Chapter – 9
Examples

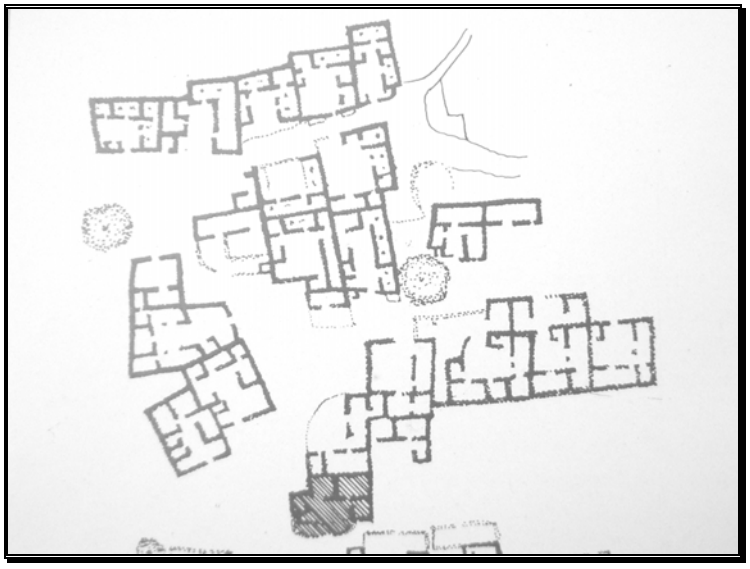
1 - Roopsi House. (Jaisalmer town)

2 - Dhulmera house ,as example.

3 - Jalwali house

Roopsi House, Jaisalmer

Roopsi is a village of about 2000 people, located about 20 kilometers west of Jaisalmer town. Although in the desert region, its immediate surroundings have patches of cultivable land and rocky mounds, the climate is hot and dry with moderate to server sandstorms in the summer. The winters are cold. The people live by sheep breeding and agriculture, which are not very remunerative. Rubble is available in the vicinity. Village life is organized on the basis of community groups. Each group is bound by close internal relationships.



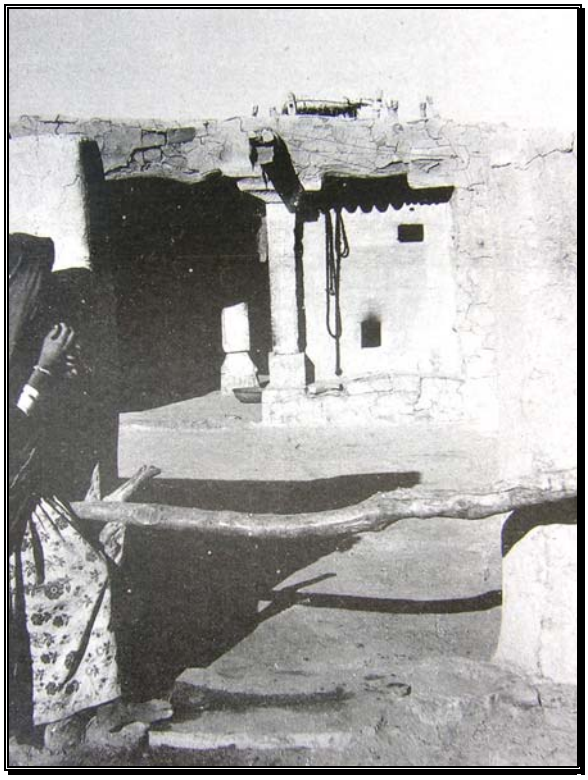
(Plan of roopsi village)

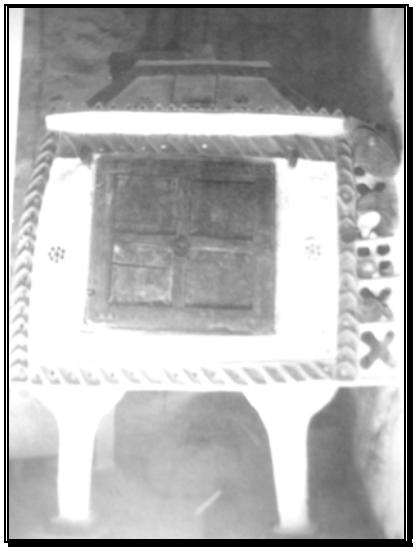
A cluster accommodating such a group has closely knit dwellings, which are introvert in character.

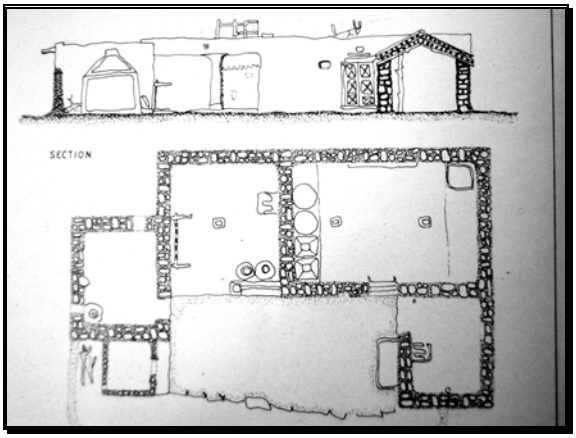
The central courtyard is the key element of the house. All the surrounding rooms open only into the court. The closed periphery of the house shares its walls with other houses. This works well in the dry climate and house is well protected against sandstorms.

Houses are constructed of uncaused rubble masonry, bound with mud mortar. Rooms are fairly large and spanned with rough wooden rafters closely arranged, with their bearings on walls and stone pillars, which have wide capitals. These rafters are covered with a layer of ruble and mud, often 25 to 30 centimeters thick. The heavy walls and thick roof keep the houses cool during summer days and warm in the chilly nights.

A variety of storage elements are found in the village. These are typical and are characteristic of the region, and can be found in most of the villages. These elements include wooden chests, clay granaries of various sizes, clay storage units and clay shelves of elaborate and intricate design. Small clay elements of this kind are also placed around a pillar just beneath its capital.







(Plan of roopsi house)

Generic form

It is difficult to divide the desert region into distinct zone and to group the house form in each zone with in generic classification. One can observe persistence, yet gradually changing character in these forms. While the circular enclosed space is formed almost everywhere, it

occurs more frequently as one moves down from Bikaner in north to banni in the south. Conversely, the frequency of occurrence of courtyards increases as one moves north words. Rectangular spaces predominate in the northern arts of the desert. It is, therefore, more convenient to follow the administrative boundaries for the purpose of protection. therefore districts have been retained as the sub-divisions with in the desert regions.

Evolving out of social physical context and due to local acceptance of its validity over a period of time, they have become the traditional type of habit of the people. The major contextual forces shaping these settlements can be enumerated as climate, available materials, technology and culture.

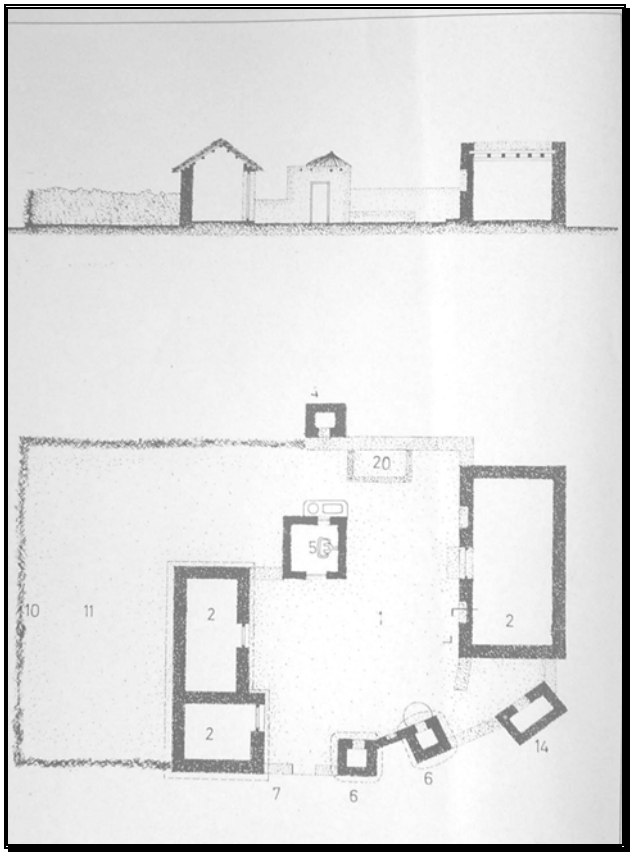
In spite of variations in village, street and cluster formation in a region, the thematic expressions therein are most commonly dictated by the material, construction techniques and life style.

Typical modern development has ignored such patters of living. The demonstrable problems that have since arisen suggest that the older settlement patterns should be re-examined for their possible

continuing validity, so that this could lead to a process of conservation or adaptation taking place in any new development. It is, therefore is important to examine this tried and tested’form’ideas to ascertain their validity and then to accept modify or reject them.

Dhulmera house, as example.

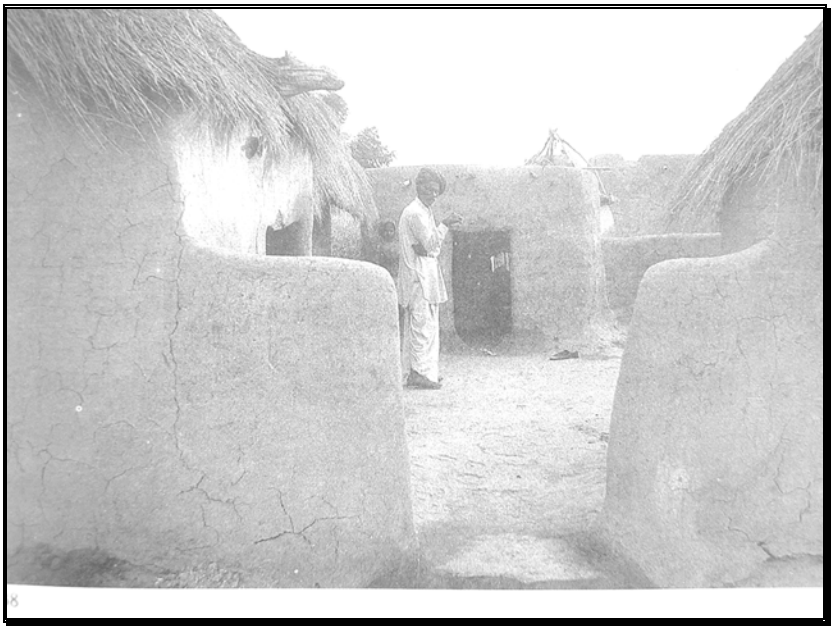
Though this dhulmera house was small and without the customary circular jhompa, it resembled a large sculpture, set n a sea of sand .all the rectangular rooms of varying sizes and heights with uneven mud plastering were set around the courtyard. Only the largest room had a flat roof, all the others had either a pitched roof or a conical roof. The UN dulating roof line with its mud color and special texture brings interest and homogeneneity to this house.



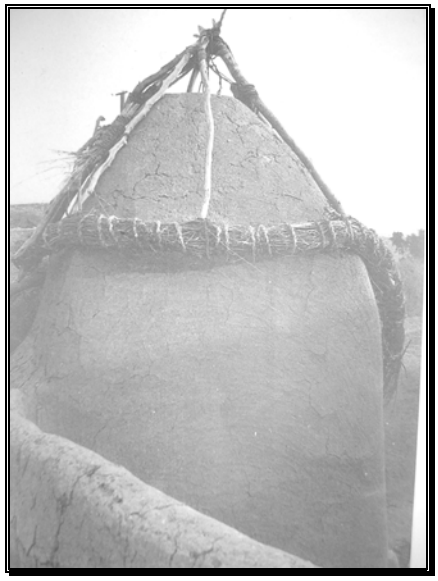
(Plan of Dhulmera house)

The position of the kitchen is strategic. It is right in front of the entrance gate and so situated that it cuts down the dimension of the court and helps to divide it in two parts. It also leaves a blank surface in front of the main road and blocks the service yard. such planning attitudes ,are the result of the development, intelligent and experienced mind .the position and construction of the two stores created an interesting peep hole 15cm. Wide .both the storage jars. are placed so close to each other .i.e. .sculptural space between

them was formed in the shape of inverted cone as in picture.



The open kitchen, position in one corner, had a burner fashion in mud, and fire wood was used as if fuel. In the summer, cooking is done outdoor while in winter it is done inside the kitchen. While in windy days, the inner kitchen is used, with their simple food habits requiring the use of only a few ports and pans, this change is possible rapidly and easily.



The worship space and water storage space are next to each other. these spaces are not part of the services but are considered sacred and therefore designed and positioned in a way to suggest this .in the absence of any semi-open spaces the shade of the room is used for

Resting during the hot summer afternoons. The boundary wall connects all the rooms while all thorny bushes enclose the rare yard. The dhulmera house is proof of the fact that simplicity of construction and can result in a building that a delightful.

CASE STUDY

Chapter–10

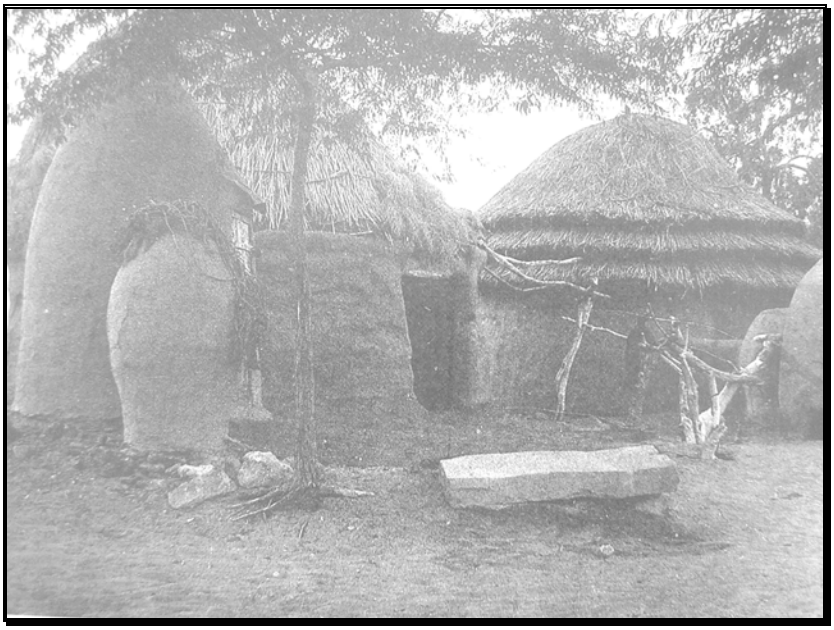
Jaisalmer as case study

The district of jaiselmer derives its name from the town of jaiselmer, which was founded by king jaisel. The word jaiselmer is a combination of two words, jaisel and meru. Meaning jaisels fort. The area comprising the district was widely known as mud dhara or valla mandal from ancient times. in 1949,after the formation of Rajasthan ,the areas under the formal jaiselmer state ,along with some pats of jodhpur state was formed into the single district of jaiselmer.

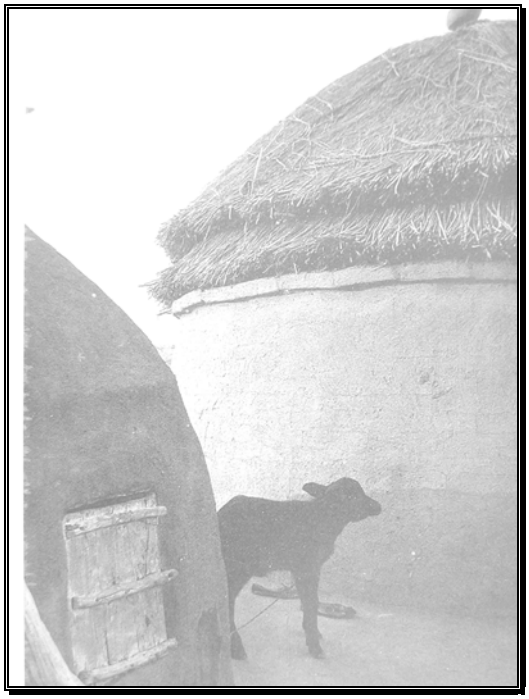
The district is situated at the extreme west of raj, and forms the major part of the great Indian

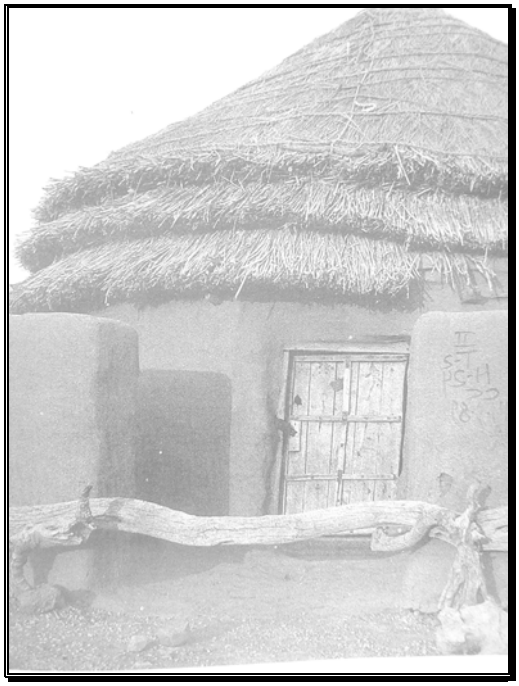
desert .the district is bound on the west, north and north-west by Pakistan and on the north east by bikaner district .on the south lies the district of Barmer and on east the district of jodhpur.

Jaiselmer is the largest district in the state and the second largest ii the country. But, it is the least populated one. the entire area is dry, sandy and with very little water this flat scurby landscape punctuated by a few hills and many sand-dunes .the land slopes towards the Indus vally and the rann of kutch.



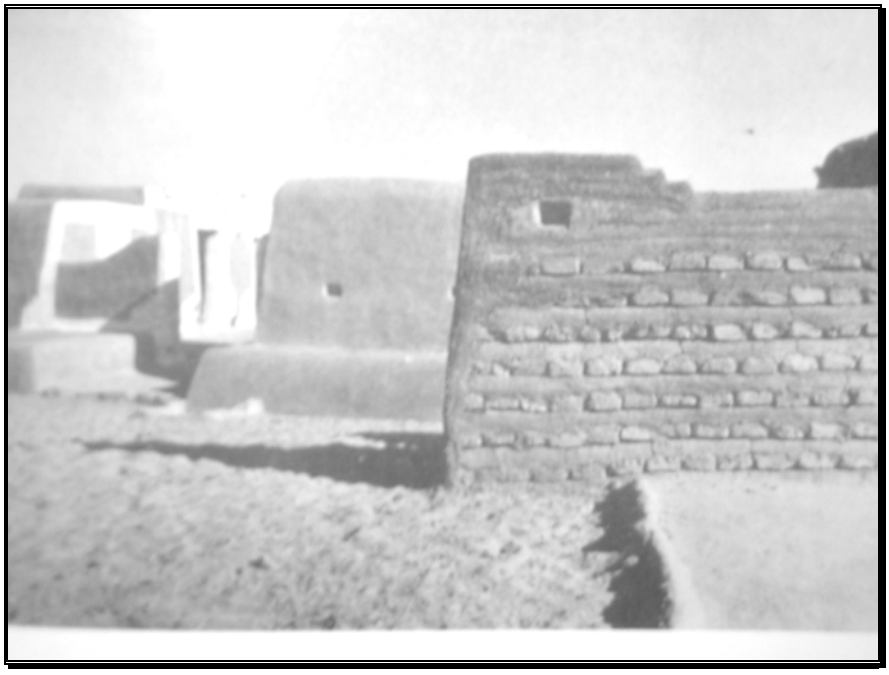
‘The topography is undulating and, as far as the eye can see, the land is covered with sand-dunes. The ridges usually are parallel to the prevailing direction of the wind. No other part of Rajasthan is as devoid of life and as forbidding in appearance. The blow sand forms into shifting dunes the few stationary san-hills in the west are covered with small bushes and those in the east with tufts of long grass. there is hardly any vegetation owing to the lack of water there are no permanent water sources and the inhabitants consequently lead a nomadic life grazing sheep and cattle, shift in from one green patch to another there is and less struggle for survival which is reflected in all aspect of life of inhabitants.





Construction

A Bhunga enclosed by a mud wall is the most typical construction for dwelling purpose. Is diameter may vary from 3 to 5 m. the wall is usually constructed in two ways depending upon its location. In places which are not likely to face inundation during the rains, no matter how meager these rains may be, the walls are made of sun dried clay blocks and finished with mud plaster. These walls cannot carry the load of the roof, nor are they rigid enough to hold it. The roof load is cleverly transferred above head level.



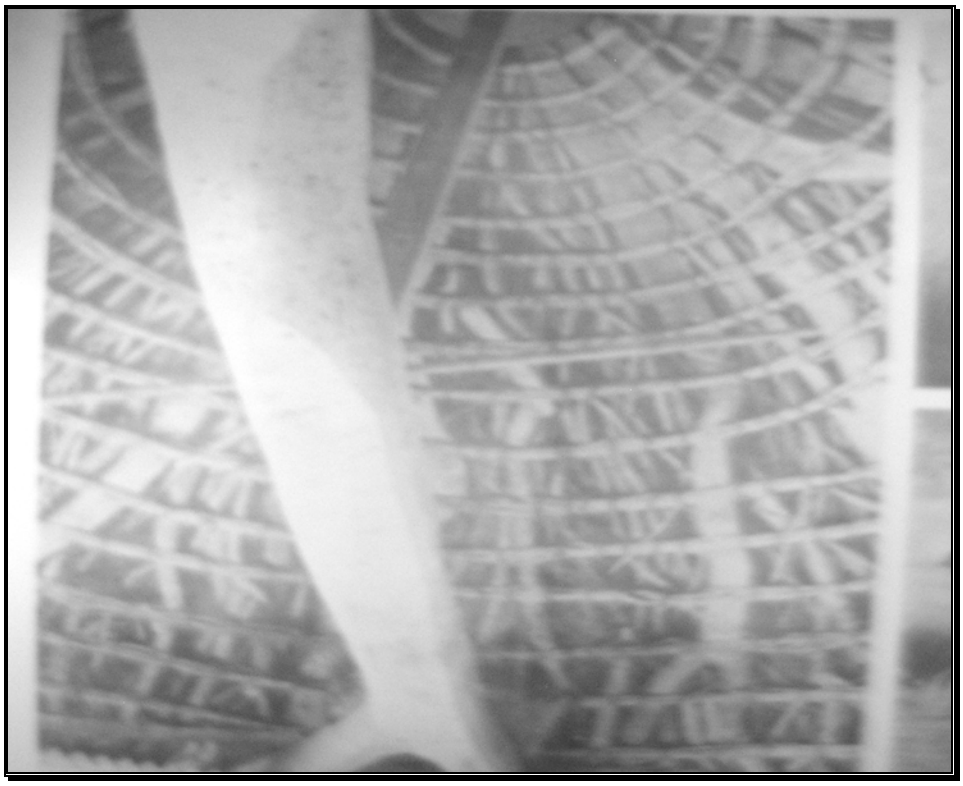
(Techniques of construction)

A wooden prop placed in the center of the beam supports the conical roof and helps transfer the load to the post through the beam. Often, the two posts carrying the beam are placed outside the circular wall and are left exposed .at times they are embedded in the mud wall.

(Mud wall)

Eternity, in the areas which face water logging, bhungas are built with wooden sticks covered with mud plaster .in the event of inundation, the wall would not give weight, as it is well reinforced by the wooden sticks is really a kind of adobe construction. These reinforced walls have a far

greater load bearing capacity, there by eliminating the need for additional post and also the horizontal beam. For the roof, a conical wooden frame is made of sticks which rise from the wall and are tied at crown to create the cone .the cone is surfaced externally with thatch.

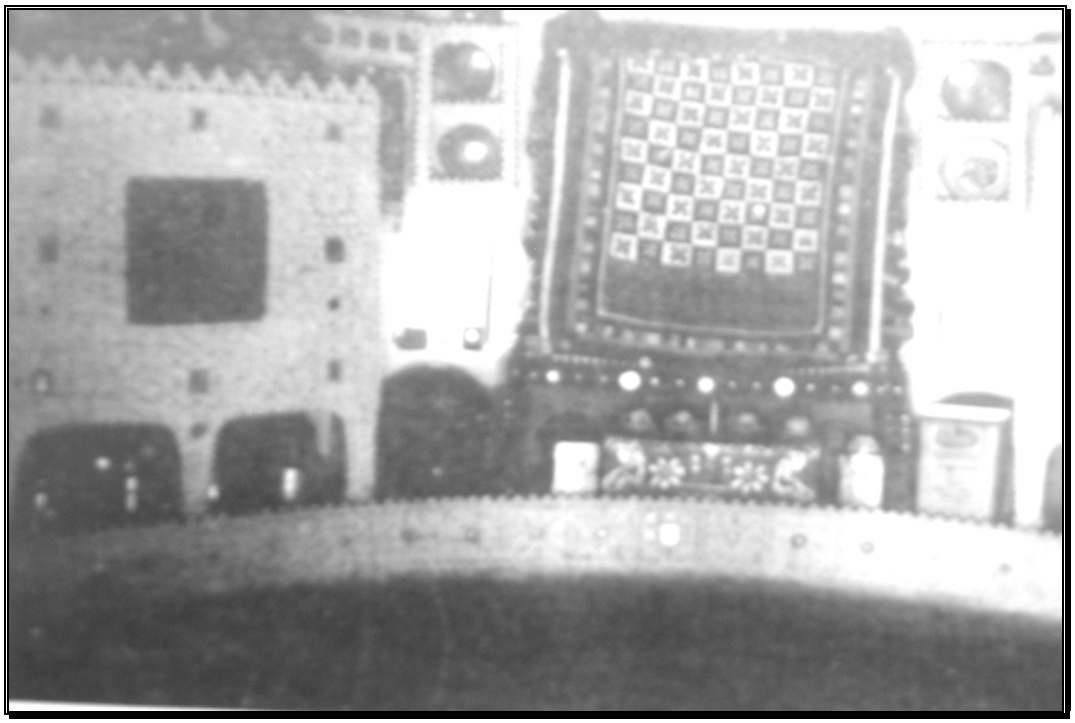


(Thatched roof interior)

The interior of all spaces is finished with white clay, often of good quality. People for communities which are involved in crafts, as in Ludia, finish

these interiors in pattern clay and mirror are embedded in surface. These mirror design are well-integrated with the wall patterns .small granaries are also built of clay. These are decorated to match the interiors, or at times left plane .the granaries may be circular of rectangular. clay is also used for making chests with wooden shutters to take care of other storage needs.

Jhompas are also constructed with mud as a principal material. How ever, there are variations in the construction of walls. Besides using clay bocks there are also places where the walls are first made with sticks and then finished with mud. These two methods are comparable with the construction o bhungas. The third method uses straw for the walls .here the straw is tied with ropes and raised in circular form. The ropes are made from fibrous local plants these thick ropes run horizontally along the internal as well as the external surface of the straw walls. Theses are then finished with clay and cow dung. A shallow foundation of about 30 to 40 cm. Is made for securing the jhompa.



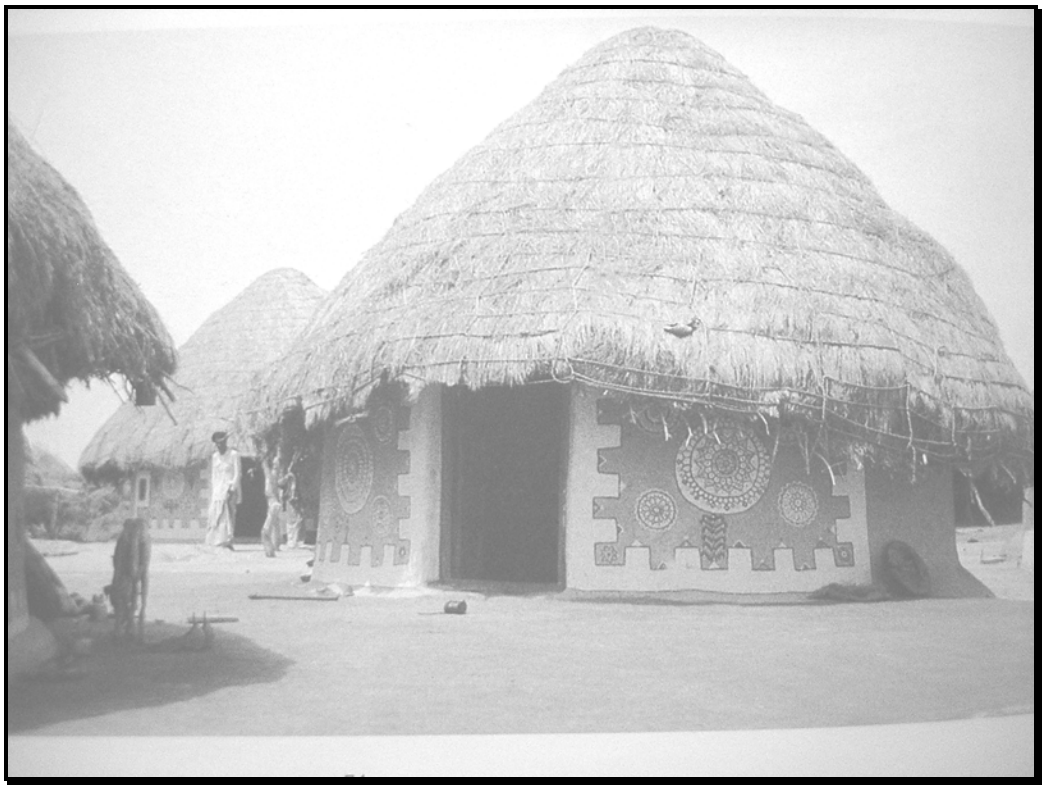
(Finished with mud interior)

The roof is supported in two different ways , depending upon the nature of wall construction. While stronger mud block walls, and the walls reinforced with the wooden sticks, can support the cone of the roof or its periphery, the straw reinforced walls normally have a central wooden spar supporting the apex of the cone.

Roof support

Radial support of the raw would connect the spar with the periphery. these are then tied ropes and the voids and are filled with straws , and further covered thatch. In the other method, radiating supports are directly connected at the apex, tied with ropes and then roof on. In such cases ,the walls also provided with hoops at regular intervals. Thus the hoops take care of the tension cause by thrust of the conical roof. Sometimes, a mud wall is only a partition and the roof is supported on wooden post. The roof projects all

along the periphery to protect the walls from sun and rain.



(Radial support at periphery)

The rectangular spaces are generally constructed with sun dried clay blocks , breaking the walls 40

to 50 cm. Thick. Raw wood joist span these narrow and long rooms. The spans are further reduced by wooden sticks put across o the main member’s .these roofs are finished with rammed earth. On the roofs is for storing grass and straw. However, in such cases the load is taken on wooden posts erected outside the mud walls.

Inside created spaces