

Reviving the architectural heritage values of Al-Aqmar Mosque as an architectural inherited and a source of inspiration for contemporary interior design

Radwa Mohamed Salah El Din ¹, Prof. Dr. Ola Ali Hashim ², Prof. Dr. Ashraf Hussein ³

1) Demonstrator in the Department of Decoration and Interior Architecture - the Higher Institute of Applied Arts - 6th of October

2) Professor of Design, Department of Interior Design and Furniture - Faculty of Applied Arts - Helwan University

3) Professor of Design, Department of Interior Design and Furniture - Faculty of Applied Arts - Helwan University

KEY WORDS:

Keywords: architectural inherited, authenticity, architectural elements, entrances, muqarnas, decades, architectural values.

ABSTRACT:

The study examines the architecture of Al-Aqmar Mosque because of its great importance in the Fatimid architectural inherited and the conclusion of the most important architectural values influencing its construction and rooting those values through monitoring and analysis of some architectural elements and items through analytical studies provided by this mosque to show the extent of its impact on its design and how the mosque became a source of heritage inspiration of the mosques of the following eras, with different parts of the design in the content and formulation according to the impact of the same era, and models of each type of following eras were selected for the Aqmar Mosque to confirm this, and how the security and wealth of the state affected the luxury of Fatimid architecture, The study also indicates how the material, texture, color, shade and light affect the architectural product and architectural treatments in the architectural formation.

INTRODUCTION:

Caliph Al Amr Beahkam Allah ordered the establishment of the Al-Aqmar Mosque and his minister, al-Ma'mun al-Bataahi, supervised its construction that was completed (519 AH- 1125 AD). Fatimid architecture flourished in Egypt thanks to security, state wealth and religious tolerance and openness to cultures. It is considered one of the most beautiful Fatimid mosques and has several advantages: It is considered the first facade decorated in the Egyptian mosques, and through the analysis of this facade we find that the first phenomenon of decoration in the facade of the Al-Aqmar Mosque is the oyster radiation that emerges from the center that represents the sun, and the use of niche hanging from the top of the mihrab in the facade. It is also the first decorative example of its kind in the architecture of Cairo and even in the whole Islamic architecture, in addition to the facade contains a variety of ornaments that make it a unique masterpiece in the architecture of Cairo in the Fatimid era, and is also noted the first use of muqarnas as an

element of Islamic decoration, as low-mounted domes appeared on spherical triangles and here have evolved to cover the corridors in the mosques in Egypt, and all of those features made Al-Aqmar mosque has historic value and dimension.

RESEARCH PROBLEM:

the lack of intellectual link between the legacy and methods of application in contemporary interior design, ie we see that contemporary design has become a metaphor only formal without depth in the meaning of architectural formation.

Research hypothesis:

The architectural design of Al-Aqmar Mosque is a source of heritage inspiration for the mosques of eras that follow it with some differences in both material and design according to the impact of the same era.

Main objectives of the research are:

- To extract new relationships and lines of design that serve the interior design in line with the spirit of the times and at the same time do not lose identity and maintain authenticity through the architectural and symbolic analysis of some architectural elements of Al Aqmar mosque, and access to this analysis for the intellectual link between the legacy and contemporaneity as an applied axis of design.
- Borrow concepts and items of traditional architecture in a modern and innovative way and integrate it into contemporary concepts and items.

The research follows: the historical and descriptive analytical approach.

1.1 The concept of revival:

Revival is a concept of the process of intellectual link between heritage and contemporaneity, which is the re-use of heritage deliverables at the cultural and civilizational level. Architectural revival means the complete or partial recovery of ancient symbols, concepts, ideas and solutions.

There is no doubt that this requires a deep understanding of the roots of architectural thought represented in the architectural inherited, which still retains its heritage characteristics as a source of architectural formations and formulations, and these roots are the overall result of culture, civilization and the spirit of the times with natural influences, meaning that the peoples who aim to revive the ancient heritage must still maintain a large part of the elements of civilization in which this heritage originated, and the process of revival of heritage depends on two basic and consecutive steps: reading and inspiring the values of heritage, and then revive heritage values inspired and integrate them into the architectural framework or contemporary interior design.

1.2 Architectural inherited:

Architectural inherited refers to the sum of buildings that have continued and proved their authenticity and value against continuous change. The architectural inherited stands out as a reference and a governing framework, comprising “visual and canvases constants” that can inspire, guide and influence the architect in his search for “optimal formulas” to shape the environment and architectural production.

1.3. Authenticity:

Authenticity means homogeneity in time and communication with the legacy, and that the present is a con-

tinuation of its past, and its future as a continuation of its present. Authenticity does not mean self-conflagration, rejection of others, and alienation of the stranger as a fake intruder and intrusion in which the self-identity is lost, Authenticity in this sense is isolation.

Islamic inherited experienced authenticity and achieved it when it was contemporary, that is, when it had an awareness of itself, time and history. With a contemporary word when it was modern in its time, this is the essence of modernity, creating authenticity and not bringing it from anywhere, because the inherent is the first and last version of itself, and not from something else, so it was important to understand the concept of communication.

1.4. Concept of communication:

Communication is the interdependence of all time in the past, for it, interdependence does not mean conformity, but means developing it, preserving its spirit and supporting it with modern methods and the latest science and arts techniques. Heritage is not something for transport, but for the addition, development, growth and modernization and linking it with the future, as linked to the past, and perhaps the most important thing when studying the culture of a society is the study of the values contained in that culture, no doubt that culture is a link to the past with the present and the future through shared and continuous and evolving values between them.

In order to preserve the principle of personality development rather than reproduction, it is necessary to find the language of intellectual communication between the architectural inherited and contemporary designs and apply it in designs that reflect the intellectual connection between heritage and contemporaneity.

Table (1) shows the analysis of the horizontal projection of Al Aqmar mosque:

Description and analysis	Symbolic analysis	Illustrations
<p>Architectural Description: The mosque consists of a central open courtyard square with a small area and is surrounded by four corridors, the largest of which is the qibla hallway. In mosques in the Ottoman era.</p> <p>The concept of alignment of the building of the street first appeared in Al Aqmar Mosque, where the mosque is directly directed to the qibla and is aligned with the facade facing the street. The broken entrance area faces the west to allow the facade to align with the street. This tendency to modify the position of the qibla in order to level the ranks of worshippers when praying and thus became the Qibla in the correct position inside the mosque deviated for its facade, and this architectural element appeared for the first time in Al Aqmar mosque. It was taken by most mosques and mosques that have been exposed to the phenomenon of Qiblah tendency in the Islamic world and Egypt, where Egypt is deviated from the direction of the Kaaba and the qibla in Egypt year southeast in the direction of the Kaaba.</p> <p>- Hence we conclude how the shape of the building was influenced by religion and belief, which created a hallmark of this era.</p>	<p>Symbolism emerged from the falls of to be free in two directions, one horizontal level linking it to the place of the Kaaba and the other vertical upward to the sky appears through the dome and minarets and balconies, and thus symbolize the absolute and interdependence between the earth and the sky.</p> <p>Wrapping value: The laws of substance are the small wraps around the large; the electron in the atom revolves around the nucleus, the moon around the earth, the earth around the sun, the sun around the galaxy, and the galaxy around a larger galaxy. The circumnavigation of the Kaaba is one of the rituals of Muslims in Hajj and Umrah. Where the Almighty says: (and (again) circumambulate the Ancient House) (verse 29) of Surat Al-Hajj, and the idea of roaming does not only exist in the world, but also found in the Hereafter at Paradise and Hell, in Paradise the Almighty says (And round about them will (serve) youths of perpetual (freshness) {Verse 17} of Surat Al Waqea, in hell, the Almighty says: “They will go around between it and scalding water, heated [to the utmost degree]” (verse 44) of Al-Rahman.</p> <p>- Hence we conclude that the idea of circumambulation and convolution comes from the nature developed by the Creator where used by the Muslim architect to reach the previous meanings, and note this here through the open courtyard, which wraps around all the components of the mosque.</p>	 <p>The illustration is a black and white architectural floor plan of the Al Aqmar Mosque. It shows a central square courtyard surrounded by a grid of columns. A prominent hallway, the qibla hallway, is located on the right side of the plan. The entire structure is enclosed within a thick black border representing the walls. A north arrow is visible in the bottom left corner of the plan.</p>

Figure (1) Horizontal projector of Al Aqmar Mosque “Quoting from the Center for Registration of Islamic and Coptic Antiquities in the Citadel”

Table (2) shows the analysis of some architectural elements of Al Aqmar Mosque:

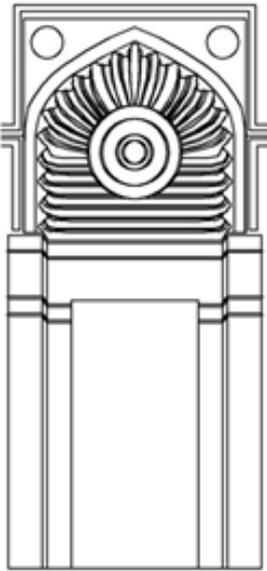
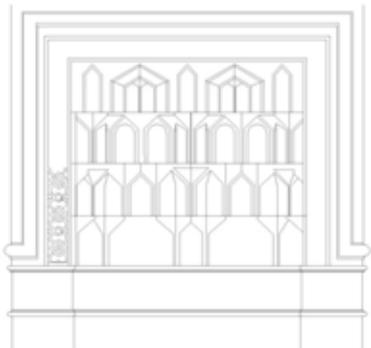
Description and analysis	Analytical Forms	Illustrations
<p>Here we find the phenomenon of radioactive decoration or oyster shapes, which is a prominent stone ribs radiate from the round decorative ornamental center between the part to be decorated.</p> <p>Oyster energies: In the Fatimid period, the forms of oyster energies, which represent semi-ribbed domes spread. They culminate in the mosque's gate. They are a large energy knotted with a pointed knot, filled with a filler radiant ribs, where the first four ribs go in a horizontal direction, while the rest of the ribs radiate from a round gamma occupies the center, as if the sun emerges light around them</p>	 <p>Figure (2) Illustrates radioactive stone ribs. "Researcher's sketch"</p>	 <p>Picture (1) Illustrates the oyster energies that crown the mosque's gate within the pointed nodes. "Photography of the researcher"</p>
<p>Symbolic analysis</p> <p>The value of repetition and proliferation: We find that the calculation of design and systems of repetitive construction behind the phenomenon of proliferation, the value of the convolution: where the idea of circulation and convolution is achieved through the use of radiological decorations emanating from the center and is a tradition of what happens with nature.</p>		
<p>Description and analysis</p>	<p>Analytical Forms</p>	<p>Illustrations</p>
<p>Muqarnas: The decoration of stone muqarnas was made at the top of the two side entrances to the entrance door. They were carried out in stone excavation and consisted of four successive stations.</p>	 <p>Figure (3) Muqarnas have been used in shaping the facade, giving diversification and coordination between the shadow and light and the prominent and submersible surfaces of muqarnas, which are architectural ornaments that resemble beehives and are used either as a structural or formative medium. "Researcher's sketch"</p>	 <p>Picture (2) It shows a square energy on which muqarnas forms from four successive stations. Muqarnas designs also appear as one of the architectural styles on both sides of the entrance surrounded by a frame consisting of a strip of designs, which makes them harmonious rhythm. Here came the power of using some items of architecture in symbolic expression."</p>
<p>Symbolic analysis</p> <p>Value of repetition and the relation of the part to the other: The Fatimid architect has applied a method whereby each part of the shape combines together to create a continuous connection and find the so-called good-neighborliness between these parts during their repetition and proliferation, the architect may resort to the formation of units and continue taking into account the interest in positive and negative spaces and equal importance between them. With the proportionality and respect between each part of the design in terms of form, size and color, and architectural elements in which this is the element Muqarnas in rows compact.</p>		

Table (3) shows the analysis of some architectural elements of Al Aqmar mosque:

Description and analysis	Analytical Forms	Illustrations
<p>Stucco windows “Sunshades”: Above the walls are a number of similar decorative windows. Each window is crowned by a pointed arch and is defined from the outside by a band of plant motifs. The inside of the window is filled with an ornament in the form of a mihrab, and the interior of the mihrab is filled with geometric motifs. Accuracy of its decoration, shadow and light resulting from the spaces resulting from the design parts.</p>		
<p>Symbolic analysis</p>		
<p>The openings are linked to the element of light, which is one of the four intellectual constants affecting the philosophical thought of the Muslim architect. The connection of light to the sky and the earth had its causal relation to the rise of these openings above the human level, and they refer to the connection to the infinite universe through sight, and to the connection of the building to the universe and the orientation of its components towards the sky</p>		
Description and analysis	Analytical Forms	Illustrations
<p>Inscriptions: Kufic calligraphy was used as a main element of the decorative composition: The arches of the mosque’s façade are engraved with stucco inscriptions engraved with Qur’anic verses in kufic script. In spite of its simplicity, we find the Muslim artist combining the arts of writing and engaging with the decorations around him in the form of the most creative images of writings in the Fatimid era.</p>		
<p>Symbolic analysis</p>		
<p>The letters with twigs have taken on the appearance of unity and integration, which enriched the aesthetic value, and the principle of monotheism had the greatest impact on the architectural decorations represented in the biblical tapes, which are infinite Qur’anic verses that cannot be distinguished from its end, and the use of Kufic script in writing Qur’anic verses. Wrapping around the facades of the courtyard facing the eye of the chapel to permeate his soul and prepare him psychologically to appear in the hands of God.</p>		

Table (4) shows the effect of formative values on the interface of Al Aqmar Mosque:

Color	Shadow and light	Surface contact	Rhythm
<p>Natural stone color was used in facades, which is considered one of the basic colors used in Islamic art without introducing any artificial colors on it. This also made it last without changing its features from what it was at the time of its creation, so as to adapt that raw material to the environment of the place where the mosque so as not to appear strange with the place where it was created.</p> <p>The use of natural stone material highlighted the color of the material.</p>	<p>The artist used shadow and light to show the design levels in the facade. It also relied on shadow and light just no material difference to show the functionality and aesthetics of the interface.</p> <p>In the vast majority of the facade wall parts, which were of aesthetic value, he used a prominent and deep stone engraving technique.</p>	<p>The surface of the facade gained richness in the touches of its surfaces by changing the ways of its decoration and wall cladding from the use of clamshell energies at once, muqarnas at once, and pediments at other times.</p> <p>This fascinating blend created a kind of richness to the surface of the facade, as it is the address of the place.</p>	<p>In the facade, the artist relied on the repeated rhythm and symmetry achieved by the use of the oyster energies, muqarnas, and symmetrical shortcomings around the axis of the door. Those elements that gave a sense of rotation around the center of the facade, then came the role of plant decoration strips used by the artist at the top of the facade and bands of decorative motifs above the entrance and the top of the facade in the transverse direction to give a stop in the rhythm and then make a repeated rhythm again, to give a balanced rhythm for the facade as a whole</p>



picture (5) Illustrates the facade of Al Aqmar Mosque “Quoting Web Sites”

Table (5) shows the impact of some heritage values on Al-Aqmar Mosque:

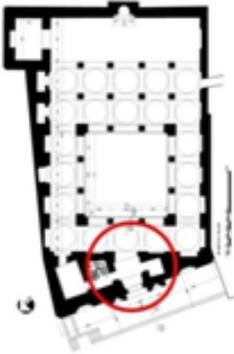
Heritage value	Influence	
<p>1-The value of social concealment</p>		<p>Figure (6) The horizontal projection of Al Aqmar Mosque is determined by the partiality of the broken entrance</p> <ul style="list-style-type: none"> • The value of social concealment in Al-Aqmar Mosque is achieved through the design of the broken entrance. It covers the blanks of the mosque from the passers-by on the road and its façade at the same time adjacent to the street, besides his main function is to address the tendency of the Qibla.
<p>2- Value of privacy</p>		<p>picture (6) Shows the dome above the prayer house</p> <ul style="list-style-type: none"> •The value of privacy in Al-Aqmar Mosque is achieved through the general formation of the mosque’s spaces where it is characterized by the integration between the spaces and the dynamic link between them, and to confirm the variation through the sudden transition from the narrow, twisted vacuum of the broken entrance to the large vacuum leading to the courtyard, and also through the closed parts such as the dome above the house of prayer.
<p>3- The value of credibility and openness in expression</p>		<p>picture (7) picture (8)</p> <p>The interlock cymbals above the entrance door illustrate the pinched rinse on the facade</p> <ul style="list-style-type: none"> • The value of credibility and frankness in the expression in Al Aqmar Mosque through the architectural expression of the structural elements is clearly achieved through the thresholds for the openings “cymbals” and rinse rinsing, and the non-use of whiteness to cover the materials used in the construction of the facade in general, thus achieving explicit expression of the nature of construction materials and method of construction The function of the building was characterized by credibility.

Table (6) shows the impact of some heritage values on Al-Aqmar Mosque:

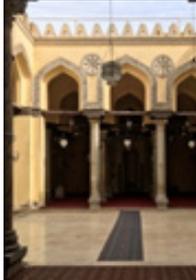
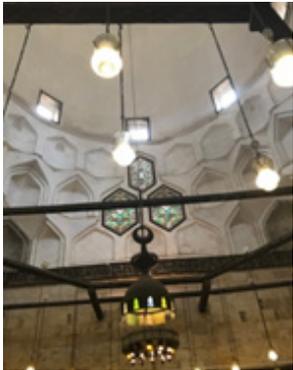
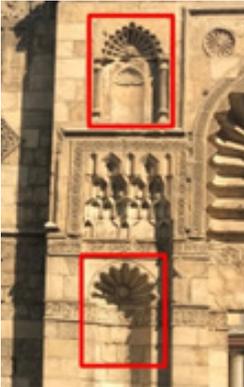
Heritage value	Influence
<p>4- The value of spirituality</p>	<div style="display: flex; justify-content: space-around;">   </div> <p>picture (9) picture (10)</p> <p>The courtyard of the al-Aqmar mosque illustrates a portion of the verse of the Qur’anic verses that wraps around the arches of the courtyard facades.</p> <ul style="list-style-type: none"> •The value of spirituality in the Al Aqmar Mosque achieved through the architect’s interest in preserving the spiritual side, and the use of architectural elements of architectural meanings of spirituality, such as the design of the minaret, the outer lines of the minaret suggest highness and elevation as one of the brides of the sky, as well as the use of the brides of the sky at the top of the facade and the top of the courtyard and the emphasis on contact with the sky. It points to the regular lineup of worshipers in congregational prayer, and that if these brides of the sky symbolize the convergence of the earth with the sky at the lower level, the minaret symbolizes this convergence at the top level, as well as the open courtyard and its indication of the lack of barriers between prayer and the God and direct connection to the God without mediation. It is realized in the element of biblical motifs by representing the Qur’anic idea into a tangible image. A delicate sensation Muslim has sensory abilities to discover the secrets of the Qur’an with aesthetic artistic vision that achieves the psychological satisfaction of beauty.
<p>5- The value of openness</p>	<div style="display: flex; justify-content: space-around;">   </div> <p>picture (11) picture (12)</p> <p>the entrance of Al Aqmar Mosquethe entrance of the mosque of Mahdia influenced by the entrance of the Mahdiainfluenced by Ancient Roman architecture</p> <ul style="list-style-type: none"> •The value of openness is realized through the influence of Fatimid architecture by Syrian and Byzantine art, which confirms the openness of Islamic architecture to other cultures and the acceptance of the other, which means that the Muslim artist was able to absorb the arts of architecture that preceded him, and incorporate them into his architecture and dye them with its own character and values. •Thevalue of openness is achieved through the similarity between the planning of the essence of Skalli for Cairo and the plan of Obeidallah Mahdi for the city of Mahdia in Tunisia, even with the same names for plans, tribes and gates. •Thevalue of openness in Al Aqmar mosque is realized through the similarity of the layout of Al Aqmar mosque with the layout of the mosque of Mahdia in Tunisia, which was built during the reign of Obaidullah al-Mahdi Fatimid, founder of the Fatimid state, who ruled Tunisia and founded the city of Mahdia and make it the capital of his state, for example the similarity of the entrance of the mosque In the main facade of the entrance of the Mahdia Mosque.

Table (6) shows how Al Aqmar Mosque became a source of heritage inspiration for the ensuing mosques, with different parts of the design in the content and formulation according to the effect of the same period:

Al Aqmar Mosque (Fatimid era)	Dome of Al SalehNajm al-Din Ayyub (Ayyubid era)
 <p>picture (13) The muqarnas show the interface of Al-Aqmar Mosque “Photography of the researcher”</p> <ul style="list-style-type: none"> •This muqarnas is the first example of its kind in the religious buildings of Cairo. These stone muqarnas are an evolution of the idea of the muqarnas, which was used in the Fatimid domes in both the domes of al-Hakim Mosque and the dome of Mashhad al-Jiushi and both of al-Ja’fari and SayyidaAtika domes. This muqarnas was divided into successive monolithic decorative elements that resulted in this muqarnas chest we see crowned up the two entries indicated. 	 <p>picture (14) Illustrates muqarnas of dome of Al Saleh-Najm Al- Din “Photography of the researcher”</p> <ul style="list-style-type: none"> •Theevolution of the use of muqarnas in the Ayyu-bid era is evident from the figure referred to in the dome of Al SalehNajm al-Din, illustrated how Aqmar Mosque has become a source of inspiration heritage to use the cornice with the difference in the use of ratios and diversity in the use of raw Part of the plaster and part used as suns decorated with stained glass, and the use of the interior design but in Al Aqmar mosque was used in the external facade.
Al Aqmar Mosque (Fatimid era)	Sultan Qalawun Collection (Mamluk Era)
 <p>picture (15) Illustrate the pediments of Al-Aqmar Mosque “Photography of the researcher”</p> <ul style="list-style-type: none"> •The study of the façade of Al Aqmar Mosque began by giving it some architectural touches to avoid the boredom caused by the lack of diversification in the form of the wall, especially large areas where the pediments were used to express the introduction of the third dimension and the introduction of a sense of space, although the composition is still face. 	 <p>picture (16) Illustrates the pediments of the Sultan Qalawun Mosque “Photography of the researcher”</p> <ul style="list-style-type: none"> •Evolution of the use of pediments in the Ayyubid era is evidenced by the picture referred to in the Sultan Qalawun Mosque, and it is clear how the mosque became a source of heritage inspiration for the use of pediments with the difference in the use of proportions and diversity in the use of material, as the pediment itself is of marble and background of mosaic.

Results:

- 1- Al-Aqmar Mosque is the first study of the facades in the Fatimid era. It was the beginning of the use of muqarnas, pediments and domes on the corridors and for the first time using the broken entrance in the Islamic mosques in Cairo, it is an important source of inspiration for the mosques of the following eras.
- 2- Fatimid architecture with an architectural thought that is inseparable from the human and the environment, and therefore it can benefit from this thought in the interior design because it is not thought associated with a specific time or certain elements, but has been linked to fixed principles and values.
- 3- The importance of reflecting the heritage of culture and its inspiration in the interior design to represent the sincere expression of intellectual identity and originality.
- 4- Methods of intellectual link between heritage and contemporary through two main objectives: revival, communication, and the existence of communication is linked to the existence of logic, which must develop heritage.

Recommendations:

- 1- Maximizing the role of Egyptian Islamic monuments and their impact on the tourist attraction, through publicity and advertisement of the Fatimid architectural inherited and taking care of it.
- 2- Promoting awareness and thought regarding the values of the architectural inherited derived from the Al-Aqmar Mosque and linking it with the interior design of materials that are environmentally friendly and also suitable for function and use.

References:

- (1) Ahmed Abdel Aziz Amin, Aesthetic and Functional Values of Interior Design of Sultan Hassan Mosque and its Application to Reception Areas in Major Hotels, MA, Department of Interior Design and Furniture, Faculty of Applied Arts (2000).
- (2) Sami Abdullah Mohammed, Interior Architecture of Al-Aqmar Mosque, MA, Department of Decoration and Interior Architecture, Faculty of Fine Arts (1993).
- (3) Ola Ali Hashim, Balancing Heritage and Contemporary Values for the Design of Tourism Facilities of Islamic Architectural Character, First International Conference on Urban Heritage in Islamic Countries.
- (4) Kamal Mahmoud Kamal El Gabalawy, Symbolic Ideas in Egyptian Architecture After the Entry of Islam, Publisher Dar Al-Fikr Al-Arabi (2009).

(5) Mohamed Ahmed Mahmoud Ahmed, Architectural Inherited and its Impact on Contemporary Egyptian Architecture, MA, Department of Architecture, Faculty of Engineering (2008).

(6) Mohamed Abdel Fattah Ahmed Ismail, Architectural Formation between Heritage and Contemporary Values Towards an Intellectual Approach to Communication Logic, MA, Department of Architecture, Faculty of Engineering (2000).