

## A study of transition spaces in traditional houses of Tamil Nadu

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Architecture is inevitably a mechanism for social purposes that could impact the personal and public levels. While architecture is used in many different ways, the arrangement and structure of places are fundamental and essential to people's lives. Thus, the people started to create spaces allowing them to eat, sleep, worship, learn, argue, recreate, and so on in a specific timeframe that has been subjected to the tradition and culture of people. This study is about one such traditional transition space - the thinnai that creates connectivity between the public and private zones in a housing typology. As evolution occurs, these structures, intended for various activities, have vanished, and compound wall structures have enclosed the dwellings. This shortens the connectivity to the external environment. In southern India, the thinnai spaces serve various socio-cultural activities. The typology of the thinnai spaces differs according to the regions of settlement, occupation and religious practices. Such spaces have been recreated due to the refurbishment of the buildings, which will not require them to serve their purpose. The main objective of the paper is to document and analyze the transitional spaces (known as thinnai or raised platform) prevailing near the entrance in the varied typology of traditional houses in a village in Tamil Nadu and to classify them based on the thresholds. The qualitative study was carried out through intense documentation analysis of transition spaces near thresholds in the varied typology of traditional houses in Mangalreva village Tamil Nadu. The result of the study showed that the transitional spaces that exist near thresholds in traditional buildings have demonstrated extensive functionality and lie in harmony with the people's lifestyle. Further, the authors also classified the types of transition spaces with respect to the thresholds. It is considered the need of the hour to replicate these structures with the same meaning in modern dwellings without any compromises.

**Keywords:** Activity, Architectural thresholds, Thinnai, Traditional buildings, Transition spaces

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In architecture, a transition space is described as a bridging space between two distinct zones. These areas are unavoidable in the majority of constructions. The functionality and proportion vary depending on the user's needs and the building's typology<sup>1</sup>. By comprehending transitional spaces architecturally, the spaces can establish subtle links that can be altered, and temporal experiences can be articulated. Their proper understanding of these areas is shaped by history and usage. These voids are felt from the macro to the micro, even though they are unaware of their presence<sup>2</sup>. A transition space bridges open and closed spaces and links public and private spaces<sup>3</sup>. Whether open or semi-encompassed, transitional space is an essential element of Indian residence, this architectural approach links home to a street or public

premise. Such transition spaces or architectural thresholds (a building or its premise) may be generated by changing the light, the tone, the orientation, the texture, the levels, perhaps by the enclosure and, above all, by changing the view<sup>3,4</sup>. This transition space has been identified worldwide with a few similarities. Such transition space is found in the 1850s in Australian colonial streets with decorative iron screens. They were also identified in the streets of the southern part of the United States. In Victorian England, they were shaded spaces to relax in. The colonial houses in Africa were built with this kind of transition space to prevent themselves from the sun's direct radiation. The British colonial houses built in India also had verandahs all over the house. Sadly, in today's dense urban apartment growth, we have lost many of the typical architectural features that have been an essential part of it<sup>5</sup>.

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### Literature study

The intense literature study found that only a few studies were done in transition spaces at national and international levels. Kushwaha<sup>6</sup> studied break space in Indian architecture and compared the planning concepts of various spaces earlier to the present scenario.

Taleghani<sup>7</sup> focused on the study of transition spaces like courtyards, atriums, and sunspaces and how it plays a significant role in achieving thermal comfort and energy consumption in buildings.

Kray<sup>8</sup> investigated the various types of traditional spaces between indoors and outdoors based on the questionnaire survey from the users and the outcome of the study.

The authors witnessed the evidence of the existence of the transitional spaces and their varied uses. Binti Hj<sup>9</sup> studied Serambi space in Negeri Sembilan traditional Malay house by describing the diverse function of serambi deeply through documentation analysis and exclusive interviews and concluded. It was reported that the serambi space planned by earlier Malay neighbourhoods had established extensive functionality to fulfil the needs of an occupant in daily life, customs practised and filling the Islamic demand.

Anjali Sadanand & Nagarajan<sup>1</sup> analyzed the threshold spaces and courtyards regarding the theoretical framework of Yatinpandya and Amos Rapport.

Alanbaki & Almoqaram<sup>10</sup>, in their research article, analyzed the transformation of the transitional spaces of the dwellings of Iraq and discussed the evolution of spaces in domestic houses across different periods concerning function.

Perera & Perince<sup>11</sup> carried out a study on the transition spaces of Srilanka. A comparative analysis was done on the transition spaces of the traditional and modernist houses during the early post-independence period.

Further, it was also found that there are significantly fewer studies on various typological classifications of Thinnai in rural houses of Tamil Nadu. The traditional houses are located in varied contexts like hilly regions, coastal regions and plains. One can find an entrance or threshold from the exterior to the interior as transition space. The users effectively use the spaces for varied activities and functions, and those spaces have solid spatial and visual continuity and connectivity to the street. Now in modern buildings, the design of

transition spaces has lost its purpose of social interaction because of the thresholds where the compound walls disconnect the transition spaces' visual and spatial connectivity to the streets.

From the research gap, it was found that there was no study of transition spaces in the entrance in varied traditional houses, so the main objective of the paper is to document and analyze the transitional spaces (known as thinnai or raised platform) prevailing near the entrance in the varied typology of traditional houses in Tamil Nadu and to classify them based on the spatial planning of the thresholds and its usage which will guide the future design of transition spaces in traditional buildings.

### Thinnai- A transition space

At a home's entrance, the Thinnai, or raised verandah space, is the dividing space between the interior and exterior. It serves the house's aesthetic purpose as well. The transition from the openness of the outer world to the locked inside is avoided in this area. In South India, a thinnai is a multipurpose area that fosters socio-cultural and climatic characteristics. In terms of architecture, this transition space blocks direct sunlight and shields from unpleasant radiation. This area promotes neighbourhood social contact by allowing solitary travellers to rest and hosting evening events. The house elders would gather here to unwind in a light atmosphere. This served as the gathering place for village-wide talks and public deliberation.

### Thinnai spaces in Tamil Nadu

It serves as the default reception area for guests who have not yet earned the right to be invited. Additionally, this is where milkmen, vegetable sellers, and other vendors of various goods set up shop, called out to the house lady and waited for her to arrive before conducting business. At certain times of the day, particularly in the late evenings, the thinnai is also the domain of the house patriarch. Usually elderly people sit in this area to spend quality time with their friends and relatives. They enjoy discussions and exchange of knowledge on diverse topics such as politics, sports, cinema, business, weather, weather etc. The thinnai areas in the homes of agricultural families are used for drying crops and storing harvested paddy or grains in sacks temporarily during harvest seasons. In priests' homes, this transition area is utilized to conduct daily rituals and to teach children about the Vedas and Upanishads<sup>12</sup>. The thinnai areas of the village chief

are frequently used as a gathering place for major local decisions and to resolve minor disputes between residents. The accountant will have a space in this thinnai in the homes of the merchants. People who worked in carpentry, weaving, or goldsmithing used this transition space for their business activity.

#### Study area and classification

In order to undertake this analysis, houses in Mangalrevu village situated in Southern Tamil Nadu were examined. The picturesque village of Mangalrevu is located in Peraiyur Taluk of Madurai district. This Mangalrevu village settlement admeasures a total of 513.6 hectares, and the community herein practices a variety of agriculturally based occupations which includes, among other things, farming and cattle rearing. The village of Mangalrevu was chosen for the present analysis because this remote hamlet is untouched by modernity and has to its credit many old houses with the traditional hallmark of Tamil architecture, the "Thinnai", and many variations of the same can be found in a single place. The residents of this village take pride in the architectural genius of their forefathers and continue to preserve their homes intact, as left by the previous generations.

During the present analysis, out of the 804 homes in the village, 150 homes with typical indigenous architecture were selected for the study. From that shortlisted pool, 113 houses have this additional space, "Thinnai", which is the subject matter of the present study. It is pertinent to note that the below study discusses the "Thinnai" spaces which are found in the village of Mangalrevu only and the same cannot be said to encompass/include all the different "Thinnai" spaces which are found in the rest of Tamil Nadu and India. In-depth study and documentation were carried out in the village comprising 113 houses and arrived at two significant classifications based on structure, form and geometry:

- Recessed thinnai Space
- Projected thinnai Space

#### *Recessed Thinnai space*

In this typology, the raised platform lies within the house's front wall, entirely enclosed by roof projection at the top and side walls. Its boundary is marked by a row of columns provided to support the roof structure, which becomes an enclosure. It is a semi-private space used mainly by the house's

inhabitants for various activities. Though it is a semi-private space, it visually connects with the street. The height and width of thinnai vary for each dwelling, but mainly it accommodates spaces which allow a group of people to use that space at a time. This typology of thinnai is subdivided into different categories based on its layout. They are as follows:

- Double-sided thinnai (Fig. 1)
- One-sided thinnai (Fig. 2)
- Double level thinnai (Fig. 3)
- L-shaped enclosed thinnai (Fig. 4)
- Single Platform thinnai (Fig. 5)

#### • **Double sided thinnai**

This type of thinnai are found in the affluent homes of the community. The majority of the thinnai columns are ornate and embellished and also act as a porch area called "Thalvaram". The thinnai can range from 6 inches to 5 feet high, depending on the function.

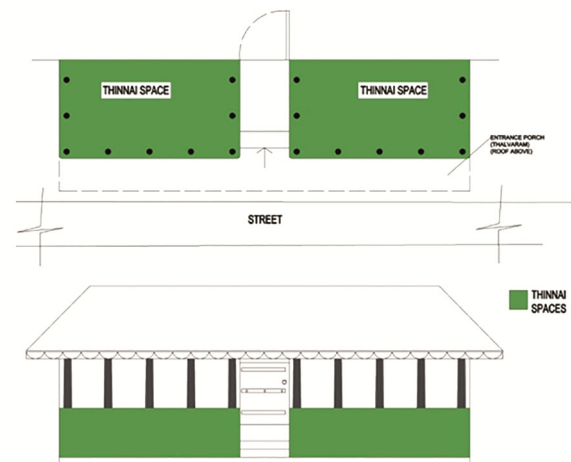


Fig. 1 — Double sided thinnai

#### **Activity**

Talking, unwinding, playing, accounting space in a merchant's home. There was a place for severe conversations between the villagers, panchayats, and children were taught. Thinnai areas of teacher families were used as classrooms to instruct the village's youth. Carpentry tasks, manual labour, and agricultural storage are all included.

#### • **One-sided thinnai**

This typology features the thinnai space on one side and the platform-like protrusion on the other. The columns have minimal decoration and are provided for structural purposes.

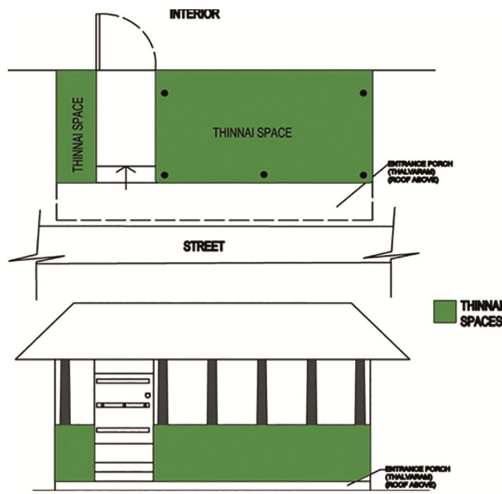


Fig. 2 — One sided thinnai

**Activity**

The activity is identical to the earlier type. The vast and long thinnai is only offered on one side due to the entrance being located in the corner. As a result, one can use the narrower space for seating and the broader space for various uses.

• **Double level thinnai**

There are two levels of thinnai spaces in this typology. Two raised platforms are on either side of it as you approach the steps, and the area is intended for 1-2 people to sit. In addition, there are two tiers of thinnai on each side. The thinnai's lowest level is only partially covered, and its higher level will have a roof over it. The street or road can be seen from the lower level. Thus the spatial hierarchy is found.

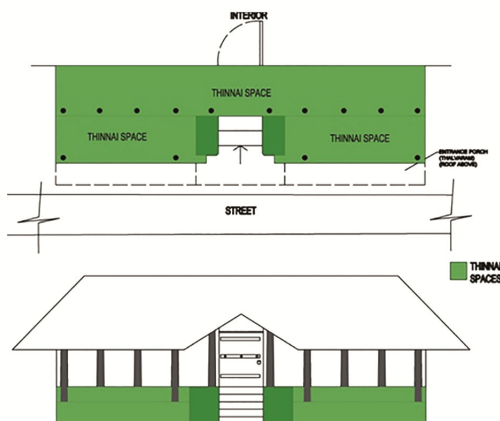


Fig. 3 — Double-level thinnai

**Activity**

Relaxing, Playing, interacting with neighbours, and drying crops on the lower level, partially covered.

The lower level is connected to the streets, and the upper level is used as a semi-private zone. The visual

connectivity of the upper-level thinnai is lost due to the presence of roof overhangs.

• **L-shaped enclosed thinnai**

In this typology, the raised platform is enclosed by a steel frame, and the space in between acts as a spill over space for various interactions, thus limiting the outsiders entering the house.

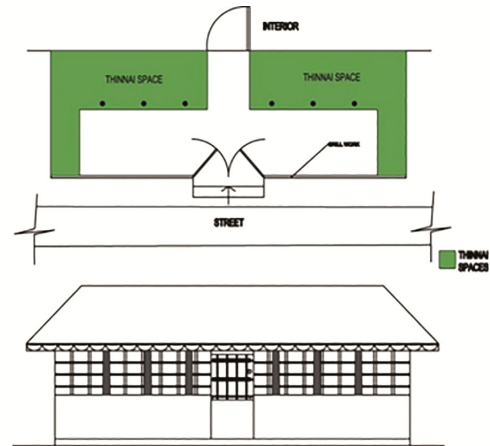


Fig. 4 — L shaped Enclosed thinnai

**Activity**

This thinnai typology is typically prevalent in Agraharam dwellings and is used for interaction among family members to observe street activity.

• **Single Platform thinnai**

It is a raised platform that runs along the length of the house and is accessible by steps, and has a pitched roof at the top

The columns in the one-sided thinnai (Fig. 2) platform support the pitched roof and the raised platform lies within the building edge.

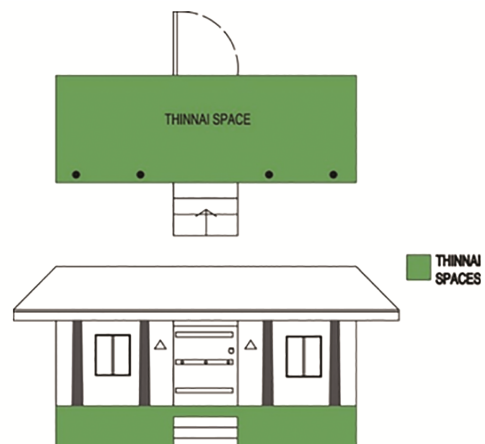


Fig. 5 — Platform thinnai

**Activity**

Cattle raising, poultry production, and other household activities. In order to closely watch and protect their livestock and hens.

**Projected Thinnai space**

This type of thinnai space is also a projection from the front wall, and in a few houses, it acts as a standalone structure. It was an evolution from the earlier typology when the size of the dwelling decreased, and the thinnai were placed only as an appellation. However, the thinnai space's width is comparatively less compared to the previous typology. This category has no complete roof projection and side walls, so it does not create an enclosed space. It is considered a semi-public space as travellers and visitors access it. It stands in the space between the dwelling and the street. Some streets have a continuous arrangement of thinnai while some may not have.

They are further subdivided as:

- Simple rectangular thinnai (Fig. 6)
- Thinnai with storage space (Fig. 7)
- Thinnai with resting projection (Fig. 8)
- Stone slab thinnai (Fig. 9)
- Stepped thinnai (Fig. 10)
- Single slab thinnai (Fig. 11)
- **Simple rectangular thinnai**

A thinnai is modelled on either side of the entrance in this type. This is directly accessible from the road or street in front of it. Because the thinnai space width is smaller, columns are not required to support it. Many dwellings will be required to cover them with tiny roofing systems, many of which do not have roofs. The thinnai might be a solid structure or a stone slab standing on two projected walls that are hollow in the middle.

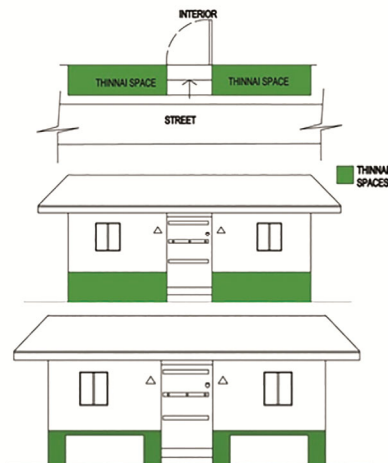


Fig. 6 — Simple rectangular thinnai

**Activity**

This thinnai is intended to provide some rest to the passengers. Because the thinnai roof is only partially enclosed, it is used to dry vessels, crops, and other items.

• **Thinnai space with storage space**

This is the same as the previous typology but with a bottom storage area used for poultry. They are closed with ventilated doors. This is one of the evolutions of the old existing forms of thinnai that occurred in later ages.

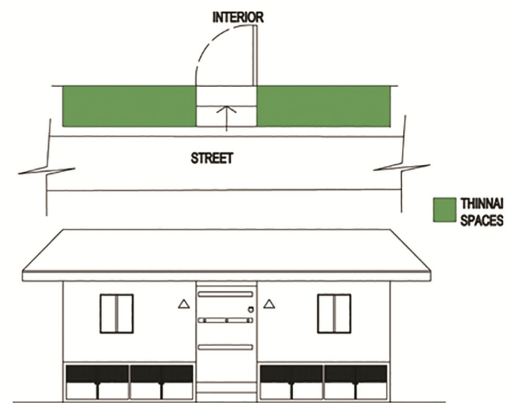


Fig. 7 — thinnai space with storage space

**Activity**

It functions as a dual-activity space. The upper portion of the thinnai is used for seating, while the lower section is used for storage.

• **Stone slab thinnai**

The doorways of the dwellings have irregular stone slabs attached with two supporting stones. As passers by use them, they are also regarded as Thinnai places. They are not attached to the houses' or stores' exterior walls. In times of need, they are an addition to them.

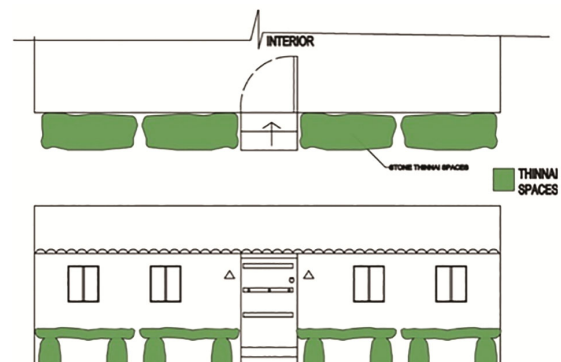


Fig. 8 — Stone slab thinnai

**Activity**

Most of these thinnai spaces are in shops where the audience addresses different topics. They are mostly made of vernacular material available in this area.

• **Thinnai with resting projection**

They are similar to the 4th semi-public thinnai typology but with projection emerging from the seating space to rest the head while lying. The corners of the thinnai spaces are curved out, which allows the passing by people to rest.

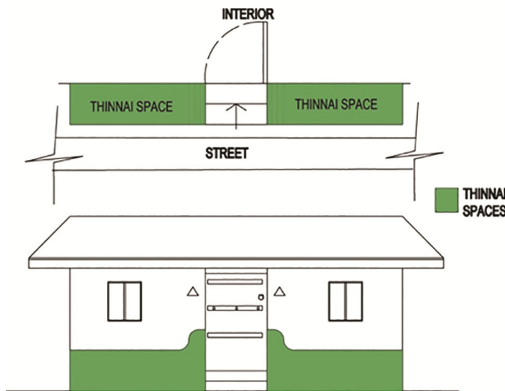


Fig. 9 — Thinnai with resting projection

**Activity**

Similar to the fourth semi-public Thinnai typology, they differ in that a protrusion emerges from the seating area to provide a place to lay the head while lying down. People passing by can rest because the thinnai spaces' corners are rounded.

• **Stepped thinnai**

In this typology, the raised platform is in three levels and looks like wide stairs

This place has been used for walking and for social interaction, which allows the people to sit down on the stair width (2 feet 6 inches).

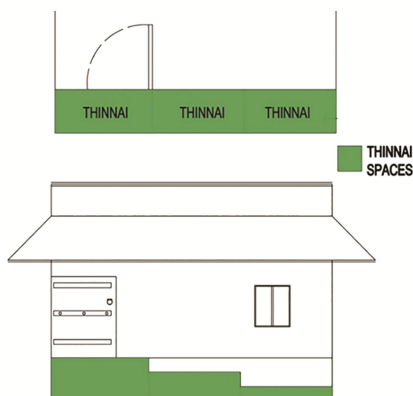


Fig. 10 — Stepped thinnai

**Activity**

Stepped thinnai performs two activities. In addition to giving the inhabitants a place to sit, it also makes it easy to climb the house's plinth. This type of thinnai typology is advised when individuals desire to have them in their homes, and street width becomes problematic.

• **Single slab thinnai**

The front plane of the house is connected to the thinnai's shorter span in this typology. It is a little projection from the wall that has room for one or two people to sit. In order to access this thinnai, one must ascend the entry steps.

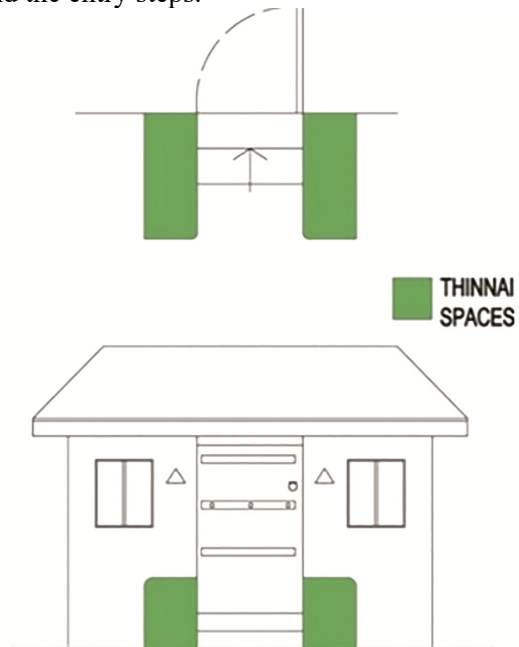


Fig. 11 — Single slab thinnai

**Activity**

The other varieties of thinnai enable the occupants to recline and take a break. However, this typology enables the user to unwind in the surroundings. The thinnai length allows the user to sit comfortably.

**Conclusion**

A detailed study, documentation and analysis of thinnai (transition spaces) that exist in rural houses of Mangalrevu village was done, and the witnessed varied typological classification of thinnai spaces existing in the village. Thinnai spaces in various typologies of traditional buildings enhanced social interaction between communities and neighbourhoods

based on their day-to-day activities and lifestyle. The significance of thinnai spaces in all typologies was found to be so effective for multipurpose activities, and the temporal quality of the space is flexible and adaptable. The authors concluded the study by classifying the thinnai spaces as projected thinnai space and recessed thinnai space based on the thresholds, structure, privacy and security aspects. From the classifications, we can find the varied articulation of volumes and forms in the design of Thinnai spaces like one-sided, two-sided and circular thinnai, stepped etc., for facilitating social interaction with the neighbourhood. The above table shows the percentage of traditional houses with varied typologies amongst the 113 dwellings that were shortlisted for the study. The above typologies were classified based on Form and Geometry, Material and Technology, and the people widely used them for social gatherings, interaction and storage facilities for their belongings.

In modern buildings, it is high time to relook into the transition spaces designed in traditional buildings by architects. These classifications will provide valuable insights for practitioners to design modern buildings.

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#### **Conflict of Interests**

The authors certify that they do not have any conflict of interest.

#### **Authors' Contributions**

PK: Data collection, data analysis and interpretation, drafting the article, final approval of the version to be published; SP: Conception or design

of the work, data collection, data analysis and interpretation, drafting the article, final approval of the version to be published; and RS: Structure of the article, revision of the article, final approval of the version to be published.

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