CHAPTER 3

CONTEXT AND METHODOLOGY

3.0 CONTEXT OF WORK

The architectural heritage of India is not only very rich but also extremely varied. This unique heritage has manifested itself in different regions of the country and can be seen in all its diversity. Besides the past, present and future co-exist in all but in-distinguishable continuum. Whereas the classical, heroic and traditional architecture of the country has been well documented and fairly well preserved, little attention has been paid to the vernacular and rural traditions of built form. They form part of the rich cultural and architectural heritage and are presently subjected to and threatened by the new demands for change and development. Besides developments in today's context have ignored such patterns of living. The demonstrable problems that have arisen today suggest that the older settlement patterns should be re-examined for their possible continuing validity, so that this could lead to a process of conservation or adaptation taking place in a new development. It is, therefore, important to examine these tried and tested 'form' ideas to ascertain their validity and then to accept, modify or reject them. It can be thus concluded that there is a need to examine, study and document the rural architecture of the different regions of the country and to develop a strong comparative and theoretical base on which living environments can be shaped.
Since the early fifties, Indian architecture has witnessed five particularly eventful decades. The modern movement and internationalism dominated the fifties and sixties, a movement, which to an extent is still going strong. In Post Independence India Chandigarh provided the first important threshold in the emergence of Modern Architecture and the efforts of Le Corbusier and Louis Kahn acted as a desired catalyst, to inspire many young Indian architects. They produced new archetypes for a developing and enterprising society, using the mythic overlays of a ‘Vernacular rationality’ and functionalism to generate imaginative forms. The introduction of modern architecture had been sudden and to some extent has broken the ‘continuity’ of the traditional architecture without allowing any scope for transformation towards ‘appropriateness’.

The first studies of traditional and vernacular architecture started emerging during the early seventies. Initially they were not only frowned upon but also called dead ends. However, they gained respectability during the eighties. The last two and a half decades have been particularly significant for two other developments, which have touched architecture not only in India, but also throughout the world:

Firstly, the scope for historic conservation has widened. It now includes not only the urban fabric, but also other historic and cultural areas. Other disciplines too have started looking into the realm of architecture like archaeology and anthropology. Particular mention must be made of anthropology, which looks at architectural artefacts as a phenomenon which represents the ideology of a culture, and which manifests social values.

Secondly, the search for a meaning in architecture by architects, with a view to locate ‘the roots’ started in the eighties.

121 See Ibid. Literature Review pp : 18
In the area of architectural practice architect Charles Correa (1987)\textsuperscript{122} postulates three separate levels at which the environment may be conceptualised and perceived today. First as an everyday pragmatic; second as a domain where fashionable imagery of one kind or other will inevitably be present and third as an invisible cultural sub-stratum that rises from time to time into the architectural subconscious of a particular region. This triadic interplay is further modified by the architecture evolved over time through the dynamic interaction of climate, technology and the emerging aspirations of a society. To Charles Correa, traditional architecture however besides being an inspiration on spatial images and form, was an ideal environment to study the responsiveness of built form to the environment and more particularly 'climate'.\textsuperscript{123} He writes 'to cross a desert and enter a house around a courtyard is the pleasure beyond mere photogenic image-making; it is the quality of light, and the ambience of moving air, that forms the essence of our experience'. To Correa the traditional architecture is an architecture of recession, of indoor and outdoor spaces that merge into one another, the use of which is determined by the climate or the seasons, and not by the activity within them: thus 'form follows climate' is the dictum. Thus there are very many lessons that can be learnt from the study of vernacular architecture. It can therefore be said that the architecture of a region will continue to have a major influence in the field of architectural practice time and again.

The study of vernacular and rural forms in the Indian sub-continent thus emerged primarily out of this necessity to identify oneself with the 'roots'. Questions pertaining to the identity of Indian architecture started getting discussed amongst professionals. The major question asked was how far the emerging Indian architecture was able to fulfil the physical and socio-cultural needs of people at various economic levels. The effectiveness of climate controlling devices derived from western methodologies was critically analysed for their suitability in the

\textsuperscript{122} Charles Correa; 1987
\textsuperscript{123} Charles Correa; A Mimar book; 1987
climatic conditions in India. The problem of relationship and continuity between the old and new built environment came into picture, as the new was considered culturally alien. The appropriateness of regional vernacular architecture attributed to the use of locally available technology, artisanship and building materials was studied and re-evaluated as a major source to evolve a new flavour of appropriate architecture with an Indian identity. The rational of spatial structure in towns and villages was reviewed from physical, traditional, socio-cultural, economic and functional points of view. The objective of this search was to understand the intrinsic value of tradition and its manifestation in simple architectural solutions that evolved to satisfy socio-cultural needs of a community.

Architect Dr. B. V. Doshi has derived his concepts for Aranya- low cost housing project at Indore\textsuperscript{124} by understanding the relationship of tradition, culture and lifestyle of the people with architecture and planning and evolving planning and design guidelines to suit the prevailing socio economical and technological conditions in the various parts of the country. This sites and services project funded by the World Bank\textsuperscript{125} discarded many of the conventional architectural, planning and engineering approaches in preference to appropriate and often highly innovative solutions. This gave rise to many distinct features, such as a clear organisational hierarchy of plots, spaces and activities, imaginative clustering, efficient land use and a high standard of utilities within the severe budgetary conditions. One of the greatest challenges in mass housing is to offer choices in form through flexibility of design. At Aranya, variations on 

\textit{oltas, entrances, staircases, verandahs, balconies and fenestration, within the standard layout, is reminiscent of the local traditional architecture, which is unique because of the articulation of surfaces - balconies, jalis and projections of rooms as well as surfaces. These variations not only enrich the street façade but also help users to express their identity. This creates a ‘sense of place’ so essential to a ‘dwelling’ and a healthy living environment.}

\begin{itemize}
  \item \textsuperscript{124} Ibid, literature Review. Page No.26.
  \item \textsuperscript{125} //E:TAMILNADU Aranya Low-cost housing at Indore. htm
\end{itemize}
It can therefore be said that in the present Indian context architecture is emerging as a result of a critical and urgent need to re-identify and re-evaluate the spirit of the specific environment and its architecture, to meet the needs of a modern requirement. Thus in some way or the other the architectural profession has attempted to look at traditional architecture for its inspiration and tries to emulate rather than imitate the spirit of tradition.

In this context it has been since the initiation of this research, the intention of this work to primarily study the vernacular architecture of Tamilnadu more specifically the rural forms: domestic rather than sacred architecture. The aim was to develop a comparative and theoretical work on the anthropology of architecture by relating the physical form of the dwelling and its spatial organisation to the socio cultural aspects and the traditional science of building. The objective was not to look at the dwellings simply as physical structures or subjects in their own right but to focus on interrelations between buildings and interconnections between the material, social and symbolic aspects of house. In the process to use ethnographic case studies if any reveal some of the different ways in which these houses come to stand for the social groups and the world around them.

There was the need therefore to examine any work done on ethnographic studies and on the area of anthropology and architecture in India. Literature studies\footnote{See Ibid. Literature review. Pages 18-28} revealed that pan India there is some amount of well researched and published data available of the vernacular styles of the north and northwestern states of the Indian sub continent and of the various causal factors- cultural and contextual- that have led to their evolution over a period of time. In Tamilnadu however only high style vernacular has been studied and any other attempts at studying and classifying rural house forms have focused basically on the material and physical aspects of the dwelling. The objective of such work was to solve problems of housing and develop
cost-effective solutions to the rural house. Though a lot of literature\textsuperscript{127} exists on the sociology (Kathleen Gough, Brenda E. F. Beck, Andre Beteille, and Baden-Powell) and the economic characteristics of the Tamil village the physical aspects of the village- its dwelling, infrastructure and settlement patterns- has not been extensively written about. In this context it is felt that the end forms of the rural dwelling in Tamilnadu need to be first documented to look at the process and the various factors - specifically the social and cultural factors - that shape the living environment.

The significance of this work is therefore two-fold:

(i) On the one hand it helps document a habitat, which is already threatened by the stresses of development and is coming under pressures of change.

(ii) On the other hand it provides an insight into the very nature of the built form and the way in which it responds to the various forces at work in a particular context.

It is in this context that this research is being undertaken to understand house forms, which result from the processes at work in a vernacular architecture, and categorise those forms in the state of Tamilnadu. And while doing so to address the societal values attached to production of a dwelling.

3.1 OBJECTIVES

The objectives of this research are therefore:

(i) To document and categorise the rural dwelling and to understand the nature of space.

(ii) To address the various socio-cultural aspects of the rural house as related to its spatial planning and organisation.

\textsuperscript{127} See Ibid. Pages 33-41.
3.2 HYPOTHESIS

(i) Whereas the passive function of the rural house may be the provision of shelter, the positive purpose is the creation of an environment which is best suited to the way of life of a people- in other words it is a social unit of space. There are therefore certain societal values and customs that are attached to the production of the dwelling and the spatial organisation within.

(ii) Though changes are inevitable in a rural dwelling because of the stresses of development and pressures of change, there are certain constants that outlive change or are manifested in different forms, with variations and deviations from the typical model. This is primarily attributed to the fact that the house is a cultural phenomenon; its form and organisation are greatly influenced by the cultural milieu to which it belongs.

3.3 APPROACH AND RESEARCH METHODOLOGY

All rural cultures exist within and largely depend on or are partially shaped by their environmental contexts. The diverse forms of rural architecture are an expression of the cultures that built them. The capacity of the cultural groups to cope up with the physical conditions they encounter and the kinds of economy they pursue and on which their life support depends, are dependent on the environment in which they live. The relationship to the land, which they occupy and the forms that their dwellings may take are intimately, bound to the quality and potential of the local geography. No environmental factor plays a greater part in the development of human life than climate as the practical requirements of human existence are largely defined by physical and psychological tolerance to extremes of heat and cold. Water is also essential to life, and a human settlement is conditioned by the necessity of access to water supplies. Topography and orientation, availability of land and building resources, defence and socio spatial relationships, communications and market
opportunities are among other factors that influence the diverse forms of habitat and settlement patterns. These factors determine the physical structure of the dwelling and the way in which they are configured within the settlement layout.

Given all the constraints of site and environment, materials and technology, it is evident the world over, that the physical form and spatial planning of a rural house and settlement reflects an image of life expressed through socio-cultural forces in the broadest sense. Evolving out of the socio physical context and due to the local acceptance of its validity over a period of time, they have become the traditional types of habitat of the people. The rural settlements of India, as elsewhere in the S. E. Asian countries, depend on geography and climate, but are most strongly regulated by sociological prescriptions and vary according to the social tenets of race, caste and class. Hence this research looks at the rural dwelling and settlement to classify and categorise them according to the physical features and to analyse the socio cultural and ritual intent of these typologies.

3.3.1 Area of Study

Tamilnadu is the southern most state of the Indian Union. It lies between 8° 05' and 13° 34' North latitudes and 76°14' and 80°21' East longitudes. The state covers an area of about 1.3 lakh sq. km. or about 4% of the total area of the country. The state has a fairly long coastline of about 1000 kms. It has as its political boundaries the state of Andhra Pradesh on the north, the state of Karnataka on the northwest and the state of Kerala on the west. It is washed by the Bay of Bengal on the east and the Indian Ocean on the south. [Ref: Plate No: 5]

The "natural landscape" of the state can be divided into four ecological zones-

(i) wide sandy beaches on its eastern coastline (Neythal);
(ii) a vast expanse of semi-arid, rain fed plains (Mullai);
Indian Ocean

Interior River and Rain Fed Plains

Area of State: 1.3 Lakh sq. Km.
Length of Coast: 1000 km.

Andhra Pradesh
Bay of Bengal

Tamil Nadu

Geographical Regions

Legend
- Upland
- Coastal
- Interior River and Rain Fed Plains

State Boundary
District Boundary

PLATE: 6
lush riverine valleys adjoining the Kaveri, Vaigai, Palar, Bhavani, Tamirabarani and smaller rivers (*Marutham*);

and the rising mountains to the Western Ghats on its western border (*Kurinji*).\(^{128}\)

The *pallai* (arid region) as outlined in the ancient text is negligible as it covers a very minuscule part of Tamilnadu\(^{129}\) and hence not considered for study. The ecological zones *Mullai* and *Marutham* have a marginal difference in physical characteristics of these two zones. Hence the two zones are grouped and considered together for purposes of study. The entire stretch of the state is therefore classified into three regions in this work, namely

1. Low-lying coastal belt,
2. Slightly elevated interior river and rain fed plains and
3. Upland regions of the west and the southwest.

Considering the mean air temperature and percentage of relative humidity, the climate of Tamilnadu can be classified as warm humid for the entire state except the upland regions like the Nilgiris hills where the climate is cold and humid. The predominant rainfall is due to the northeast monsoon from October to December to all parts of Tamilnadu, while the southwestern and part of the central regions get good rains through the southwest monsoon as well, from June to September.

As climatic differences are small in the lowland regions, the climatic conditions for the coastal and the slightly elevated river and rain fed plains are outlined as one region (Zone A) and the upland regions as another region. (Zone B)

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\(^{128}\) Words in parenthesis indicate typologies of regions in local Tamil language.

\(^{129}\) Though *pallai* or the arid region forms a part of the ancient Tamil country after the re- delineation of the Tamilnadu as a state after India’s independence most parts of the *pallai* come under the adjacent state of Andhra Pradesh.
3.3.1.1 Climatic conditions - Zone A

Mean monthly air temperatures vary between 40°C to 23°C. The air temperature is not extremely high when compared to North India where the conditions are hot- dry and composite. This is due to the fairly constant existence of a heavy cloud cover, which reflects a large proportion of the direct solar radiation from the top of the clouds before it can reach the earth's surface. Even when the sky is clear the humidity of the air has a strong filtering and dispersal effect on the solar radiation. The cloud cover also has the effect of a blanket over the earth's surface preventing radiation of heat from the earth to the sky at night. Hence the diurnal range is small. Being closer to the equator there is very little seasonal variation in the air temperature.

The heavy rainfall is concentrated in one season (during the time of the northeast monsoon) and there is moderate rain in the other season as well (southwest monsoon) resulting in high percentage of relative humidity. Very heavy thunderstorms are frequent and particularly in the wet seasons and are often accompanied by high quality winds. Wind speeds vary from 17 to 20 km./ hour and at times during the northeast monsoon, severe cyclonic storm of wind velocity 60 to 80 km./ hour can occur, resulting in substantial damage to the built environment.

3.3.1.2 Climatic conditions - Zone B

Tropical upland climates centred in the Nilgiris and Kodaikanal hills has the climatic characteristics of the adjoining low lands modified by their altitude to an extent of a drop of 1°C for every 185m of height. The intensity of the solar radiation increases at about 10% per 1000m. Because of this the diurnal temperature range is generally high. Seasonal changes in humidity, sky cover and rainfall correspond to those at sea level at the same latitude.
3.3.2 Social Structure

In the Tamil country as in the rest of India, social hierarchy and the numerous community groups have been responsible for many social customs and habits. The culture of these community groups and a series of socio-economic factors have produced a variety in the expression of vernacular house form.

The social structure in any village in Tamilnadu consists of the Brahmins, the non-Brahmins or the Sudras and the 'untouchables' or the Pariah. There are a large number of castes and sub-castes within the Sudra and there is no hierarchical order in terms of ritual grading amongst them. The wealthier and the landed Sudras however have more prominence among other castes and sub castes. They try to emulate the ritual practices and beliefs of the Brahmin community and as a result some of the Sudra groups like the Vellala and the Chettiar have become very custom and tradition bound. Otherwise there is very little variation amongst the other Sudra groups in terms of lifestyle and culture. Besides all castes and sub-castes under the Sudra category are not found in all villages.

Taking the economic activity into consideration the community groups can be categorised as follows:

(i) the agriculturists and the agricultural labourers,
(ii) the merchants, the artisans and craft groups,
(iii) the lower caste groups/untouchables.

The above classification does not categorise the groups into any kind of ritual or hierarchic order. Villages for study and analysis have been chosen based on both the social structure as well as the economic activity such that house typology is well represented.

130 Ibid. pp: 33-35
These social groups each have a number of castes and sub caste groups. The agriculturists or the landed class of people occupy the topmost rung of the social hierarchy and therefore occupy prime position in the power structure of any village. Here mention must be made of the Brahmins who, by the close of the 19th century had shifted their position from being mere teachers and priests to the more substantial one of a landed aristocracy. The rulers mostly gifted lands to them in return of favours, and thus by virtue of their education and economic status they enjoyed higher social status amongst the various social groups though they were a minority. They dictated largely the way in which the social relationships within various communities in a village were determined. However today a great majority of the Brahmins in pursuit of other professions have migrated to urban areas.

In the middle of the social hierarchy we have the artisans and craftsmen, besides the merchants. However some of the merchant groups- amongst them most notably the Chettiar community due to acquisition of wealth through extensive trading in India and overseas have gained in social status. They constitute a community of less than one lakh people and today they are one of Tamilnadu's most visible mercantile groups. Though widely scattered all over the State, the Chettiar are so bound to their ancestral homes that they return to them in the event of any family function or auspicious ceremony.

The untouchables occupy the lowest place and therefore have no position in the power structure of the village. They form the labouring class of people, some of them being village servants, small traders and the like. Even today in spite of land and social reform these people are still considered outcasts whereas the social distances between the other caste groups have narrowed down. They live in very substandard and unhygienic dwellings and are segregated from the main village.

\textsuperscript{131} Ibid, pp.33-35
3.3.3 Selection of Case Studies

Case studies of the rural house and settlements have been made taking into consideration the three regions of the state as outlined earlier in the chapter. The villages have been identified in and around major centres, which are traditionally and culturally very strong and which give opportunity to study the various societal factors that are at play in the structuring of space within the dwelling as well as at the settlement level. Consideration has been given to the economic activities in these villages so that a good representation of various typologies is seen. The length and breadth of the state were scanned for the selection of the villages and the following villages for case study were identified:

<table>
<thead>
<tr>
<th>Region</th>
<th>Village</th>
<th>Economic Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coastal</td>
<td>Pulicat village (North TN)</td>
<td>Fishing/ agricultural / Service industries</td>
</tr>
<tr>
<td></td>
<td>Rasapettai and Soothikupam</td>
<td>Fishing</td>
</tr>
<tr>
<td></td>
<td>(Central TN)</td>
<td></td>
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<tr>
<td></td>
<td>Muttam (South TN)</td>
<td>Fishing</td>
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<tr>
<td>Inner River, and rain fed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plains</td>
<td>Munugapattu (North TN)</td>
<td>Agricultural/ weaving/ service Industry</td>
</tr>
<tr>
<td></td>
<td>Ayyangarkulam (North TN)</td>
<td>Weaving</td>
</tr>
<tr>
<td></td>
<td>Kurangilmuttam (North TN)</td>
<td>Agricultural/ weaving</td>
</tr>
<tr>
<td></td>
<td>Udaiyalur (Central TN)</td>
<td>Agricultural/ service industry</td>
</tr>
<tr>
<td></td>
<td>(Central Thirukarkavur (Central TN)</td>
<td>Historical settlement/ Traditional Brahmin settlements</td>
</tr>
</tbody>
</table>

132 Ibid page. 74
Baburajapuram (Central TN)  Agricultural
Thyagarajapuram (Central TN)  Agriculture/ Thonnai making
Pathamadai (South TN)  Mat weaving/ handloom weaving/
                        Agriculture/ pottery
Alwarthirunagar (South TN)  Agricultural/ service industry
Padmanabhapuram (South TN)  Agricultural/ Historical settlement

Upland  Ellithorai, Nilgiris  Agricultural – tea
         Berhutti, Nilgiris  Agricultural – tea

The selection of sample dwellings was first done based on the physical manifestation of the house and on documenting the various physical characteristics the social relevance of its plan form and organisation were studied. This was done with the help of a questionnaire and recorded through observation and discreet questioning.

3.3.4 Methodology

The methodology adopted for the research consisted of not only literature studies to orient the work but also surveys and studies conducted at the village level. The following methodology was structured to undertake the research:

(i) Literature and readings on various theories and practices of architecture in the modern context and readings on architecture and anthropology are reviewed in order to appropriately focus and orient the study and analysis.

(ii) A literature review of the various studies on vernacular and rural architecture elsewhere in the world and India, social and economic

133 TN: Tamil Nadu
structure of Indian villages, etc., has been done to understand the social conception of space and the complex set of interrelationships that exist between various groups of people at the community/settlement level.

(iii) A primary survey of both the “natural” and the “cultural” landscape of the state of Tamilnadu, India are made to choose villages and community groups for a detailed study.

(iv) A detailed survey of the villages selected is made to record the following:

- Spatial layout of the settlement.
- Typology of dwelling units within the settlements.
- Village origin, location, its climate and weather and the effect on the life and activities of the villagers, its classes and communities, its occupations and industries, its trade and transport, its administration, its population characteristics, its social life and religious life, etc.

The following issues are to be addressed:

- The form of the dwelling in its natural and built environment.
- The relation between bodily movement and daily ritual and the lived space. [How everyday uses of space within and around the house may serve to shape the relations of those who inhabit it and the relations of those inhabitants with society?]
- The relation between the work environment and the lived space.
- The use of cosmology as the divine model to structure space in and around the house.
- The impact of new developments and technologies.

The information with regards to the dwelling units was collected through a questionnaire and documented through drawings, sketches and photographs.134

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134 Questionnaire enclosed in Appendix 1
Other general information as well as maps of the villages was obtained from the local Panchayat and Village Administrative office of the various villages.

(v) Analysis of the case studies.

3.3.3 Chapterization

The research has been presented in eight chapters:

(i) As a preface to this work, the first chapter briefly presents the need and scope for the study of the vernacular more specifically the rural dwelling and the settlement.

(ii) Literature review on various theories and concepts of space has been presented in the next chapter with an outline of some important and relevant studies of vernacular architecture the world over and in the Indian context. A survey of the literature to understand the social and economic background of villages, the Tamil village in particular and the cultural context is also presented in the second chapter.

(iii) Chapter three outlines the context and the methodology of work undertaken to study the rural dwelling in the state of Tamil Nadu, India.

(iv) The next chapter describes the pattern of settlements that are found in the three geographical regions identified. The various factors that are intrinsic to the composition of the village like caste, sacred topography and its economic activities are highlighted so as to provide an idea of the complexities involved in its overall configuration. This is done to understand the rural dwelling in its context.

(v) The fifth chapter—Physical manifestation of house in Tamil Nadu—identifies the general typologies of house forms as seen in Tamil Nadu: courtyard house and the one-roomed kutch dwelling seen all over

135 The information was collected by the II year students of School of Architecture and Planning, Anna University as part of their academic work under the guidance of the author over the last 8 years.

136 Local body looking after the governance of the village.
Tamilnadu and the Continuous Introverted House Row Clusters in the Upland Regions; and describes their physical characteristics. The materials and the responsiveness of these dwellings to climate and context are also outlined.

(vi) The sixth chapter discusses in detail the shaping of social relations within the dwelling. The variations and deviations from the general type are discussed with respect to social relationships between the members of the family, men and women, members of the household and the community etc. While many features and elements of the houses may be the same or may seem apparently functional, there is a symbolic and ritual intent in the production of these spaces.

(vii) The seventh chapter looks at elements of change and constancy. While change in site and context may take place; while change can occur in the family structure and change can manifest itself due to new materials and technologies used there are certain elements of constancy which have gained validity over the years and which can be attributed to social factors.

(viii) The final chapter analyses the rural house in terms of the conception of space, its symbolism, rituals and cosmologies, its decoration and its inter relation with the built form and settlement. It draws up a comparison of the various physical aspects of the house, which are crucial to its plan form and organisation. It draws up a comparison of the social, symbolic and ritual content of the space within the dwelling and the settlement and concludes on the relevance of the same in the planning of housing environments today. Findings and conclusions are tabulated in the same.