

Transformation in Minarets design at Contemporary Mosque Architecture in Hazara Division, Khyber Pakhtunkhwa, Pakistan.

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Abstract

Minarets are one of the prominent features of Islamic Architecture among other elements which are in practice in the design of the mosque. It is regarded as an integral part of masjid design. It can be seen in most of the masjids on either a smaller scale or on a monumental scale with the use of innovative design, Techniques, and Materials. In the Hazara division along the historical silk route (Karakoram Highway), the minaret has experienced a visible change in the design, use of material and visual styles. In this paper, prominent minarets having special characteristics like their geometry, detailing, height, materials, aesthetics, workmanship, built in different time periods are selected and analyzed in terms of their general architectural features. Throughout the selected cases are compared to each other and the modifications of forms and functions are studied. Its uniqueness is highlighted with the idea to explore causes for the rapid transformation in the design and outlook of the minarets.

This study claims that a visible transformation has occurred in the design, techniques, and use of modern materials. And this innovation in the design of minarets is basically in the usage of modern materials and techniques with a formal exploration of mosque design.

Keywords: *Mosque architecture, Minaret design, Transformation, modern materials.*

Introduction to the origin of Minaret

The distinct feature in the mosque architecture includes the Minaret, which is used to pronounce Adhan (Azaan) to summon the believers for prayer. However, it became a central component in the design of a mosque due to its functional and symbolic character. The Minaret is one of the most distinctive features of mosque architecture. As cited by Richard J. H. Gottheil¹ the word (Manara) has been used in old Arabic poetry for an object that gives light. Then it was used for the tower of the mosque due to the light held by the muezzin when he calls for the prayers at night time. The most significant view on the designation of the minaret is *mi'dhanah* or *midhanah*; a place used to

call for prayer. Few historical minarets are given in (Fig #1) during different eras and empires which represent Islamic architecture design vocabulary transformation.

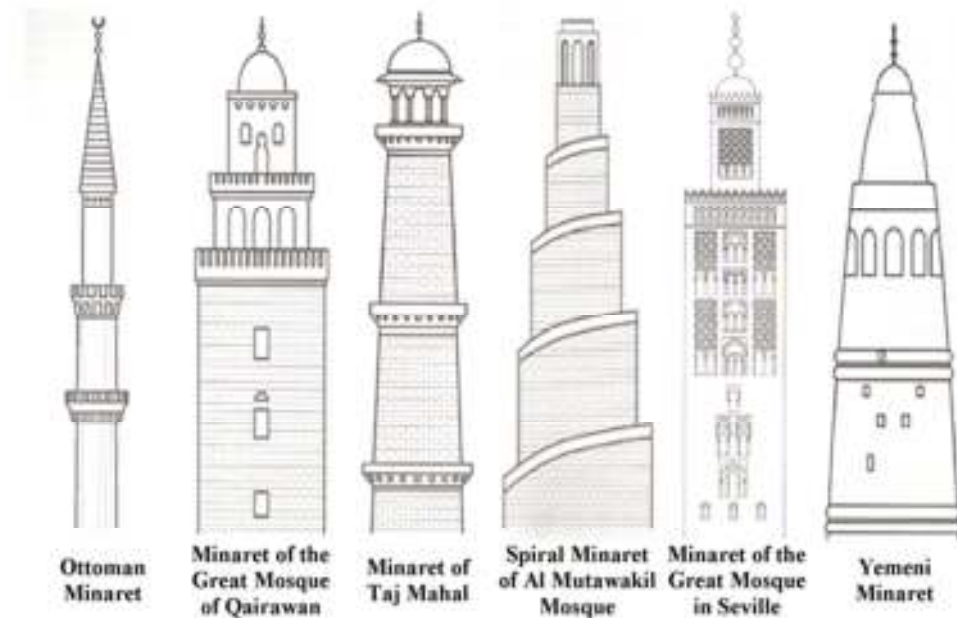


Fig # 1 Minarets- History, Vocabulary and Regional Transformation

The early mosque of Islam i.e. Ka'ba and Madinah were very simple and functional in design {Ali, #44}. These mosques have no tower or minaret at all. It was a court with porticos around it. The whole place was surrounded by a wall to maintain its privacy. Even the prayers were offered without any preliminary adhan when the Muslims came to Madinah. It was later commanded by the Prophet Muhammad (SAW) to Hazrat Bilal (R.A) ² to stand up and summon the Muslims for prayer. This process was then followed in the time of every prayer till date.

There was no place specified to pronounce Adhan in the early history of Mosque architecture. The variety of places used for Adh'an include the high place in a mosque, from the top of Ka'ba, from the top of the high house in the neighborhood of the mosque, on the wall of every city, on the back of horses or camels while riding ³. No specific side of the mosque was specified for the offering of Adh'an during that time period.

Johnson has stated that the first of known minarets seemed after eighty long years after the Prophet (PBUH) death. But some historians are of the opinion that the first examples appeared to be the re-utilization of the watchtowers of the Roman temenos ⁴.

The origin of the minaret is not very specific to any period and apparent at first sight. It can't be traced to have any connection with the race

or other religion. As cited by Richard citing the Franz Pascha book 'Baukunst des Islam' ⁵ that in Christianity, the bells led to the idea of Towers, while in Islam, the call to prayer by human voice is the basis for the creation of the Minaret. The use of the towers as a place for pronouncing the Adh'an is suggested to be coming from the Great Mosque of Damascus which was conquered by Al Walid.

Minaret as a Traditional Element of Mosque

The shape and size of the minarets were based and being modified in the region and period wisely. Minarets were having conical, squares, cylindrical or polygonal shapes in various periods. But as cited by Creswell⁶, in the post-Fatimid period, minaret took the form having three distinct sections with a Square base followed by an octagonal middle portion and a dome in the top section. Each of these parts decorated by the muqarnas at the junction point. (Fig # 2) show different shapes and styles of the Minarets of different periods mentioned in the sketch image.

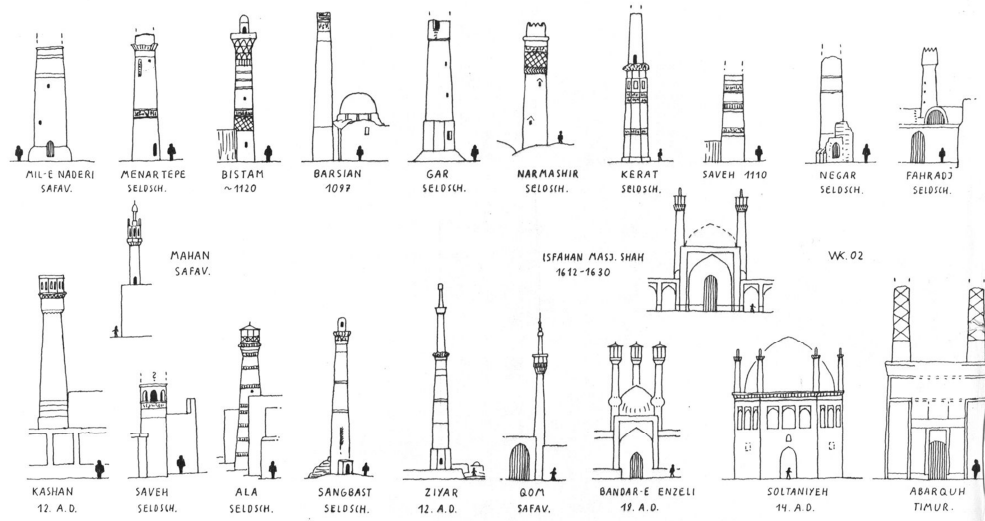


Fig #2 Minarets of different region and time period

Metaphorically Minaret is being expressed in several ways throughout history. Some scholars are of the view that it is a reminder of heaven and used as a link between the earth and sky⁷. While those attached to Arabic liturgy describes the minaret as a gate from the heaven and earth as cited by Johnson⁸.

Design of Minaret

As inspired by the Syrian church towers the *square tower* form of Minaret is replicated in North Africa and Spain The minaret of the mosque of qayrwan (Fig # 3), built-in 836 is the earliest in North Africa. The minaret

Cylindrical in form was created in Iran. The minaret of cylindrical form is of the congregational mosque at Siraf built around the 9th Century, is the oldest known example⁹. The tall pointed minarets with the addition of balconies are the characteristics of the Ottoman mosque architecture. The first example of it is the Uc Serefeli mosque (Fig # 4) built-in 1447 in Edirne. Outside Mecca and Medinah, minarets were not very common before the 19th Century. Some of the surviving examples are having used a square or circular plan¹⁰. But we may extract that the style and design are dependent on the period and region. Basics of the design of minaret include three features i.e. base, shaft, and gallery. The shaft was used to house the stairs circle upwards clockwise in direction with the function of the vertical movement and structural support to the shaft. While the gallery/ galleries were incorporated encircling the shaft from outside. While the top of the minaret was generally covered by a roof decorated with brick or tile work, cornices, arches, or inscriptions. The meeting of shafts and balconies are celebrated by the use of a distinct style of muqarnas. Minaret architecture under the Seljuk Empire (Fig # 5) is a good example to represent the Islamic Architecture development during that period.



*Fig # 5 Minaret
under Seljuk Patronage
1038-1327*



*Fig # 4 Uc
Serefeli Mosque -
Minaret built-in 1447*



*Fig # 3 Minaret of
qayrwan
built 836*

Development in Minarets Architecture

Some examples of historical minarets during different periods show the development of Mosque - Minarets architecture i.e. use of different design, materials and techniques. The use of shapes i.e. cylindrical, square, conic, octagonal in the design of minarets with detailing of muqarnas, tiles, arabesque, calligraphy, arches, geometric patterns etc. (Fig # 6)



Fig # 6: Historical Minarets Architecture during the different periods

Contemporary Minarets

Today we are in contemporary world and with the development of different time periods the minarets design were modified and developed through using of new advanced technology, materials and techniques and designed on the basis of historical development of minarets through different ages of developing minarets architecture throughout the world. (Fig # 7)



Fig # 7: Contemporary Minarets of Various Regions

Regional development in minarets design

Regionally the transformation of the minarets is developing according

to the approach of the people in the design, materials, and techniques. The (Fig # 8) are the examples of the regional development of minarets in the locality. The same philosophy were utilized as in the para “Development in minarets fig # 6 but the approach in the design were not of the experts i.e. architect in the regional context only they use the pre-fabricated shapes, materials, techniques as well as the local masons.



Fig # 8: Regional Minarets in Hazara Division

Development in minarets design along the silk route at Mansehra - Abbottabad

Mansehra - Abbottabad district is located in the northern part of the Khyber Pakhtunkhwa Pakistan, which is geographically a hilly area and one of the most affected areas after the 8 October earthquake 2005. Mostly changes occurred in the architecture in this region after the earthquakes. The survey of the different minarets were conducted in the Mansehra - Abbottabad districts of different years. The case studies show the built minarets i.e. design, materials etc. See table 1.1, 1.2 and 1.3. The transformation in the design of the minarets were founded in the last few years specifically the use of steel materials in mostly masques which were founded in cities, villages, on the Silk route. The table 1.3 show the survey of the minarets i.e. made in the steel with using of fiber glass and steel pipe in different shapes throughout the region.

Survey of the selected minarets (Mansehra - Abbottabad)

Table 1.1






<p>MASJID TAFHEEN-UL-QURAN School Of Education - 2017</p>	<p>MASJID USMAN 2018</p>	<p>MASJID SIDDIQUE AKBAR 2010</p>
		
<p>Location: Kaghan Road Collage Doraha Mansehra Height of Minarets: 45 Feet (Approximate)</p>	<p>Location: Berkund Mansehra Height of Minarets: 20 Feet</p>	<p>Location: Tehsil District Mansehra UC Soum Height of Minarets: 42 Feet (Approximate)</p>
<p>MASJID UMAR KHITAAB 2009</p>	<p>MASJID YASIR BIN AHMAR 2009</p>	<p>MASJID FAROOQ-E-AZAM 2011</p>
		
<p>Cotley Pahi Village, Tehsil District Mansehra UC Echriyaa Height of Minarets: 70 Feet (Approximate)</p>	<p>Haripur (T.I.P) Height of Minarets: 70 Feet (Approximate)</p>	<p>Mansehra City Height of Minarets: 50 Feet (Approximate)</p>





Table 1.2

ILYASI MASJID 1927-32	JAMIA MASJID 1989	MASJID MAKHI 1983-85
		
Location: Abbottabad Height of Minarets: 100 Feet (Approximate)	Location: Mansehra City Height of Minarets: 80 Feet (Approximate)	Location: Dhodial Mansehra Height of Minarets: 70 Feet (Approximate)

JAMEAA MASJID 2004	JAMIA MASJID 2002	JAMIAT-UL- HASNAIN
		
Dhodial Mansehra Height of Minarets: 100 Feet (Approximate)	Gari Banna Chowk Nuwan Shehr Abbottabad Height of Minarets: 75 Feet (Approximate)	Chiti gatti Ghandian Mansehra Height of Minarets: 68 Feet (Approximate)

Survey of the selected "Steel - Pipe" minarets (Mansehra - Abbottabad Districts)



Table 1.3

SUPPLY MOSQUE	MASJID KHIZRA
	
<p>Location: Supply Abbottabad Height of Minarets: 20 Feet (Approximate)</p>	<p>Location: Mirpur Abbottabad Height of Minarets: 50 Feet (Approximate)</p>
ILAHI MASJID	MASJID ABU BAKAR
	
<p>Kaghan Colony Abbottabad Height of Minarets: 60 Feet (Approximate)</p>	<p>Location: Islamkot Mansehra Road Height of Minarets: 30 Feet (Approximate)</p>



Observations & Analysis

The detailed study of all the minarets surveyed suggest the following trends in the detailed forms.

1. **Geometry:** In traditional minarets the geometrical shapes, or proper geometry were followed in the design of minarets. But in case of the transformation of modern materials the geometry is limited to few shapes i.e. cylindrical, cube or square shapes that followed throughout the region in the modern minarets.



Minarets with Traditional Materials	Minarets with Modern Materials	Description
		<p>Only cylindrical or cube shapes are mostly followed due to the structural limitation.</p>

2. **Detailing:** The use of modern materials also affected the detailing in the design of minarets i.e. use of arabesques, use of tiles, use of motifs, and only the forms are followed with no traces or little of detailing.



Minarets with Traditional materials	Minarets with Modern Materials	Description
		<p>The detailing done in metallic minarets are limited to spiral strips used also for the structural enforcement purposes.</p>

3. **Height:** The Height of the minarets also affected due to the use of lightweight materials i.e. to bare the air/wind pressure, and also

chances of broken and falling etc.

Minarets with Traditional materials	Minarets with Modern Materials	Description
		<p>As metallic minarets are lower in weight and the area under discussion is having severe conditions such as the high speed winds, rains with thunderstorm, and earthquake, so the height of the modern minarets are deliberately kept lower.</p>

4. **Materials:** The materials is used steel or iron which give look of the Industry, Electric pole, and no more attraction in the design to catch the viewers as followed in the historical minarets i.e. attractive materials, detailing, aesthetics etc.



Minarets with Traditional materials	Minarets with Modern Materials	Description
		<p>In traditional minarets the basic building material used include bricks, RCC columns and some case the stone in foundation, while the tile (both glazed and unglazed) are used for the surface treatment.</p>

5. **Workmanship:** The use of Modern materials also overcome the skills of the traditional craftsman in the region which was a part of the culture and heritage of the region since centuries. Most of the Islamic design elements we lost and in future may be no more to see only a few examples.

6. **Aesthetics:** The overall look of the minarets is un-attractive and no visual aesthetics can see in the steel minarets as founded in the case studies of mosques minarets in the region of using the traditional and regional materials with details of using Islamic elements of architecture.

Minarets with Traditional materials	Minarets with Modern Materials	Description
		<p>The use of colors, arabesque, tile work, niches, monumentality, solidness and variety of geometric shapes and forms are replaced by monochromatic cylindrical shapes adorned with structural enforcement strips and green cloth and in some cases fiber glass.</p>

7. **Free standing nature:** The nature of the minaret as a free-standing element is being diminishing and the more mounting on other building or structure is enhanced. The looks and charm of it as an independent element is overlooked by the mounting mechanism in contemporary practices.

Minarets with Traditional materials	Minarets with Modern Materials	Description
		<p>As the minarets are manufactured in the factory or stainless steel workshop and then transported to the site, the installation is easy in nature. It is installed on the top of the main hall or other building top floors. It's not designed in the contextual frame of reference, only the basic shapes are replicated with only structural conformity.</p>

Transformation in the Design

The word transformation can be defined as coming into a form different than the original one or occupying a new position. Conceptually, the

word also encompasses the literal meaning of the word change which refers to the process of becoming something different from the original one. On the other hand, the word transformation describes the process between the two phases of the word “change”¹¹.

Contemporary globalization trends have transformed the economy, politics and technology from a narrower regional parameters to broader universal perspective. These are the factors which have a direct role in the transformation of the architecture. However, the term may not be confused with the transformation design, which is “a human-centered, interdisciplinary process that seeks to create desirable and sustainable changes in behavior and form - of individuals, systems and organizations - often for socially progressive ends”¹². Architecture, just like other aspects of human culture and life, also goes through the process of evolution in terms of the configuration of spaces, formal arrangement and organization, and most importantly the types and numbers of metaphors incorporated and how these are interpreted by the users and viewers. This process of evolution when brings perceivable changes in the afore-mentioned parameters of architecture may be referred to as transformation of architecture which is dependent on a number of tangible and intangible factors.

In case of minaret design the basic building material is the only factor that is principally responsible for the other changes pointed out in the above discussion.

There are various reasons responsible for this process of transformation i.e. Earthquake, Weather Condition, Economy factors, Time Factor, local industry influences, local available and easy materials, etc. After the detailed investigation of the above surveyed mosques, we can conclude that use of modern material such as stainless steel is the major factor for transformation in minaret. Small industrial estates present in the area has played a pivotal role in the adoption and propagation of steel as a basic material for the minarets. The time duration for the construction and installation of the metallic minarets is very less as compared to the traditional materials. The cost is the other outstanding factor in taking decision in favor of the steel minarets. But it should be bear in mind that the life span of these metallic installation is far less than the traditional minarets.

Conclusions

A distinctive element of mosque architecture, the minaret in the Hazara division (Abbottabad - Mansehra) of Khyber Pakhtunkhwa is undergoing a clear transformation and one of the most apprehensible causes of the architectural transformation is introduction of new materials and developments in the available construction technology. This transformation is in the form, function and in materials. The regional architectural detailing is limiting and replaced by the current trends. The minarets are becoming more standardized in terms of materials, its form and predominantly dictated by

the industry, workmanship and flexibility of the materials without any contextual traces. Though innovations in construction materials is a perpetual and non-stop phenomenon. But here the historical evolutionary development of the minaret's form is overlooked and not assimilated in these modern day designs and hence an important element of Islamic architecture i.e. minaret is losing its essence. Through this research, there is presented an evidence for the architects to not only adopt the symbolic nature of the minaret but also needed to reconcile it with the traditional forms, materials, detailed design in contemporary mosque architecture to restore and safeguard one of the important element of Islamic Architecture which is at high risk.



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