

## ANALYSIS OF AN ALGERIAN- TYPOLOGY OF HOUSING

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### Résumé

De part ses richesses naturelles, l'Algérie recèle un immense trésor architectural.

Dance 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 des matériaux locaux, reflétant ainsi une culture et une manière de vivre bien particulière

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

### Abstract

Algeria possesses a great architectural experience.

In that sense, we can find a great diversity of traditional architectural model, which mainly varies according environmental and geographical factors (situation).

These very models are actually, the expression of local architecture realised with local building materials and techniques, reflecting thus, a restrained culture and way of life.

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

### 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 أيجابيا )  
يذهب البحث بتحليل النمط السكني الذي يحتوي علي ( وسط الدار ) أو الساحة الداخلية للمسكن 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 :** النمط السكني, التخطيط العمراني, المسكن التقليدي

**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, obey 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 with more than 2.300.000 km<sup>2</sup> and covered by the desert or “Sahara” over the 5/6 th of its territory. Relatively under populated during the colonial era, it has been recording since 1962 ( the independence ), a strong progression in its population growth and also an intense human concentration in urban areas, especially in big cities ( such as Algiers, Oran, Constantine, Annaba...) which “welcomes” 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, just 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 about 60 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 added to that the eternal problem of shanty towns and bidonvilles, which if they are not definitely solved, the government will have to build over a million dwelling.

On the other hand, if the occupancy rate is to be improved, and ameliorated in bringing it down to 05 person 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 4years 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.



**B – A TRADITIONAL TYPOLOGY OF HOUSING:**

**I – The house with patio:**

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

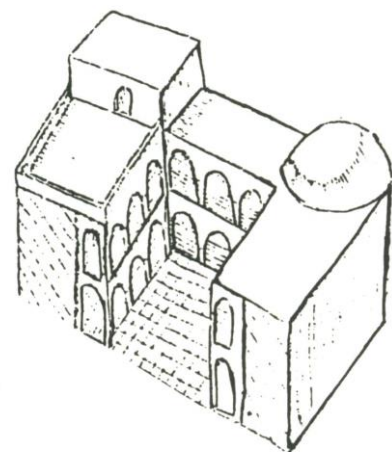
A double interior nomadism imposes this sort of spaces:

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.

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

- living space.
- Circulation.

They also protect the adjacent rooms from heat and cold.



# ANALYSIS OF AN ALGERIAN- TYPOLOGY OF HOUSING

## - Usual plan of house -

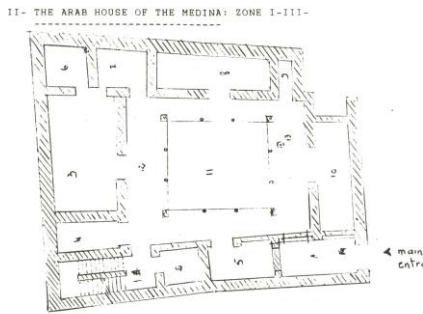
El Oued is characterized by its use of cupolas and vaults in its constructions.

The cupolas used has an average diameter of 2.50 meters, most of the rooms are rectangular and could 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 are 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 space ( public ) and the inside one ( private ).
- On the southern side, an open gallery with arcades constitutes a shaded and ventilated place for the summer.
- Systematically arranged, the rooms opened or south are used in the winter. side accommodates the rooms mmodities like: prayer, stable,... ide constantly exposed to the sun d healthy reasons.

## II – The Arab house of the medina:



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

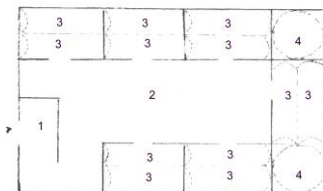
## - ground floor plan –

All houses are built on the same principles:

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

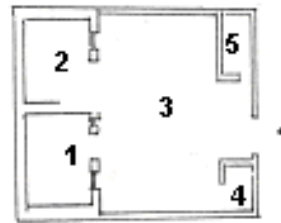
In general, the houses are less than three levels high and built with local materials. They are also built along very narrow streets ( passages ) like a labyrinth and are inward looking.

## III – The Arab house of El Oued:



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

## usual house of the high land:



## Plan of the house



## general view

- |                    |                |
|--------------------|----------------|
| 1, 2 – Rooms.      | 3 – Courtyard. |
| 4 – Cooking place. | 5 – Stable.    |

Most of the inhabitants of these regions are from “berberian” origin and called Chaouias. “ These people have been for a long time 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 also built in local building materials found in the area ( stones, clay, mud, thatch...).

The house is divided in rooms and there is in general, up to 3 generations living in, each room is occupied by a mononuclear family.

There is always a direct contact between:  
room ----- courtyard.

And never between:  
rooms ----X---- rooms.

The houses are built on the same principles.

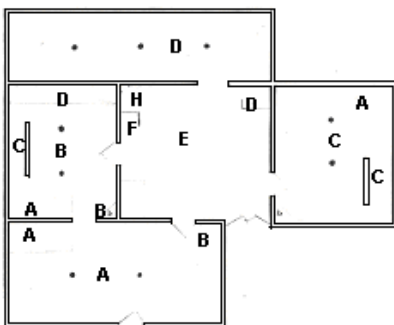


**Micro-level: The house**



**Macro-level: The community**

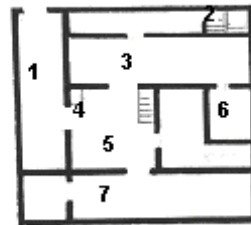
**Other examples of traditional rural house in the “ Rhoufi “ – High land -**



**A - Bed B – Cooking place C – Loom D – Storage**

**E - Stairs F – Pitlatrines H - Wood**

**V – The house of G’rara “ Sahara “:**

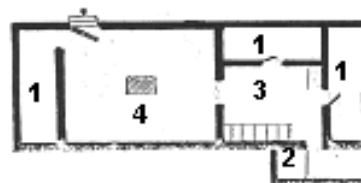


**Plan of house – Type 1.**

- |                               |                       |
|-------------------------------|-----------------------|
| <b>1 - Vestibule ( skifa)</b> | <b>2 – Pitlatr</b>    |
| <b>3 – Sheepfold</b>          | <b>4 - fire place</b> |
| <b>5 – Stairs to terrace</b>  | <b>6 - Hen-house</b>  |
| <b>7 – Aeration hole</b>      |                       |

\* The lower part of the house is dug 50 to 80 cm into the ground.

**Plan of house – Type 2.**



- |                              |                          |
|------------------------------|--------------------------|
| <b>1 - Storage</b>           | <b>2 – Pitlatrines</b>   |
| <b>3 – Stairs to terrace</b> | <b>4 - Aeration hole</b> |

The store rooms could 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, generally one floor. It comprises 3 to 4 rooms grouped a central patio. The width of the rooms is determined by the length of palm trees “branches” and does not exceed 2.50 meters. If the inhabitant “dweller“ wants to enlarge one room, a pillar is added to support the beams.

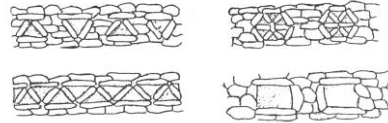
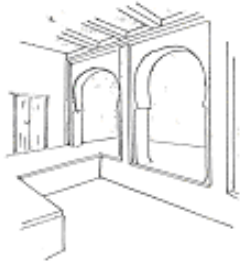
**C – Appropriate technology:**

**A – Type of furniture:**

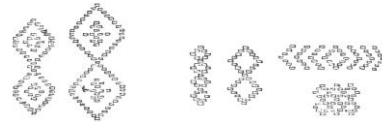
In the regions where the timber is scarce, the furniture is generally made of masonry.

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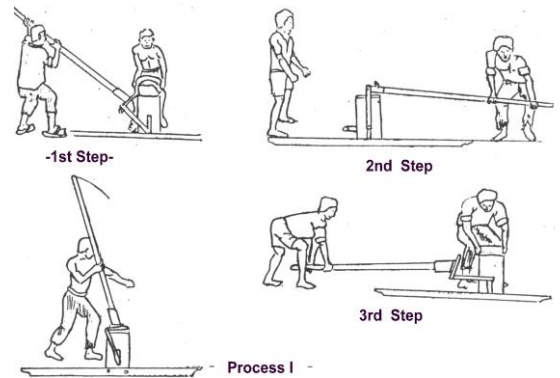
## 2 - Type of Openings



## 3 - Type of Decoration

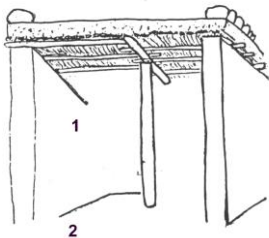


## 4 - Traditional process of Brick making ( mud bricks)



## B - Building materials

### 1 - Type of roofing



- Thatch - Reed - Timber

- Clay - Stones....

### - Process 1



### - Process 2

**D – GENERAL ANALYSIS:**

**I – Spaces of the traditional housing:**

The traditional human establishment is organized according to a hierarchy of spaces which corresponds to the increasing privatisation of the human relation. The “place” is the central element of the public life, the room constitutes the last degree of intimacy.



- The city welcomes you, the soil must produce but “ not any thing ”.



- The public place -



- The court-yard -



- “ Quiet please ” : the unifunctional way of life stimulates : “ the mental sterility ” .



- The room -

**III – Analysis and alternatives:**

In the Arab world in general and until a fairly recent date, development has only touched the urban centers. Whereas the rural areas which formed 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 varies 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 materials used.

Nevertheless all the architectural models posses 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 favor the evolution of this heritage



- The impasse -

- The impasse

The hierarchy of spaces is associated with the atmosph regulation:  
 -lessen the luminous intens  
 -create draughts.  
 -increase the feeling of fr  
 -protect against sand and d  
 winds.

**II – Aspects of the contemporary town-planning:**

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



Land reserve for some, users: each one sets up as animal reserve for others: a builder. a qualified zone.

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without though harming its social and cultural specifications:

- To a project answering the need of the in 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:

- To favor 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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