

Using Heritage Architectural Elements in the Contemporary Buildings: The ‘Shanashil’ of Iraq

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Abstract

Architecture has always been an expression of the culture of the people who created it, and it is also a reflection of the way societies live and their intellectual orientations. The issue of architectural communication generated through heritage is crucial wherever they occur. Heritage elements used in the facades of contemporary houses enhance the values of local architecture through their expressions of time and place. They create continuity by embodying the cultural identity communicated to the present generation. In Iraq, shanashil is one of the prominent heritage architectural elements in the domestic architecture of Baghdad. It has been previously commonly used in the construction of houses, employing its communicative capabilities through architectural forms. In recent years however, especially when local architecture adopted the imitation of architectural models from outside the country, a new issue has emerged. Buildings today do not express the urban cultural heritage of the country leading to the absence of cultural concepts in local architecture. This paper addresses this issue.

It employs two research methods: a literature survey and case studies. A number of case studies have been studied by observations and some interviews to ascertain the meaningfulness or its absence in the contemporary local architecture of Iraq.

It sheds light on the role played by heritage architectural elements used in the facades of contemporary houses in enhancing the values of local architecture through their expression of time and place. It concludes that they create continuity by embodying architectural cultural identity communicated to the present generation. It also concludes that there is a reluctance among many designers to employ architectural heritage elements in the facades of houses to pacify the customers or because of the high costs. Buildings with shanashils do express heritage architecture even though their use is merely decorative.

Keywords: Heritage; Architectural Elements; Façade; Architectural Reviving; Shanashil

Introduction

In recent years, Iraq in general and Baghdad in particular have witnessed a remarkable urban development with an increase in the number of houses built due to the emergence of the need to construct new houses or to renovate them. This has been accompanied by a diversity and increase in the architectural styles that have been used, resulting in a diverse architecture with different origins and references. Unfortunately, however, they forget the cultural and architectural heritage identity and its distinct elements.

Although Iraqi architecture, in the capital in particular has been characterized by designs inspired by the heritage of Baghdad, these trends have begun to decline clearly in recent years, influenced by many factors. They include the influence of modern movements and global trends. The influence of the designs of buildings and houses by imported Western designs also contribute. At the same time, there has been no central plan by decision makers to preserve the existing buildings that have heritage values, especially after the 2003, as a result of the war conditions and the deterioration of the security conditions. Therefore, many of these buildings have begun to suffer from neglect and extinction. All of these factors have led to the absence of representations of heritage in the buildings and particularly houses among the people. It is more so especially among the present generation, who are not able to contemporize heritage architecture and co-exist with it's the elements that distinguish them from the others.

Any architectural element associated with a particular style is affected and determined by several factors and they can be divided into two parts. The first is those with a permanent and long-term impact, such as natural and geographical conditions, climate, and construction materials. The second is those factors related to the historical and social environment and its structure. Indeed, they relate also to the economic growth and the development of a nation or a society (Alsultany,1985).

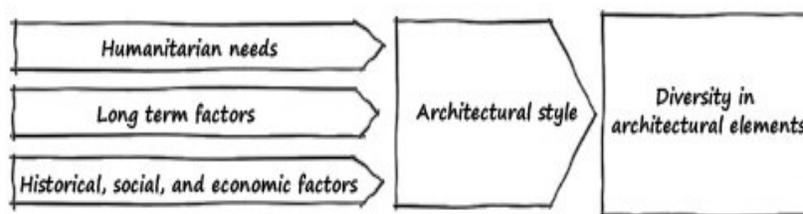


Fig. 1: Factors affecting architectural styles.

Source: Authors

Heritage architecture is considered a cultural manifestation of societies through connection to cultural and material concepts and dimensions, temporal continuity, and connection to the environment and content. It constitutes one of the most important characteristics of the architectural and urban character in the human environment and in turn expresses the culture of the societies, their distinction, identity, and the physical expression of them at the same time. (Ameer, 1999), The product of architecture becomes heritage when it acquires a value given to it by the society, and this value is evident in the relationship between Man and heritage. If a person does not communicate with his heritage and what his ancestors produced for him, heritage becomes forgotten and can disappear forever. Therefore, awareness and observations of the elements of heritage for a community have their roots.

The architect contributes significantly to the preservation and continuity of the urban heritage. Therefore, the lack of awareness of the value of heritage leads to damage to the heritage stock of communities.

This research paper seeks to demonstrate the importance of reviving heritage by using heritage architectural elements in the design of the contemporary houses. This may introduce the people to the characteristics of local heritage architecture. It addresses the question of the direct

impact of the designs of houses in which ‘shanashil’ was used in introducing people to the components and elements of architecture in Iraq. They are some of the main features that express place and time of architectural heritage in Baghdad. When these architectural components return to local heritage, they will imbibe ancient heritage atmosphere and scenes, as shown in the Figure 2.



Fig. 2: Scenes of the emergence of the Shanashil in Baghdad alleys.

Source: (Al-Baghdadi, M., 2017).

The importance of this study lies in the role that it plays in the process of reviving heritage by means of borrowing and reusing modern heritage elements in the facades of buildings. They reveal the definition and educate the modern generation about the details and elements of the local architectural heritage. It also highlights the role of the designer in enhancing communication and continuity of architectural heritage through embodiment.

Scenes and atmospheres that emulate the rich heritage with such elements distinguished by decoration and reproduction with specific details will distinguish them from the other models. In fact, there is a deficiency and knowledge gap in the literature related to the understanding and developing of the concept of simulating heritage architecture through borrowing and reusing shanashil.

This paper examines the role that this process plays in educating and enhancing the understanding of the people about the formal elements that make up heritage architecture. Its objectives are as follows.

1. To identify the characteristics of shanashil
2. To establish how they have been used in the past
3. To identify their meanings
4. To demonstrate how they can be re-introduced in contemporary architecture

Theoretical Framework

Architectural Heritage

Heritage is defined as everything that is inherited from cultures including values, traditions, and visions. This does not mean that it belongs to the past, that is, unless it is a past event. Rather, it is a cultural extension that lives with the era and is implemented in the lives of contemporaries, thus having an impact on political, social, and cultural life. It involves spirituality and deal with the surrounding environment (Al-Daraji & Hamid, 2013). Multiple concepts have emerged from the concept of architectural heritage, which differ from one country to another or from a global community to different concepts. Mostly, that thought has not been realized as a result of the distinction between multiple political, cultural and other aspects. In 1972, a global use was held through an organization for that, and it was pledged to shed light on the general framework of the concept of heritage and everything that can be considered of creative values

Shauqi says:

“For the purposes of this Convention, the following shall be considered as ‘cultural heritage’: Monuments; architectural works, works of monumental sculpture and painting, elements or structures of an archaeological nature, inscriptions, cave dwellings, and combinations of features, which are of outstanding universal value from the point of view of history, art, or science; groups of buildings: groups of separate or connected buildings which, because of their architecture, their homogeneity, or their place in the landscape, are of outstanding universal value from the point of view of history, art, or science; sites: works of man or the combined works of nature and man, and areas including archaeological sites which are of outstanding universal value from the historical, aesthetic, ethnological or anthropological point of view.”

1995:122

Relying on the definition approved in the UNESCO Convention in 1972, one can consider the Iraqi houses that have been built 80 years ago or more as buildings of heritage value, especially those that have preserved the elements and components and distinguish Iraqi architecture during that period (Fig. 3). Architectural heritage represents an honest expression of the history and culture of a society, and it is a material and moral connection that connects contemporaries to their predecessors, as it is the embodiment of cultural and civilizational values, and a reflection of a solid social and economic structure: our ancestors lived it (UNESCO,1972).

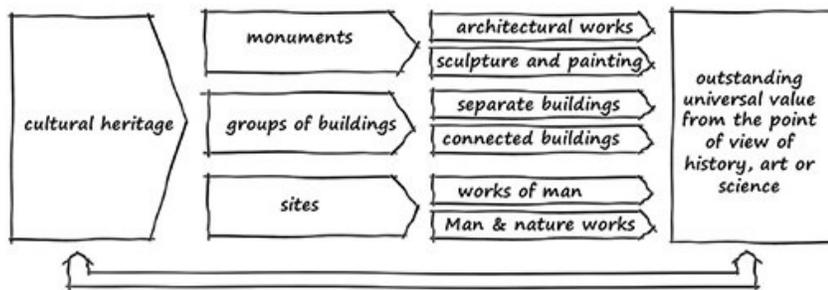


Fig. 3: Cultural heritage

Source: Authors.

Review of Literature

Many studies have examined architectural heritage and its revival. These studies have addressed the dilemma of heritage, which has become a necessity for people to communicate with their intellectual heritage, and the role of society and designers in achieving this. There are difference in the scope and subject of these studies, in addition to the difference in the methods adopted. For example, Rjoub (2016) examines the circumstances of the emergence and development of architecture and the extent of its connection with the resources of architectural heritage of the civilizations that passed through it. His study identifies the heritage resources which the architect has related to and the classification of architectural styles and design relationships that have been used to achieve this communication. He produces results that the architects have preferred to communicate with the sources of Roman, Nabataean, Islamic, and local heritage by expressing them at the planning and architectural levels, and the diversity of design relationships.

Kóródy and Vukoszávlyev (2107) examine the relationship between heritage, contemporaneity and perception. By examining the evolving approach to modernity and its impact on heritage preservation throughout the twentieth century, they show how the country's subsequent international openness has contributed to the reinterpretation of Creativity for modernist goals,

generating a special architectural language characteristic of Spain, culminating in interventions on historical buildings. They symbolize the relationship between heritage and contemporary architecture. In comparison, Moscatelli (2023) highlights how the traditional values, forms and expressions of traditional buildings in the Najd region of Saudi Arabia seek cultural heritage and building forms that are translated into contemporary models, making them capable of local cultural identity in a society fast developing. It demonstrated the necessity of preserving traditional architecture and then transforming them into new architecture to remain compatible with the Saudis.

Fadia, et al. (2020) point out that the use of elements derived from traditional architecture express cultural identity. They show how architects seek to link contemporary architecture to the roots of the place and sometimes, this involves copying and imitating the components of architectural heritage in an attempt to hide contemporaneity. On the contrary, there appear to be serious attempts aimed at achieving a deep understanding of its elements and developing its architectural heritage. Hong for example (2020) examines architectural heritage in buildings and heritage preservation and their effects on spatial experience. He looks at early universities planned by Henry Murphy in East Asia, characterized by American designs and building styles. Focusing on the preservation of architectural heritage in Shanghai College, the value of architectural heritage and spatial experience associated with the development of the campus is analyzed.

Similarly, Piombo & Suzanne (2022) address the issue of integrating contemporary architecture into cultural heritage sites. The suggestion is to keep in context and restore as an element of reading and creative reference. Above all, the necessity and importance of building in existing urban areas or vacant lands is taken into account. The commitment is to adapt or replace different architectural proposals that have not been intended to interact, coordinate, and integrate in their immediate context. Likewise, Muhammad, et al. (2018) analyze the impact of the use of heritage elements in contemporary architecture in the city of Sulaymaniyah. They identify their intellectual and philosophical dimensions and the possibility of employing them in order to advance contemporary heritage architecture that simulates and achieves communicative time. They analyze a group of contemporary local buildings during the period between 2003 - 2014, from different areas in the city of Sulaymaniyah. They identify the most prominent heritage elements, such as their effectiveness and the role in contemporary architecture. They find indicators of the effects of heritage facade elements, identifying their most prominent elements, and setting standards to achieve continuity of elements in contemporary domestic architecture. Alqatrani, (2020) on the contrary, addresses the importance of heritage buildings, which are considered influential in identifying the culture and people that have produced such creativity, in addition to the symbolic, spiritual, and political values.

Heritage buildings are considered some of the most important landmarks expressing cultural identity in Iraq and Basra. Among them, shanashil is significant and for that reason, it has not gone un-noticed. For example, Nassar & Habeeb (2018) deal with the relationship of the design of the shanashil in the houses of the city of Basra in Iraq with climate factors. They clarify the concept of the shanashil and its design, explains the parts of the heritage houses, and their importance in developing climate solutions. They also show the importance of using wood in its construction.

Based on the literature reviewed, it is clear that there is sufficient scope for further research that focuses on exploring the role of architectural designers in promoting concepts of architectural heritage. They should involve a proper selection of architectural elements and components that would achieve interaction between them and their recipients to achieve intellectual and cultural communication. With architectural heritage, It is found that most studies deal with architectural heritage while stating the necessity of dealing with it as a link between the generations. The architectural components have been studied as an inheritance that represents identity of time

and place. Some studies emphasize the fabric and origin from social and climatic aspects, while others focus on the formal architectural components that express the styles of heritage architecture from structural aspects and components of building materials. Other studies have also addressed the components and elements that make up heritage architecture, such as basements, pedicures, shanashil, and decorative elements.

These studies focus on the importance of the role of architectural heritage in understanding the requirements of contemporary buildings in terms of performance and the aesthetics, independent of their impact on people, especially with regard to the structural elements and components that decorate the facades of buildings and houses.

Research Methodology

This study aims to shed light on the effective impact of the process of reusing heritage architectural elements in the design of contemporary house facades, in achieving intellectual and cultural communication between heritage architecture and the present generations. It intends to divulge the meanings and aesthetic values that reflect the creative state of that architecture through its formal and structural elements. The focus is on the shanashil which is a distinctive element in Baghdadi domestic architecture.

Although studying a single element that makes up that architecture does not reflect the integrated image of all the features of heritage architecture, it will enrich cognitive awareness of the formal elements that distinguish the heritage architecture of the houses in Baghdad. For this purpose, a three-stage strategy was adopted.

In the first stage, the sanashil and the history of traditional architecture is divulged through literature and observations.

In the second stage, a literature and sources that have dealt with heritage architecture are examined. They unravel the importance of intellectual continuity of architectural production of heritage, to identify the criteria for adopting and reshaping the elements of heritage architecture. A set of criteria are produced.

In the third stage, case studies that have reused or reconfigured the facades are examined. Interviews are held with the owners. Case studies are thus reviewed and analyzed to generate models to apply the standards extracted from the literature. They are analyzed using the criteria developed in the second stage and the conclusions are drawn

Findings

Traditional Houses of Baghdad

Stability is the beginning of the emergence of architecture. Man's need for shelter and housing has led in turn to the emergence of architecture. Since the appearance of the first settlements throughout history, Man has been keen to improve and develop his buildings and urban facilities, either from a technical or an aesthetic perspective. From this perspective, the art of architecture is a reflection of the development and growth of human civilizations throughout the ages. Architecture is described as "history written on stones." (Kamal, 1976), There is no doubt that the Baghdadi Heritage House is one of the most important products of heritage architecture in Iraq. It has been characterized by a distinctive character that has made it reflect the products of architecture: arts and crafts in those periods in which it appeared. These houses were a reflection of the requirements of the society and have been based on the technologies available at the time. They take into account the type of construction materials available. Any architecture is a product of a cultural and social demand that is produced using certain techniques, and the social demand represents the historical stage that society is going through. This reflects its functional and utilitarian as well as intellectual and religious demands, and all of these specifications can be distinguished and revealed through the urban product of any society that distinguishes it from another society and represent it (Figure. 4).

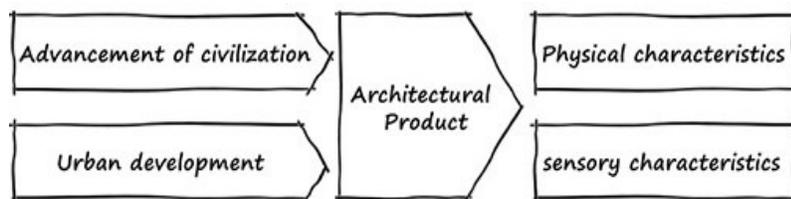


Fig. 4: Requirements for establishing the architectural style.
Source: Authors.

The traditional Al-Baghdadi plan of a house consists of a central courtyard that represents the vital heart of the house socially and functionally. The other spaces of the house are distributed around the central courtyard on two floors overlooking this central courtyard. This house usually overlooks the alley (Saleh, 2016) The Baghdadi heritage houses have witnessed many developments over time, in a way that simulates the requirements of the society during those eras, in addition to the technological developments that have helped in the construction work, the development of the efficiency of craftsmen, and other factors such as the improvement of the economic reality matter. Studies indicate that the Iraqi traditional house, as it was documented in its known form, has an appearance in this form during the era of late Ottoman rule.

The Baghdadi house consists of two floors with a courtyard in the middle, either in a square or rectangular shape, open to the top (open and exposed). It is surrounded by columns on the first and second floors and rooms and spaces are distributed around it. The level of the courtyard is less than the level of the surrounding spaces on the ground floor, and it is the center of the house and from it, the house gets ventilation and sunlight (Al-Haidari, 2008) (Fig. 5). The Baghdadi house was beautified from both the inside and the outside.

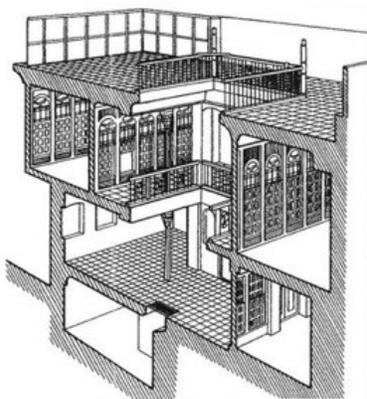


Fig. 5: Traditional Houses of Baghdad,
Source: Authors.

Paint has been used for the wooden parts, while the walls were built of yellow bricks. Further, on addition to decorating the wooden parts and some walls have been built with bricks with geometric and floral decorations. Decorations have been painted in colors, some of which in gold or silver. Glass has been used in the decorations and internal and external windows, and some of it was colored and formed as geometric pieces installed in wooden perforations (Yosef, 2014). From the above, it is found that Baghdadi heritage houses possess a set of elements and components, such as the central courtyard, wooden columns, and shanachie. It also consisted of some other elements in addition to the type of materials used in the construction process, such as bricks, wood, and colored glass. These houses have specific features that many of them share. With

other architectural styles, and with the realization of those elements that define the styles in which these houses have been built, they have the character that distinguishes and defines them as architectural and cultural heritage that expresses the place and time in which they have been built.

The Shanashil

One of the most distinctive architectural elements in the architecture of traditional Baghdadi houses is the shanashil, which protrudes from the facades of the houses with its view of the narrow alleys that contain a group of houses on either side of them. Wood is the main material of the shankhil. It is a light and available material and contributes to reducing the weight of the buildings. It is also easy to shape and insert patterns into them. The mashrabiya or chanashil is an architectural element represented by the protrusion of rooms on the first floor or above, extending above the street or inside the building's courtyard particularly in houses with central courtyards.

The mashrabiya is built of carved and decorated wood and is lined with colored glass. It is one of the elements of traditional desert architecture in the hot Arab countries. It began to appear in the sixth century AH (thirteenth century AD) during the Abbasid era, and its use continued until the early twentieth century AD. Mashrabiya are widely used in palaces and traditional houses (residential buildings), but they have also been used in some public buildings such as emirate houses, caravanserais, hospitals, and others. (Alhanafi, 2009) (Figure 6).

It is difficult to determine the exact time in which the Mashrabiya appeared, but what can be confirmed is that the processes of developing it and improving its performance did not stop for hundreds of years. Literature indicates that its beginnings appeared in the Abbasid period and it was used in palaces and general buildings on a large scale. However, the peak of its use was in the Ottoman era when it reached its finest form and spread almost everywhere in Iraq, the Levant, Egypt and the Arabian Peninsula. This is because its use in various buildings proved very effective in achieving a comfortable and efficient indoor environment despite the extremely hot external conditions.



Fig. 6: The Shanashil
Source: Authors.

Different styles and shapes of mashrabiya appeared, depending on the type of wood used and the mastery of the craft of shaping and assembling wood. However, they all share one origin and one method of work. Hassan Fathi believes that the shanashil has a premium because of its aesthetic value in decorating the facades of buildings, but it has other functions, such as controlling temperature, controlling the passage of light, adjusting the airflow, raising the level of humidity of the airflow, and providing privacy (Fathy, 1986).

Reviving Heritage Architecture

In recent years, many architectural heritage revival centers have emerged at the local and international levels. They seek to preserve architectural heritage by spreading awareness of the importance of archaeological sites and buildings, documenting studies on architectural heritage, and preparing training programs for the architects and engineers in the field of architectural revival. There exist many organizations that deal with heritage, such as the United Nations Educational, Scientific and Cultural Organization (UNESCO), the International Council on Monuments and Sites (ICOMOS), Aga Khan Trust for Culture, World Monuments and Heritage Fund, Max van Berchem Foundation, and the Bavarian State Office for the Protection of Monuments (CIAH,2011). The inherited heritage of architecture has been classified into several parts within multiple classifications, and it can be summarized into two types of architectural heritage. They are the material heritage, which means the remains, constructed parts, buildings, statues, and all physical signs, and the intellectual heritage, which means the ideas, beliefs, and practices that accompany architecture which influences the formation of architecture.

Revival of architecture is the deliberate recycling of a previous historical style. Architectural revival is described as a struggle against urban progress and development. Although this heritage has been created by Man, according to Bernard (2003), it is also the main cause of extinction of culture and architectural heritage.

The effort to represent identity through heritage is one response to the phenomenon of globalization. Indeed, representations arising from previous traditions and localities can be a reference in generating identity, which cannot be presented immediately. Rather, it can be presented through repeated, regular and continuous stages.

Knowledge of local traditional architecture must be constantly maintained (Prajudi, 2011). Intellectual trends to revive heritage architecture that adopted the topic of understanding the content and reshaping it with a modern vision have focused on using and borrowing similar forms and compositional elements in constructing the special form within a specific cultural environment. As long as the identity stems from the specificity of that place and thus achieving identity through imitation of traditional architecture, it does not neglect the issue of adopting the materials used in creating traditional architecture (Alfurty,2020).

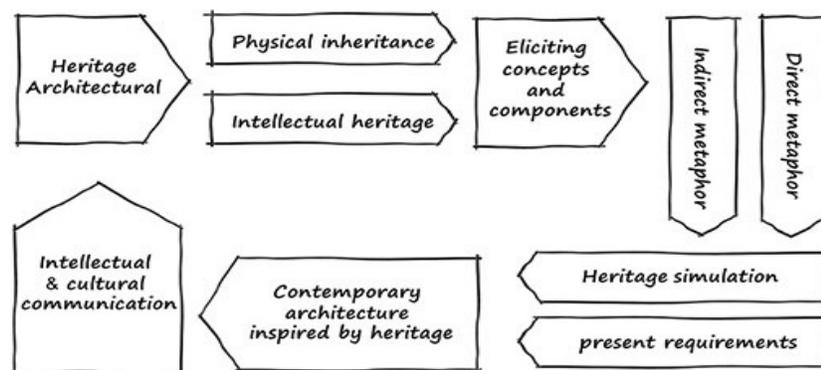


Fig. 7: Reviving Architectural Heritage

Source: Author

From the above, the process of reviving heritage aims primarily to preserve the architectural heritage and achieve formal and intellectual communication between contemporary and heritage architecture by embodying awareness of the importance of the architectural heritage and introducing its characteristics and material and intellectual components. Then these elements

can be reused or borrowed in order to develop an image to emulate architecture. Heritage is within modern requirements and needs. Through this, it is possible to achieve intellectual, cultural, and moral communication between heritage architecture and contemporary architecture (Figure 7).

Reviving Architectural Heritage: Previous Attempts

Many attempts to revive local architectural heritage have appeared in the middle and end of the twentieth century, and many veteran and emerging Iraqi architects have presented designs characterized by a revival of heritage. This was in addition to the visions of some homeowners who have been interested in the local architectural heritage and have tried to create their houses within this vision. Here, a number of case studies that have attempted to achieve that goal are examined.

Table 1: Previous attempts of introducing Shanashil in houses

Source: Author's

	<p>Case Study 01 The house of Mr. Ahmed (Abu Mustafa), Zayouna, District 716</p> <ul style="list-style-type: none"> • The house has been built on a plot of land with an area of 600 Sq.M in 1991. Its facade extends 18 meters, • Designed by the well-known architect Dr. Saher Al-Qaisi. • Local bricks called (Jaff-Qim) have been used as a finishing material for the facade, with shanashil made of wood added as elements inspired by the local architectural heritage. • The house is in excellent condition and is currently occupied by its owners¹.
	<p>Case Study 02 House in al-Wihda district, Saad Bin Abi Waqqas St.</p> <ul style="list-style-type: none"> • The house has been built in the early nineties on a plot of land with an area of 800 Sq. M, with a facade extending 20 meters. • Architectural designer is unknown. • Local bricks called (Jaff-Qim) have been used as a finishing material for the facade, with shanashil made of bricks added as elements inspired by the local architectural heritage. Other heritage architectural elements have also been also used, such as decorated bricks, arches, and glazed bricks. • The house is in good condition but is currently not inhabited².
	<p>Case Study 03 House in al-Wihda district, near Ah-Watuiq Sq.</p> <ul style="list-style-type: none"> • The house has been built in the early nineties on a plot of land with an area of 600 Sq.M, with a facade extending 20 meters. • Architectural designer is unknown. • Local bricks called (Jaff-Qim) have been used as a finishing material for the facade, with shanashil made of bricks added as elements inspired by the local architectural heritage. Other heritage architectural elements have also been used, such as decorated bricks, arches, and glazed bricks. The condition of the house is not good. Some parts and iron panels have been added to the facade and the external fence. • A family lives in the house³.

It is well known that Architectural designs must meet the needs of the clients and achieve their aesthetic and functional needs. Further, they may communicate ideas such as the importance

¹ An interview with Mrs. Sabria, the owner of the house, on January 18, 2024 at 4:10 pm.

² An interview with Mr. Aziz Al-Safi, an old resident of the area on 14/13/2023 at 3:10 pm.

³ An interview with Mr. Ahmed Abu Mustafa, the resident of the house, on 01/15/2024 at 3:45 pm.

of the designed product to the current generations and the extent of the richness of the architectural heritage of the country. They are messages directed to educate people and develop their sensory and aesthetic tastes. Here, the role of the designer is significant in introducing them to the clients and convincing them with the proposals. Designs must be inspired by heritage architecture to educate them towards adopting these designs as an alternative to their options of adopting hybrid imported styles, which are foreign to intellectual heritage. It is found that several variables and factors work together to achieve the goal of reviving architectural heritage. They lie in issues directly related to the adopted method of simulation, the method of borrowing, the method adopted in selecting and using heritage architectural elements, and the purpose of the design and borrowing of these elements.

The theoretical framework derived the criteria that can be employed to evaluate the relevance and usefulness of such practices. These factors and the method of borrowing the Shanashil element

1. Whether it was direct or indirect.
2. Method of simulation: comprehensive simulation by using and borrowing several elements within a composition inspired by heritage architecture, or a partial simulation by selecting one or more elements within a modern interface
3. Materials used in finishing the interface and borrowed elements (Figure 8)

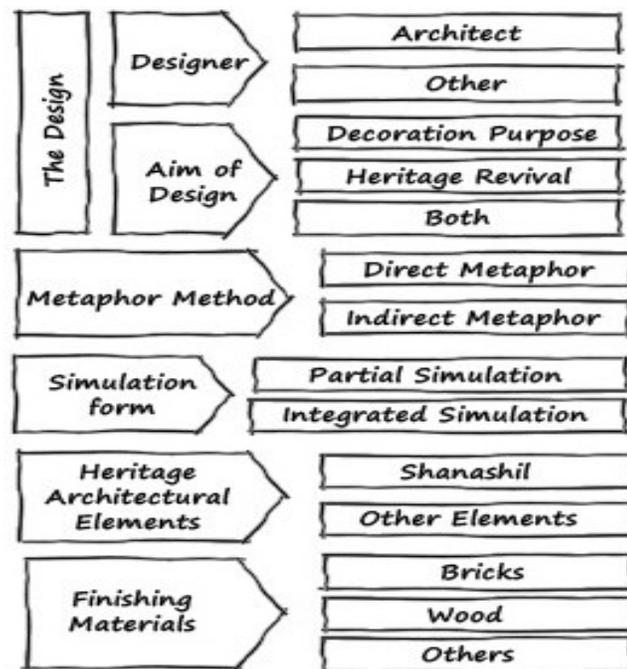


Fig. 8: Aspects Examined in the Survey borrow
Source: Author

Case Studies of Selected Recent Projects

Several case studies that have attempted to produce models of house facades that mimic traditional architecture and revive heritage by introducing the Shanashil have been examined. These were distinguished by being houses for the general public located within the residential areas. They have all been built after 2010. Case study samples were chosen randomly, by walking around the residential neighborhoods of the city of Baghdad, identifying the models that relate to the issue.

Information was collected through personal interviews conducted with the owners of the houses, or by interviewing the architectural designers of those houses.

Table 02: Case Studies of Recent Projects

Source: Author's

	<p>Case Study 01 The house of Mr. Ahmed Al-Sudani / Baghdad/ Zayona, District 716 The area of the house: 300 square meters The façade: 9 meters Year of construction: 2014 Designed by the homeowner) ⁴</p>
	<p>Case Study 02 The house of Dr. Fattah Shghaith/ Baghdad/ Zayona, District 714 The area of the house: 300 square meters The façade: 9 meters Year of construction: 2014 Designed by Architect Square Eng. Co. ⁵</p>
	<p>Case Study 03 Mr. Ihsan Qalam house/ Baghdad/ Zayona, District 716 The area of the house: 600 square meters The façade: 18 meters Year of construction: 2018 Designed Architect Ewan Architectural Consultations ⁶</p>
	<p>Case Study 04 Mr. Sadiq house / Baghdad /Palestine Street /, District 508 The area of the house: 300 square meters The façade: 15 meters Year of construction: 2021 Designed by a non-Architect ⁷</p>
	<p>Case Study 05 Dr. Ammar S. Ashour house / Baghdad The area of the house: 200 square meters The façade: 14 metres Year of construction: 2016 Designed by: Architect, Ammar S. Ashour. ⁸</p>
	<p>Case Study 06 Mr. Ahmed Abdulhusain house /Baghdad/ Palestine Street, District 508 The area of the house: 200 square meters The façade: 10 meters Year of construction: 2012 Designed by: non-Architect ⁹</p>

⁴ An interview with Mr. Haidar, the owner of the house, on 12/12/2023 at 5:20 pm.

⁵ An interview with Dr. Fattah Shghaith, the owner of the house, on 22/01/2024 at 3:40 pm.

⁶ An interview with the engineers Ahmed Thamer & Younis Sabri, the designers of the house, on 01/26/2024 at 11:20am.

⁷ An interview with Mr. Sadiq Malik Al-Bayt, on 01/10/2024 at 4:20 pm.

⁸ An interview with Dr. Ammar S. Ashour the engineer, who designed the house, on 01/24/2024 at 1:30 pm.

⁹ An interview with Mr. Ahmed Abdel Hussein, the owner of the house, on 25/12/2023 at 4:30 pm.

	<p>Case Study 08 Dr. Shatha Abbas house / Baghdad Wziriah, Al-Magrib District The area of the house : 200 square meters The façade: 9 metres Year of construction: 2012 Designed by Architect Dr. Shatha Abbas.</p>
	<p>Case Study 07 Haj Rasoul house / Baghdad, / Karradah The area of the house: 1000 square meters The façade: 20 meters Year of construction: 2017 Designed by Architect, Ammar S. Ashour. ¹⁰</p>

Analysis and Discussion

Table 03: Analysis and Description of case study
Source: Author

<p>Case Study (1)</p> <p>The house has not been designed by an architect. The house owner's vision was to borrow an element from the architectural heritage in order to decorate the facade. It is a direct metaphor for the shape of the Shanashil, to achieve a partial simulation of the architectural heritage. No other heritage architectural elements have been borrowed. Wood has been used to form the shankhil, mounted on a marble facade.</p>	
<p>Case Study (2)</p> <p>The house has been designed by an architect. The designer's vision to revive heritage architecture. Using an indirect metaphor for the concept of Shanashil to achieve a new classic style. Thus, a partial simulation of the architectural heritage has been carried out, Modern building materials have been used in the facade finishing works.</p>	
<p>Case Study (3)</p> <p>The house has been designed by an architect. The designer's vision to revive heritage architecture, by using a direct metaphor for the concept of the Shanashil. The direct metaphor comes from the shape of the Shanashil, to achieve an integrated simulation of architectural heritage. Other elements have also been borrowed from architectural heritage, such as arches and Islamic patterns. Wood has been used to make Shanashils, and marble has been used in the finishing work of the façade.</p>	
<p>Case Study (4)</p> <p>The house has not been designed by an architect. The house owner's vision has been to borrow an element from the architectural heritage in order to decorate the facade. It is a direct metaphor for the shape of the Shanashil, to achieve a partial simulation of the architectural heritage. Wood has been used to make Shanashils, with traditional bricks.</p>	
<p>Case Study (5)</p>	

¹⁰ An interview with Dr. Ammar S. Ashour the engineer, who designed the house, on 01/24/2024 at 1:30 pm.

<p>The house has been designed by an architect. The designer's vision to revive heritage architecture. It uses an indirect metaphor for the shape of the Shanashil, to achieve a partial simulation of the architectural heritage. Modern building materials have been used in the facade finishing works.</p>	
Case Study (6)	
<p>The house has not been designed by an architect. The house owner's intention has been to borrow an element from architectural heritage in order to decorate the facade. It is a direct metaphor for the shape of the Shanashil, to achieve a partial simulation of the architectural heritage. Wood has been used to make Shanashils,</p>	
Case Study (7)	
<p>The house has been designed by an architect. The designer's vision to revive heritage architecture in order to decorate the facade. It is a direct metaphor for the shape of the Shanashil, to achieve a partial simulation of the architectural heritage. Wood has been used to make Shanashils, with modern building materials have been used in the facade finishing works.</p>	
Case Study (8)	
<p>The house has been designed by an architect. The designer's vision to revive heritage architecture. It was a direct metaphor for the shape of the Shanashil, to achieve a integrated simulation of the architectural heritage. Wood has been used to make Shanashils, with traditional bricks.</p>	

Analysis of the Case Study of Recent Attempts

The analytical study of the case studies shows differences in the designers as well as in the reasons that have prompted metaphors borrowed from architectural heritage. It also shows that there are differences in the method of metaphor and simulation of the elements of heritage architecture, and also the diversity in the choice of materials with which the elements have been created.

Table 4: Analysis of the Case Study of Recent Attempts
Source: Author's

Attributes		Samples								
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
Design	Designer	Architect		•	•		•		•	•
		Others	•			•		•		
	Aim of Design	Decoration Purpose	•			•		•		
		Heritage Revival			•				•	•
		Both		•		•				
	Metaphor Method	Direct Metaphor	•		•	•		•	•	•
		Indirect Metaphor		•			•			
	Simulation form	Partial Simulation	•	•		•	•		•	
		Integrated Simulation			•			•		•
	Heritage Architectural Elements	Shanashil	•	•	•	•	•	•	•	•
		Other Elements		•	•				•	•
	Finishing Materials	Bricks				•	•			•
		Wood	•		•	•		•	•	•
		Others	•	•	•		•	•	•	

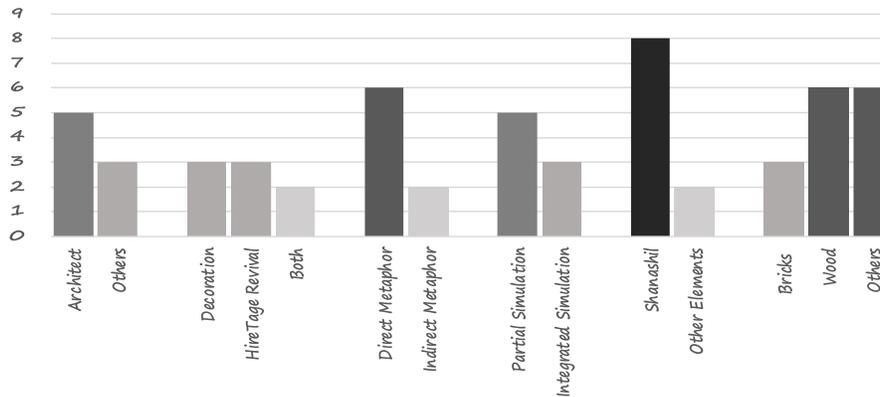


Fig. 9: Analysis of the Case Studies
Source: Authors

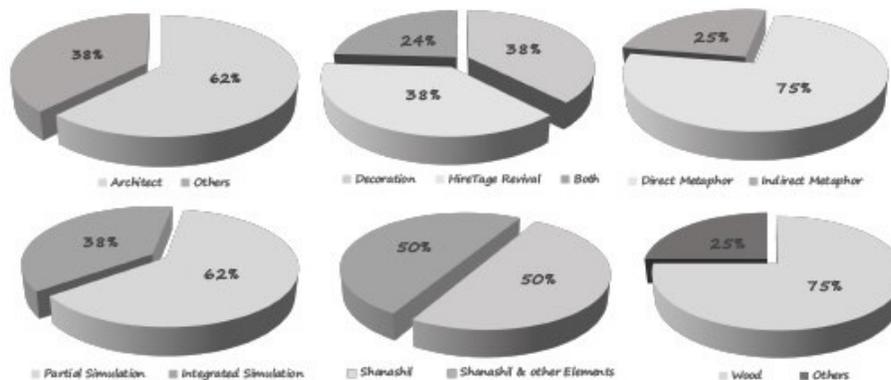


Fig. 10: Analysis of the Studies
Source: Authors

Results and Provisional Conclusions

- Five of the case study models (2), (3), (5), (7) and (8) have been designed by architects, and the remaining three (1), (4) and (6) have not designed by architects.
- Three of the case study models (1), (4), and (6) have borrowed heritage architectural elements and have used them in the facades for decorative purposes. Three of the case study models (3), (7), and (8) have revived the architectural heritage. Two case study models (2) and (5) have been used to decorate the facade, taking into account the theme of reviving the architectural heritage.
- It is found that five models (1), (3), (4), (6), (7), and (8) have been borrowed, using a direct metaphor method. Case study models (2) and (5), have adopted an indirect metaphor method in simulating the Shanashil.
- In the case study models (1), (2), (4), (5) and (7) a partial simulation method has been adopted by using a metaphor for one element from architectural heritage. This is the Shanashil. In the case study models (3), (6) and (8), an integrated simulation has been adopted by borrowing several heritage architectural elements.
- All the case study models have borrowed the shankhil to achieve a simulation of heritage architecture. In the models (2), (4), (7) and (8), a number of architectural

heritage elements such as arches, Islamic pattern, and decorative brick formations have been borrowed.

- In the Case study samples (1), (3), (4), (6), (7), and (8), the shanashil has been made of wood, meaning the shape and material of the architectural heritage element have been simulated. In the samples (2) and (5), the Shanashil has been made from modern construction materials. It is made up of concrete molds and finishing materials such as red bricks, glass and aluminum. Here, the simulation has been done by borrowing the shape and the concept of the Shanashil.

Conclusions

Thus, this study concludes the following.

1. Borrowing and employing elements of heritage architecture is of great importance in reviving architectural heritage by creating a mental image in the people. This could consist of the form, characteristics, and elements of heritage architecture, thus preserving it from extinction and oblivion.
2. Shanashil is one of the prominent elements of the local architectural heritage of Baghdad, Iraq, if not one of the most important. The process of imitating heritage architecture requires borrowing prominent and carefully studied elements in terms of formation and the location of the element in the façade. Moreover, the process of imitating and copying its details and then transferring them in a way that achieves aesthetic aspects within the design are significant.
3. People who have created heritage architecture in the past are also the main factors causing the obliteration and forgetting of that architecture. It occurs through his neglect of cultural heritage, influenced by current factors represented by rapid production, costs, lack of demand for creative works, and other external factors such as the influences of architecture, modernity and international style. They have become the dominant features of most architectural design products.
4. The facades of the houses to which shanashil have been added often have no other heritage elements used. Even if the goal of borrowing these elements has been pure decoration, they reflect the form of heritage architecture and produce an image and perception among the people, of the details and features of local heritage architecture.
5. There is a sincere intention among many architectural designers to revive local heritage architecture. The process of imitating heritage architecture requires borrowing prominent and carefully studied elements in terms of formation and location of the elements in the façade. Moreover, the process of imitating and copying its details and then transferring them in a way that achieves aesthetic aspects within a modern design are quite popular.
6. Despite there are sincere intentions among many architectural designers to revive local heritage architecture, there is a reluctance among some architects to borrow heritage architectural elements in designing house facades. This is due to factors related to achieving the client's desires, high costs, scarcity of raw materials, in addition to the dearth of craftsmen specialized constructing in heritage-related architecture.

In this context, this research provides deep insights into the issues and solutions in re-invigorating heritage architecture through the incorporation of the Sanashil in the contemporary architecture of Baghdad, Iraq. The concepts and ideas explored in this research need further exploration theoretically as well as be practically implemented with the support of the state agencies.

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