

An Ethno-Architectural Documentation of Alteration in Settlement Pattern among the Hill Korwa of Chhattisgarh

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ABSTRACT: The present study was undertaken to access the indigenous knowledge about Ethno-architecture and develops the theoretical frame on housing pattern among the Hill Korwa tribe of Korba district, Chhattisgarh. The research was focused and based on anthropological and ecological perspective. The ecological perspective deals with the use of local available material and adaptation with environmental condition. Finding of present study shows that there are four types of houses have been found among Hill Korwa tribe, namely *Jhala*¹ (Timber shelter), *Jhala*² (Timber shelter with mud plaster on walls), *Jhala*³ (Timber shelter and its roof covered with shards (*Khapra*) or mud flakes) and *Chadkhodi* (Timber shelter with porch). Animal shelters were also found associated with residential shelter, four types of animal shelter were found, namely *Cherimacha* (goat shelter), *Kukrigodadri* (hen shelter), *Suamacha* (pig shelter) and *Bailamacha* (cow shelter). However, it may be inferred after assessing variation in housing pattern among the study group was due to cultural diffusion. Environmental changes and ecological depletion or resource scarcity and government policies in study area were analyzed as change agencies in present study.

INTRODUCTION

Shelter is a certain basic need along with food, air and water and it is essential for the survival for human being, and to attain this need man build up their house with different tools and techniques. Using natural material from nature and preparing structure is a primitive technique, Habitation has been always a basic need of man and one of the most important element of material culture (Plant, 2019) . Home provides psychological and physiological satisfaction as it is comfort place where you can take shelter and rest which provides you comfort and you live with your own rules, home can be said to be as sanctuary

where you have freedom, place of affection, emotional attachment and these are the basic requirement for the survival of human being. House is a building constructed with non-living things, shelter comprises piece of land where a structure is build and contains roof, walls, door, window and rooms and it becomes home when we live in with our family and loved ones. We know that man spends its entire life in house from birth to death with its family and loved ones and have various memories so gets emotionally attached with house and family members.

Earlier in prehistoric period or paleolithic period when there was absence of knowledge of construction of shelter hence they used to find caves or rock shelters for protecting themselves from storm, wild

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animals and enemies, natural shelters were in limited numbers and increasing population, circumstances angled were believed to be the reason man strived to make their own shelter, art of designing habitable structure is a technique which is adapted by various animal, birds and human. House is built for the comfort and safety of oneself and we find different types of houses on the basis of requirement of man.

The term ethno-architecture is composed with two words 'ethno' and 'architecture' here ethnic are indigenous, native, homogenous group and culturally distinct people, they are collection of people who identify with one another based on shared characteristics which differentiate them with community (Chandra, 2012) and architecture is the art of planning and construction of structures, collectively ethno-architecture is the study and practice of architecture planned for and by ethnic group, simply ethno-architecture is collection of divine nature, belief, religion, custom, traditions, which is ideal beauty blessed with perfection and excellence and is nature-friendly as well as sustainable. House of indigenous people has huge contribution of cultural, economic and environmental factors; being a part of society man has always valued traditions and customs of its society and which is also reflected in its residence (Pathaw, *n.d.*).

Tribal house is related with environment and when environment is considered need of family and ecology plays the important role hence when construction of tribal house is dependent upon the environment condition, generally tribal's have sustain economy hence they do not invest in their house, commonly naturally available materials nearby place such as forest are used for the construction of tribal house hence they have temporary or semi-temporary house, in contrast when we discuss about house in complex society house is specially constructed for comfort and people have deep connection with their house and decorate it with their admiration.

House or habitation is associated with material and non-material culture, emotions, mental security, satisfaction, physical security are the major points regarding tribal as well as non-tribal house, the fear of natural disaster, wildlife are the paramount reason behind construction of house, structure of house is

dependent upon the availability of raw material and geographical condition of area. Hygiene condition is poor in tribal house due to sustainable economy and dependency on domestic animals.

The importance of documentation of present work is to enlighten the importance of traditional house in the regards with ecological factors, need, ritual, custom, belief and myth. Documentation will provide the creative idea, concept and construction method of primitive house through traditional knowledge; the verbal traditional knowledge regarding primitive house could be preserved and will be useful for the upcoming generation.

Objectives: (1) To explore the ethno-architectural knowledge of the Hill Korwa of Chhattisgarh; (2) To conserve the ethno-architecture knowledge through written documentation; (3) To discuss the anthropological and ecological perspective of ethno-architecture of Hill Korwa; and (4) To analyze the factors of changes of the dwelling pattern of Hill Korwa.

MATERIALS & METHOD

The study has been carried out among the Hill Korwas of two villages Terriamma and Kharkapara of Machdoli Panchayat and two villages Kharkaama and Kukricholi of Satrenga Panchayat of Kotghora Tehsil under Korba District of Chhattisgarh. The research was qualitative and descriptions of ethno-museological object precisely, in fieldwork the information were documented through written and visual documentation. For the collection of information head of house was interviewed, age between 20-45 years and almost 7 houses were investigated from each village. Korba district and its villages were selected purposively and the approach of this study was micro-approach and Interview guide was used for the collection of information. Interview guide, Non-Participate Observation, Interview, Group discussion, Measuring tape, Audio-video recorder, Still photography was used as research tool for the present study.

Area and People

Hill Korwa tribe was declared as Particularly Vulnerable Tribal Group (PVTGs) of our country by Government of India during the sixth-five year plans,

which are native community of Northern part of Sarguja district of Chhattisgarh district. Hill Korwa tribes are sub-group of Korwa tribe, a group that hunt, collect forest produce and perform shifting agriculture. In Chhattisgarh Hill Korwa's are distributed in Sarguja, Jashpur, Balrampur, Korba District and Shankargarh block. Hill Korwa tribes belong to Austro-Asiatic family according to the anthropological description, In physical appearance they are dark brown or black skin and they have medium to short height stature (PahadiKorwa.pdf, n.d.; Ekka, 2023; Srivastava, 2007). Hill Korwa people mother dialect is called 'Kowai' and they also speak and understand Chhattisgarhi dialect, religion of Hill Korwa people was confined with ancestral worship and also too few Gods and Dieties. *Mahadev, Parvati, Sigrudev* and *Gauridev* are important gods of Hill Korwa's and *Khudia Rani* is main deity among Hill Korwa (Vasnav, 2008). Nuclear family is found generally in Hill Korwa's and their families comprises of husband, wife and their unmarried children. The families are patrilocal and patrilineal, generally when children's get married the male construct their new house and starts living with his wife. In Hill Korwa's parallel cousin and cross-cousin marriage are allowed, early marriage is prominent among them, in general they have arranged marriage. Polygamy can be also observed in some cases, widow remarriage, sororate and lavirate are also observed among Hill Korwa's. Main occupation among Hill Korwa's is gathering of minor forest produce like Sal timber (*Shorea robusta*), Bamboo (*Bambusa vulgaris*), Amla (*Phyllanthus emblica*), Baheda (*Terminalia bellirica*), Harra (*Terminalia chebula*), Kanda (*Tubers*) and other available minor forest produce. They were also found practicing agriculture and pastoralism, pastoralism is found among the Hill Korwa's due to strict laws regarding Hunting, mainly Rice (*Oryza sativa*), Maize (*Zea mays*) and vegetables are cultivated (Khan and Nayak, 2018; Khan *et al.*, 2019; Khan, 2018).

RESULT & DISCUSSION

The present study was focused on the housing pattern among the Hill Korwas of Korba district of Chhattisgarh, the study was conducted in four villages which comprises Hill Korwa groups.

Oral Folktale of Ancestors Settlement

The study group believes that they were migrated from Putkapahad (Jashpur district) to their resident village, because there were scarcity of food and interference of government; they transferred to plain area and settled far away from other community. The study group had memories of their ancient shelter and its structure in which they had conical shaped and short heighted timber hut with or without roof.

Construction of House

In present study four types of houses were found among the study group which are *Jhala*¹ is constructed with only Sal timber (*Shorea robusta*), *Jhala*² is constructed with Sal timber and walls are daubed with mud plaster, *Jhala*³ is also constructed with Sal timber and roof are covered with shards (*Khapra*) or mud flakes and *Chadkhodi* is constructed with timber and walls made up with timber or bricks and daubed with mud plaster and additional porch is constructed and these houses have animal shelters associated with residential shelter.

Preconstruction Ritual

The ritual is performed before starting construction of house, first of all suitable area is selected by family nearby other residence and after that grass tress are cleared as per as area required to build new shelter, Initially *Baiga* (priest) is called and on the basis of financial capacity goat or hen of any colour is sacrificed by the *Baiga* to please ancestral god '*Barmadev*'. House of Hill Korwa faces east; according to the Hill Korwa community east facing represents luck, protection, health, positivity, harmony, happiness, wealth and prosperity to the family.

*Digging of Post Hole, Nivkhodai and Construction of Jhala*¹

Immediately after rituals are performed, six post holes are rooted 2-3 meter deep to the ground and four logs of Sal timber are brought of similar size and dug onto the four corners in rectangular shape and two more logs of Sal which are bigger than rest four are also rooted middle of two timber opposite each other. Ridge board and conical shaped wooden rods are fitted into the pillar and tied with Maloo creeper

string (*Bauhinia vahlii*) and rafters are arranged parallel on the roof and this house consist rectangular shaped area where they have cooking area, a place to reside, a roof, a wall and an entrance. *Jhala*¹ is long elongated rectangular shaped with doubled roof hut made up of Sal timber, Bamboo and tied with Maloo creeper string.



Figure 1: Timber hut (*Jhala*¹)

Formation of Mud Plaster in Jhala² and Other Shelters

*Jhala*² is constructed with same procedure made in *Jhala*¹, *Jhala*² is also long elongated rectangular hut with Mud wall, and locally available clay in forest is collected by family members and brought to village in abundant amount, exact amount is not measured by study people they bring soil from forest as per as requirement, Initially clay is filtered from waste materials like stone, roots and other elements, Mud plaster is prepared by mixing clay and chopped pieces of paddy with water and then champed with legs to make a smooth paste this procedure is repeated for three days, after three days mixture of mud paste is used to plaster walls and floors, thick evenly mud paste is daubed into the floor and smooth ever floor is prepared by hands, after the construction of shelter Mud plaster is done inside house, and in courtyard, and is repeated twice a year, correspondingly walls of hut are also daubed with mud plaster, in this mud balls are prepared with same mud paste and daubed into the walls, similarly thick evenly mud paste is coated into the entire walls from top to bottom.



Figure 2: Timber hut with mud walls (*Jhala*²)

Formation of Roof in Jhala and Other Shelters

There were mostly two types of roofs found, first roof covered with split bamboo and bark of tress and second roof covered with shards (*Khapra*) or mud flakes. Firstly roof covered with split bamboo and bark of tress is prepared by fitting ridges corners and conical shaped rods in hut, abundance of bamboo were slashed with sickle and arranged and covered onto the roof along with barks of tress were also spread on roof and tied with string, secondly some house roof also found covered with shards(*Khapra*) or mud flakes, shards(*Khapra*) are prepared by using clay mixture, in this procedure mud paste is prepared by mixing filtered clay and water. Traditionally shards(*Khapra*) are prepared by family members by using *Sancha* (mould), *Teer* (iron wire used to separate residue), *Ghoda* (piece of wood which looks like bat to give shape), *Raakh* (ash), hence in this procedure first of all ash is dusted into the mould to avoid sticking and then mud paste is filled in mould and pressed with wooden bat and residue are separated by cutting it with iron wire and immediately shard is removed from mould by wet hands and then semi-circular shape is given by using wooden bat and kept for air dry. After completing all shards (*Khapra*) are air dried overnight, then brought to nearby open field where bark of trees, wood, bamboo, husk, cow dung are spread all over open field and dried shards (*Khapra*) are arranged and again pieces of timber, cow dung and paddy husk are arranged over dried shards (*Khapra*) and then set into fire for baking shards (*Khapra*) and now these shards (*Khapra*) are ready to use on roof.



Figure 3: Timber hut, roof covered with shards (*Khapra*)
*Jhala*³

Formation of Chadkhodi

Pre construction ritual is similar above shelters, *Chadkhodi* house was constructed with wooden base, wooden pillars and with front porch in front, first of all 12-14 Sal timbers are collected from forest and then scraped to make long elongated smooth rectangular in shape timbers, ends of wood are craved and notches are made by sickle and hand-axe to bind two wood with Maloo creeper string, six wooden pillars of similar size are vertically dug into six post hole in rectangular in shape, similarly three similar size timber are fixed horizontally upon two timbers and tied with Maloo creeper string, wooden base is fitted upon centre most pillar and carved wooden structures and lastly ridge board is fitted at middle to double roof and rafters are also arranged to form roof and at end all timbers are tied with Maloo creeper string and at end shards (*Khapra*) are arranged on roof. *Chadkhodi* has front porch in which single roof structure is constructed by two Sal timbers and its roof is also covered with shards (*Khapra*).



Figure 4: House (*Chadkhodi*) with front porch (*Parchi*)

Interior view and description of the House On entering the house, firstly there is entrance, that the Hill Korwa call it *duari*, and this place differentiate the residential area with outdoor, on entering the residential area it comprises single rectangular space which is divided into residential area and kitchen area and the entire house is constructed with Sal timber. Room is meant for family members, which is called *bhitari*, kitchen is meant for cooking and this space is called *jevnas* where no other community member is allowed to enter, because it is believed as sacred place and god and spirit of ancestor reside in kitchen, for the happiness and prosperity of family other community members are not allowed to enter kitchen, kitchen consist of hearth, base stand. Interior has no artificial light because they do not have electricity, in residential area there is absence of bed, Hill Korwa sleep in floor, it is believed that they are children of forest and sleeping in floor will connect them with “Mother Nature”. Mud house consist shelves to store personal stuffs, In *Chadkhodi* house, they have a separate railing in front, which separates residential and outer space, and this area has Mortar for grinding grains, Hill Korwa house consist only entrance there is absence of window because they do not have concept of window in their traditional house, ventilation in house is provided with roof and mud walls, and the size of house is small hence there is no need of window in their house, there is absence of door and lock because Hill Korwa trust their community, there house is always open for their community members they leave their house and domestic animal without flinching theft and goes to forest for hunting and gathering on the basis of trust towards their community.

In this study it was analyzed that all materials used in construction of house were by locally available eco-friendly, biodegradable, recyclable, natural and climate efficient, they have nomadic lifestyle hence their house is recyclable and these materials are easily available in forest and construction is done by voluntary help of family members as well as community members. Mud walls and slits presents in roof ling acts as ventilation in house, in Chhattisgarh the tropic of cancer passes and due to which Northern part of Chhattisgarh gets warmth and mud houses are natural clay which is porous and acts as ventilator and they offers insulation during

summer and in summer interior residential area is temperature is lower. All these different houses also indicates the changes, adaptation as well as economical status of families, Families of *Jhala*¹ was found least economically wealthy and their residence is found in middle of forest i.e. interior of forest and they had huge distance from nearby Village Panchayat Machadoli and Satrenga and they had Goat and Hen as their domestic animals. *Jhala*², *Jhala*³ house were found 5-7 km of distance from nearby Village Panchayat Machadoli and Satrenga and they were more economically wealthy than *Jhala*¹ families because they had roof covered with shards(*Khapra*) and walls daubed with mud, they had pig, goat and hens as their domestic animals, *Chadkhodi* house was found nearby Village Panchayat Machadoli and Satrenga and *Chadkhodi* families only had cow as their domestic animals along with hen, goat and pigs. Structure of house and domestic animals were sign of wealthy economic families.

The house is simple rectangular in shape, and divided into two compartments for living area and kitchen area, corners of roof are used for holding tools like hunting tool, fishing tool, religious tools and agricultural tools, kitchen consist hearth and base stand to store utensils, to store clothes hanging rope is found in walls, in mud walls have shelves. *Chadkhodi* house consist of porch and porch floor consist mortar and millstone for grinding grains and spices, house was known as "*Jhala*", ridge board was known as "*Kedli*", raftler was known as "*Thathar*", wall were known as "*Bichiya*", room was known a "*Kuriya*", hanging rope is known as "*dang*", shelves were known as "*Phula*", Kitchen was known as "*Jevnas*", hearth was known as "*Chulha*", base stand was known as "*Machadasa*" which consist legs and those legs were known as "*Palla*", millstone is known as "*Jata*", mortar is known as "*Dheki*", porch is known as "*Parchi*", mud was known as "*Mati*", shreds were known as "*Khapra*", roof is known as "*Chani*" and door was known as "*Faika*", entrance was known as "*Duari*", pillars were known as "*Patiya*".

Figure 5: Hearth (*Chulha*)Figure 6: Kitchen (*Jevnas*)Figure 7: Base stand (*Machadasa*)



Figure 8: Hanging rope (*Dang*)



Figure 10: Hen shelter (*Kukrigodadri*)

Animal Shelters

Animal husbandry is also of one main source of property along with food gathering, agriculture among the study group, domestic animals were property of study group and they also prepare animal shelters to store and protect them, there were four animal shelters were found in study group which were goat shelter, hen shelter, pig shelter and cow shelter, these shelters were constructed attached along with residential shelters and prepared at the same time when residential shelter were constructed, cow shelters were found separate from residential shelter as well as attached with residential shelter. Goat shelter was known as *Cherimacha*, Hen shelter was known as *Kukrigodadi*, pig shelter was known as *Suamacha* and cow shelter was known as *Bailamacha*. Terminology of animal shelter and residential shelter is similar for walls, roof and doors of animal shelter.



Figure 11: Pig shelter (*Suamacha*)



Figure 12: Cow shelter (*Bailamacha*)



Figure 9: Goat shelter (*Cherimacha*)

DISCUSSION

Above different types of housing pattern reflects the indigenous knowledge of Hill Korwa, their architectural pattern in the study group was found changes in location i.e. at middle of the dense forest, 10-15 km away from Machadoli Panchayat and 1-2 km away from Machadoli Panchayat, study group stays in dense forest area lives in *Jhala*¹, Hill Korwa tribes



Figure 13: Posterior view of house

who lives 10-15 km away from Machadoli Panchayat lives in *Jhala*² and *Jhala*³ but Hill Korwa tribe who lives 1-2 km away from Machadoli Panchayat lives in *Chadkhodi* house. Many factors govern the architectural pattern of these different house patterns found in same tribe such as economic factors, Ecological adaptations, and spiritual belief and unavailability of government residential scheme to study group. Indira AwasYojna (IAY) was launched during 1985-86 whereas Pradhanmantri AwasYona was launched on 2015, and their main objectives were to provide support and design the house based on the requirement of beneficiaries, it was scheme where solid/ permanent roof and walls with basic requirement were supposed to provide to the weaker section societies (*Indira Awaas Yojna/ National Portal of India*, n.d.) , WHO has referred “Residential Environment” which means a place where a person develops physically, mentally, socially (WHO, n.d.) . Basic requirement in house is separate kitchen, proper drainage system, safe drinking water supply, ventilation and bathroom. Poor housing can cause negative impact on health such as physical illness, psychological effects, skin infection, respiratory infection and many other abnormalities.

On protection point of view *Jhala*¹ is a simple basic timber double roof rectangular structure, in close contact with domestic animals, which is located inside a dense forest area, where there is no protection from wild animals, enemies, natural calamities, heat, rain, storm etc., there is a single space where entire family lives in without a separate kitchen, bedroom or living room/hall, minimum requirement and facilities are absent in these houses similarly *Jhala*², *Jhala*³ and *Chadkhodi*

house have changes in but the changes are roof covered with shards (*Khapra*) and walls plastered with mud, house is made with timber, sand gravel and clay which are not enough to provide protection from bacteria and microorganisms and there are always threat of spores of anthrax, tetanus and vibrio cholera, salmonella and dysentery to the study group. At the time of interview questions regarding protection from rain, storm, heat, natural calamities and diseases were raised and the response from the study group was that they also wanted to shift in permanent house or *Pukka* house but the few house constructed are not comfortable to the families during summer there excessive heat inside the house and that house has absence of basic requirement and hence it is impossible to adjust there and the reason why they have shifted to their traditional *Jhala* and *Chadkhodi* house and similarly maximum families have not received the benefit of government scheme of house and the construction of house has not been planned as per as the requirement of study people, so they are stick to their traditional houses and have threat with various problems and issues. With reference to study conducted by Pradumn Bajaj on Monapa, Tawang, Ziro, Pasighat, Adi and Apatani tribes have started using new materials for construction of house and there is change in their houses to provide structural strength to their residential structures which is an example of acquiring and new method and techniques in their houses as a change in material culture and this kind of change may be practiced among study group so that they can be saved from effects of poor housing (Bajaj, 2019). The studies of (Premi and Mitra, 2012; Premi and Kumar, 2017; and Premi and Kumar, 2019) have highlighted the problems related dwelling in Particularly Vulnerable Tribal Groups (PVTGs) specifically in the Baiga and the Birhor Tribe of Chhattisgarh.

CULTURAL AND FUNCTIONAL ASPECT

Culturally it was used as a shelter by Hill Korwa’s, there are absence of doors and lock in their house, the reason of no doors and lock in house was that they had a communism and trust among themselves, Hill Korwa’s used to sleep on floors the absence of bed and furniture was observed, they do not laid any bed sheet on floors and oneself during sleep , they believe that were children’s of forest and hence to get

associated and attached with nature hence they sleep on floors, their house can be used by any of the member of their community, culturally they showed a communism bonding among themselves.

Social and cultural change found in their habitat earlier there was presence of two doors in a single house, one was for male and other was for pregnant women and lactating women, females were not allowed to enter from the front door there was side door attached with living area and at present there was single door on house. Functional change found where use of single door for both males and females.

Religious significance in their house is that the other community or caste member is not allowed to enter the kitchen area or touch any religious instrument and household goods, it is believed that it is sacred place and god and goddesses resides there and if any other community member enter or touch will make them god angry, on violation sacrifice of hen or goat to god and goddess is practiced.

Spiritual significance with house and area is present where the burial, memories of ancestors is present and though as per as their belief spirits of ancestors is there to provide protection from all natural and man-made disasters and hence, they have a strong connection of their house and area and the reason why they are not ready to shift to other areas for better facilities.

Mythological significance among them related with house is that after shifting into a new house if within a year any of the member die then it was believed that that house is not lucky and they leave that house and build new house.

Economical significance of their house and animal shelter is for the protection of domestic animal, these peoples are directly and indirectly dependent upon their heard of animals for food and other materials. Cow, goats, pig and hen play important role for milk, milk products and meat. Food grains are also stored in house animals and food grains were main property of Hill Korwa's.

CONCLUSION

The study, an ethno-architecture among the Hill Korwa of Chhattisgarh enlightens about the construction and dwelling techniques among the Hill

Korwa. House is one of the basic needs of human being hence the present study explores traditional knowledge on construction techniques, social significance, religious significance, mythological significance, economical significance, emotional significance related to their houses. The primitive technology of building house is found in abundance and prominent in the study group. Isolation from urban area and rural area is responsible for the prominence of traditional dwelling. Evolutionary change in the structures of house was observed, the presence of primitive hut, semi-primitive hut with some modification and solid dwelling or *Pukka* house with government policies, these variation shows transition state among the study group. The voluntary efforts of community members for construction of house, the house is believed as common property of community and absence of doors and locks due to trust between themselves indicates communism among themselves. Absence and avoidance of bed or bed sheet as they belief they are children of nature and this practice will connect them with their nature. Prohibition on the entrance in kitchen of other community shows the religious significance, whereas the mythological significance is destruction of newly built house due to death of any family member within a year. Attached animal shelters with habitation shelter shows a deep relationship and they are also regarded as their property and source of economy. Evolutionary changes came to their habitation due to interaction with non-tribal due to globalization, urbanization, market, schools, hospitals, automobiles, communication, and government agencies and in one word the interaction between tribal and non-tribal's resulted in the occurrence of changes in their housing pattern.

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