
Interpretation of de Saharan façade, from traditional to contemporary: Case of individual houses of the Bechar town-Algeria

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1. ABSTRACT

The town of Bechar is one of the examples of Saharan cities that formed from human settlement called "Ksar". It has subsequently been significant urban expansion dating from the colonial era to the present. Thus constituting a diversity in its urban fabric, recalling the traditional fabric "Ksourien", the colonial urban fabric, and finally the urban fabric that came after the independence.

One of the representatives of any architectural language materializes in the facade. This element seen from the exterior, it expresses the values and criteria for the architecture used in the design of a fabric. Yet it also determines a real expression of the contents of the building and its architecture from its structure and elements that compose it.

The Interpretation of the façade into the architecture of the city Saharan "Bechar" tells us in its development and its components, and this through its three modes of interpretation, that of traditional architecture "Ksourienne", colonial architecture and finally how to interpret contemporary.

The traditional facade "Ksourienne" and saw the expression of blindness that we provided, giving way to open another front on the interior of the "Ksar" house. It provides both thermal comfort of the home and the social aspect of intimacy. Its composition shows timidity in the architectural expression, however, reveals a genius designer of Arab-Muslim society in Ksar architecture.

The development of the facade was guided by the use of new architectural trends from modernism. In the colonial mode of interpretation, she try to find the appropriate model that can integrate into the nature of the Saharan environment, using the concept from the front which preceded that of Ksourian architecture.

The present facade in its content, expresses a composition of two different languages. She calls the elements of modern architecture and elements related to the local building culture, which is a result of reading this type of hybrid façades

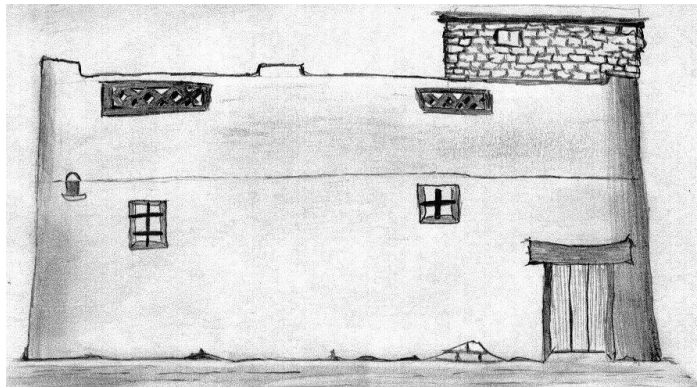
2. INTRODUCTION

The architecture of the town of Bechar, is a variety that requires an understanding to formulate a general idea of trends and architectural languages that participated in the formation of the city. Excepting the old core of the city which is the Ksar occupying the threshold of the built heritage of the city and remains as an outstanding reference that dictates the genius of the builder Ksourien and value of traditional architecture in human settlements in the Sahara.

The facade in the house of the Saharan town of Bechar has undergone changes, which led to a development in its composition through Saharan architectural languages has experienced this city, taking into account its environmental context. And this in parallel with traditional architecture Ksourienne is representative of introvert house

3 INTERPRETATION OF THE FAÇADE IN THE KSAR HOUSE

The facade of the house in the Ksar of Bechar is described as blind; it does give some discretion in its structure and composition to the traditional Saharan house. The exterior façade presents a variety of structures, ranging from house Ground floor only, the house has two levels. Having a compact structure, we distinguish that the Ksourian facade is organized by a base, body, and a top, this is on the concept of anthropomorphism in the facade.



3.1 The composition of the Ksourian facade

In the house of Ksar Bechar, the exterior form a reduced number of its composition, with the exception of small overtures which serve to bring back the air and light, and the front door which makes the transition of man serving as a passage, we can find another element that makes up a quote gargoyles (components which serve to remove rainwater from terraces) and the acroteria to delineate the walls of the facade with its terraced.

The geometry of the windows in the facade ksourienne, is substantially similar in all facades of the Ksar. It has a simple geometry that chooses the square as a reference and small ranging from 0.50x0.50 to 0.80x0.80 in some cases. There are some openings at the floor of very small size of the deadly kind used as a culmination to the facade. In the winter seasons the openings of the facades are closed to keep out the cold.

we find in the facades of the house exceeds one level, the openings of the floor are of greater size than the ground floor, and feature a wooden shutter. They are on the residence of men on the floor or at the upstairs bedroom called Mesria.

3.2 Building materials

The building material found most frequently in the traditional home of Ksar Bechar is Toub. A material obtained by mixing a wet clay and straw, all kneaded and sun-dried in molds of dimension of a cinder block room. But sometimes these materials are not readable from the front, since the latter is coated with plaster.

The coating as used in coatings of traditional facades argillaceous sand is applied by hand. This is only used in areas where there is contact with the outside environment, and surfaces likely to be rubbed. Regarding other materials which enter into the composition of the facade Ksourienne, there are palm trunks, which are implemented for use in the manufacture of doors and window shutters.

3.3 Aesthetics in the traditional facade

The traditional facade in the Ksar of Bechar, gives us no insight from the point of view and aesthetic beauty, of course if we take the definition that aesthetics is a science which determines the character of beauty in the productions of nature and art and that it is an object, a being, or a move that gives the impression of being a fine¹.

By against if we take into consideration the nature and criteria of Muslim Arab society, which relies on the concept of morality, and that individuals of this society are equal, the notion of aesthetics seems from another angle that of the pure research of the balances of the individual to give satisfaction to all two, having said that personality and traditions of a Muslim society.

The advent of architecture and engineering that support the new technical construction and multiplicity of new materials, a fact that traditional Saharan architecture, and especially of Ksour, is considered bad by some proponents of contemporary architecture, but still others admit it as a home contractor, hinged to the dictates of one of the great architects of the twentieth century "Le Corbusier" the City of Mzab (one example of human settlement Sahara²) Mzab that is a lesson in architecture.

4 INTERPRETATION OF THE COLONIAL FAÇADE

The houses of the colonial type, are located in the old center of town, colonial city center said that his vocation was able to keep up these days as the heart of the town of Bechar.

The facade in the house, in the colonial architecture is quite different from that of traditional architecture Ksourienne, with the exception of forms that flow into the external composition of the house which means the facade, to include small openings for ventilation, the use of the arcade as a constructive element and a very common element in traditional Saharan architecture

The first intuition that comes to mind upon seeing this type of facade is that it does not obeyed to the notion of blind frontage adapted into the architecture of Ksour, and in parallel she opted for a rich facade in its composition, its form and structure, while respecting the rule of the anthropomorphism of the facade

The colonial facade is a coherent structure, she opts for a fixed template of R+0, with a terrace and inaccessible. The facade of this house type has only a body and a top, which gives a structural criterion in distinguishing this type of architectural interpretation of the colonial house

The body of the house is formed by the main entrance of the house that is marked by one or more arches, different openings, lintels and window sills, at the top there are the parapet under different treatments

Regarding the composition of the colonial facade, there is a certain richness that gives an architectural look more expressive, since it involves the interpretation of architecture by the western colonial presence, which is quite different to that dwellings ksourian.

The facade of the colonial house has three bays, one center and two at the end while using symmetry as a means of geometric and architectural composition. The span of the center contains one or more arches that signal the main entrance of the house, and made by a door, windows with shutters and a small air vent of a rounded shape. The windows have dimensions 0.60x1.20, to ensure visual contact inside - outside.

As for the end spans, it is virtually the same components that arise, apart from the door of grafted and arcades, note that the window sizes are larger than previous ones, having the function of always ensure eye contact inside - outside and let go of daylight for a possible natural lighting. It should use some constructive elements to give the facade has an aesthetic appeal on notions of aesthetics used in Western architecture of the twentieth century to include the green tile, window sills, jambs protruding to give the components of the facade more important and decorative elements for parapets ... etc.

Colonial house has a richness in its composition especially in its external form, which could give the facade a colonial architectural harmony while respecting the environment, as regards the nature of this Saharan landscape and the interpretation of some elements that come from traditional architecture ksourienne for example the use of deadly but in another function.

4.1 The new constructive technical

With the advent of architecture in the west, and the pinnacle of scientific progress in the construction techniques (the use of steel and concrete), the construction of colonial houses in the town of Bechar have not was actually affected by these changes. These structures have promoted the use of local materials to cite a few stone, mortar containing Toub and sometimes the palm, which has given the presence of load-bearing walls and slabs of palm trunk

Coatings for facades are based mortar troweled toub for smoother surfaces prevent the infiltration of water and sunlight of the summer thus ensuring good thermal environment of the house knowing that the majority of houses have for north-south orientation, the size of the bearing walls varies between 40 and 60 cm and the presence of window blinds to protect themselves from sunlight in the period of hot weather.

This construction process is relative to that of traditional houses Ksourienne, except the degree of finish, the use of stone as a building material from which new extraction is easy and the new interpretation of the facade and its elements in architecture of individual houses colonial.

4.2 The notion of aesthetics in the colonial facade

The architecture of the twentieth century saw movements and styles that have influenced the production of housing. At the same place there was the work of archaeologists through archaeological excavations of the oldest cities to rebuild its architecture and benefit from, and sometimes even imitate. The colonial architecture in the town of Bechar, and from its external image, which is its facade has provided essential information for identification and placed in an architectural and social.

The interpretation of a modern architectural language in the colonial facade, and the inspiration of a few design elements from the front Ksourienne, and the nature of the Saharan environment was that the front of these homes offer a single definition harmony and beauty through a combination of the two concepts of imitation of the notion of aesthetics in the house Ksourienne, and that of the formal composition of an architecture imported. This conceptual combination has favored the emergence of a new model of

interpretation of the external image of Saharan homes, regenerating a formal and aesthetic typical of a new architecture for arid regions.

5 THE FACADE AND ITS COMPONENTS PRESENT IN ARCHITECTURE

Recognizing the enormous task of analyzing the contemporary facade in its tissue, which may be another memory of teaching, we limit ourselves to study some aspects of the composition of the facade and its elements in the current architecture, referring to individual homes subdivisions that came just after independence and continue to make the composition of the urban fabric of the town of Bechar. In reading the facade of modern houses, it is essential to a breakdown of the different elements that soar in the formation of this front, favoring later to identify the different directories of this kind of typological architectural translation in external image of the contemporary individual housing. It should be noted that the position of the houses does not meet the situation north-south one that ensures that the penetration of daylight and solar rays not that influence on thermal comfort in the house. The houses that we have targeted for study are the most expressive through the composition of their facades.

5.1 The elements of composition of the present facade

The different facades that have been the subject of our analysis (Table No. 05), has some elements of composition that emerges from modern architecture, some others refer to the composition of traditional facades. The facades available, have a structural aspect, which refers to previous facades (traditional and colonial). The template has two levels and a terrace, in virtually all fronts selected for study, made reference to the Ksourian facade. The vertical frame varies between two three-span thing that exists in the colonial facade, while respecting the concept of anthropomorphism of the facade. The application of symmetry is also present in front of the house today, a standard concept of modern architecture. The elements of composition of the present facade inspired by modern architecture are as follows:

- The balcony: one element composition of the present facade in Bechar that have no function except as an ornamental element, it comes out in relief against the surface of the front and sometimes it's built in, operating along the spans half or in some cases. It is decorated by screen walls and wrought iron.
- The large openings at ground floor and upstairs with shutters. They allow the penetration of sunlight.
- The construction materials which enters the composition of the house and watched from the front panel are the iron, concrete, brick and concrete block.
- The covering of the front are a cement treated in different ways smooth or mottled
- Elements of ornaments such as basements small brick, trellises in the outer walls, as well as ground elements of reinforced concrete.
- The joinery doors and windows are made of metal or manufactured wood.
- Color: diversity of color in the facades, does not mark the nature of the Saharan environment.

6 CONCLUSION

This interpretation we have been useful to indicate the many forms of the Saharan facade and its development process. From the examples we have studied clear that the traditional facade has undergone a transition due to the application of architectural rules come from the west through the settlers, while retaining certain aspects of compositions that have influenced architecture colonial. The colonial architecture has tried to find a combinatorial model between the old architectural identity of the town of Bechar and new architectural patterns of the twentieth century, to find an ideal mode of expression for a Saharan environment, by using traditional culture of constructive Ksour and environmental aspects of the region, it has helped create a satisfactory result given the persistence of these homes up to our days and considered an architectural heritage of the city.

After independence and with the arrival of the various planning programs and the emergence of figures of modernism in architectural production, the facade of the house has undergone a mutation that has favored the emergence of new elements of composition and interpretation of the facade while taking into account the influence of the local building culture. These elements appear in a subtle way in some fronts, and in certain other we see a chaotic use which does not allow an easy reading of the architectural language assigned to these houses. In these facades environmental aspect is not taken into account as the houses are positioned in any manner, ignoring the aspect of the penetration of sunlight through the large openings or by heat transfer from materials constructs used in these constructions.