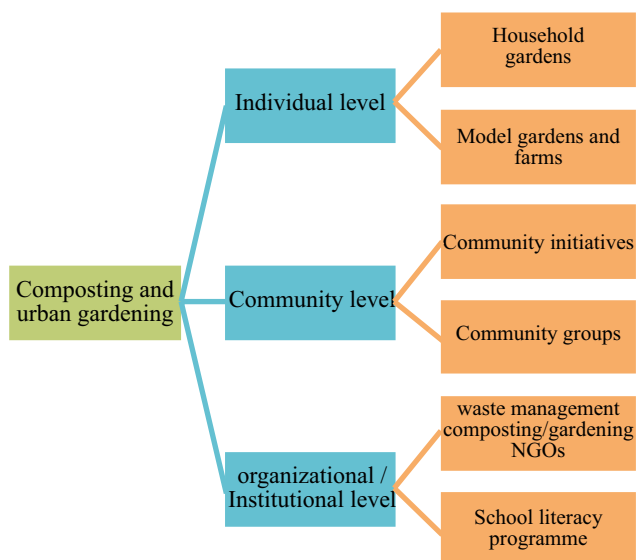


Figure 1: Composting and urban gardening in Karachi
Source: Categorizations by Author in 2014



Figure 2: Rooftop gardening and composting in a high-income household

Amateur Gardeners Club (KAGC). The group holds regular meetings where members give talks about various topics, such as composting, water conservation and the making of seed bombs, in order to help educate themselves and teach each other. In addition, they hold an annual food festival. They also have an active webpage through which they try to raise awareness through sharing gardening advice, particularly on environmentally friendly gardening practices, and share pictures of their flowers, vegetables and gardens (figure 3) (KAGC, 2013).

Organizational Level

A number of Karachi based NGOs work on promoting composting and urban farming. Gul Bahao, whose focus is waste management, has been making compost for years using urban organic waste. In 2013, the NGO launched a new project called 'hawai khet' (gardens in the air) where they created structures from scaffolding from which they hung discarded bags filled with compost to grow vegetables. This was done to create a spectacle for display at Pakistan's first Environment Museum in order to stimulate thought and raise awareness about what can be done with waste (figure 4) (GulBahao, 2013).

Another NGO, Crops in Pots, aims to show those individuals who do not have a large garden space that they too can have a garden to grow organic food. They hold workshops to teach people about composting and the development of pot gardens, as well as set up these gardens for individual households and company buildings. They have an active webpage where they post thought provoking pictures to raise awareness, promote the work of others in this field, as well as display their own work (figure 5).

Crops in pots have also launched a school literacy programme where they educate school children about the importance of composting and urban agriculture. They also teach children how to develop a compost pile and garden in their own homes.

ANALYSIS AND DISCUSSION REGARDING COMPOSTING AND URBAN GARDENING IN KARACHI

The situation analysis of Karachi and its waste management system revealed a number of difficulties faced by the city. These difficulties however, as the literature review demonstrated, can all be addressed in some way by composting combined with urban gardening. It is a fact that composting can contribute to solving a number of Karachi's difficulties, in a relatively inexpensive way; which justifies



Figure 3: KAGC meeting and talk on growing watermelons at KAGC food festival
Source: KAGC, 2013



Figure 4: Hawaii Khet
Source: Gul Bahao, 2013



Figure 5: Bonsai making and lime harvest from a pot garden set up by crops in pots
Source: Crops in Pots, 2013

its implementation in the city. These difficulties and the way in which composting can address them are taken from the situation analysis and the literature review respectively, and summarized in Table 3.

In order to look into the possibility of composting and urban gardening for Karachi a SWOT analysis was undertaken and is presented in Table 4.

The SWOT analysis reveals several positives that could contribute to the successful implementation of a composting and urban agriculture programme in Karachi. The most significant opportunity highlighted is the fact that the city

Table 3: Justification for composting and urban gardening in Karachi

Problems Related to Composting in Karachi	How Composting Can Contribute to Solving the Problem
Poor waste management (Ali and Hasan 2001)	Composting would help take organic waste off the streets, divert waste from landfill and kill pathogens present in the waste. By reducing the waste volume it would allow the existing system to improve its service for collection and management of non-organic waste and expand to areas of the city that are currently not serviced (Slater and Frederick, 2001)
Declining green spaces (Qureshi Kazmi and Breuste 2010)	Compost production would promote urban agriculture and therefore an increase in green spaces: gardening at household level community gardening school gardens and public parks planting along roadsides (Grim, 2012)
Law and order	Composting and practicing urban agriculture would bring communities out of their homes and on to the streets and facilitate social interaction both of which will lead to a reduction in crime (Kuo and Sullivan, 2001)
Ethnic violence (Mukhtar, 2007)	Composting and practicing urban agriculture would facilitate interaction between different ethnic groups and provide them with a common goal and could decrease friction between communities (Smith and Bailey, 2006)
Poor transport system (Hasan, 1999)	Composting has the potential to reduce the burden on the waste transport system by half therefore reduce trucks on roads depending on the type of system implemented (Zurbrugg et al, 2005)
Poverty (Mukhtar, 2007)	Composting would provide jobs and compost to sell. Through making free/cheap food available urban agriculture would allow savings and investment in other areas therefore help to break the poverty cycle
Inequality (CDGK, 2007)	Composting combined with urban agriculture could improve access to nutritious food for all therefore would contribute to food security and equality (Grim, 2013)
Climate change (Anwar, 2012)	Composting reduces methane gas emissions from landfill sites and may reduce carbon dioxide emissions from transport (Eionet, 2012)

Table 4: SWOT analysis for composting and urban gardening in Karachi

Strengths	Climate of Karachi – an expensive closed system would not be required to maintain the right conditions for composting as the normal outdoor conditions are ideal (Average annual: temperature= 25.9°C, precipitation= 203mm, humidity= 70% (Anwar, 2012) Availability of man power Composting is culturally acceptable (GulBahao, 2013; Crops in Pots, 2013) Developed and active civil society (Anwar, 2000)
Weaknesses	Previous attempts to improve the waste management system, including plans for one composting plant, have failed (Ahmed and Zurbrugg, 2002) Karachi's authorities lack finances (CDGK, 2007) Legislation is lacking and outdated Karachi's governance system is not participatory (Khalid, 2005) Data in the waste management field is lacking and outdated (Ali and Hasan, 2004) The population lacks awareness of climate change, sustainability and the environment (Ahmed, 2000)
Opportunities	Large supply of organic waste – it is a resource that just needs to be realized (CDGK, 2007) Demand for compost – Pakistan is an agricultural country lacking in fertilizer, plus it is wanted by the population and already carried out in households and by NGOs (Anwar, 2012) Composting provides an economic opportunity in the form of jobs and saleable compost – this needs to be realized External funding is available for sustainable, environmentally friendly projects CDGK has suggested composting as a 'long term' solution to the waste management problem in Karachi, the government is therefore displaying an interest in composting (CDGK, 2007)
Threats	Water shortage (Anwar, 2012) Extreme weather events – Heavy rainfall and flooding (Anwar, 2012) Unregulated waste economy Land unavailability (Hassan, 1999)

government has expressed an interest in composting because, as explained earlier, the primary reason for the failure of the previous attempt at composting, as well as other attempts to improve the waste management system, was the lack of government interest and support (CDGK, 2007).

ONGOING DEBATE IN KARACHI: CITY-LEVEL (CENTRALIZED) COMPOSTING VERSUS COMMUNITY-LEVEL (DECENTRALIZED) COMPOSTING

The above discussion demonstrates the relevance of the centralized versus decentralized composting for Karachi. This debate therefore needs to be studied in more depth. The literature revealed several requirements for the successful implementation of a city-level composting system (Table 5).

Karachi potentially has the land for city-level composting, the city is unable to meet the other requirements like a strong political will, funding and transport facilities, so a city-level composting plant has great potential to fail. A community-level composting system on the other hand does not require the same level of government involvement or funding and it is less reliant on the transport system (Grim, 2013). Therefore considering Karachi's poorly functioning and overburdened municipal authorities, lack of funding and inefficient transport system, a community-level composting system is more likely to be implemented successfully if land can be secured. However, as was explained earlier, the issue of land availability is a serious one, and the success of a community led composting system is dependent on it.

Table 6 looks at the list of difficulties Karachi is facing, deduced from the situation analysis. The table also analysis

Table 5: Requirements for a successful city-level composting system and Karachi capacity to meet these requirements

REQUIREMENT FOR CITY LEVEL COMPOSTING	KARACHI	
Government/ municipal involvement (Ahmed and Zurbrugg, 2002)	Lack of political will to manage the urban waste problem. Other issues take precedence e.g. law and order. The current waste management system is poorly managed. The government has failed to support a previous attempt at composting.	X
Sufficient funding (Rothenberger, 2007)	Inadequate funding (CDGK, 2007)	X
An efficient waste transport system (Sehri, 2013)	Transport facilities are inappropriate and inadequate (CDGK, 2007) Truck drivers are often bribed into inappropriate dumping of waste	X
Availability of Land (Cofie, et. al., 2006)	The government owns land on which a central composting facility could be set up (CDGK, 2007)	✓

Table 6: Problems of composting in Karachi and appropriate composting system for the city.

PROBLEM IN KARACHI		CITY-LEVEL COMPOSTING SYSTEM	COMMUNITY LEVEL COMPOSTING SYSTEM
Poor waste management	✓		✓
Declining green spaces	✓	Depends on what the compost is used for, most likely given to the highest bidder so won't increase public green spaces	✓
Law and order	X	No effect as centralized composting does not allow for community involvement (Grim, 2013)	✓
Ethnic violence	X	No effect as centralized composting does not allow for community involvement (Grim, 2013)	✓
Poor transport system	X	Would burden the transport system more as the compost produced would require redistribution (Rothenberger, 2007)	✓
Poverty	X	Little effect – a city-level composting plant in Karachi would only provide employment for 15-20 people and sale of the compost would benefit the municipality (Khalid, 2005)	✓
Inequality	X	No effect – would not improve access to nutritious food	✓
Climate Change	✓		✓

these problems that could be addressed by the implementation of either the city-level or community-level composting system. Where the composting system could fail to address a problem, an explanation is given in the table as to why this could be so.

CASE STUDY

Field work was done within the region of Karachi. The main purpose of this field work was to review and manifest a proper system of urban gardening in Karachi. In order to do this however, the context in which the communal based composting and urban gardening had to be managed is initially explained.

Description of the Practical Field Work

A community based program was initiated named ‘Sustainable Sultanabad’, in Sultanabad, where after a preliminary process of survey and evaluation of community neighborhood, few local people were selected and trained. The program focused on environmental improvement through organic urban farming and kitchen gardening, linked with composting and health and hygiene awareness, with an accompanying vision and plan for long term sustainability based on promotion of ‘community self help’ models. A scheme had been visualized in the “Learning Garden Workshop” in a public school to educate the new generation about nature appreciation, environmental sustainability and aesthetics and to develop a sense of cleaning their surrounding and to grow food in their homes and other available spaces around them. Secondly, another “DIY Vertical Garden Workshop” was planned to create ‘space’ for a community where open green spaces in terms of environmental improvement and household health and hygiene were to be promoted and implemented.

The objective was to promote greater harmony and bonding among the residing communities and initiate and sustain the volunteers, who would eventually take the role of ‘facilitators’ from ‘implementers’ and the communities will take the lead role in the various aspects of the project.

Educating the new generation at school about the methods of planting various edibles at micro level aimed to teach the benefits of urban farming in terms of health and resulting environment. Furthermore, the community vegetable gardens and kitchen gardens in the urban context of Karachi aimed for low income groups to connect with the earth and cultivate pieces of land. The main idea was to ensure that communities and users within the selected vicinity were provided with

sufficient awareness and had the opportunity to grow food for themselves.

The proposed project aimed to inculcate ‘values’ of selfless help and positive community bonding in the future generations. Also a ‘culture’ of community self-help and viable models of community-government interaction for civic improvements were aimed to be established.

The concept of educating the new generation to turn open and abandoned spaces into edible gardens and the greening of low-income neighborhood and its public school as a promotion of urban gardening in the urban context was developed as a response to the deprivation of such open green spaces for the local common people living in congested and unplanned areas of the city.

Location of the Case Study Area

Sultanabad is a low income area in Karachi located on the southern edge (Figure 6).

Learning Garden Sessions at the Public School in Sultanabad

A green curriculum had been visualized in the “learning garden sessions” for a public school in Sultanabad to generate awareness and educate the new generation. In this scheme of studies, the volunteers and experts taught the female students of grades six to eight about nature appreciation for promoting environmental sustainability, aesthetics, to develop a sense of cleaning their surrounding and of growing edible plants in their homes and other available spaces around them. The students were also encouraged to spread the given knowledge further to their families, friends and communities.

The program visualized generating awareness of the importance of environment, green spaces and growing plants at an early stage of secondary education level through an



Figure 6: Map showing the area of Sultanabad, Karachi

additional course / extracurricular activity. The course entitled “learning garden” included art work and physical implementation of planting and composting methods. Female Students were chosen to acquire this additional course keeping in view the interest and understandability of the students coming from background of the villages and informal sectors. Since this type of courses are hardly being offered in schools of Karachi, therefore, such awareness was thought to be essential, as it may be easily learned, transferred and spread by female children to friends, families and other groups.

The course was carried out through various sessions taught step by step in extra-curricular classes, which was completed in a duration of two months. These sessions had diverse topics which were delivered to the students in Sultanabad, is (Tables 7 - 8) (Figures 7 - 8).

The first session started with the introduction on the universe as a whole environment and how one can help save the environment by doing small deeds. The topic was explained thoroughly with the help of general discussion and by giving examples of the daily routine so that the students get a clear idea of what they were being taught about.

At the end of the first session, a handout was given to all the students in order to make them memorize what was taught in the class. Furthermore, some brain storming that was required to be attempted in the handouts was explained through discussion.



Figure 7: Explanation and general discussion in the introductory session at school



Figure 8: Working on handouts and checking handouts given to the class

In the second session, handouts were read out loud for better understanding of the topic and to explain how to go about the learning process throughout the course.

In this session, the students were taught about the qualities of a good citizen and how could they become superior global citizens. All this was made clear through a well-prepared multi-media presentation. Later another set of handouts were distributed which the students were asked to complete on their own.

In the third session, the students were taught ways and means of tracking their waste. What waste they generated and how were they disposing it and what harm were they doing to the earth as a whole and ultimately to the global environment was discussed (Figure 9).

Table 7: The schedule of the Learning Garden Sessions conducted at a public school in Sultanabad, Karachi

DATE	TOPIC	SESSION	GRADES	TOTAL No. of STUDENTS
15 October '14	Nature Appreciation	1 st	6 & 7 & 8	100
16 October '14	Global Citizenship	2 nd	6 & 7 & 8	100
20 October '14	Tracking our Waste	3 rd	6 & 7 & 8	100
21 October '14	Tracking our Food	4 th	6 & 7 & 8	100
27 October '14	Learning Garden	5 th	6 & 7 & 8	100
28 October '14	Learning Garden	6 th	6 & 7 & 8	100
29 October '14	Tracking waste and separating trash	7 th	6 & 7 & 8	100
27 November '14	Learning Garden	8 th	6 & 7 & 8	100
28 November '14	Learning Garden	9 th	6 & 7 & 8	100
1 December '14	Learning Garden	10 th	6 & 7 & 8	100
2 December '14	Learning Garden	11 th	6 & 7 & 8	100
3 December '14	Composting	12 th	6 & 7 & 8	100

Table 8: The details of the activities conducted in the learning garden sessions at the public school in Sultanabad, Karachi

SESSION	TOPIC	ACTIVITY
1	Nature Appreciation	1. Introduction on the universe as a whole environment 2. Multi-media presentations 3. Handouts 4. Discussion
2	Global Citizenship	1. Reading and checking the given handout for better understanding 2. Multi-media presentations 3. Handouts 4. Discussion
3	Tracking our Waste	1. Reading and checking illustrations from the last given handout along with rewards for encouragement 2. Multi-media presentations 3. Handouts 4. Discussion
4	Tracking our Food	1. Reading and checking illustrations from the last given handout along with rewards for appreciation 2. In class activity work 3. Given chart papers, stationery, magazines, newspapers, etc. 4. Discussion
5	Learning Garden	1. The school terrace was occupied for the practical work 2. Given benches, pots (of various sizes), sacks of animal waste / soil, gardening tools, etc. 3. Students arrange the pots and mixed the appropriate compost 4. Demonstration and explanation
6	Learning Garden	1. Students were taught to sow seeds 2. Secondly they were demonstrated to plant stems like: mint and chards 3. Demonstration and explanation
7	Tracking waste and separating trash	1. The school campus clean up activity was done practically 2. Given sketchbooks, colors, stationery, etc. 3. Students were asked to map all floors and mark the garbage, wrappers and identify the type of litter 4. Demonstration and explanation
8	Composting	1. Given bins for each classrooms, corridors and open spaces 2. Students were taught to dispose waste properly 3. Demonstration and explanation
9	Composting	1. Given three big bins for the assembly area (open courtyard) 2. Each marked as tin and glass; Plastic bottles and bags; and compost. 3. Students were taught to separate waste as per the labeled Bins. 4. Compost material /item were taught in detail 5. Demonstration and explanation
10	Learning Garden	1. Students were taught transplant process 2. Demonstration and explanation
11	Learning Garden	1. Students learned to pick unwanted wild leaves that outgrow from compost 2. Demonstration and explanation
12	Add-on Composting / saving seeds	1. Students learned to add nutrients to compost by meshing banana peels with gur and later add in compost bin 2. They were taught to prepare seeds for sowing 3. Demonstration and explanation

In the next session, the school terrace was occupied for practical gardening work. The students were given benches, pots (of various sizes), sacks of animal waste / soil, gardening tools, etc. The students were asked to arrange the pots and mix the appropriate compost (figure 10). The session ended with an elaborative demonstration and explanation of the entire process of gardening.

In the next session, the students were taught to sow seeds. Secondly ta demonstration of planting stems of mint and chards was done. In further sessions the students were educated about transplant processes. They were also taught to pick unwanted wild leaves that outgrow from compost. Each detail was demonstrated and explained practically.



Figure 9: Multimedia resentation to the class



Figure 10: Terrace of the school occupied for practical gardening sessions of sowing planting, transplating and harvesting

In the next session the school campus clean up activity was undertaken. The students were given sketchbooks, colors, stationery and were asked to map all levels, mark garbage and identify the type of litter present at the school campus. After doing that they were more aware of the type of litter present on the campus and the dirty zones around them. It was explained to the students, how to manage and dispose of such small scale trash around their premises. In this learning they were also taught to avoid market based junk items and eat more healthy food brought in from homes and wrapped in good lunch boxes, so as to avoid too much polythene bags.

In further sessions on composting, the school was given three big bins for the assembly area (open courtyard), marked as tin and glass, plastic bottles and bags and compost. The students were taught to separate waste as per the labeled bins. In the concluding session, students learned to add nutrients to compost by meshing banana peels with *gur* and later adding it into the compost bin. They were also taught to prepare seeds for sowing in a practical gardening session. They were encouraged to apply whatever they had learned in their homes and around their community spaces.

VERTICAL GARDEN SESSIONS

A vertical gardening had been visualized in the “DIY Vertical Garden Workshop” for a particular community to generate awareness and educate the members. In this workshop, the volunteers and experts taught the lady members of the selected community about nature appreciation for promoting environmental sustainability and develop a sense of cleaning

and of growing food in their homes and other available spaces around them. They were also encouraged to spread the given knowledge further to their families, friends and communities.

The title of the workshop conducted in the selected community of Sultanabad was “Vertical Garden Program”. The program was intended to make females aware of the hygiene of the vegetables / fruits in the markets on first hand. The second intention was to make them practice fresh food growth without using polluted water and chemical sprays. Ultimately the target community was taught to track their own waste to produce clean and healthy soil (compost) for home grown food. The workshop included physical implementation of planting and composting methods. Women members of the community were selected to attend this workshop, keeping in view the interest of each individual coming from diverse backgrounds of informal sectors. Since this type of workshops are hardly available in Karachi, therefore, such awareness is essential as it can be easily imparted, transferred and spread by female and their families to other families and other group of people.

SCHEDULE FOR SESSIONS

The first session of the vertical garden workshop started with the introduction on the concept of vertical gardening and the knowledge of growing plant in less area (Tables 9 and 10). Vertical gardening is possibly the most space-efficient method of gardening today in the urban context. The expert made it sure that all members were well aware of what they were about to do. A detailed demonstration of

Table 9: The schedule of the Vertical Garden Sessions conducted at a community in Sultanabad, Karachi

DATE	TOPIC	SESSION	GROUP	TOTAL No. of STUDENTS
22 October '14	DIY Vertical Garden	1 st	A	30
23 October '14	DIY Vertical Garden	1 st	B	30
29 October '14	Sowing seeds and transplanting seedling	2 nd	A	30
30 October '14	Sowing seeds and transplanting seedling	2 nd	B	30
11 November '14	Growing herbs	3 rd	A	30
12 November '14	Growing herbs	3 rd	B	30
18 November '14	Composting at home	4 th	A	30
19 November '14	Composting at home	4 th	B	30
25 November '14	Making Natural Fertilizers	5 th	A	30
26 November '14	Making Natural Fertilizers	5 th	B	30
4 December '14	Saving Seeds	6 th	A	30
6 December '14	Saving Seeds	6 th	B	30
Mid December '14	Harvesting	7 th	A & B	60

Table 10: The details of the activities conducted in the Vertical Garden sessions at the community in Sultanabad, Karachi

SESSION	TOPIC	ACTIVITY
1	DIY Vertical Garden	1. Introduction on the concept of vertical gardening and knowledge of growing plant in less area 2. Sample given for practical vertical kitchen garden 3. Detailed demonstration of method of using given sample and planting in it
2	Sowing seeds and transplanting seedlings	1. Demonstration of sowing seeds and transplanting (with roots) such as: mint, garlic, ajwain, mooli, etc.
3		1. Various types of herbs were taught to be planted
4		1. Domestic waste and leftover from homes were listed down and collected 2. Fruits distributed and their peels and waste were collected while demonstrating 3. Discussion and awareness on waste management
5	Making Natural Fertilizers	1. Importance of egg shells in making compost 2. Bananas distributed to eat and collected the peels 3. Demonstration and explanation on making mixture of gur and banana peel and later spray on plants
6	Saving Seeds	1. Females were taught to save seeds from best looking and flavored fruit / vegetables 2. How to dry seeds for a certain period of time 3. Given airtight polythene bags 4. Demonstration and explanation
7	Harvesting	1. When grown fully, most of the food was harvested

method of sowing and planting was shown to all the lady members (Figure 11).

Some samples of different sized pipes, planter and already sown various seeds with roots in trays and pots were shown to the participants (Figure 12 and 13).

The adding of fish fertilizer at a later stage of mixing the was also advised which was very essential for the plants to grow. These steps were demonstrated in the workshop.

In the second session, full-fledged demonstration of sowing seeds and transplanting (with roots) plants as mint, garlic, *ajwain*, *mooli*, was demonstrated.

In the third session, the method of planting various types of herbs was demonstrated.

In the fourth session, the domestic waste from homes were listed down and collected. Ways to dispose off waste food was demonstrated along with techniques to make compost with left over food. All the items which could be used for preparing the compost were listed down and the members were asked to memorize them. In this session of composting at home, the participants were given one big bin each. As a demonstration, some fruits were distributed and their peels and waste were collected in the given bins. Later a detailed discussion and awareness on waste management was provided by the expert.



Figure 11: Demonstration to the community ladies by the experts



Figure 12: Given seeds sown in trays and small plants in pots to the community ladies by the experts



Figure 13: Given sample of pipes for vertical garden to each lady per house

In the fifth session of making natural fertilizer, the importance of egg shells in making compost was explained. A thorough demonstration of making a mixture of *gur* and banana peel was done which was sprayed on plants already growing in the vertical gardens.

The sixth session was the seed saving sessions. It was demonstrated that the seeds available in the market were rather of low quality; hence it is beneficial to grow one's own seeds. Furthermore, they participants were taught how to dry seeds for a certain period of time. In addition the members were provided with airtight polythene bags for preserving seeds.

In the concluding session, after a certain duration when the plants were grown fully, most of the food was harvested. It was a happy moment for the community members who participated in the workshop of DIY vertical garden as all they sowed was eventually harvested.

FINDINGS AND RECOMMENDATIONS

The overall study revealed that composting in the paradigm of recycling is the most preferable alternative as it facilitates the return of nutrients back to the soil as well as kills any pathogens present. A pathogen or infectious agent is a biological agent that causes disease or illness to its host. The term is most often used for agents that disrupt the normal physiology of a multi-cellular animal or plant. However, pathogens can infect unicellular organisms from all of the biological kingdoms.

It is a known fact that recycling verifies the biogas production and composting, both of which are effective waste management techniques and were valuable ways of using organic waste as a resource. Composting converts troublesome urban organic waste into compost, an effective solid conditioner, which when combined with the practice of urban agriculture completes the nutrient cycle and leads to the production of food, as is the aim under a circular economy.

The case study of Karachi demonstrated that the city has a poorly functioning waste management system and faces a food crisis majorly in the lower income groups. However there are several examples of citizens' initiatives to manage waste effectively using composting and urban gardening. The situation analysis also revealed numerous additional difficulties faced by the city, including declining green spaces, a poor transport system, law and order problems, ethnic violence, poverty, inequality and climate change. When these difficulties were compared against the findings of the literature review and after a practical work in terms of the workshop of Learning Gardens and Vertical Gardens conducted in the selected area of Sultanabad in Karachi, it was found that composting combined with urban gardening could contribute to addressing each of these difficulties and

therefore is justified for implementation in Karachi.

A SWOT analysis however revealed a number of threats to its implementation including, water shortage, extreme weather events, an unregulated waste economy and land unavailability, with water shortage and land unavailability being the most significant threats. While community-level composting was found to be considerably more suitable for Karachi than city-level composting, on the other hand, the lack of space could make its implementation difficult.

Nevertheless, the live project conducted at Sultanabad, Karachi, amalgamated the idea on one hand that awareness and generating knowledge about nature appreciation and learning gardening, at the early stages of secondary education could develop a sense of ownership in terms of cleaning the surrounding spaces and growing food at homes and other available area around. Also the student could be one of the stakeholders in the betterment of the city.

On the other hand, if land and water could be secured and small communities could utilize their own generated organic waste through the implementation of community-level composting and urban gardening in Karachi, it could not only contribute to a better livelihood but also add to climate change mitigation, and could make the city richer, safer, greener and cleaner at the macro-level.

A thorough analysis proved that community-level composting and urban gardening are more likely to succeed and more likely to benefit both the government as well as the community. It was also highlighted that community-level composting and urban gardening can ease the financial and managerial burden on municipalities, ease the burden on transport systems, contribute to food production, and in numerous ways contribute to the building of community capital.

Composting can be implemented in a city under two ways: a centralized / city level system, which supports city horticulture, landscaping and commercial farming, and a decentralized / community-level system, where the compost generated supports household, school and community gardening. A thorough review of the city-level (centralized) versus communal-level (decentralized) composting proved that, of the two systems, community-level composting is more likely to succeed and more likely to benefit both the government as well as the community in Karachi. An exploration of this idea also highlighted the positive role that a community-level composting and urban gardening can play. It can ease the burden on transport systems,

contribute to food production, and in numerous ways, can contribute to the building of community capital.

CONCLUSION

Composting is the best way to recycle the valuable nutrients in the food that is thrown away, which on average makes up around 40% of household waste. It also produces low cost fertile soil for planting in small scale community gardens. Community garden is a great place to socialize for community members. It also helps to make indoor environment of the built structure aesthetically beautiful as well as it also provides one's own supply of fresh and hygienic fruits, herbs and vegetables.

On a larger scale, a growing number of cities are designing policies and programs for urban gardening, applying multi-stakeholder planning approaches to recognize effective ways to incorporate urban gardening into urban sector policies and urban land use planning and to facilitate the development of safe and sustainable and multi-functional urban gardens. Urban gardening has the potential to become a vibrant

economic sector that quickly acclimatizes to changing urban conditions and demands, intensifying its efficiency and diversifying its functions for the city. Governmental policy should create a proper framework for most favorable development of the social, economic and ecological benefits of urban gardening, whilst reducing harmful effects on public health and environment that some types of urban gardening can have if improperly managed or not well located.

Hence, the sustainability of urban gardening is strongly related to its contributions to the development of a sustainable and resilient city that is socially inclusive, productive and environmentally-healthy.

Composting should be promoted and widely practiced in sustainable gardening in the urban context. Awareness on composting and urban gardening should be made popular amongst the new generation from the very initial stages of the educational system. The government should include a green curriculum officially with the induction of learned trainers at all levels of education.

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ARCHITECTURE AFTER INDEPENDENCE: 55 ARCHITECTS OF PAKISTAN*Murtuza Shikoh and Zain Mankani*

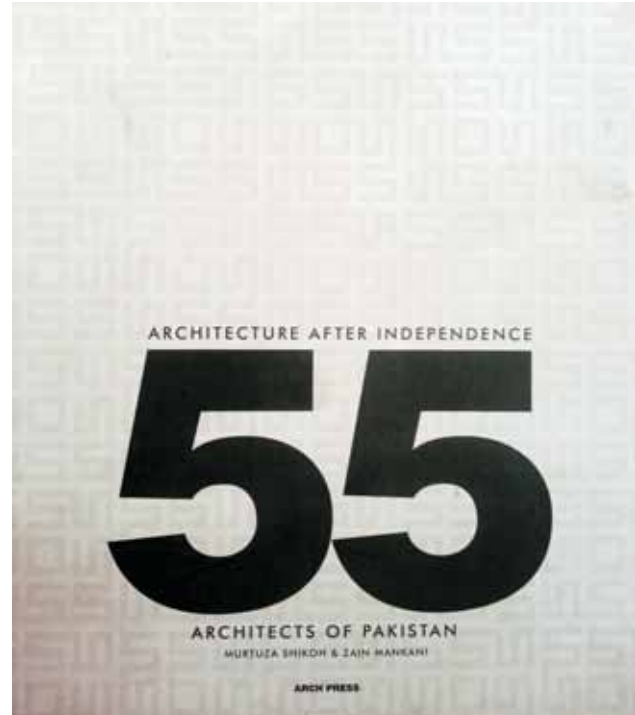
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A Review by

Rabela Junejo*, Assistant Professor, Department of Architecture and Planning, NED University, Karachi.

The book “Architecture after Independence: 55 Architects of Pakistan” is seminal work, as the editors state in the preface. The number of architects covered from the earliest to contemporary is a total of 55. They chart out briefly the constraints in compiling this work that is “fruit of many years of hard work and perseverance in the face of untold complexity”. The book rather than being divided into chapters treat every architect independently arranged chronologically. It has four essays at the beginning by seasoned architects and academicians Kamil Khan Mumtaz, Arif Hasan, Hasan-Uddin Khan and Dr. Jawaid Haider. These essays are a treat to read. One must commend effort of the editors on adding a scholarly dimension to the work through incorporating these essays. The book principally, is a compilation of architecture produced in the country after independence and the essays in the beginning lay a ground work for understanding the motivations, aspirations, tradition and trends behind the architectural-scape of the country.

Identity is the overriding question here. What is the identity of Pakistani architecture? The book does not provide answers but mediates discourse on the issue by recognizing layers of events and occurrences (both local and international) that shaped built environment in the country. The question of identity is a problematic one and has its complexities. Identity ‘crisis’ we face in the wake of globalization is a contemporary issue faced by many geographies and is neither specific to Pakistan nor architecture. With Pakistan the issue is exacerbated pertaining to contentious past and constant struggle with tradition and religion. Sub-Continent has a troubled albeit rich past where the region was split into 2 countries in Aug. 1947 namely Pakistan and India, after almost 100 years of colonial rule. The shared cultural and



architectural heritage split between the two countries created the conflict and identity crisis way too early for Pakistan. The later debates of nationalism, post colonialism, globalization and post modernism etc. add to the baggage. Should architecture of Pakistan follow the tradition and legacy or should it treat the new country as a clean slate and forego the tradition? If the answer is to follow “tradition”, the question arises which Colonial or Mughul – Hindu or Muslim and how to adapt traditional architectural approaches to contemporary needs. Following Islamic (read Mughul) architecture served the ideology better. Being Islamic Republic of Pakistan identity got intertwined with Islamic/Muslim building tradition and gained momentum

* Rabela Junejo, Assistant Professor, Department of Architecture and Planning. NED University, Karachi.
Email correspondence: rabelajunejo@yahoo.com

in Zia's regime where buildings were cloaked with identifiable elements of "Islamic" architecture. "The search for modern and experimental architectural design was curtailed around 1978 when notion of an "Islamic Architecture" was advanced by General Zia-ul-Haq's government. His interest in architecture seemed to emphasize easily recognized elements of historic Islamic (mainly Mughul) architecture, essentially based on inclusion of motifs like arches, domes and ornamental surface treatment". There was a conscious "Islamic appropriation" of modern architecture.

The first generation of architects were modernist as most of them were foreign educated. Modern movement and its impact on early architecture of Pakistan was such, that all four essays dedicate a portion to it. Modern was also appropriated to cater to climatic needs with use of concrete jalis, louvers and overhangs etc. Mehdi Ali Mirza, M. A. Ahed, Minoo Mistri and Rustom Sohrab Jee etc. were pioneering modernist who adapted the style to local conditions and are discussed with reference to their work later in the book. Anwar Said I think requires a special mention with his constructivist approach he stands out from the group. As Kamil Khan writes in his essay "As a chief architect at CDA in Islamabad, Anwar Said has been one of the most prolific designers of community and public authority buildings. . . . He is also one of the most consistent disciples of constructivist, purist or Elementarist School with in modern movement". These early architects therefore had modernism as their guiding style with the context informing how to appropriate it to the region. In the later years modern architecture was further adjusted to serve the Islamic identity. The irony here is; Islamic was modernized by stream of foreign architects who worked in the country making their modern more regional and to the context. Kamil Khan Mumtaz calls this phenomenon as "modernization of the Islamic and Islamization of the modern". With these streams permeating the question of identity, one also struggles with the inherent issue of architecture being a creative discipline where individual stamp and approach of architect conflicts with the larger national identity narrative. The final product we see in the built form is therefore not a straight forward solution to an architectural problem presented by the client. The contemporary style has been dubbed as "Dubai effect" where sub standard copies of architecture in Dubai are designed here and are the same if designed by architects or built by contractors. We have taken the slogan of "everything goes" a little too far I think. This Dubai effect is escalated with the diverse clientele and their aspirations. As Arif Hassan mentions the State and elite are no more the clients there are many more today all informing architecture and its aesthetics. This eclecticism is hence, resultant of the

multiple clients and their wishes and gives more freedom of design to the architect than before. There are many more 'isms' to be followed and we see this reflected in the assorted palette of present-day architecture in the country and world over.

The book raises another issue of schism/gap/divide between education and practice. The international modus operandi and aesthetic sensibilities inform local design barring a few who are inspired by regional and vernacular sensibilities. These design paradigms need theorizing according to local context and much research is required to make the young students fathom these multi layered motivations that lead to design aesthetics eventually becoming an identity whether Islamic, modern, post modern, traditional or eclectic. Architectural history/theory as Dr. Jawaid Haider writes can play a vital role in filling the gap where existing theories can be contextualized and 'whole sale importation of images' without due consideration of context can be questioned. He furthers that architecture in Pakistan should be studied/researched under current debates of post colonialism and post structural tendencies that might shed some light to what, how and why of architectural production both earlier and contemporary. The students should sensitize to realities of the country they live in where gap between poor and rich is as stark as the Dubai-ized corporate developments and low income settlements like Orangi we encounter. They need to be aware of the dynamics of the country and be more socially responsive. CED studio taught in Dawood UET and NEDUET architecture departments was designed to address this issue in specific. The academics as well as professionals need to be more proactive in bridging the gap between education and practice. These few categories made the larger portion of discussion in the essays the book from here takes each one of 55 architects individually and illustrates their work. There is a short bio, brief description of architects taste and design philosophy, personal quotes and list of most of famous works are provided. The essays raised important debates but the compilation of works fall short in taking either of them forward. It would have had been a much inspiring read if the work of individual architects was categorized under similar debates dealing with them thematically or else a conclusive remark/chapter in the end to sum everything up is/was much required in my opinion.

This book nevertheless is a positive effort and calls for much needed research, documentation and insight into architectural production in the country.



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Ar. Suneela Ahmed at jrap@neduet.edu.pk**

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
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