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COMPARATIVE SEMANTICS OF WOODEN SASH WINDOWS (OROSI) AND LEAD SASH WINDOW (ROSE WINDOWS)

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ABSTRACT

It should be considered that artists and craftsmen for explanation of rich conceptions of religions had no way but using symbols influenced by the dominant culture of society. The symbols had an adaptable form in the mentioned environment, which means religions were a factor for direction of arts in society, and art has been applied as a medium implement for transfer of religious definitions and promotion. This vast medium (traditional art) includes abundant elements in different religions that one of them is religious architecture and its extensions such as muntins. According to the total resemblance of form and technology of wooden and lead muntins (Rose window), it seems that they have semantic similarity, in addition of practical and visual similarity. The objective of this essay is consideration and accommodation of wooden and lead muntins, and reaching to the common points in usage of traditional art for the promotion of these two religions. Could we understand the religious conceptions by understanding symbols, motifs and coloration in these works? The purpose of this descriptive analytical research is to discover the conception of just some reasons of usage of motifs by the religions for promotion and influence the public lives in varied cultures by recognition of history of forms and motifs and accommodation and analysis of the mentioned works. The purpose of this research is recognition of these concepts and applying them in the modern ages for more human cooperation with modern environment and reappearance of religion via art in daily lives.

Keywords: *Islamic Patterns, Wooden Muntins, Iconography, Lead Muntins*

INTRODUCTION

Artistic and cultural symbols are global category, sometimes a special symbol or sign is created by the vast concept which is derived from myths, legends, religion or rites and the history and ecosystem of that region and its folk. One of the reasons of creation of motifs or their spread in the society is dominant religion in a social environment. It means that religious advices in a region have made mint motifs or the former motifs which have common meaning with the mentioned religion, remarkably will become popular. The more the extension of catechism and the applying approach of art as a medium by that religion and people, the more the influence of religion via art in the routine lives of people. As a matter of fact the art could be used as a medium for explaining the concepts through symbols and motifs in order to spread that religion. Since it has been mentioned, one of the artistic cultural mediums which are applied by religions is the architectural element. There are some common examples in different religions. For instance we can imply wooden muntins in Islamic art and lead muntins in Christian art.

Assuming that any of these two mentioned categories (wooden and lead muntins) have similarity and segregation points according to the dominant religion in society, these two subjects will be analyzed based on their placement, total form and decorative elements (pattern and color) and available symbols in them. Finally it is hopeful of us to show the effect of dominant religion in society on these art works.

The main purpose of this research which is stylistics of mentioned samples and recognition of religious symbols in order to appear in modern life one more time, will be resulted if the assumption of this research, which is based on the effect of religion on formation and making style in Christian and Iranian Islamic muntins, would be correct.

The conclusion of this research is an answer to relevant questions about background, recognition, technology and semantics of works of these two cultures and religions. In addition there would be a way to recognize the patterns and concept of the elements using in these works. Moreover accommodation and

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analysis of these patterns can help us to make cooperation between human and tradition and also to find out solutions for retrieval and reappearance of religious elements to the routine life of modern societies.

MATERIALS AND METHODS

Research Method

This essay includes a fresh outlook and descriptive analytical way and objective observation by direct observation and writers' presence in some individual buildings of Isfahan and Tehran such as Haghigh home of Isfahan, Tehran Imam Joma's home and library studies around rose windows, structural analysis and the history of wooden architectural appurtenance. It has analyzed and accommodated the wooden and lead muntins. Clearly the strong effect of religion on art works could be observed in both cases, and the artists have created their artworks by the penetration of dominant spirit of the society and popular religions.

There is an evident shortage of semantic researches around wooden and lead ornaments related to architecture in the Islamic and Christian architecture. And here the efforts are for induction of dedicated features of both of these two categories through accommodation and study of the placement, visual position and semantics of some samples of these muntins. Considering the numerous existing samples, the research has been limited to visual and library study of top works of rose windows in gothic period and specifically the Notre Dame Church of Paris and wooden Islamic Iranian muntins in Isfahan region back to Safavid and Zand era.

Wooden Muntins (Sash Windows)

Appellation of Orosi (sash window) term: It's been written in the "Islamic architecture of Iran" by Pirnia: "Some have assumed Orosi is a type of window which is an imitation of Russian architecture that became popular in Iran, while we can observe interesting samples of Orosi in buildings and paintings, way before any sophisticated architecture were formed in Russia. There are disagreements about the etymon. According to Purina's description, "Or" means "up" and "Orosi" means a window with mates and small doors opening upwards ()[17]. According to Farah vashi's statement this term is derived from "Aru" or Pahlavid (arus) and it means white and brightness ()[27].

According to the statements of writers, it could be concluded that Orosi (sash window) is an extensive window including two upper and lower fractions that the upper one includes Pataq or Katibeh (inscription) and lower one usually includes Daraks (small doors). These windows could be simple or have stained glass or colorless glass that are laid by a special arrangement in the frames based on inner forms of muntins and lines which cause the inner pattern of these frames.

The History of Wooden Muntins in Iran: Of primary example of aperture with glass we can consider some of Chogha Zanbil Ziggurat samples that Ghirishman found lots of glass pipes there. These glasses are made of opaque black and white glass rings and it seems like they have been used in windows ()[8].

The considering wooden muntins are those windows including stained glass and organic and geometric patterns that make an ordered arrangement in the king accommodation (Shahneshin) hall ()[9]. That these muntins are both practical and ornamental. Because of stained glass, this alternation of latticed apertures to the apertures with glass, make a fender between inner and outer space of the building so that in addition of light direction to inner space, they would stop loss of hit and also keep insects away ()[15]. This fender which has a remarkable place in Islam religion has become a perfect location for patterns and concepts expression and has had a bilateral function. Therewith, the crumble of patterns, make colorful fractured spaces in the environment that make it impossible to see the inside of the rooms and it's an emphasis on introvert architecture of Islamic regions especially Iran ()[17]. Another reason of applying colorless glass in the upper sides and stained glass in lower sides is also because of not having any view of the space in which the family members are busy doing household chores. It must be said that these kind of muntins in individual houses were usually used as a fender between king accommodation (shahneshin) and yard. These fenders had turned to an appropriate place for religious symbols and concepts. According to iconology of Islamic art, these symbols were only geometrical and vegetal so that it made the interior space full of common symbols of Islamic period.

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We have no aperture with glass before political and commercial communication between Iran and Europe, in the Safavid era. It is thought that before having glass goblets in Iran for the first time, Iranian used waxy color papers instead of glass. These papers were oiled that made the paper transparent and let the light pass through the papers. There is evidence in Alighapu Palace (Interview with Ghobad Kianmehr and Ahmad Montazer). During Safavid dynasty some cultural exchanges happened between Iran and Europe and by Venezuelan glassmakers' entrance to the king Abbas court, lots of stained glasses were imported. Popularity of these glasses was in the late Safavid dynasty and Zandid era in Iran ()[26].

Most available samples of function of latticed geometrical divisions (Gereh chini means a collection of geometrical shapes that are harmonically gathered) in carpentry is back to Safavid era for instance wooden window of Sheikh Safi-ad-din Ardabili mausoleum, Hasht Behesht, Chehelsotoon and Alighapu palaces and monuments of Jolfa region in Isfahan. The later samples have been used in latticed windows of Ilkhani and Teimoori era (Zomorshidi, 1377). Moreover later sample is a geometrical pattern (gereh tupor) in Jameh Mosque of Nain back to 7th hejira century ()[21]. naturally we observe geometrical divisions in earlier arts such as book decoration, acrography and bricklaying but it became popular mostly in the wooden girih chini used in huge size doors and 3doors and 5doors sash windows and finally vegetal patterns appear in this art which clearly depicts the individual sophistication and facilities improvement.

THE CONCEPTION OF PATTERNS IN SASH WINDOW: Wooden muntins include two main categories: rotating and angular patterns. These two patterns are technically classified to three series for example usually angular patterns are constructed by girih chini and rotating patterns are made by “parche bori” and “ghavare bori”. Here are explanations of mentioned techniques.

Girih chini (junctions): Wooden girih chini is a combination of geometrical shapes that are placed in a harmonious manner. Creation of a geometrical plane by wooden sections called “alat” is called girih chini. Alats (wood pieces) are interconnect by tongue and groove joints ()[22]. According to the pattern, these sections (alat) create special motifs and symbols in the composition called “shamseh” (star) and mostly 8pointed star is used in Safavid era.

Laleh Bakhtiari has claimed number eight is an emphasis on eighth stage of suluk and Miss Mir Ahmadi suggests that in Safavid period eighth stage of suluk was more considered, maybe the artist invites all residents to holiness.

Perhaps the reason why constructors of sash windows, have chosen girih chini for theosophical conceptions is that geometrical patterns are the most abstract shapes and are beyond the nature. On the other hand they are stable because of angles and straight lines. We surely know geometrical shapes begin by a point and continue to countless sides. So they could be drawn and constructed unlimitedly. It must be claimed that lots of castes in Islamic period and specially in Safavid era were formed influenced by Sufi Chivalry way which have Islamic rules. Since apprentices must have learnt these rules and accept one of those castes to be able to learn any profession, we can easily observe the penetration of religion and beliefs in the art works specially sash windows.

Islimi bori or Ghavare bori: Along with the improvement of equipment, girih in girih sazi turned to rotating motifs and therefore girih were constructed in islimi patterns. These samples are titled “islimi bori”, which were applied in wooden architectural constructions appearing in late Safavid dynasty and were popular in Zandid and Ghajar era ()[21]. These motifs are in the centroid of frames of sash windows in the shapes of star and lilies.

Parche bori: The creation of this art has been in Safavid and Zandid era and they are mostly used as ornament in architecture in Ghajar era because of facilities improvement. This art such as other ones is impressed by naturalism in Ghajar dynasty and is more realistic. They were constructed by vegetal motifs sometimes arabesque (islimi). Here is the technique: the pattern is copied on a rectangular piece of wood with 6 millimeter height, 5 centimeter width and 15 centimeter length, the pattern will become latticed, then the wood is cut to two sides, blank spaces are filled by stained glass and wood pieces are glued to both sides of stained glass again ()[21].

Color and Light in Wooden Muntins: The daylight would create delicate detailed regular lattices during the day, by passing and entering house through the available regular lattice in sash windows. It is an

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intensification of influence of mentioned patterns by applying spreading color and light in the room. Of course the wood as the main material is almost homochromatic but light can spread way regularly by passing through the girih chini that it seems like the spirituality has diffused monotonously.

Usually colorless glass or red, blue and yellowish orange glass are applied in wooden muntins. The complementary colors are usually next to each other and one astonishing point is that applying colors are equivalent to Goethe's theory of colors. The complementary colors are set in an equiponderant manner which perfectly indicates the visual understanding of workman and constructor. This usage of color also fulfills the precise arrangement of geometrical and non-geometrical patterns.

Applying this art in a place where the light has to pass in building, displays workmen's wisdom and religion thoughts which is common between Christian and Islamic workmen. It shows not only practical aspect of muntins, but spirituality and immaterialism of motifs. Access to light is only by unveiling, and perhaps girih chini is a veil which human could reach immaterialism by unveiling it. In order to recognize the order source we have to understand orders and symbols and whatever is been veiled so that we can get close to the source and unveiling would occur. At first, the appealing colors of this art, attracts the human attention and then they make you realize the discipline of creation. After that human spirit that has recognized the conceptions, lines up with his nature. Thus leading the human spirit to truth is the most important obligation of this art. The truth which is absolute perfection and beauty. This is the belief of Sufis whom are a theosophical branch of Islam. Both the color of glass and the applying numbers in girih have not been only ornamental ()[21].

Maybe latent conceptions of girih and muntins with symbolic meanings are the best choice for artist to emphasize on specific subjects. For instance in Haghhighis house, there is a parche bori girih by bismillah pattern in the sash windows which are placed in a tongue and groove joint girih. This kind of girih is called shah girih or girih tu girih. We can observe bismillah three times applied with green color that shows holiness ()[21].

Although sash window was renowned since Safavid era, as a traditional art of Iran has a long history as human culture and art and history. It seems like sash window is a celebration of light that has varied arts and conceptions inside it in order to praise the light ()[15].

Color use is so effective in building lighting. it makes their effect double By balanced and coordinated patterns. It means that the purpose of architect which is influencing the audience is perfectly reached. Also applying of stained glass windows helps the architect as well.

Lead Muntins (Rose Window)

The literal meaning of rose window: The France term "rose" or "rosacea" could be used about the technic which European architectures used for stone windows. Basically in English, this term suggests stone window that its radius widening around the center symmetrically. One of the most famous early examples is in north side of Loan Church which is the stone window with lead muntins and Christ icon and is usually used in churches and holy places.

Rose window became popular since 12th century in Europe and in fact abundant examples have been constructed in Gothic art in contrast to the Romanesque art. In gothic churches rose windows are the most applied elements.

In most cathedrals in Paris, Rome (Palma), rose windows are the mote noticeable element to all visitors which adds color and light to the vapid tall gothic churches ()[20].

As a matter of fact rose windows have two differences with wooden sash windows. They were used only in churches and they didn't include small doors.

A Brief History of Rose Windows: The first rose window was constructed for a summer hall in 711 AD by Migueldelillo the architect in Spain. The hall isn't a church. He had covered a small area of wall by a rose window in a vegetal pattern including 6-petal flowers with no glass. In addition, there are bigger vegetal ornaments and motifs in borders of doors called arak (circle like) and this window is matched by them as well ()[20].

Therewith there is a window like rose windows in San Martin church in Arguelles which is not in the basic structure of building.

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Two churches include early examples of rose windows in France. Although large panes of glass are used in 15th and 16th century in Italy and Spain, the oldest one belongs to 13th century ()[19].

One of the best examples is in Notre Dame church. The church was built in 1163 AD, it has early gothic style and advanced gothic. There are 5 noticeable hallways in the building. The peak achievement of gothic architecture is based on sculptures and perfect use of patterned glass. These materials are alike gothic style and in no other period the glass has not been used this much delicate and sophisticated ()[20]. Technique of these rose windows is glass painting. The technique includes small panes of stained glass held together by strips of lead. The lead strips have a basic function because they are used as forming lines. Stained glass makes the patterns lightening and makes colorful images.

Glass painting is probably derived from muntins in plaster frames. They were used for icons of holy people and religious scenes In Europe.

Rose Windows Pattern: Usually rose windows have two inner and outer patterns. Outer patterns with stone work include simple divided circles and lattice in the form of lotus which backs to Mehry culture. These divisions are inspired by abstract motifs such as circles and vegetal motifs. Inside of rose windows include Christ icons with lead stripes and stained glass.

In these patterns including icons of Christ, holy Mary and the apostles, workman and craftsman has a basic role. Here in contrast to Islamic art, figural representations are used as well. It can be declared that figural representations are the base of lead muntins and they suggest the other side and this world lives of Christ and his apostles.

Icon is a term for sacred images which eastern European and Middle East Christians worship them with no attention to their material and technique. The icons could be made of frisk, mosaic, stone carving, metal carving and etc. Practically it represents portable sacred images painted on wood, wax or glass nowadays. The icons are representations of Christ, holy Mary, priests, and even angels and sacred events such as martrology.

Icons specifically belong to Eastern Orthodox Church. They believe that “icons are symbolic representation which make us go beyond the symbols and invite us to make a connection with represented person” and also “explains impalpable unexplainable definitions” ()[3]. This definition shows art function in recognition of religion for people who had low education and could not get the conceptions by studding. By watching the images and icons, people could learn religion taught in a visual way and memorize them easily.

Icons in the Sight of Christianity: In the sight of Christianity, luminous architecture is the result of stained patterned glasses that make an intimate environment. Muntins existed before Christianity but became popular during Christianity. Muntins were appealing implement for religious promotion by explaining the events of gospels. The light that got colorful by stained glass is like a whole pictorial world in dark inside of churches. It appeals every visitor to an evident about Christian religion, a supernatural world. Yet color of muntins, turns to light which means the daylight by the shining clear color of glass, transfer its richness to the light. Like the divine light that is astonishing and the eye could not bear it, when is deflected in spirit mirror, it lessen and causes mercy ()[24].

Blue is the dominant color in muntins which is symbol of deep sky. Red, yellow and green are less in use and look more precious. They remind us stars and flowers or Christ blood drops. Blue in Middle Ages muntins, make a calmative gentle luminance ()[24].

The Conception of Icons: In the sight of eastern church “icons explain real beauty” ()[24] and the effective connection occurs by hidden beauty in these works. People by religious beliefs and real inner beauty of them will get familiar with truth self-consciously and subconsciously. Icons are not only wrathful for their application and they are not only for creation of a beautiful environment. They create a divine atmosphere.

Considering it icons in Christianity are not realistic and humanity of Christ is in icons in order to make more connection with people and to be a medium for conceptions transfer in a symbolic way. One of the characteristics of icons is materialist aspect of them reduced as well. As we can observe, there is no excessive emphasis on human aspects of Christ in order to notice extraterrestrial nature and the truth.

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Icons explain ritual events, also martyrology. Therefore they copy representations of individuals, in a way that it seems like the martyrs come alive by icons and they provoke love and happiness in viewers. In organic or geometric motifs of wooden sash windows, usually an organic or geometric star exists in the centroid of the image which represents the source of light of universe. In a corrector explanation, it suggests the truth. The rose windows extensions are human, center and centroid. Thus human is never painted in profile position. Whole creatures (animals and landscape) are beside human and never are in icons solely. We can say in wooden muntins, star is in the center of veil .the veil between truth and facts recognition. In Christian art by recognizing the humans in icons and reanalyzing individuals in the center, we can achieve the fact. And by grabbing to it, fact will be known. It could be the reason why main person was bigger and in the center. In iconography there is no shadow and researchers believe that physical light is superseding by metaphysical one.

Similarities and Difference of Wooden and Lead Muntins in Pattern and Concept: Motifs in these muntins are covered by stained glass. We can observe both organic and geometrical patterns in wooden muntins. In these two types of muntins, colors and patterns are divided regularly accommodating with geometrical patterns and wood capability. But according to lead muntins, by considering lead capability such as flexibility and forming and turning to curve shapes, naturalistic shapes and figural representations are not in a geometrical manner and this matter makes non-geometrical arrangements. In wooden muntins, girih chini and different types of geometrical motifs suggest theosophy of Islamic Iran and its stages. Non-use of realistic figural representations is because of iconography in Islam. While in Christian art and lead muntins of churches we exactly observe figural representation and the life, religious and moral features of icons.

Conclusion

People searched about wooden muntins: Mehdi (1383) in “sash, windows to light” has implied outstanding workmen and types of joints. In common articles of Kianmehr an Khazayi(1385) titled” Numerical Expression And Conceptions In Safavid Girih chini”, have mentioned the relationship between this art and Iran theosophy. Also in “Girih Sazi in Architecture and Carpentry” written by Shafayi (1380) and “Girih Chini in Islamic Architecture and Traditional Arts” written by Zomorshidi (1365) also have implied the name of patterns and drawing methods of them. In “Sacred Art” of Burckhardt (1389) he has mentioned theosophical and spiritual aspects of patterns in muntins. In “The Rose Window” written by Cowen (2005) and “The Beauty of Stained Glass” written by Reyntiens, he has mentioned short history, technology and introduction of lead muntins since primer time and widely in gothic era. But in this essay we have analyzed technology, patterns and their concepts with a new outlook. By considering abundance of ornaments and differences and similarities of image elements, we can recognize the relation between religion and dominant culture of society with the popular art of time.

Analysis of a number of wooden sash windows easily shows that big portions of most of them are covered by girih chini. This field of traditional art which emphasizes on geometry can attract the viewer in the first sight. This could be a metaphor of universe order and teleological argument (The argument for the existence of God based on the assumption that order in the universe implies an ordered and cannot be a natural feature of the universe, is called “teleological argument”.) that is a popular argument for existence of God in Islam in all periods.

One of the reasons of popularity of wooden muntins among individual buildings and ordinary people is religious taught in Islamic countries history specifically in Iran. These taught did not belong to special group of people and were not limited only to mosques and seminaries. These belonged to all people. And more important is that constructors of these works used to apply religious taught so that girih chini became popular in almost all traditional arts. People acceptance, correct approach of religion promotion in mentioned periods, application of motifs and symbols qualified by religion, the existing metaphor in orders which points out basic arguments in religion are efficient factors in religion success of promotion by applying this medium. According to abstract form of these patterns in Islamic art, they have interpenetrated in human lives and because of non-figurative shape of them they could have existed in houses.

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Wooden muntins are representation of Iran theosophy specifically in safavid era and have an excellent link with culture of Iranian people. Patterns in these muntins have been used in many other sacred places such as mosques and ornamental and functional tools such as holy Quran cover. All these suggest sacred cosmos inside us and are manifestation of holiness in daily lives. Totally geometrical and organic patterns in wooden muntins, suggest our cultural and religious beliefs. Geometrical patterns suggest religion and theosophy and organic ones suggest mythical nature and symbolism of plants.

Lead muntins also are a visualization of Christian religion that is in a perfect and stable connection with Christian society. muntins demonstrate dominant religious thoughts, and vision in Christian society specially in medieval period and gothic era. The motifs and icons demonstrate Christ and his apostles' lives and also transparency of colors because of transparency of glass.

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