

# Modern Architecture in Historic Cities of Afghanistan: A Case Study of Kabul

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**Abstract:** *Afghanistan has developed its own new language of architecture from various influences from all over the globe. This paper deals with the influences of ancient Afghan architecture and its indigenous style, and how the architecture developed over years. It aims at examining the ancient features of residential architecture in Afghanistan, and understands the new language of the same being used currently. To trace the evolution, ancient features of residential architecture are examined, followed by the changing trends, gradually leading to the current status of architecture in Afghanistan with an example of the city of Kabul[1][2][6].*

**Keywords:** Stupa; Mausoleum; Mosque; Minaret; Tent Dwellings; Sedentary Cave Dwellings; Sedentary Curved-Roof Dwellings; Sedentary Flat-Roof Dwellings; Afghan Architecture

## 1. Introduction

Afghanistan has a large collection of landmarks and monuments. These represent their past civilizations and manifest their place at the intersection of cultures. While efforts had been made for the conservation of the architectural remains and the protection of the monuments from 1922 to 1979, Afghanistan's built heritage has been physically affected by war, encroachments, public indigence and unconscious destruction or renovations.

Afghanistan includes striking architectural remains of all ages including Greek and Buddhist stupas (shrines or relics) and monasteries, arches, monuments, complicated Islamic minarets (the tall, slender mosque towers), temples and forts. Among the most famous sites are the large mosques of Herat and Mazar-e Sharif; the minaret of a mosque at Jam in the western central highlands; the 1000-year-old Great Arch of Qal'eh-ye Bost; the ChelZina (Forty Steps) and rock inscriptions made by Mughal emperor Babur in Kandahar; the Great Buddha of Bamian (55 m/180 ft tall); the "Towers of Victory" in Ghazni; and Emperor Babur's tomb and the great BalaHissar fort in Kabul [2][6][12].

## 2. Ancient Architecture of Afghanistan: Features and Influences

Afghan history's diversity allows for the diversity that exists in the country's architecture and architectural remains, with influences in recent centuries ranging from Greek to Persian, to Indian, to Chinese and European. There are also reflections of a range of religious influences over time, with evidence showing primarily early Buddhist, Zoroastrian and Islamic inspirations.

With the start of the Iron Age in Central Asia the first signs of circular city planning are visible, common from this point on across the Iranian plateau. Most likely, the circular form had defenseless intent as its origin. Parts of major historic cities such as Balkh and Kandahar have evidence of

ramparts with foundations dating back to this period, with characteristic mud-brick construction at regular intervals, and towers. Also commonly located within the center of these structures was a citadel, evidence that these settlements also functioned as administrative centers and market places. From these beginnings, this tradition of defensive architecture was propagated and maintained throughout much of Central Asia [10].

### 2.1 The Stupa

With the establishment of the Kushan Empire, both political and dynastic centers have been established, with one such dynastic center being identified at SurkhKotal in Afghanistan, established at the height of Buddhism in Afghanistan. The widespread construction of the stupa, a key architectural form of the early Buddhist period, came within this time period. This structure developed from the original earthen mounds built in north-east India after Buddha's death, with the structure's role moving from a commemorative reliquary to a place of worship itself. This occurred around the 3rd century BC when Emperor Ashoka opened the original stupas to use relics to disseminate religion, coinciding with the structure itself being disseminated. From an earthen mound to solid masonry structures consisting of a square base under a hemispheric dome, a long and complex development of form came with this development of purpose. This form eventually came to be dwarfed by a mast adornment featuring seven umbrella-like disks, or chakras, each representing a different layer of heaven. These structures, with other stupas and traditional Buddhist monasteries and chapels commonly in the vicinity, were rarely isolated [10][11].

### 2.2 The Mausoleum

The mausoleum was an important Islamic structure, with the large distance between the region of Afghanistan and Mecca elevating the structures enshrining holy men to alternative focal points for the pilgrimage to the city required. At

Mazar-i Sharif there exists evidence of this in the great shrine of Ali, the first Shi'a Imam, which today remains a point of great pilgrimage for the Sunni Muslim population in Afghanistan.

Typically, the shape of a mausoleum involved either a domed square chamber, or a conical cupola above a tower. An iwan, an ornamentally vaulted entrance portal, was subsequently a key feature of common later additions. The iwan originated in pre-Islamic Central Asia, and saw itself incorporated with Islamic expansion into many mausoleum and mosque designs, especially in later Timurid period architecture. It was also maintained as a prominent feature of secular architecture, with pre-Islamic evidence in the Ai Khanum palace architecture, and a later Islamic example in the Ghaznavid palace at Lashkari Bazar in the 12th century AD. Another essential form was the dome, used especially in mausoleums and mosques [5][12][15].

### 2.3 The Mosque

Another core influence of Islamic rule on Afghanistan's architecture was the introduction of the mosque's fundamental religious building, with aspects of the basic structure influenced by the religion itself. A mosque must face Mecca, or qibla, in the direction of prayer, and contain within the qibla wall a mihrab or niche for prayer. An ablution area allows for the cleanliness requirement before prayer and a clean, covered floor enables the head to be touched on the ground during prayer. With the Qur'an restricting animal portrayals or the human form, Islamic structure decoration evolved with a more intangible aspect than previous eras. Much of this decoration utilised the literal text of the Qur'an.

In the subsequent Ghaznavid and Ghorid periods, a markedly Iranian influence is notable, where tiles were arranged to form decorative inscriptions that made up entire walls, a tradition that later developed greatly in the Timurid era. In general, the mosques were based on a four-iwan plan with a central dome chamber. The oldest Islamic structure in Afghanistan is a square, nine-dome mosque at Balkh, constructed in the 9th century AD by the Abbasids[8][15][16].

### 2.4 The Minaret

The 65-meter Ghorid minaret at Jam—one of two surviving monuments from that period in Afghanistan—and the two minarets at Ghazni are often cited as the most outstanding examples of this Islamic architectural tradition. These particular minarets themselves are also evidence of the formal variety that existed in minaret erection, with the former a colossal minaret of three stories and the latter two small and star-shaped. With their height serving the purpose of marking the site of a religious structure, minarets almost always accompanied a mosque, and could exist either in connection with it or freestanding itself.

There were few monuments from the Abbasid, Saffarid, Ghaznavid, Seljuk, Ghorid, and Khwarezmian periods in Afghanistan to survive the later devastation with the coming of the Mongols, although sources of Ghaznavid, Ghorid, and

Seljuk architecture remained and continued in India under the Sultans of Ghor during this time.

## 3. Indigenous Afghan Architecture

There are two main types of dwellings in Afghanistan: sedentary and non-sedentary dwellings. The non-sedentary dwellings come in the forms of black tents, cotton tents, yurts and huts [8].

### 3.1 Non sedentary Tent Dwellings

In Afghanistan there are many types of non-sedentary dwellings. Black tents are the most common types of tents in Afghanistan, by far. These are used by the Pashtuns of Durrani and Ghilzai, and the Baluch. As the frame, they consist of different hoops, poles, T-bars, and ropes. The frame is covered with black woven goat haircloth plates. This cover "absorbs the summer sun's heat and gives considerable shade." "The result is an air temperature ten to fifteen degrees Centigrade cooler than the outside air." Traditionally, black tents are found in southern Afghanistan. Amir Abdur Rahman's (1880–1901) forced relocation of Pashtuns took the tents to the north. These tents have begun to replace the yurts in the northern part of the country.<sup>1</sup>

There are two styles of tents in black. Vaulted used by the Pashtun Duranni and peaked used by the Pashtun Ghilzai. The vaulted tents "employ T-bar hoops, or a T-bar alone, to create a vaulted frame over which the pinned panels are stretched taut." Baluch and Durrani tents vary in that the T-bar is not used in the Baluch tent [16]. In the southwest this type of tent is that, from Herat to Kandahar. It's found also from Kunduz to Maimana in the north.

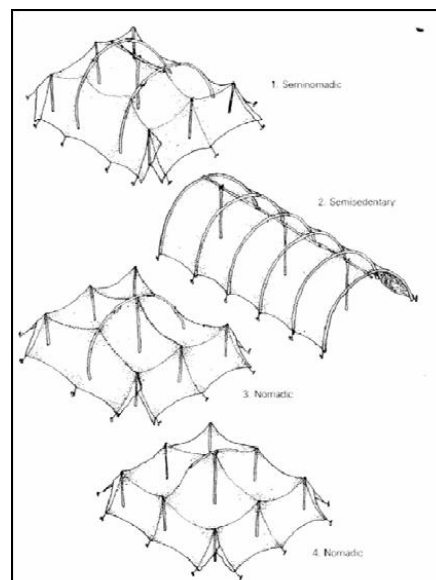


Figure 3.1: Sketch of a Durrani Vaulted Black Tent<sup>2</sup>

<sup>1</sup>Szabo, Barfield, and Sekler, *Afghanistan: An Atlas of Indigenous Domestic Architecture*.

<sup>2</sup>Szabo, Barfield, and Sekler, *Afghanistan: An Atlas of Indigenous Domestic Architecture*, 33.

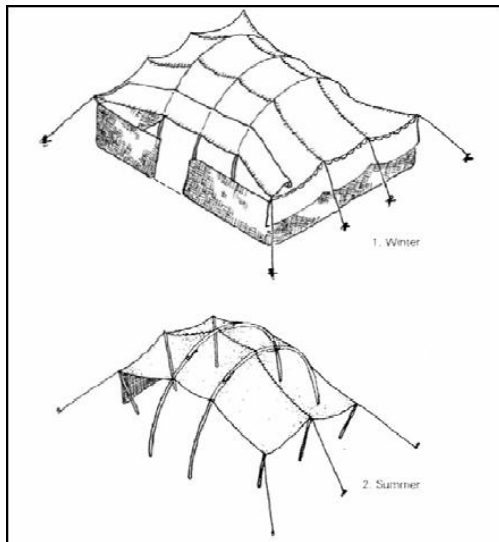


Figure 3.2: Sketch of a Baluch Vaulted Black Tent<sup>3</sup>

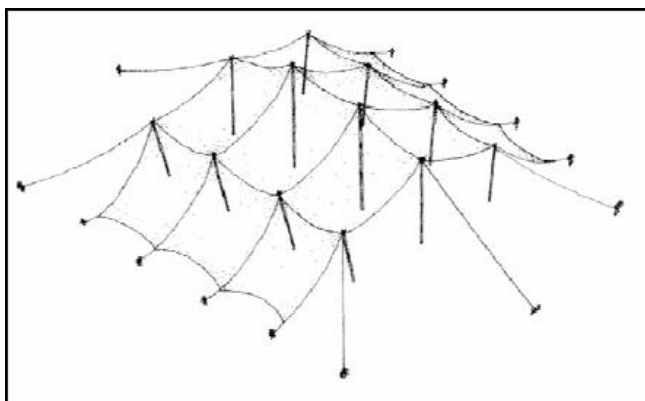


Figure 3.3: Sketch of a Ghilzai Peaked Black Tent<sup>4</sup>

The peaked black tents used by the Ghilzai Pashtuns are traditional along the Pakistani border in west Afghanistan. Their structure is made up of poles and ropes which keep the black cover in place. If the residents stay in one area for a while, they may build a small mud or stonewall at the tent's base. The nomadic Ghilzai Pashtun who stays in these tents flies to central Afghanistan from the Pakistani border region annually [16].

There are two smaller tribal groups that use the black peaked tents. The Brahui, they are. The Brahui stay by Iranian border along the southern part of the Helmand River. Their tents look like half of a Ghilzai tent, since they have just two rows of poles. The Taimanis live off the Farahrud River in the Tulak area. Their tents are like a yurt with rectangles. A rectangular frame made from willow poles, for lateral stability supported by a transverse ring. A ridgepole runs the center of the tent over its entire existence. Woven reed mats fasten the tent's sides. The black panels are attached to wooden pens. A sedentary tribe.

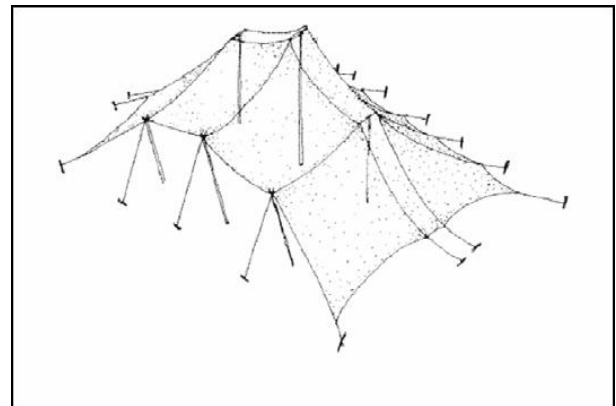


Figure 3.4: Sketch of a Brahui Peaked Black Tent<sup>5</sup>

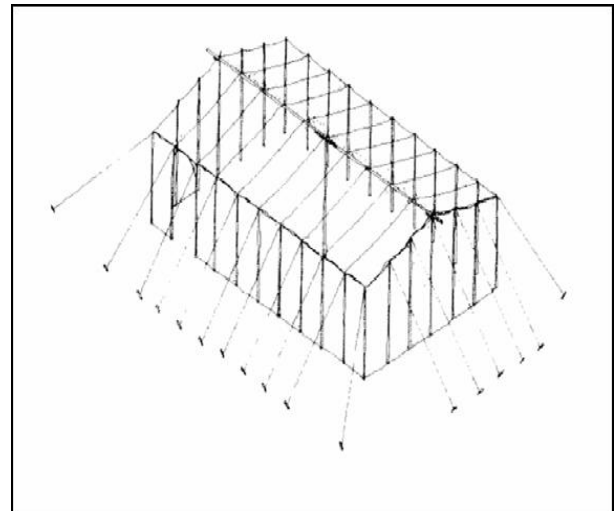


Figure 3.5: Sketch of a Taimani Black Tent<sup>6</sup>

In the northern regions the typical association of these tents' structures can be skewed. Because of its ease of use, construction and movement, Uzbeks, Tajiks and other ethnicities, who traditionally use yurts, have switched to the black tent. In Afghanistan the black tents are by far the most prevalent tent structure.

In smaller areas the cotton tents are used less frequently. The Tribes of Jugi and Jat Using 'Store Bought' white cotton tents for decoration with coloured patches sewn on. The Jugi reside in the Samangan area, and the Jat live in the Kabul area. The tent in Jugi uses four poles. The coating only covers one wall, slanted at an angle of 45 degrees. The Jugi travel from one place to another and are known for their begging and fortune telling. The Jat structures are similar to traditional American structures. Tents in the Army. Bamboo poles supporting the frame. If the Jat is in an area they will create a small mud wall around the tent for a while. This wall will grow in time creating a small permanent looking structure with a clothroof. The Jats are not well liked and are known to be peddlers, entertainers, and artisans [9][16].

<sup>3</sup>Szabo, Barfield, and Sekler, *Afghanistan: An Atlas of Indigenous Domestic Architecture*, 39.

<sup>4</sup>Szabo, Barfield, and Sekler, *Afghanistan: An Atlas of Indigenous Domestic Architecture*, 43.

<sup>5</sup>Szabo, Barfield, and Sekler, *Afghanistan: An Atlas of Indigenous Domestic Architecture*, 47.

<sup>6</sup>Szabo, Barfield, and Sekler, *Afghanistan: An Atlas of Indigenous Domestic Architecture*, 49.



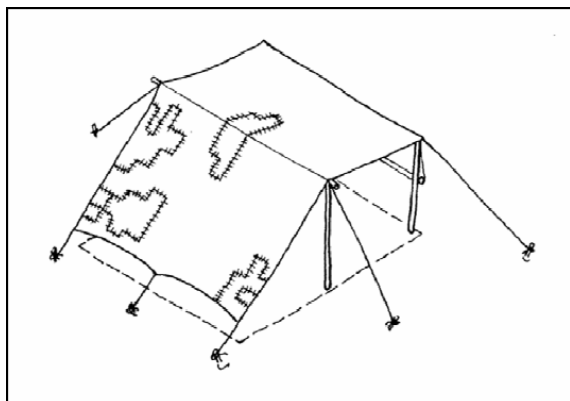


Figure 3.6: Sketch of a Jugi Cotton Tent<sup>7</sup>

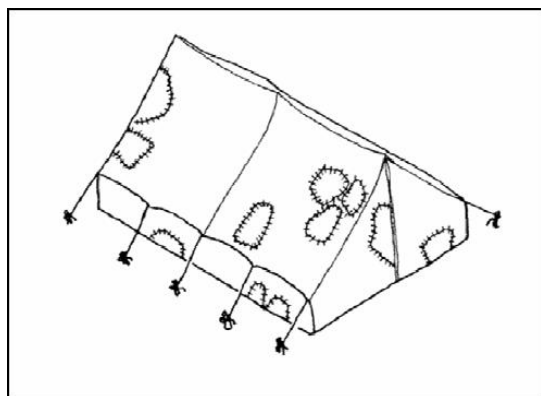


Figure 3.7: Sketch of a Jat Cotton Tent<sup>8</sup>

### 3.2 Non sedentary Yurt Dwellings

Yurts are the nomadic structure type with the most complexity. They are available in two versions Separate Areas of Afghanistan. In the northern part of the world the Turkmen, Uzbek and Central Asian Arabs use the domestic yurts.

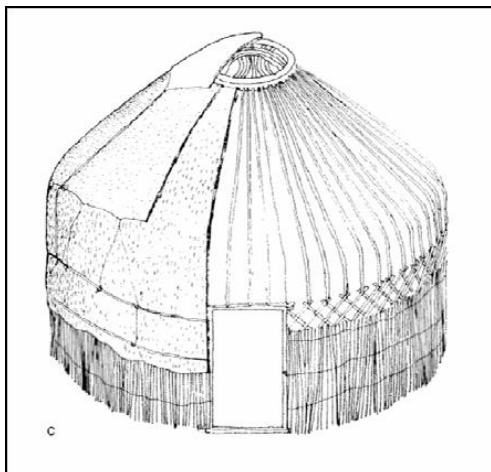


Figure 3.8: Cutaway Sketch of a Domical Yurt<sup>9</sup>

These yurts have walls of linked lattice, roof poles that are kept together with a roof ring at the top, felt for a roof. As

<sup>7</sup>Szabo, Barfield, and Sekler, *Afghanistan: An Atlas of Indigenous Domestic Architecture*, 53.

<sup>8</sup>Szabo, Barfield, and Sekler, *Afghanistan: An Atlas of Indigenous Domestic Architecture*, 57.

<sup>9</sup>Szabo, Barfield, and Sekler, *Afghanistan: An Atlas of Indigenous Domestic Architecture*, 64.

with most buildings, a low mud wall is constructed around the building if they are in place for some length of time. Sufak region Firozkohi uses conical yurts. This yurt's basic structure is identical to the domestic yurts, except for the pointed roof. Only wealthy families do have yurts. Chaparis is used by the poorer families.

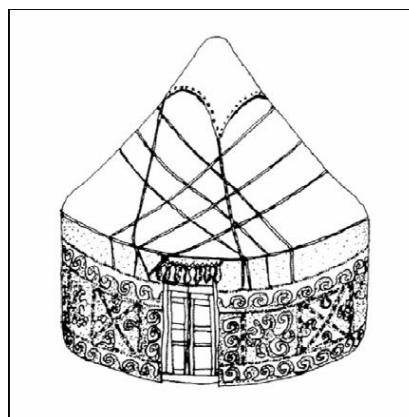


Figure 3.9: Sketch of a Conical Yurt<sup>10</sup>

These structures are disappearing from Afghanistan. The lack of skilled artisans required to build the structure; the cost, weight and the movement of nomadic groups into villages and more permanent and cheaper chapari huts have reduced the need for these structures [1][2][3][16].

### 3.3 Nonsedentary Hut Dwellings

There are several types of huts with circular, polygonal, rectangular and ovate oblong shapes. The Uzbeks, Arabs, Tajiks, and Turkmen all use the circular hut of Lacheq, in the Samangon region. This framework is made of lightweight wooden poles bent over to form the roof. This looks like a bucket going inverted. The covering of the wall consists of woven reed matting and the roof is made of plated grass or flattened reed matting.

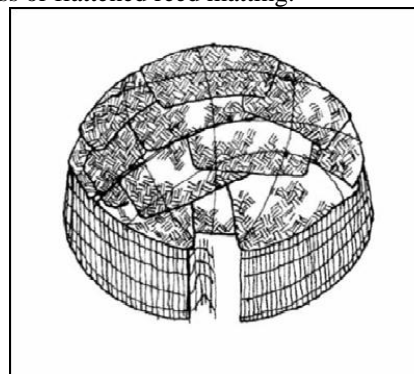


Figure 3.10: Sketch of a Circular Hut<sup>11</sup>

<sup>10</sup>Szabo, Barfield, and Sekler, *Afghanistan: An Atlas of Indigenous Domestic Architecture*, 69.

<sup>11</sup>Szabo, Barfield, and Sekler, *Afghanistan: An Atlas of Indigenous Domestic Architecture*, 75.

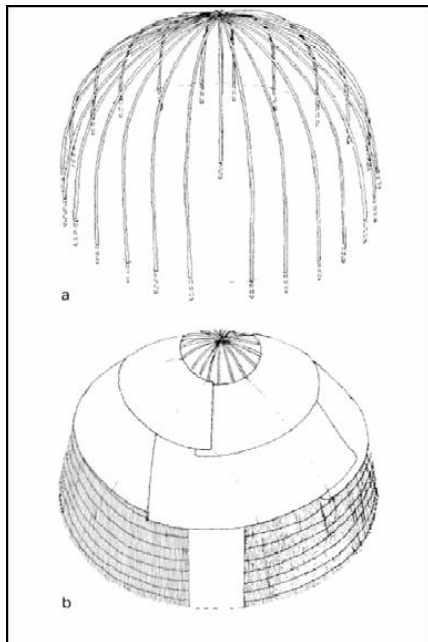


Figure 3.11: Sketch of a Circular Hut with Center Pole<sup>12</sup>

Northeast of Kunduz are the rectangular Central Asian Arab, kapa-i-arab huts made of wooden poles tied together to form a roof. They are coated with Felt or White canvas. This area also includes the Tajiks and their ovate-oblong, kapa huts. They are made of poles bent over to form a roof. They have matt reed walls, and grass or flattened matt reed roofs [11][12][16].

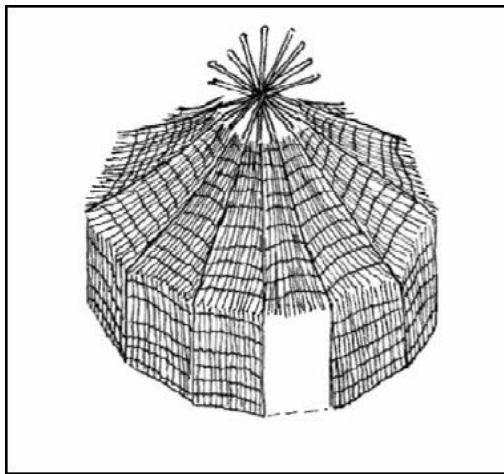


Figure 3.12: Sketch of a Polygonal Hut<sup>13</sup>

<sup>12</sup>Szabo, Barfield, and Sekler, *Afghanistan: An Atlas of Indigenous Domestic Architecture*, 83.

<sup>13</sup>Szabo, Barfield, and Sekler, *Afghanistan: An Atlas of Indigenous Domestic Architecture*, 87.

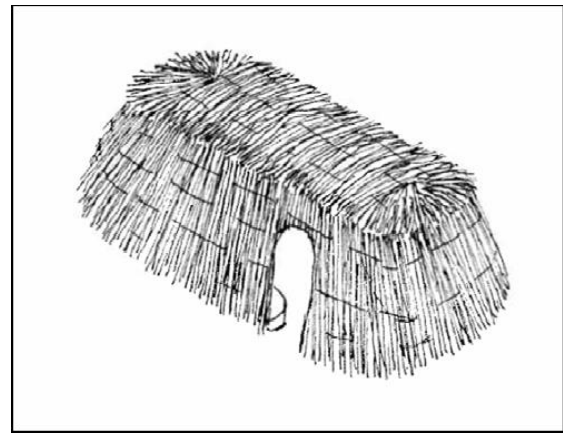


Figure 3.13: Sketch of an Ovate-Oblong Hut<sup>14</sup>

The Arabs Circular, kappai-chamshi hut, is located north of Kunduz; built entirely of reeds. Smoke must filter out the top, because there is no hole for the smoke. Walls are covered with mats of reed, or plated grass. This area also contains the Central Asian Arabs with their rectangular, chubdara hut. It is also made of reeds, but has a wooden frame to support the roof.

Bamiyan is the home to the Hazara. They build three types of huts. The chapari with and without a center pole is built with twenty-four poles that are bent to form a roof. The wall is made from reed mats and the roof is covered with felt. The polygonal chapari is built like the circular chapari, but with only twelve poles, giving it a distinctive polygonal shape.

Both the Durrani, along the Helmand River, and the Ghilzai, west of Jalalabad, build Ovate-oblong Huts. The Kodai called Durrani huts are constructed by constructing a clay wall with embedded poles. The poles are bent to form the roof, and the walls and the roof are lined with straw bundles.<sup>82</sup> The Baluch and Brahuis also build the Ghilzai Pashtun huts. They are made of tamarisk scrub boughs, which are bent to form the roof. These structures are covered by loosely woven tamarisk mats. In the winter they get muddled. In the summer months, the mud is washed out<sup>[13][14]</sup>.

### 3.4 Sedentary Cave Dwellings

The cave is the first sort of sedentary structure. One Region in Afghanistan, currently domestic housing caves are in use, Bamiyan. It has been widespread in many regions in the past; but the practice has gradually vanished as construction materials become more widespread and cost-effective. Many types of structures are still used in Bamiyan, and those freestanding structures should be used for reconstruction by coalition forces [8].

### 3.5 Sedentary Curved-Roof Dwellings

The next type of sedentary structure is the curved-roof structures. These structures are normally found where wood is not readily available or where wood boring insects are

<sup>14</sup>Szabo, Barfield, and Sekler, *Afghanistan: An Atlas of Indigenous Domestic Architecture*, 99.

prevalent. They are found throughout the Western portion of the country and in Kandahar.

Curved roofs have some benefits relative to flat roofs. The living area stays cooler in hot climates as the heat rises up into the roof layer. The heat layer at the ceiling level prevents heat from flowing from the roof into the building. The walls must be thick to "compensate for the dome or vault lateral thrust." The thicker walls provide greater protection than the thinner flat-roof structures. The curved-roof structures are subdivided into four forms [3][8].

The first type of curved roof construction uses sun-dried brick domes and vaults.

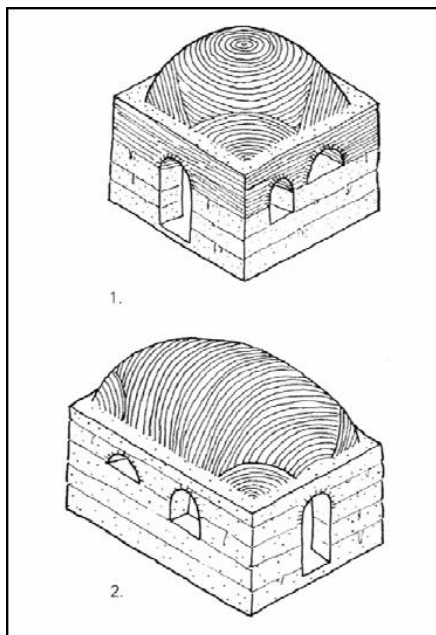


Figure 3.14: Sketch of Curved-Roof Buildings<sup>15</sup>

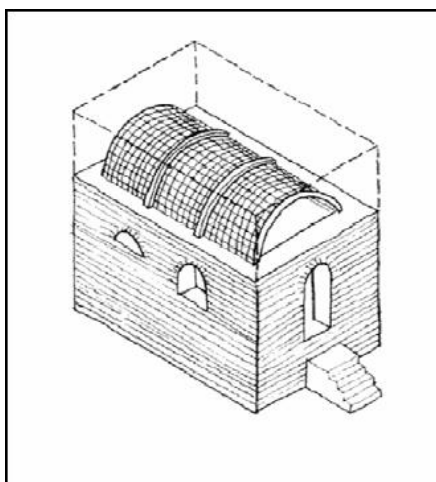


Figure 3.14: Sketch of Curved-Roof Construction (Single Vault)<sup>16</sup>

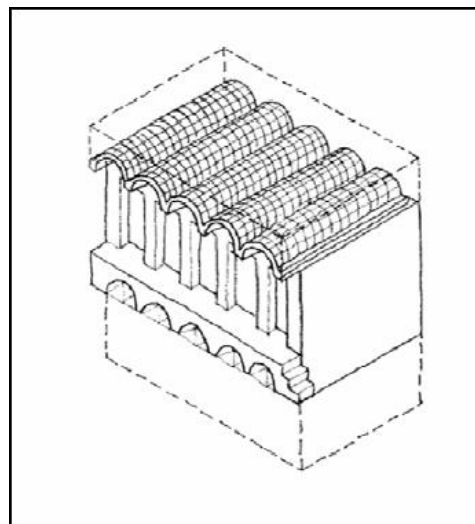


Figure 3.15: Sketch of Curved-Roof Construction (Multiple Vaults)<sup>17</sup>

### 3.6 Sedentary Flat-Roof Dwellings

The Flat-roof designs are the last types of sedentary dwellings. These structures predominate where wood is available readily. There are five types of structures with flat roof. The brick and mud walls are found all over central and eastern Afghanistan except Nuristan. Large building of mud walls is found from Kabul to Kandahar, including Bamiyan. Nuristan is home to timber and stonewalls. The last two styles are the large stonewalls, and the combination of brick and wood frames. Such building styles are found only in the isolated mountainous Salang and Istalif regions[3][6][8][16].

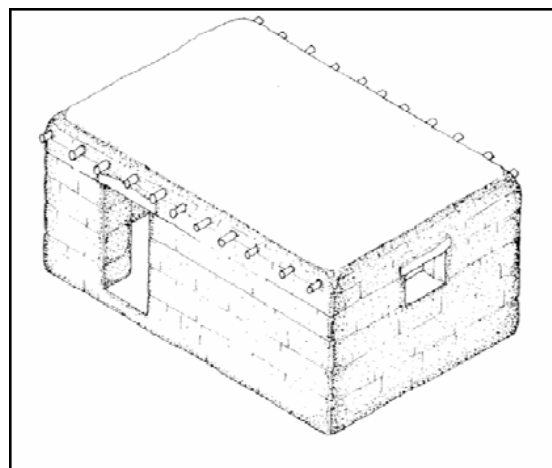


Figure 3.16: Sketch of Flat-Roof Buildings<sup>18</sup>

### 3.7 New Language of Afghan Architecture

Modern architecture was a landmark in the history of world architecture, and for the first time, the attitude of tradition, history and past changed its course as a source of inspiration for architecture and the future and creation of architecture was introduced as the main objective and subject. Architects and theorists have been trying to make the architecture

<sup>15</sup>Szabo, Barfield, and Sekler, *Afghanistan: An Atlas of Indigenous Domestic Architecture*, 119.

<sup>16</sup>Szabo, Barfield, and Sekler, *Afghanistan: An Atlas of Indigenous Domestic Architecture*, 123.

<sup>17</sup>Szabo, Barfield, and Sekler, *Afghanistan: An Atlas of Indigenous Domestic Architecture*, 127.

<sup>18</sup>Szabo, Barfield, and Sekler, *Afghanistan: An Atlas of Indigenous Domestic Architecture*, 135.



homogeneous as science and technology with an evolving world.<sup>19</sup>

Modern architecture arose in the form of a global style, the style that took root after World War I and spread in post-World War II reconstruction of countries. This style had its claim to reform architectural process and building design with no planning and traditional management by adopting a global architecture system. This new architecture was organized with rational standards and the use of some of the most efficient materials like concrete, steel and glass.<sup>20</sup>

Modern architecture focuses first and foremost on the efficiency and pragmatism, and uses the style and tools that has not had a history of such use to this size and in a way tries to develop in the modern era and uses all possibilities to achieve this purpose. This use causes to restrict the human role in its creating and whether causes to superior the technology on human [3][6][8].

### 3.8 Kabul: A Case study

Today, when traveling through cities of Afghanistan, it is obvious that massive glass façades have been introduced as a new feature of its architectural mix. Interestingly, mosques in particular are fitted with coloured mirror glass. For example, in Kabul, the large Friday mosque Eid Gah is completely fitted with green mirror glass, and the Kheirkhana Yaqub mosque has blue windows. The facades thus contribute to the inward-oriented way of living in Afghanistan [5][7][16].

Within the mud-brown countryside of Kabul, many commercial and private buildings are scattered like glass palaces. They're quite the opposite of the rest of the city, and they amaze the observer. More and more private houses are being built in this "new modern style" that expresses the possibility that the owner can afford it. If you ask people on the street, they're going to say they're mainly the commanders' houses.



Figure 3.17: Kabul City Centre (Source: Masoud Akbari)

<sup>19</sup>Qobadian, V. (2003), *principles and concepts in contemporary architecture in the West*, Tehran: Cultural Research Bureau

<sup>20</sup>Malpas, Simon (2007), *postmodern*, translated by Hussein, Tabriz University Press.

Another architectural attraction has arrived near the Shar-e Nau Park, the Kabul City Centre. The first mall opened in 2005 and was founded by an Afghan businessman. It reflects a traditional western mall style with several floors. A "food court" is located in the basement, which is similar to many European malls. Visitors are capable of moving from the underground to every floor using glass elevators. Shops in western style sell everything from jewellery to trendy clothing. The mall represents uniqueness since for ordinary Afghans most of the goods offered are not affordable. Despite this, many visitors come to Kabul City Centre. Particularly the escalators are a very special attraction, because they are the first to ever appear in Kabul.

New imported techniques have appeared beside the traditional way of construction. A new mosque was designed using Iranian construction techniques, not far from the President's residence, the ark. To simplify the construction process, steel girders were used as roof scaffolds. The roof was covered between the steel girders with traditional bricks which were reinforced with a mass of mud and gypsum.

In September 2002 an international conference on "Kabul and the National Urban Vision" was held in the Afghan capital. The topics included the preservation of the heritage of Kabul, revitalization of the old town and the reconstruction of Char Chatta Bazaar as well as issues of urban transportation, urban management and planning, urban infrastructure and services. The problems of rebuilding Kabul, a war-torn city with an increase of population that would make it a mega city soon, led to another meeting hosted at the University of Karlsruhe in Germany in July 2003. The workshop was titled "Urban Planning in Disaster Regions, Supplying the Urban Realm: The Case of Kabul".

A focus of the Karlsruhe meeting was the old town's role between tradition and modernity. The development of a square-system as the initial focus for neighbourhood development was one example that arose. To restore neighbourhood communities were also considered deadlocked street patterns as a typical feature of an oriental area. Fountain squares were intended to activate the centre's redevelopment. Hybrid systems and structures were seen as a mechanism for integrating the old with the new, and were intended as powerful elements of an extreme contrasting "new urbanism."

Kabul has to be the "role model," but it can only succeed if the city and rural areas have regional compensation. The idea of modernizing Afghanistan through Kabul has traditionally failed as mentioned above. But now we see a chance to strike a balance between Kabul and regional growth. Given that many of the inhabitants of Kabul are people who have recently migrated from the provinces of Afghanistan, experimenting with types of "urban agriculture" using conventional methods of construction would be an interesting aim [4][5][6][7][16].

## 4. Conclusion

There was not much development in the architectural form as compared with the design. The decoration and

ornamentation of the structures and monuments has undergone considerable change. Colors started with turquoise, white and royal blue, followed by a myriad of shades and pigments, arranged into complicated, intertwined geometric girikhs or knots. The decor featured included floral motifs, mountain and cloud depictions and Chinese-inspired ornamentation.

Planning and regulatory bodies do not appear to have an adequate legal framework; nor are there adequate historical property records, nor comprehensive planning regulations and building codes. The conservation policy of the government is weak and the law on the protection of archeological artifacts does not clearly protect monuments, particularly those located away from the authorities and experts' eyes. Lack of executive coordination, and a lack of funds and expertise also add to the challenges. It is most important to protect the cultural heritage built up in Afghanistan.

The community's direct involvement people, education, and cultural institutions in works of protection and conservation needs to be strengthened in development programs. It must be acknowledged that for our restoration as a nation and for our future, our historically built heritage has significance. Work and publication will start on vernacular architecture and the conservation. It is best to raise public awareness of the value of our cultural heritage by educating young architects and building archaeologists through organized training both at universities and at project sites.

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