Understanding Agraharam's Culture and Importance in Interiors

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ABSTRACT

The study is to understand the importance of agraharam culture and its influence and importance in interiors. It is needed for this fast-moving world and globalisation we need to preserve and need people to know about the past culture, tradition and the importance of cultural context to the society. As a result, this paper aids in understanding the significance of a specific vernacular housing style and assists interior designers in using them for interior aspects of houses. Traditional built environments are excellent examples for us to understand how physical design plays an effective role in bringing people together and creating a sense of community and, hence, ahealthy society.

INTRODUCTION

1.1 AIM

The purpose of the study is to understand all the interior elements, culture, construction techniques, and climate-responsive features of agraharam houses.

1.2 OBJECTIVES

The main goal was to ensure the significance of agraharam design and topreserve and use those designs in future interiors.

- Analysing the indigenous design features and principles
- Adopting a case study research methodology to gain a thorough understandingof the specific case
- To make future research recommendations based on the use of these elements that could define the establishment of culturally-based construction.
- To establish cultural sustainability through visual awareness.

1.3 SCOPE AND LIMITATIONS

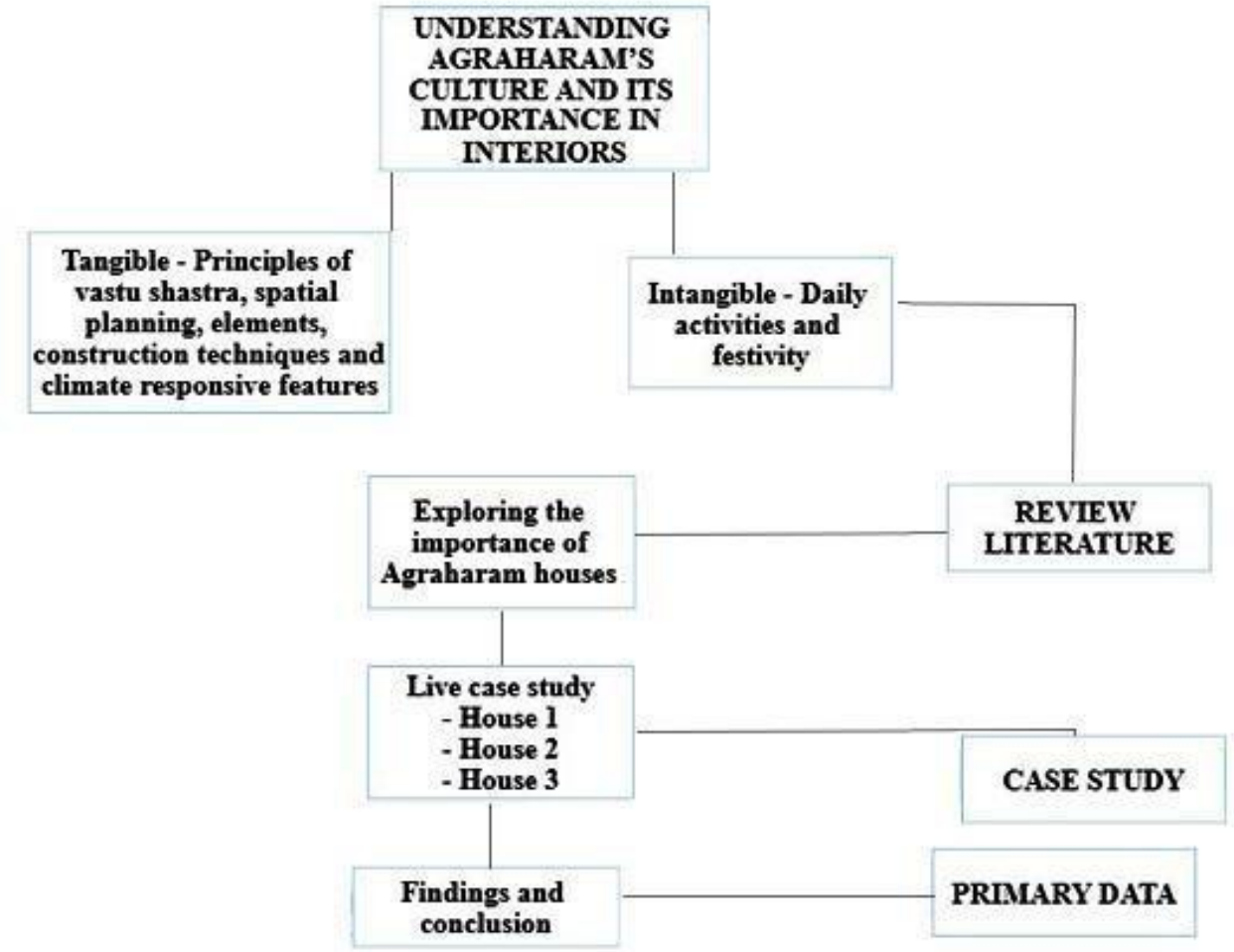
The scope of the study is to understand the importance of Agraharam culture and its influence and importance in interiors. The study will focus on the areas which help in understanding the relationship between the place and people.

The study is confined to a specific community of the people and context and hence will narrow down the scope of generalization of the inferences. The studyis limited to agraharam, and even more specifically to agraharam houses in the Tamil Nadu region.

1.4 RESEARCH QUESTIONS

- Do religious principles being considered in the designs?
- How interiors of a particular area gets valued globally?
- How to incorporate traditional agraharam elements in future designs?
- Can agraharam techniques be a contemporary sustainable solution?
- What is the relationship between culture and space in cities of a contemporaryglobalized influence?

1.5 RESEARCH METHODOLOGY



2.1 AGRAHARAM

Any village with a Brahmin majority, including the Brahmin component of amixed-race community, is referred to as an agraharam

The name originates from the fact that the agraharams have lines of houses oneither side of the road and the temple to the village god at the centre, thus resembling a garland around the temple. According to the traditional Hindu practice of architecture and town-planning, an agraharam is held to be two rows of houses running north-south on either side of a road at one end of which wouldbe a temple to Shiva and at the other end, a temple to Vishnu.

2.2 SPATIAL PLANNING

Since, the temple played a vital role in the Brahmin communities; the houses were planned on either side of the temple in rows. Agraharam means being temple on either side, defines the Brahmin colonies, in which the Brahmins livedone either side of the temple. A Garland of houses is the simplest synonym which can be used to describe the spatial planning in Agraharam. The word can also be interpreted as a grant or piece of land given by the Kings to the Brahmins to sustain themselves and rehabilitate their communities in an alien land. The Brahmins built row houses for themselves with the upper end culminating in a Temple. Thus, an Agraharam can be defined as a collection or group of houses with the temple being the central crux or the focal point. Some temples also had a village pond near it, often a part of the temple premises. The row of the houses was either single or double storeyed. The settlements were based on the aspects of Vedic town planning and lifestyle. The houses shared a common wall between them, the streets were narrow and the houses were characterized by a peculiar Architectural style. The settlements evolved as closely knit communities as it was a tendency for people of the same community to settle down together for ensuring safety and they based their lifestyle of strict religious norms based on principles borrowed from the Vedas. It‘s interesting to note how the spatial planning influenced the culture and tradition of the villages and there was a certain amount of synthesis and blending with the existing topography of the land.

2.3 IDEOLOGIES AND PRINCIPLES OF VASTU SHASTRA

In Vastu Shastra, the under structure of any design concept emerged out from a philosophic frame of the phenomena of Existence, Space and Time. The phenomenon of Existence is underpinned by the philosophy that all things and their existence are inter-connected. So, the existence of one affects the other. Thephenomenon of Space is conceptualized as a dynamic element made of energy particles, wherein the main aim is to create an environment that is in harmony with this subtle energy; and lastly, the ‘notion of Time with regard to cosmos andhuman life have been explained to coalesce all processes and movements of the universe’(Parikh, 2008, p.28). Based on these ideologies, the built form was designed to be in harmony with the forces of the universe.

According to Parikh and Danielou, Hindu philosophy, its origin, has always
maintained that the interpretation of all three phenomenon in continuum leads toan intrinsically dynamic worldview and that they are absolutely essential in order to understand the Indian view of the universe and the forces that affect human life. Any aspect of the manifest world exists in space, the terminologies being mutually definitive. Time is a dimension of space and therefore
inseparable from it. ‘Space and Time together form a continuum that regulates each form of existence’ (Parikh, 2008, p.35). Therefore, it can be said that theseare not independent phenomenon, but part of a greater continuity, where a seamless cycle of one transforming the other goes on eternally. This makes thecontinuum of Existence, Space and Time the philosophical frame of Vastu

Shastra that finds direct manifestation in the art of urban design and architecture.The interaction between the three basic phenomena of Existence, Space and Time were also considered to be deeply rooted in the way of life and moral
Values of the Indian people. According to Parikh (2008, p.47) 'every action ofthe people reveals their response to the Hindu philosophy based on the
Interaction of these basic phenomena'. This makes it clear that the spatial organizational principles of Vastu Shastra ensured that the design of physical spaces responded to the cultural values and way of life of the people. Through literature and experts, it can be gathered that, these spatial organizational principles, based on the interaction of the three phenomena, can be expressed
through four key concepts; that informed layout and consequently, the structureof cities

Co-existence of systems and relative wholeness: Stemming from the individual identity of the underlying ideologies and their seamless continuity, Vastu believes that the components of the physical environment also needs to becomplete entities in their context; creating individual centres in continuum
wherein each centre is defined by several other sub-centres. This again containssmaller sub-centres, each connected to one another in order to reflect the order of the cosmos. Thus, connectivity and relative wholeness become one of its organisational principles and was applied by the vastupurusha mandala in
Hindu literature where the relationship between the Mandala and urban planningis explore , it is suggested that the sacred geometry of the Mandala is essential to establish a secure claim within an active landscape. In Hindu literature where
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Individuality within a group: As much as all forms of existence and space canbe understood in terms of a system of concentric wholes, centres and sub-
centres, each of them have a degree of centeredness; implying independent identities. 'They have their own regulating systems and specific characteristics that are different from others and make an individual statement' (Parikh, 2008, p.55). But, no matter how distinct, each element forms a part of each other. The underlying meaning in terms of Vastu Shastra therefore implies how individual buildings or parts of a larger city, even though having an independent identity, need to coexist harmoniously in order to contribute to the overall greater identityof the town or city; making it another of its key organizational principles.

Coexistence of extremes and celebration of junctures: All conceptions of
Space and Existence are based on the principle of bipolar manifestation, whereinthe extremes are considered to be merely different aspects of the same
phenomenon, working in intercommunicative unity and forming a continuumover Time. One is dependent on the other for its existence and effectiveness.
Maintaining a balance between the extremes was considered crucial for all
aspects of life, including built form. Since Space was believed to be made of energy, this coexistence related to the five kinds of energies namely, ether, air
fire, water and earth - the 'Panchbhootas'. The perfect environment according to Vastu is one where there is a balance of all the energies enhancing mutual
existence. This unification of relationships between extremes in the built
environment automatically puts a lot of importance to the design of transitions,junctures and thresholds.

Timelessness of space: Vastu believes in the concept of multi-layering of Timereflected in the Space as changes within a spatial frame, where the 'resultant space evolves its independent identity though carrying the shadows of the original one' this concludes adaptability of space with layering of time as one of the organizational principles. This principle works in conjunction with the Vastu belief of being sensitive to the natural context and using the resources of the areasustainably in order to be in tune with the space time continuum.

The temple played a vital role in the Brahmin communities; the houses were planned on either side of the temple in rows. 'Agaro Harscha Harishchal', the meaning being temple on either side, defines the Brahmin colonies, in which theBrahmins lived one either side of the temple. A Garland of houses is the simplest synonym which can be used to describe the spatial planning in Agraharam. The word can also be interpreted as a grant or piece of land given by the Kings to the Brahmins to sustain themselves and rehabilitate their communities in an alien land. The Brahmins built row houses for themselves with the upper end culminating in a Temple. Thus, an Agraharam can be definedas a collection or group of houses with the temple being the central crux or the focal point .Some temples also had a village pond near it, often a part of the temple premises. The row of the houses was either single or double storeyed. These settlements were based on the aspects of Vedic town planning and lifestyle. The houses shared a common wall between them, the streets were narrow and the houses were characterized by a peculiar Architectural style. The settlements evolved as closely knit communities as it was a tendency for peopleof the same community to settle down together for ensuring safety and they based their lifestyle of strict religious norms based on principles borrowed fromthe Vedas.

2.4 THE PLANNING ACCORDING TOVASTUPURUSHAMANDALA

The selection, orientation, and location of the house in the traditional Agraharam concept were greatly influenced by the concept of the vasthupurushamandala, the cosmic diagram, and related geometric ways of spatial planning in relation with time and nature based on astrology and mathematical computation, which formed the primary resource of Hindu architecture. According to Vastu, the site is divided into nine veedhis, or paths, by concentric squares. The seventh and eighth paths, known as devaveedhi and manushya veedhi, are reserved for ancillary structures. The outermost veedhi is the pishacha veedhi, where no construction other than the compound wall and the gateway is permitted. The two innermost paths are dedicated to the gods: the Brahma Veedhi and the Ganesha Veedhi. These are considered sacred, and no construction is permitted over them.

2.5 SPATIAL PLANNING

Mudhal kattu : Receiving section

The mudhal kattu as the receiving section consists of **thinnai (plinth)** and **rezhi** (passageway). The street edge of each agraharam has a semi-open space covering the entire front edge of the house, which is known as thinnai—a placefor interaction on the street. This front edge is divided into two functional spaces; one is the high plinth with a series of columns called thinnai, and theother is a series of steps leading to the entrance of the house called **therukaradu**. Thinnai is constantly used by visitors, neighbours, and residents to sit and interact. Traditionally the plinth was used as a sleeping space at nightby the house owner and male guests. In some cases, thinnai showcases two plinths; the higher plinth is reserved for the house owner, and the lower plinth can be occupied by villagers or farmworkers.

The angle of the roof makes an enclosure that protects the plinth from heavy rainand sun. The series of columns and angle of the roof support further enhance thecharacter of the interiority of thinnai. It is a space that opens on the street, but the width of the platform, series of columns, and low eaves of the roof makes one feel part of the

agraharam. At this point, where people pause for interaction, thinnai becomes a threshold between the outside and the inside.

The passageway between the entrance and the interior of the agraharam is known as rezhi. Rezhi is a transitional space; however, in a few houses, grain storage opens into it. The spaces right at the entrance to the house allow the farmworkers to enter and fill the grain storage but at the same time restrict their entrybeyond the receiving areas of the house. The size of the room can accommodate a sleeping cot for one person. The rezhi marks the second spatial boundary of
agraharam after thinnai. It is an in-between enclosed space accessed fromthinnai on one side and tavaram on the other.

Tavaram is a part of the interior courtyard, and thinnai becomes the transition from the street. Thus, in this space, one experiences being part of the interior aswell as the exterior. Here one can only get a glimpse of the living spaces inside.

Spaces from thinnai to rezhi are considered as mudhal kattu, the receiving
quarters. As a receiving section, the spaces give an introduction to life inside
agraharam. Sitting on the plinth near the entrance, talking to neighbours, lightingoil lamps on the small shelves on either side of the entrance door are all integral parts of their lives supported by physical spaces.

Irandham kattu:Living section

As one passes through rezhi, the large space opens up in the front. This space is an amalgamation of multiple functions, consisting of **mutram (courtyard), tavaram (semi-open space), koodam (semi-open space)**, and **nadai arai** (enclosed room). Mutram (courtyard) enhances the character of the entire living quarter. This open space is lower than the semi-open spaces on its three sides and shares a neighbouring house's common wall on the fourth side. The
courtyard brings sunlight and ventilation to the adjoining spaces providing thermal comfort, and this exhibits multiplicity through its functions. It becomes a part of the movement from the entrance to the backyard with minimum undulations on the floor. The leaning roof towards the courtyard and the high wall of the adjacent agraharam enhances the inward character of the house.

Tavaram is a semi open space that connects mutram (courtyard) and another large semi-open space called koodam. Tavaram is mainly used for circulation.
The level difference of about 450–500 mm between the surrounding semi-openspace and the courtyard creates a

plinth condition to use tavaram as a sitting space. It is a familiar gesture seen in residents and visitors to use tavaram as a seat accessed from the courtyard. A series of columns, low eaves, leaning roof, and exposed roof members towards the courtyard provide a unique experience while in motion through this interior space. The level difference defines a clearboundary between open and semi-open spaces.

Koodam is another semi-open space in the living quarter that is wider thantavaram. This space accommodates the prayer area in one of the alcoves, a
sitting area, and a swing. It is the house's main space for multipurpose activities such as entertaining guests, sleeping at night, performing daily prayers,
gathering, etc. The roof gains maximum height over this space; thus, the attic space is accommodated above, which eliminates the experience of the inclined roof. In some houses, the attic space is removed, exposing the wooden truss supporting the roof. This space feels the richness of the carved wood and rich oxide flooring depicting wealth and tradition.

Nadai arai is a multifunctional enclosed room; it is traditionally used as a treasury, a sleeping area, and a storage for grain and textiles. The use of this room depends on the requirements of the residents. Currently, this space is usedas a dedicated bedroom in many houses. This space is enclosed with one entry and two windows overlooking the street. The windows open into the thinnai
space. One feels entirely enclosed by four walls as the windows are rarely open.

Moonam kattu: Service section

The moonam kattu is the service section of agraharam that consists of several functions: **samyal arai (kitchen), thotanadai (passageway with semi- open space), kollai pakkam** (courtyard with semi-open space), and kottul (backyard).Samyal arai or the kitchen is an enclosed space with a small courtyard placed onone edge that acts as a chimney and a light well. It accommodates essential storage areas and is accessible from koodam and back courtyard, creating a thoroughfare. The fascinating spatial character here is the courtyard that brings a unique light quality inside the dark space. The courtyard's floor is sunken and isused for washing the utensils. A thin silver light penetrating through the
courtyard, light through glass tiles from the roof, leaning roof structure towards the courtyard, and the visible structural wooden members are a few experientialqualities that are unique to kitchens of the agraharam.

Thotanadai is a passageway with similar width as the entrance space rezhi, and it has a courtyard shared with the kitchen. This space is used for washing,
cleaning, and storing. This space is not directly accessible from the kitchen. Kollai pakkam is the courtyard with semi-open space. This space beyond the kitchen serves as an extension to the kitchen. It is again an amalgamation of a sunken courtyard and semi-open space where the courtyard is used for drying food and vegetables. Traditional food requires intricate preparations, and every meal is prepared from fresh ingredients handpicked mostly from their backyardswith spices crushed manually on the stone. Kottul as the open backyard houses awell, a wash area,

toilet and sometimes sheds for domestic animals. It is a home garden with herbs like holy basil, lemon, hibiscus, curry leaves, and trees such
as drumsticks, coconut, mango, and sapota. There is a small service entry at theback, which opens into the service lane.

2.6 ELEMENTS OF SPACE MAKING IN AGRAHARAM

The amalgamation of spatial elements in agraharam together creates a good blend of tradition, culture, and religious inclinations. Each element contributesto the spatial quality of the built environment and enriches the notion of the spaces (Pandya, 2007). There are several main elements of space making of
agraharam, consisting of courtyard, semi-open space, floor, columns, and roof.Multiple courtyards become the main elements in the spatial configuration of agraharam that is long and orthogonal, with single or double-storey structures and shared walls. The courtyards' placement and sizes and the varied width of semi-open spaces provide unique character to each courtyard. Unlike the
courtyards in hot and arid regions, most of the courtyard spaces have an evident level difference that controls natural movement to and from the courtyard to theadjacent spaces. Ample rainfall in this region could be one of the reasons for sunken courtyards. These variations treat the plinth difference as a seating space while accessing the courtyards. The divisions of the courtyards create a play of light for a variety of functions, and each courtyard has a degree of interiority
associated with it. Public to private space transitions are evident thus, the degree of interiority increases as one moves from outside to interior spaces. The
courtyard in the living quarter, though enclosed, still embodies the feeling of awelcoming space, whereas the service section courtyard is felt more private.
Interiority is an experience with the notion of space within a space. The entire
agraharam is an amalgamation of varied semi open-spaces with limited enclosedspaces. Larger semi-open spaces are separated by a row of columns, creating a set of adjacent semi-open spaces. These spaces also define the movement through the house, and the pause is sometimes attained via floor variations.
Semi-open space at the receiving quarter is dedicated to interaction. At the living quarter, it accommodates movement and interaction, while at the service quarters, it serves as space to facilitate daily chores. With minimal anthropometric dimensions, one feels interiority in these semi-open spaces characterised by low eaves and row of columns. Floors in agraharam are modulated with variations in levels. These variations define the character of
each space and create subspaces. The notion of floors is unique in agraharam, asthe floor is not just a horizontal plain or defining a movement, but it is an integral part of resident's lifestyle. There is minimal furniture on the floors, and it is widely used to sit, cook, sleep, and place household things. As the floor is used for most of the activities, the touch of the floor is evident, further enduring the tacit feel of the oxide flooring. Columns are significant structural supports in agraharam as most of the spaces in agraharam are semi-open spaces opening towards the courtyard. The row of columns creates a rhythm, defines movement,and establishes the space. The aged circular wooden columns with minimal carving give a unique character to agraharam. In the central living quarters,

therow of one column is bigger, carved, polished, and protected from direct sunlight, whereas the columns near the courtyard have minimal carving and areweathered. Variation in sizes, carving, and finishes on columns define the importance of space. The row of columns in thinnai and a series of such thinnaiadds rhythm to the streets. The roof of the agraharam plays a vital role in
establishing the humane scale of the spaces that contributes to the identity of agraharam. The roof profile is visible from the street and all the courtyards of
the house. The higher ridge passes through the larger areas of the house, and it iscovered by an attic space, so the volume is not perceived. The lower eaves provide a sense of enclosures such that it defines the edges of the interior spaces, contributing to then sense of interiority. The low height at eaves allows easy reach of the wooden members and the roof tiles. The heaviness of wood and thetexture of roof tiles can be felt by touching them.

2.7 THE SIGNIFICANCE OF SHADOWS

“Deep shadows and darkness are essential because they dim the sharpness of vision, make depth and distance ambiguous and invite unconscious peripheral vision and tactile fantasy”. This notion can be realized within various spaces of an agraharam. While the spaces are dark, regulated light through the courtyards,openings and glass roofs let the diffused daylight into the spaces. There are multiple courtyards as light sources illuminating the dark spaces. The enclosed sleeping areas have comparatively less light coming in through one or two
openings, whereas the semi-open spaces get indirect light through the courtyard. The function of the service courtyards is mainly to dry cloths, utensils, edibles, and perform other household activities. Here, direct bright sunlight is helpful to eliminate pests and unwanted odour from the ingredients. Plants and trees grow under direct sunlight in the service courtyard.

The human eye is most perfectly tuned for twilight rather than bright daylight. The light condition throughout the house is regulated over the spaces, enhancing its function. The kitchen has a minimum required light entering through the light well and transparent roof tiles. A low roofline at the edge of semi-open spaces in living areas controls direct light, whereas a little higher roofline in the semi- open areas of the service section provides direct light appropriate to the task.
Quality of light varies in semi-open spaces, which are used for multiple functions; part of the space gets direct light during some part of the day and is diffused during other times. This play of light provides a character to the spaces being private or public. The entire house has wonderfully modulated light and shadow spaces.

2.8 ACOUSTIC INTIMACY

The sound emerges in various forms in the domestic situation of agraharam. Beginning from outside and eventually inside, the various sounds create a myriad of experiences. A loud call of a street vendor travels through the spaces and reaches the central space where women are busy cooking or are in the courtyard with other house chores. Washing and cleaning sounds remain in theback courtyards. The sound of breaking coconut shells is familiar in all houses. Backyards have trees and vegetation that support part of each family's daily food requirement. The bird nests on these trees and their chirping become an integral sound of the house. The house's main space that comprises the courtyard and semi-open spaces provides the possibility of a multiplicity of sounds. The sound of rain falling in the courtyard, the sound of small prayer bells in the morning, the chatter, and TV or music system gives a collective memory of the place. "Hearing structures articulates the experience and understanding of space" the community in this village have proficiency in classical music and dance. The sound of Carnatic music with a balance of vocalsto instruments further caters to the enriching multi-sensorial experience of the internal space. The music recital with certain low and high pitch variations further enhances the experience of traversing through agraharam. Different times of the day are devoted to different activities and the activities have associated sounds. From hectic mornings to quieter afternoons, busy evenings, and quiet nights, one can establish memories through sounds.

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2.9 SPATIAL ELEMENTS IN THE AGRAHARAM

2.9.1 The Thinnai

Thinnai is a very important element in our traditional architecture. It acts as a transitional space for the house. It is very much a casual seating space which is utilised by even strangers, travellers for sleeping/ dining. In this agraharam, the original thinnai stretches between the East and west boundary walls, except at the entrance, is used on the edge of the thinnai to ensure that the floor finish doesn't get damaged due to the frequent usage. The long corridor/verandah running in front of the agraharams. This space also acted as a community congregation place where the men assembled for religious discourse. It consistsof the basic spaces of a vernacular house; i.e., the front raised platform (Thinnai), the central living space with an open court and the kitchen at its rear.The house abuts the wide street at its front, and has an open yard at its rear side.

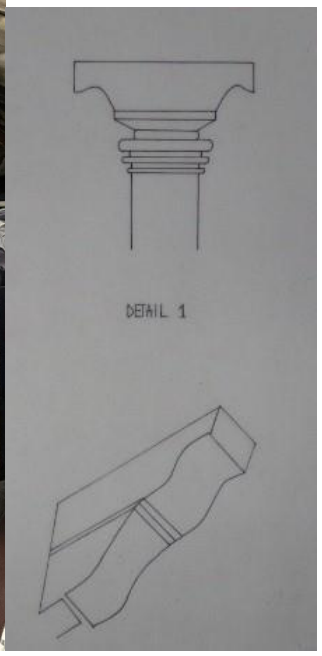
A narrow lane is left along the eastern edge which provides access to the backyard without entering the house. It has a raised platform (Thinnai) on eitherside of the main entrance to the house; this acts as the transitional zone from theexterior to the interior or vice versa. On its either side, two rooms are provided, which are accessible from the thinnai. The thinnai along with these rooms is mainly occupied by the elders of the family throughout the day. It has a sunken floor level with 30cm depth. More than an activity space, it is a climate conscious design element in the house. It provides diffused light into the house, and facilitates good air movement, as it is located along the axis.

2.9.2 Pirai

There is a prismatic recess, known in Tamil as "pirai," in the gable walls of agraharams where vilakku is placed (lamps). It is employed to keep oil lights burning all night. An extruded equilateral triangle with six-inch sides and a six-inch depth makes up this prismatic recess. In addition to this, the wall also features cuboidal niches that mirror the gable walls. In many agraharams, the entire recess doubles as an accent wall.

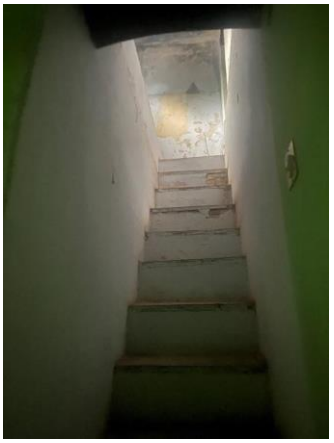
2.9.3 Wooden columns

Each house has at least 6 nos. Rose wood columns in the fore court, courtyard and backyard. The shaft of the column is turned to get a tapering cylindrical profile the head holds the wooden roof beams. Columns are carved in different
types according to their wealth and available craftsmanship. But the woods usedin all the agraharam house are first class teak wood which lasts more decades
and it has a great quality.



2.9.4 Staircase

Not all the dwellings has a flat roof. The dwellings that have a flat roof have a staircase leading to the roof from the courtyard. The staircase seen today is madeof lime concrete. Staircase leads to



2.9.5 Well

All the houses had a well. The families had no other source of water at the time of construction and for the need of water they had well in those times. The distanceto fetch water must have forced the builder/owner to take the decision to dig wellfor every house.

2.9.6 Muttram (Courtyard)

A court or courtyard is an enclosed transitional space by a building that is open to the sky. These areas in public buildings were often the primary meeting placesfor some purpose, leading to the other meanings of court. Both the words ‘court’ and ‘yard’ derive from the same root, meaning an enclosed space. The courtyard is placed east in which ‘Thulasi maadam’ is placed. Every morning, while
watering the ‘thulasi’ plant, water spills on the floor also thereby reducing the heat on the floor and balancing the micro climate. The courtyard in addition to providing lighting and ventilation to the living room, helps in maintaining the thermal comfort of the occupants. During the day, the walls of the building getheated, resulting in rise of temperature of the courtyard. The heat in the
courtyard creates negative atmospheric pressure in the area, thereby drawing airfrom the surroundings. The air that gushes to the courtyard is drawn from front /rear of the building through the windows of all rooms. This results in

fresh air being drawn continuously from all sides, keeping the rooms airy and cool. The hot air that reaches the courtyard goes up by virtue of its temperature, loses heatand dissipates.

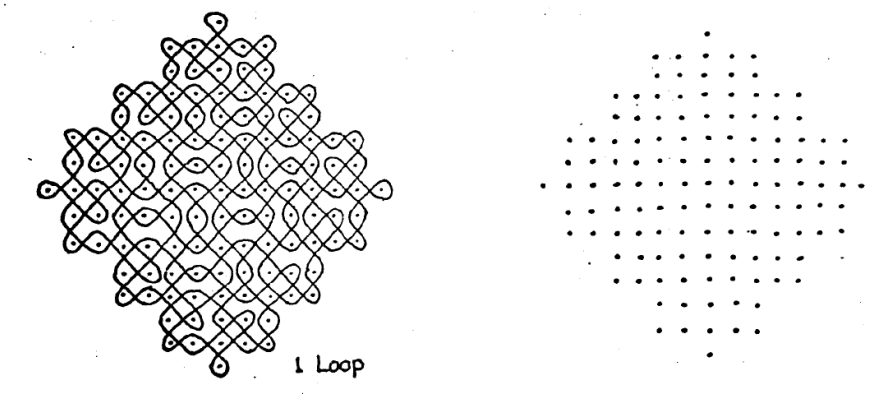
The courtyard acts like a thermostat which controls the temperature of the
house. Negative pressure is created in the courtyard as it is surrounded by roomsand less exposed. This low pressure helps to draw more air towards it. In some
agraharam the central courtyard is left open and grills are attached to the ends of the slant roof surrounding the courtyard to prevent the entry of birds, animals,
and thieves. The rain water is collected in the manmade reservoirs. A dust storm could pass overhead with little effects on the inmates

2.9.7 Courtyard Projections:

The courtyard roof is projected into the courtyard such that all the rainwateraccumulates in the courtyard itself and to provide shade to the surrounding
corridor. By this projection the roof provides ample shadow to the corridor as well as the room surrounding the corridor, in turn reducing the intensity of heat.

2.9.8 Kolam:

There is an interesting correlation here with the art of the kolam. These ritual diagrams are drawn every morning by South Indian women on the ground in front of the house. Using rice flour, a series of dots is laid out in a grid pattern. Then one or more continuous lines are woven through them, creating complex designs. In most cases care is taken never to touch the dots, although sometimes the lines connect them. A two- and often four-part symmetry is maintained, evenwhen a single loop is used. I do not know the origin or history of these diagrams.But an association with the vastu mandala seems possible. In the 'Mandala silpa sashtra the mandala is to be drawn with corn and unhusked rice" (XII, 61) on theoccasion of laying the foundation of a house.



2.9.9 Oxide flooring

Oxide flooring is the most common flooring used in all agraharam houses; it hasa shiny appearance after polishing and is available in a variety of colours by combining natural dyes. The health and climate benefits of using oxide flooring compelled people to use it, and cost effectiveness was also a major factor in its use in Agraharam homes.

Oxide flooring techniques

Ingredients
For PCC: Aggregate, Cement, Sand and Water
For Oxide Mixture: Oxide Powder, White/Grey Cement, Marble Powder (notindispensably) and Water
For Polishing: Wax, Turpentine, Coconut Pith (or any fibrous) Scrub, SandPaper, Soft Cloth
Tools and Equipment: Sieving Tray, Gurmal (flat, square shaped trowel, is themost suitable), Karni (pointed, flat trowel), Mug
Others: Newspapers, Glass/Aluminium Strips, Thread and Plumb Line

MAKING PROCESS

Laying of PCC
The foremost requirement to have a head start on the oxide flooring is to have aconsolidated base bed. A concrete floor is the most appropriate surface which
ensures a firm bonding with the oxide layer.

Plain Cement Concrete (PCC) bed of the thickness 100-150mm is laid, which isa mix of aggregate, cement and sand in the ratio 1:2:4 with water in the requiredamount of workability. If the flooring already exists upon which the

oxide is to be laid, the surface would need to be scrubbed and cleaned to remove any big particles of dusts or debris and get a plain, clear base.


Preparation of the flooring layout

Post cleaning, flooring depth is referenced by putting dummy level dots ofcement lumps at every 1 or 2 meters, for levelling to the required slope of
flooring. If the design so demands, the floor is divided into various panels forlaying the mixture. These divisions are mainly done for easy workability in
batches of areas. These divisions also help to avoid the minor shrinkage cracksthat appear on vast spans.

According to the grid size for the design layout, the glass, aluminium or brass strips (30mm depth) are fixed in cement mortar with all their tops levelled
according to the slope and allowed to set. After they are firmly embedded,one gets separate panels to begin laying cement mixture in.

Laying of cement mix

A cement and sand mix of 1:4 is then spread in these panels up to a height of 20mm with the quantity of water that makes the slurry be easily poured. The surface is then levelled with a straight-edge trowel, called 'karni' after a secondlayer of the mix which is in thick lump consistency to be firmly applied and pressed. This layer gives the final floor level for the thin oxide layer to come ontop.

The edges of the panel strips are cleared with the electric rotary cutter to getsharp ends and clean depth of 2-3mm.

Preparing the oxide mix

Now, the dry oxide mixture is prepared manually by hand to get the desired
fineness of composition, which is a particular requisite setting most of the oxidefloors apart in their quality of exact shade.

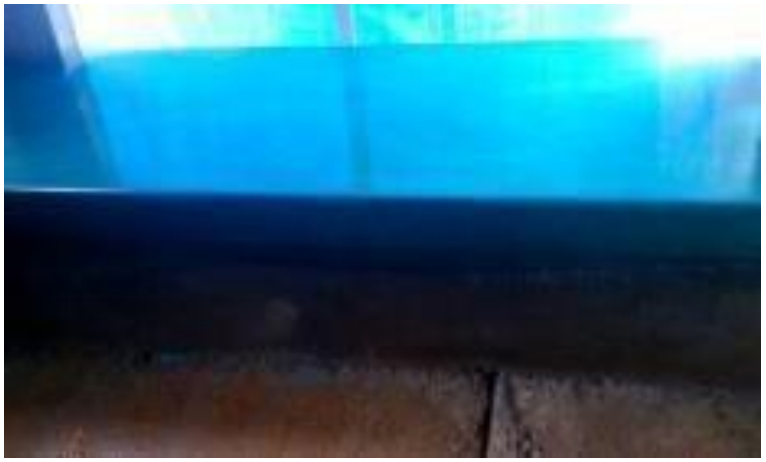
The composition is a mix of oxide powder, granules of which are crushed by hand to allow uniform mixing and prevent formation of lumps till one gets very fine powdered form. It is then mixed with white/grey cement depending upon which tone of the shade is needed (dark or bright) in the broad proportion 1:3 (3 parts of cement), with some variation up and down by the in situ estimation to
arrive at the correct shade. One unit quantity of marble powder (or lime, which is a cheaper substitute) is added to this mix by running it through the sieving tray. Marble powder is used to give a stronger grip of the materials and also, to increase the volume of the overall quantity to save other materials, accounting for its relatively cheaper price. Adding lime also retards the setting process of the mix, helping one get a better blend without developing cracks because of theheat released from the quick chemical reaction of the constituents.

This mixture is then ready to be mixed proportionately with water.

Pouring and curing of oxide layer

The oxide composition prepared is added water to, to get a slurry-like mix whichis poured above the cement base. Oxide layer is applied in two stages; the
second layer of the oxide has the quantity of water in proportion to keep the
application thick to level it out with the help of a flat trowel. This is applied by the mason moving backwards, while the front part begins to dry up by spreadingout sheets of newspaper to soak the moisture (as locally practised). Any lump formation in the mix will show up in the flooring. Trowelling is important to remove them, while the minor undulations vanish during the hand polish.

Once this layer dries thoroughly, the floor space is filled with water upto one inch by cordoning off the premise and curing is done over a time of 24hours for the reactive strength to be attained.



After the surface gets dried properly, and in case the white patches show up ontop, that area is wiped off with a cloth and cured again to dry out the residual mineral. Oxide floors must be done in one continuous stretch without break, often taking the whole day and night depending upon the area to be covered.

Polishing and finishing of the floor

The oxide floor surface is ready to be polished for a smooth and anti-acid stainfinish. The surface is rubbed with 400 grade sand paper to smoothen and levelthe base for polish application.

Wax based polish is mixed in 1 part to 2-3 drops of turpentine. This mix is applied with a soft cloth on the floor and scrubbed with rice husk or coconut pithin two layers in a circular fashion till the wax disappears and does not show visible seams and to cross it off from possible pores. Egg-white, coconut oil and rice bran are also used by some practitioners in stone-scrubbing the floor.

After the whole floor space is polished, the room is closed for 2-3 days so thatthe wax is absorbed fully and until floor achieves a radiant sheen.

Oxide has an unparalleled merit for the experiential sense of touch of its surfaces and local attachments to its making, but there are innate pitfalls whichare consciously accepted along, for a choice of this style. The type being a time-investing technique if not executed with proper expertise of skill, might in long run not show pleasant (preferable) results. These skills are mostly honed by practice over years and thus the labourers are trained and mentored with tried-and-tested recipes of proportions and mixes to master this flooring.

2.9.10 Lime plaster

Almost all agraharam houses have lime plaster, which has many health benefitsand a smooth textured finish. Lime plaster is mixed with many ingredients and used as it lasts long and also provides a great look for the walls. These are someof the traditional techniques used in the olden days.

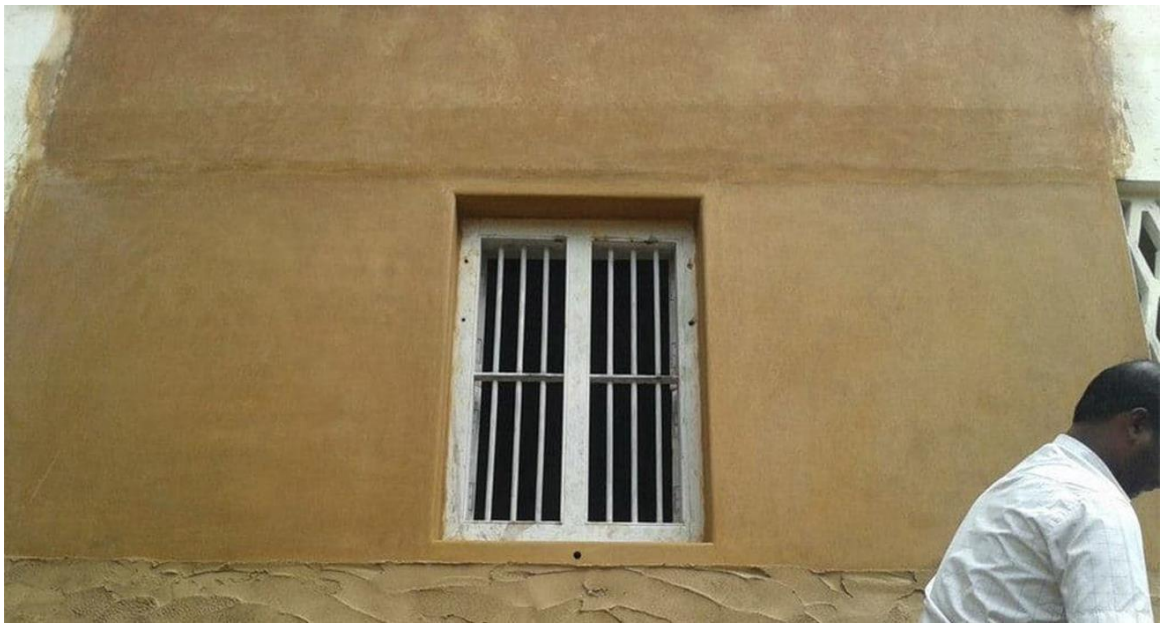
The traditional limestone mixture

For 100kg lime powder, 30 egg whites, 3kg wild aloe vera, 10kg palm jaggery (karupatti); haritaki (kadukki), a herbal nut 10kg, filter sand 200kg. For five days, palm jaggery packed in gunny bags is soaked in water in a pit; in another
pit, the crushed haritaki nuts are soaked for 15 days. The lime powder, sand, aloevera, jaggery and nut along with its water are ground in a mixer to get the slurry.This slurry is stored in a huge put, covered and left to ferment for 15 days. Just before the plastering work is taken up, egg whites are mixed into the lime mixture. Only the jaggery and haritaki soaked water is used all along in the mixture, to increase its consistency.

* 1,000kg of mixture is prepared in one go which is used for two days forplastering
* A load of 10 tones of lime stone granules are transported
* Kadukki nuts are sourced from ayurveda shops

*Filter sand is used

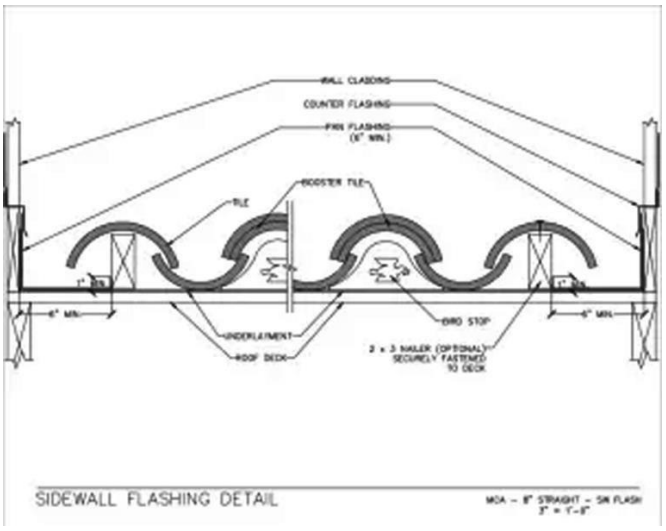
Lime mortar generates a lot of heat during the mixing process. Workers gets blisters on their hands and feet. The gloves and boots are preventive measures, but still workers suffer. After completion of each batch of mixture, workers takerest for a week and resume once the blisters have healed.

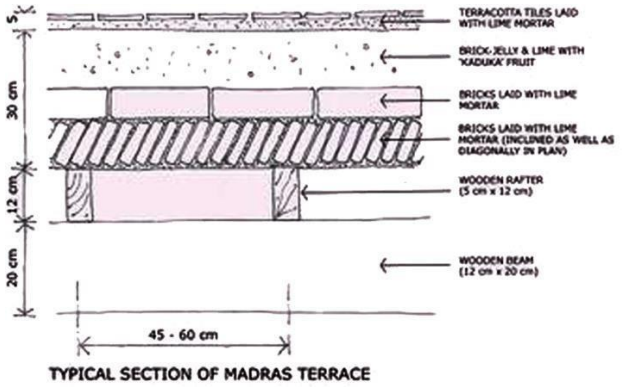


2.9.11 Roofing

Rosewood beams are first placed upon opposite walls across the width of the room, 450mm to 600mm apart. High density and high strength clay bricks, made to special thin size measuring 25mm x 75mm x 150mm, are used. Properly

mixed and matured lime mortar is used for bonding the flat tiles that are placed at an angle of 45 degrees to the wall, or diagonally across the room width. Theseterrace tiles, placed on the edge, ensured tensile strength. The roof is cured for aminimum of one week to achieve early setting. Thereafter, a 75mm thick layer of broken bricks or brick bats would be laid where nearly half the volume wouldbe made up of lime mortar, three parts brick, one part gravel and one part sand. This layer provided the compressive strength and load bearing capacity to the roof. All flat roof houses has madras terrace roofing.





TYPICAL SECTION OF MADRAS TERRACE

As seen previously, agraharam roofs have great importance as a tool for
collecting rain water and for air cooling. The repetition of rectangular plots, positioned in accordance with the major axes East/West and North/South, theorganization of the houses in successive courtyards and the hierarchy of the pavilions with sloping and terrace roofs has created a specific "roofscape", unique to agraharam.

2.9.12 Nandhavanam

Nandhavanam is a place behind the house where they grow all their vegetables, fruits, and all the flowers required for the deities. It is a huge space, and the nandhavanam of all the houses is interconnected and open without any boundaries as they live as whole communities.

2.10 CONSTRUCTION TECHNIQUES

Locally available building materials are used in constructing the vernacular houses of weavers. The houses have walls made of brick with lime plaster whichabsorbs moisture and prevents the wall from cracking. Large granite slabs are used as a facing for the thinnai and in areas where wooden columns rest directly on the floor, to prevent damage from frequent usage. Mud which is mixed with jaggery and locally available waterproofing admixtures are used in the flooring. These soft floors are regularly treated with a wet mixture of mud and cow dung and are suited to careful handling of the weaving accessories. The roofs are sloping with wooden rafters and purlins, covered with clay tiles. All residences have rosewood columns on the front veranda and courtyard. All doors and windows are made of rosewood.

Brick work using lime mortar

This is one of the oldest known type of mortar, dating back to 4th century B.C.and widely used in Ancient Rome and Greece, when it largely replaced the clay and gypsum mortars common to Ancient Egyptian construction. Despite its enduring utility over many centuries, lime mortar's effectiveness as a building material has not been well understood; time honored practices were based on tradition, folklore and trade knowledge, indicated by the vast number of old buildings that remain standing. Only during the last few decades has empirical testing provided a scientific understanding of its remarkable durability.

Traditional buildings built using lime mortar move and absorb moisture, which prevents the masonry from cracking. Also by using lime mortar expansion jointscan be avoided. Clay bricks of size 6 3/4" x 4 1/4" x 2" are used for the construction of foundation and superstructure.

Foundation and superstructure

Though a very little information could be obtained in this front, there is no doubt that the foundation is a stepped footing under all load bearing walls. However doubt persists over the depth and width of the footing. No steel is usedin the foundation of super structure. All peripheral walls and most inner walls are built with clay bricks and lime mortar for a thickness of about 1'6". Few
walls are 1'1.5" thick but made of same materials. Both brick and lime arepermeable materials that allow air to pass through them. This helps in
maintaining the thermal comfort of the buildings' occupants.

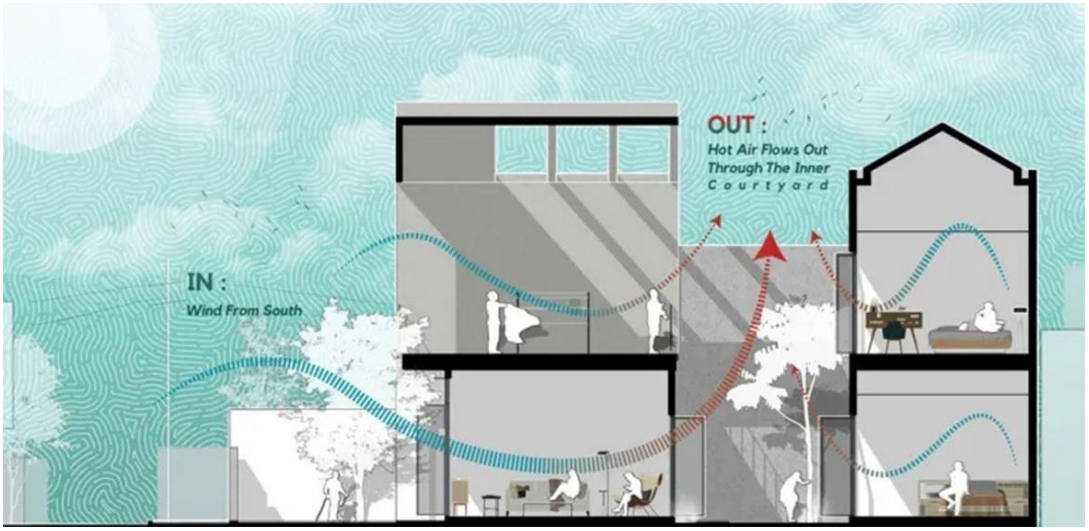
Since the number of solutions, at least in principle, is limited, it can be said thatevery form of construction can be found in vernacular dwellings, including many innovative structural concepts. Indigenous Construction Techniques, developed over years, by acquired and disseminated skills by locals, are also a deep-rooted component of the cultural influence on built-form of a region.
Roofing is done using thatch or clay tiles (fish scale tiles and Mangalore tiles). The thatched roof demands periodic care as it has to be renewed every year; thisconsequently ensures the proper maintenance of the roofing system. Stone workwas restricted to the plinth even in prestigious buildings including temples and palaces. The indigenous adoption of the available raw materials for architectural expression thus became the dominant feature of the Kerala style. The sculpturing of the stone was mainly moulding in horizontal bands in the plinth portion (adhistans) whereas the carving of timber covered all elements - pillars, beams, ceiling, rafters and the supporting brackets. Roofing was done using thatch or clay tiles (fish scale tiles and Mangalore tiles). The thatched roof demands periodic care as it has to be renewed every year; which ensures the proper maintenance of the roofing system. Roofs in Kerala houses reflect the outstanding features of shingle and bent roof construction. It reflects the logic of tropical sloping as seen in the shingle, hip, saddle roof and the span of eaves of the roof slopes. The basic structural elements consist of pairs of kazhukol (rafters) resting on an uttaram (wall plate). Pairs of kazhukol will meeton a montayam (ridge) to make the hipped roof. Pairs of kazhukol
(rafters) would be bound by horizontal rods going through other pairs of kazhukol. This rod is called vala. Thus, the vala, kazhukol, montayam anduttaram become one unit of roof construction.

2.11 CLIMATE RESPONSIVE FEATURES

Orientation- the residences are oriented along a north–south axis. Te longer eastand west walls are shared between the adjacent residences and are not exposed to solar radiation, thus reducing the heat gain.

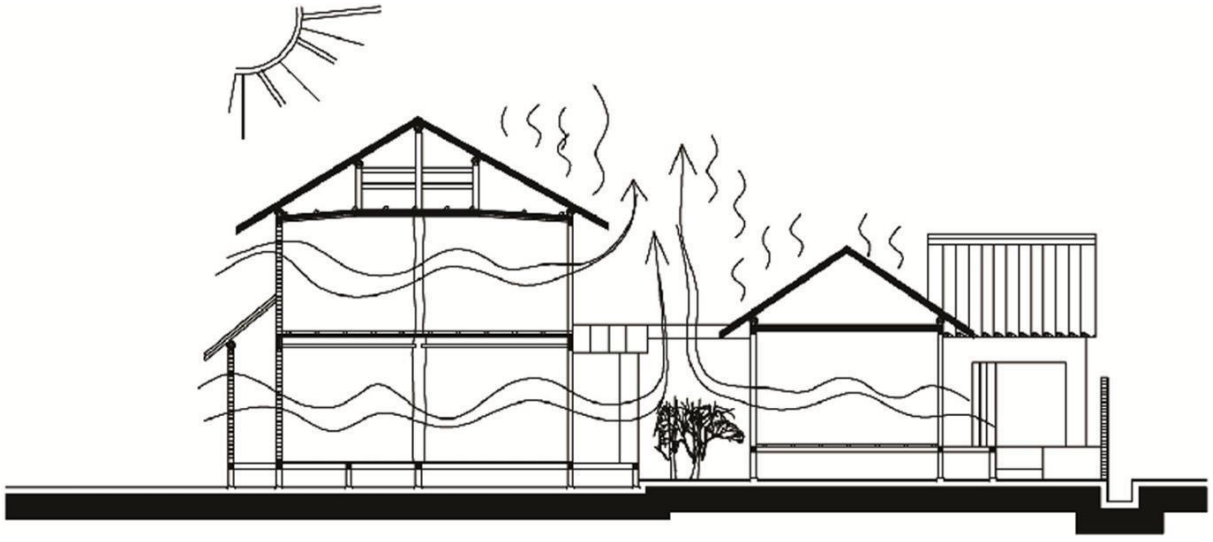
Buffer spaces- shaded spaces like the front veranda with the thinnai and reinforced concrete veranda facing the backyard act as buffer spaces, reducingglare and doubling as comfortable spaces for social interaction.

Courtyards- courtyards, which form an integral part of the traditional residences, act as a microclimate modifier. The workspace or 'Koodam' faces the courtyard, which provides adequate daylight and ventilation to maintain a comfortable environment for the weavers to work. The courtyard acts as a natural channel to allow the smoke and heat of the house to escape.



Rainwater harvesting- the roofs are sloped in such a way as to collect the rainwater in the courtyards, from where it is channelled into the well in thebackyard through stone culverts.

Cross ventilation- the doors and openings are in a straight alignment from the thinnai to the door leading to the backyard of the house. This aids cross ventilation.



Building materials- the brick and lime plastered walls maintain the thermal comfort of the occupants because they are permeable building materials. Theyabsorb moisture and maintain balanced humidity levels in the workspaces.

Row housing pattern reduces the exposure of the external wall surfaces to sun asthe house share a common wall

- The movement of warm air around the house is minimized and helps to keepthe interior cool and comfort
- Direct openings and large volumes are avoided - Street side- where walls areexposed to direct sun or rain the use of thinnai and pandhal provide shade andprotection.

- The roof has steep pitches with an angle of 45degree to drain rain waterefficiently

- In these the country tiled roofs, the successive layers of tiling traps the heat any gives effective heat insulation.

- The pitched roofs with the broad eaves were typically employed in design toshed off the rainwater

- The entire unit was kept symmetrical about an axis to aid the sharing and division of spaces across the main hall for the joint family members. The concept of the central open space served the purpose of bringing in the light,ventilation and the draining of rain water to the exteriors or to the well for adequate recharge.

- The whole exercise of architecture was an energy efficient, eco- conscious anda scientific technique that these inhabitants had followed.

2.12 DAILY ACTIVITIES

The daily activities of men and women are totally different. Women wake up,take a bath at the first place, light the lamp in the thulasi maadam, and circle itthree times; gents only circle the thulasi maadam three times. The morning breakfast will consist of only coffee.

They will do Sandhya Vandanam three times a day. As per the practice, if we carefully go through the ancient Indian literature, we will find that prayer to thesun occupies most prominence, Sandhya Vandanam being one of the important elements. Sandhya vandanam is a short religious practise that Hindus perform three times a day. It combines specific mantras with breathing practise and meditation. Regular practitioners perform this three times a day: just before sunrise, at noon, and just before sunset. The Vedic saints believed that it is during those times that the mind and body are fully alert, and we could leveragethose periods to strengthen the mind. It takes about 10 to 15 minutes each time.

Samithadhanam is done by all Brahmin boys till marriage from the day they wear the sacred thread; usually after Sandhyavandhanam, "SAMITHADHANAM" is a "SUN WORSHIP!" This was continued until his marriage. It is a kind of worship, offering prayer to the sun. Usually, a four- sided elevated platform is created (using the brick model or nowadays, even the cement model is available). Camphor is placed in the centre and is lit. While

chanting the mantras, the sticks of the peepal tree (Arasa-Maram) are placed onthe fire accordingly. Sticks will get burnt, and the residue (ashes) of the pooja is kept on the forehead, shoulders, and throat. This is regarded as a purification process, not only for the person who is performing it. They will keep the ashes intact and use them for their final rituals after death.

Other than these rituals, they all will follow Shiva pooja at least twice, up to a maximum of 12 times a day; usually, people over 60 do it once for 2 hours and 12 times a day. Women always put Kolam in front of the house every morning, and usually they will put maa Kolam in agraharam houses. Women always keepfood for crows and then only provide food to other members of the house.

They will perform Ammavasai tharpanam and change the sacred thread at Ammavasai. Tharpanam typically refers to making an offering to one's ancestors in order to please them. Many people think that tharpanam is just as important asany other kind of worship. At least two oil or ghee lamps must be lit in order to perform tharpananam. Sit on a mat and face east. Pray to Lord Sun, then Lord Ganesha. The lord of ancestors is regarded as being Lord Sun. Put the Tharpanam grid out on the plate in front of you. Paternal male ancestors should receive the first three grid squares. The following three should be given to the female ancestors of the father. The maternal male ancestors should be given theblocks seven to nine. Maternal female ancestors should receive the last three blocks. Put a strip of darbha grass in each grid block. Request the pitru ancestorspirits to be present in the tharpanam grid and receive your humble offerings with all your heart.

Evenings are when women begin their daily practise of Sahasranamam by lighting all the lamps in the pirai and pooja rooms. The word "a thousand names" of Lord Vishnu, one of Hinduism's most renowned deities, is literally translated as "a thousand names" in the ancient Sanskrit hymn known as Sahasranamam. They believe that reciting Sahasranamam regularly results in a long life, an end to reborn on the material plane after death, the washing away ofall sins, the preservation of a disease-free body, and the maintenance of an active, pain-free mind.

2.13 FESTIVITIES

Festivities is cited according to the month

Chithirai

Chithirai Visu – Chithirai Visu is also known as vishukani which is celebrated for Lord Krishna according to a mythological story. People observe the Vishukani first thing in the morning on this day. Vishukani is a great arrangement of gold, money, rice, dal, fruits, and flowers, as well as a mirror decorated with gold ornaments and a Krishna statue. This arrangement is made the night before, near the location of the God in houses, and is then seen the nextmorning to represent an auspicious beginning of the new year with plenty of wealth and prosperity and, primarily, the blessings of the God, with the decorated Krishna statue.

Akshaya Tritiyai - Brahmins celebrate Akshaya Tritiyai for two reasons: first, itremembers the birth of Parasurama, the sixth avatar of Lord Vishnu; second, it tells the tale of Lord Krishna and his Brahmin friend Sudama. On the day of Akshaya Tritiya, Lord Vishnu is worshipped through rituals that include fasting. Along with that, worshippers carry out charity deeds by giving out clothing, food, salt, vegetables, and fruits to the needy. Some even use sandalwood paste to decorate Lord Krishna. According to the beliefs, doing so ensures a place in heaven forever.

Vaikasi

Vaikasi Visagam - For the anniversary of Lord Murugan's birth, Vaikasi Visagam is celebrated. They participate in a variety of processions, one of which involves bringing milk pots to temples. The milk is then used to perform "abhishekam" at the temples. That is done while chanting hymns, mantras, and prayers to the supreme god. Many people participate in Vaikasi Visakam traditions by practising meditation and giving out prasadam on this day.

Aani

Aani Thirumanjanam - Aani Thirumanjanam is celebrated for Sri Natarajar with different decorations, especially using scented decors during this Aani Thirumanjanam.

Aadi

Aadi Pooram – Aadi pooram is celebrated as the baby shower function of Ambaal in all houses Homes and unique poojas are performed on this day to please Goddess Aandal. New bangles have been put on all of the goddess statues, which are worshipped. Then, the bracelets are given to each and every believer. These bracelets are believed to protect pregnant mothers from evil spirits and favour good births. People gather in groups to sing "Thiruppavai" and "Lalitha Sahasranamam," as well as present the Aandal idol with red clothing, lotus flower garlands, and kumkum.

Aadi perukku - Women participate in a water ceremony known as the Aadi perukku, which is believed to honour nature. In Tamil, it is celebrated on the 18th day of the Aadi month. Goddess Parvathi Devi is worshipped on this auspicious day by receiving 18 various rice dishes. Offerings of flowers, rice offerings, and akshata are made to sacred rivers like the Cauvery. People bath along the river while doing poojas and taking a holy dip in the water. Followingthe pooja, they will eat "Kalandha Sadham" (variety rice) along the river with their families.

Aavani

Vinayagar Chaturthi and Gokulastami are rituals performed for Vinayagar andLord Krishna all over India, and they are followed by decorating and offeringsto the respective gods.

Varalaksmi Nombu - Most married women observe the Varalakshmi vratham, orfast, in order to get blessings from Varalakshmi, an avatar of Goddess Lakshmi. The main goal of Varalaksmi Vratam is to offer genuine prayers to Goddess Lakshmi in order to receive spiritual advantages. The fasting for this day extends from sunrise to sunset. They create a puja altar and set up a holy container called as a Kalasam. This is decorated with flowers, vermilion, sandal paste, turmeric, and turmeric powder.

Purattasi

Navarathri - Every three-day segment of Navaratri is devoted to a different feature of the ultimate goddess. The first three days are devoted to Durga, with each day celebrating a different aspect of the supreme goddess. Durga is honoured during the first three days. The following three days are dedicated to Lakshmi, and the final three days are dedicated to Saraswati. Golu is kept in every home, and bajanai and poojas are performed every evening with offeringsto the gods.

Aippasi

Deepavali – It is celebrated according to the same customs followed in allhouseholds.

Karthigai

Karthigai Deepam – In the whole Karthigai month, the lamps were lit up in and around the house. They also burst crackers and celebrated the festival. These arealmost common celebration in all houses.

Mahadeva Astami – It is celebrated for Lord shiva in all Astami's of karthigaimonth with offerings and decoration to Lord shiva

Margali

Arudhra Dharisanam - It takes place on the full moon night in the month of Margazhi, which is also the longest night of the year. It celebrates the cosmic dance of Lord Shiva, which is represented by the Nataraja form. They all gather

in the night for the Thiruvathira, and they will dance and sing Thiruvathirasongs.

Thai

UTHRIYANA PUNNIYA KALAM - The gates of 'Vaikuntham' opens on Vaikuntha Ekadasi day as it is dawn at Deva Lokam. And the movement of Suntowards 'Vaikuntham' (i.e North) is considered sacred. They perform many religious activities like a holy dip / bath in the seas / rivers offering prayers to Sun god, during 'Uttaryana Punyakalam' time. People also donate food, clothes,money to the poor.

Masi

Masi magam - The spiritual beings are said to appear in astral form in order to clean both their own karma as well as the collective karma of the human race. Masi Magam is a fantastic opportunity to free oneself of bad karma. Devotees can take advantage of this wonderful chance to clean their karma with the blessings of the Lord and to be surrounded by the light of the heavenly power's positive energy. Deity idols are ritually removed from their homes on the auspicious day of Masi Magam in order to take a holy bath in the river. Offering prayers and bathing in famous rivers like the Ganges, the Cauvery, and others is seen as a holy practise to purify oneself of one's own karma.

Panguni

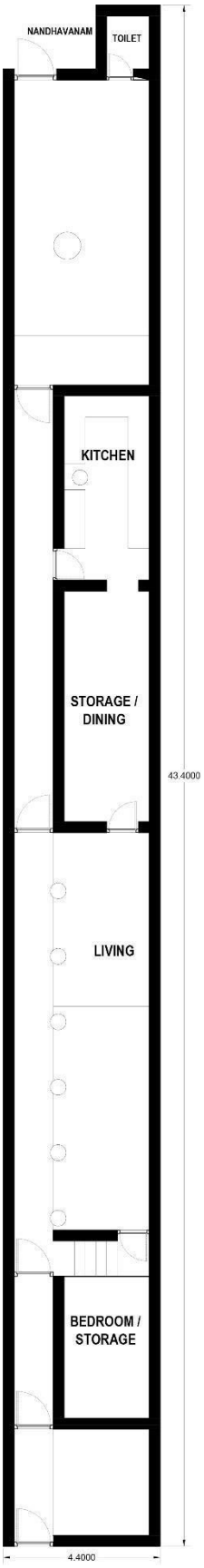
Panguni Uthiram - The festival of Panguni Uttiram celebrates marriages. On this day, Lord Shiva married the goddess Meenakshi. These ceremonies date back tothe era of Rajaraja Chola, according to inscriptions. On the day of the full moon in the Panguni month, Panguni Uttiram occurs. The devotion of Shiva, Perumal, and Murugan on this day is seen to be particularly important. God and Goddess idols can be built out of metal or gold, depending on choice. The idols are then decorated with attractive flowers and jewels by devotees, and they are finally worshipped by saying prayers during holy puja. There is a severe fast on this day, during which they only eat one meal. However, they consume prasad in theform of fruits and payasam.

CHAPTER 3

3 CASE STUDY

3.1 HOUSE 1

House 1 was built in the 1970s in Thillaisthanam, Thiruvaiyaru taluk and Thanjavur district. Srinivasa Perumal Temple was located on one end of the street typically in agraharam setup. The house entry was from the road and has a foyer now covered with wooden fabrication, which was before used as Thinnai due to security concerns but is now covered as there is only an old lady living in the house as others have migrated.



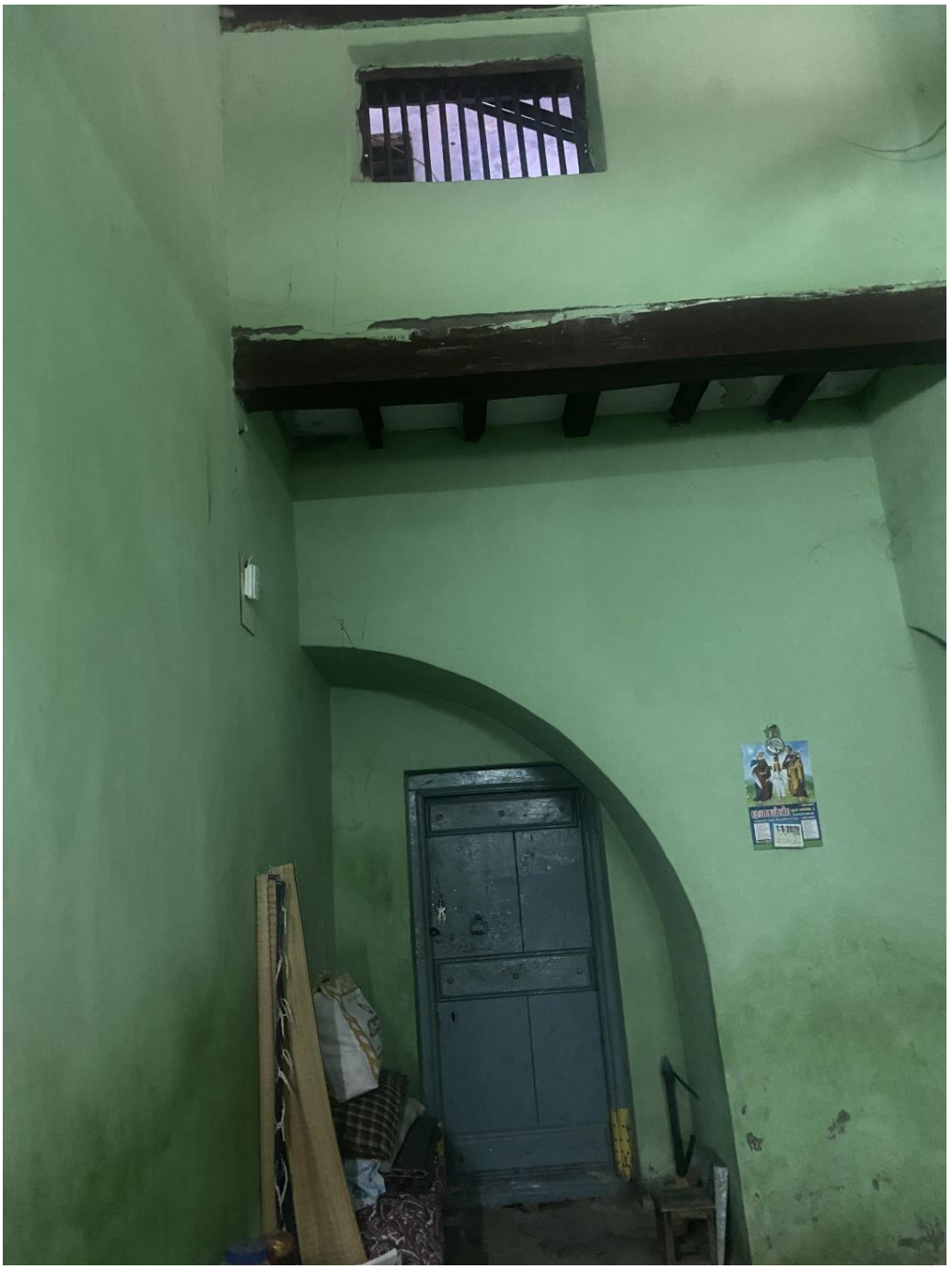
The linear passage Rezhi takes us to the interior aspects of the Agraharam house. The walls of the rezhi are made of pirai, which is used for lighting lamps.Rezhi is also a location where the entire niche serves as a decorative wall hanging element.

Rezhi leads to the staircase first, and then it leads to the tavaram, which usually acts as a semi-open space in sloped roof agraharam. In this, it is covered, but theheight of the roof is increased, and clerestory windows are provided in it for lighting. They use it as an open living space; currently, it is usually a transition space from the street to the interior.

The columns separate the Rezhi from the tavaram and koodam and act as a threshold for the spaces. Columns were made of stone with vaulted arches with adiameter of .45m

Tavaram leads to the koodam, which is used for the prayers and acts as a gathering area or sitting area. This is currently used as a living space with furniture; exposed wooden trusses were used throughout with a madras terrace roof; all the woods used are first-class teak wood in the house.

Nadai arai is located near tavaram, which was previously used as a treasury, grain storage area, and textile storage area and is now used as a dedicated bedroom. It has an arched structure entry above which the staircase is located.



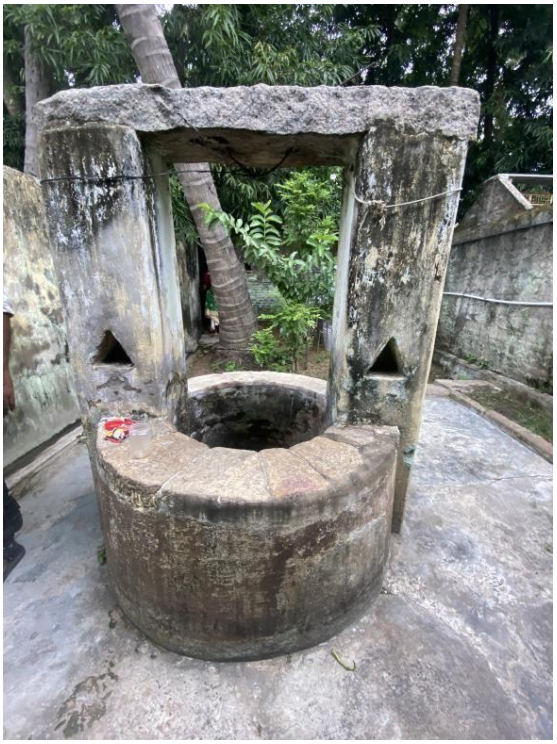
Koodam leads to Rithi, which is not available in all the houses. Earlier, it was a place where all the storage was done for the kitchen, and now it is used as a dedicated dining space in which they serve lunch during functions and festivalsfor all the people.

The final built space here is the samayal arai (kitchen), in which there are two levels of platforms with a proper slope on the kitchen slab to drain out the water with a drain in the wall. The kitchen also has a well with a skylight above, whichwill be provided in almost all agraharam houses to ease the need for water for cooking.

Rezhi continues in this for a full stretch from the entrance to the backside exit;throughout this, there is a skylight providing lighting.

Rezhi leads to the thodanandai, which is semi-open and serves as an outdoor storage facility. Because it is sunken, water cannot enter other places. The drainfrom the kitchen slab is connected to this sunken thodanadai.

Then there is kollai pakkam which is a open courtyard used for drying clothes and a kottul which a main well for the house and it is also used as a open kitchenin olden days there is toilet located at the end of the house. Kottul also has a pirai in it which is used for lighting lamps as it will be used during the night time also.



Then there is a back door entry in the rear compound wall which leads to the nandhavanam which is open place which connects all the agraharam and this place is actually a home garden with herbs like holy basil, lemon, hibiscus,curry leaves, and trees such as drumsticks, coconut, mango, and sapota. With all the flowers which is presented for the gods are grown in this place.

CHAPTER 4

4 RESULTS AND FINDINGS

Comparative analysis of all the case studies has been made to draw conclusions.The social, cultural parameters like occupation, religion, Privacy, Safety, Position of women, Family structures etc. are considered in this evaluation. After that the relationship between culture and built form has been establishedwith following Findings.

Location Orientation:

The strategic location of the settlement was decided by the religion and occupation. For example, the location of Agraharam settlement is based on thetemple position and all the houses were arranged in a linear pattern different from the clustered pattern usually seen in Kerala traditional architectural style thus forming a garland around a temple.

Form Typology:

This is determined by the social need of the inhabitants. The row of houses is either single or double storied, with the traditional pitched roof form striking a significant profile against the sky. The streets were narrow and formed an integral extension of the _living space‘. The row houses sharing a Common wallhad a long verandah running along the front portion, supported by stone and wooden pillars. The house has a verandah at the entrance for social activities anda platform, slightly raised from the street, which runs the entire length of the rowhouses. It also acts as a transition from the street to the dwelling. A passage which starts at the street face, runs through the house ending at the backyard, doors leading to inner areas.

Social interactive Spaces:

Street is a major social space in many settlements. In Agraharam, internal streetis an extension of living space.

Visual connectivity:

Each settlement of the community has proper physical integration between each other. The street share slightly distorted at an angle to maintain visual privacy of two different community settlements. Within a particular settlement, the streets are straight and visually connected. In Agraharam, Inner Street is wide and mainfunctions occur at the street level.

Symbolic significance:

Each Settlement has its own symbol to represent their culture. Use of Symbols for ornamentation is very common. Thulasi thara (thulasi platform) is another symbol which is common in Agraharam.

Courtyards were placed in agraharam because it was needed for their rituals and daily activities, which we have seen during the intangible documentation. It is also needed for the air to pass during samithadhanam.

The plan also calls for a courtyard because they can't provide windows on both sides due to a shared wall, so it's necessary for ventilation. As a result, there is astrong relationship between culture and built form, which is lacking in contemporary design.

Construction techniques and climate-responsive features of agraharams are already reclaiming some of the landscape, and some of the decorative features andtheir importance are understood, so interior designers can use those elements to revive the dying culture while also improving the space's sustainable quotient.

The impact of globalization has threatened traditional and cultural values by the forces of economic, cultural and architectural homogenization. This has brought disregard for traditional environment .In the race of modernity, values, beliefs, culture are removed from the society

CHAPTER 5

5 CONCLUSION

This paper unfolds various architectural aspects in the context of different cultural beliefs and practices which helps in the creation of identity of the society. The cultural differences among communities are well reflected in each settlement. History is the foundation of every society and each society has developed its own norms and traditions over centuries, it's like a article over which layers of thoughts and reveries have been inscribed upon. History is the foundation of every society and each society has developed its own norms and traditions over centuries, it's like a palimpsest over which layers of thoughts andreveries have been inscribed upon.

Each and every element are planned very carefully that it maintains the homogeneity in every aspect which creates a new visual experience to its visitors. It is clear that family structure, the position of women in the family, religious beliefs and practices, and ways of making a living all contribute to the urban context and creates an identity of its own, without losing the integrity of setting whether it is in the homeland or in migrated land. It shows how the spatial-cultural aspects can be incorporated in architecture to maintain the ethnicity of our land. This study contributes to the further scope of research related to the relationship between culture and interior by giving insight into the knowledge of the influence of sociocultural values. This article contributes to a better understanding of the relationship between culture and interiors which may help in future development with proper social integration between different communities without losing their identity and achieve long term sustainability.
This study also contributes to understanding the significance of culture and thesustainability quotient of a space, which should aid future researchers in understanding all of the techniques and details of agraharams and preventing their extinction.

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