

Architectural and Heritage Elements and Formation Characteristics of Traditional Houses Interfaces

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Abstract

The research aims to characterize functional architectural elements of the traditional houses facades in Jordan (the old city of Salt) as a case study. The analysis of these architectural elements will study the formation properties of the facades through identifying its historical, structural and philosophical foundations. These various elements have great importance because they contribute to the design frameworks that have characterized these buildings interfaces. So these elements represent the architectural structural art integrated rich beauty, heritage, and moral values and that has not changed by modern architecture or dispense the architect of quoting of western models in the need to focus on the structural basis of the architectural heritage that contributed to the detection of the solutions used in the civil disciplines so been reworked these foundations in a modern way.

Keywords: traditional architecture, moral value, aesthetic value, Archs, Shutters.

Introduction

With succession of civilizations a tremendous amount of cultural heritage provides a fertile source for researchers and artists.

They derive their materials and check their personal identity against it, As well as the inspiration Heritage and especially architectural heritage necessity crosses every society for originality, creativity and its beauty. In this research we will study the elements and characteristics of the formation of traditional interfaces of old houses which crossed and reflected the cultural and social heritage of residents of these houses to show its importance in the formation of traditional interfaces that will give forming new values emphasize the secrets of this acquired beauty that contributed to the extension of the identity of traditional architecture in order to extract fine values in traditional architecture and study their properties, for use in the business division and see how is the engagement with the roots to get out elements which will utilize it in modern architecture to achieve cultural communication.

In this research we Will be taking the old city of Salt (as an analytical case study) located 28Km to the West of the capital, Amman based on a series Mountains are (stairs and the castle). The urban planning of the city was affected by several factors, including social factors, which led to the division of the city into shops to begin the establishment of the city center and build houses around this center, the materials used in construction are stone material and a especially yellow stone and is renowned for frequent use of contracts and arches, rolled civilizations of the city starting from the late Bronze Age in (1600) down to the rule of the Ammonites, Babylonians, Alldanis then the Persians, Greece, Roman, Byzantines until Islamic rule, starting from age Rashidi(661-1517) for Umayyad ruled down Ayyopie with the end of their rule in 1261 income Mamluks and with the end of the reign of the Mamluks in the year (1517) entered the Ottoman rule and in this particular period witnessed a remarkable urban activity where erected public buildings, churches, schools and hospitals.



Picture (1) A general view of the city of Salt



Picture (2) diagram of salt city at the beginning of the Islamic era .



Picture (3) Illustration of the beginning of the city of Salt in ancient times

Search terms:-

Decorative and Architectural elements:

Yassin (2002) suggest that elements of architecture depend not only on the performance of the structural purpose, but often have decorative purpose and thus combine to achieve the Structural purpose and decorative purpose in that one.

Architectural Heritage

Architectural environment is Influenced by the needs of each stage of human evolution and changes with the needs. The architectural environment produces "architectural heritage", which in the past was part of everyday life, like what we produce today from buildings and installations we use in our daily lives.

Objective of this research: -

- 1 – to limit and describe the functional elements of architecture in the facades of traditional residential buildings.
- 2 - to highlight the aesthetic and artistic values of the traditional architectural elements.
- 3 - to show the characteristics of the traditional forming that will earn new values confirm this syndrome beauty secrets.

Elements forming the traditional facade of the old houses:

Interface configuration of residential building in the ancient city of Salt like the composition of a text, forming components tells the story of the building configuration and outlining its structure. Also, through the formation of the architectural interface it architectural function of each space of functional spaces of the building can be identified:






1 - openings: -

The openings of the most important elements in effect on the properties of the visual forming of the facades in traditional architecture has taken a dynamic character that give a sense of freedom for variety and height, and the elements used to focus on: -





The Entrance

The entrance represents the most important architectural elements in the formation of the interface of traditional houses and that's because of its position in the axis of the main interface, Which regulates interface elements within the various levels.

Entrance frames built of yellow lime stones crowned by a tapered arc topped with a circular opening with accurate details of stone and cover this circular hole garnished stained glass allow the lighting to enter. Entrances are in the form of a rectangular open covered with a wooden door associated with an architectural element called Hammer and is used to knock on the door marking the arrival of the guests and the hammer comes on several forms and made of iron or wood, in addition to the stone pillars on either side of the entrance, above the Corniche entrance is decorated with motifs and patterns.

بعض الاصناف الموجودة من كل نوع		الاصناف نوع الدخول
		النوع الأول
		النوع الثاني
		النوع الثالث
		النوع الرابع
		النوع الخامس

Picture (4) A table showing the types of entries used and their relationship with the holes Top

الاشكال ذات الصيغة المعمارية		الاشكال نوع الهندسية
		هندسية مستطيلة
		هندسية القوس دائرية
		هندسية وترابية
		هندسية جانبية

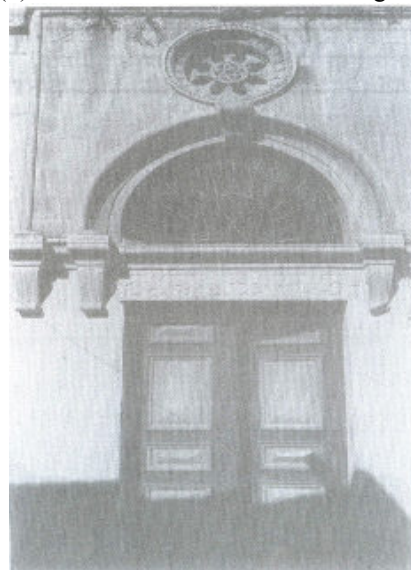
Picture (5) table shows the frames on the Doors in multiple forms



Picture (6) the main entrance of the (SUKAR) building interface .



Picture (7) the main entrance to the building of Toukan.



Picture (8) : Entry to the courtyard of the house lighting through the circular opening and the stained glass above the entrance.

2- Arcs

Waziri 2004, and Al-hammad 1990 reported that the contract is a sacred element depends on a one focal point or more and usually represents openings of construction or the surroundings, and the arc composed of several stones, each one is called a faqara or hashajah.

The arc is composed of paragraphs and key strikethrough and shoulder or base that join it with the column and the arc has multiple roles including the balance of the building, and relieves pressure on the buildings and decorations. George Marcy suggest that the contract grew in Mesopotamia, where trees and rare and stone is difficult.

Also, Bahnasi (2006) suggest that the innovation of the bow is an old Arab heritage, borrowed by Rome and Byzantium, and received broad perfection in the Arab Islamic art. Muslims knew many types of contracts: the contract half ring, refracted, deaf, the spire, dedicated, cornice, and low.

Arcs are used at the entrances of the buildings, in the dishes of the mosques, in the neck domes. The arc types are discussed below

1- Spire arc: Arc is influenced by Christian architecture, topped of window openings, These arcs give rise to the openings and the orientation to the top and give the interface rise and height and these arcs are usually based on columns on either side of the window or door.

2—half-ring arc : it is in the top of the doors and windows, and we note this type of arcs in the openings of the upper floors.

3- Tendon arc (al watari) :Mounting holes of windows on the upper floors and arrange the stones bow and tendon appears prominently stone in the middle of the bow and the so-called key (bow) to provide structurally bow.

4- horseshoe-shaped arc: The origin of this arc is from the Andalusian architecture, but this arc is not frequent in the interface like the rest of the other arcs.

5 - Aalghemriaat (circular): It is a circular window placed above the main entrance usually to emphasize the entrance and show its importance as well as the introduction of light into the house through the stained and colored glass that is in it , this circular window can be carved of stone and a prominent of the façade.

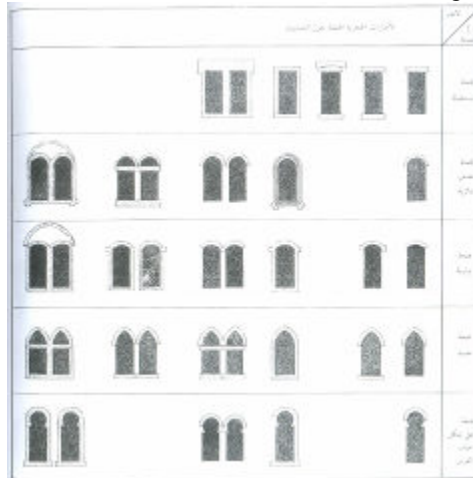
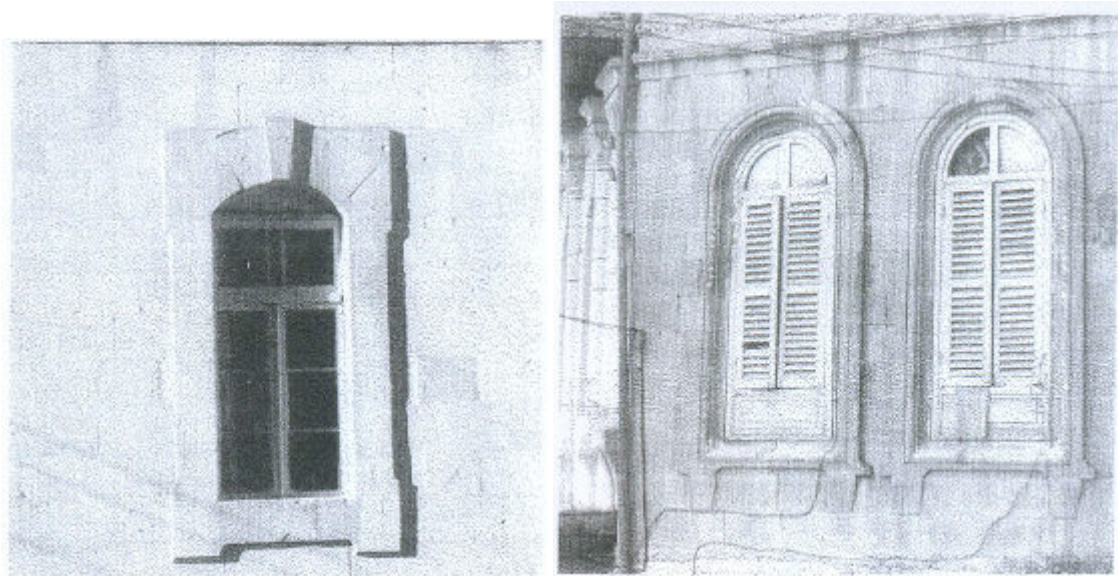


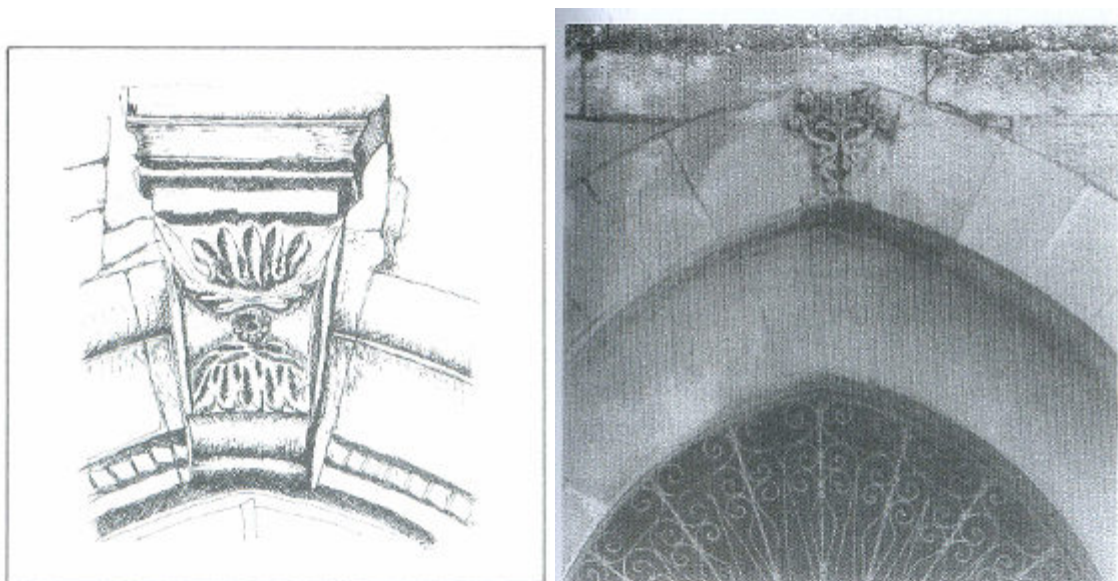
Table (9): shows the various arcs of all kinds multiplexing around openings.



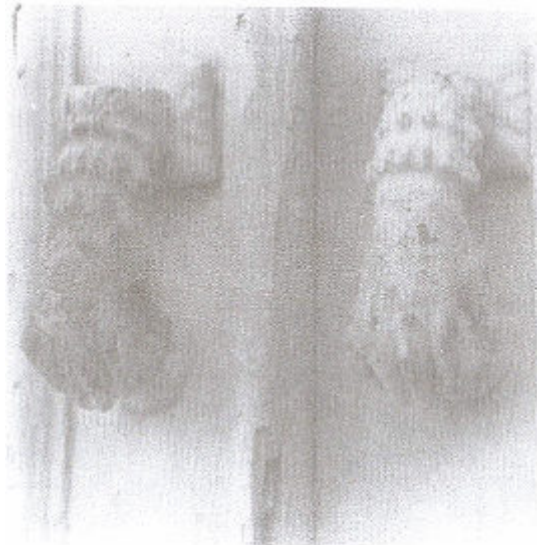
Picture (10): a home interface and see the different types of arcs that have already been mentioned.



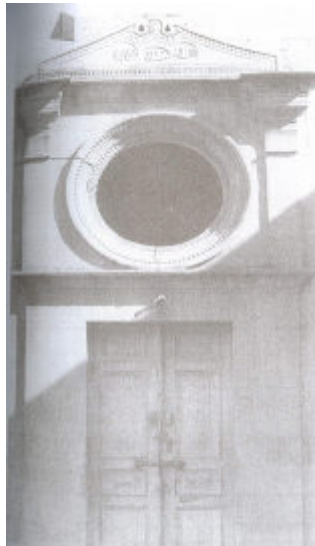
Picture (11): half-ring arc around the window openings.



Picture (12): key bow is the most important part and supports the bow structurally and note that adorned decorations.



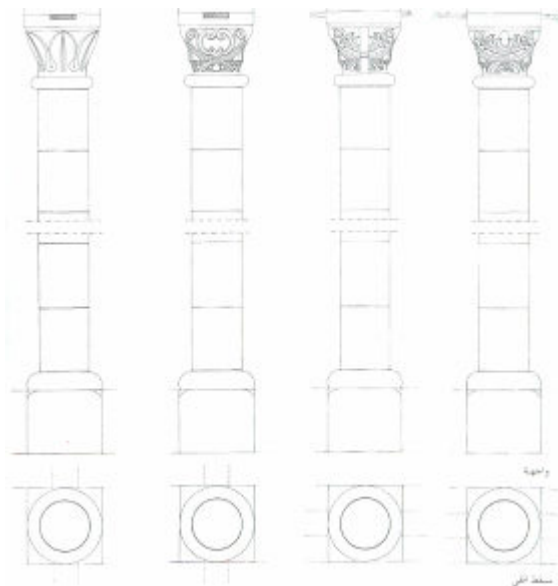
Picture (13) Hammer on the entrance door and here was in the form of man's hands.



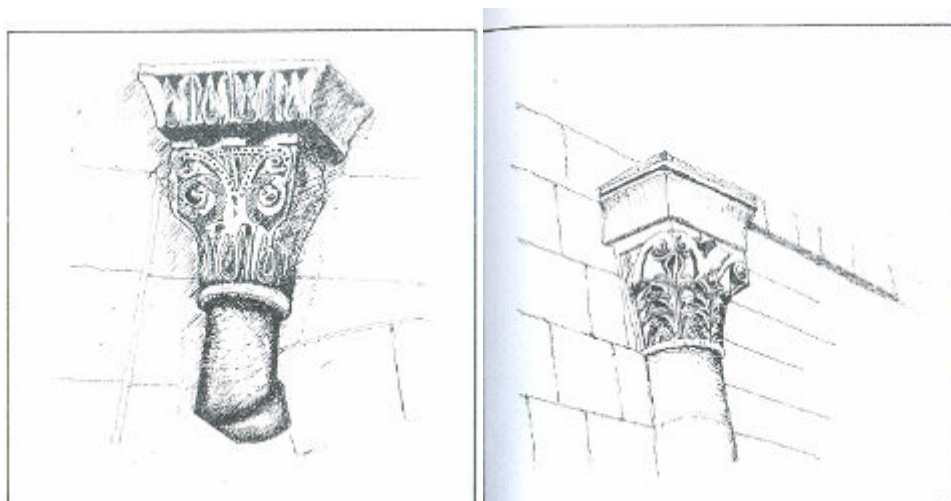
Picture (14):circular open above the main entrance .

3- Columns

From the architecture view Column of consists of three parts crown, body and base. The columns in the interfaces are either attached to wall or full columns and they may appear at entrances of shops down of residential buildings as in the Toukan building. The crown of the columns contains of various decorations , the architectural style of the columns is fashioned Ionian.



Picture (15): multiple columns types are used as part of the façade and represents parts of the column.



Picture (16): crown of the column with multiple floral and geometrical decoration.



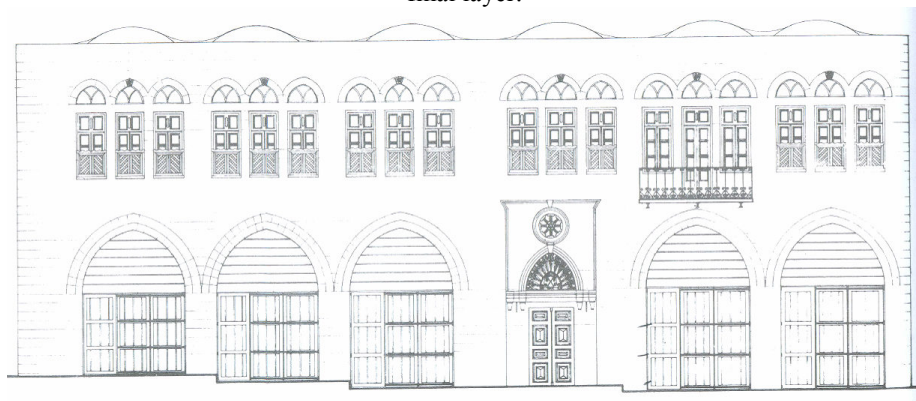
Picture (17): columns locations within the façade either as part of the windows hole to confirm them or with a separate base is repeated to create a kind of balance.

4- Mashrabiyya and Shutters windows

They are placed on the windows of the building so that they appear as part of the windows to allow the viewer to see through, while view from outside is restricted.



Picture (18): a section shows parts of the window, the iron handrail start then the shutter and stained glass as a final layer.



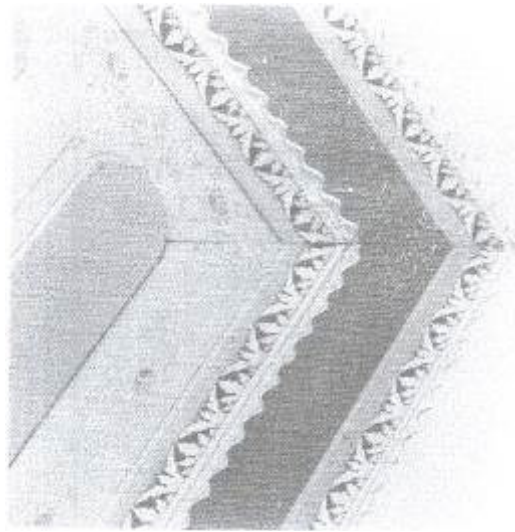
Picture (19): facade of Toukan residential building Ground Floor was used as Commercial shops ,Therefore mashrabiyya has been used on the first floor windows to increase the privacy of the house.

5-Brick ceiling: - (Abu Jaber Building):

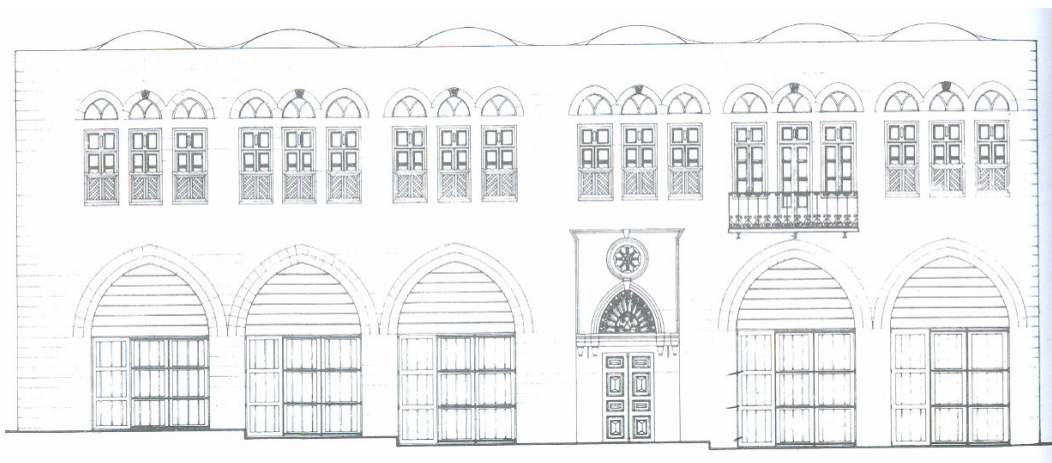
Red tile roof and under the tile wooden pillars plates of tin to prevent the leakage of water inside the building. In addition to the ceiling decorations from the inside.



Picture (20): section explains a brick ceiling from the outside and the load-bearing pillars of the roof from the inside



Picture (21) section explains brick ceiling of the home and interior decoration.



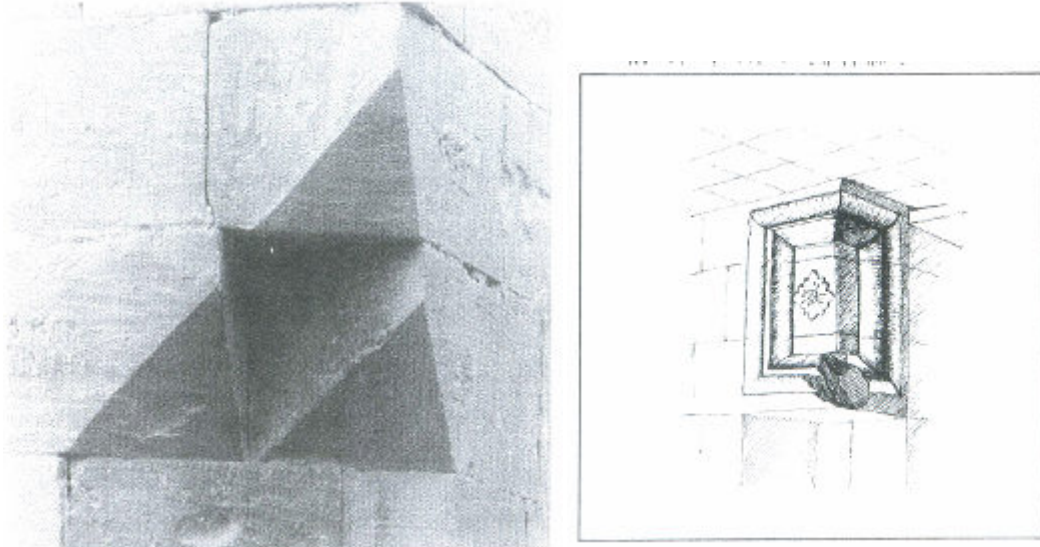
Picture (22) balcony as part of the upper floors to provide the required views.

6- Balconies

Terraces are a high place and the terrace is placed on the high palaces and mosques, etc., in traditional houses terrace used in the upper floors of the levels offers panoramic views. Balconies are composed of wooden porch and supports of iron pillars.

7- Corners of the building

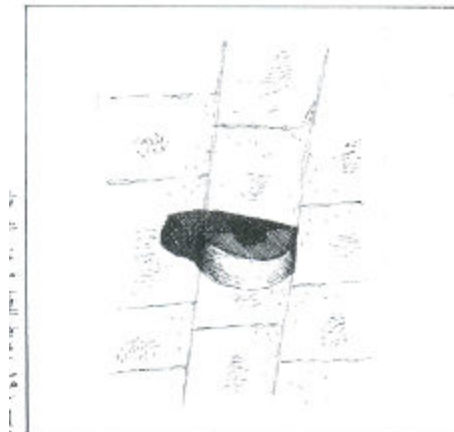
It is part of the façade, its position in the corner of the building with beautiful geometrical forms.



Picture(23): corners of the building with several forms

8- Stone Horse cleat

Stone ring as part of the interface used to connect the horse next to the house.



Picture(24): Stone Horse Ring on Wall.

Forming properties in the traditional interface

The formation of the traditional interfaces of blocks and architectural elements affirms the principle of simplicity and the depth of its expressive contents. The building expresses the function which they were created for: -

There is harmony in the traditional formation in the interface through

- A - a relationship between architectural elements is harmony and continuous link between these elements.
- B- variety in the architectural elements creates a kind of excellence and unity among them.
- C - There is a rhythm by using elements that are repeated without getting bored.
- D - The presence of the rule in the overall composition, with the repetition of some elements there is a dominant form of the total for example, most of the holes ending with arcs.

To understand the architectural composition of the traditional interface, it is not enough to study architectural elements that forms the facade and there is a need to study the characteristics of formation that gives the composition new values.

1 - Scale

Scale is the relative relationship between buildings and human dimensions such a relationship over the ages is the relationship that makes human feel of belonging.

Scale in traditional architecture is human scale for the production of building with spaces that compatible and consistent with use. Scale used in residential homes is the arm which is the basic unit in the building, which is equal to two-thirds of a meter 66 cm. The parts of the arm are the hand and its equal to one-third of the arm is 22

cm.

2- Ratios and proportionality

Achieving the golden ratio in most of the elements, and the relation between elements with each other can achieve harmony in visual terms.

The use of stone courses height of 25 m show uniformity and consistency, identify the height of floors at suitable rates so that the ground floor rise then the second followed by the third one.

3- The solid relationship with open

There is a relationship between solid and space. It is shown in the proportion of open spaces in lower floors which is less than in the upper floors to provide the required privacy.

4 - Colors and Color Configurations

Color is a power understood man, people realize natural colors larger, In traditional housing color shows through the nature of the materials used (yellow limestone, wood, handrails with a multicolor, stained glass).

Stones have multiple colors and types, and stone-page in sections of one building we see the white strong Mazzi stone in a part of the interface, and yellow limestone in another part, diversity is evident in the colors of outer Doors and colors of shutters covering windows in addition to stained glass used to cover openings windows.

5 - Symmetry:

Architectural composition of traditional architecture does not achieve symmetry. Most buildings do not achieve uniformity in general composition and it is due to freedom of composition, and here appear proficiency in the distribution of the architectural elements of the interface to achieve a balance without costing.

6 - Sincerity of expression:

It appears through the foreign blocks of the building, which reflect the plan of the building by specific surfaces. The method of drafting architectural elements in the interface they reflect the architectural spaces that have been developed to confirm it clearly and spontaneously without the cost and reflect the natural environment, cultural and religious customs and prevailing traditions which showed Building verify all the requirements and express its builders.

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