

Analysis of an Algerian. Typology of housing

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Abstract

In Algeria, is situated a great architectural experience. We can in fact, find a great diversity of traditional architectural models, which varies mainly, according to environmental and geographical factors (situations). These very models are actually, the expression of local architecture, in local building materials, reflecting thus, a restrained culture and local way of life.

Keywords: Architectural heritage, local architecture, Traditional architecture, Appropriate technology, Housing typology, Housing crisis, Housing policy.

Résumé

De part ses richesses naturelles, l'Algérie recèle un immense trésor architectural. Dans ce sens, il existe une grande diversité dans sa composante architecturale, ses modèles architecturaux locaux..., variant essentiellement en fonction de son environnement, ainsi que de ses particularités locales (facteurs géographiques). Ces mêmes facteurs sont en fait, l'expression d'une architecture locale, réalisée grâce à des techniques et matériaux locaux, reflétant ainsi une culture et une manière de vivre très particulières.

Mots clés: Patrimoine architectural, Architecture locale/traditionnelle, Technologie appropriée, Typologie de l'habitat, Crise de l'habitat, Politique de l'habitat.

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ملخص

" تحليل أنماط السكن في الجزائر "

يهدف هذا البحث إلى تحاليل الأنماط السكنية في الجزائر أخذا بعين الاعتبار المراحل التاريخية الهامة التي مرت بها هذه الأنماط السكنية و أثرت فيها أما سلبا أو إيجابيا (أكثرها إيجابيا)

يذهب البحث بتحليل النمط السكني الذي يحتوي علي (وسط الدار) أو الساحة الداخلية للسكن كما يحلل نمط السكن العتيق في المدينة القديمة و يأخذ مثاله لكل الأنماط الرئيسية في كل منطقة في المدينة , أو في الريف , أخذا أمثلة من الشمال و من الجنوب الجزائري لإعطاء صورة كاملة عن هذه الأنماط المختلفة في الجزائر.

كما يتعرض هذا البحث بطريقة موجزة للوسائل التكنولوجية المحلية و التقليدية المستعملة في إنجاز هذه الأنماط السكنية وفي الأخير يتعرض لبعض المساحات الخاصة في المسكن التقليدي و مفاهيم التخطيط العمراني اليوم في الجزائر.

الكلمات المفتاحية تراث، تكنولوجيا محلية، نمط معماري، أزمة الإسكان، سياسة الإسكان، هندسة معمارية (محلية / تقليدية)

Introduction
“ The process of popular participation could be the base of technical performances developed in the art of building... product of a particular way of life. The housing morphology obeys rules accepted by all... To optimize exploitation of resources in land, water and materials often limited, the – introvert – and grouped form of housing rather than the split and sparse one imposes itself particularly in hot dry climate. With its morphology, its materials and implantation in a given site, housing performs a certain number of functions which unable it to adapt itself and at the same time to transform the environment to its proper needs and exigencies...”

I – Historical back-ground:

Algeria is a very large North-African country of more than 2.300.000 km², covered by the desert or “Sahara” over the 5/6 of its territory.

Relatively under populated during the colonial era, it has been recording since the independence (1962), a strong growth in its population and also an intense human concentration in urban areas, especially in big cities (such as Algiers, Oran, Constantine, Annaba...) which “welcome” a very important part of the migration influx.

Essentially rural before the second world war, the country has also been recording a big industrialization process with the “ plan of Constantine “ which was transformed in voluntary projects of industrial and independent development, after 1962.

II – Present Situation:

In 1980, Algeria counted a total population of 19 million and the growth rate kept increasing at the same rate ever since. The actual population is about 32 million and will theoretically be about 40 million by the year 2010.

Most of this population tend to concentrate in the big industrial and urban poles.

The actual average rate of occupancy of a house “home“ is estimated at 6.3 persons per dwelling. For Algiers for instance, the number given was up to 11 people per dwelling or unit.

III – Housing Crisis and Policy:

The actual housing park is far from being sufficient, and add to that the eternal problem of shanty towns (bidonvilles), which if not definitely solved, the government will have to build over a million dwellings

On the other hand, if the occupancy rate is to be improved, and ameliorated to 05 persons per unit, the number of dwellings to be built would be fairly acceptable.

Different measures were taken to stop the migration phenomenon or process towards the urban poles. In that sense, between 1966 and 1973, some special programs to develop the most disinherited regions were added to the national ones.

Then some communal plans were inserted in the second 4year plan, with a particular emphasis in favor of the 300 poorest communes. And then, an important program of what was called “ integrated rural housing “, was launched during the agrarian revolution (1000 socialist villages), the construction of which, was to allow in rural regions, the transition from a scattered housing to a grouped and structured one.



Illustration 1: The housing situation... in Algeria

A TRADITIONAL TYPOLOGY OF HOUSING

I – The house with patio:

The houses are inward looking and organized in groups.

The patio (well of cool air and freshness) is used as a cool air storage for the house. It acts as a thermal regulator. The house is in fact organized around it according to a certain number of multipurpose spaces.

A double interior nomadism imposes this sort of spaces:

1. seasonal nomadism: the use of different parts of the house according to the season.
2. daily nomadism: the use of different parts of the house differs from day to night and from activity to activity.

In the ground floor, the patio could be surrounded by a gallery and consists on a loggia in its upper floors. These latter are used for two main purposes:

- Living space.
- Circulation.

They also protect the adjacent rooms from heat and cold.

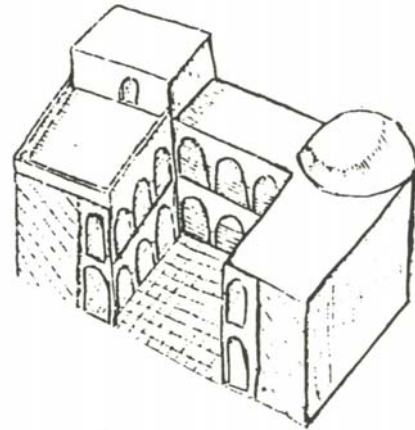
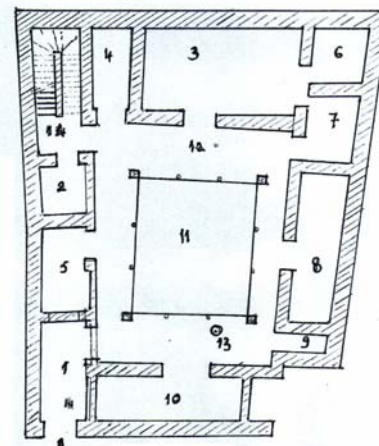


Illustration 2: General view of a typical house.

II – The Arab house of the medina:



- 1-Vestibule / Hall.
- 2- 3 - 8 - 10 - Rooms
- 14 - Stairs
- 4 - Store room.
- 6 - Bath-room
- 7 - Cooking place
- 9 - WC
- 11 - Patio
- 12 - Gallery
- 13 - Water well

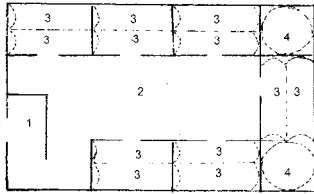
Illustration 3: ground floor plan.

All houses are built on the same principles:

- o Central court-yard – patio.
- o Vestibule – main entrance.
- o Gallery along the patio.
- o Rooms distributed from the gallery.
- o Stairs for upper floors.

In general, the houses are less than three levels high and built with local materials. They are also built along very narrow streets (passages) like a labyrinth and are inward looking.

III – The Arab house of El Oued:



- 1 – Entrance in chicanery
- 2 – Central courtyard.
- 3 – Vaulted rooms.
- 4 – Rooms with cupolas

Illustration 4: Usual plan of house

El Oued is characterized by the use of cupolas and vaults in its constructions.

The cupolas used has an average diameter of 2.50 meters, most of the rooms are rectangular and could be, as long as, 3 following cupolas.

The traditional way of life of the inhabitants and their adaptation to the harsh climatic conditions of the desert is reflected in the spatial organization of their houses.

- The main entrance is open into a vestibule “ skifa “ which has the role of a filter for the transition between the outside (public space) and the inside (private space).
- On the southern side, an open gallery with arcades constitutes a shaded and ventilated place for the summer.
- Systematically arranged, the rooms opened or oriented to the south are used in the winter.
- The western side accommodates the rooms reserved to commodities like: prayer, stable,.... And it is the side constantly exposed to the sun for hygienic and healthy reasons.

IV – The traditional rural house of the high land:

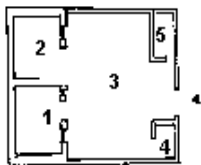


Illustration 5: Plan of the house. **Illustration 6:** general view.
1, 2 – Rooms. 3 – Courtyard.
4 – Cooking place. 5 – Stable.

Most of the inhabitants of these regions are of “berberian”

origin and called “ Chaouias “. These people have been, for a long time, living in rough midlands areas called “highlands”. Most of them are still living from the land:

- Growing crops.
- Living stocks.
- Breeding animals.....

The work is always shared within the family members and the house is most of the time situated in a bottom of a hill “as a shelter”. It is also built in local building materials found in the area (stones, clay, mud, thatch...).

The house is divided into several rooms and there is in general, up to 3 generations living in. Each room is occupied by a mononuclear family (the suns, generally).

There is always a direct contact between:

room ----- courtyard.

And never between:

rooms -----X----- rooms.

The houses are built on the same principles.



Micro-level: The house Macro-level: The community

Other examples of traditional rural house in the “ Rhoufi “ – High land -

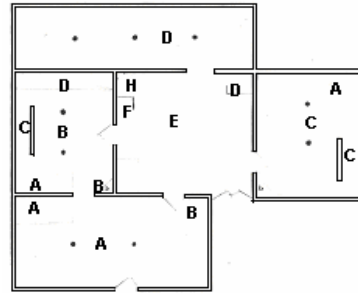
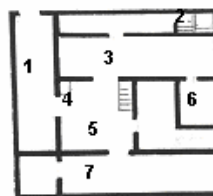


Illustration 7: Typical house plan **Illustration 8:** General view

- A - Bed B – Cooking place C – Loom
- D – Storage E - Stairs F – Pitlatrines
- H - Wood

V – The house of G’rara “ Sahara “:



- 1 - Vestibule (skifa)
- 2 – Pitlatrines
- 3 – Sheepfold
- 4 - fire place
- 5 – Stairs to terrace
- 6 - Hen-house
- 7 – Aeration hole

i.e.: The lower part of the house is dug 50 to 80 cm into the ground.

Illustration 9: House plan – Type 1.



- 1 - Storage
- 2 - Pit latrines
- 3 - Stairs to terrace
- 4 - Aeration hole

Illustration 10: House plan – Type 2

The store rooms could also be used as living rooms, and the whole house is only used during the winter. The house is very simple. Square if not rectangular shaped and flat roofed (generally one floor). It comprises 3 to 4 rooms grouped around a central patio. The width of the rooms is determined by the length of palm trees “branches” and does not exceed 2.50 meters long. If the inhabitant (dweller) wants to enlarge any room, a pillar is added to support the beams.

C – Appropriate technology:

A – Type of furniture:

In the regions where the timber is scarce, the furniture is generally made of masonry.

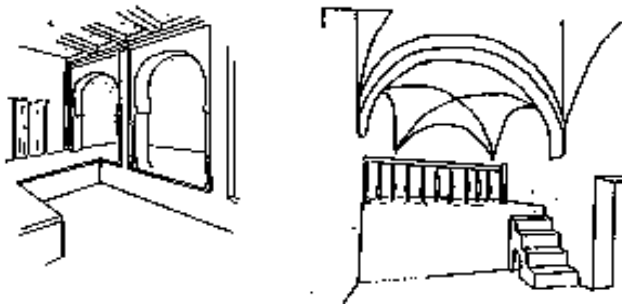
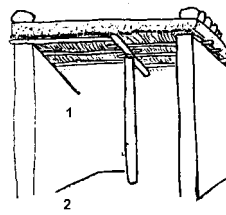


Illustration 11, 12, 13: Furniture made of masonry

B – Building materials

1 - Type of roofing



Thatch - Reed - Timber

Clay - Stones....

Illustration 14: Roofing made of: thatch, reed, timber, clay, stones...

2 - Type of Openings

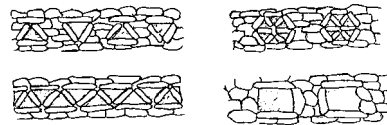


Illustration 15: Openings made of bricks.

3 - Type of Decoration

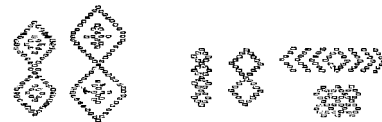


Illustration 16: Brick work as decoration.

4 – Traditional process of Brick making (mud bricks)

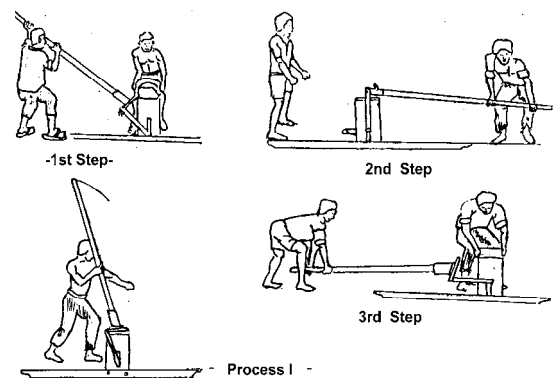


Illustration 17: Steps of a brick making process (1).



Illustration 18: Brick making process (2).

D – GENERAL ANALYSIS:

I – Spaces of the traditional housing:

The traditional human establishment is organised according to a hierarchy of spaces which corresponds to the increasing privatisation of human relation.

The “place” is the central element of public life, the room constitutes the last degree of intimacy.



Illust. 19: The public space



Illust. 20: The court yard.



Illust. 21: The commercial street.



Illust. 22: The room.

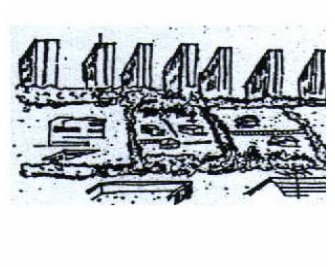
The hierarchy of spaces is associated with the atmosphere regulation: lessens the luminous intensity, creates draughts, increases the feeling of freshness, protects against sand and dust winds.

II – Aspects of the contemporary town-planning:

Everything seems to be justifying the answers which legitimates needs, except the irreversible damages caused on the expenses of future generations.



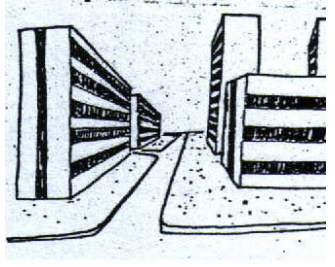
Illust. 23: An urban tissue sick of its users (every one sets up as a builder)



Illust. 24: Land reserve for some, animal Reserve for others, (a qualified zone).



Illust. 25: The city welcomes you, the soil must produce, but “not anything”



Illust. 26: “Quiet please”; the unfunctional way of life, stimulates “the mental sterility”

III – Analysis and alternatives:

In the Arab world in general and until a fairly recent date, development has only touched the urban centres. Whereas the rural areas, forming the majority of the population, were completely neglected. Nevertheless this population confirmed its ability to master the natural and economic factors and adapted them sociologically, culturally and humanly.

This situation is remarkable in Algeria, where an architectural experience is situated. One can find a great diversity of traditional architectural models which vary according to the environment and the geographical situation: mountains, high lands, littoral, oasis, Sahara zones.

Yet these geographical zones differ not only in their climate and their relief but also in the architectural styles or spaces which alters according to the building materials used.

Nevertheless all the architectural models possess a common denominator: they are the expression of local architecture, in local materials which reflects a restrained culture and local way of life.

Today’s task is to know how to conserve the architectural heritage, to give it a new impetus, to develop it scientifically in the contemporary social and economic context.

As a result of this, alternatives have been put forward to favour the evolution of this heritage without though harming its social and cultural specifications:

- To a project answering the need of the population by taking into account economic, social and cultural data (local).
- To realize these projects in making optimum use of local resources.....

CONCLUSION.

This case study could be considered as a base of thought and reference in many different fields, from which emerge the following ones:

1. Knowledge of the local architectural heritage.
2. Appreciation of the importance of the traditional architecture in its different aspects (constructive, climatic, technological...).
3. Housing as a social and cultural product and wealth of different technologies and technical components...

And all that would hopefully lead to:

- Favour the research of an authentic "Algerian" building product.
- Take into account acquisition such as culture and improved traditional techniques, readapted to the new needs and social and economic factors...

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