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Original Research Article

A Comparative Study of Decorative Patterns in Mosques of the Third Century AH Based on a Contextual Approach (Case Study: Atiq Grand Mosque of Shiraz and Cordoba Grand Mosque)*

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Abstract

Problem statement: This study attempts to examine the decorative motifs of mosques (Atiq Mosque in Shiraz and Cordoba Mosque in Cordoba) in Iran and Spain in the third century A.H. These decorative designs are in accordance with the beliefs of the people of the region and regardless of all their differences, they share common goals in the Islamic world and through these designs spiritual and mental concepts are conveyed. Decorative patterns, which are symbols of the elements of nature, are rooted in Iranian-Sassanid art; Byzantium and have been continuously repeated as motifs in the art of the Islamic era.

Research objective: This study attempts to compare the decorative motifs of the Atiq Mosque in Shiraz with those of the Cordoba Mosque in Cordoba with a contextualist approach.

Research method: This article used a descriptive and analytical method to study the decorations of the Atiq Mosque in Shiraz and the Cordoba Mosque in Spain and to identify similarities and shared symbols.

Conclusion: Decorative designs in Islamic art are derived from the beliefs of people over the centuries. The continuity in Islamic art has spread from Iran to the Islamic world. The architectural formation of Atiq and Cordoba mosques is not contextual, because they are built based on the pattern of the Prophet's Mosque-Shabestani columnar mosque. However, the decorations of both mosques are contextual and inspired by Sassanid art in Iran and Byzantium in Andalusia.

Keywords: *Geometric patterns, Islamic art, Contextualism, Shiraz Atiq Grand Mosque, Cordoba Mosque, Symbolology.*

Introduction

Architecture is the most prominent manifestation of

the art of the Islamic era in any land, which is first visible in the form of a mosque, and its related decorations are reflections of the culture **and**

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beliefs of each country and nation. Iranian art has always been accompanied by decorative patterns. Further, Muslim architects have used these vegetal and geometrical patterns in decorating buildings, instead of using the ones derived from humans or animals.

The architecture of mosques has taken many forms through centuries in various Islamic lands, however, geometrical and vegetal patterns, as well as calligraphy epigraphs are the common features of all Islamic mosques, which have replaced the patterns containing human and animal shapes in Iran and all other parts of the world. The initial architecture of Iranian mosques was inspired by the Al-Masjid an-Nabawi ('The Prophet's Mosque'), and since 625-626 it has continued its path through Iranian contextualism. The Atiq Grand Mosque of Shiraz was built in the late Saffarid era inspired by the Prophet's (PBUH) Mosque in Medina, in the style of Khorasani (using naves) in a rectangular space with naves located in the direction of Qibla. Later in the Ilkhanid period in 1351, the Khodaiy-khaneh was built in the middle of the mosque in Azeri style, which represents one of the features of this period in using more geometry in architectural design. Simultaneously with the rule of the Umayyad Caliphates in Spain like Abd al-Rahman II, in 624, and then Abd al-Rahman III, a new stage of development was officially established. This architectural stage came with magnificent structures, arches, domes, and golden mosaics that decorated the altar, which in turn created a unique splendor and glory in the decoration of grand mosques. These decorations can be seen in the geometric and vegetal patterns resting in the altars of Cordoba and Atiq mosques. These geometric and vegetal patterns were in accordance with the beliefs of the people in each region. The construction of the Cordoba Grand Mosque took almost two and a half centuries. The old name of the mosque was Jame Hazrat (Great Mosque of Hazrat). The mosque had 11 porches at the time of Abd al-Rahman, the Umayyad

caliph of Andalusia. It also turned into a church after Cordoba was taken by the Spaniards. The original structure of the mosque had a courtyard and no arches. The horseshoe shape of the arches was common in Spain and Africa, which appeared from the beginning of the Umayyad dynasty. The plot of the building was a simplified sample of the Motavakel Mosque. Of the architectural features of this mosque are the columns that lead the prayer-sayers towards the Qibla, the large naves, the horseshoe-shaped and crenate arches, the plastered decorations, the works of Muqarnas¹, and the horseshoe-shaped Mihrabs with shiny decorations. The tall beautifully decorated arches are very mesmerizing, and the marble columns of the naves, which reach 856 cases, have given it a special effect and grandeur. Most parts were built following the remains of Roman temples or other ruined Roman buildings. A special feature of the mosque is its main entrance, which passes through sour orange trees. A courtyard called Narenjestan (Garden of sour oranges) is located next to the mosque with ponds and water fountains, which is very functional in the hot summers of Spain, and the minaret of the mosque is 20 meters high and its facade is made of marble.

Various geometric and vegetal patterns are engraved in both mosques to express religious beliefs. Much research has been done on the Cordoba and Atiq Mosques, but less attention has been paid to the study of the designs in these two buildings simultaneously. Therefore, this research tries to examine and find the roots of geometric and vegetal patterns by comparing the two mosques, among which one is built on a Roman temple (The Cordoba Mosque), and the other (The Atiq Mosque) goes back to pre-Islamic times in its underlying layers. In this study, both mosques are first examined in the context of history. Although both buildings have a history in ancient Iran and Rome, the formation of the mosques is not contextual, and they are modeled after the prophet's mosque.

Then their decorative patterns are introduced. Finally, the geometric and vegetal patterns and the places of their application are analytically compared between these two structures which have undergone many changes over time. These patterns and motifs can be clarified and adapted to reach information about the status of architecture and the skill of artists in different periods. These dynamic and vibrant patterns, which are related to symbolic concepts, are rooted in the ancient arts that have continued in the Islamic era in the form of patterns. Comparative study of the patterns in these mosques can reveal the impact of Islamic culture in decorations of Eastern and Western architecture. In this regard, changes in Islamic culture can be proven by moving from one place to another. Therefore, a comparative study between architecture and designs is of particular importance from the following perspective, which raises the main question of the present study: "What are the similarities between the patterns in the decorations of the Cordoba Mosque and the Atiq Mosque in Shiraz?"

Research background

There is no comparative study conducted so far regarding the Atiq Grand Mosque in Shiraz, and the Cordoba Mosque, which would rely on contextualism for architecture and decoration, in Persian sources; No other research has been done on this subject or similar ones. Therefore, this comparative study is conducted for the first time with emphasis on contextualism in architecture and decoration of items such as the following that are mentioned in the following literature. The designer and the architect must understand the context of the design and the text, and then design according to the existing conditions, Blair said in his article 'The Islamic Mongols in Islamic Art and Architecture on Contextualism'. He stated that the design should be based on a realistic view of environmental information, and the building should interact properly and in a balanced

way with the structure of its environment. In contextual architecture, the resulting work is not a place, rather it is the production of environmental force and its metaphysical complement (Blair & Bloom, 1996).

"Islamic art is introverted and is the result of spiritual concentration and thought that manifests itself in artistic activities," Brolin said in his book 'Contextual Architecture' about contextualism in Islamic art. "This art has a pure and indigenous identity and fits the spirit and social position of its time. Islamic architecture has a similar foundation and is closely related to the spirit and social status of its time (Brolin, 2004).

In the book entitled 'The Atiq Mosque of Shiraz', Wilber stated that: The Atiq Mosque is the oldest mosque in Shiraz, which is also called Juma or Adineh Mosque. The main building of the mosque was constructed in 903. during the reign of Amr Laith Saffari and became the first religious center in Shiraz, in addition to its religious function, it also has played a socio-political role, hence having 6 entrances on different sides, the most important of which is the northern entrance that has been reconstructed during the Safavid period (Wilber, 2008).

Hattstein and Delius in the book 'Islam, Art, and Architecture' wrote about the Cordoba Mosque: "The Cordoba Mosque in Andalusia, southern Spain; Abdul Rahman I built this mosque in 786, and its initial name was Jame Hazrat. It is one of the largest and most beautiful mosques in Andalusia, containing the rarest examples of Islamic decoration and architecture in the world. The mosque was originally a small church, but after the Muslims conquered the Iberian Peninsula in 711, the church was divided into Muslim and Christian places of worship. In 784, The Emir (Abd al-Rahman) bought the Christian part and ordered a large mosque to be built in this area (Hattstein & Delius, 2011).

These studies have examined each of these mosques separately. However, for the first time,

the present study dealt with decorative patterns comparatively and examined the architecture and decorations to some extent with emphasis on contextualism.

Research methodology

This research first examined the contextual conditions and relationships in the two mosques with a descriptive method. Accordingly, the social, historical, physical, climatic, and special design and implementation conditions were examined considering the desired context, which emphasizes the relationship between the environment and the space. Therefore, this study is descriptive and analytical. Also, a content-analysis-based qualitative method was used. In addition, by using a qualitative method, objectives and hypotheses were examined to discuss the symbols that are present in the decoration and structure of the mosques in Shiraz, Iran, and Cordoba, Spain.

Contextual approach in Islamic art and architecture

Contextualism means a fundamental structure in which architecture is formed, and contains content and form. Contextual architecture is a phenomenon that cannot be considered abstract and distinct from the building. It not only directly impacts the potentials, the existential and esoteric characteristics of the foundations and roots but also affects the surrounding environment. In fact, in contextual architecture, all components are generally interconnected, and each component affects the whole, and any change in the components has vital effects on the whole. This approach is more related to the reflection of thoughts and context. The context in which architectural works are formed has an identity that includes physical, geographical, climatic, social, cultural, economic, and historical features. Contextualism emphasizes the need to pay attention to the environment surrounding architectural works and believes that the balance between architecture and the environment can be an

effective and reinforcing factor for the work itself, as well as the context. Contextualism is a better model for creating an environment. Therefore, more knowledge and awareness and a deeper understanding of the context and environment are necessary for architects and designers. This approach is an attempt to demonstrate the power of the visual environment on a scale larger than architecture (Beikzadeh Shahraki, 2012).

Indigenous Iranian architecture is physically and conceptually contextual and is formed in accordance with the current tastes and lifestyles of the people. Loyalty to the history and culture of land can mean using the patterns and experiences of its people, and creating new forms after concepts because architecture is the result of meaning (Kerenyi, 1976). Professor Pirnia has mentioned this important issue in Iranian and Islamic architecture discussions; also, architectural decorations have been an inseparable element of buildings throughout the Islamic period and before that, which were context-oriented and arose from climatic and cultural conditions

Developments in human cultures and changes in society always show their most obvious and important effects on the appearance of cities and buildings. Therefore, architecture cannot be considered a science separate from the context-based structure or separate from the categories of culture and religion. This sublime art, which has been passed on to us through prominent and cultured architects throughout history, has been the most beautiful manifestation and reflection of culture and tradition in any historical period. Therefore, it is the designer who, in addition to paying attention to function, and technical, psychological, and aesthetic issues, must look at other issues from a different perspective (Gültekin, 2012). Issues such as culture, tradition, religion, mysticism and philosophy, the originality and identity of each country, and high humane values must all be examined in some way. These are each and every element of contextualism.

Mosque in Islamic contextual architecture

Islamic architecture has a strong connection with nature (from the perspective of contextualism) and its basis is the inseparable link between man and nature. The presence of nature can be seen in the design of the tiles, plastering, bricklaying, etc., and issues such as the sense of sanctity, light, brightness, unity, and order are evident.

Islamic art in its contextual aspects emphasizes the landscape and the relationship between the environment and the space, and its identity is formed by understanding the message of its context. In fact, Islamic art manifests the message that the context of architecture (Islamic identity) has given it; As a result, the building will be a small part of the surrounding nature. In terms of contextualism, each building is designed and implemented based on cultural, social, historical and physical, climate, and specific conditions of the target geography under the influence of Islamic teachings (Ghadiri, 2006). Therefore, the Islamic building will be a member that is in harmony with its own context, and eventually with the Islamic context. The art of the Islamic world is diverse in terms of climate, culture, and interest in geometric styles, and the ideas of artists and architects are different in each region, but among the buildings of the Islamic era, the mosque is very important. Because the mosque is the religious pillar of the Muslim community and the center of urban and rural development. Needless to say that detailed study and analysis of these works is of undeniable importance in clarifying the mentioned cases. One of the first steps to achieve this goal is to know the history of architecture and the style of this building.

The geometric and vegetal patterns of Islamic art were mainly originated from the nations of Iran, India, Turkey, Arab countries, Greece, Spain, and Egypt, each of which was brilliant in some arts, years before the advent of Islam. But as Islam expanded its vast territory from India to Andalusia, a period of prosperity and glory

emerged. What emerged as Islamic art in these lands reflects each nation's own characteristics. Geometric and vegetal patterns play a significant role in Iranian-Islamic arts and are among the many Iranian sciences and pieces of knowledge that have been given to the world. Although many consider mathematics as an abstract science, many civilizations have been able to use mathematical knowledge to flourish their civilization. Muslims have been able to use geometry to develop their civilization in various fields. One of these areas is architecture, where principles, tricks, and works of art come together and become a growth factor for architecture. This is a great opportunity to give architecture a fundamentalist identity. Geometric design, structure, decoration, and space are the unifying forces of Islamic architecture. Recent studies on the relationship between mathematics and geometry and Islamic architecture indicate that Iranian Muslim artists made significant advances in mathematics and geometry in the Middle Ages. Supported by this view, which is rooted in Islamic identity, geometric and vegetal patterns have been engraved on building surfaces and decorated doors, walls, ceilings, and windows. Although the use of geometric and plant patterns as a basis in combining shapes is not the exclusive privilege of Islamic art, the special skills and genius of Iranians, especially in the Islamic era, has made a very rich and diverse tapestry of geometric and plant arts in architecture and decoration. This style is evident in the glass ornaments of the Gothic cathedrals, as well as the mandala patterns (on which the foundations of India's sacred architecture rest). But it is in Islamic art that these "spiritual geometric and plant forms" expand and become rational and complete. From the Muslim scholars' point of view, Islamic art in fact acts as the manifestation of mathematical, geometric, and plant concepts. According to Farabi, these methods are identified and employed through art (Abdullahi & BinEmbi, 2013).

The Atiq Mosque of Shiraz

Atiq is the oldest mosque in Shiraz known as Juma or Adineh Mosque. Later, in 1351 CE, Shah Ishaq put up a building in the middle of the mosque called Khodakhaneh or Dar al-Mus'haf wherein the Holy Quran was kept and recited. Its lithographic inscription is one of the valuable examples of calligraphy and contains some sentences of the Holy Quran. This inscription was written by Yahya Al-Jamali Al-Sufi, a famous calligrapher of the time of Shah Ishaq.

This mosque is the first religious center in Shiraz, which apart from its religious function, serves a socio-political role. That is why it has 6 entrances on different sides, the most important of which is the entrance on the northside, which was rebuilt during the Safavid period (Wilber, 2008); (Fig. 1).

The Cordoba Grand Mosque

The Cordoba Grand Mosque is located in Cordoba in the province of Andalusia, and the construction of this mosque took almost two and a half centuries. The old name of this mosque was "Jameh Hazra". During the reign of Abd al- Rahman, the Umayyad Caliph of Andalusia, the mosque had 11 arcades. Later, it turned into a church after the Spanish recaptured the city of Cordoba. The original building had no arches around the courtyard.

The horseshoe shape of the arches, which had emerged over years in Umayyad architecture, spread widely in Spain and North Africa. The map of this mosque is a simplified map of the Mutawakel Mosque. Upon entering this mosque, we find ourselves among a multitude of pillars but only the paths through the wings of the buildings lead us to the qibla. Architectural features of the mosque are wide naves, horseshoe, congress arches, plastered decorations, Moqarnes work, and horseshoe arches and altars (Hattstein, & Delius, 2011); (Fig. 2).

Therefore, various geometric and vegetal patterns

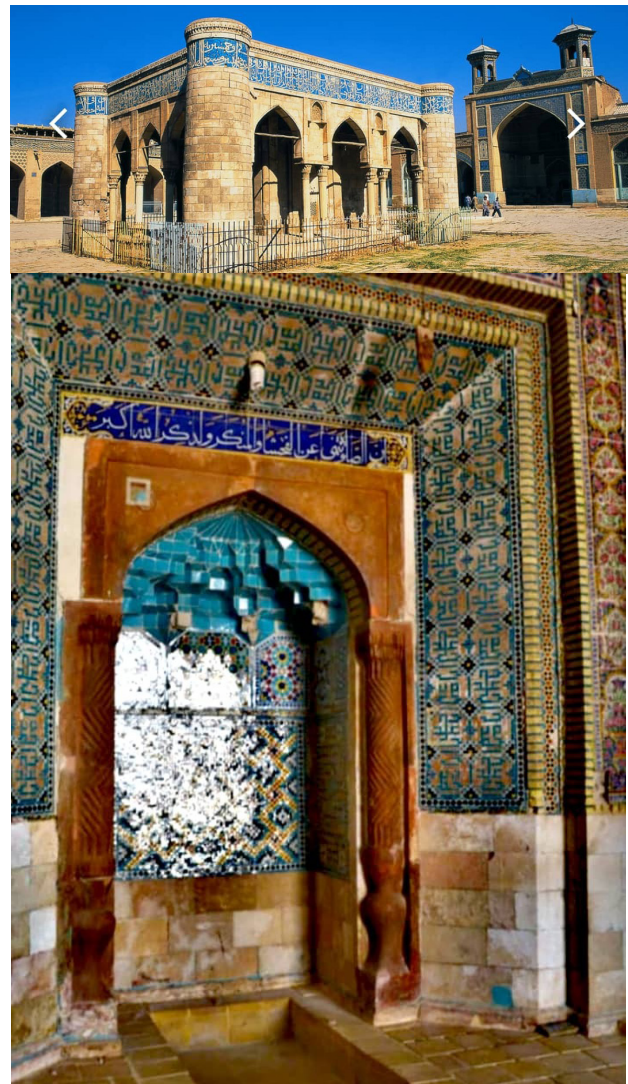


Fig. 1. The Atiq Grand Mosque in Shiraz. Source: Eslami & Shah Amiri, 2018.

that are engraved in both mosques express religious beliefs

Analysis of geometric patterns in mosques

• Circle

The circle is one of the most mysterious man-made symbols that reflect the world. This geometric shape is one of the most fundamental patterns used in the works of ancient Iranians. Different interpretations have been given for the circle and the square, but what is certain is that these forms are used in architecture and other arts for their perfection and stability. Sometimes poetic and non-argumentative interpretations have



Fig. 2. Cordoba Mosque. Source: Ghanizadeh & Pour Kalantari, 2015.

been given in this regard. However, they are not properly justified. Sometimes, this form joins the symbol of the heavens, the symbol of the globe in relation to the planet earth, and also somewhere the divinity. In the Islamic tradition, the shape of a circle is considered to be the most complete shape. The concentric, endless circle is the first sign of radiant and perfect absoluteness. This shape is the main form in the geometric designs of the Islamic period. The interior decorations of mosque domes are often showing the sun and the stars. The patterns of the sun and the stars, and their connection with the heavens go back to pre-Islamic patterns and beliefs, which did not cease to exist in the later periods, as they continued as decorative patterns, and also symbolize the heavens and the divine light in the Islamic era. The circle's application can be seen in the form of Shamsah or the Sun in parts of the Atiq's and Cordoba's ceilings.

The circle is the most complete geometric shape and has played an important role in symbolizing all historical periods. The presence of a circle can be observed in the visual arts of India and the Far East. In addition to the concept of perfection, the circle is also a symbol of the world's creation, as well as the concept of time, which is repeated as a series of consecutive moments. It is also a symbol of the constant circular motion of the sky, and it is associated with divinity, too. In the center of the circle, all the radii coincide and join at the center point.

In Islamic art, the pattern of the Shamsah or the sun is generally combined with calligraphy, and

other animal patterns, such as fish, or birds, which symbolized the divine light, and the goddess of the sun - Mitra - Mehr before Islam, and also in Islamic patterns, God has referred to the light of the heavens and the earth.

One of the most beautiful applications of circular geometric decorations in the art can be seen on the ceiling of the Cordoba Mosque. The use of the symbol of the Shamsah in this space, which is the dominant decorative design in the mosques of Cordoba and Atiq, is a representation of the sun. In Persian literature, Shamsah is the source of radiance, the embodiment of perfection, beauty, and the high position of the sun as the fourth constellation figure. This pattern, as its name suggests, evokes the concept of light, the same as the Holy Quran referring to God as light. Thus, in fact, this pattern is the corresponding meaning of the verse "Allah is the light of the heavens and the earth" and refers to the Creator. Light has clearly expressed a kind of belief in support of the existence of God in all religions, and even in primitive nations. Therefore, the symbol of the sun in both mosques is a symbol of divine light and is derived from the ancient pattern and concept of the God of the sun (Fig. 3).

• Chalipa

'Chalipa' or 'the broken cross' is one of the most ancient patterns among the different tribes in the world, which is interpreted as the four main directions, the four seasons, the four elements of wind, earth, water, and fire. In Mithraism, it is compared to the four-horsed chariot of Mehr and has different meanings in other cultures.



Fig. 3. Right: The main Shamsah pattern inside the dome of the Atiq Mosque in Shiraz; Left: The Cordoba Mosque in Spain. Source: Ghanizadeh & Pour Kalantari, 2015.

In China and India, it is called 'Swastika' and symbolizes peace, goodness, and friendship. Chalipa symbolizes action, emergence, orbit, and constant re-creation. It mostly symbolizes the sun and expresses concepts such as light, fertility, and happiness. In ancient times, the four seasons, which represented the stages of a plant's life, and the sun's passing stages through the four equinoxes, and then return to its original places were represented by Chalipa. Chalipa also symbolized the four stages of the moon, the lunar eclipse, the full moon, and the dark or hidden moon. These concepts were often depicted as a cruciform structure, that later took four or eight arms and became Mehrani or the Swastika. The completely broken cross, or Chalipa in the Islamic period is a symbol of unity and the embodiment of the four main directions, and the angels of the four seasons, and a symbol of fertility and rebirth. In mystical literature, Chalipa is the sign of the world of nature and the attributes of glory. The patterns based on the geometric themes of Chalipa, the swastika, and the square are created in various decorative forms in the architecture of the Islamic period, which can also be found in the ancient mosques of Shiraz and Cordoba. For Plato, the square represents harmony, which is the highest virtue, and the perfect knowledge through which perfect truth can be attained. The square

also symbolizes place, just as the circle and spiral symbolize time. The square represents the four main directions of north, south, west, and east, and thus represents the following quadruples:

- The four elements: Water, Earth, Wind, Fire;
- The four stages of human life: Childhood, Youth, Middle age, Old age;
- The four stages of human evolution: Fetus, Life, Death, Resurrection;
- The four seasons: Spring, Summer, Autumn, Winter;
- The four temperaments: Cold, Hot, Dry, Wet (Memarian, 2008).

The square symbolizes the smaller world, while the circle represents the larger world. In Islam, the two geometric patterns of circle and square have been used most symbolically. The Kaaba, which is the Qibla of all Muslims in the world, is a black cube around which Muslims perform Tawaf seven times during worship, without any interruptions. In this space, a cube made by repeating a square is placed in the center of the place of pilgrimage, around which the white-clad pilgrims must perform Tawaf. Also, the nave of the mosque consists of a large hall made from four rooms, the highest of which has a dome that symbolizes the world, and the greatness of God. In Persian mythology, squares and cubes are symbols of Ahura Mazda (Khazaei,

2002). However, most circles and squares have been used for the statics aspect, and as complete shapes in architecture. Different interpretations in the visual arts are significant to the point that can be accompanied by reasoning (Fig. 4).

• Spiral Pattern

The spiral pattern is adapted from a snake, which means health in ancient Persian, and has a special place in Persian and Western Mithraism. This pattern is also a manifestation of air, water, rotating thunder and lightning, whirlpool, great creative power, and grace. Since it shrinks and opens up, it can also represent the rising and falling of the sun and the moon, as well as continuity. The spiral is the dichotomy between the rise and fall of solar or lunar forces. In the Cordoba Mosque and Atiq Mosque, this pattern can be seen too, which is one of the most repetitive patterns in the decorations of the Islamic era. The pattern of the spiral has its roots in ancient Iran and the ritual of Mehr. It hints to the snake which is pouring the essence of life in a convivial cup. In many entrances and lintel of buildings of the Islamic era, such as mosques, etc., there are two spiral columns on either side of the arch, that lead to a cup or vase. Over time, spirals have appeared in plant and natural forms, as the spiral becomes plant-shaped and leads to the vase. One can mention the case of Imam Mosque's entrance in Isfahan, which has many samples of these spirals on the sides of the arches, the mosque's and other buildings' lintel. The spiral pattern is one of the most important ones among the patterns, due to its diversified origins. The use of this pattern has been common in many ancient cultures, and it has been used frequently in works of art from the Paleolithic era onwards. This pattern has symbolic connections with various forms and shapes (inspired by nature), such as a ram's horn, a snake, a bird, a plant, and water. This pattern can have a sacred meaning and is a symbol of life and health (Fig. 5).

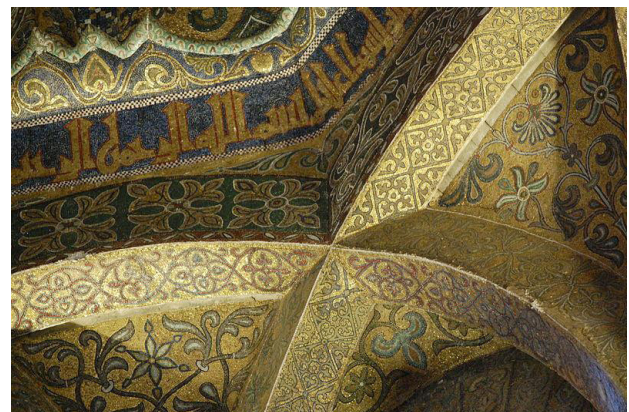


Fig. 4. Top: Chalipa patterns in the Atiq Grand Mosque. Source: Eslami & Shah Amiri, 2018; Down: Cordoba Grand Mosque. Source: Ghanizadeh & Pour Kalantari, 2015.

• Moj-e Modakheleh (Interference wave)

The geometric pattern of the wave is one of the patterns that has been used a lot in Islamic art. In Islamic art, the wave of interference symbolizes the seven heavens, water, and sanctity of water, which can be seen in the stone works of Jiroft, and the objects and pottery of the Stone Age. The patterns used in the Cordoba Grand Mosque are taken from the Temple of the Goddess in Çatalhöyük, Turkey. This is considered to be the historical context of contextualism. In the Atiq Mosque, this pattern refers to the Iranians' belief



Fig. 5. Right: A spiral pattern in the design of the Atiq Mosque in Shiraz. Source: Eslami & Shah Amiri, 2018; Left: the Cordoba Grand Mosque. Source: Ghanizadeh & Pour Kalantari, 2015.

in the seven heavens, which creates the cultural context of contextualism (Fig. 6).

• Star

The pattern of the Star, the Moon, the sun, and in general, the celestial bodies in the decorations of Islamic-Iranian art goes back to the previous era, and symbolizes the sanctity of the heavens and its sacred elements and refers to Mithraism, which has clearly seen influenced Islamic patterns, especially with the Muqarnas works in the altars. The Muqarnas works with the patterns of the sun, the rays of light, and stars refer to the dome of the sky. The star is a symbol of divinity, transcendence, eternity, immortality, and hope. It is also known as the symbol for the wives of the King of Heaven, who has a crown of stars. In this regard, one can consider Anahita to be the source, as she has a crown of shining stars on her head, a golden collar around her neck, and square

earrings on her ear (Doost khah, 1982); The square earrings are probably in the shape of a quadrivial star. In Mesopotamia, the star symbol was used as a form of worship. The four-pointed star, which later became the cross, symbolizes divinity, excellence, eternity, sun, love, and justice. The vertices of the star stand for light and spirituality. According to the findings of this study, most of the star patterns used in the Atiq Mosque are worked as eight-pointed stars, which is one of the patterns existing in the inscriptions of the fifth and sixth centuries, and was later known as the rose in Islamic art. The eight-pointed star turned into a kind of circular pattern, and later into a cross and a star. In other words, the symbol of the star has entered art in different periods and different ways, each of which has different meanings (Mahina & Selcuk, 2018).

The eight-pointed star, which is also seen in Mithraic patterns, is formed through the rotation of two squares,

or the sun pattern with eight rays. It is seen throughout Europe, Asia, and Africa, and is sometimes interpreted as the eight gates of paradise in Islam. In mysticism, paradise is considered to be through the eighth door, which is the door of repentance and is always open.

But the star patterns in the Cordoba Grand Mosque are five-pointed stars. The five-pointed star in Islamic patterns is defined as Shamseh-e Mohammadi. The number five has been linked to the five senses. This number also plays a role in general astronomical

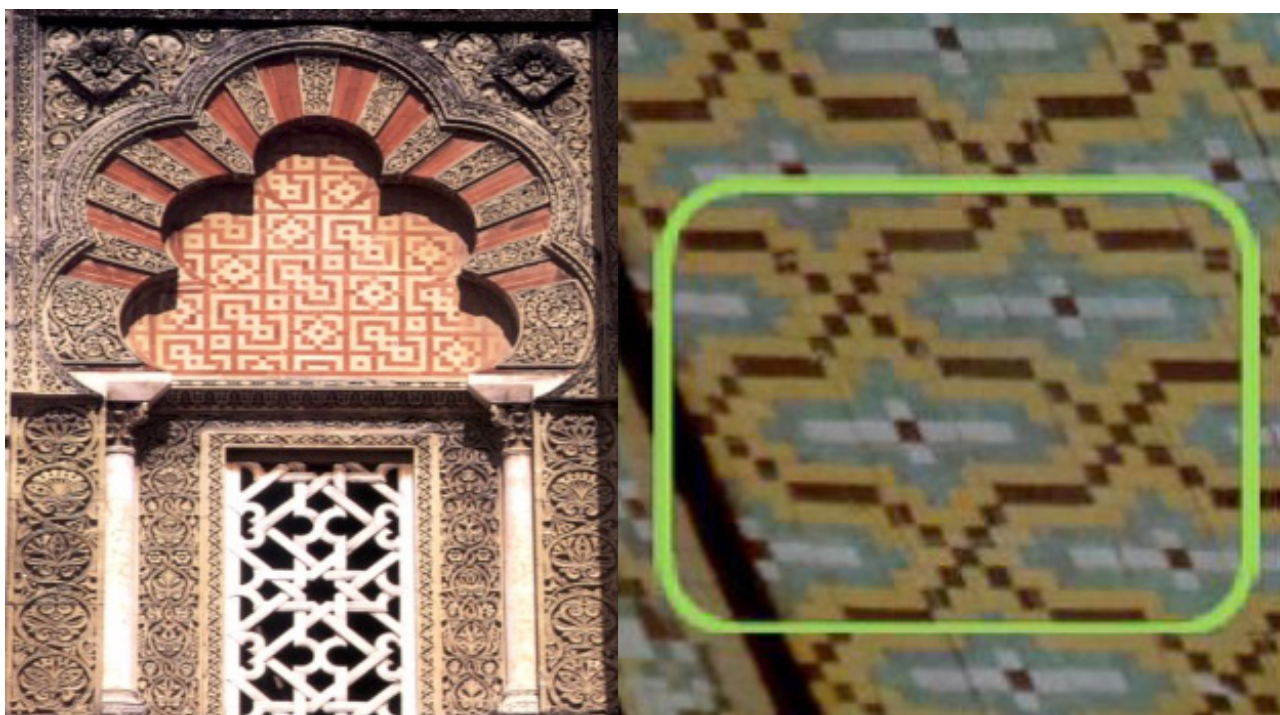


Fig. 6. Right: The interference wave patterns from the Atiq Mosque of Shiraz. Source: Eslami & Shah Amiri, 2018; Left: Cordoba Grand Mosque. Source: Ghanizadeh & Pour Kalantari, 2015.



Fig. 7. Right: The pattern of the star in the Atiq Mosque in Shiraz. Source: Eslami & Shah Amiri, 2018; Left: The Cordoba Grand Mosque. Source: Ghanizadeh & Pour Kalantari, 2015.

trends (Abdullahi Hanif & Maleki, 2016). All kinds of five-pointed, six-pointed, seven-pointed, and eight-pointed star or flower patterns are seen mostly in Iranian-Islamic patterns, which have had different interpretations from the past to the present, such as the five-pointed star or the star of David that goes back to pre-Christian times, but its continuation is evident throughout the Islamic era (Fig. 7).

• Tabl (Drum)

The pattern assigned with the name 'Tabl' or the drum (dormant drum, straight drum, and drum in a drum, as well as turning drum), is one of the ornaments used to decorate Islamic architecture. This role is sometimes associated with resurrection, the blow of the Israfil's Trumpet (*see Nafkh al-Şūr), and judgment day. Among the discovered patterns in the ancient site of Susa belonging to the Ilam civilization, this arrangement is silent and regular. This role is evident in Islamic buildings. In the Atiq Mosque of Shiraz, this pattern is harmonious with the natural elements around it (natural context), but in the Grand Mosque of Cordoba, it is formed with human-based features (cultural context). This pattern is exemplary in both mosques (Ahmadi, 1998); (Fig. 8).

A summary of the comparative analysis of the patterns of the two mosques

Conclusion

Some of the patterns that are abundantly seen in the Islamic art ornaments and decorations are Shamsah or the sun; the Chalipa - or the broken cross, which is also a symbol of the sun, and also a symbol of peace and tranquility, that has a special place in the art of most nations and peoples of the world with different beliefs and religions. Therefore, patterns and symbols that have ancient roots in people's beliefs are repeated over time in the form of motifs. Shamsah has always been a symbol of the sun and the divine light, and it also shows divine light in Islamic art. The main question of the research is "What are the similarities between the designs used in different parts of the Cordoba Grand Mosque and the Atiq Mosque?" According to the findings of the present study, examples of geometric and vegetal patterns can be seen in these two mosques. The symbolic geometric and vegetal patterns represent natural elements. The circle is the symbol of the world, stillness, the most complete geometric shape, the dome, the sky, the existence, and a symbol of the heavenly and the divine. Shamsah is a symbol of the sun and celestial light. Chalipa is a symbol of the rotation of seasons and the continuation of creation, as well as a symbol of the sun. The spiral is a symbol of fertility, health, and life.

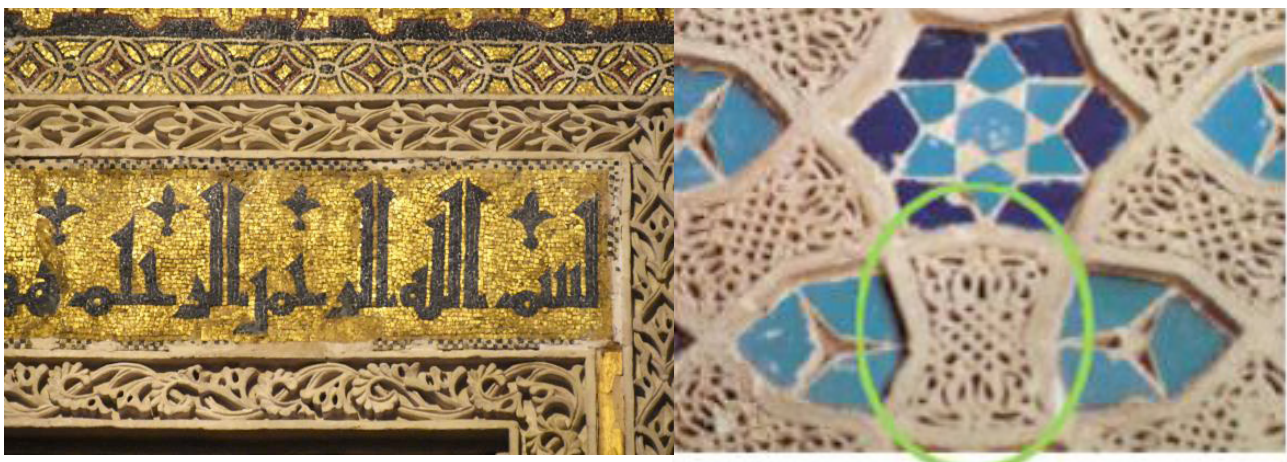

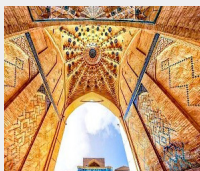
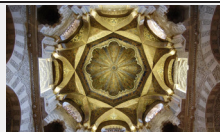


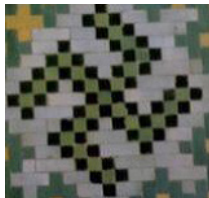
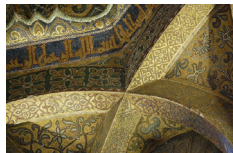

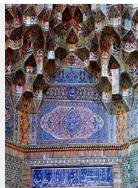
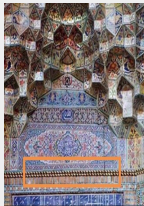

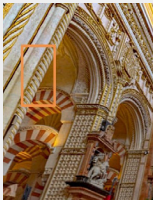

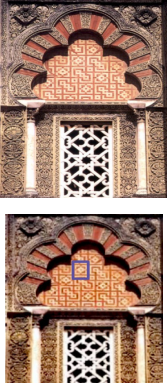
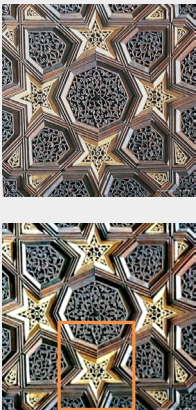
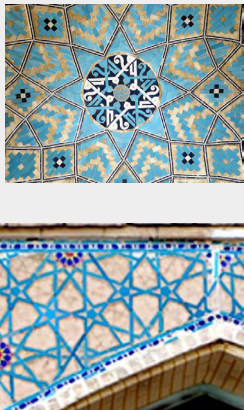
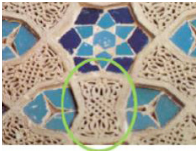



Fig. 8. Right: The pattern of the Tabl (drum) in the Cordoba Grand Mosque. Source: Ghanizadeh & Pour Kalantari, 2015; Left: the Atiq Mosque in Shiraz. Source: Eslami & Shah Amiri, 2018.

Table 1. A comparison of geometric and vegetal patterns of the Atiq Mosque of Shiraz and the Cordoba Grand Mosque with a contextualist approach.
Source: Authors.

No.	Pattern Type	Symbology of the pattern	The Atiq Grand Mosque's Patterns	The Cordoba Grand Mosque's Patterns	A comparative analysis between the patterns of the two mosques based on the four Contextualism approaches (Physical, historical, Cultural, Climatic)
1	The Circle/ Shamsah	In Islamic art, the Shamsah is inspired by the circular pattern of the sun, which depicts the sun and the divine light.	 	 	This pattern has been formed in both mosques based on the cultural contextual approach (natural context) according to the surrounding elements.
2	Chalipa	It is known as the sign of unity, and the manifestation of the four main directions, and the angels overseeing the four seasons. It is also considered a symbol of soul and rebirth, and some have considered it a symbol of the sun. It expresses concepts such as light, fertility, and happiness.	 	 	The pattern of Chalipa in the Atiq Mosque is derived from ancient Iranian beliefs (historical contextualist approach). It is also a repetitive pattern in the Cordoba Grand Mosque and goes back era before Christ, and its repetition has become a motif in Islamic decorations (historical contextualist approach).
3	Spiral	The spiral pattern, which somehow refers to the snake, is one of the most ancient patterns in Eastern and Western art; It is frequently repeated in Persian ornaments and goes, back to the ancient beliefs of Iranians. The ones in the Cordoba Grand Mosque are related to the ancient beliefs that were common in Christianity and earlier religions; According to Greek mythology and ancient Iranian beliefs, the snake is a sign of health.	 	 	The pattern of the spiral in both mosques is based on ancient and mythological beliefs with a historical contextualist approach, examples of which are shown in the picture.

Rest of Table 1.

No.	Pattern Type	Symbology of the pattern	The Atiq Grand Mosque's Patterns	The Cordoba Grand Mosque's Patterns	A comparative analysis between the patterns of the two mosques based on the four Contextualism approaches (Physical, historical, Cultural, Climatic)
4	The Interference Wave (Moj-e Modakheleh)	The interference wave symbolizes the seven heavens in Islamic art.			In the Atiq Mosque, the interference wave has been formed based on the cultural contextualism approach with human-based characteristics (socio-cultural context), but in the Cordoba Grand Mosque it has been formed based on the historical contextualism approach in (historical context).
5	The Star/Sun	The star is a symbol of divinity, transcendence, eternity, immortality and hope.			In the Atiq Mosque, the star pattern is based on the cultural contextual approach with the surrounding natural elements (natural context), however, in the Cordoba Grand Mosque, it is based on the approach of cultural contextualism with human-based features (cultural context).
6	The Drum (Tabl)	In Islamic architecture, it refers to The Blow of Israfil's Trumpet, and Judgment Day.			In the Atiq Mosque, the pattern of the drum is formed with a cultural contextualist approach based on the surrounding natural elements (natural context); But in the Cordoba Grand Mosque, it is cultural contextualism with human-based features (cultural context).

These patterns adorn architectural spaces in the Islamic period. Geometric and vegetal patterns represent the natural elements, on which human existence and life depend. Thus, as the praise and sanctification of natural elements were considered significant, the geometric and vegetal patterns were symbolically associated with the same sacred elements and were manifested in the art of the Islamic world. The context-oriented approach was studied in these two mosques, and it was found that both mosques were inspired by the Prophet's Mosque's architecture, but they are context-oriented in terms of decoration. The architectural decorations of mosques are in harmony with cultural contexts, especially religion and beliefs. The decorative patterns displayed in geometric and vegetal forms are inspired by the simplification of the elements of nature that are manifested throughout the Islamic world. Decorative patterns in Shiraz and Cordoba mosques have also used these symbolic geometric and vegetal elements including Shamsah, Chalipa, Circle, Triangle, Square, Spiral shapes, etc., which are symbols of the elements of nature and have their roots in Persian-Sassanid and Byzantine art, and have been repeated and continued in the art of the Islamic era as a motif. In conclusion, it can be said that in the Islamic era, Iranian architecture is one of the grounds for the emergence of a beautiful, diverse, and unique collection of geometric and vegetal patterns, which is manifested in the Shiraz Mosque, and the designs used in the decorative mosaics of Cordoba. These are among the excellent and unique examples of Islamic-Byzantine decorations, especially in the three altars. The Kufic mosaic inscriptions in the altars, with the golden color in the azure background, are one of the calligraphy masterpieces.

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