STUDY OF ARCHITECTURE OF ISLAMIC IRAN IN ILKHANID PERIOD IN EAST AZERBAIJAN

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ABSTRACT
Present research is related to a study on Architecture of Islamic Iran in Ilkhaind period in East Azerbaijan. The main question of the research is that whether Architecture of Ilkhaind has affected on Architecture of East Azerbaijan? Studied carried out are based on the field and library studies. Main purpose of the research is that considering indemnity crisis of the current architecture realizing and applying early architecture can be effective in identifying today architecture. Architecture and associated arts like tiling and aerography also flourished considerably in Ilkhaind period. Mosque and caravansaries in Architecture of Ilkhaind period which was were building in earlier method, the only difference was that schools instead of having harem (bedchambers) were built in on or two floor with chambers for students to settle in them. In historical epoch Ilkhaind have had remarkable developments, so that in Tribalism period cities of Tabriz and Maragheh had been chosen as capital cities for this ethnic. Architecture of Ilkhaind epoch is introduced with a series of engineering indicators and building ornaments, which present research has attempted to investigate this important period shortly and specify its cultural and artistically effects on East Azerbaijan. Research results demonstrate that architecture of Islam and Ilkhaind considering Ilkhaind and geographical position of East Azerbaijan has developed innovatively and has created a lot of masterpiece buildings in that period. That this important consequence has obtained through sever of years of attempts and hardworking by workmen, masons architects which were responsible for preserving and repairing of that building.

Keywords: Architecture, Islamic Architecture, Architecture of Ilkhaind, East Azerbaijan.

INTRODUCTION
Azerbaijan has played a significant role in identifying Architecture of Islamic Iran and its development and growth in context of Persian civilization presenting a pattern and valuable experiences. Azerbaijan occupying a wide area is one of the origins of Persian civilization which has played a valuable role in its cultural flourished. Culture of Azerbaijan in evolutionary progress of Architectural art of Iran has a special place. It's because architecture style of Azerbaijan is one of the four architectural styles of Islamic Iran and in fact it connects Architecture of safari period with architecture of Saljoghi. After destructive invasion of Mughal to Iran and formation of Ilkhanid dynasty, Azerbaijan becomes scope and focus of Persian civilization and renaissance period in culture of art of Azerbaijan begins to opera.

Seventh and eights centuries in inner calendar are known as golden epochs of Architectural art of Azerbaijan which starts with Farabi's reformation epoch, at this time ideology of Architecture of
Tabriz steps to word artistically history of Architecture of Iran. Architecture style of Azerbaijan which is formed of three ideologies of Shrvan, nakhyvan and Tabriz, in Ilkhanid period is flourish with Architecture ideology of Tabriz. Masterpieces such as Ghazanieh, Soltaniyeh, Roshdiyeh and Alishah Complex are appeared in ideology of architecture of Tabriz. (Ajorloo, 2001).

Architectural developments originated from Azerbaijan not only didn't remain limited to Azerbaijan but also it spreader to Turkistan and Khorasan in Timurid times. In fact Iranian culture and art in Timurid times is continuance of Ilkhanid period. Amir Timur Ghoorkani and his art growing succulents, sent numerous artists from Azerbaijan and specially from Tabriz to Khorasan and transoxiana and several masterpieces were created based on trainings of Azerbaijan style in grand Khorasan, Turkistan and transoxiana: Jame Mosque of Samarqand, Ghoorahshad mosque in Razavi Mashad, Ghoor Mir, Torbat Khajeh Aboonar Parsa in Balkh and AghSiray in urban Sabz. There for in this research the attempt is done to study and investigate ambiguous aspects of architecture of Ilkhanid and its influence on architecture and configuration and space of buildings in architecture of East Azarbajyan.

**ARCHITECTURE of ILKHANID**

In the seventh lunar century Hulegu Successors after settling in Azarbajyan, chose Maragheh and later Tabriz az there capitals and undoubtfull beauty of the nature in this area had attracted their attention to it. Historical buildings of this period are as a stage of continuous history of architecture of Iran reflect forms and figures of previous period and their characteristics and details. (Ajorloo, 2001). Until their rulehip Ilkhanids didn’t have much intention to architecture, in other words their intervention was limited to issuing rules and ordinances which were prepared by their minsters. Late rulers of this dynasty showed so much personal intention to design, plan and creating important historical buildings and this led to a general uniformity in architecture style of entire Iran and constructing these huge building they used plans of the buildings made that period, but they applied in larger scales all the attempts done in previous times. Magnificence of created buildings in Tabriz and Soltaniyeh, led to the need for skill full artists and architects form all around the country to be invited. Therefore, all architects, practitioners and workmen could be aware of technics, tactics of their coworkers and after the building were completed they returned to their own countries, they applied development skills of their time in constructing other buildings. Therefore even after devastation of Ilkhanid power great style of architecture in this period wasn’t lost but it was continued and spared all around the country. (Willber, 2008).

Specifying characteristic and indicators of architecture of Ilkhanid epoch:

1. Cohesion of minarets to the body of the masques and religious building.
2. Emphasize on up warding and tallness and magnificence of the building.
3. Expanding symmetric plan whit four porches.
4. Expanding constructing architectural complexes, specially religious complexes.
5. Elevating high legged domes.
6. Expanding decoration mosaic tiles
7. Expanding ornamental moldings, specially Plaster in altras.

Architects of Ilkhanid period comparing to architects of Saljoughi epoch have differentiated their monuments because of magnificence. The appropriateness of building components, plan and their great plot. (Hasan, 1987).The most explicit characteristic which differentiate architectural buildings of Ilkhanid from the other epochs, is height and tallness of the building. Engineers and architects of Ilkhanid epoch had their own engineering techniques tactics. The grand dimensions of the buildings lateral arches are known as their engineering indicator, this type of arch entails a method to cover the vast and high inner spaces without need for application of pillar or king post. Although architects were familiar whit this technique earlier, but it was first time that architecture was applied with brick materials.(Petresan, 1996). Passing architectural methods of Saljoughi epoch to Ilkhanid epoch with transformation of romantic architecture to Gothic architecture was compared. (Hillenbrand,1999).
Architects of Ilkhanid period, chose symmetric plans wit porch for constructing religious and public buildings such as mosques, schools, caravansaries and tried to make subtle changes using decreasing and correcting adjustments of the building.(Kiyani, 1995: Hillenbrand, 1995b, 1998). Tradition of classical plans wit two porches which had appeared early sixth century in lunar calendar in Khorasan in Ilkhanid epoch is transformed and completed to four porches. Designing and constructing of architectural complexes, specially religious ones, is among the most important characteristics of architecture of Ilkhanid epoch. Large and huge architectural complexes such as Jame Alishah Tabrizi and Ghazaniyya (Shabn Ghazan/ Sham Ghazan) in Tabriz and Abvabolbar kaghani/ Aljayto (Soltaniyeh dome) later become a model for constructing large religious complexes such as Jame of Samarghand and Jame Goharshad was concurrent wit sultanate of Timur Gourkani and complex of sultan Hasan in Cairo was current with Ilkhanid period. All these complexes are modeled by two complexes of Moameneh Khatoun(582, H. L) and gharh Baghlar (Limit 670, H. L) in Nakhjavan.(Qiyasi, 1985, 1991, 1997:Ajorloo, 2010).

Constructing high legged domes which Piriya introduced the so called (Geryonary). (Pirniya, 1968, 1971, 1975, 2001). Is among architectural characteristic of Ilkhanid-Timuri periods in Iran and Turkmenistan, which the best examples for them are the Kaboud mosque of Tabriz, goharshad mosque and Jame mosque Samarghand. According to archeological evidences plan of northern building originated from northern facade Alishah Ark of Tabriz. (Mansouri and Ajorloo, 2002). Dome of Jome mosque of Ardabil is among the first models for constructing high legged domes. (Qiyasi, 1991). Of course about jome mosque of Ardabil it should be said that is no archeological evidence on any reconstructions or changes in its appearance or framework in Timuri period. Therefore its high maxim sir relates it origin to Sasani (Kiyani, 1995), but he has found no archeological evidences or records so far. Also it should be noted that domes of the mosque of Gheirna village and tomb of Door(Dargah) in Nakhjavan are kinds of high legged domes, which they are referred to late in Saljoughi period. (Qiyasi, 1991). Expanding ornamentation of buildings in Ilkhanid times in give specification, character and independence to architecture of this period(Hillenbrand, 1999).

Aerography and tiling both are two top ornamental elements in Ilkhanid, which the best example of it is Soltaniyeh dome (Blair, 1994). Promotion of architecture in Ilkhanid epoch whit an emphasize on ornamentation of buildings led to prosperity of tiling. (Kiyani, 1995: Michell, 1995). Ilkhanid period was Period of popularity of tiling, expansion of mosaic tiles and wide spread expansion of mosaic tiles and Zarrinfam. Tabriz become one of the important centers of tile manufacturing industry and Soltaniyeh industries producing tiles of Zarrinfam competed whit Kashan (Kiyani, 2000). Aerography of Ilkhanid period was originated from aerography of saljoughian, but gradually changes and innovations in designing and ornamentation and applying aerography was created. (Shokofteh, 2012).

**METHODOLOGY**

Recent research is descriptive-analytical and applicable, which collecting data has done as field and library method which will be done using strap takings not only are consist of architectural elements but also have existing images as well.

**RESEARCH FINDING**

1- Evaluating architecture of Ilkhanid building in East Azarbajian:

Based on studies have done and analyzing obtained data, four important building wit architecture of Ilkhanid is East Azarbajian were evaluated which following results shown in table (1) presented.
<table>
<thead>
<tr>
<th>Build name</th>
<th>Kind of Plan</th>
<th>Kind of Dome</th>
<th>characteristics</th>
<th>Decorations</th>
<th>materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rabbe Rashidi</td>
<td>Rectangular Plan</td>
<td>Dome of the Building with 2 coverings</td>
<td>Frist Constructed University in Iran, indicators created in Rabbe Rashidi, was paying attention to relations between buildings Sabat(Introversion), Chambers all around the yards, Centralizing, the pivot, four porches, Contains scenes, using porticoes, full and empty spaces, using porch</td>
<td>Aerography, Epigraph, Carvings, Brick working, Tiling and …</td>
<td>Brick</td>
</tr>
<tr>
<td>Ark Alishah</td>
<td>Square plan</td>
<td>Without of Dome</td>
<td>Using covers arches, using deep and massive Foundation, adjusted with structures mentioned above, height of the building reaches to 36 m, width of the walls are 10 m which their inside is composed of 2 wide walls</td>
<td>Tiling, marble columns, inscriptions, plaster and Epigraph, …</td>
<td>Mortar, Reinforced Materials with firm and permanent, Brick</td>
</tr>
<tr>
<td>Jame Mosque Tabriz</td>
<td>Square plan</td>
<td>Double-shell dome</td>
<td>The oldest part of it is a vast bed chamber composed of domes of top of the octagonal piles made of bricks.</td>
<td>Delicate aerography's, aerographical epigraphs from Ilkhanid period from 3 different manuscripts, from plants, geometry and other kinds of tilling and marring.</td>
<td>Brick and ornamented and tiles</td>
</tr>
<tr>
<td>Ghafariyeh Dome of Maragheh</td>
<td>Square plan</td>
<td>Double-shell</td>
<td>Ghafariyeh dome is inspired from sorkh dome of Maragheh and has a squared shape made of brick and is on the platform and is located on top of an anter and its for angels have surrounded with brick ornamented piles. It's front gate is located toward the north and have a big lichgate and two thin and tall lichgate on the sides.</td>
<td>Ornamental piles, applying bricks and colorful and black white, and light blue tiles, beautiful carved epigraphs.</td>
<td>Brick</td>
</tr>
</tbody>
</table>
2- Architecture of framework and space of buildings:

Generally architecture of framework and space of buildings of East Azarbajjan in Ilkhanid epoch are following:

a- Architecture of Ilkhanid East Azarbajjan is architecture of inside not outside. Basic principle of this architecture is considering and emphasizing on inside. This architecture has two faces: a face inside and a face outside of the building. Outer face is simple, natural, without a shape, unglazed and rough and inner face is a face that worked on and is arranged, transformed, subtle and gentle. Two different and sometimes opposed to each other but made of soil.

b- Architecture of Ilkhanid of East Azarbaijan in an architecture of yard. Base and origin of spacing in this architecture is an open one. An open space which is designed carefully. An open space which is designed in a regular shape and thought harmonies and gets life with a water pool, fountain, trees and flowers. Whole building components get their life, light and air from the yard.

c- Architecture of Ilkhani in East Azerbayjan architecture, connects and relate open an closed spaces deeply. Yards stand through the building and closed single spaces, surround around the yards. Single rooms with three doors, five doors and halls which are living spaces of the house, all open toward open space. Sashes turn important closed spaces of the house into semi open dominant spaces and toward bright and beautiful yard. Halls and the most important spaces of the house are located on places that have the best view to the yard.

d- Architecture of Ilkhanid in Azerbayjan, all have beauty and arrangement. Complete geometrical array is seen in every port of it. Selection, shapes, space designs, their components, faces, divisions on planes, mass makings and etc. all are possibly in their most complete mode. This beauty and arrangement and completes is observed clearly. Intense emphasize of architect on spaces in the shape of square and octagonal and eight and a half Hash rat and even a slight lying down toward rectangle all around the building can be originated from his intension to undirectionality of spaces.

3- Innovation of architecture of Tribalism period in East Azerbaijan:

Innovations of architecture of Ilkhanid period which has had the most influences on Architecture of East Azerbayjan are as following:

1- Huge scale and reminding glory and magnificence.
2- Valuating and emphasizing on principles of Architecture.
3- Evolution of plan with 4 porches.
4- Fertilizing and conscious performance about verticality.
5- Strengthen and stabilizing the combined buildings in different systems.
6- Constructing two folded domes.
7- Evolution of two layered brick domes and onion shaped domes.
8- Porch with high Head which had two minarets in both sides.
9- Ornamental Changes in adytum's, applying Mogarnas in ornamentations.
10- Pottery and glazing ornamentations on big planes.
11- Extreme skill in aerography and applying it divisively.
12- Tiles with outstanding and curved lines margines and shapes on them.
13- Glazed and polished tiles with natural pictures.
14- Cross and star shaped tiles, applying golden layer.
Innovation table of tribalism Architecture (Table 2)

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<thead>
<tr>
<th>Feature</th>
</tr>
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CONCLUSION

Studying and analyzing architecture in East Azerbayjan and its main components in mentioned period we conclude that although each of the components and models have created in a specific period of the history of architecture of this country, but with continuous presence in next periods they have completed and purified and gained an identity independence of time General concept is offered by a single model or a single component which has phantasy and is message.

Which here architecture of Ilkhanid has had innovations with them which Framework and space of architecture of Azerbayjan and specially East Azerbayjan in influenced, that are as following:

Huge scale and reminding glory and magnificence.
Valuating and emphasizing on principles of Architecture.
Evolution of plan with 4 porches.
Fertilizing and conscious performance about verticality.
Strengthen and stabilizing the combined buildings in different systems.
Constructing two folded domes.
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Pottery and glazing ornamentations on big planes.
Extreme skill in aerography and applying it divisively.
Tiles with outstanding and curved lines margins and shapes on them.
Glazed and polished tiles with natural pictures.
Cross and star shaped tiles, applying golden layer.

Finally using investigations carried out and results of findings in this research, we can conclude that architecturally, architecture of Ilkhanid period has had the most influence on architecture of East Azerbayjan. Another effective factor in architecture of East Azerbayjan is cold weather of this region. Other factor is intension to Islam in Iran with subjectivism characteristics, separating private and public places, noblesse right, respecting privacy of individuals an etc. According to sentences mentioned so far, it is seen in historical studies; first Ilkhanid period has not been seen, so its influence on other architectural styles has completely specified and second according to the fact that architectural identity is not
separated from the post, clarity of a part of history of the architecture requires understanding architectural identity and finally applying them in contemporary architecture.

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