

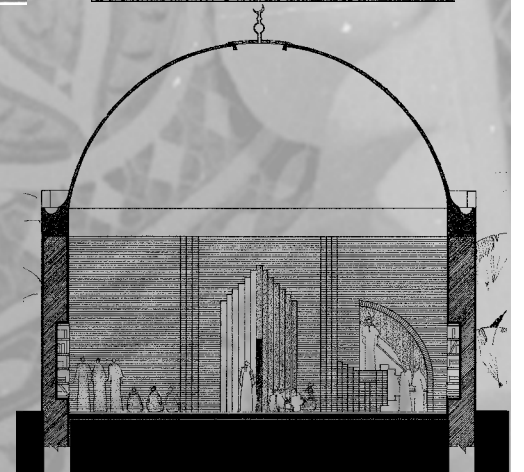
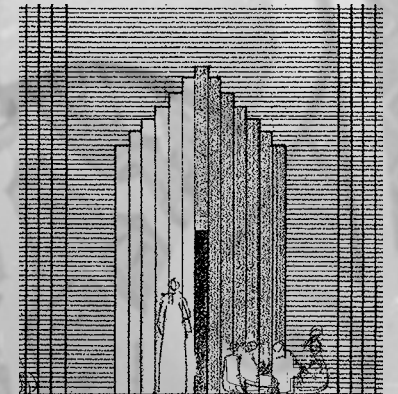
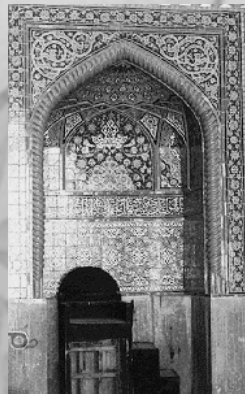
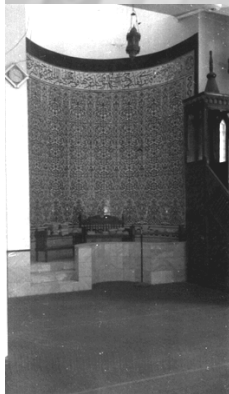
THE MIHRAB -(PRAYER NICHE)

It is mainly the liturgical *qibla* axis made visible. It is an early innovation in Islamic architecture, and its origins have been the object of controversy. It entered Islamic world in 707- 9 as a concave shape. This fashioned masonry, is a niche in the *qibla* wall similar to those in the coptic churches, with difference being that what had been a devotional niche; now became directional. *Mihrab* is an acoustic device, a resonator for the voice, shaped to bounce the sound back and magnify it at the same time. The concave *mihrab* is where the *imam*(the prayer leader) stations himself to lead the congregation in prayers, therefore it wasn't fortuitous innovation but the consequence of an order that the Muslims overseers must have given the copts.

Promptly, the *Mihrab* became the central feature of any mosque, and of all sacred art and architecture in Islam. It has little in common with the Alter of a Christian church; indeed, in all essential respects it is its antithesis. Where as an Altar is convex, or at least protuberant, the *mihrab* is concave and this concavity is a symbolism of which requires that it be kept empty at all times, and opposes it self aesthetically to the cluttered surface of an Altar mensa. It is not the *niche* that is sacred but the direction it expresses. I tried to take advantage of the *qibla* wall thickness, which is 1.50 m, and to cut into the wall. Traditionally, *mihrab* was always a decorative element. It has always been exposed to ornamentation and decoration, and treated as an sculptural element. The intention was to create a simple feature that stands out by its simplicity not by its decoration, and to introduce its self as a directional element, more than to distract the worshippers attention from their worship.

The niche tappers inward from both sides to 1.30 m, and they meet in the middle at a 20 cm wide and 2 m high glass block, which allows defused light, not direct, to penetrate. This soft light will illuminate the niche internally. The philosophy is to create an ethereal environment and to direct the worshippers to that passage of light. Light has always been an essential concept in Islam as a religion, as well as an art and architecture, it symbolizes faith and sacredness.

As described in the **Holly Qur'aan** "*God is the light of the heavens and the earth. The parable of his light is as if there was a niche and within it a lamb, the lamb enclosed in glass, the glass as if a brilliant star, lit from a blessed tree, an olive neither of the East not the West, whose oil illuminates although fire has not touched it, light upon light. God guides whom he will to his light, God set forth parables for man and God is all knowing.*" Sou rat 24 "The Light," verse (35).



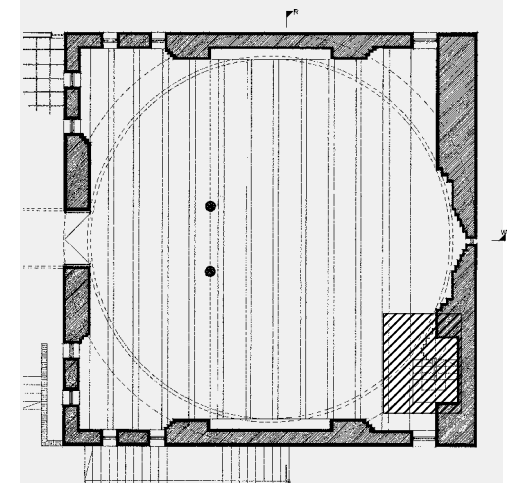
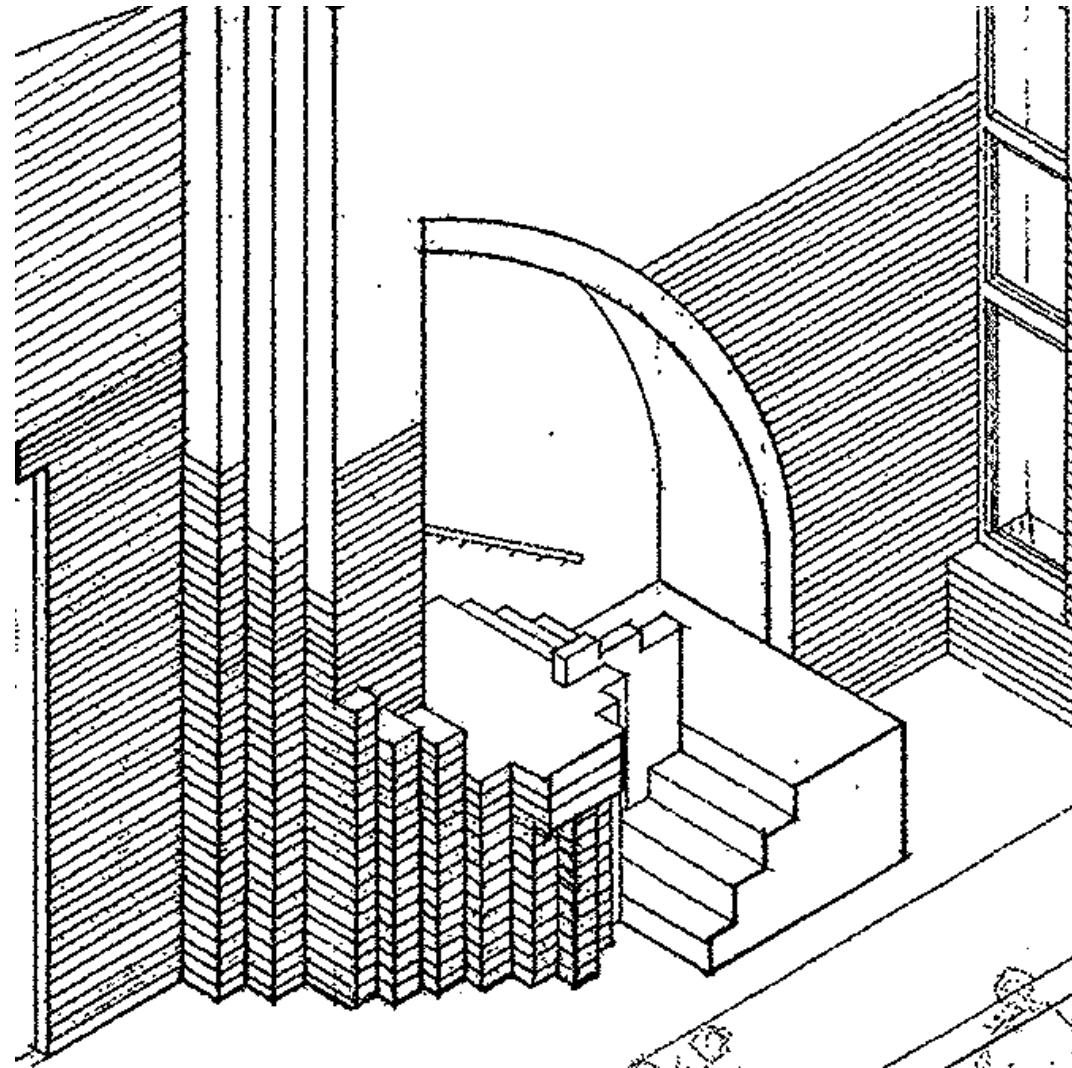
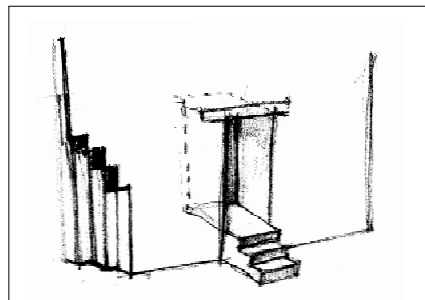
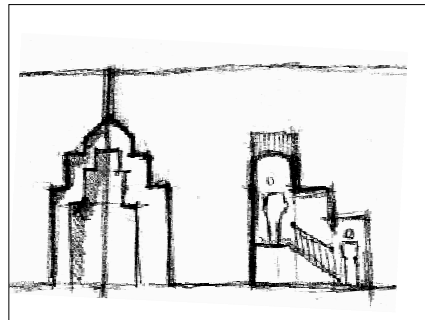
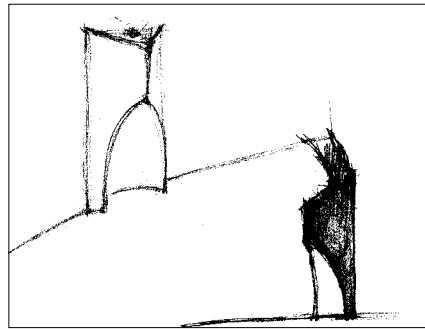
THE MINBAR

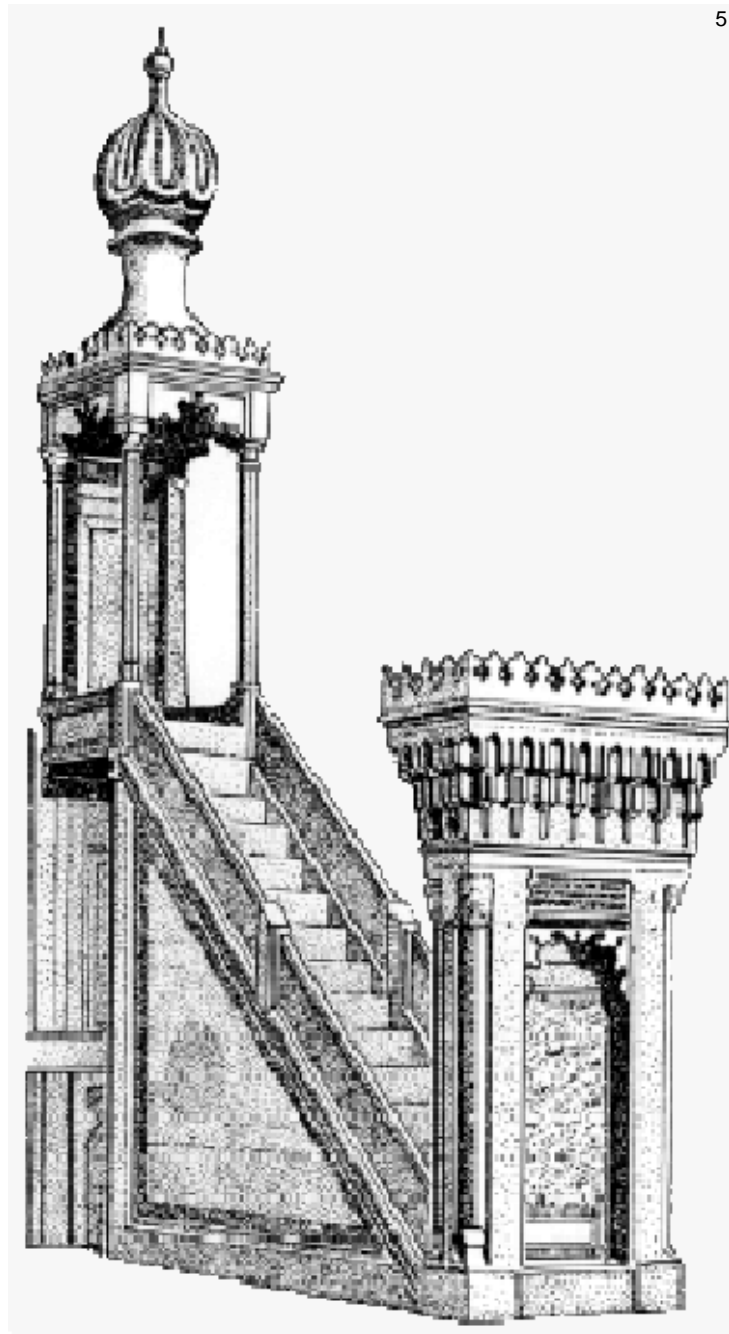
Is a stair case leading to a small platform that is placed on the right side of the *mihrab* (niche) from which the *Imam* (prayer leader) addresses the weekly congregation (*khutba*). The sermon in early Islamic times was political rather than dogmatic in content. That explains why the shape of the *minbar* (pulpit) has nothing to do with the Christian ambo.

In its origin it was the throne of the leader of the community (the Prophet Mohammed), set up in the place of assembly, from the top of which he, addressed the community as law giver. Having completed the sermon, he would descend the pulpit and enter the niche to lead the prayer, for as a leader he guides people to God and leads the prayer in that capacity.

Although, the *minbar* is a symbol of authority, it is also an acoustic elevation. The *Imam* always delivers his address not from the top but from the lower step, and the top part remaining empty, the canopied space stands for the absent Prophet.

Thus the *minbar* emphasize the intimate connection between politics and religion in Islam.



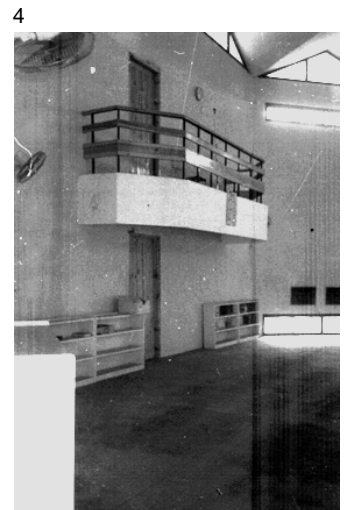


Examples of *minbars* different in design, materials and height. Fig(2, 3) are made of wood, fig(3) made of concrete, while fig (4) is different in design and location, represents a balcony. Fig (5) is the traditional way of designing a *minbar*.

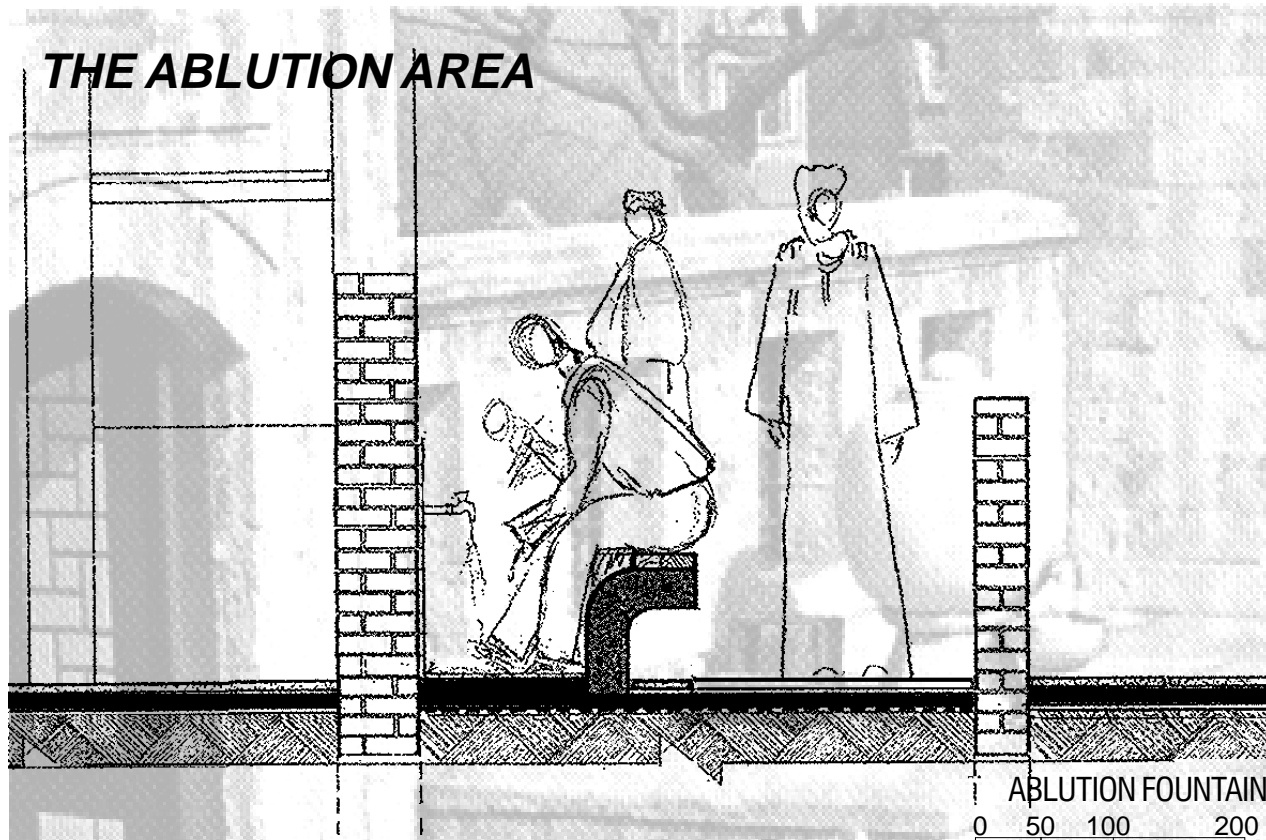
The first *minbar* was constructed of three steps fashioned from tamarisk wood, from the top most of which the prophet Mohammed addresses the companion. The *minbar* (the pulpit) is traditionally made of wood, richly carved and glowing with incrustation of nacre and ivory, marble is less common, and limestone and even iron occasionally been used.

In most countries the *minbar* became architecture with folding doors admitting to a stairway crowned with a canopy or a bulbous cupola and topped with a steel crescent finial, fig (5).

The attempt in the design of the mosque was to emphasize the sacredness of *minbar* by being a part of the *qibla* wall. It is 1.00 m deep with eight steps, four of which are protruding out of the wall to maintain the concept of belonging to the prayer hall as well as the *qibla* wall. The part of the platform which projects 1.00 m out of the *qibla* wall is for the *Imam* to stand and address his congregation, so he can be seen by all the worshippers. The platform follows the same pattern of staggering that is used for the *mihrab*. Being inspired with the traditional way of supporting an opening, by arches, the *minbar* is mainly a half arch curved in the *qibla* wall to maintain the harmony of the wall, being a load bearing brick wall.

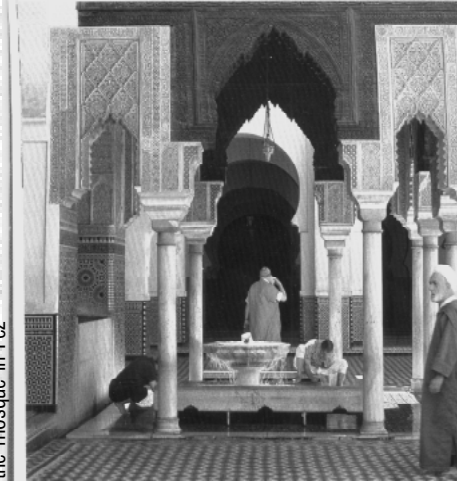


THE ABLUTION AREA



ABLUTION FOUNTAIN
0 50 100 200

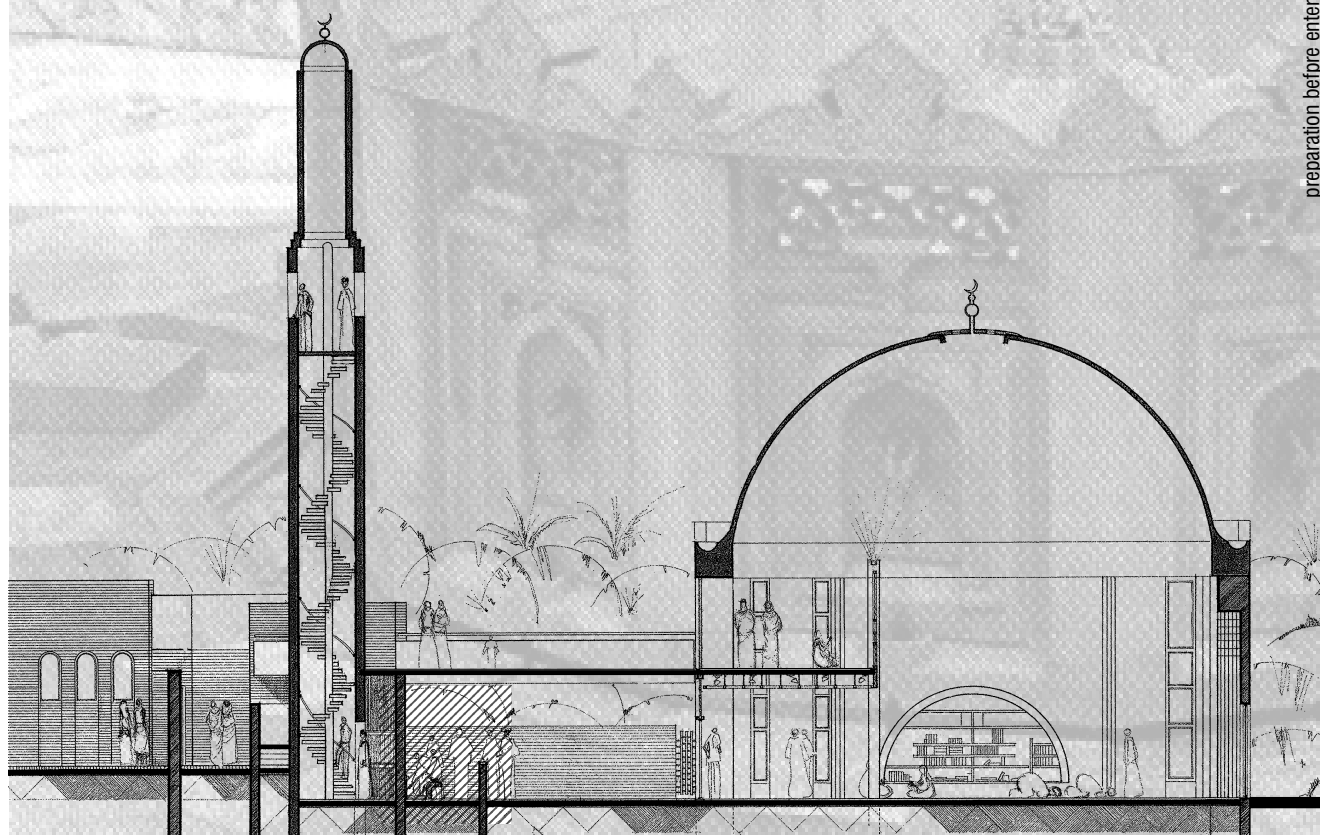
worshippers preparing themselves for prayer out side the mosque in Fez



Different examples of Ablution fountains in the *Sahan* (mosque courtyard).



preparation before entering the mosque



Is one of the ancillary structures for the Islamic worship. The worshipper should be in a state of ritual purity before he starts to pray. Weather total or partial, ablu-tion must be preformed with running water.

Historically, the fountain was found in Syria and Egypt, and it was usually a decorative feature.

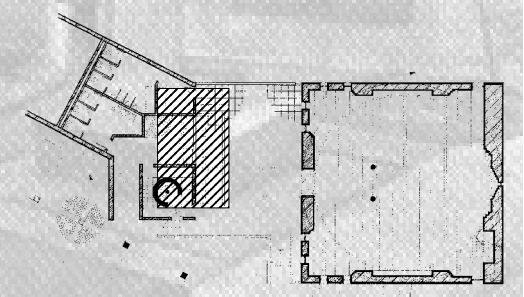
Ablution fountain is an intermediate between external and internal features, generally located in the center of the courtyard to emphasize the initiatic function of water in Islam.

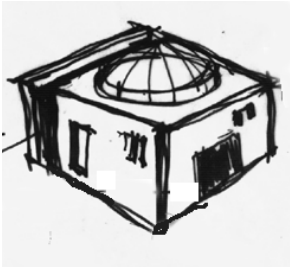
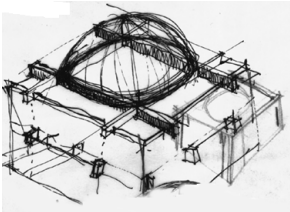
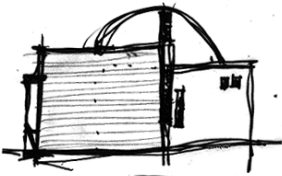
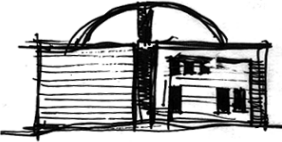
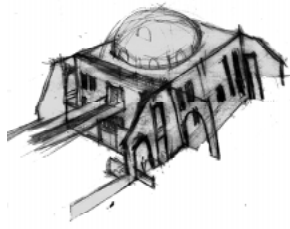
It is similar to the Font in Christianity, which is located just inside the West door to emphasize that it is through the sacrament of baptism one enters Christ's church.

Water in Islam is the vehicle of purification and enjoy an almost sacramental status. In addition to the courtyard fountain, supplementary, ablu-tion facilities may be provided inside the mosque, often in the shape of a colossal marble jar with basis and taps so that the elderly may comply with the law without risk of exposure to the inclemency of the elements.

Among its amenities, the fountain has taps for lukewarm water and low stools so the user can isolate him self physically from the ritually impure floor. This wet area is usually separated from the rest of the mosque by a boundary. This defines the boundary between the areas of ritual purity and impurity, the former being invariably carpeted for the comfort of the congregants and kept scrupulously clean. The ablu-tion area in the edge mosque is separated from the *sahan* (the mosque courtyard) and attached to the minaret, to be accessible from the market area.

It is separated from the *sahan* by a 90 cm high brick wall that could be used as a stool for sitting and waiting. The fountain is a concrete basin finished with ceramic tiles, equipped with a recycling system to save water.

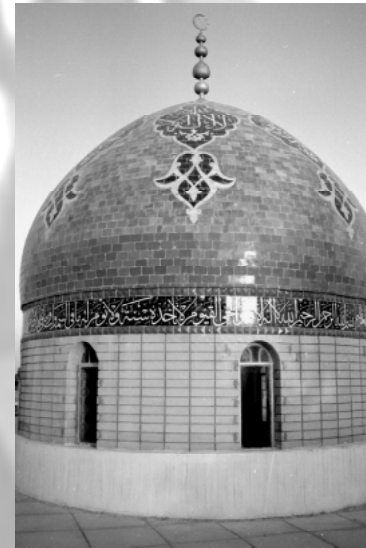




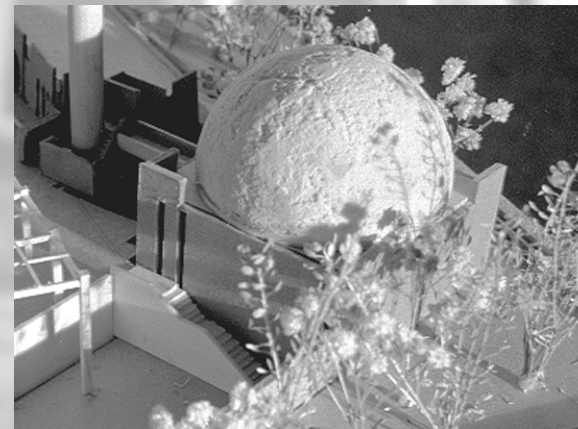
The Qubanjī mosque, Baghdad, Iraq



The University of Khartoum Medicine collage mosque, Khartoum, Sudan



The Qubanjī mosque, Baghdad, Iraq



THE MOSQUE DOME



The dome was found in Egypt, middle East, North Africa and arguably find it greatest expression in the Ottoman architecture of Turkey.

It may represent a mosque, a palace or a tomb; it may cover a square or a rectangular prayer hall, a chamber at the end of a receptional hall or a square, circular or a octagonal tomb. It may be a minor element in a vast structure that surrounds the domed area.

The dome appears to be a general symbol, signifying power, the royal city or the focal point of assembly; it can therefore serve both religious and secular purposes.

The dome has been described as the crowning glory of Islamic art, even if liturgically it is of minor significance.

The earliest domes were small affairs erected over the *qibla* to define it externally and to light it internally. At a later stage the dome was used to cover the mortuary chamber in which the founder's body rested; then the

dome moved from this lateral position to a central one, and grew in volume until it covered the entire sanctuary area around the *qibla*.

The dome is of course, a cosmic symbol in almost every religious tradition; and symbolically, in Islam the dome represents the vault of heaven in the same way as the garden prefigures in Paradise.

Since the dome stands for heaven, Paradise tree provides an appropriate motif for the decoration of the interior surface. In Islam the decoration usually spreads downwards from the apex of the dome, to represent the concept that every thing started from heaven and ends on earth.

In the mosque, the dome is the most dominant feature, expressed by height, shape and volume. It covers the entire prayer hall. Constructed of 20 cm (shell dome) about 15 m in diameter and 6 m high, it rests on a 1 m thick and 1 m high ring beam. The beam rests mainly on the center of the 4 walls of the prayer hall.

At the apex of the dome, there is a 10 cm thick circular copper plate that accommodates 4 windows with 20 cm in diameter that allow diffused light to penetrate and to illuminate the dome internally. At the top of the plate there is a copper crescent with a tight opening to discharge the hot air out of the prayer hall. The philosophy of having this soft defused illumination of transcendent light is to symbolize the light of faith.

The Prophet used to say when he was heading to the mosque:

“O Allah, make light in my heart, and light in my vision, and light in my hearing, and light on my right, and light in my nerves, and light in my flesh, and light in my blood, and light in my hair, and light in my skin.”

Recorded from Ibn 'Abbas by AL-Bukhari and Muslim.

THE MINARET

It serves a dual function. It is both a land mark and place from which the call to prayer is broadcasted. It was not until at least the 14 th or the 15 th century that the minaret became a universal feature of the mosque complex, but the symbolism is more ancient. During the time of the Prophet, the call to prayer was made from the roof of his house in Medinah. The height of the minaret, over a neighborhood has helped the sound to carry. Today, most prayers times are heralded by the sound of the call broadcasted on loudspeakers. A single minaret is the norm, but some mosques do have more than one minaret. The feature also provides a local land mark.

The minaret was derived from Syrian architecture. It is tall, slender tower attached to or built near a mosque. Each minaret has a balcony that a *muezzin* (Muslim crier) uses to call the faithful to prayer five times a day. This balcony is analogous to the belfry: the higher one gets, the greater the area over which the sound can be distributed. The meaning for minaret (manara or manar) in pre-Islamic Arabia was used to designate high places of light or fire. Minarets served also as beacons or markers to guide caravans or crusade routes. The minarets attached to Islamic fortresses along the North Africa coast (Tunisia), and Syria were used as light houses or signal towers by the Byzantines.

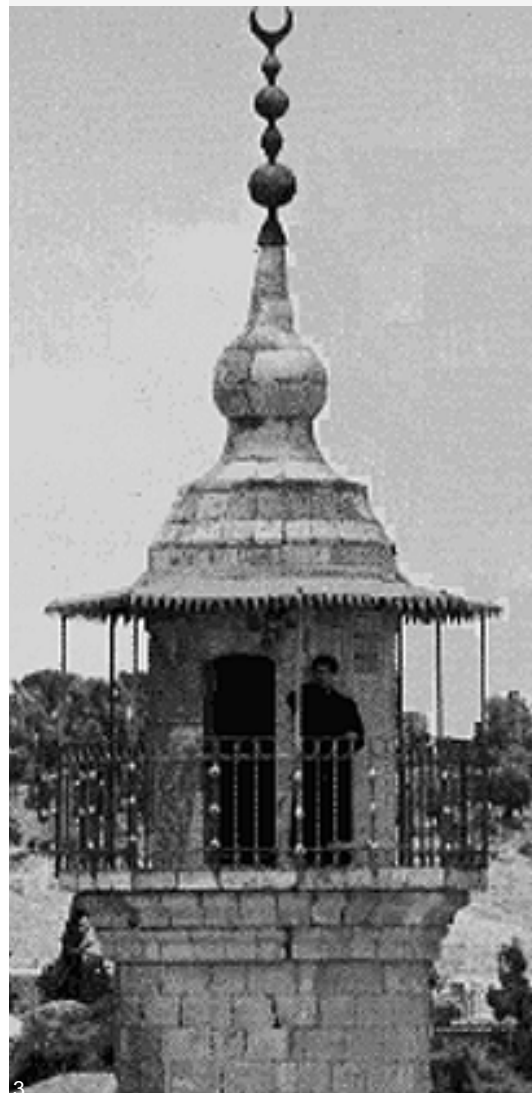
A minaret has a significance at both the spiritual and material level. Standing vertically it serves as spiritual symbol that links heaven and earth.



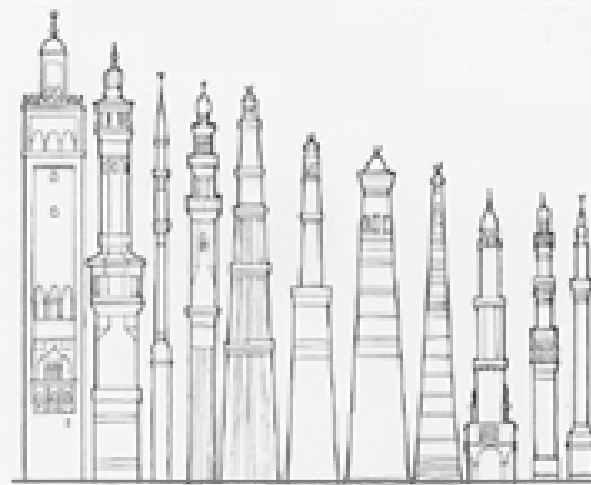
1



2



3



Different shapes of minarets in history



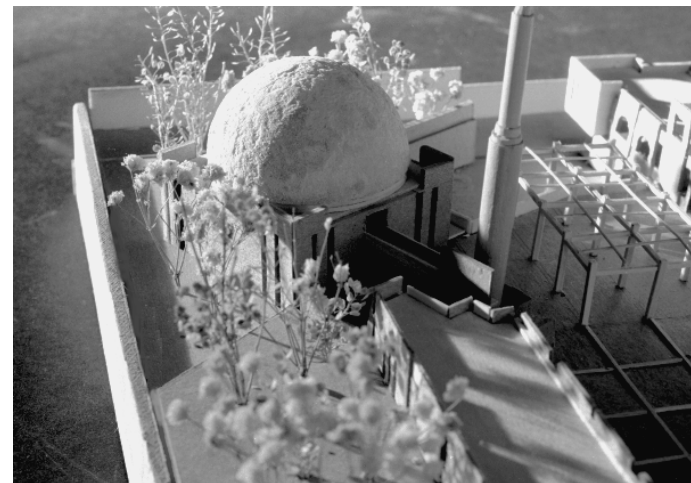
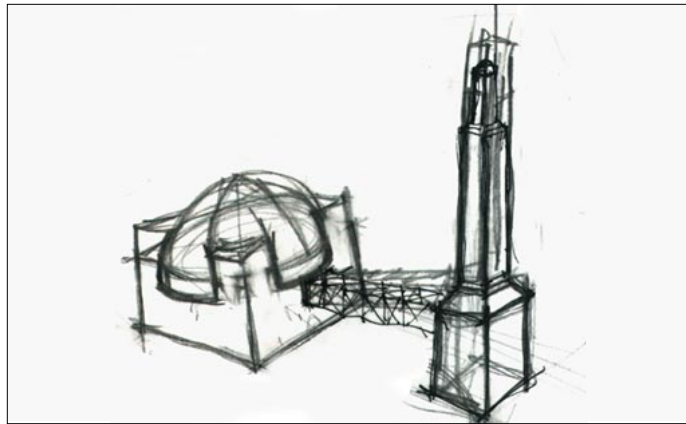
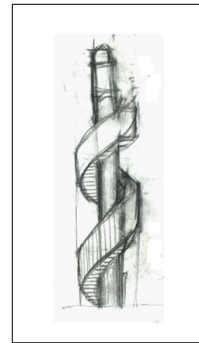
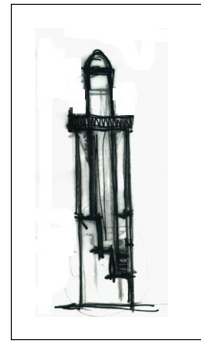
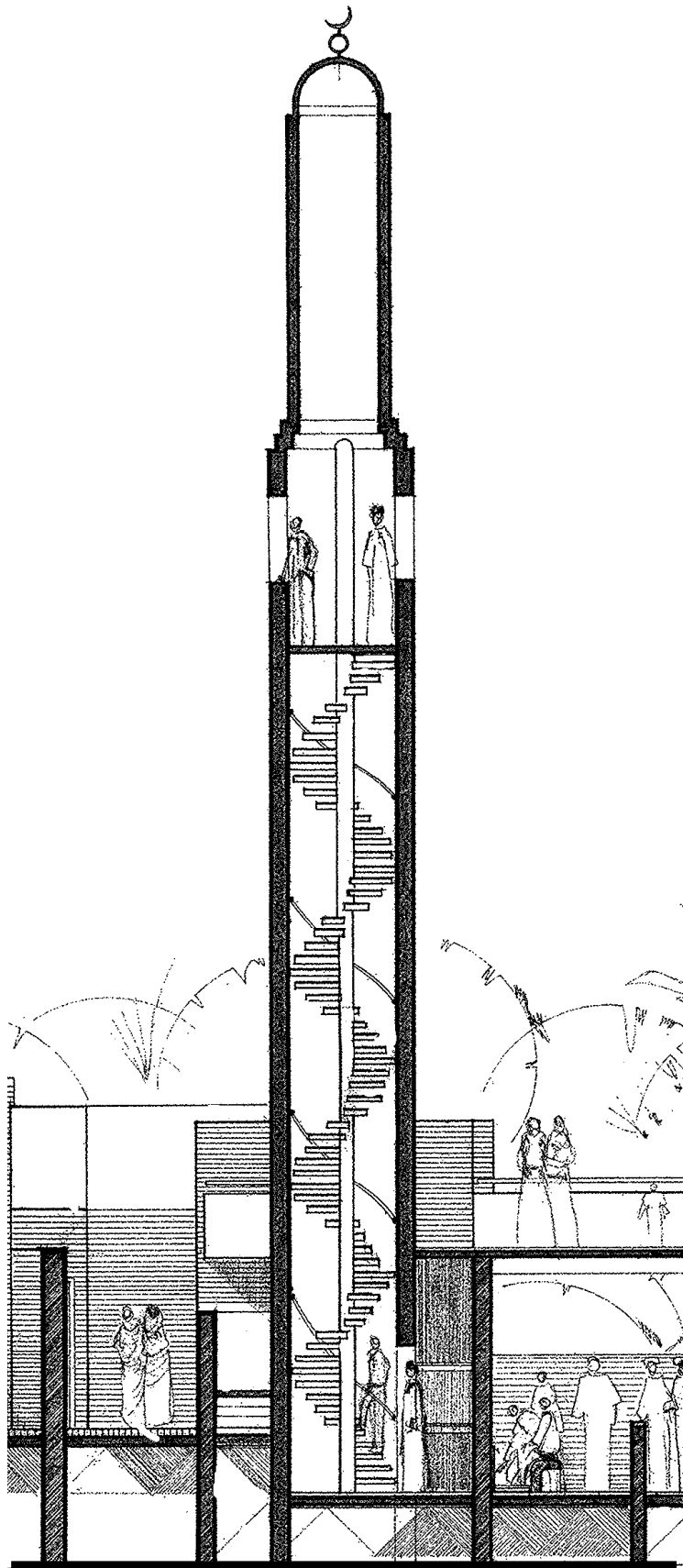
4



5

LEGEND

- 1- Al Nileen mosque at the edge of the Nile -Khartoum
- 2- Abu Genzeer mosque in the center of Khartoum
- 3- example of a minaret balcony- Syria
- 4- Medicine college, University of Khartoum, Mosque
- 5- Al Qubanji mosque- Iraq

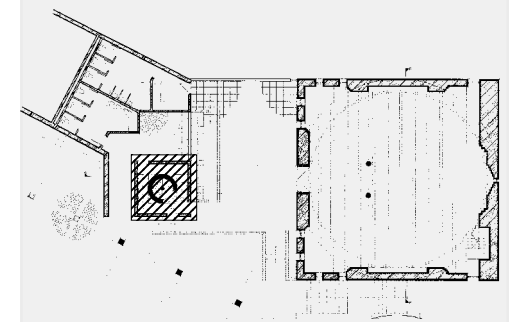


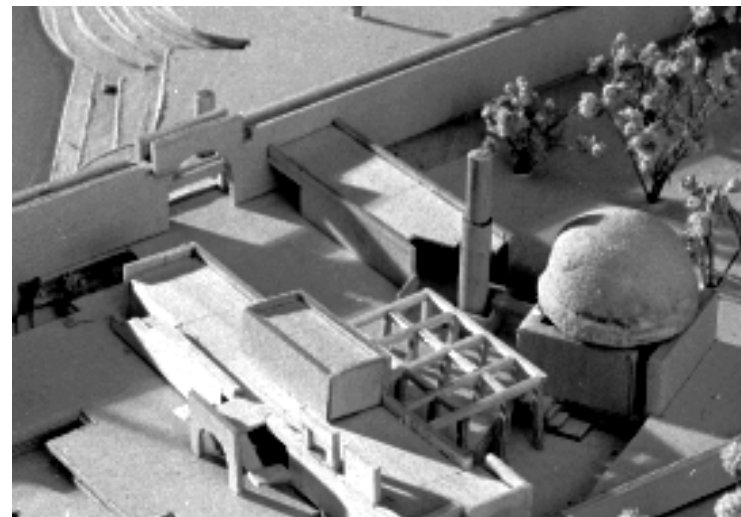
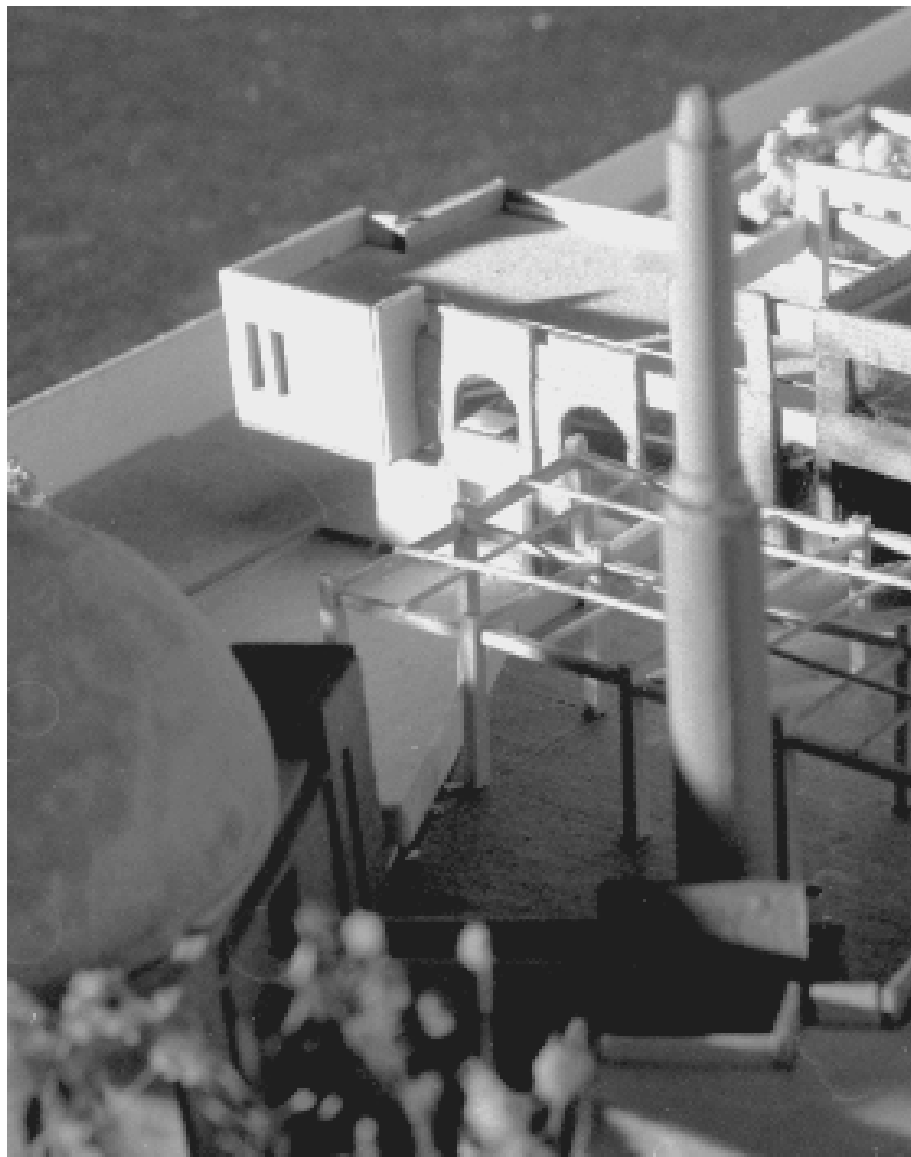
The appearance of a single *minaret* resembles the number “1” which symbolize the unity and oneness.

At the material level, or horizontal level, it serves as a boundary to outlines spaces. It varies in size, shape and made from brick or stone. Most minarets have ample interior space to accommodate a spiral staircase, but also minarets with inner spiral staircases have limited space. Although in some minarets the external spiral staircase is an outstanding exterior feature.

The original 7th century low square minarets were built in Damascus, Syria. As the towers got higher, Islamic architecture created a stepped-tier design. Minarets continue to evolve to an octagonal and circular shapes. In some cases it is tall cylindrical tower topped with a dome.

The minaret of the mosque maintains the concept of slenderness and height. The *muezzin* balcony which is represented by the higher level in the minaret, gives a wide range of vision of the Island and Khartoum city. The minaret has two staircases, an internal spiral staircase and an external staircase, which leads to the mezzanine which is the women’s level. They run in different directions and have different shape.





The external stair is surrounded by a 30 cm thick brick wall, that encloses the space, and act as a base for the minaret. The concept is to gather the circulation area in one space, and maintain the concept of separation between males and females .

The spiral staircase is constructed of steel and supported by 20 cm steel column in the center. This column has a dual function, a structural element and a illuminating tower, where it accommodates a lighting source at the top end of the column

The minaret is 25 m high and it is constructed of 30 cm thick concrete walls, cylindrical in shape and of 3.5 m in diameter. It tapers as it gets higher, at the first 18 m it reduces its diameter to 2 m. It is covered by a concrete dome with a steel crescent, that act as a passage for the hot air that gathers inside the tower.