The traditional house of Tuareg, adapted the harsh dry environment in the Sahara

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1. Introduction

Tuareg is traditionally cattle breeder nomading in a desert. Today some of them live in a settlement; others build a house in a town. But still today, nomadic life style is their bases and contain a lot of philosophy of them.

I will present a traditional Tuareg dwelling, from an ethno-architectural point of view. And discuss about their houses how they adapt the harsh dry environment in the Sahara.

2. Method

I explain and illustrate a concrete real tent of Mrs. F who lives a nomadic life in an area of north tombouctou. I interviewed her about how to build the tent, the name and the size of each part of her tent. I also asked old people about general use and meaning of each part of Tuareg house. I measured Mrs. F tent, and stay there and observed how the tent was used and treated by the people. Everyday women gave special care to the roof skin; opened, closed, half rolled up and moved off.

Tamaseq is translated and transcribed by Mr. Mahmoud Ag Assaleh. The vernacular name of each part is indicated by underline.

3. The plane figure and the name of each part of a tent

The traditional Tuareg house is a skin tent. In tombouctou area almost all tent has roof top directed from north to south. It is because of the wind blow from north to south in all season, dry and rainy season.

The entrance is east side or west side, because, as describe later, one side is often closed by putting up roof skin lower, along the direction of wind, rain and a sun position.

The tent of Mrs. F has 5 stakes <u>ajat</u> in north-south direction, and 5 stakes <u>ajat</u> in east-west direction. The approximate size was 6.5 m in north-south, and 5.5 m in east-west. The tent skin is fixed the stakes by the skin strings taudast.

The size of a tent is presented by the number of north-south taudast (same number as the stakes

Table 1 Vernacular name of each part for the tent

English	Tamaseq	
	singular	plural
house	ehăn	ihanăn
roof skin	ahəkkum	ihəkkăm
skin string for roof	ăzzəmmi	izzəmmăy
skin string for stitch	tăsdəst	tisdăs
rope	taγănt	tiγun
ridge pole	aloba	ilobăn
central pillar	tamănkăyt	timănkayen
prop	tajətewt	tijətwen
bar	ăkărăr	ikararăn
stake	ajət	ijətăn
baggage side	teje	tăjiwen
windshield	asəkbəl	isəkbal
pole for windshield	tasatit	tisutṣy

ijattan). For example "a tent with 5 tidas (Ahakkum wan 5 tisdas)". This number is 5 or 7.

The number of stakes in east-west is always 5. But rarely some tent has 4 stakes in east and west. In such case, the central part of the roof skin tejarjart is missing.

The tent has 2 ridge poles \underline{iloban} in north-south direction. These poles are supported by the central pillars $\underline{timankayen}$. The tent of Mrs. F has 2 central pillars. If tent become big like a tent with 7 \underline{tidas} has 4 or 6 central pillars.

These 2 ridge poles are linked on the top by a short bar akarar.

The ends of ridge poles are fixed by a small shelf, which are called as "baggage side <u>teje</u>." The props, which support the ridge poles and construct "baggage side" in vertical direction, is named as <u>tajattewt</u>. The short bars which construct "baggage side" in horizondal direction are also called as akarar.

To protect food, tableware and clothes put against rain and sand wind and cattle, the "baggage side is wrapped by a windshield <u>tasatit</u>, made of grass. When rain or wind, people spread <u>tasatit</u> to avoid water coming inside the tent. Tasatit stands by beautifully decorated poles asakbal.

4. The size of the each part

The size of Tuareg tent has a strict rule. They have three kind of unit for length established along human body size.

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1) Aril(s.), rilan (pl.)

Almost same length as front arm. From the medial epicondyle (epicondylus medialis) to the tip of middle finger (majeur ou medius).

2) ajanduf(s.), ijandaf(pl.)

This is shorter than aril. From the medial epicondyle (epicondylus medialis) to the first joint of little finger (articulations interphalangeae manus).

3) tardast(s.), tardasen(pl.)

Between a tip of thumb and a tip of little finger, in the condition of hand spreaded.

The reason why they do not use the length "from the edge of elbow to the tip of middle finger" is that this length is influenced when people get fat.

These units for length are different among women, so each woman has her own unit. Collecting materials for tent, stitching tent skin, and building tent, all of them belong to woman's work. In a case of Mrs. F is that; 1 aril = 46 cm, 1 ajanduf = 35 cm. The unit aril is used in other things, for example, the length of turban. An average man's 1 aril is almost 50 cm.

A roof skin of a tent is divided into at least 13 parts and each has name and size. Side parts are called <u>araytulu</u>, and its width is 5.5 rilan. Other parts than <u>araytulu</u> are called <u>takaytamast</u>. Each <u>takaytamast</u> is divided into 2 pieces; center is atakor and side is ijam. The width of <u>atakor</u> is 3 <u>rilan</u> and the width of ijam is 2.5 rilan.

The central part of the skin that is on the ridge poles are called <u>tejarjart</u>. The width of <u>tejarjart</u> is 1 ajanduf and the length is 20 rilan.

Totally, the width of roof skin is 11 rilan and 1 ajanduf and the length of it is 20 rilan.

The reason why the skin is divided in some parts is that the roof skin is always repaired. The roof is made of both of goat and sheep skin, but they prefer sheep skin to goat. Only the part which has hole is exchanged to new one. The roof skin's name is changing from new to old, <u>ahakkum</u>, <u>ehakket</u>, and <u>ebarsaj</u>. The string for stitching tent skin is named <u>azammi</u> and it is made of young sheep skin cut into a thin string.

The length of <u>taudast</u>, which is a wider string connecting roof skin with stakes, is 1 aril and 1 tardast.

The length of pillars and bars is also regulated. Length of a central pillar tamankayt is 6 rilan, 2 rilan of which is under ground. So the height of a tent is almost 4 rilan. Mrs. F tent is 160 cm in height.

The ridge pole <u>aloba</u> is supported by three places; one center and two ends. The central pillar is tamankayt, and a prop in the end is <u>tajattewt</u>. The length of tajattewt is 4 rilan, 1 rilan of which is underground.

Aloba, tamankayt and tajattewt are most important parts of their tent. When they start to build a tent, first they set up the two central pillars tamankyt.

The interval of these two pillars is 3 rilan at the ground. Another interval of them on the top is almost 1 aril. Because the short bar akarar which links 2 pillars and 2 ridge poles is 1 aril in length.

After setting up tamankayt, they set up tajattewt. The interval between tamankayt and tajattewt is 4 rilan. And then they put aloba on the tamankayt and tajattewt.

Next they make "baggage side teje." Tajattewt is already stands, so they add short bars akarar. The length of akarar is 1 ajanduf.

All these pillars, props and bars are bound by the rope tarant, which is made of goat skin.

Finally they put roof skin on these poles and fix it with stakes.

The height of windshield tasatit is 3 rilan.

5. How to use it

Every sunset time, the tent is folded from the end neatly, and put on the ridge pole arch. The reason is if a tent got tension for 24 hours, it would become easy to break. With the sunrise, woman put up the tent. In the morning she sets east side of tent lower, in the afternoon she puts west side of it lower and adjusts east side higher. So that people make a good shield from strong sunshine.

When they have heavy wind and rain, they untie the strings of the wind side, so that the roof skin hang down vertically until ground. And inside the tent they stand the windshield to prevent water flowing into the house.

The north "baggage side" is called "baggage side of woman teje tan afalla." In this shelf, here put in woman's goods, dish, spoon, knife, mallet, mortar, sieve, winnow, skin bag for making butter, bowl containing fresh or sour milk, and trunk containing woman' clothes and accessories.

The south side is called "baggage side of man." Here is kept suitcase containing man's cloth, tobacco, sward, and heavy things such as millet, rice, sugar, and blanket.

Which side is woman or man is depend on the wind direction. Anytime the side which wind blowing become woman's side, because of protecting foods and dishes against the sand. In tombouctou area, almost all the time wind blow from north. In such that reason, usually north side become "baggage side of woman."

6. Conclusion

The Tuareg traditional tent is made and built along systematic rule. Each part has standard size. The system is reasonable, functional and beautiful.

About size, they choose unique unit for measuring from the real life in a bush. The length of unit is

The traditional house of Tuareg, adapted the harsh dry environment in the Sahara

shared by the people, and also is different by each person. It is reasonable because woman can make her own tent and space for dwelling.

The structure of tent is simple and flexible. It is easy to change shape along the changing environment. And also the tent become compact and with folded in small. It is very adaptable to the nomadic life in the Sahara.

要約

サハラ砂漠に住むラクダ遊牧民トゥアレグの伝統的な住居について調査を行った。トゥアレグの家屋は、強烈な日差しと砂嵐を遮断し、居住の快適さを求めつつも、いつでもテントを解体して移動が出来るような簡便さも同時に備えたものである。

また、テントの柱や皮のサイズは非常に細かく厳密に寸法が決められている。その住居の女性の肘の長さを基準に3通りの寸法の単位がある。これらの寸法単位は、布やロープ(井戸水をくみ上げるためのもの)の寸法の単位でもあり、彼らの日常生活のすみずみまで行き渡った「モデュロール」の一例であるといえる。