TURKMEN VERNACULAR SETTLEMENTS (STUDY OF THE ROLE OF CULTURE AND VERNACULAR SHELTERS OF GOMISHAN HISTORICAL CITY)

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Abstract

As time passes, places used by people as shelter or housing become diverse, modern and more complex. In many ways, housing joints architecture with life and the life necessitates mental organization and physical arrangement of the world as places. Housing of vernacular Turkmen tribes is one of the well-known examples in Gomishan city. Early shelters have good adaptation with climate and are mainly composed of tent and tent with certain types of wooden structures. The role of culture in forming vernacular housing of Turkmen people and application of vernacular house in definition of social structure are some of the goals of research. Since cultural characteristics, climate and tribes' lifestyle play vital role in socioeconomic structure and vernacular housing forming, theoretical framework of the research is based on culture and tradition. The method of research is descriptive-analytical and historical-interpretative and data are collected using documentary-library study and field studies. According to results, fixed and variable basics of design which are proportional to utilities and certain situations were recognized.

Keywords: shelter, culture, tent, vernacular housing, local vernacular climate, Turkmen

Introduction

From ten thousands ago, Golestan province has been the settlement of various tribes. According to researches done on excavations, Gorgan region has been the center of Arian civilization since six thousands ago. Turkmen are of the last tribes who came from central Asia to Iran in recent centuries. Turkmen were originally composed of seven tribes from which Yamut and Goklen are currently residing in Gorgan plain and others are in Turkmenistan and other USSR countries (Saedian, 1990).

Assumptions

- First assumption: tents of Gomishan are designed according to climate, are compatible with environment and constructed using vernacular masonry.
- Second assumption: human and formal proportions of vernacular housing (tent) of Gomishan are provided according to tribal and environmental needs.
- Third assumption: social and cultural relations are observable among tribes and old traditions are persistent.

Method of data analysis

Theoretical framework of the research is based on culture and traditions. Descriptive – analytical and historical – interpretative research methods are used and data are collected and analyzed through documentary – library study and case studies.

Research goals

- Study of the role of vernacular and traditional culture on vernacular people of Gomishan
- Social evaluation of the role of tent among people and maintaining traditions and originalities
- Study of the methods of construction of vernacular shelters according to needs of vernacular people

Turkmen seating

The place where Iran Turkmen reside can be classified as mountain and plain regions. Mountain region is located in the eastern region of Gorgan hill including districts and divisions of Kolaleh, Golidagh, Ghareh Bolkhan, Maraveh Tappeh and Hesarcheh and includes parts of western and northwestern mountains of Bojnourd (Mirnia, 1957, 106). Plain region where Turkmen reside is located at southern part of Atrak River. This region which is known as Dash-e- Gorgan or Turkmen Sahara is constrained from west by Caspian Sea and from south by Alborz forest foothills (Mirnia, 1957, 106).

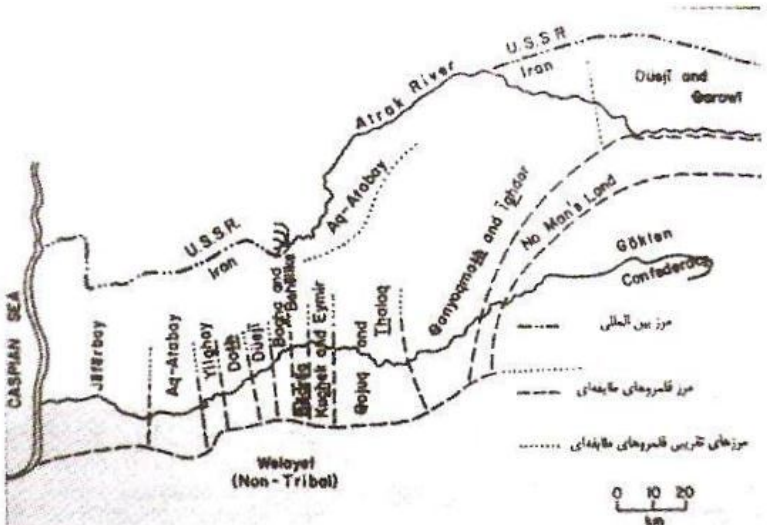

Fig. 1: seating of tribes in Gorgan plain before 1930 (Irons)

Climate of Turkmen Sahara in winter is moderate to cold and in summer is warm and semi dry. At the vicinity of Caspian Sea, the climate is wet.

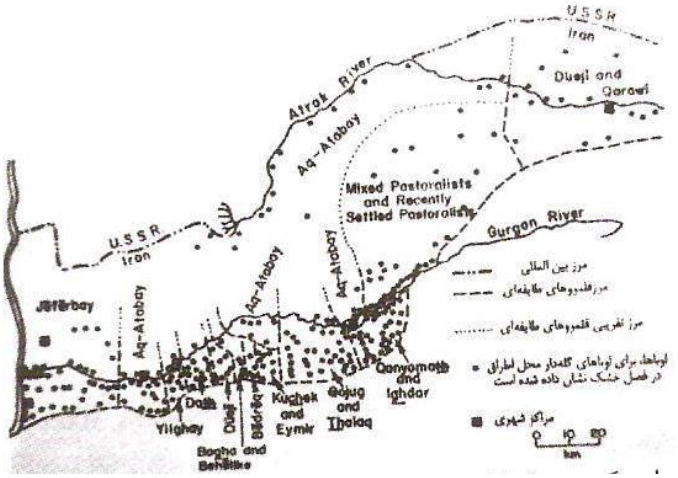

Fig. 2: Yamut Tribe distribution in 1976 (Irons)

Historical background of Turkmen

Torkaman (Turkmen) is the name of a Turk tribe of central Asia. Western Turk tribes are known as Hun and Bahnak and eastern Turk tribes as Tafghach, Bashghi and Khazar.

Vernacular housing of Turkmen

Turkmen ranchers live in a tent called Evy. Tent is in fact early housing of Turkmen and is completely compatible with their social structure. A set of many Evy is called Obeh which puts the socioeconomic structure of the Evys together and forms the social structure of the Turkmen tribes.

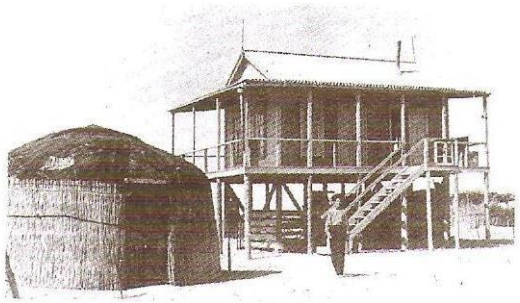

Fig. 3: Yamut tent and wooden house in Caspian Seashore (Oliver, 1977)

Turkmen houses in old villages is called Oubeh which is constructed from muddy Evys. According to regional nature and neighborhood of other tribes, Turkmen villages are constructed in two forms. In villages where residents felt more security, houses even close relatives are constructed far from each other and in villages exposed to the attack of neighbors, houses were constructed relied on each other with high walls and formed a village as a fort (Kasrayian, 1991, 16).

Fig. 4: vernacular house in Gomishan

Fig. 5: vernacular house in Gomishan

Turkmen tent (Evy)

Evy comes from Turkish work "Ev" which means house and residence. Turkmen have a specific tradition for its erection. They try to erect Evy in a good day and believe that 7th day of each month is appropriate for doing so (Asgari Khanghah, 1995, 114). Tent is not only a house and resting place of people, but also is a place to keep livestock, preparation of dairy and food products, wheat storage and a place for handicrafts (Haji Ebrahim Zargar, 2006, 178).

Skeleton

Skeleton of each tent is composed of four parts: 1. Roof ring having a concave form and a diameter as much as 2 meters. 2. Patio (Tarom) which is a circular network of wood having 1.5 m height which binds a circle having 5.5 m diameter. 3. Many arc beams with 2.5 m length which one of its heads is connected to patio woods and another to roof ring and 4. Frame which is placed in one side of patio network (Andrews, 1972).

Patio

Patio forms the bottom part of the Evy and is composed of four parts which form a cylinder having radius of 2-2.5 m. each part of patio is composed of crossed woods which form diamonds which major and minor axes as much as 20 and 15 cm, respectively. These woods intersect each other as a cross and from the hole of connection, a leather rope passes and each side of the rope is tied around itself. Therefore, woods rotate freely around these axes, each part is opened and closed easily and upon opening, form diamonds. (Haji Ebrahim Zargar, 2006, 179)

Ough

Numerous arc woods which form the dome of the tent are called ough. One head of it are on the cross end of the patio woods and another is placed in holes of the Toi Nok (Haji Ebrahim Zargar, 2006, 179).

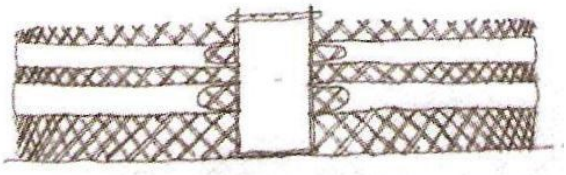

Fig. 10: patio and the method of tying via Dorlagh Yaxa (Shari'at)

Toi Nok

Top of the dome of the Evy is called Toi Nok in which one side of Evy woods are connected. This part of the tent is circular having 1.5 m radius of bent woods and the set of circle peripheral

and its bent woods are like a dish which is placed inversely on the top of tent (Haji Ebrahim Zargar, 2006, 179).

Fig. 11: Toi Nok (www.bayragh.ir)

Ghapy and Souyeh (door and frame)

Frame of the door is composed of four separate wooden parts. Two horizontal ones of the top and bottom are as two pallets and bottom part has four holes (two at each side). One of the holes is for placement of the tongue of parts close to frame and another one is for placement of wooden pivot around which door rotates. Upper pallet, in addition to these holes, has other ones in which one side of oughs are placed (Haji Ebrahim Zargar, 2006, 179).

Felt

Dowrloq: four rectangular felts width of each equal to an open patio

Uzuk: two felt parts roughly as a trapezoid and upper and lower sides are curved and are placed on the dome skeleton of the tent.

The material of the felts is of pure wool and approximately impermeable to rain water. In summer, felts are raised about 1 meter and straw cover permits air circulation

Felt of entrance door: these felts have a width equal to the width of the tent and length of 120-150 cm and are often hanged on the horseshoe of the frame. When necessary, they can be rolled and placed at the top of entrance door mainly because of air circulation inside the tent. This felt has decorative folds (Tapper, 1971).

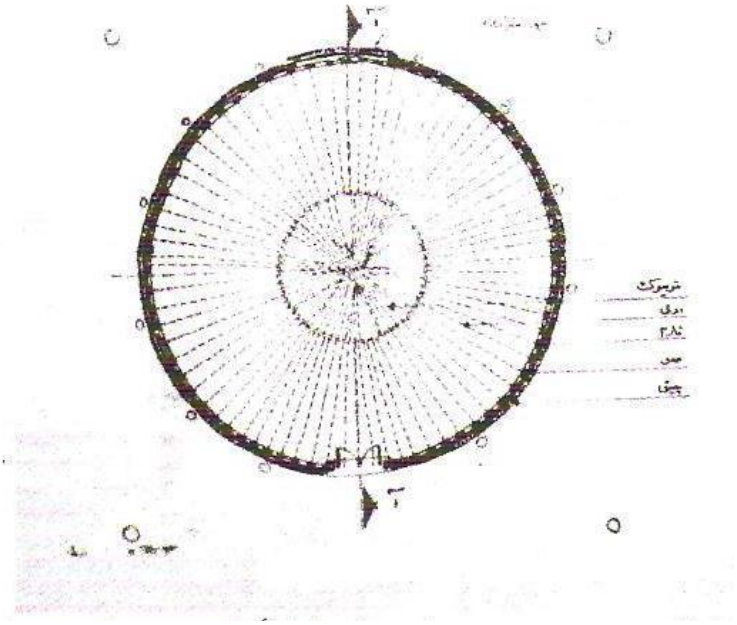

Fig. 12: plan of felt coating of the tent (horizontal section) (Shariat Zadeh, 1983, 91)

Straw

Qumis includes three straws wrapped around tent patio. Third straw in behind the Evy and is called qotqumis which is put away in warmth so that the breeze of the north flows inside.

Connections

1. Dowrloq yaxa is a woolen cloth texture strip by which patios are tied tightly together. Its width is 30 cm and its length is equal to the perimeter of the tent circle.
2. Bilyup is a strip narrower than dowrlaq yaxa by which upper side of the patio which is tied by dowrlaq yaxa is tied for the sake of more resistance against strong floods.
3. Duzi is a narrow woolen cloth texture strip which keeps oughs together are kept together.
4. Orqon is a thick rope which is sometimes thrown at the rear of the Evy and its head is tied to pegs around Evy.
5. Peg: outside of the Evy, at a distance about 1-2 m of the door, two headed peg is staved off so that sometimes ropes are tied to it and the Evy can resist against wind (Shari'at Zadeh, 1983, 82).

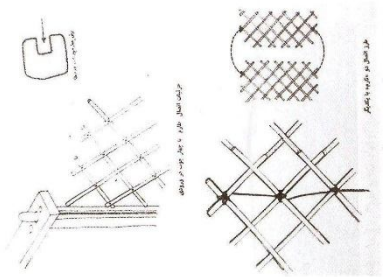

Fig. 15: details of Turkmen tent connections (Shari'at Zadeh, 1983)

Seating and orientation

Erection and putting down the Evy is done by Turkmen women. Evy is erected in an open and relatively high lands and sometimes, to prevent entrance of rain water and gerbil, 10 cm mud or brick is laid. Entrance of the Evy is located southward so that it can benefit from sun and be protected against western and southern winds. If the strong flood of the region called Ghareh Yil is present, from inside of the Evy, pegs as high as 2 m are staved next to the patio to keep the Evy unmoved. Three days after the death of each of the family members, they change the place of the Evy. Previously, relatives of the dead person migrated and went to another place. After the son's marriage, father erected an Evy at the right side of his own. In replacing Evies, territory and distance between them is so important. Evies are never erected tight to each other. By doing so, in addition to privacy of the family, the wind flow is possible as well (Haji Ebrahim Zargar, 2006, 183).

Decorations

In tents, applied elements of the tent construction were used to decorate it and no useless element was present in Evy structure. Among interior decorations which were widely used for decoration are colored knots which were actually the connections of the elements of Evy, the rope passing through Toi Nok to which a heave body such as wheat bag is tied to increase its resistance against winds. This rope is made up of heavy strings of woven hair in black, white ot brown with rows of red and indigo textures and also decorations hanging over the entrance door inward (Irons, 1974).

The role of Turkmen in social structure of Turkmen tribes

In smallest traditional group of Yamut Shabankar Turkmen tribe and previously all Yamuts, there is a group of 2 – 10 tents which camp together. Such a group includes families whose head is of father relatives, though group composition is continuously changing. Therefore, one independent father and son camp together (Irons, 2006).

Socioeconomic relationships of Evies residents, determines the location of each one; that is, depending on the origin of Evy owners and their used grassland. Neighbor Evies are often relatives and they have common grasslands and their livestock graze in a cattle. Although many group Evies are called Obeh, they are far apart by many kilometers and their distance changes according to grasslands capacity. Many Obeh form a clan and finally, a set of many clans is called tribe.

Person → Family Race→ Clan → Tribe

Persistence of the social structure of Turkmen from migrating tents to vernacular housing of resident Turkmen

The composition of the rooms of a Turkmen house is very similar to the composition of the tents of an Obeh. However, kinship system and this housing style has an economic base. Since Turkmen were rancher and migrating, their survival depended on tribal unity. A Turkmen cannot stand alone in desert, graze its cattle, produce dairy products, resist against attack and plunder of other tribes and survive in natural and human events. As a result, it was necessary for them to keep their tribal unity. After marriage, a Turkmen stayed beside his father. Therefore, an Obeh can be considered as a family corporation. Like row order of the Obehs according to kinship system of the group, in a Turkmen village, houses are constructed in row and all rooms and members of the house take part in production activities. Even all residents of a Turkmen house use an oven to bake bread. General schema of the houses in this system is a row of rooms in which father or the head of the clan lived in the first room and each married son in other ones (Baboli Yazdi, 2000).

The role of cultural and climatic factors in determination of the type of masonry and structure of the Turkmen housing

In constructing vernacular houses of Turkmen, masonries were used which were available in surrounding environment. To build walls, stone or raw brick were used which both were found in environment. To erect roofs, wood was used. Wood is widely used in Turkmen houses. They build their houses in two stories and the lower one is for livestock barn. Primarily, since in early houses of Turkmen, tent, main skeleton and round roof are all made up of wood, therefore, using wood in house building is a cultural habit and a minor part of Turkmen society. It can be expected that a tribe who always considered wood for housing, do not leave this behavior till now (Baboli Yazdi, 2000).

Application of Turkmen tent shell in environmental situations adjustment

In modern architecture, shells are defined so that they can adapt with environment, be flexible, dynamic and respond to environmental factors. Some of these factors refer to architectural specifications of the building and some to control of the flexible shell of the tent. Vernacular architecture orientation regarding special and vernacular nature of the region of Turkmen tent is remarkable.

Since structural system in intelligent kinetic systems are applicable in architecture by three scales, these scales are obvious in Turkmen architecture:

1. Internal structures or structures located as a part of the architecture, have a fixed position. In tents structures, Oughs are so.
2. Adjustable structures which are usually located in temporary locations and are easily transported, inherently have the capacity to be build or destroyed. In tents, patio is an example of such structure.
3. Dynamic structures which are located in a bigger whole, can be altered as mobile or constructed with growth and increment capacity. Examples are felt and straw coatings of Turkmen tent.

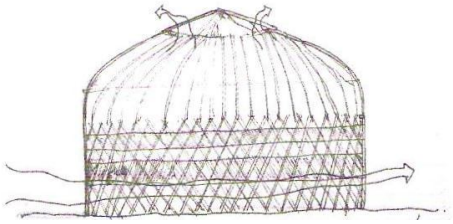

Fig. 18: utility of stack in Turkmen tent (Ghasemi Nia, 2010)

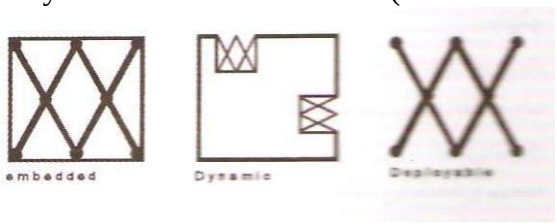

Fig. 19: diagram of intelligent mobile structures

Walls of the tent in contact with surroundings

Tent shells are designed so that they can be altered in various climatic changes and make the situations suitable for human as much as possible. In summer, felt coatings are raised 1 m to allow air entrance to inside of the tent. 1/3 of the felt coating are heated from upper parts to allow air to go out from inside. Hot air exits via stack at the top of the roof and this makes equilibrium between the temperatures of the air at both sides of the tent. Straw prevents the animals' attention to felt decorated by various colors and doesn't let poultry to enter tent. In climatic sense, this filter the dusty air of the outside. Moreover, felts are an insulation against sun radiation and impermeable to rain water (Andrews, 1972).

Conclusion

Housing is one of the basic need of all humans and this can be in the form of the tent or residence. According to investigations, Turkmen people of Iran were mainly migrating and after residence, they build houses which are similar to their original houses from two aspects; one from space available in their house and another from houses position against each other. Complete compliance of form and performance, utilization of functional components for decoration and tent structure which has shell specifications as well as simplicity of erection and putting down are some characteristics of Turkmen tents. Since migrating Turkmen people were exposed to environmental factors of the region long before, structure of the tent in response to special natural and vernacular factor was found to be considerable and concentrating on every part of the tents proved this idea that structure of the tent is completely in accordance with

structural system of intelligent kinetic systems and finally provides a flexible space and multifunctional space which is adapted as much as possible with region situations and needs.

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