

Impact of culture (occupation) on rural built form: A case of agrarian societies

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Abstract : The influence of occupation on built form and building practices is investigated and understanding the pertinent relationship which is viewed through the integration between the agriculture as an occupation or livelihood practice and the built form of the village, the layout of streets, open spaces, and residential areas at both macro and micro level of the village as a settlement. The author studied about the built forms at settlement level and individual residential unit at a village-Velnuthala in the state of Andhra Pradesh, India, in order to find the impact of the major occupation (agrarian society) on built form.

IndexTerms - agriculture, occupation, livelihood practices, built form, settlements.

I. INTRODUCTION

Culture attached to the communities and groups is the characteristics of a particular group of people, defined by number of aspects such as language, religion, cuisine, social habits, music, and arts these aspects are identified by the ‘*occupation*’ they follow and crafts they practices’ (Ghuyre 1962, 30). Rapoport(1981) defines the cultural elements that form the house as; religion, language, family structure, child-raising methods, settlement patterns, land division and landowning systems, nutrition habits, symbolic and traditional systems, status, social identity, cognitive maps; privacy, intensity, territoriality, behavioral organization in a house, working, business and trades. Culture creates behavioural norms where for instances, people tend to engage in traditional occupations as their livelihoods. Traditional occupations have been described as occupations practised by successive generations, rooted in their customs and practices those occupations focused on subsistence economies, pre-dating colonisation and the industrial revolution. The influence of occupation on built form and building practices is investigated and understanding the pertinent relationship which is viewed through the integration between the agriculture as an occupation or livelihood practice and the built form of the village, the layout of streets, open spaces, and residential areas at both macro and micro level of the village as a settlement.

II. RESEARCH METHODS

In the present study, a relatively novel concept is deemed to be identified which is ‘assessing the impact of culture especially occupation on the building forms in the select rural regions of Andhra Pradesh, India’. The research purpose and design gives the basic idea to the researcher about the research area in before commencing the research process (Saunders et al., 2012,p.171) The purpose can be descriptive, exploratory and explanatory on the basis of requirement (Saunders et al., 2012,p.171). Exploratory research helps to identify, and better understand the novel phenomenon being investigated to create a novel hypothesis or clarify concepts based on the findings obtained through this study (Saunders et al., 2012,p.171) Descriptive approach rather describes events, or a particular problem or issue and characteristics of the population (Collis & Hussey, 2009,p.4). This design is usually combined with either explanatory or exploratory research. In the present research, the researcher would acquire first-hand information about the case regions selected for the study and hence adopts a descriptive approach. As the descriptive approach is selected, it is deemed that the research will be conducted as a combination of descriptive and exploratory research designs. However, the present study also adopted ethnography method, which was described by Maanen (1988). For the purpose of examining the various cultural practices especially livelihood practices and occupation that influence architectural built in selected districts of rural Andhra Pradesh, the researcher has selected the ethnography method. Through this method, the research will interact with people dwelling in the select case regions wherein their inputs will be assessed using qualitative methods. The benefits of applying this research strategy is an holistic approach to study the cultural system, further it is highly rely on field work and which is basically reflexive, interpretive and constructivist process. This method will support to the study of socio-cultural aspects, meanings and processes in within cultural system (Whitehead, 2004).

III. SIGNIFICANCE OF STUDY

The study would shed light on the impact of occupation and livelihood practices on the rural built environment. This study will provide insights over the internal structure of the layout of houses and building materials, which becomes the matter of significance by the researcher to investigate. For any research concerned with examining the impact of work places on the building forms, it is deemed that traditional way of life, live and work at home have influenced the way people build their houses. Since the research considers the various villages from India, the findings of the research will be a benchmark for future researches in the same direction on other states as well in other nations.

IV. CASE STUDY AREA

The influence of occupation on built form and building form is investigated and understanding the relationship which is viewed through the amalgamation between the agriculture as an occupation or livelihood practice and the built form of the village, the street patterns, open areas, gathering places and residential units at both macro and micro level of the village as a settlement. The selected case area is Velnuthala, a village in Krishna District, in the state of Andhra Pradesh, India with a population of

approximately 400, as shown in figure-1. Agriculture is the main source of income and the main occupation of the state is farming with more than 60% of people are agrarian societies and related activities, with rice as the major crop food crop and staple food of the state. There are other crops like cotton, chili, maize, pulses, sugar cane, mango, maize etc., in this region. This depends on the soil condition and climatic condition of the specific region of the state.

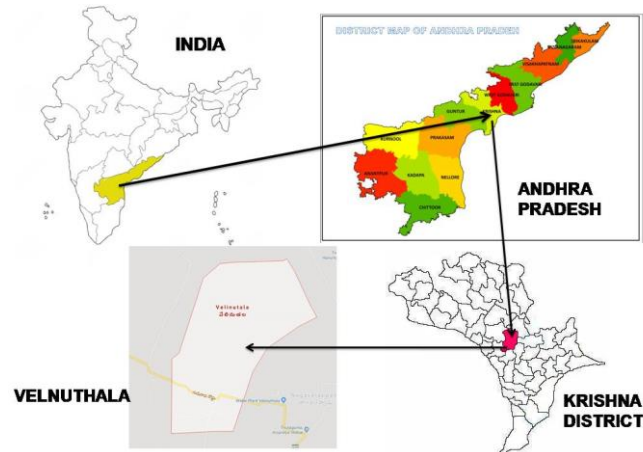


Figure 1 Location of the case area: Velnuthala

The major occupation in the case study area is agriculture and the other occupations in the village are daily labour/work force for agriculture, nearby industries, carpentry, small business, etc., which are required for the sustenance of the village. Most of the villages in the state of Andhra Pradesh, especially the agricultural villages have similar layout. Water is the major source for the agricultural farming; they are either through river, canals and ponds for drinking and other facilities. Velnuthala also has the similar layout with two ponds and an irrigation canal running along the edge of the settlement, which is exclusively used for farming as shown in figure 1.

The village was originally Brahmin Agrahara (the Brahmin quarter in a village or town; land granted to Brahmins for their sustenance), where most of the land holdings belong to few priests (Brahmins) and later the people who worked under them have slowly increased and also people from other areas migrated to this place and finally evolved into a village. The land was subdivided into smaller and larger areas and the local people who used to serve the priests bought the same and also people from other areas bought agricultural lands and migrated to this village. The village expanded from the temple surroundings. Temple being the prominent place and dwelling units have started evolving around the temple with two ponds – one for fresh water and the other one for washing clothes, cattle etc., The street layouts and the patterns are basically superimposed by the humans on the naturally existing green fields. This itself becomes an amazing characteristic of the villages in India. These villages are small agglomerations at reasonably favored and selective sites, which are nearer to their work place.

Most of the families at the initial stages are joint families. So the houses are large enough to accommodate complete family. The activity or job in which the complete family is involved is same and it becomes a family business. The rural or the village life is always taken as an example of societies with great socio-cultural aspects. The house forms, people, society, festivals, beliefs, celebrations, occupation, food etc., are all part of rural character. Various definitions of culture reflect differing theories for understanding, or criteria for evaluating, human activity. Edward Burnett Tylor writing from the perspective of social anthropology in the UK in 1871 described culture in the following way: "Culture or civilization, taken in its wide ethnographic sense, is that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society."

Industrialization had an impact on the people, where people started moving from rural areas to urban centers for better employment. They initially moved to nearby towns and cities and got employed in to various manufacturing units, industries, government and private jobs and later moved to cities for other jobs. Most of the Younger generation is migrating to nearby towns and cities for better employment facilities.

With regards to the study of individual housing units, respondents were asked for their impact of livelihood practices/occupation on the built form. In order to identify the determinants, the researcher had included few questions in the questionnaire that was prepared for the participants of the interview. The study has twenty residential units in Velnuthala Village.

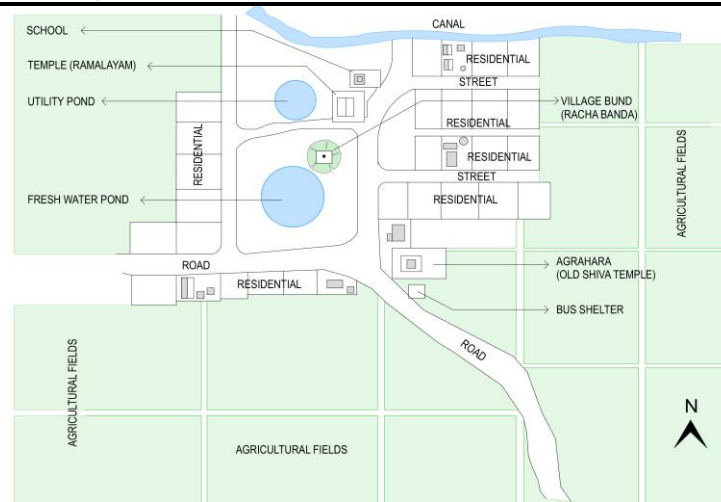


Figure 2 Layout of Velnuthala Village, Source: author

Rural settlements are indigenous settlements evolved based on various parameters like socio-cultural, occupational, economical, geographical, climatic aspects etc. They evolve or develop based on availability of local materials and various other aspects. Majority of rural areas of Andhra Pradesh depend on agriculture and there are other settlements, which depend on specialized occupations like fishing, weaving, pottery etc. Various house forms are derivative of the spaces required based on the occupational background. There is also interrelation between caste, religion and occupation in Indian context. Caste in the olden days is basically derived based on their livelihood practices. Both of them have connection with occupation and vice versa. There are some caste groups, which are pertaining to a particular occupation. A particular caste group involves only in pot making, another group involves only in fishing, whereas another group which involve in only business. This was seen from the past and hierarchy of housing in a rural settlement in India also follows the same system. A group of households with a particular caste are grouped together in these settlements. R.Y.Singh (1994) in his book Geography of settlements describes about village versus rural settlements as the term “village” attracts simultaneously denounces any legal definition. It discards to be delimited by either size or population criteria. In India, officially village stands for the area demarcated as a mauza meaning, “parcel of ground with definite boundaries, for revenue purposes without clear and consistent regard for its population.” Obviously, village, gram and gaun are synonymous terms, which denote a cluster of houses including the surrounding land almost self-sufficient and usually grouped at a convenient site.

Since the location of farmer’s dwelling is functionally related to the arable fields, pastures, water sites and woods, it is presumed that, with few expectations, the farmer occupies a place in a compact habitation, separated from his farm by a number of objects interposed in between. A farmers landholdings scatter in the village territory in many or one direction but often, at a distance ranging from few meters to certain Kilo Meters. Fragmentation of the holdings, along with other obstacles, adds new problems to the distance covered. Farm-dwelling relations are greatly influenced by the degree of fragmentation, scattering of plots, pattern of operation, irregular and circuitous pathways, elongation of village shape as well as of plots, obstructions caused by physical features like rivulet, hillock and ravines and lack of roads. But despite these, the farmer lives in the compact habitation not to face them under duress, but because of the compensation, he enjoys provided by aggregation. A farmer’s dwelling in not only a resting place, but a center of multi-variate activities, which he does, seemingly his own, often, common with others. He breathes air, sleeps, walks, gossips, quarrels and prays not only in his dwelling but also in the village. At each step, in the walk of life, he is mostly a mutual co-operator for articles ranging from needle and spade to bullocks, carts and a host of others, based upon reciprocal relations of functions, both vertical as well as horizontal. Farmer’s social space, thus, outweighs his economic space.

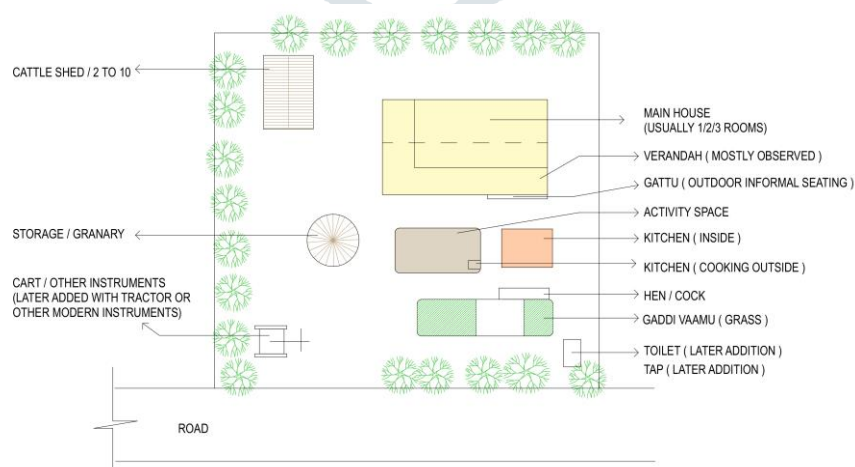


Figure 3 Typical layout of residential unit, Source: author

The dwelling unit/house in the case study area has following parts, as shown in the figure 3.

- Main house with 1/2/3/4 rooms depending on the economic status of the owner of the house. This main house has other areas like verandah, Pooja space other than the above-mentioned rooms. This is also related to the ownership of land (number of acres owned by a family). The first set of families are the ones which have their own land ownership, which

might range from 1 acre to 30 acres of agricultural land. The second set of families is the ones who take land on lease from the original owners. The third category families are the agricultural labor.

- b. Kitchen: There is an enclosed room, which is not directly connected to the main house. The cooking happens in two places, one is in the inner enclosed room/space and they also have an outdoor/open space in front of the kitchen, where major cooking happens. Enclosed kitchen is only used during rainy season. This space acts as an interaction space, which connects the main house and kitchen. The complete family is visible from this space.
- c. Cattle Shed: This is a thatched semi open structure, where cattle are placed. The number of cattle owned by a family will depend on the ownership of lands and economic status of the family. This space will accommodate cattle along with necessary vessels for their food.
- d. Storage for granary: This is an independent unit, where grains are stored either to sell at regular intervals or to store the required grains for the family. This is also used in exchange to buy other goods. For example, a family could buy milk from a milk vendor and they in turn pay them in the form of grains. These units are either circular or cube or cuboid in form.
- e. Space for grass (Gaddi vamu is the local term in Telugu language). This is an open space in the site where they store grass, which is used as feed for the cattle and also used as roof covering. It is also used as fuel material. The space becomes empty by the end of the season.
- f. Space for bullock cart, tools: This is an open space usually in the front yard of the house where the bullock carts, plough and other tools required for agricultural farming is placed. The size is again proportionate to number of acres owned or leased by a family. This space is slowly replaced for parking of tractors and other advanced tools required for farming.
- g. Toilet: This is later addition in the site. The toilet is usually built at rear side of the house and is always detached to the main house.

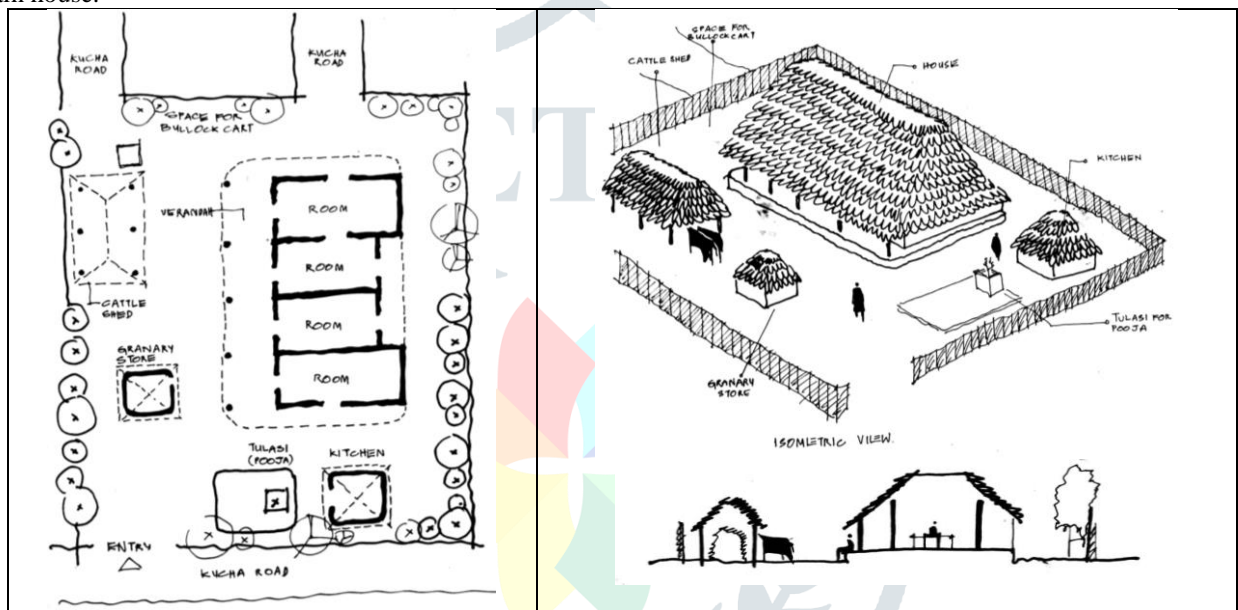


Figure 4 Case study area showing the thatched house, adobe walls and the cattle shed, Source: author

Generally most of the Houses were made Thatched roof, mud/adobe walls, doors and windows made of local wood as shown in figure 4. The houses are purely vernacular in nature with locally available building materials. Other than the thatched houses, there are also houses with Mangalore tiled roofing and adobe walls as shown in the figure 5. The third typologies of the houses, which are the resultant of modernization are the houses made of RCC and clay/cement bricks a shown in figure 6. The houses are slowly transforming from the vernacular to modern housing. The reason is due to various government-housing schemes for rural development by the government and non-government agencies. The house designed by the government agencies doesn't suit to the local conditions or they don't take care of the local characteristics, local materials and cultural aspects of the settlement. The built spaces and open spaces vary with size of the family, wealth acquired by the ancestors, ownership of the agricultural farmlands, and capacity of lease holdings.

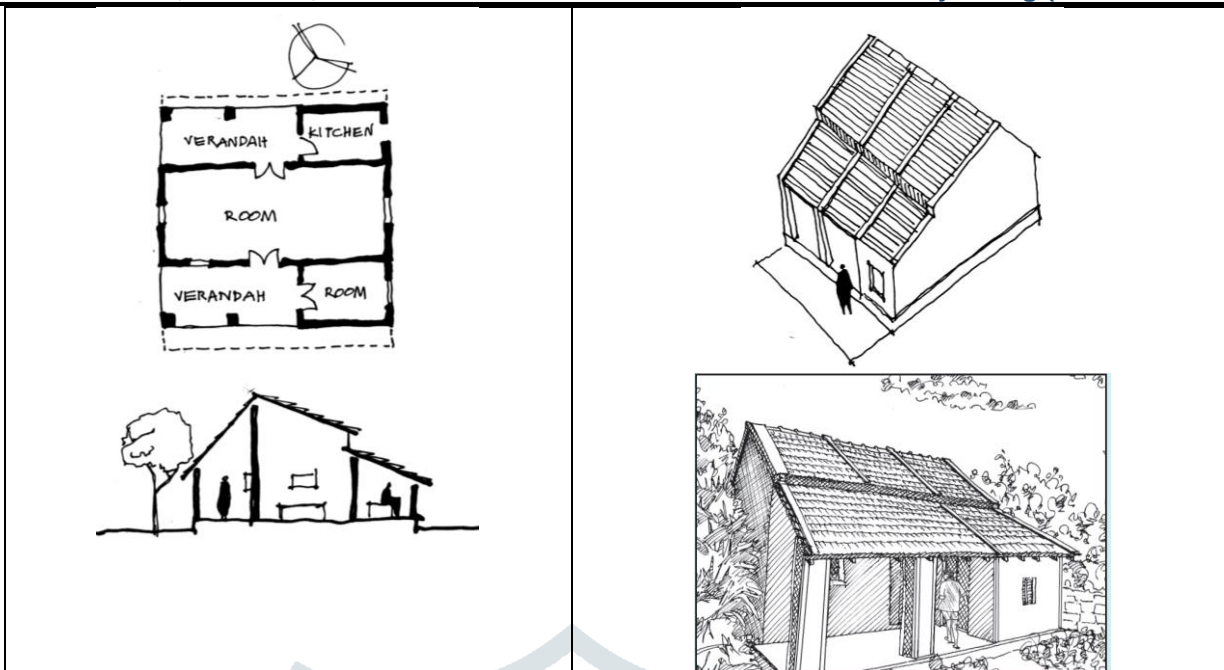


Figure 5 Case study area showing the Mangalore tile house & adobe walls, Source: author

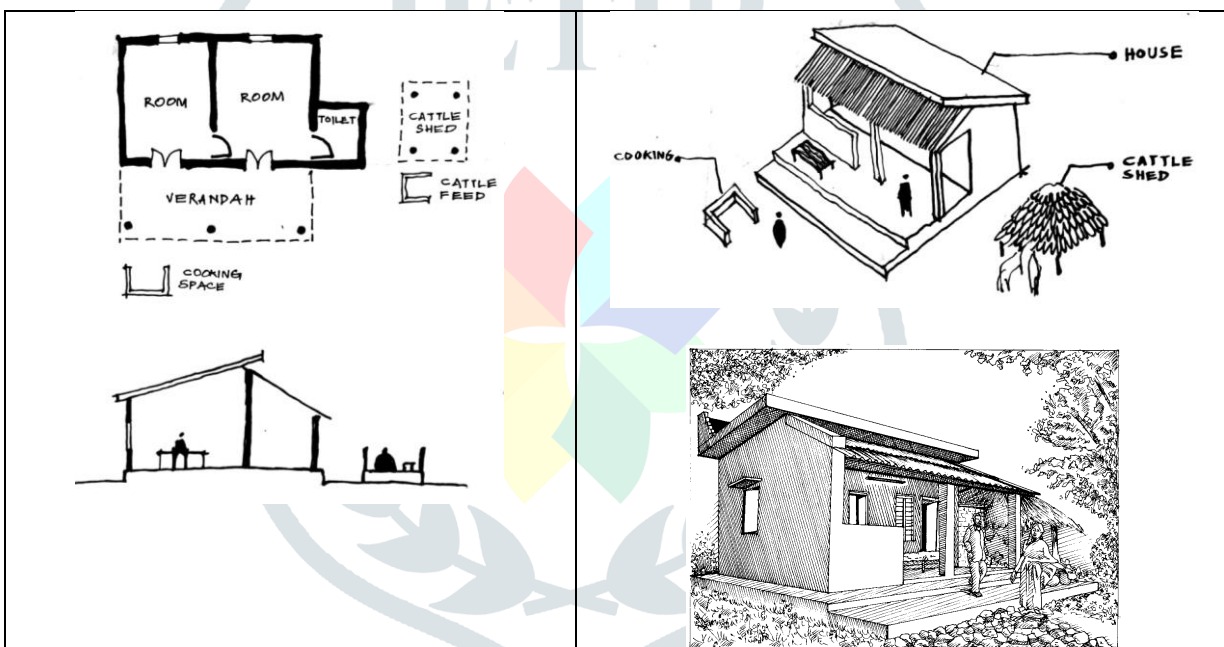


Figure 6 Case study area showing the RCC and asbestos roof house & clay brick walls, Source: author

The general pattern observed in most of the houses in these villages has the above components. The different spaces evolved are derivative of occupational pattern. Though the main house has few rooms and becomes the main component in the site in its size and area, the major activity revolves around spaces like verandah in the main house, informal area in front of the kitchen, cattle shed, granary and grass storage space. All the built forms are active and lively as per the observations and discussions on site. The schedule starts at 4.00 am with feeding the cattle, preparation of feed for cattle and necessary arrangements to go to field. The housewife and members of the family becomes part of the early morning activities. Head of the family along with other family members leave to the fields for working in the agricultural lands other than females. They will be back between 10.30 am and 11.00 am for their lunch and will rest for some time. The afternoon schedule depends on the work at the fields or they will work at home, which includes preparation for farming. They used to sleep by 6.30 pm. The above schedule was when there was no electricity. After the villages were connected with electricity, the schedules have slowly shifted from morning 4.00 am to 6.00 am.

V. RESULTS AND DISCUSSION

Settlement level: The settlement has developed in to a compact village, with the central focal area as the temple and the two ponds. The village has radially expanded from the ponds and ending at the agricultural fields. The distance to the agricultural lands are not more than five kilo meters from their respective houses. The houses were distributed in the village, based on the caste and which in turn has reflection on the occupational pattern. This is clearly observed in the case area. The Village has the

main priest, who belongs to brahmins and are settled around the temple. The second hierarchy of houses is few meters away from these houses and belongs to two other caste groups called Koppula Velama's and Kapu's. The primary occupation of these two caste groups is agriculture and they own land holdings from 1 acre to 25 acres. The third caste group is basically working class and is away from the two major occupational groups, who are settled on the other side of the pond. The layout of the village is basically categorized based on the various occupational patterns in the village.

Individual residential level: The built forms of various components in the residences in Velnuthala were understood to have derivations based on the occupation/livelihood practices of the person who resides in the residence. The layout of the house as shown in figure 3, clearly shows various parts/components of a house, unlike a modern house with a single unit and all facilities within the unit. The spaces like granary storage, which becomes a major economic base for an agrarian home is a derivative of particular occupation. The size, shape, form and capacity of the granary storage depends on various factors like location, climatic zone, availability of materials, type of crop, ownership etc., The forms of these granary units are cube or cylindrical or abstract forms developed based on various factors. The other spaces like cattle sheds/space for cows/buffaloes/oxen are the necessary requirements for the agrarian societies. The size of the shed in turn depends on the landholdings of the family. The larger, the agricultural land, the larger is the size of the shed with necessary facilities attached to them and vice versa.

So, based on the literature and case studies, it is clearly evident that though there are various factors, which influence the characteristics of built form, there is an equal importance of influence of occupation/livelihood practices. This influence is clearly visible both at macro level settlement level and at micro level at individual housing unit. The studies show that houses were also distributed based on the occupation at settlement level. As a way forward for the study, the author also intends to study on other occupational patterns in the same region and check the influential factors of occupation on built form. This would also help various Government and Non-Government organizations, in deriving the design solutions for rural house holds with specific occupational patterns.

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