

An analytic study on architectural decorations in early Islamic architecture

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Abstract

Islamic architecture dating back to about 1400 years ago, has been affected by territories under the Islam dominance from the view point of the form as well as architectural decorations. That is why some critics has considered the form similarities as a weak point in the Islamic architecture, while others are denying any derivation in Islamic architecture and believe that its principles have been extracted from the Islam religion. In this regard, Iran as a country having a civilization which both affected and was affected on/by the adjacent civilizations may be assumed as the basis for the Islamic architecture formation at the very beginning centuries and may overcome the related ambiguities. The present article attempts to consider the effects of the pre-Islamic patterns on Islamic architectural decorations during the first to fourth centuries (Hijri). Therefore, we firstly provide definitions and concepts as requirements of such study in the field of religious art and architecture in history and culture arenas. The related literature was also surveyed. A multi-section method was applied to classify Islamic art and architecture characteristics. Then, in contextual consideration of the religious thought among Iranian population at the era of the Islam penetration and after the Islam's dominance in the country, there appears an assumption about the way of this transition toward the new era, depending on the observed parallelism and mental evolution. In particular, the present article studies the typical decorations works of the time in a descriptive method as the primary period of the Islamic architecture formation. Regarding the results and findings as well as

comparing the pre-Islamic Iranian patterns, in one hand, and the typical motifs of the early Islam era, on the other hand, we may achieve an insight to development procedures. Analysis of the two sections provides us with the process of studying the religious buildings evolution procedures as the era's typical architectural works. The research assumption is formed based on the severance of the elements such as inscription, forms and decorative images. This assumption is based on architectural and form evolution in pre-Islamic architecture in transition era and proportionate to monotheistic thought evolution in Islam and its inseparable integration with the Iranian culture. The findings of the research confirm this reality.

Keywords: Pattern, Islamic Architecture, Pre-Islamic Architecture, Motif

Introduction

Evolution of Iranian Islamic Architecture

Iran is one of the oldest countries of the world. History of Iran used to be considered from the VI c.B.C. when the tribes dwelling at the territory of Iran were united by the King Cyrus II into the kingdom of Achaemenids. Still, there existed earlier states-Elam (4th-3rd millennia B.C), Media (IX-VI cent B.C). Iranians themselves do not use title "Persia". It is inherited from ancient Greeks who used in relation to the whole empire the title of a single province Fars (Pars State of Achaemenids stretched from the banks of Nile to Indus and was overthrown in IV cent. B.C by Alexander of Mace-

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donia. In the middle of the III cent. B.C. there emerged a new state-Parthia, which successfully dared the Roman Empire. In III cent. A.D. kingdom of Sassanid which was conquered by Arabs in VII cent. And included into Arab Caliphate.

In XI, XIII, XIV cent. The country suffered from invasions of Turks, armies of Tchinghis-Khan and Timur. New renaissance was already taken place during the rule of dynasty of Sefevids (XV-XVIII cent). The new history of Iran starts in the époque of late middle Ages. Dynasties of Sefevids, Afsharians (XVIII-XVIII cent). Zends (XVIII cent.) and Qajars (XVIII-XX cent.) strengthened the country and protected the growth of art. History of Iran including Iranian architecture is traditionally divided into two principal periods:

Pre-Islamic (before VII cent.) and Islamic. Indeed, Islamization of Iranian society by Arabs in VII VIII century led to fundamental changes in the area of cultural, social and political structure. However, despite introduction of Islam, older spiritual values did not disappear. They caused a lot of influence on new growing culture that some authors named Iranian Islam. Many pre-Islamic traditions and rituals are still kept in modern Iran. For fourteen centuries after Arabic conquest, different rulers tried to revive ancient traditions. During the ancient time, such efforts were undertaken in the reign of Pahlavi dynasty. Modern and traditional trends were mixed in the culture of the countries of Asia. Without having historical knowledge, it is impossible to build a worthy modern society (HamdouniAlami, 2001) thorough Characteristic of Periods and Styles. Here, we consider the specific features of the styles of Iranian architecture including Media and Persia. History of Iranian state was traditionally researched since the founder of Achaemenids' dynasty (550-330 B.C.) Cyrus II who established the two largest Indo-Iranian tribal unions, Medes and Persians. Yet earlier, before the emergence of the Persian state, Medes reached a high level of political organization and conquered in 612 B.C. Nineveh-the capital of ancient Assyria. (Janet, 1987).

Cambyes II and his followers continued the extension of the Persian state. In this period, its borders included Minor Asia, Egypt and the valley of Ind. The most important historical and archeological monuments of the poque of Achaemenids are the ruins of their capital Persepolis, known as Tekhte-Jamshid in Iran, tomb of Cyrus II in Pasargadae and the inscription of Darius I on mount Behistun.

Achaemenids widely used the skills of the conquered people and therefore were influenced by

high cultures of Mesopotamia, Egypt and India, which was one of the first multi-national states. Almost no literature remained from the poque of Achaemenids because Alexander of Macedon ordered to translate all Persian sources to Greek and Coptic and to destroy the originals. (Thames& Hudson, 1978).

One of the principal morphing factors in the architecture of any country is the historical tradition. To establish a correct image of Iranian culture, we should know the principal stages of evolution of architecture. This country is a direct descendant of rich cultural traditions of ancient Persia boundaries of which extended from Mediterranean to Indian Ocean. Scales of this state impressed the imagination, which included most of modern states whose title ends with-stan, states of modern Caucasus and many others. In order to study the architecture of a country, getting knowledge of periods of its historical development is important.

Although this aspect has already been studied by both Iranian and foreign historians, there is no whole system for studying the scientific and methodical factors of evolution of culture and architecture of Iran. Therefore, in this article, the development of Iranian architecture is directly connected with emergence and evolution of Iran as a state. However, studying the documents and evidences concerning the evolution of Iranian Islamic Architecture could be summarized in the following key notes: Despite the large quantity of publications concerning culture and architecture of Islamic countries and particularly Iran, no whole picture of evolution of cultural traditions has been created yet. Architecture of Iran is ancient and It has passed a long path and was influenced by many cultures from Indian to Egyptian. Architectural traditions of many people created the unique styles of arts and architecture. For many centuries, architecture of Iran developed as part of culture of various empires that included Iran indifferent times, also in the flow of transnational culture of Islam. Cities were the centers of medieval culture of Iran. Cities were planned concerning many factors including orientation along the axes north-south and east-west. Most of the cities had one of the two types of the street net including rectangular or radial. Since the age of Arab Caliphate, the cities were divided into districts, settled according inhabitants' professions. Centers of cities and districts were the bazaars often with mosque and other sacral and civil buildings, many of them have survived, preserving the traditions of Iranian architecture.

Form and Content in architectural patterns

Generally, form in visual art consists of two or three dimensional shapes which can be solid or empty. Form is called Sourat as well (Pakbaz, 2000). Additionally, form entails the expression of artists and it can contain the structural quality of artifact. In most branches of visual art, form is one or three- dimensional shape such as sphere, cube, and cone. Accepting this assumption, form is equal to Sourat, which is different with shape, accordingly.

Further, formalistic view in studying artifact like architecture does not have a long history. According to the definition of critics, the value of artifact depends on their appearance and in architecture, it could be limited to visual points. Therefore, the reason of creating the artifact, history, the lifestyle of its creators and the social, cultural and political conditions are not the priorities of formalist's critics. This definition is similar to Plato.

Regarding eidos, Plato concluded that eidos consists of representation and imitation. He believed that object has no similar object. This interpretation is applied even in current critics. Some of his followers referring to his theory, presume that form consists of combination of elements which represented the object wrongly and in fact these elements stand between the conceptional process of perceiving the object and the object itself. On the other hand, skeptics believe that the visual elements should be understandable and represent the shape of subject. The third group assumes that, in confrontation with artifacts, it should present ontological and comprehensive science and knowledge. These critics are more structuralist and concentrate on the quality relationship of the creation of artifact with object. In some cases that formalists give the preference to visual elements, structuralists make the connection between content and object on purpose.

The characteristics of Islamic architecture fall in specific groups. Due to the comparison of form and content, in pre-Islamic and Islamic architecture and recognition of roots and source of inspiration, there are varied points of views but the quality of mutual relationship between these two periods proves that Islamic architecture applied the common and reasonable solutions in the world of architecture. Therefore, with the formation of Islamic architecture and collection of Islamic regulations,

Muslims artist spent more efforts to replace their previous attitude with newly shaped approach, that states that the materialistic world is mortal. As a result, inspiration of other civilization is not a proper paradigm for evaluation.

Architectural Decoration in early Islamic architecture

Recognition of decorations in Islamic architecture should not be restricted to painting sculpture and architecture. Islamic art is dealing with all aspects of Muslims' life. Nowadays, in order to recognize Islamic architecture, calligraphy, painting, binding, metal works, pottery, jewelry, molding and ceramics should be noticed vastly. In Islamic art, all different types has been produced based on people's needs and it has kept its own characteristics intact in a way that can be distinguished with non-Islamic art. But, it should be considered that Islamic art can be studied according to a regulated trend as other types of artistic fields.

Regardless of form, material or scale, this concept of art rests on a basic foundation of calligraphy, geometry and, in architecture, the repetition and multiplication of elements based on the arch. "Allied and parallel to these are floral and figural motifs", Jones writes. "Water and light are also of paramount Importance to Islamic architectural decoration as they generate additional layers of patterns and just as happens with surface decoration, they transform space." Space is defined by surface and since surface is articulated by decoration, hence there is an intimate connection in Islamic architecture between space and decoration. It is the variety and richness of the decoration with its endless permutations, that characterizes the buildings rather than their structural elements, which are often disguised. Many devices typical of Islamic architectural decoration, for example "Muqarnas" [a honeycomb decoration that can reflect and refract light], are explained by a desire to dissolve the barriers between those elements of the buildings that are structural (load bearing) and those that are ornamental (non-load bearing).

In recognition of roots in Islamic architecture, researchers consider one of the above-mentioned approaches. As an example, unlike Burkhart, who just considers content and deliberately ignores some examples which contradict with his principles, Hillenbrand has a structural view and considers the formal similarities. Decoration is one

of those characteristics joining the Islamic art in the entire of Islamic lands. In spite of common attitude among researchers, decorations and motifs are not exclusively decorative as they have educational purposes (Nagizadeh, 2005). As a result, in entire of the mosque, in inscription with Koranic verses has been repeated. More importantly, decoration in Islamic art is not equal with another one and each can be distinguished with materials, construction techniques and method. In Aesthetic point of view, decoration joins the different spaces in sequence. Apart from this, also Islamic decoration might seem two-dimensional but the combination and mixture of text and patterns with material, light, glaze attribute three dimensional characteristic. It may occur that some believe that light and water are decorative but from this fact, they are meaningful, they tenderize the atmosphere and create dimension.

Due to lack of reliable sources and documents, an analytic study on decoration and how they have been transmitted to Islamic period from pre-Islamic period is problematic. The visual symbol (two or three dimensional) plays an important role to submit information but a very comprehensive dimension which can introduce and categorize decorations in early Islamic architecture yet to be completed. Artist has applied geometric patterns wisely from different cultures such as Persia, Central Asia Byzantine, Rome and Greece. These roots with arabesque which is based on plants forms are different, but in some cases geometric patterns combined with plants pattern and create a unique motif. Some plant forms are eccentric and none imitative and geometric patterns became more completed and sophisticated. In this part, regarding shape, content, and complexity, patterns have been categorized in early Islamic architecture.

Geometric patterns

Square and rectangular are vital shapes in Islamic architecture. Perhaps this is the main reason of applying rectangular and square shaped in buildings' elevation. Brick works in the form of simulated palaces of early Islamic architecture create three dimensional senses with strong chiaroscuro in the middle of desert. Of course, it can be seen in Sassanid architecture as well. Some of Sassanid patterns and even Achaemenid ones have been taken from other civilizations. For example, menader pat-

tern which is made of a repetitive and continuous line has Greek roots.

On the other hand, it is stated that this pattern resembles a tortuous river in Central Asia. But, in total, apart from being inspired by nature, comes from Greek labyrinth (Kerenyi, 1976, p 89). The afore-mentioned pattern can be observed numerously in Islamic art such as Chalipa, Gereftva-Gir. These patterns have no change in their meanings and connotations and are applied in specific places of building noticeably (Fig 1, 2, 3).



Figure 1. Part of frieze, Ctesiphon, Metropolitan Museum (Pope, 2008)



Figure 2. Part of frieze, Ctesiphon, Metropolitan Museum (Pope, 2008)



Figure 3. Mosaic in Khirbat al-Mafjar URL (1)

Another issue worth mentioning is the application of mosaics in early Islamic architecture. The root dates back to applying mosaics as a decorative element in church and public building in Rome and Byzantine. According to historical sources, many of mosaic works had been done by Byzantium artists. Generally, two different kinds of mosaics

are differentiable. Firstly, floor mosaics which were made of colored pieces of stone and marble and they have mainly been used as pattern and model such as khirabat al mafjar and *Jawsaq al-Khaqani*. The second group is mural mosaics, which is made by small pieces of marble or glass having illustrative scenes. Examples can be found in excavation of early Islamic architecture in Syria and Palestine. Further, some of the Byzantium buildings change to Islamic ones.

Floral patterns

The combination and repetition of geometric and floral patterns on face of the building is a continuous tradition from ancient time. The abundance usage of patterns in early times proves the frequency of its usage in all civilizations. These patterns represents God and immense nature while based on available documents in pre-Islamic architecture, the patterns are not able to relate spaces (Fig 4, 5, 6).

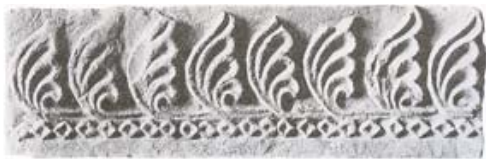


Figure 4. Part of frieze, Metropolitan Museum (Pope, 2008)



Figure 5. Part of frieze, Metropolitan Museum (Pope, 2008)



Figure 6. Khirabat Al mafjar (Hamilton, XV, p1.VI)

Flower patterns have used imaginative and abstractive in Islamic architecture of course ex-

cept Iran and Syria (Hoag, 2005). Artists specially used the date leaf and applied it as profile or front in the margins of inscriptions or grooves. This tradition existed in pre-Islamic architecture but it was used separately like a frame around the reliefs.

Anecdotic patterns

Mosaics works on the floors have no human, animal or floral patterns. It is worth mentioning that patterns in some churches having the same characteristics were destroyed. This theory has some exceptions because these patters exist in some buildings such as Qasr Al-Hayr in Syria or Khirabat al mafjar . Some scholars believe that this taboo stems from not insulting human patterns by taking step on them.



Figure 7. Janevarsazi in Takht-e-Jamshid (Bakhtiar, 2007)



Figure 8. Handle of silver vessel, Sassanid period. Museum of Kiev (Khazai, 2002)



Figure 9. Mosaic of Khirabat al-Mafjar URL (2)

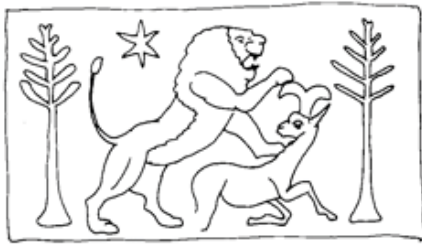


Figure 10. Cylinder seal Morgan Libraray URL (3)



Figure 11. Mosaic of Khirabat al-Mafjar URL (2)

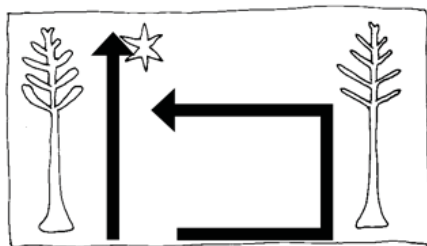


Figure 12. Analytic study of cylinder seal

Many ancient tribes worshiped trees as a God or symbol of God. Additionally, the tree (Fig. 7-12) was the symbol of universe, fertility and knowledge and immortality (Hall, 2001). But, in ancient near east tree of life and abstractive form of tree is a common motif which can be seen in diversive forms on different objects, a tree flanked with two imaginative creature, human is seen.

This tree is symbol of cosmetic tree and its values, life, three world, immortality and center of world. Apparently, this is haome tree in Zoroastrianism (Riyazi, 1996), which is a tree that people gain the elixir of immortality during the reconstruction of the world. Phoenix hanger is located on top of the tree and the evil tried to destroy this lifeful tree and create a devil(Chalpaseh) to attack the tree but ten fish which was permanently swimming around was

protecting the tree and the tree was under surveillance.

The root of this pattern is in Mesopotamia (Summer civilization) and later in Babylon, Assyrian and Elamite and especially in Luristan metalwork reached to its superb form. In Mesopotamia, tree of life is a mixture of different plants which are sacred for their benefits including cedrus tree having expensive wood, palm with date and grape or pomegranate.

On top of the holly tree as a symbol of fertility, there are different patterns. Regarding the importance of animals such as ibex or cow, it assumes that the combination of tree of life and animals are symbol of fortune and luck in fertility. In arabesque patterns, which are the sign of Islamic art and architecture, floral (plants) animals are prominent. Paisley is similar to plants leaves and continuous and complex patterns which join the decoration in architecture, depicts twisted plants. Animals such as ibex can be seen in carpets, rugs and architectural decorations.

Adoptation and elimination

Although some Islamic patterns have been used in early Islamic architecture, they have rarely been applied in next periods. For example, rosette has a long history in ancient near east and different with red flower in roman catacomb. Rosette was the symbol of sun in Mesopotamia and red flower represents heaven (Fig 13-15).



Figure 13. The application of rose in architecture, Achaemenid dynasty



Figure 14. Ctesiphon molding, Metropolitan museum. (pope, 2008)



Figure 15. Mosaic work in Khirabat Al mafjar URL (4-32)

After the establishment of Islam in early centuries, many fragments of stuccos have been discovered which proved the comprehensive understanding of usage of patterns and the quality application on huge scale in buildings. These patterns are divided into two groups and each group has a specific meaning. For instance, the application of circle and square and the arrangement of hem can represent the main four elements in square and immobility and calmness in circle. Patterns make the atmosphere more dynamic. The second groups are surrounded in a space and have fluid nature. Similarities among these patterns are considerable and the source is unclear (Fig 16-21).



Figure 16. Flower pattern, Berlin museum (pope, 2008, v 7)



Figure 17. Bishapour, Moldings (Grishman, 1999)



Figure 18. Molding in Samara mosque



Figure 19. Molding in Samara mosque



Figure 20. Molding in Khaza-Samara mosque (E. Herzfeld, fig. 305)



Figure 21. Paisle (Khaza-Samara mosque) (E. Herzfeld, 2002, page 163)

One of the exclusive characteristics is the mosaic works and molding of Samara palace. Of course, the oldest mosaic works dates back to Sassanid and Byzantium art (Fig 22-24).



Figure 22. Sassanid Crown (Prada, 2003, page 291)

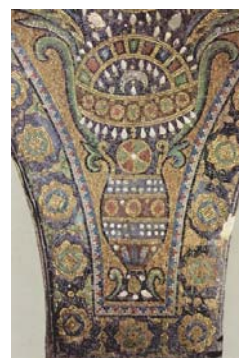


Figure 23. Part of mosaics, Dome of the rock URL (2)



Figure 24. Sassanid Vessel -URL (4)

In next step, it can refer to mosaic works of Umayyad mosque which depicts gardens, housed with rivers but there is no trace of human or animals. The best example of mosaic works in form and evolution of form can be seen in Samara palace. It is necessary to mention that mosaic works were not common after 10th century and only were used for two centuries in mihrab at Egyptian mosques.

Complex patterns

In complex patterns which are the last step of patterns evolution in early Islamic architecture, geometry with math plays an important role. Interlocked patterns are centric or liner. The sophisticated patterns in decoration are the continuation and twist of curved lines around a central stalk. These patterns are used massively in book binding and painting (Fig. 25-27).



Figure 25. Decoration of Ctesiphon palace, Metropolitan Museum (Pope, 2007, p172)

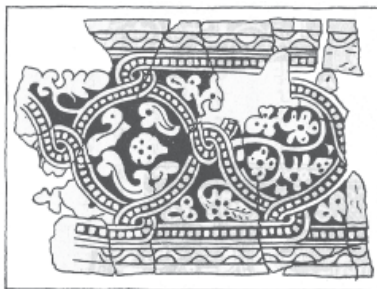


Figure 26. Ctesiphon, Part of molded piece in early Islamic era. (Reuther, fig. 19)



Figure 27. Part of molded piece in early Islamic era Rice, (1934, p. 51, fig. 3)

Conclusions

Decoration is a major unifying factor in Islamic and Iranian architecture and design. After 13 centuries, writes "Dalu Jones" in a very interest-

ing and informative essay entitled "Surface, Pattern and Light" (in *Architecture of the Islamic World*, edited by George Michell), decoration has linked buildings and objects from all over the Islamic world from Spain to China. Notes Jones contends that Islamic art is an art not so much of form as of decorative themes that occur both in architecture and in the applied arts, independent of material, scale and technique. There is never one type of decoration for one type of building or object; on the contrary, there are decorative principles that are pan-Islamic and applicable to all types of buildings and objects at all times (whence comes the intimate relationship in Islam between all the applied arts and architecture). Though objects and art differ in quality of execution and style, the same ideas, forms and designs constantly, little furniture is traditionally used for daily life in Islam, decoration contributes to the creation of a sense of continuous space that is a hallmark of Islamic architecture. The layers of surface decoration are increasing and the complexity of visual effects is enriched by the use of carpets and cushions, which often reflects the same decorative schemes as those found on walls and ceilings. Floors and ceilings contribute to the fluidity of space by the nature of their decoration, since they are often patterned in the same manner as the walls; sometimes, in the case of floors, the decoration actually represents carpets. Islamic design may seem restricted to two dimensions but that the very character of Islamic design implies three-dimensional possibilities (Pirniea, 1988). For example, the interlacing designs, often accompanied by variations in color and texture, create the illusion of different planes.

Through the use of reflecting and shining materials and glazes, the repetition of designs, the contrasting of textures and the manipulation of planes, Islamic and Iranian decoration becomes complex and sumptuous.

Decoration in Islamic architecture is a united element. Not only Decorative elements did use in applied art, but also they are in Islamic architecture and each of them has an independent and separated material and technique. Despite Islamic architecture, decoration in Islamic architecture is not used on specific type of building or artifact. They are applicable on all artifacts and buildings.

Although there are some differences between artistic and none artistic artifacts in execution and ideas but the adherence in interior space between

objects and architecture is felt strongly. With increasing the layers in space, the visual complexity expands and the harmony of decoration in floor or roof is fully respected.

In Islamic architecture, roof and floor decorations are influential in fluidity of space. It may seem that architectural decoration in Islamic architecture are two-dimensional but due to complexity of color and texture, new layers are created, making the third dimension.

In comparison with other artistic field, the usage of material, repetition and new layers in decoration in early Islamic architecture and the following centuries, they have become more complex and sumptuous. Water and light, despite pre-Islamic architecture, are known as the principles of architectural decoration and they add new layers to the floor. This can be the turning point in decoration and relationship between decoration and space. In fact, the diversity and elaborate patterns has caused the building to become different from a simple structure.

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