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DECORATIVE DESIGN IN THE MINARETS OF ANCIENT ISLAMIC MOSQUES: IRAQ AS A MODEL

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Abstract
To trace the growth and development of Islamic decorative art, it is essential to identify the various civilizations that came under the influence of the Islamic state. The impact of a civilization found in the Mediterranean seems to shape that Islamic artistic identity. This abstract trend in Islamic art and architecture emerged in Central Asia, making Islamic architecture a fertile source for the Muslim artist and architectural designer. Its decorative designs, abundant with many architectural complements, included vegetal and geometric motifs in the realm of Islamic art, introduced with the Mongol invasions. Despite the cultural heritage and artifacts brought by traders, credit goes to the Muslim artist for what he created and developed in the field of Arabic calligraphy and Islamic architecture, which integrated different civilizations harmoniously under Islam. This resulted in a magnificent artistic output in architecture, particularly on the walls of minarets, where Islamic decoration has always been able to rival other arts.
Keywords: *Decorative Design, Minarets, Ancient Islamic Mosques, Islamic Art.*

1. Introduction

Islamic decorative art represents a harmonious blend of cultural influences and artistic innovation, reflecting the rich tapestry of civilizations that came under the Islamic state. Among these, the Mediterranean civilizations significantly shaped the evolving Islamic artistic identity, which found its unique expression in Central Asia. This research traces the development of Islamic decorative art, focusing on the integration of diverse influences into a cohesive artistic tradition. From vegetal and geometric motifs to the refined art of Arabic calligraphy, the Muslim artist demonstrated an unparalleled ability to adapt and enhance artistic elements introduced through events like the Mongol invasions and the trade of cultural artifacts. The study emphasizes how these influences culminated in architectural masterpieces, particularly the intricate decorations adorning minarets, showcasing Islamic art's ability to rival and surpass contemporary artistic traditions. This exploration aims to highlight the profound creativity and adaptability that define the legacy of Islamic decorative art.

The Holy Qur'an encompasses various aspects of religious life, influencing different arts during the Abbasid era and other periods through the use of decorations and their creative patterns and types by the artisan craftsman in the Islamic world. All decorations, derived from nature and reflecting God's creation and the infinite, encompass both religious and worldly life, including Islamic art, characterized by using all that is found in nature and embodying it on the facades and walls of Islamic mosques. These decorations are considered linked to the Islamic religion and are embodied in various ways, such as relief carving, embossing, or abstraction, represented in all elements of Islamic architecture.

2. Research Methodology

Research Problem

Islamic architecture encompasses design elements and architectural complements such as the dome, minaret, arch, column, muqarnas, and balcony. It also includes Islamic decorations such as braiding, star patterns, and Islamic arabesque. However, to what extent do these designs and their design values manifest in the facades of Islamic architecture, particularly minarets, which are a significant element of mosque facades, reflecting the philosophy of Islamic monotheism and religious beliefs? Minarets are a source of decorative designs and one of the first elements to capture attention in Islamic art, representing design forms of decorations in mosque minarets. These forms include vegetal and geometric patterns, known as arabesque, and are extensively embodied in the decorative design of minaret walls. These designs feature similar and modified forms that rely on transformation and the loss of linear perspective and density. Decorative design in minarets depends on geometric shapes where the compass played an important role, resulting in limitless types of these decorative designs . The Muslim artist discovered a new world by embodying these shapes on the minaret walls, always carrying a doctrinal significance and applying decorative design. These shapes can be applied to stone and artistically engraved, holding creative meanings manifested in the brilliance of planning, composition, and coordination. The research problem lies in understanding the extent of the impact of decorative design and its application on mosque walls. What is the relationship and the interconnected values in embodying these shapes on walls from aesthetic, artistic, and functional perspectives according to doctrinal and Islamic instructions? This includes the types, sizes, and application patterns of the shapes and lines in the design of decorations as achievements of human creativity, presented in this field related to architecture and its design, which addresses the viewer and attracts attention to the height of the minaret as one of the essential elements and complements of Islamic mosque architecture.

The research problem is summarized in the following questions
What is the relationship between decorative design and the design values derived from various forms of decoration on the minaret wall, considering it as a vital element?

Research Questions

What is the potential of utilizing design elements and principles on minaret walls, considering them as architectural complements in ancient mosques in Iraq, and viewing minarets as sources of decorative designs in terms of Islamic, spiritual, and doctrinal aspects?

Importance and Need for the Research

The importance of the following research lies in:

The study reveals the extent of the relationship between design elements, contributing to achieving aesthetic, artistic, and functional values for the minaret.
The decorative design values on the minaret wall contribute to a spiritual and religious connection.
Understanding the impact of design principles in Islamic doctrinal thought on the design process of the facades of old heritage mosques in Iraq.
Providing an approach to appreciating the facades of Islamic architecture through the decorative designs of the minaret, coordinating and arranging them for artistic and aesthetic purposes.
It adds aesthetic value to an Islamic building through the decorative design formations on the minaret walls, possessing both utility and adornment properties for the mosque.

Research Objectives

To reveal the impact and value of decorative design in embodying various forms and types of decorations.
To uncover the philosophy of design principles and the potential use of design elements in the architectural complements of Islamic architecture and the decorative applications of the minaret in the mosque.

Research Hypotheses

The research assumes that the facades of mosque minarets include design and decorative values, as well as the philosophy of monotheism in the elements and principles of design and their application.

The research assumes that artistic beauty and values are the most important results that the designer may achieve in the decorative designs on the minaret walls of mosques.

Research Boundaries

The research is conducted under the following limitations:

Temporal boundaries: (692 AH) to (1893 AD)
Spatial boundaries: Iraq - Baghdad.

Definition of Research Terms

Design

Defined by (Abu) as the process of distinguishing with lines and geometric and decorative shapes in occupying empty spaces for specific purposes, including decorative shapes. Occupying space requires high technique, refined taste, and reaching the content in the simplest way and expression.
Defined by (Scott) as the creative work that determines its presentation.
Defined by (Hammouda) as the translation of a specific subject into a purposeful drawn idea, fully related through execution, carrying an artistic value in its aspects.

Design

It is the organization of the relationships and basic elements that make up the geometric decorative work through design principles and criteria to achieve functionality and beauty with the unity of the intellectual theme to achieve the artistic outcome.

Decoration

Defined by (Ibn Manzur) as (decoration: ornamentation), then (every ornamentation was called a decoration, then it was likened to something supplied with it, and a house made of porcelain, and he decorated the house, decorated it, and completed it)

Minarets

Defined by (Johnson) as "not a structural or functional component but something added to what is structural or functional. It may not be technically constrained, yet it serves the purpose of making things beautiful".

Minarets are typically raised above the mosque structure to project the call to prayer (adhan) to the farthest point from the mosque. They were not used during the Prophet Muhammad's (PBUH) time; instead, the call to prayer was made from the roof of a house near the mosque.

Minarets of various shapes have imparted a distinctive spiritual character or a remarkable structure, creating a lively artistic impact with their prominent vertical shapes above a calm horizontal formation composed of compact building blocks at their base, representing the mosque sanctuary and its surroundings.

Mosque Facades

It is well known that the exterior facades of Islamic architecture were initially composed of thick, high walls with no openings or small high openings, making the structure resemble a fortress. These exterior facades underwent significant development, and Muslim architects incorporated many new design elements, especially simple niches, muqarnas with multiple openings, and organized designed and open surfaces. They also created colorful courses with ablaq masonry, silent and vegetally and geometrically interlocked decorations, ornate crenellated upper balconies, commemorative and regular entrances, among other architectural and artistic elements.

The researcher believes that mosque facades, especially their elements, including the minaret, are one of the features of Islamic architecture that Muslim artists paid particular attention to. They added designs, shapes, and geometric lines, Quranic inscriptions in Kufic script, and decorative designs related to the Creator, evoking the purity of the place and the remembrance of God, making it suitable for worship. These elements, along with the openings, dome, minaret, and stonework, are crafted with precision and possess religious, worldly, and artistic beauty, including the iwan and Islamic arches that have spread across the facades Islamic mosques as potential spaces for implementing carvings and decorations in high relief using plaster.

First Topic: Architecture in Islamic Eras

Arab architecture, in particular, encompassed numerous artistic elements and forms, repeatedly used here and there. It became possible to establish them as distinctive vocabulary for this art. The facades of religious buildings, including Islamic minarets, were distinguished by the richness and diversity of their architectural units and elements. These formations, with their regularity and diversity, constituted an unparalleled aesthetic dimension. They also formed a rhythmic artistic expression through the contrast of these units in their shapes and the harmony in their functions.

When analyzing these units, one must consider the vast expanse of the Islamic state and its connections and interactions with other open countries. The clear influence in shaping architectural and artistic design adopted from the architecture in those countries, and the infusion of natural motifs and the prevailing religious thought into the building style that was widespread in the Islamic countries through the design unity that marked its identity.

This architecture was imprinted with its unique character, and those buildings and for the reasons for the establishment of Islamic art and the selection of the Umayyads (132 AH - 750 CE) in the city of Damascus, the capital of the Islamic Caliphate, which was the first school of this art. This period had a profound impact on the history of Islamic civilization, as it marked the connection between Islamic culture and the civilizations of the countries that were opened up by Islam.

Craftsmen and artists from the countries that embraced Islam were employed without Umayyad interference in these matters, due to their focus on religious and military affairs at that time. The result was a manifestation of Sasanian and Byzantine influences in Umayyad Islamic arts, with decorative elements blending in this era, starting with those close to nature. This is clearly evident in the mosaic of the Dome of the Rock in Jerusalem and the Umayyad Mosque in Damascus, as well as the frescoes on the walls of Qusayr Amra and the gypsum and stone decorations on the façade of the Mshatta Palace.
We have received from this era artifacts and treasures that indicate that Islamic art emerged in each region of the Islamic state based on its previous arts.
At the same time, it drew from artistic traditions in other regions subject to Islam, which, under unified rule, had the opportunity to blend.
Also, in alignment with the teachings of Islamic religion, its spirit, and rituals.

Umayyad art was distinguished by retaining some classical styles that were unified in its early stages in Islamic art during the Umayyad era. Moreover, it lacked the influence of Turkish and Asian influences that appeared and spread in the arts of the Islamic East. It also featured some developed European styles, such as the two-tiered arches (as seen in the Mosque of Cordoba). Occasionally, it mixed with local styles like the Mudéjar art, creating Islamic Spanish art. It can also be said that the new architectural style emerged in the arts and architecture of the Islamic East, with the Great Mosque of Cordoba, built by Abd al-Rahman I in 785 CE, being one of the most beautiful Islamic buildings. The mosque's roof is supported by 18 pillars composed of two tiers stacked on top of each other. It is noteworthy that the tiers are perpendicular to the wall (as in the case of the Al-Aqsa Mosque in Jerusalem), forming a round tier that resembles a horse's hoof. The prayer hall's arcade was made of magnificent stone, so its roof had to be made of light material. The columns were elevated, and then the second row of arches was built at a level above the first row, which was a unique design at that time.

Islamic Architecture in the Abbasid Era

The Abbasid style was represented by its most prominent aspects, revealing its explicit features that formed the basis for Islamic Arab decorations, as evidenced by the gypsum models discovered in the buildings of the city of Samarra. These models covered the walls from the inside to about one meter in height, as in the case of the palaces of Jawsaq, Balquara, and Bab al-Amma. These styles progressed through several successive stages in development, referred to as the "First Style".

The second and third styles emerged within a period of no more than a quarter of a century due to the rapid urbanization in the city, which imposed urgent demands on craftsmen to meet the pressing needs for construction and ornamentation in a short time. Therefore, they resorted to attempts at simplification, which led to the emergence of the mentioned styles, differing in the nature of elements, artistic features, and execution style in Islamic buildings.

The Mesopotamian region has witnessed the succession of several civilizations since the fourth millennium BCE. The Sumerian civilization in the south, the Akkadian civilization in central Iraq, and the Babylonian civilization with its center in the city of Babylon, which reached its peak during the reign of Hammurabi, were among the most important civilizations in this area. The architecture in the Mesopotamian region has several characteristics determined by the climate, land, and other factors:

> *Mesopotamia is often swept by devastating floods resulting from the melting of snow in the Armenian mountains. These floods cause significant losses, prompting designers to build their cities on artificial mounds, leading to the prevalence of platforms and terraces in buildings.*

The scarcity of Rocky Mountains, especially in the central and southern regions, led Mesopotamian architecture to use sun-dried or kiln-fired mud bricks. In the north, however, limestone marl was readily available, which limited the use of mud bricks.

The scarcity of forests also led Mesopotamian architecture to forgo wooden roofs and construct domes from fired clay bricks. The Sassanians, Byzantines, and later the entire West took inspiration from them. Domes, especially in religious buildings, remained a characteristic feature of Islamic architecture.

One of the most important types of buildings that emerged in the Mesopotamian region is the "Ziggurat," a temple in the form of a tower composed of gradually decreasing layers as it ascends, resembling a pyramid, with inward-leaning walls.

Among the most important Islamic buildings constructed by the caliph was the focus on teaching Sharia law according to the Sunni Shafi'i School. Baghdad witnessed this during the reign of Al-Mustansir Billah.

The Abbasid caliph built the Al-Mustansiriya School in the year 625 AH (1227 CE) and designated it for teaching the four Islamic schools of thought. It is a rectangular building composed of a large courtyard surrounded by arcades. In the middle of each side, there is an iwan with an area of 6 square meters, and each iwan contains two teaching halls. The student halls were two-story buildings located at the ends of the iwans, and they had balconies supported on shoulders. This school took the form of Iranian structures.

Fig 1: Shown the image illustrates the Al-Mustansiriya School and its decorations.

And the patterns and styles of presenting the subject matter of Islamic ornamentation, especially in the context of the school, could be in geometric,

calligraphic, structural, or natural styles, using the compound attribute style in the decoration of the school walls. However, these patterns and diversity depend on the elements governed by the design of the decorative entity, which are the specific purpose and objective of Islamic architectural ornamentation and the nature of the geometric decorative environment and its formations. As shown in Figure (2).

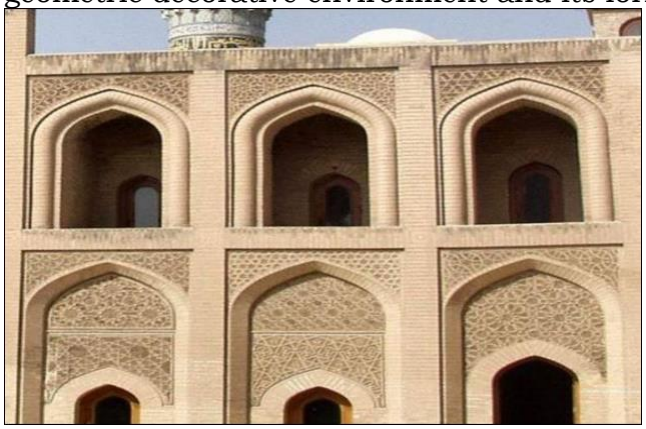


Fig 2: Illustrates the diverse styles and patterns of Islamic ornamentation, specifically as they pertain to architectural decoration.

3. Theoretical Framework and Previous Studies

Design Elements in Islamic Mosque Architecture

Understanding Islamic architecture and many of its essential characteristics cannot be achieved without understanding the religious influences that are considered fundamental in shaping its distinct personality from other architectural styles. Islamic religion, as a comprehensive and unifying faith, has defined the framework of the relationship between the servant and his Lord, and between him and his community, leaving no aspect of a Muslim's life without a prescribed model to follow.

Islamic art does not express specific forms representing God, the universe, ideals, or humans, but rather seeks to enter the realm of the absolute. The secret behind these grand meanings and Islamic aesthetic standards lies in freedom, creativity, the pursuit of ideals, transcendence, and ethics.

The beauty in Islamic art differs from beauty in other arts where imitation is the goal and standard. Islamic beauty does not lie in the most representational material reality but rather in the form that expresses the absolute. In Islamic art, relative boundaries dissolve, sensory memories fade away, and relative values retreat before the power of light shining in the consciousness of the universe.

Islamic art is nothing but a refinement of the arts that existed before Islam in the regions conquered by the Arabs after they embraced the manners of Islam and absorbed its spirit. We notice a clear difference in forms, but also a real brilliance in essence and content in the philosophy of Islamic art.

The philosophy of Islamic art is based primarily on abstraction, where this philosophy returns to the faith calling for abstraction from the temptations of life and contemplating and appreciating the beauty of God's creation. The geometric units used by Muslim artists in their artistic works consist of lines and geometric shapes. These decorations are abundant in friezes, floors, muqarnas, niches, and walls, which are architectural elements of the mosque based on diverse abstract forms that spread with mathematical growth during artistic formation.

Therefore, the philosophy of Islamic art is essentially based on abstraction, as this philosophy returns to the belief in abstraction from the temptations of life and contemplating and appreciating the beauty of God's creation. Since ancient times, humans have adorned their dwellings with various decorations, regardless of the material and means. Since humans started painting their constructed environment of stone with a layer of plaster, they began decorating it with various forms or engraved motifs. After humans discovered brickmaking, they attempted to shape their environment with different forms. They then progressed to the technique of glazing bricks with various colors. Humans also innovated the technique of creating niches in walls to eliminate monotony and improve the appearance of wide, uninterrupted surfaces. They decorated these niches from the inside, and then progressed to create muqarnas and corner embellishments on the higher parts of walls.

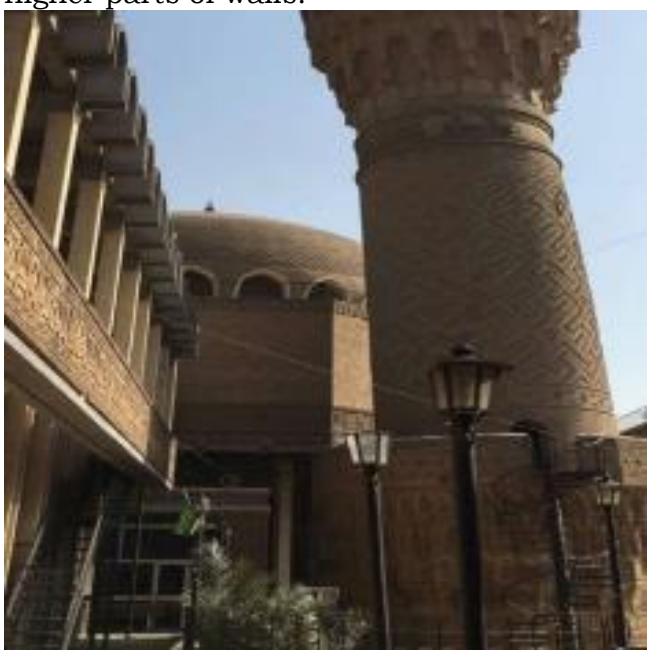


Fig 3: Shown it illustrates abstract decorate ons of niches, muqarnas, and wall corners.

Mosque Architecture and Islamic Decoration Elements Arab architecture, in particular, included many artistic elements and forms that were frequently used here and there, making it possible to consider them distinctive vocabulary for this art. The facades of Islamic religious architecture were distinguished by the richness and diversity of their architectural units and elements, which formed a harmonious and aesthetically unmatched rhythm through the variation in their shapes and the harmony in their functions. When analyzing these units, we must familiarize ourselves with their architectural elements:

Minarets

These are often called "manā'ir" in Arabic. They are usually raised above the level of the mosque building to transmit the call to prayer (adhan) to the farthest point from the mosque. They were not used during the time of the Prophet Muhammad (peace be upon him); instead, the call to prayer was made from the roof of a nearby house to the mosque.

Minarets come in various shapes, giving them a distinctive character and a magnificent composition. They exhibit artistic expression with their towering,

clearly delineated forms above a serene horizontal arrangement. At their base, they consist of stacked, converging building blocks, representing the sanctuary of the mosque and its surroundings.

The most important forms of minarets include the square, also known as the "sawāmī'" (towers), the cylindrical minaret, also known as the "manā'ir" (lighthouses), and the spiral minaret, called the "malwīyah" due to its twisted external shape. Thus, minarets, in general, represent the vertical, ascending line towards the sky, aesthetically and spiritually connecting, in the Muslim context, to the expansion of faith emanating from the heart towards the heavens.
In the image (Figure 4), a depiction of a cylindrical and a spiral minaret is provided.

The Adhan (Call to Prayer)

The call to prayer serves as a language and is used as a ritualistic element to announce prayer times or signal for Hajj. Minarets and lighthouses serve as landmarks from which the call to prayer is made. The terms "minaret" and "lighthouse" were used in the Islamic East. The term "lighthouse" was applied to the minaret because most minarets in the Islamic Maghreb illuminate with lights at sunset during Ramadan and remain lit until dawn, signaling the beginning of a new fasting day.

In the Western Islamic lands (the Arab Maghreb and Al-Andalus), minarets are referred to as "sawāmī'", which is attributed to the fact that most minarets in the Islamic Maghreb have a square shape resembling the towers of lighthouses.

The oldest minaret in the Islamic world, which has retained its original shape despite modifications, was erected by Uqba ibn Nafi between the years 50 and 55 AH (670-675 CE) in the Great Mosque of Kairouan. It serves as a model for the minarets of mosques in the Arab Maghreb and Al-Andalus. Minarets that appeared in the early periods of Islam (Umayyad era) were square in shape, influenced by the style of Syrian church towers. However, in Iraq and Persia, minarets took on a cylindrical form and sometimes a spiral shape, with the spiral serving as the staircase outside its body. Examples include the mosques of Samarra and Abu Dulaf in Iraq. Ahmed Ibn Tulun adopted the same idea of a spiral minaret when he built the minaret of his famous mosque in Cairo, which is considered the oldest minaret in Cairo in terms of retaining its original shape.

Fig 5: A depiction of the Mosque of Ahmad ibn Tulun is provided.

The shape of minarets evolved in Egypt, especially during the Mamluk era, where they began with a square base topped by an octagonal section, then a circular section ending in a single or double top, sometimes adorned with a finial or a dome. Ottoman Turkish minarets were characterized by their beauty and elegance, with their straightness and conical termination resembling the tip of a pencil. Examples include the minarets of the Muhammad Ali Mosque in Cairo and

others that grace the skylines of Muslim lands. There is no specific location for the minaret in relation to the mosque; it may be integrated into the building itself, as seen in Damascus, Kairouan, and Cordoba, or it may stand separately near the mosque, as exemplified by the Great Mosque of Samarra and Ibn Tulun Mosque.

Domes

Domes were not initially used at the advent of Islamic architecture but were known in the civilizations of Mesopotamia and ancient Egypt. They first appeared in the government house in Kufa, then the Green Dome in Wasit (84 AH). The Dome of the Rock, built by Abd al-Malik ibn Marwan in 72 AH, is one of the oldest Islamic domes. Among the Abbasid domes is the Green Dome in the Palace of the Mansur in the Palace of Bab al-Zahab. The oldest remaining domes in Iraq today are the Dome of the Akhizar Palace (hemispherical) and the Cross Dome (elliptical) in Samarra.

In the image (Figure 6), a depiction of the Dome of the Rock and various semi-circular domes in Jerusalem is provided.

Fig 6: The Dome of the Rock in Jerusalem is one of the most important Islamic landmarks in the world.

In addition to being a pinnacle of Arab architecture, with its grandeur and sanctity, the dome expresses loftiness, majesty, and the sense of awe that arises from its elevated ceiling, leaving the deepest human feelings and emotions. It leads to contemplation and was initially used in mausoleums. The dome has a strong connection with the Arab who looks at the sky in front of him, seeing it as a celestial dome above him, and this dominant feeling of the celestial dome has been a motivating factor for its widespread use in Arab architecture. Domes have taken various spatial forms, including hemispherical, conical, onion-shaped, pointed, ribbed, and squinch types, as depicted in Figure (7).

Fig 7: Types of Islamic Domes

Columns and Capitals

In the early Islamic periods, palm trunks were used as columns, as seen in the Prophet's Mosque. Later on, Muslims resorted to using Greek, Roman, and

Byzantine columns imported from previous buildings. Then, Islamic architecture adopted columns with designs inspired by Islamic art itself.

Architecturally, a column consists of three main parts: the base, the shaft, and the capital. Initially, cylindrical shaft columns were used, and later on, other columns with ribbed shafts in an octagonal or spiral ribbed pattern were invented. In Ottoman style, a type of column with a curved reinforcement in the shaft, resembling fluting, emerged.

As for the capitals, Muslims invented various types, including the pomegranate-shaped ones with a circular or octagonal section, or in the form of an inverted truncated pyramid or a bell shape. The column capital is decorated with a row of leaves, muqarnas, or droplets (as seen in the Alhambra Palace in Granada), and the base comes in the shape of an inverted bell.

As shown in figure (8) Image of columns and capitals with different octagonal and cylindrical bodies.

Fig 8: Different Types of Columns and Capitals

Historical Overview of Ancient Islamic Mosques in Iraq

The expansion of the Islamic state and its connection and interaction with other open countries had a clear influence on adopting a pattern of formation and artistic design. It assimilated what architecture was like in those countries, imbuing its buildings with a unique character influenced by prevailing religious thought, resulting in a building style that became widespread in Islamic lands. Through manifestations of continuity in design, it formed its identity and distinguished itself from others, marking those buildings.

Abbasid Style: After the fall of Umayyad rule, a style emerged in the art that characterized the subsequent period, known as the Abbasid style. This style is distinguished in Islamic architecture by the use of brick and by being influenced by Sasanian architectural styles, preferring buttresses or supports on columns in supporting vaults. It is also characterized by the preference for using plaster in the decoration of buildings. One example of their architecture is what appeared in the city of Samarra, also known as "the secret of vision".

The city where the Abbasid style manifests its most glorious aspects was built north of Baghdad by the order of the ruler al-Mu'tasim in the year 22 AH (836 CE) when he made it the capital of his rule. He ensured that the city grew rapidly by gathering builders, craftsmen, artisans, engineers, and experts in water engineering from various Islamic countries and settling them there. He established bustling markets and built palaces in Samarra, filling them with gardens, lakes, and squares. Al-Mu'tasim constructed the Palace of Jawsaq, and his son al-Wathiq built the Haruni Palace, while al-Mutawakkil built the Palace of Firdaws, the Palace

of al-Mukhtar, the Palace of al-Wahid, and the Palace of al-Ja'fari. Among these was the Grand Mosque. The history of the decorations used in its construction generally involved parts built with bricks, including circular and tapered arches used for wall decoration, showing the Abbasid influence.

An evident architectural influence is seen in the iwan of the Palace of Khosrow, which still stands in the ruins of the ancient city of Ctesiphon on the banks of the Tigris River, with its impact visible on Islamic architecture in places like Mada'in. Many mosques, such as those in Basra and Kufa, had special layouts consisting of several rooms overlooking the courtyard and courtyard where the poor sought refuge.

The mosques and houses took on a similar character, with walls made of reeds, known as the Quba Mosque, founded in 635 CE (14 AH) and rebuilt with rectangular brick and plaster structures and a wooden roof. The dome of the mosque was supported by layered stone columns.

Research Procedures

First: Research Community

The researcher accessed available visual materials, representing a research community from various sources. The researcher did not encounter precise statistics, making the research community open for the purpose of selecting what achieves the study's objectives.

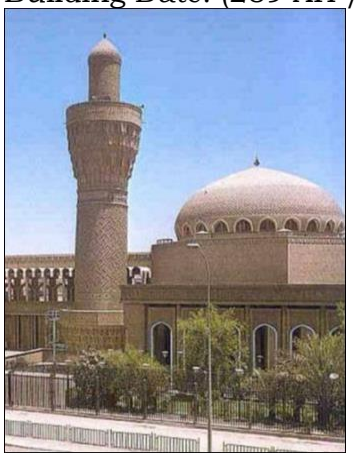
Second: Research Sample

After determining the research sample, which focused on Islamic arts and their minarets to understand the decorative design on the walls of Islamic architecture, the researcher deliberately selected materials that serve the research objectives.

Third: Research Methodology

The researcher adopted a descriptive-analytical methodology in works that addressed decorative design and mosques' minarets, relying on heritage and artistic references.

Model Number (1)
Architectural Term: Mosque Minaret
Al-Khalifa Mosque
Description: A standalone minaret
Location: Baghdad: Al-Khalifa Street / Side of Al-Rusafa
Building Date: (289 AH / 295 CE) Illustrates the minaret of Al-Khalifa Mosque



General Analysis

This mosque is located in Baghdad, the capital of Iraq. It was built by the Caliph Al-Muqtadir Billah to serve as the central mosque for Friday prayers in the eastern part of the palace. It boasts intricate artistic decorations and houses some of the oldest examples of Islamic domes. The minaret of Al-Khalifa Mosque stands out as a historical and distinguished landmark in Islamic architecture, preserving the architectural legacy of the Abbasid Caliphate. Constructed purely from bricks, this minaret has stood for over seven centuries. Its circular surface is adorned with simple geometric patterns. The contrasting shadows cast by the brickwork reveal Baghdad from atop its minaret, which stands at a height of 35 meters.

The upper level of the minaret features balconies with protruding ornaments, including ridges and cavities adorned with interlocking motifs resembling overlapping letters. These elongated forms contribute to the aesthetic beauty of the decorative design, suggesting squares and rectangles, thus incorporating geometric shapes into the stone and ornamental designs. The intricate lines, intersections, and framed angles on all sides of the minaret halt the spread of these branching geometric decorations, creating closed and repetitive units in all directions.

The direction and continuity of these lines suggest divine creation, reflecting the profound interest of Muslim artists in geometric ornamentation. This interest can be attributed to two factors: an inherent tendency towards abstraction and the influence of materials and tools during the production process. Islamic ornamentation is characterized by the repetition of units and the extension of its scattered lines, with ridges framing the surface of the minaret. These ridges open up a network that extends infinitely into its parts, representing a harmonious decorative unity despite the stars and hollow carvings scattered within. This comprehensive aesthetic vision of the established lines embodies the beauty of this creative endeavor.

Model Number (2)
Architectural Term: Minaret of Mosque and Madrasa Al-Mustansiriyya
Description: Standalone minaret
Location: Baghdad, Al-Rusafa Side
Construction Date: (1233 CE / 623-631 AH

General Analysis

The idea of establishing the Mosque and Madrasa of Al-Mustansiriya dates back to the 7th century AH, specifically in the year 623 AH, when Al-Mustansir Billah, Abu Ja'far Mansur bin Al-Zahir, ascended to the Abbasid Caliphate in Baghdad. He built mosques, schools, guest houses, hospitals, and numerous urban projects, some of which still stand today. This reflects the topic of Islamic architecture and its places of education among Muslims, where teaching the four Sunni schools of thought became prevalent in the contemporary Arab-Islamic context.

Here comes the minaret, which has a circular shape and is divided into several sections, with balconies in the middle and the upper part of the minaret. The minaret features stone carvings, cavities, and vegetal motifs, and its circular shape facilitated the curved elements according to an Islamic style. There are ridges with Quranic inscriptions, as well as small arches reminiscent of the iwans inside Islamic mosques. At the top of the minaret, there is a small dome with protruding longitudinal elements along its length and width. Additionally, there are a number of adjacent spheres followed by a crescent, symbolizing its Islamic identity as a mosque for prayer.

At the top of the minaret, there are slanting Quranic inscriptions arranged in a spiral manner, giving the minaret a majestic presence. The design of the minaret combines geometric shapes, vegetal motifs, and Quranic inscriptions, creating a harmonious aesthetic through their multiplicity. Each part of the minaret, adorned with decorations, contributes to a sense of balance, and the technique used creates an aesthetic harmony, symbolizing the openness to infinity to signify the eternal and timeless nature of the minaret as part of Islamic architecture. The design elements of the minaret aim to reach the pinnacle of unity and serve as a testament to the divine essence. Muslim artists intended to employ these forms to the fullest extent, employing a sophisticated technique to achieve aesthetic, artistic, and design harmony.

Model Number (3)
Architectural Term: Minaret of Samarra Mosque
Location: Samarra
Construction Date: (234-237 AH) (849-852 CE)
General Analysis:

The mosque and congregational mosque in Samarra were constructed between the years 234 AH and 237 AH (849-852 CE), with only the outer walls remaining. The mosque features a spiral minaret known as the Malwiya, reminiscent of the Ahmad ibn Tulun Mosque in Egypt. The mosque's dimensions are 40 meters by 158 meters, accommodating up to eight thousand worshipers. Minarets, usually elevated above the mosque's structure, are designed to transmit the muezzin's call to prayer to the farthest point from the mosque. During the Prophet's era, minarets were not utilized, and the call to prayer was made from the rooftop of nearby buildings.

Minarets come in various shapes, including square ones, also known as "Sawami', and cylindrical minarets, also referred to as "manarat" due to their resemblance to the lighthouse of Alexandria. They possess both aesthetic and spiritual significance, characterized by their imposing geometric shapes above a tranquil horizontal formation representing the mosque's precinct and its surroundings.

Adorned with multiple decorative motifs, including geometric patterns, vegetal motifs, and Quranic inscriptions, these minarets reflect Islamic art and serve as symbols of spirituality. The minaret's spiral shape resembles ancient temples and ziggurats of ancient Assyria. After the completion of the Grand Mosque in a short period, it became one of the most beautiful architectural structures in the Abbasid era. Its construction focuses on octagonal pillars, surrounded by an external wall supported by round towers, similar to those in military camps. The Malwiya Minaret, located outside the walls, resembles a spiral tower with an external staircase for ascent. It represents religious arts in the Abbasid era, such as the Great Mosque of Samarra (also known as Abu Dulaf Mosque), representing the architectural art of the Abbasid Golden Age. Its grandeur and facilities, including ablution areas, make it an integral part of Samarra's mosques, carrying religious and social significance. The Muslim artist deliberately designed it spirally to symbolize human ascent towards worshipping Allah, ensuring the muezzin's call reaches the farthest point on earth. Its aesthetic and creative design embodies the beauty and ingenuity of Islamic architectural vision. It gives comfort and reassurance to the souls of the worshippers, and its form suggests grandeur and looking upwards towards the sky, towards God the Creator. It was built with carved stone and bricks.

First: Research Results

The results of the research related to decorative design in ancient Islamic mosque minarets in Iraq are as follows:

It is evident that the decorations, in their various forms and lines, are related to the architectural and decorative design elements in all their components, such as lines, colors, shapes, masses, and voids, giving them creative, aesthetic, artistic, heritage, and religious value, showcasing the sophistication used in Islamic minaret architecture.

Most artistic works agree on integrating geometric and vegetal decorations, demonstrating a harmonious integration where each unit has its own style, analysis, and design value in Islamic architecture.

The decorations, in their forms and lines, each signify a communicative area through the extension of infinite lines in the design of decorations in Islamic architecture and its mosques.

The decorations on the facades of Islamic buildings and mosques, especially on all fronts and walls of minarets, possess aesthetic, artistic,

and engineering values of mathematical systems resulting from artistic philosophy and its applications in Islamic architecture.

Second: Research Conclusions

Decorative designs on the walls of minarets and Islamic mosques, with all their components and data, complement each other to avoid problems in decorative design in the walls of Islamic mosques, making them an aesthetic and spiritual element to adorn the building facade.

Architectural design forms in Islamic buildings, including minarets, emerge based on the characteristics of the place and its Islamic and civilizational philosophical implications, showcasing their diversity.

4. Recommendations

The researcher recommends studying the decorative design and its issues in the walls of Islamic mosques and their relationship to religion, beauty, and art according to geometric designs and design principles and elements.

The researcher recommends studying the integration of design principles according to geometric and botanical shapes for their artistic and aesthetic value.

The researcher recommends paying attention to the study of nature to uncover the cosmic relationships inherent in its structures and designs, considering it a fundamental source in the decoration of Islamic architecture.

Suggestions

The researcher suggests conducting the following studies:

Preserving the Islamic cultural heritage through documentation and illustration of Islamic architectural elements and their restoration to match their counterparts in Arab countries.

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