**Typology of the Black Tents Architecture between Iranian nomad tribes**

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Abstract

Variety of scenery shows differences in human’s settlement. Nomadic house the” Black Tent” shows relationship between humans and the natural environment surrounding them. Black Tents are made of natural materials consistent with prevailing environmental conditions. This paper discusses about nomadic living place in some of Iranian tribes in different regions to show their unique architecture and culture. Rediscovering different architecture to understand this particular modus in nomadic life which need migration between their summer and winter residences. Given the fact, that Black tent materials is approximate similar, after thorough study in seven tribes in different province of Iran, some general ideas concerning such set up and install of the tent have been same. consequently, Black tent in different region has different shapes and forms. In this regard, documenting of, how Iranian nomadic tribes can arrange their homes and method of using natural material seems to be a good method for the preservation of their architecture typology. The Black tent is a combination of nature and human's creative power. Method of data collection has been done through library studies and observation and documentation of indigenous habitat patterns of Iranian nomads by field method and participate in their migration.

Keywords: Nomads, Black Tent, Natural Material, Vernacular Architecture, Iran.

**1- Introduction**

There is no evidence of how various forms of prehistoric migration emerged. Hypotheses are based on the studies and deduction on the lives of peoples from the early stages of civilization in the world [1].

Primitive humans (families) lived by collecting the roots of the plants and fruits of the forest trees and hunting wild animals. At this stage of the evolution of culture, which is called the hunting season, they moved from place to place as small groups of several families to find food and hunt animals. At the stage of pastoral economics, with domestication of animals, humans move in a new way of life. Since then, humans have been displaced to provide livestock food and adapt to natural conditions following livestock pastures and grasses [2].

This research has attempted to examine the nomads' lives with the natural context, which they have interacted over the centuries in the form of cultural landscape. Iran has different nomadic tribes and they are existing in different regions of Iran. They have special method of biology and geography, culture, customs, knowledge and architecture. To better understand the place of nomads’, live in the context of vernacular architecture is focused on interaction with nature in nomadic life is their home (Black tent) in different geographical locations of Iran.

Nomadic life is organized between their two residence places, summer and winter residences. That means their life style is also adapted with their movement life. The best example to show and clear their adaptation life is nomadic home (Black Tent). This tent is provided from natural materials around of them in their territories. Tent fabric is from nomadic goat hair and tent wooden columns are from trees that they find in the nature. They know their environment and try to use the nature in the best ways. Architecture is certainly one of the most important element to introduce the life space in nomadic life. It is an essential source of information for the understanding of the original spatial concepts and relation of people and nature in nomadic architecture.

**2- Methodology**

The paper searches the living space of the nomadic tribes of Iran: The nomadic home (Black Tent). The findings are used to analyze and preserve their unique culture. The research is a study of Iranian nomadic housing and the domestic space of Iranian tribes to collect the typology of nomadic architecture.

The purpose of the study was based on applied research. It has been analyzed descriptively. The research method was based on case studies: documentary studies as well as field studies. Data examination has been done through library studies, authors’ observation during onsite visits and documentation of the indigenous habitat patterns of Iranian nomads by the field method.

In this study the authors have tried to present discussion regarding Iranian plateau, to focus on these specific regions in order to develop a much deeper representation and to introduce the major part of homes in the nomadic life of Iran. In this regards, seven tribes in different parts of Iran have been chosen to achieve the best typology and collection of Black tent in different geographic situation. Although, Iran has more nomadic tribe but collect of these seven tribe’s selection connected to author (N, Hassas) contacts and possibility to visit of their sites during the few years.

The comparative research about Iranian nomads housing is an important topic and is being investigated by other scholars nowadays. The knowledge gained about the vernacular traditions of the world up to the present has created a base and great fundament for field research. However, due to the fact that the written resources regarding the area of nomad architecture, especially in Iran, are very limited, most of the data in this paper are the result of architectural findings and the authors’ interviews with Iranian nomads. Data include findings based on surveys and field trips in Iran and taking into consideration how discovering tradition and culture merge with what is written into the nomadic cultural landscape. One of the most attractive parts of the study was travelling together with the nomads in order to better understand and analyze the nomadic settlements from the point of view of architecture.

**3- Architecture in nomadic life**

Historical life is precious, such as the Nomadic life after century’s history has been proven. Immigration is the first harmony between human and natural environment. Normally migration is bilateral motion between the two environments. The existing of nomadic life is not only in the animal economy but also is influenced by natural conditions [3].

Therefore, this resulted in mobility making their life simple enough to live in temporary shelters with limited number of furnishings and establish temporary settlements. These shelters, the Tents have intricate, versatile design and are created for migrating pattern of living. Inherited from ancestors, structure is used for many centuries and represents local vernacular architecture. Black Tents have been recognized as a cultural symbol among Iranian people and the tribes.

As there is no physical stabilization connected with the place of living of the tribes, a set of cultural symbols, ideas and beliefs is an anchor for the tribes’ identity. The Black Tent is one of them.

In the next parts of the research has been focused on the introduce of these tribes, elements of this architecture then interior design and general architectural form of Black tents in different geographical points of Iran to achieved typology of Black tents.

**4- Geographical locations and trails**

It has been estimated that between 200-150 million people in the world still lead a life centred around shepherd’s and cattle breeding. Iran with an average annual rainfall of less than 250 mm, (about one-third of the world’s average rainfall) is considered to be part of arid and semi-arid regions. Studies show that sustainable land management and exploitation of such areas are cattle-based. Therefore, migrating from cold to tropical regions and vice versa as a model for adapting to climate change and exploitation of natural resources is one of the main causes of the development of a nomadic life that has lasted for several thousand years in Iran [4]. Since Iran is a great country, the 7 tribes selected in different provinces round of country exposed to different climate and topographic situations and introduced here:

1- Tribe Qashqai in Fars Province

2- Tribe Arkovazi in Ilam Province

3- Tribe YaromTatli in Hamedan Province

4- Tribe Garapapakh in West-Azarbayjan Province

5- Tribe Kormanj in Golestan Province

6- Tribe Bahlooli in Sistan Province

7- Tribe Soleimani in Kerman Province

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| HamMihan-20151382035624510051428648462 |
| Figure 1- Location of the seven tribes surveyed in the research [5]. |

**5- Architecture typology of Black Tents in Iran**

In the table, introduced all 7 tribe’s Blank tents. All of them has different shape but with the same materials. To better understanding needs to research about their natural materials and their interior designs.

Table 1- Black tent architecture in different tribes of Iran.

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| Tribe No.1. Qashqai. Winter Black tent. [6] | Tribe No.1. Qashqai. Summer Black tent. [6] |
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| Tribe No.2. Arkovazi. Photo by M. M. Moghadam | Tribe No.3. YaromTatli. Photo by Author |
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| Tribe No.4. Garapapakh. Photo by Author | Tribe No.5. Kormanj. Photo by Author |
| Related image | D:\chador\213___02\kerman\kerman.jpg |
| Tribe No.6. Bahlooli.[7] | Tribe No.7. Soleimani. Photo by Author |

**6- Natural elements of the Black Tent structure**

Typology of the seven Black Tents of Iranian tribes that living in different geographic situations and adhering to their idiosyncratic cultures would provide ground scope for the research and also assumptions for protection and conservation of the Black Tents as a vernacular occurrence.

This research had been started from Qashqai tribe in Fars Province (Tribe No. 1), therefore this part of research has more detailed information and in order to avoid repetition, the information concerning the other provinces will concentrate on the elements that differ from the structures, ways and details of the Qashqai Tribe [8].

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| Figure 2. Structure of Black Tent of Qashqai Tribe, Fars Province. Drawing and photo by author |

**6.1- Tribe Qashqai in Fars Province**

**Tent cover** consists of two parts: roof/ceiling and wall and both are woven with goat’s hair. The method of preparation of the goat hair fabric and tent’s wall is the same.

Strips of the tent cover - according to economic situation of families, the tents are 6 to 12 meters long and 3 to 5 meters wide, which means that the area varies from 18 to 60 square meters. Weaving a piece of this size causes a lot of problems; the need for a big workshop for weaving and weight of the heavy cover for transport. Also in the case of weaving large strips it is difficult to weave them tight. After some time, they become loose and their water resistance is insufficient. Therefore, the cover consists of narrow strips about 60 to 80 cm wide, so if it is damaged only one strip must be changed. The new part of the cover is sewn into place with goats’ hair yarn.

Walls of Black Tents are rectangles, 6 to 12 m long, and only 1,5-2,5 m wide. Like the roof they are made of horizontal strips and connected with the roof with wooden pins. Black tent wall, like a roof, is made of strips of fabric and hangs from the edge of a roof, to which it is pinned. The length of the wall must suffice to cover the perimeter of a tent, with exception of its entrance.

The strips woven for the walls are usually wider because they are not so loaded and do not undergo the same traction and pressure as the roof fabric. Sometimes, when the roof cover is used for some years and is worn out, it is used as a wall.

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| Figure 3- Narrow strips of Black Tent roof cover are sewn together and while on the roof, the seams are parallel to the ridge of the roof; Qashqai Tribe, Fars Province. Photo by author |

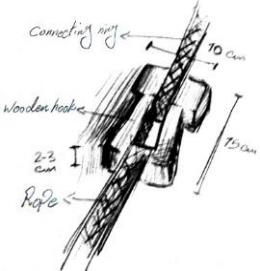
**Wooden pins** connect the tent wall with the roof edge. It is the quickest way to assemble and disassemble two elements of the cover of the tent. The pins are made from tamarisk (*Tamarix* L.) branches, as this timber is light and solid, and accessible in the desert as well as near to the rivers. Branches of diameter less than 1 cm and 20 cm long and straight are shaved from bark and sharpened to pierce the fabric easily. The pins are pinned around the edge of roof in 20-25 cm distances. They are not seen from the inside of the tent.

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| Figure 4- Wooden pin. Photo by author |

**Connection rings (edge clamps)** are made of goat hair ropes in a way similar to plaits, and are stitched to the edges of tent roof with yarn also made from goat hair, every 60 to 80 cm around the roof. The other end of each clamp is fastened around wooden hooks where the ropes holding the tent in position are knotted. If there are more clamps, the tent is safer in case of strong winds, as the load is distributed more evenly on the surface of the roof. The length of corner clamp is about 20 cm and thickness of the clamp is about 3 cm.

These corner clamps (or connection rings) tear earlier than the other parts of the tents, as a result of tension and a lot of friction due to movements in adverse weather conditions and precipitation. As a result, they should be exchanged at least every two years. If the pressure of a tent fabric is too big and the clamp is worn out it can be easily exchanged for a new one.

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| Figure 5- Connecting ring of Black Tent. Qashqai Tribe, Fars Province, Drawing and photo by author |

**Wooden hook** “belong” to the edge of the roof, as they are hooked on the clamps, that are sewn to fabric edge. The hooks are shaped in such way, that on one side the clamps are attached to them, and on the other ropes that stretch the tent. The wooden hooks differ in shape even within the same tribe, but they are always made of hard and resistant timber, as they must withstand rupture power exerted by a clamp and a rope.

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| Figure 6- Two types of wooden hooks in Qashqai Tribe, Fars Province, photo by author | | |

**Ropes** They are made of fleece or goat hair and sometimes with a mixture of both. Each tent needs 20 to 50 ropes between 8 and 10 meters long. The tent ropes are heavily loaded so they must be changed quite often. There is a special node in the middle of the rope to shorten it or make it longer.

**Wooden Stakes** The ropes are attached to the pegs pounded in vertically to the ground. The length of the pegs is about 20 to 40 cm and their diameter is up to 5 cm. They have either appropriate shape or are incised in such way, that a rope bound to them would not slip off.

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| Figure 7- Ropes of Black Tent. Qashqai Tribe, Fars Province, photo by author | Figure 8- Wooden stake. Photo by author |

In summer the ground is dry and hard, if the pegs are properly mounted, they can hold the tent safely, but in winter, because of rain, soft land and strong winds and storms may pull out the stakes and make the tent fall down. To prevent it the pegs are secured by big rocks around them to stabilize the ground.

**Column** a wooden pillar, 2-2.5-meter-high and 8 to 10 cm diameter. Upper ends are indented in dovetail way (V shape) to hold ridge carrier beam. The height of the columns secures the slopes of the saddle roof and volume of the tent.

**Posts** encircling the tent are flat ended as they support edges of the roof.

**Alachigh or Chigh** “ala” is a Turkish word and it means zig-zag in black and white – and this is the colour of this matt. Light colour of debarked branches and twigs contrasts with colour of string made of goat’s hair. The string binds the matts and creates design. Chigh surrounds the wall of the tent making it stronger, guards against wind and dust and makes tents beautiful. Making chigh is one of the crafts of nomadic people and their design differs from tribe to tribe. Alachigh consists of two identical pieces of 1.5-meter width and between 6 and 10 meters long. It is woven with branches and twigs and stands on the ground. When it is rainy or extremely cold it can move to the entrance of a tent and used as a wind shelter. The Alachigh is fastened in its position along the wall, by wooden pillars about 1.5-meter-high, pounded into the ground.

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| Figure 9- Alachigh of Black Tent of Qashqai Tribe, Fars Province, photo by author |

**6.2- Tribe Arkovazi in Ilam Province**

**Tent cover** of Arkovazi Tribe consists of two elements: roof and wall are both of them made with goat’s hair and the method of preparation and the texture of both is the same. The way they are woven and assembled is the same like in Qashqai Tribe in Fars Province. Usually the cover of the roof of the Black Tent Arkovazi Tribe consists of 12 narrow strips 80 to 100 cm wide. These tents are narrower than the Qashaqi Tribe tents (Tribe No.1) and they form the rectangles 12 to 10 m long and 2 to 4 meters wide and their size connected to the economic situation of the them.

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| Figure 10- The purchased black tent by Edelberg. Part of ethnography of Mosgard museum. 1964[[1]](#footnote-1)[9] | Figure 11- The Stone wall around of the tent. Photo by M. M. Moghadam |

**Black tent roof** consists of two parts that they connect to each other in the middle of the ceiling roof, thus at the edge of these, two parts a narrow strip of goat hair stitched to roof that have some delicate strap or hook. Each hook passes through the other hook by a small wood.

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| Figure 12- wooden pin. photo by author | Figure 13- connection of two parts of the roof with delicate strap or hook and wooden pin. Drawing by author |

**Pins** that connected the two parts of tent’s roof together. It is about 25 cm long. As it has been shown above, they keep in place the sewn hooks overlap on both sides of the roof. This is very quick way to assemble and dismount the tent roof. This detail is typical of Arkovazi Tribe.

**Connection rings (edge clamps)** is made of goat hair. All around of the tent roof, every 80 to 100 cm is connection points of the ring. Whatever number of these rings is more, the pressure on tents is less and the tent remains more stable.

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| Figure 14- Method of connection. Photo by, Edelberg.1964. [9] | Figure 15- Corner clamp (Connection ring). Photo by M. M. Moghadam |

**Column** 2 to 2.5-meter-high and 8 to 10 cm in diameter. Quality of timber must be high, without knots, as they bear big loads. Arkovazi people, similarly as the other tribes use material that is accessible: young poplar and spruce trees. They construct the column with the two pieces of timber joined by rope, which is threaded through the holes in both parts of the column. The lower, long part of it is a trunk, the top one is short and rectangular in section. The ridge of the tent is supported by wooden, rectangular ridge beams seated atop the upper part of the columns by means of adjusted incisions. These details contribute to bigger flexibility of the column itself and bigger resistance to wind of the whole tent. Arkovazi Tribe tents have 3 to 7 columns lined in the centre of the layout, and the number depends on the size of a tent.

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| Figure 16- The central column of Arkovazi tent and ridge beam seated on the top of it. The costruction covered with the roof fabric. Photo by author. | Figure 17- Sketch of the construction supporting the ridge of the Arkovazi tent: column, its plank extension and ridge beam supporting the fabric. Drawing by author |

**Post** surrounding the tent and supporting the walls are of the same strong material as the columns but shorter to allow slope of the roof. They are fork-ended on the top to secure ropes that ground the tent.

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| Figure 18- Forked ending of a post with supporting ropes stretching the roof sheet. Photo by author | Figure 19- Columns around of the tent. Photo by M. M. Moghadam |

**ChIgh or ChIt** Arkovazi Tribe chigh consists of thin twigs and reeds that are woven together with coloured wool yarn. Chigh is used as an additional, solid wall, standing on the ground and protecting the interior from wind and dust. If it is colourful, with intricate design and divides the parts of the tent it contributes to beauty of the interior. Usually the size of the chigh is 1.5 meters by 6 to 10 meters.

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| Figure 20- Method of propering of the Chigh. Photo by author | Figure 21- View of prepared Arkovazi chigh for bride’s tent design. Photo by author |

**6.3- Yarom Tatli Tribe in Hamedan Province**

**Tent cover** is made of goat’s hair, similarly as the Black Tents of Qashqai Tribe in Fars Province. Usually YaromTatli Black Tent roof consists of 10 narrow strips of fabric, each up to 1 meter wide. Its square area is between 10 to 12 long and 10 meters wide.

**Black tent roof** in YaromTatli Tribe, like in Arkovazi’s consists of two parts stitched. The method of these two parts of the roof joining between both tribes is bit different. As it is clear on the photo, the edges of both parts have two sewn tapes. The rope which is between those tapes, joins both parts of the roof together. This rope moves from one side of the roof to other side. Differences between these two tribe roof structure is using to connection of both sides of the roof. In the tent of Arkovazi, they used wooden pin to join and in the tent of YaromTatli, they used rope.

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| Figure 22- YaromTatli Tribe. Method of connecting two parts of the roof. Photo by author |

**Columns,** as in the previous cases are wooden planks 2 to 2.5-meter-long, 8 to 10 cm in diameter, uniform, without knots. In YaramTatli Tribe it is usually a pine tree, due to the area of their highland trail. Each tent has 3 to 5 columns in the centre, according to its dimensions. The ridge beams (carrier beams), with a hole/socket in the centre provide a lock for a tip of the column. The columns and the beams are called ‘black wood’ or (Qaraaqajeh) in dialect of the nomad’s tribe of YaramTatli.

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| Figure 23- YaromTatli Tribe.The central column of the tent and its pass from the carrier beam on it to slope the tent. Photo by author | Figure 24- Detail of ridge beam (carrier beams) and column. Drawing by author |

**6.4- Tribe Garapapakh in West Azarbayjan Province**

**Tent cover** of Garapapakh Tribe is aforementioned in other tribes, in the same way as in the other Iranian nomads’ tents. Usually the tents’ covers are made by sewing together 8 to 10 narrow strips of fabric, maximum 1 meter wide. Garapapakh Tribe tents are between 10 and 12 long and narrow and only 3 to 4 meters wide. The strips of fabric used for the roofs are accordingly long.

**Column,** the middle columns are 2.5 to 3-meter-long and their diameter is about 8 to 10 cm. They are made of smooth and straight trunks provided by young walnut and sycamore trees. The columns have groove incision on the top, named” Hacha” on which supporting and stretching ropes are hooked.

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| Figure 25- Garapapakh Tribe. The columns are forked at the top and keep a stretching rope attached. The incision on the top of the column keeps the loop sewn on the top of the fabric. Drawing and photo by author |

**6.5- Tribe Kormanj in Golestan Province**

Tent of Kormanj Tribe is large. Its internal space is usually more than 9 by 4 meters. The tent cover is a one-piece fabric and it hangs down to the ground at the back of it. In summer the front remains open, but in winter strips of the fabric could be added by stitching them to the cover of the roof. Usually the cover consists of several strips of fabric sewn together, the stripes is not more than 1 meter wide. Holes are made along the seam of these strips to hold the columns. Around of holes are secured with piece of fabric or small pillow which relieves the strain of columns during the times and to avoid of rupture of the roof fabric's. Also protects to water leakage to the inside of the tent.

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| Figure 26- Kormanj Tribe. The stripes of the tent cover. Photo by author | Figure 27- Kormanj Tribe. The outside of the roof hole’s, where the tips of columns stick out. Photo by author |

**Column,** a wooden pole, 2 to 2.5-meter-long and 8 to 10 cm in diameter is smooth and straight and usually is provided by tree trunks. The columns have sharp tips to keep the fabric. Other columns or posts round of tent are the same of middle columns in material but shorter than them to setting slope of the tent easily.

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| Figure 28- Inside of the tent and how to place the columns. Small pillow or piece of fabric are located between roof cover and column. Photo by author |

**6.6- Tribe Bahlooli in Sistan Province**

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| Figure 29- Bahlooli Tribe. Spiral rope between pins and columns. Photo by author |

**Tent cover** details are described in Qashqai Tribe No.1 from Fars Province. Usually the tent consists of 3 to 5 strips by width of maximum 1 meter in roof's part and it is popular by name of 3 or 5 Pelas tent (Pelas means piece). This kind of tent consists of 3 to 4 strips in tent wall's.

**Ropes** are made from goats’ hair. They are long enough to join and to tighten in a zig-zag way all the tops of columns and the pins on the ground along two parallel walls into one structure.

**Column,** Bahlooli Tribe columns are also made of high quality trunks of young trees 2.5 to 3 meters long and 8 to 10 cm in diameter. Usually the trunks of poplar or a nutmeg tree are used. Each tent has 3-5 columns in the central of the tent. Tent’s posts are of the same quality as the central columns when timber is concerned, but shorter, to set the slope of the roof. They have forked tips allowing a hook of a tent cover and stretching ropes to be safely placed.

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|  | DSC_0088 |
| Figure 30- Bahlooli Tribe. View of a Black Tent cover and position of its columns. Photo by author | Figure 31- Bahlooli Tribe. One of the posts around the tent. Photo by author | |

**6.7- Tribe Soleimani in Kerman Province**

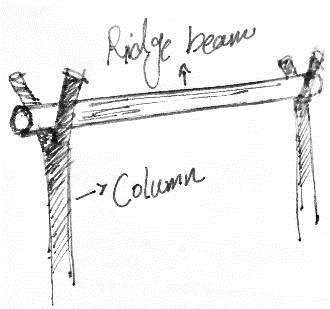
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| Figure 32- Soleimani Tribe. Four parts of the tent’s roof cover are joined by the metal pins. Photo by author |

**Tent cover** fabric is similar to the other tents of the other Iranian nomads. The cover of a roof consists of four strips fabric, thrown over the ridge and joined by metal pins.

**Metal pins** are shaped as needles for better use while mounting and dismounting the tent. While connecting adjoining strips of fabric, a rope is threaded through their hooks, and because of this, by one pull of it, strips of fabric are separated. They can be rolled for travel very quickly.

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| Fig. 33. Soleimani Tribe. Metal pin with a hook for threading the rope. Photo by author | Fig. 34. Method of connection of the two strips if fabric by metal pins |

**Columns** in Soleimani Tribe are taller than in most of the tents of the other Iranian tribes, as they reach 3-meter height, with 8 to 10 cm diameter, due to the quality of trees accessible on their trail. Timber of young willows and poplars is without knot and homogeneous. Their tips are either naturally forked (trunk-bough junction) or get dovetail incision to secure a ridge beam resting on them. The local name for the column is Kalak. The ridge beam placed on the top of forked tip of column, that encourages efficiency of knots, is called Tir.

**Posts** that are encircling the tents are similar to the columns but shorter, to set a slope of the roof. All of them have dovetail incision on the tip to secure knots of the ropes.

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| Figure 35- Soleimani Tribe. columns with forked tip form and location of the ridge beam on its. Photo and drawing by author |

**7- Assembled of the Black tents setup**

This part of research is based on field studies held by the author in 2012 in the Qashqai Tribe in Fars Province, research between other chosen tribes in the other provinces and studies by Lennart Edelberg from the 1964 of the tribes from Jalalvand, Baland and Osmanwand in the Hulilan plain of Ilam province. The results confirm that the methods of assembling, disassembling and packing the tents for journey has not changed. All the findings show that the method of setting up these tents is in one form.

Activities performed while unpacking the tent are as follows: cleaning the place that is suitable for the tent. Then woven roof cover is spread on the ground. In some households, the columns are placed under the cover on the floor.

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| Figure 36- Preparing for a tent assembly, Photo by Edelberg, 1964. [9] |

Taking into consideration the length and width of the tent, wooden pegs have to be hammered in the ground. The tent wall’s and these pegs distance is about 3 meters. Ropes, which stretch roof and support posts along the walls must be tied around the pegs.

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|  | DSC_6476 |
| Figure 37- Wooden pin. Photo by, Edelberg. 1964. [9] | Figure 38- Pins and ropes surround a tent. Photo by author |

Wooden hooks are attached to corner posts of tents. They are forked tip form at the top and it is connection to rope of the tent.

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| D:\chador\New folder (3)\MOV09505[(019322)17-33-36].JPGD:\chador\Untitled-1 copy.JPG |
| Figure 39- Connection of tent corner to the wooden hook. Photo by author |

The central columns on both ends are placed under the fabric of the roof and then lifted into their slanting position. Then the ridge, or the edge of a tent is lifted and fastened

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| Figure 40- Standing position of corner columns Photo by author | Figure 41- Qashqai Tribe in Fars Province. Pitching the roof by lifting end columns. Photo by author |
|  | |
| Figure 42- The end corner columns are lifted. Photo by, Edelberg.1964. [9] | |

The central columns at the two ends of a tent are raised as the first ones by the method explained above, and the tent is almost ready. The central columns of the interior of the tent are placed under the fabric with a short ridge beams on the top of them and the fabric of a roof is lifted.

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| D:\chador\New folder (3)\IMG_0104 copy.jpg | E:\chador\New folder (3)\IMG_0117.JPG | DSC_0181 |
| Figure 43- Pulling up the end and the middle column which carries a ridge beam. Photo. By author | Figure 44- Lifting the middle column with the ridge beam. Photo by author | Figure 45- Middle column with a ridge beam. Photo by author |

Depending on the situation and the tribe, sometimes a pit is dug to place the basis of the column and sometimes it is placed right on the ground.

In the case of some tents, the only way is to grub a small pit in the ground and lay the columns in it, and in some to rest the columns on the ground. After the tent is stabilized, the posts on both sides of a tent are arranged in a form of a cross to stiffen the structure. This form differs in the regions.

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| D:\chador\New folder (3)\IMG_0132.JPG | D:\chador\New folder (3)\IMG_0188.JPG |
| Figure 46- Digging the end column into the ground. Photo by author | Figure 47- The posts are arranged along the walls of the tent in a criss-crossed way (bracings). Photo by author |

Then the outer ropes which were loose have to be tightened by pulling up the rope knots, which stabilizes the midline of the cover.

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| Figure 48- Setting ropes. Photo by, Edelberg, 1964. [9] |

In the next step, the tent walls are connected with the edge of the roof with thin wooden slits (pins). The pin is pierced through the edge of tent cover, then pierced through the edge of wall fabric and rotated by the hand, and inserted into the fabric of the cover from below.

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| D:\chador\New folder (3)\MOV09505[(051418)18-34-55].JPGD:\chador\New folder (3)\IMG_0174.JPG |  |
| Figure 49- Wall and roof of the tent are connected by wooden pins. Photo by author | Figure 50- Piercing the cover with thin pins in roughly 20 cm distances to brace the edge. Photo by author |

When the walls and the roof are connected, the Chigh roll is unwind to secure the wall. The posts, which are woven into it in regular distances are hammered into ground. Chigh is unrolled around the whole length of the wall of a tent, with exception of the entrance. The other way of securing the side wall of the tent is to ram into ground many thin branches, that would prevent movements of the wall caused by wind.

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| D:\chador\New folder (3)\MOV09505[(069416)18-49-21].JPG |
| Figure 51- Ramming/pounding into the ground thin branches and unwinding Chigh to support the wall. Photo by author |
| IMG_0255 |
| Figure 52- This Black tent was assembled by the author and members of Qashqai Tribe |

**8- Functional analysis (interiors) of Black tents**

Every residence is a cultural configuration shaped according to the activities of the residents and their respective cultures. The spaces within homes, therefore, are based on such behavioural models. In other words, all activities and behaviours have their own privacies and therefore, every space has its own privacy too [10].

Nomadic people created flexible interiors which are divided by decorations and elements of furnishing, making the functional layouts of the tents, similar to a house. Partitions are built with bags, saddlebags, bedding and other belongings not needed in a moment. This kind of separation, without interior walls, simplicity and fluidity of internal space of tents.

The Nomads' tents that often show the nonphysical separation of private and reception areas a women's area is generally separated from the area for men and guests, but without any partition. In certain Bakhtiari tents, the interior areas are given specific names: Lajenoon or Kayvanoo is the women's area, and Lamerdoon is the section used by men and guests. The location of those areas differs according to the kind of tent and the exact location of the entrance. The entrance of Dawar of the Bakhtiari people is on the short side of the tent: the women's area is towards the rear, while the area close to the entrance is reserved for the men and male guests [11].

In another type of Dawar in the Ilam region, in the west and south-west of Iran, the entrance is positioned on the long side. Here the left side is devoted to the women's area and the right side belongs to the guests and men's activities [12]. In all cases the women's area which is used for such activities as cooking and children's playing, is covered with felt, while the guests' area has small carpets.

The other dwelling is common in certain regions of Iran. Examples are the tents used by Kurds in the north-west and those of the Papis in the Luristan region in the west of the country [13].

The Ilam region in the south-west of Iran, provides an interesting example of the complete separation of private and reception areas, an arrangement more normally associated with the urban houses. While the 'living' tent, the Dawar, may be used for short meetings, the main reception in this case takes place in a special tent, called the Diwa Khan, which is shared by all members of the tribe. This tent, which is larger than the others, has an interior arrangement based on the partitioning of women's and men's areas. [12] The entrance of the tent is on the long side, with the men's area to the right and the women's to the left. In the centre are the hearth and a place for putting the carpets and other materials. The three areas are divided from one another by straw curtains or partitions calls Chit or Chigh.[10]

In winter and summer, in Fars Province, Qashqai nomad’s Black tent has different plan, construction and arrangement, decorations and position of entrance door, but materials used for constructing it in summer and winter are the same. In summer the construction is more open, higher and spacious as the furnishings are arranged in a different way. Summer weather conditions allow for more freedom and contact with the environment [14].

The place for cooking – a small kitchen is arranged inside of the tent, near to the entrance, this small kitchen has a granary and in other side of the tent is sleeping spaces. In summer time, kitchens are moved outside the tents.

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| D:\chador\عکس\10.jpg | DSC_6503 |
| Figure 53- Summer Tent decorated in Qashqai Tribe, Fars Province. Photo by author | Figure 54- Winter Black Tent. Qashqai Tribe, Fars Province, photo by author |

The other tribes built the same structure of a tent with the same elements in winter and summer but the plan of the tent and furnishings are arranged in a different way between these tribes. There are, however, exceptions, when the tribe lives in permanent winter houses – as it is mentioned further.

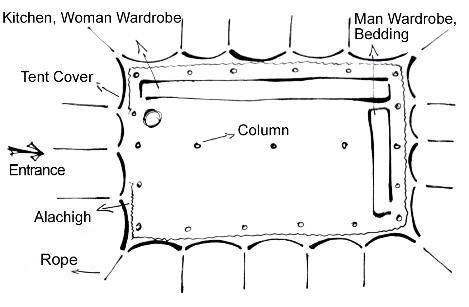
Internal organization and decorations of the black tent differ according to the status of the family. Tents have two main parts, for man and woman. Within the tents, in special men's part there is a space prepared for guests and appropriately kept. of course inside of the tent has not a divider wall for different function but nomad people have unwritten rule to separate their interior space, as it is clear on table 2.

In the tents dining, lodging, kitchen and warehouse are situated in their lower parts. Their location and arrangement is stable and each part of the tent is a place for a particular furnishing and function. This differs between the families, according to their class and culture level but there are some general principles common for all tents.

In a rectangular tent, the summer entrance will be placed in a longer wall, while in winter it will be moved to the shorter wall.[[2]](#footnote-2)

Poorer people's tents have smaller dimensions and their space interior is organized with the essential housekeeping appliances. The people who have lower social status, have fewer facilities and comfort for themselves and also for the hospitality functions. Their discipline inside tents is much lower. In khan`s (Head of tribe) families who have a higher social situation, their tents and diversified living facilities. Rich families are able to accommodate guests in large numbers by using their numerous amenities, so guests are common in this type of a family [6].

The following drawings were initial part of the survey, they were prepared by the author and allowed to assess initial differences between types of structures, with reference to the volumes of these tents. They also helped to analyse arrangement of interiors in different parts of Iran.

Table 2- Plan drawings of Black Tents and equipment they contain. Drawing by author

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|  | E:\chador\skis\english\fars t copy.jpg |
| Winter Black Tent plan of Fars Province. 3-5m wide/ 6-12 m long | Summer Black Tent plan of Fars Province. 3-5m wide/ 6-12 m long |
| E:\chador\skis\english\ilam.JPG | E:\chador\skis\english\hamedan.JPG |
| Plan of Ilam Province tent. 2-4 m wide/ 10-12 m long | Plan of Hamedan Province tent. 10 m wide/ 10-12 m long |
| E:\chador\skis\english\azarbayjan gharbi.JPG | E:\chador\skis\english\golestan.JPG |
| Plan of West Azerbayjan Province tent. 3-4 m wide/ 10-12 m long | Plan of Golestan Province tent. 4 m wide/ 9 m long |
| E:\chador\skis\english\korasan jonoobi.JPG | E:\chador\skis\english\kerman.JPG |
| Plan of Sistan Province tent. 3-5 m wide/ 7-9 m long | Plan of Kerman Province tent. 4 m wide/ 5 m long |

**9- Conclusion**

Table 3- Black Tents Architecture Typology. Drawing by author

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| Photo | Skatch | PLan | Map of location on summer and winter |
| DSC_3706 copy | fars tt | E:\chador\skis\english\fars t copy.jpg | G:\PHD\1semester\presentation\map province\fars.jpg |
| 1 A- Tribe Qashqai in Fars Province, Summer Black tent | | | |
| DSC_6477 | 10  fars ze copy | E:\chador\skis\english\fars z copy.jpg | G:\PHD\1semester\presentation\map province\fars.jpg |
| 1 B- Tribe Qashqai in Fars Province, Winter Black tent | | | |
| ABCD0008 | 8 illam | E:\chador\skis\english\ilam.JPG | G:\PHD\1semester\presentation\map province\ilam.jpg |
| 2- Tribe Arkovazi in Ilam Province | | | |
| D:\chador\net\hamadan.jpg | 6 hamedaan | E:\chador\skis\english\hamedan.JPG | G:\PHD\1semester\presentation\map province\hamedan.jpg |
| 3- Tribe YaromTatli in Hamedan Province | | | |
| D:\chador\net\IMG_4274.jpg | 2 azar bayjan | E:\chador\skis\english\azarbayjan gharbi.JPG | G:\PHD\1semester\presentation\map province\azarbayjan.jpg |
| 4- Tribe Garapapakh in Azarbayjan Province | | | |
| D:\chador\net\khorasan shomali, golestan.jpg | 4 golesstan | E:\chador\skis\english\golestan.JPG | G:\PHD\1semester\presentation\map province\kormanj.jpg |
| 5- Tribe Kormanj in Golestan Province | | | |
|  | sistan | E:\chador\skis\english\korasan jonoobi.JPG | G:\PHD\1semester\presentation\map province\sistan.jpg |
| 6- Tribe Bahlooli in Sistan Province | | | |
| D:\chador\213___02\kerman\kerman.jpg | kerman | E:\chador\skis\english\kerman.JPG | G:\PHD\1semester\presentation\map province\kerman.jpg |
| 7- Tribe Soleimani in Kerman Province | | | |

Diversified Iranian climate led to a variety of types of architecture throughout the country and it also affects the structure of Iranian nomadic homes. Coexistence and interaction with the environment and continuous efforts to adapt to the climatic and geographic conditions of each region led to the formation of unique methods of survival, unique migration systems and exploitation of environmental resources.

This vernacular pattern is strongly adjusted to rough and unpredictable nomad’s life. It is a manifestation of native and local talents. It also includes accurate aim and strategy for different locations.

Architecture of the Black Tents is intricate and diversified, although seems to be very simple. It shows the interaction of nomad technical skills with nature. All materials belong to their natural environment and for the most of tribes, these natural materials are almost the same and in some cases have different shape and design. According to the studies, the method of setting up the tents have been the same, but we have witnessed the diversity of architecture style and typology of Black tent shape with the same materials, methods of preparing and assembling in different climatic situations. So the culture has important role in this variety. On the table3. Typology of the Black tents is so understandable with differences and commons elements and designs.

Research clearly shows that black tent is four seasons settlement. In this structure, nature materials are used and displayed some vernacular technology and value innovation. In addition, static strength and durability of the tent is enormous. The original cover is woven by the nomad’s women. Women are active and participants in organizing and collecting black tents. Separation of the house spaces for various functions by some, even movable, walls and partitions limits the overview of the whole. In Black Tents the separation is achieved without walls, therefore beautiful, simple and fluid internal space emerges.

However, in this adaptability and changing of natural landscape in different province and different tribes, knowledge of people is very important, similar and effective. As noted above, in this study, black tents were studied as part of the creative of nomadic indigenous.

Some part of tribe’s life was mentioned in this study. All potential did not consider still. Over time, tribes have to leave of all this beauty what was connected with changes in environment. Unfortunately, this is a growing problem and indifference to this culture is very wrong.

Knowledge management, sustainable preservation and interpretation of cultural landscape in this special biologics life can help to improve the quality of life. Unfortunately, lack of support from relevant agencies will gradually lead to a sedentary tribe what will cause endangered cultures, including the loss of migration routes and housing (black tent), etc.

In this regard, researchers are trying to receive a full understanding of the all potential of existing technology's and knowledge’s of vernacular peoples which has a centuries-old tradition with all knowledge and guidelines for the management. The goal is conservation and transmission this for posterity.

Following this study and in order to maintain and conservation this structure as the first human shelter after caveman, The Black tent of Qashqai tribe was successful registered in September of 2000 by Najmeh Hassas in the Iranian national heritage index, the topic of its document was: How to build and how to set up and install a Qashqai black tent's.

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1. He prepared the Black tent of the Ilam province for ethnography of Mosgard museum, Denmark in 1964. Source: Digard, 1990, p. 127. [↑](#footnote-ref-1)
2. For common feature layout and more information about this part of research, follow: Hassas N., 2018. P,190. [↑](#footnote-ref-2)