

(Re)Constructing Dwelling: Transient Architecture of Rabari

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Abstract

To a sedentary modern society, permanence of structure in shelter is a prerequisite in defining its architecture. In the light of this, it is pertinent to revisit the definition of shelter in its most basic form. The Rabari pastoral nomads due to their constant mobility and lack of an elaborate transport system, have been able to define shelter which is both vulnerable and responsive to their basic needs. And yet, the shelter presents a distinct cultural imprint. This paper explores the dwellings of this nomadic community by de-constructing their life into components, daily life, negotiations which landscape, resources and climate, and their place in the contemporary world. Eventually the thesis concludes by forming a narrative of re-constructing their idea of dwelling and their relation with a sedentarized society.

Introduction

To understand what it means to dwell, it is important to define the built environment which allows for the act of dwelling. Dwelling allows an occupied space to make it a place. In order to understand the transformation of space to a place, act of dwelling is understood by understanding what it means to create a built environment.

Clifford Geertz has declared, ‘Man, is an animal suspended in webs of significance he himself has spun’ (Geertz 1973: 5). The statement implies that the society we occupy is a construct of the myths we have spun to create this reality. Hence, the myths have a direct implication on our built environment. Tim Ingold searches for the meaning of built environment ‘not, that is, on what a built environment means, but on what it means to say that an environment is built.’ (Ingold 2000: 174). To answer, he tries to distinguish between what is built and what is not built. The built environment as ‘any physical alteration of natural environment, from hearths to cities, through construction by humans’ (Lawrence 1990: 454).

To define architecture Ingold distinguishes animal architecture and human architecture on the basis of volition of design of the construction (Ingold 2000: 175). It is evident that humans build houses of diverse kinds while animals construct forms of dwelling which are constant for a given physiological setting. This distinction points out that human beings, as opposed to other animals, build not only as a result of intuition which is a resultant of physiological needs but rather human beings build to respond to their sociological setting as well.

Vagadia Rabaris are pastoral nomads migrating within the state of Gujarat for larger part of the year. The Rabaris have a permanent house in their native village. While for the most part of the year, they are migrating in search for fodder; during the monsoon months, they return to their village.

In order to understand building as a social act, the current paper deals with observing the daily life of Vagadia Rabari. There are two ideas which determine the design of the built environment, the community's response to climatic conditions and building as a social act; various components of their lives are documented to corroborate the theory. It has been assumed that there are three acts which largely contribute to the design of dwelling, daily routine, loading and unloading the camp and setting up the camp.

Farming community and the nomadic pastoralists share a symbiotic relation. After the crop has been harvested, the livestock of the pastoral community feeds on the plantation stubs while fertilizing the farmer's land in return. The nomadic Rabaris migrate from farm to farm in search for fodder. While they occupy one farm for setting up their camp, their livestock is taken to graze the farms in the vicinity as well. A camp is set for at least three or four days to allow the livestock to graze the neighbouring farms.

A unit family of Rabari typically consists of parents and one or two children. Elders who cannot commute longer distances stay behind at the village residence. Each family unit occupies one camp. The most basic camp is defined by an ensemble of two *charpoys*, two metal posts, a piece of canvas large enough to cover the charpoys and three bamboo sticks. Children and women of the house occupy the two charpoys for sleeping while men sleep on the ground encircling the pen of the livestock.

A group of nuclear families travelling together is called a *vandhyo*; the number of nuclear families travelling may vary from three to four up to ten families. Typically, the vandhyo travels with three kinds of animals, loading animals which are camels, livestock animals consisting of a herd of sheep and goats and security animal which is a dog, depending on the herd size the vandhyo may have multiple dogs. Loading animal is responsible in determining the nature of camp set up. The camp set up has to be mounted on to the loading animal during the period of migration. Hence, components to create a camp have to be kept minimal. Due to constant migration with minimum utilities, the camp is fragile and vulnerable to climatic conditions. Therefore, the camp demands flexibility in its structure of architecture to respond to changing climatic conditions during the year as well as during the day.

Constant migration with limited supplies increases the community's dependency on their surroundings. The pastoral nomadic Rabari essentially carry the objects needed to construct a camp, a pen for their livestock and vessels and non-perishable groceries. The pastoral nomads are dependent on their surroundings for ensured daily water supply. Water supply can be a natural source or collected from irrigation facilities of farmers or from surrounding factories. Perishable food items are bought from surrounding shops every once in a few days. The pastoral nomads are also dependent on their surrounding for procuring firewood, which is not carried from one farm to the other.

Dependency on their landscape can be inferred by observing the cycles which make up the lives of the Rabari. There are various movements and cycles which compose a larger season of migration. Daily cycles include grazing trips which range from a few meters to a few kilometres and at least a trip to water source; these are predetermined cycles which continue for the entire year. Contingency cycles include migration from farm to farm which may happen at least once in a week. These cycles are

pre-determined and respond to a unit of time which corresponds with their cycle of buying perishable supplies for cooking, which primarily includes vegetables. Apart from the daily cycles and contingency cycles, there may be transaction cycles like visit to bank and religious cycles during festivals and festivities.

The men of the vandhyo spend most of their time tending to the needs of their livestock- sheep and goats. For a larger part of the morning and afternoon, the men set out with their livestock in search for grazing fodder. Meanwhile, the women are engaged in food preparation and collecting water for daily needs. The men essentially do not spend time on neither the camp site nor the camp.

The case study consists of two Vagadia Rabari vandhyo. Members of both the vandhyo came from in and around Bhachau district in the western part of Gujarat. During the period of case study, they were located 10 kilometres away from Bhachau village during the time of the site visit. It was observed that the vandhyo do not set up their camp adjoining the farms located in immediate proximity of the highways, rather their camps are set up at least two to three belts of farmlands away from the arterial roads.

The dirt road adjoining the farm they were settled in, was a single lane road made primarily for farming vehicles. This road accessed a large parcel of land which was utilized for farming. While the entire parcel of land belonged to multiple farmers, it is common for farmers to own a number of farms cultivating different crops. There were three migrating groups occupying the parcel of land, two were Vagadia Rabari while one was a Fakirani Jat group. Both the Rabari vandhyo were occupying neighbouring farm lands. The vandhyo had occupied the farm a day before site visit and would continue to live for at least next three or four days.

Their possessions during the migration were limited primarily to their livestock, a shawl or two, a bamboo stick and paraphernalia required for food preparation. These men did not own loading animals. Therefore, this dang did not set up a formal camp. The nature of occupancy of land was defined by storing food preparation utilities on a part of the farm. Analysing from a physiological view, in both the cases the perception of dwelling is similar. Absence of a camp set up, in the case where only the men were traveling, did not change their idea of dwelling. In both the cases, the men do not directly interact with the camp set up. It is primarily the women and the children who utilize the camp during the day as well as during the night. One vandhyo consisted three consanguineous families migrating together. The three families belonged to different villages and had been migrating together since the previous season of monsoon. The dang consisted of only men who were migrating with their livestock. While these six men were not related by blood, they belonged to the same village and like the other dang they had also been migrating together from the previous monsoon season.

The social organization of the Rabari is consists of two units; one happens at the level of household which consists of a nuclear family and some casual workers, the other is at the level of migrating group (vandhyo). The entire family consisting of men, women and children migrate together with their animals (young and old). A large vandhyo consists of 10 households which could include households from different villages, while small dangs are restricted to households sharing close relations.

Khazanov explains 'in the case of nomads, primary kin group consists of closely related families which migrate all around the year, or parts of the year to pasture together' (Khazanov 1984: 127). Each individual family is financially autonomous

and owner of their share of livestock. A family generally consists of parents and their children but in some cases, members of a family may not be migrating due to medical reasons or if they have adopted alternative lifestyles. In the case of families observed, not more than two generations of the same family were migrating together.

In case of the Vagadiya Rabari, while monetary transactions are handled by the women of the house, it is the men who primarily look after the livestock and engage in everyday routines affecting the animals. Ownership of livestock is credited to the head of the family. Transformation from child to man is marked by the distribution of livestock between father and son, however, the transaction may not be equal. Henceforth, the son is economically self-sufficient yet the family as a household divulges in joint production and joint consumption.

Two cases are discussed in this paper one migrating group consisting of three families, were related to each other through kinship, while the other migrating group consisting of only men, did not necessarily share kinship. The families travelling together did not come from the same village. While the families were travelling together for about eight months now, come monsoon, they could well be traveling with a different set of families. The reason for the break up could be based on unequal demand of fodder for their livestock, productivity of pastures, distance covered, and state of distance covered. Although the deciding factor in composing a migrating group is the shared resources. The other migrating group consisting of only the male members belonged to the same villages and had similarly been traveling together since the previous monsoon season. In both cases, it was observed the monsoon season marks the completion of one cycle of migration.

A day in the life of Vagadia Rabari

A typical day starts between 4:00 am and 5:00 am for the men and women of the vandhyo while the children are yet asleep. After the men and women have cleaned their mouth with some warm water the women begin preparing tea. The men and women share some tea and the women get to the task of preparing the first meal of the day while the men tend to the livestock. The men milk their livestock to acquire the quantity required for the day while also feeding the young animals. After the young ones are fed, they are moved into the pen where they will remain for the rest of the day. By 7:00 am, children wake up and start their morning by drinking tea after they have washed their mouth with warm water.

It is at 10:00 am, the individual families eat their first meal near their respective charpoys. After the first meal, the men set out to graze their livestock, male children may or may not accompany their fathers for grazing while the girl children stay back with their mothers. At 11:00 am the women of the vandhyo gather and leave the camp to collect water if the water source is not available on the farm they have set up their camp. The children may accompany their mothers. In case the water source is further away than a few metres, the women take the camels along to fetch water otherwise the camels remained tied around the camp. The camels feed on the weeds which are grown on the peripheries of the farm which distinguish one farm from the other hence they are tied on the peripheries.

After returning from collecting water, the women create shade for the young ones in the pen by hanging a few blankets on the periphery of the pen. The women may also hang the canvas over the charpoys which creates a shade where the women will

collectively sit together during the afternoon. For a couple of hours in the afternoon the women and children may enjoy a siesta in their respective camps.

After sunset between 6:00 pm and 7:00 pm the men return with their livestock. For the second time in the day they begin acquiring milk (which will be used for the second meal) and feed the young animals. The young animals are brought out from the pen and instinctively the young ones find their mothers. In rare cases when the young one is turned away by their mother, the men may have to forcibly direct the young one to another lactating mother sheep or goat. Meanwhile, the women prepare the second meal. By 8:30 pm, the families enjoy their last meal of the day and retire. The mothers and children occupy the charpoys while the men locate themselves around the pen.

Choice of location for activities provides an insight into the family unit's response to social conditioning and gender dynamics. While interaction of objects is seen as the collective migrating group's response to physiological needs. Hence, the amalgamation of the two forms a basis to understand the Vagadia Rabari in the context of their environment. The purpose of documentation of their daily lives helps understand the fragility in their lives. The fact that they are constantly on the move limits the number of possessions which can be carried while migrating and hence they are extensively dependent upon their environment to provide for most utilities. Also, the other reason for possessing minimal number of items is the mode of transportation; camels are the only loading animals and hence, they have to manage their possessions minimally.

If the inanimate items carried and the items acquired were to be compared, it would indicate that majority of the items they carry are components which make up their camp and only those ingredients which are not perishable. For all perishable items, the Rabaris negotiate with their surroundings.

It was observed while tracing their daily routine that the Rabaris are extremely sensitive to the changes in their environment. There are two stages at which their sensitivity is reflected, one is at the level of the individual and other is at the camp level. So, at the individual level it was observed that changing climatic conditions altered their habits. The most notable change was the change in the positioning of the charpoy. Each family of the vandhyo travel with two charpoys, a few bamboo sticks and a canvas for the construction of their camp. Additionally, they may also carry a tarpaulin for occasional and infrequent rains. Out of the two charpoys, one is higher and the other one is lower. The higher charpoy becomes a permanent, structural member of the camp composition and lower one holds a rather arbitrary place in the structural system. The higher charpoy for all the families across the community correspond to a fixed cardinal directional system. The direction for the charpoy marks the shift in the position of the sun.

Tracing the daily lives of the Rabari lends a lens into the primary utilities in a life as a pastoral nomad. Components of their daily lives form cycles attributing to a larger season corresponding to migration. Observations derived from daily activities have been segregated into three components, the nature of activity, location of activity and the interaction with objects. The three components help derive relation between the pastoral nomads and their environment.

When considered the built environment as response to physiological needs, interaction with objects exemplifies the community's response to a minimal lifestyle as a result of life on the move. Choice of location elaborates building as a social act.

The two migrating groups are observed to be able to document a typical day in the life of Vagadia Rabari. Gender division has been considered as a parameter to document

their lives; men, women and children have distinct roles to perform exemplified by documenting various activities which take place during the day.

Locating the camp

Rationale for location—When moving from one camp site to the other, the primary focus to identify a camp site is the availability of fodder. The distance between two camp sites is approximately 5-7 kilometres. Along with the considering the availability of fodder, a water source is identified which will sustain the livestock for the next few days.

Rationale of camp set-up—The farm occupied was nearly 3-4 acres. The farm was accessible by a 3-meter-wide dirt road. One side of the farm was abutting a dirt road while the other three sides were surrounded by other parcels of farm lands. Two high tension pylons were placed in the parcel of land occupied.

The camp was set up towards the rear end of the farm. A pen was constructed for livestock; four feet high with plastic net. The shape of the pen resembled a square and at the corners, the three families had laid out their charpoys along with their other possessions.

Each family owns two charpoys; one is higher while the other is lower. The higher charpoy is used to place valuables during the day. Spices and flour are stored in containers which can be plastic or steel, vegetables are kept in polythene bags and oil in plastic or steel containers which have a handle to hang it. Spices, flour and vegetables are kept on the higher charpoy. Two metal posts with a circular profile at the upper end are placed at either ends of the charpoy. Through the two circular profiles, a bamboo stick is rested. The oil container is hung at either ends of the bamboo stick. Each family carries multiple blankets which are also kept on the higher charpoy. The saddle for camel is also kept on the higher charpoy at one end vertically aligned with the shorted edges of the charpoy.

The charpoy legs have four cylindrical profiles located somewhere between the length of the legs. This profile is used when a mosquito net has to be suspended from the bamboo stick covering both the charpoys. On warm and sunny afternoons, a canvas is suspended over the charpoys to create shade.

Orientation of the two charpoys changes during the year. Holi marks the shift in the orientation. The higher charpoys are at all times during the day fixated while the lower charpoy may be oriented differently during the day time according to need. During the day time, the lower charpoy is used to rest and sit. The higher charpoy after Holi has longer side of the charpoy is aligned north-south with the head resting in south direction.

Children sleep on the higher charpoy and the women sleep on the lower charpoy. Men sleep around the camp set up and do not follow any orientation. Men sleep on the ground without any bedding, they use their turban to rest their head on the ground.

In the case of the vandhyo consisting of only men without camels, the possessions carried are minimum. They did not carry material to construct a pen, the livestock was gathered and the men slept around the livestock during the night to protect them and prevent them from straying away. As the camel is the primarily utilized to carry instruments for setting up camp, men traveling without camel did not have the luxury to carry their charpoys. The men store their possessions in sacks which becomes their camp.

Camp as a structure—essentially defines the elements, in their structural capacity, which are responsible for making the camp a sound structure. There are two types of

such elements, fixed components of the structure and the components which are rather arbitrarily placed. Fixed components of the camp include the higher charpoy, bamboos rested on the charpoy to create a shade while the only component which is arbitrarily placed is the lower charpoy which accommodates the changing daily lifestyle uses.

Camp as an assembly of objects—This section is a continuation of ‘camp as structure’. To differentiate between the camp as a structure and the camp as an assembly of objects is to distinguish between a defined space and what becomes a place. Additions in the camp which do not add structural value but play an integral role in creating a home for the pastoral nomads. This is not to say that structural elements do not play a role in creating a home but rather this section can be viewed as a step forward after the creation of the framework of the camp. When the camp is examined as an assembly of objects, one begins to see the multiplicity of the functions which are performed by the objects carried. The blankets, which may be carried to provide warmth become a bedding during the day time, while the saddle becomes a foot rest during the night.

Fragility of camp—Pastoral nomads on account of being constantly mobile carry components to create shelter. Due to the restrictions which come with being on the move, their shelter is minimal. This makes the shelter vulnerable to the forces of nature with minimum combating tools. Hence, the shelter is constantly transforming itself to adapt to climatic disturbances. The shelter transforms during the day to negotiate with sunlight. The camp sees the addition of a canvas to create shade while for the pen of the livestock, blankets are hung to create shadows where the livestock huddles up. Each migrating group may deal with climatic disturbances differently. In some cases, instead of using canvas to create shade, the charpoy is stationed at an angle underneath which the women sit during the afternoon. During monsoon season, a couple of inches high plinth is made from clay around the camp to prevent flooding. In addition to the canvas, a plastic cloth is hung large enough to cover the two charpoys. While there may be minor variations in the method of negotiating with climatic disturbances, the principles and tools of combat remain the same.

Loading and unloading of camp on camel

The loading animal employed by the Rabari is camel. A caravan may consist of a single camel or multiple camels depending upon the size of the caravan. It was observed that camels are treated as a collective property of the caravan. However, during the shuffling within the migrating group, the family which owns the camel takes the animal during the shuffling. It is important to note that formation of a migrating group is done on a premise to acquire necessary utilities as a collective.

Men spend majority of the day fulfilling the responsibilities of a shepherd; the livestock requires to be grazed and fed water. Men spend most the day away from the camp in search for grazing fields occasionally foraging for water sources. Meanwhile, the women occupy the camp for most duration of the day. If men look after the livestock, women are responsible for the camp. As the camel is primarily used as a loading animal, the camel stays back at the camp while the livestock is taken for grazing. Women make sure the camel is taken to a water source and is well fed. Hence, it does not come as a surprise that women take up the responsibility of disassembling of the camp as well as the loading and unloading of the camp. While the men may help in settling the camel, the women of the family meticulously disassemble the camp.

The process of disassembly of the camp simultaneously takes place along with the loading of the belongings on the pack animal. Children may assist their mothers to

supply each article in the sequence of loading. The camels are made to sit on the ground and the process of laying the possessions begins. A thin piece of cotton cloth is laid over the camel back. This cloth is large enough to cover the hump of the camel as well as the rest of its stomach. The shape of this cloth is more or less rectangular. Over the piece of cloth, *atharyu* is laid. The *atharyu* has a cut out in the centre where the hump fits. The thin piece of cloth was laid before *atharyu* to prevent it from getting dirty. *Artharyu* is made from two-three pieces of cotton cloth layered and stitched together. The *artharyu* is longer on the four edges giving it a drooping shape. Over the *atharyu* another rectangular thin piece of cotton cloth is laid. This piece of cloth has cotton string attached to the four edges. This piece of cloth is tucked from the edges. All the blankets are neatly folded and laid equally on either sides of the camel hump. Eventually a folded blanket is laid to cover the hump. Saddle is kept on the top. The saddle consists of two compartments which are divided horizontally by a wooden section passing through the centre of the saddle. The saddle has a cotton belt with a triangular metal ring at the other end of the belt. On the other parallel side of the side, a metal ring is attached to the saddle. A leather belt and a rope are tied to the ring. The cotton belt is wrapped around the belly and the two belts tied to the circular metal ring are passed from the triangular ring attached to the belt to fasten the saddle on the camel back. The saddle is shaken while tightening the rope and the leather belt. In both the compartments of the saddle, remaining blankets are placed.

Another article of cloth is placed over the blankets. This article is called *kandhar* and it is used to carry household items like vessels and containers. The *kandhar* has a slit in between through which it slides through the middle vertical bar of the saddle. During the process of filling it up, the edges of the *kandhar* are rested on the saddle. The *kandhar* has various sewn notches through which a rope is passed to fasten the items kept inside. Remaining blankets are placed in the two compartments of the saddle. This is done to make a comfortable seat on the camel, where the children will sit. Another piece of cloth with a hole in the centre is slid through the middle bar of the saddle. This is a decorative piece of cloth which covers all the articles which have been loaded.

Both the charpoys are then loaded on the camel and tied from all the four sides using rope. Edges of the saddle have wooden protruding pieces which are used to tie the charpoys. The charpoys are upturned and horizontally aligned with the camel. The legs of the charpoys are covered with cloth coverings. Pots are upturned and rested on these legs. The cloth covering prevents the metal legs from making noise when stuck against the steel pots.

Articles are loaded on to the camel keeping in mind the comfort of the camel as well as properties of the article being loaded. For example, water pots are placed inverted on leg of the charpoy to have it readily available when required during the journey. Most blankets are tucked onto the camel before placing other articles to prevent the camel from developing rashes as the blankets act as buffer between the courser articles and the camel.

Meanwhile, the men disassemble the pen of the livestock animals. The men gather their livestock and the children may help keep the livestock rounded together preventing them from escaping. The process of unloading unfurls in the same sequence as loading. Again, the women engage in the activity while the men will be busy. The process of disassembly and loading of the animal takes between 15 minutes to 30 minutes. Generally, this takes place during the first half of the day as the livestock would have exhausted neighbouring grazing fields and have to be taken to new ones.

Weekly movements

Weekly movements are contingencies and may or may not correspond to the Western perception of the unit of a week. The movements basically correspond to the shifting of camp from one site to the next. Camp site is changed when the grazing of neighbouring farms has exhausted plantation stub supply. Typically, the livestock belonging to a vandhyo of 3-4 families takes 4-5 days to exhaust plantation supply of farms covering a radius of 4-5 kilometres. After this exhaustion the camp site is moved.

Firewood—*Prosopis juliflora* is abundantly available in Kutch. *Prosopis juliflora*, locally known as *gando baval*, is fiercely invasive and multiplies without much effort. The farmers use dried baval to demarcate their farms as the shrub is thorny and prevents trespassing. Baval is also used as firewood. Firewood is collected either while returning from collecting water or sometimes secured from the baval fences laid out by the farmer. Firewood is not collected on a daily basis but rather stored to suffice for a few days depending on the time to be spent on a designated farm.

Ration—Flour, oil and vegetables are bought once in a few days. The ration is bought from nearby shops. Ration was stored in plastic as well as steel containers. Steel containers were bought while the plastic containers could be reused from buying other commodities. In the case where only the men were traveling, storage of ration was more frugal. Flour was stored in a steel rectangular box container. Vegetables and spices were stored in polythene bags. Flour, vegetables, spices along with necessary vessels used for cooking were packed into a sack to prevent predators from attacking their supplies. These supplies were kept in on the farm where they would set up their camp.

Seasonal migration

After about a year of migrating together the families return to their respective villages during monsoon months. For 2-3 months during the monsoon season, the migrating group returns to their village and settle in their village homes. The herd, all the members of the family as well as the paraphernalia carried along to sustain the nomadic life is brought back to their respective villages. The livestock are grazed in and around the village as the landscape becomes greener during monsoon.

There are other occasions when the vandhyo returns to their village, a week or two during Diwali. For Navratri the vandhyo may or may not return to the village, but they definitely make a visit to their *kuldevi* temple. During Holi if the son in the family has gotten married recently, the son's maternal uncle has to circle the fire of Holi with him and his bride in the first year of marriage. The mother of the son may return to the village to witness this festivity but the entire vandhyo does not return to the village.

It is not necessary that only families residing in the same village migrate together. But the families migrating together are related by blood. Before setting out after monsoon, a migrating group is made considering the resources required to sustain a pastoral nomadic life. This migrating group had been traveling together for 6-7 months now and prior to this the families had been traveling with different set of families.

Another migratory group encountered composed of only male were traveling without their wives and children. While the larger pattern of migration was similar, the kinship within this vandhyo was different. While the men belonged to the same village, they were not related by blood.

Nomadic pastoralism in the contemporary world

British India did not recognize pastoral nomads and hence they were isolated whereas the newly formed India tried to 'integrate' them after 1947 (Edwards 2010: 184–206). The Nomadic Tribes' Day Conference held in Delhi 1960, clearly suggested the pastoral nomads to sedentarize.

'This Nomadic Tribes' Conference strongly recommended to the Government of India for allocation of substantial funds for the rehabilitation of nomadic communities so that they stayed at a place, build their own houses and subsisted as a good citizen of the community. Such a course would also wean them away from criminal tendencies if and where they exist consequent on the nature of their unsettled lives' (Gooch 1998: 42).

As a result of being cast out, a large population of Rabaris have either begun to sedentarize or opt for long distance migration to other states where the pasture is abundant (Edwards 2010: 193).

This section looks at the impact of modernization on the Rabari who remain in the state and continue to live a nomadic life. This section also attempts to answer the motivation for their lifestyle despite the neglect and often being labelled as criminals for their mode of lifestyle. The pastoral nomads lead a life which is an antithesis to the settled life. The definition of a modern life adheres to sedentarization as preliminary requisite. Sedentarization also gives rise to the idea of possession of property as an act of ownership. But in the case of the pastoral nomads, the idea of ownership, when on the move, is different.

As the Vagadia Rabari have been exposed to the modern world, they have begun to adapt to modern ways. However, modernization in their context is vastly different from the settled members of the community. The general perception of pastoral nomads indicates to their being primitive. However, they are trying to grapple with technology the same way any 'modern' citizen does.

The Vagadia Rabari have access to mobile phones. The fact that they are constantly on the move, raises the problem of recharging the battery. It is also important to note that while they maybe in contact with urban centres once in a while, most of their lives are spent on farms in remote locations. So, as a solution to this problem, a lot of the Rabari turn to solar charging. They carry a solar panel which supplements for the entire migrating group. So, their migratory lifestyle may be perceived as primitive in general opinion, the fact is that to sustain themselves, they are constantly adapting to technology. Also, their adaptation of technology vastly differs from how a settled citizen might adapt.

Pastoral nomads lead a fragile life; to fulfil their physiological needs they are constantly negotiating with their environment. Traditional knowledge has historically equipped them with the ability to sustain their life as pastoral nomads. Daily tasks in the shepherd's life requires knowledge from various domains, which is traditionally acquired. Knowledge about soil quality distinguishes pastures with greater nutritional value.

Close association with their livestock as an exercise of several generations has equipped the pastoralists an understanding about the requirements of their livestock. The community has adopted a communication method which consists various sounds to command their animals. To cure disease in animals, chemical drugs are being used. But before Kutch became accessible and hence globalized, ethno botany and ethno veterinary sufficed medical care of animals as well as humans.

Modern schooling system was brought to India during colonization. As the pastoral nomads were largely disregarded from the system, modern education is neither inclusive of the challenges faced by the pastoral nomads nor does it acknowledge the traditional knowledge required to sustain life as a pastoralist. Content taught by the schools and the life lead by pastoralists is tangential. The community's exposure to this capitalist economic model has resulted in a realization to pursue formal education. The foremost challenge faced by the community is the disconnect between their context and the context of the education.

Two direct implications of formal education on the life pastoralists were observed during the site visit. One of the migrating groups consisted three nuclear families, the children were aged between 2–11 years. All the children of this migrating group had completed 3–4 years of formal education system before dropping out. The children along with their mothers are again leading a migratory lifestyle.

Enrolment in formal school requires sedentarization which disconnects the children from the migratory life. As the schooling does not formally encourage pastoralism as a way of life, the migratory lifestyle becomes irrelevant to their lives. Correspondingly, traditional knowledge which is passed down from one generation to the other is immaterial and hence, lost.

In the vandhyo where only the men were traveling, it was observed that because their later generations were educated, they adopted alternative lifestyles. Sedentarization in this case resulted in an alternative lifestyle for the children as well as their mothers who had stopped migrating to look after their children. The second generation was educated just enough to opportune blue-collar jobs. Traditional historical knowledge was passed down through tales and myths, while traditional ecological knowledge will be lost. One of the women of the clan quipped, '*Bhaniye toh mel uthar se!*' This roughly translates as 'only education can rid us of our misfortune'.

An article published by *Pastoral Times* (31st March, 2018) 'From Herders to Truck Drivers to Herders' informs that camel breeding has once again been revived as a commercially viable activity. This movement may instil pride in the community for their mode of lifestyle. The article informs that AMUL has launched a Camel Milk Chocolate while Aadvik Foods of Delhi has begun manufacturing products from camel milk. This is significant step in recognizing the pastoral nomads as modern citizens of the country.

Conclusion

The transient nature of architecture gives a model of the most basic form of shelter which can be considered a built environment with a certain level of cultural design. There are two parts of the statement which need to be elaborated, the first being, the model of architecture in pastoral nomads is the most basic form of shelter and the other being, the shelter having a degree of cultural forbearing.

The shelter is termed as the most basic model of architecture owing to the constant state of migration. The architecture does not have the advantage of a ready built environment as in the case of permanent settlements. At the same time, unlike in the case of hunter-gatherers, the act of building does not begin afresh on a daily basis. Essentially, migration requires for the pastoral nomads to deconstruct their camp but they do not abandon the components of the camp. In the case of hunter-gatherers, the material of the architecture may be intentionally selected but the material is largely occupied from the surrounding. This could lead us to believe that the material to build does have a cultural memory.

If the premise of cultural memory can be defined by the materiality of the camp, it means that the act of migrating with components, which eventually make up the camp, is an indication that the camp has a cultural design. The evidence of this can be attributed to the fact that they carry their shelter when moving from one camp to the next unlike hunter-gatherers for whom the act of building becomes a part of their daily lives.

By distinguishing between the shelter of hunter-gatherers and pastoral nomads it is proven that the camp has a cultural memory, it yet remains to be proven that the shelter of the pastoral nomads is the most basic model. Here again, permanent architecture is brought in to questioning; the permanence in architecture creates an environment which can be distinguished from the natural environment. What this means is that when act of building happens on a daily basis in different locations, the act of dwelling becomes the first layer of built environment but in the case where architecture is permanent, the consequent acts of building are adding to an already existing structure of a built environment. By the continuous processes of co-opting and constructive making, the complexity in the shelter increases. This continuous activity allows for the expression of architecture to resemble the mental representation of the environment we perceive.

In the process, the architecture begins to dwell in an artificially created environment rather than the natural environment. While in the case of a pastoral nomad's shelter, constant mobility ensures that the shelter remains in a natural environment and does not reach the level of complexity of a permanent shelter. At the same time, the shelter has a cultural memory expressed through the materiality. Hence, it can be concluded that the pastoral nomad's shelter is the most basic model of shelter with a cultural design.

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