

Mogharnas decorations and knots geometry analysis in Islamic architecture-Case Study: Islamic era mosques

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ABSTRACT

Geometric patterns of Islamic architecture in the world, is one of the most controversial issues. So that in this article has been many discussions on this topic in the mystical concepts and Quranic Islam in Iranian mosque decorations and geometry. This article reviews and seeks different ways and appropriate words to prove that claim to have Islamic geometric concepts different meanings latent deals. This study is based on a library research method then used field-based surveys, it has been chosen to study a number of mosques, Then with library research and collect data to gather multiple photos and finally analyzed ingnalytical-discriptive method. The study is based on the assumption that decorations of this eras used the concepts and mystical meanings. There are also two types of Chinese knot ornaments and Mogharnas that specifically investigated in which Mogharnas in different periods of art used different doctrine that has been led to deform in it.

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Introduction Background

One of protests geometric beauty and fitness is to analyze and decode Geometric mysteries(passwords) . Geometric designs Check that the language has abstract decorative aspects in which in many works of art could be seen. In Geometric forms The numbers changed to unity that two kinds of geometric node decorations and geometry of the hanging Mogharnas have mystical concepts and something special meanings. Mogharnas in 4 different forms throughout history has created. (Lorzadeh, 1360) that each form has its own concepts. and It is the wisdom in each period.

Statement of the problem

Islamic geometric motifs is one of the most controversial topics in the world of art and architecture. Geometric of Persian architecture particularly in religious buildings in the minds of Iranians linked to mystical concepts, but these concepts are unknown to many Western scholars and theorists and that is not acceptable. This paper seeks to query seeking the mystical and Qur'anic concepts in the geometry of the part and the whole Iranian mosques.

The art Mogharnas appears to 4 different forms indifferent periods that in some This period has seen little resemblance to the previous period. In this article, it is to know the wisdom in each of these courses that the impact of the Mogharnas has changed or not.

Background research

This research follows two studies of Abbas Zamani and Alexander Popadopouloi. And this research used descriptive analytical approach and qualitative indicators index that by studying of the impact of religious and teaching beliefs in the formation of different types of decorations and the geometry of the architecture and logic to deduce studying of the impact

of religious and teaching beliefs in the formation of different types of decorations and the geometry of the architecture and logic to deduce achieved.

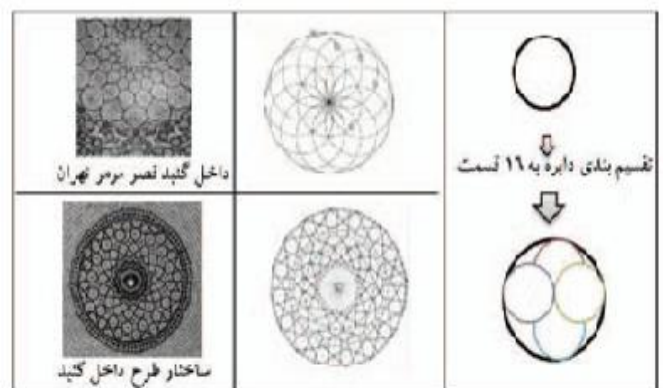


Figure 5. Tajolmoluk northern arch, Isfahan mosque, byusindselfresemblance through accompanied by the part and the whole in geometricdecorations(Henry,2007).

Literature

For 2-Dimention geometry, node

Node is said to be making decorations for geometric and specific rules drawn that generally are used in Islamic religious sites . Based on the geometry node, the drawn said that is defined points that have nodes and capabilities of the rise and fall and also in the ideas of the Pythagoreans points: Repeat field from all directions. (Naderifar, 1389:28). Also in the first unit of the line, the line level and the volume level is obtained. (Guthrie, 1375:196).

Aristotle believed that the structure of objects related to their geometric shapes. And it also forms the basis of numbers

Akhavanalsafa describes the impact of the Pythagoreans and Aristotle, knewed the number 1 as the key point and unity, number 2 as the password line, the number 3 as a level and number password and number 4 level as an encrypted volume, visualization the physical body password (Kapelson, 1368:45).

Node architecture has reproductive ability and the creation of new nodes. Also has reproducibility property inert and transformation within the node does not become nasty again ...) node in the node (the instruments of of each node crushed by smaller nodes so that the internal nodes complement each other and with each other all nodes answer a query. (King nodes) becomes smaller or larger types by the rise and fall of its call. (Naderifar, 1389:29)

Mogharnaswork

One of the decorative elements in the beautiful architectural monuments of Iran, especially the mosques and tombs that has great important role is Mogharnas work. Mogharnas that resembles a honeycomb, in the form of buildings on the class made up of buildings or become gradually another geometric shape geometric shape is used. This Mogharnas can be including effective means building's dome, which later lost the basic theoretical content and more. some Iranian architects that this Mogharnas in front used for decoration. (Zamani, 1350:4).

The buildings were used to build it did not have enough skill to put Under heavy pressure building and on the principle and basis. By observing the natural forms ice and limestone caves, we find that the most likely fans of the first artists Qandil have artistic sense and it's just interior and exterior surfaces of buildings using brick Plaster or cement are used. Mogharnas usually mired at the following corner stands creation will become. But the location of this decorative element can be at the top of the walls, roofs and siding corner (Lorzadeh, 1360:72).

As Lorzadeh believes Mogharnas terms of shape classified into 4 classes:

1- Mogharnas coming forward: Mogharnas to say that the materials of the building. And finally simply and without ornament in the form of brick or stone, the outer surfaces Facade, Make-up, that has high strength.

2- Overlapping mogharnas : Aside from the main building materials used such as plaster brick and rock, it is used in interior and exterior surfaces of building. And often locates in several rows (two to five or more) together with the modest stability.

3-suspended Mogharnas: the same calcareous prisms hanging in caves are called Astelaktyt. And often are done by pasting various materials such as plaster, ceramics, tiles and concave surfaces inside . That the dangle seem to be having little stability.

4- Honeycomb mogharnas: As the total of this category of Mogharnas suggests, like a hornet's nest in whole hives were small on time. This category of looks like suspended mogharnas.

Mogharnas in the fifth and sixth centuries AD, or in other words, it can be seen in the Seljuki period in the evolution that was rapid in most buildings of this period . The most obvious example in Seljuk era is Isfahan mosque that its Mogharnas architecture is the dome of the masterpieces in Islamic architecture. The following is described in the table below 4

Mogharnas shape and wisdom, although each also is examined.

Mogharnas come forward:

In the first period due to the arrival of Islam in Iran and Iranian rulers and Islamic religious teachings architecture, Iran was simply so that the simplicity of the architecture. as a result the decorations went up to simplicity . Finally Mogharnas simply and without ornament in the form of brick or stone makeup the Exterior of building out. (The author) Mogharnas overlapping.

In Seljuki, s art Mogharnas were evolving severe. And generally in different countries and areas that Arab occupied was updated and Sassanid goes to the elements including in making up the Great Hall.

Perhaps the wisdom of moving away from the basic teachings of the Islamic religion and disrespectful and unclean and less worth knowing Iranians are Arabs and authorities by them. Iranians are a proud history and architecture to their governance. In the Seljuki, s period after Arab leaders to come with power The Iranians and to employing them in government and political affairs in a cultural struggle with the Arabs pay. So that the spaces are huge and start hanging on to it. And so that the beautiful name of Imam Ali (AS) in more decorations including Mogharnas use.

And even hanging Mogharnas and their shape varies according to large spaces (the author) We were bound together and to the act as a crime measured Everyone was more than our sin but to love Ali gave us



Isfahan Mosque

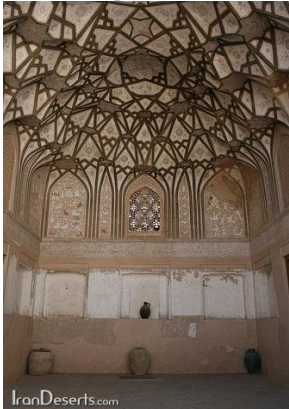





Isfahan Mosque Seljuk though that were not originally belong to the range of present-day Iran, but in governance and administration Iranian scientists took advantage affairs ministers.





Sibuwayh and Dinawari in Arabic literature On Tabari and Beihaghi literature Avicenna and Abu Nasr al-

Farabi in all fields In mysticism and philosophy Suhrawardi and Ruzbehan In Persian literature, Ferdowsi, AsadiTusi, Onsori, Naserkhosro, Baba Taheroryan, AbuSa'id Abu al-Khair, FakhreddinAs'adGorgani, Omar Khayyam, Nizami, Khagani,

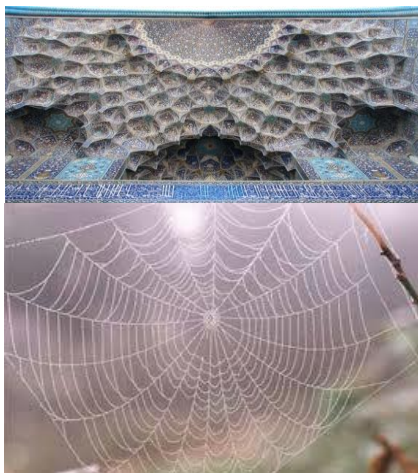
their Arab culture. Such as Ferdowsi's epic Persian. (the auther) Mogharnas suspended and honeycomb:

<p>Mosque of Nain</p>  <p>IranDeserts.com</p>	<p>Entrance of the mosque In Isfahan Jameh mosque</p> 	<p>Mogharnas come forward</p>
<p>Policy and administrative procedures governing the According to Islamic teachings Simple life, avoid decorations and The lavish lifestyle, living according to teachings Religious</p>	<p>Mausoleum of Ismail Samani Mosque of Nain</p>	<p>Mogharnas at four First century AD</p>
<p>Those who wish to live in the world and its pomp. We give, Wages [in the world fully to their work and therein they will not have given. These are people who in Hereafter taste the Fire what in the world could have done all are wasted and revoked</p>	<p>And let them have a look at what groups [And just [Monuments life in the world to test them. Thine don't look at them that [one day your Lord is better and more lasting.</p>	<p>Effective Hadithes</p>

<p>Isfahan Mosque</p> 	<p>Isfahan Mosque</p> 	<p>Mogharnas overlapping</p>
<p>During the Seljuki art on stage Intense development and for Overall in different countries and Arab occupied areas was updated To change elements of Sassanid Including large square rooms</p>	<p>Policy and administrative procedure based on the teachings Islamic religious Use decorations sparingly, life According to religious teachings Shiites and their greater power Mogharnas in the fifth century</p>	<p>Mogharnas in the fifth and sixth centuries AD Isfahan Mosque Mosque ardestan Mosque Golpayegan</p>
<p>Prophet PBUH Ali, leader of the believers and the hypocrites leader is wealth. Prophet PBUH : Ali has Right on the nation as the father of the Children.</p>	<p>Prophet PBUH: Blissful means complete and true one that Imam Ali (AS) On his life and after death love.</p>	<p>Effective Hadithes</p>

		<p>Mogharnas suspended</p>
		<p>Mogharnas honeycomb</p>
<p>Policy and administrative procedure based on the teachings Islamic religious Use decorations sparingly, life According to religious teachings Shiites and their greater power</p>	<p>Isfahan Mosque</p>	<p>Mongol and Safavid period</p>
<p>Imam Ali But is not that the world is mortal world Not lasting. The world is like a house that it tantivy spider. You from eager to the world Soon my oath that he dies</p>	<p>Their life Are happy and satisfied, if the Next to the next life, but is slight</p>	<p>Effective Hadithes</p>

Mughal,s period architecture went into the development of the vertical lines and subtle forms of attention Ivan thinner and more, thinner walls and ceiling pressure on columns Mogharnas was conducted. Also boom became more and more detailed records and more diverse materials used in more places and the four categories of (Mogharnas come forward, overlapping, dangling, Honeycomb) outside and inside the buildings were used. Perhaps it's the wisdom of the Islamic kings and Shiites and to show their strength the use of large mosques and maximal use of inlays and suspended use of Mogharnas Man reminded the continental ice and lime and a sense of fear to enter these places as if the world Local is unstable and ephemeral(the auther).



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