CHAPTER 5

SPATIAL DESIGN AND QUALITY OF LIFE

5.1 INTRODUCTION

Domestic activities are what people do in and around their houses. Daily family activities and use of domestic space are closely connected to individual, social and cultural factors, as well as the spatial dimensions of their dwellings (Circe Gama Monteiro 1997). Social relations and events express themselves through spatial configuration. The spatial pattern of activity as a result of flexible spatial design in different typologies of dwellings in the vernacular context, are analysed through the selected sample dwellings in this section.

5.2 HIERARCHY OF SPACES

5.2.1 Degree of Privacy and Public Interaction

Spaces that establish the privacy level of activities depend upon their distance from the street. The Thinnai and the courtyard act as transition spaces for the entire house. Irrespective of the size and scale of the buildings, the transition is always from the Public zone to the Semi-Public zone, and the Semi-Public zone to the completely Private Zone.
Privacy for the inmates is achieved in two ways. One is from the passersby and people in the street, which is achieved through the thinnai (Figure 5.1). This thinnai space serves for the outsiders and passersby even when the main door of the house is closed. The other is among the family members. This is achieved by the courtyard of the house. A single or two rows of the wooden pillars around this court edging the hall, provides privacy for the inmates within the house (Figure 5.2).

Figure 5.1  Privacy for the inmates and the passersby in the street, achieved through the thinnai

Figure 5.2  Columns, segregating the living space from the courtyard provides privacy within the house
Following the courtyard will be the rooms with total enclosures which are meant for more private and confidential activities. The courtyard and the deep designed transition spaces such as the *thinnai* permit the inmates to be a part of the street activities visually, without losing their privacy.

### 5.2.2 Degree of Enclosures

The nature of the activity is dependent on the level of the enclosure of the spaces and vice versa. The house grows as an extension of the street. It starts from the *thinnai*, and covers the transition spaces (*rezhi*), and the courtyard surrounded by a living space and rooms. The *Thinnai* starts as a semi public space, which belongs both to the house and the street. It facilitates activities between the inmates, neighbors and outsiders or between the outsiders and neighbors. These probabilities of interactive levels make this space more vibrant.

Followed by the *thinnai* is the transition space, and then the courtyard with a living space. Since the courtyard is an open-to-sky space, and has a proximal, visual, and physical link with the street, it generates, accommodates and encourages social but restricted interaction of the inmates with selected/ permitted outsiders within the court space and to some extent around the court. Beyond the court, the house extends to the service yards and rear gardens, and the rear door which is solely restricted to the inmates and permitted servants.

### 5.2.3 Level Differences in the Floors

The level differences in the floors not only help to define boundaries, but define the territory of the spaces and their activities. The raised *thinnai* on both sides in the front of the house helps to have an undisturbed interaction and other activities that happen on a *thinnai*, such as sleeping, teaching, solving disputes, etc.
The minor level difference between the living space and the passage, defines the boundary of the private living space of the house. The houses had very few items of furniture and most of the activities were on the floor. The level differences in the floor facilitate people of different ages to sit, rest or lie down (Figure 5.3). The aged people spent almost their whole day along this courtyard engaging themselves in various activities and in helping the younger ones.

Figure 5.3 Level differences in the floors facilitate different activities

The sunken courtyards define the space strongly and accommodate a variety of activities, to collect the rainwater and to dry grain. It also holds water stored in vessels which helps the cleaning activities. Since it is sunken in level and defined, it has the advantage of undisrupted activities and events which involve many people and sometimes social gatherings. These level differences in the cross section of the house also contribute greatly to the visual privacy of the house from the streets.

5.2.4 Spaces with Varying Ceiling Heights

The varying heights of the roofs and eaves have different impacts on the usage and quality of spaces. Though these houses have considered human scale in their design and details, the lowering and heightening of the ceiling bring out the interpretations and qualities of the way we use these spaces. Smaller spaces like the thinnai have low level roofs, and the main
living spaces have considerable heights for spaces to flow and provide a sense of openness.

In the interiors, the high roof spaces are cooler compared to the low roof spaces. The low roof eaves at the courtyards and at the entry not only serve as a climatic design strategy, but also to facilitate and pull the wind in to the house. The edges of the courtyards, because of the lowering down of the eaves, facilitate the women and children to use them effectively for casual interaction among themselves and with guests/relatives. The courtyard not only drains the rain but also controls the glare from the sun light. It provides psychological comfort for the users, referring to the human scales and their heights. Because of these, people feel a friendly connection between the structure and themselves.

5.2.5 Layers of Elements

The layers of elements like pillars, doors, walls with spaces in between them, and light sandwiched between them, generate different types of spatial quality. These varieties created by the layering of the elements in light, offer options of choosing a space according to the different moods of the user. These elements in different layers also filter light, and create a mysterious healing quality of floor spaces.

Figure 5.4 Repetition of spatial elements in the interior creates visual drama
Since these elements are organized in space as independent repeating elements but in a rhythmic fashion, they create a drama of visual experience by moving, and seem to change positions when one chooses different points of spaces in the house, and particularly in movement as the perspective keeps shifting constantly (Figure 5.4).

5.2.6 Axis and Interlocking Spaces

The front steps, main entry door, transition spaces, and walk way around the corridor, courtyard, service corridors, back garden and exit door, form the main axis of the house. Because of the visual connections established between the rear end of the house and the street, the house becomes more visually open and clear, in terms of mental comfort and security as one can have a look on the main door entry and rear doors (Figure 5.5).

Figure 5.5 Visual connection is established between internal spaces and the street through axial alignment of spaces.

The functional and circulation spaces are clearly segregated in these dwellings. Though these houses are built on lengthy plots, this alignment and axis helps to shrink the space visually. Most of the times this axis is virtual, as one does not always walk along the axis getting up and down in a courtyard. There is always a shift in the axis of the movement of the user, and this shifting in the axis creates a rich spatial experience.
Other spaces are organized in the secondary axis perpendicular to the main axis, keeping the court as the theme. Spaces are always connected, and interlocked, thereby creating a smooth transition of one space into another, maintaining the constant flow of one space type to the other (Figure 5.6), as follows:

- Street and *thinnai* are connected by steps.
- Street and house connected by *thinnai*.
- *Thinnai* and house connected by the transitional space (*rezhi*).
- Court and living space connected by passage around court.
- Court and rooms connected by the main living space.

**Figure 5.6** Linking of spaces creates smooth transition.
5.3 CULTURE AND SPACE

5.3.1 Rituals and Habits

The houses of this region reflect the culture and tradition they are accustomed to. The people were keen in cleansing, and maintaining hygiene in their valuable life. In all the samples of the identified settlements, the semi-private courtyards of the house, irrespective of their size, hold large vessels of water used for ablution purposes.

Figure 5.7 Daily rituals and ablution activities are carried out in the courtyard

The activity in the courtyard keeps on changing with time. In the morning, the inmates conduct prayers and pranayaamas (in Melattur and Someshwarapuram), while in the afternoon the households sit along the courtyard for cutting vegetables and preparing food (in all the three settlements).
The houses that have courtyards in the corner have a different dimension. In Melattur, the houses have the divine *Thulasi Maadam* in the main court or in the secondary court meant for the womenfolk, where the inmates offer prayers and conduct rituals (Figure 5.7). Sometimes it is considered as a drying place for grains, clothes and for wet vessels too.

### 5.3.2 Festivals and Customs

Thanjavur region is a cluster of agrarian communities, besides their other occupations. The month of January gains importance in the life of the people, during the change of season from winter to summer. The houses are white washed with traditional materials and get ready to receive the sunlight. The *Pongal* festival is considered more important for the agricultural community. People conduct prayers and rituals to the Sun God and celebrate the harvest of that month. The houses that have cattle sheds conduct special prayers for the cattles considering them as divine. Every month on the new moon day, they clean the house completely, and make special offerings to their ancestors. The floors of the houses were periodically washed with cow dung to keep them healthy and away from diseases. The whole day they practice dieting and also make offerings to others.

![Figure 5.8 Wide streets accommodate the religious processions during festival seasons.](image-url)
The streets which face the temple or have a temple nearby, get a new dimension during the festivals in the temple. During the temple car arrival, the houses are decorated and people place several offerings in front of their house (Figure 5.8). In Melattur, the Bagavathamela (a drama festival associated with the temple) is conducted for 10 days, which keeps the entire settlement along with the nearby settlements, vibrant, and in a festive mood. The relatives of the villagers dwellers who reside in far off places also come over here and stay for the whole duration of the festival to take part in the events. The people from nearby village come every day to Melattur for the same. This strengthens the community interaction and societal bonding.

Functions in the house like marriages and other similar functions accommodate all the family members in the living area (Figure 5.9). Most of the male members of the gathering have their seats along the edges of the floor and have deep discussions about their family and society too. During the functions, food was served in the living space along this courtyard for the entire gathering.

Figure 5.9 Spacious courtyard along with living space accommodate family functions and get togethers.

While houses having clerestory windows in the living space have a great advantage of more usable floor space, this single space gets different dimensions during different functions. The thinnai of the houses was built to accommodate the strangers and the passerby. Their social life of sharing and
showing care was reflected in this space. It is a space of interaction for both
the inmates and outsiders. In the evenings different aged people gather on
their thinnaįs to have interactions among themselves and encourage social
life.

5.3.3 Values and Systems

The culturally bound people have a great belief in spiritual aspects.
Their houses have the front and rear doors axially arranged. This is to invite
Positive energy inside the house and to destroy the negativity. Every day the
sunrise plays a major role in their life. The women of the society get up very
early in the morning and perform rituals to God. This helps them to take in
fresh air and to receive powerful cosmic energies. Their planning and spatial
arrangement always has a directional basis. Their prime consideration will be
the sunrise and the sunset. The activities in the house also depend on this.
They always give more importance to cleanliness and hygiene in their life.
Every Friday the houses are cleaned completely and they offer special prayers
on that day.

In Melattur, the thinnaį of some of the houses turns into
padasaalas, where the traditional Veda is taught. The Vedic (learned) Guru
teaches his students at a particular time in the day. Sometimes it happens in
the living area of the house adjacent to courtyard. The simplicity in their life
is reflected in their expression and in their Architecture.

5.4 Activity and Space

The semi public zone of the dwelling which includes the raised
platform (Thinnaį) and the buffer room (Rezhi), holds activities that enhance
social interaction and societal bonding with the neighbours and sometimes
with the strangers. The semi private zone of the dwelling including the main
courtyard, the passages around it and the service courtyard hold activities that facilitate family interaction and interaction with the relatives. The private zone of the dwelling includes the living space, private rooms and kitchen, which are accessible only to the family members and holds specific activities.

As the spaces of a vernacular dwelling are highly flexible in nature, the location of the space, the degree of lighting and the level of privacy decide the activity in a particular space at a particular time.

5.4.1 Transition Spaces

The raised platform (Thinnai) is the main space which links the house with the community. As the houses have introverted planning, the entire settlement is tied together only by means of these thinnai spaces. They are the connecting elements of the structures with the streets, unlike the modern houses which stand isolated and disconnected in a street or layout.

“Isolated buildings are the symptoms of a sick society”

*(Sir Christopher Alexander in Pattern Language)*

The Thinnai hosts variety of activities by people of different age groups at different times. Traditionally, the Thinnai is the public space of the house which connects the house with its exterior, and is normally used by the inmates, especially the elders to socialize with their neighbours. It was also meant for travelers, strangers and visitors to relax and take rest during their long travel, as there was no vehicular transport available in those days. In settlements of the Thanjavur region, where there are temple festivals conducted frequently, these spaces are also used by strangers who stay there for a few days to take part in the festivals.
During the personal interaction with the inmates of the dwellings, it is found that the cultural aspects play a vital role in the usage of spaces. The *thinnai* is used only by the men of the family in the mornings up to around 9 AM, and in the evening from 6 PM onwards. The womenfolk use the space for varying purposes only when the men are out for work. During the hot summer season, it is the sleeping area for men while ladies sleep in the buffer room *Rezhi*.

The buffer zone (*Rezhi*) provides the transition for the inmates from the exterior to the interior or vice versa. It is interesting to note that the grain (mainly paddy) storage unit is located in this space which is slightly hidden. The main reason for this is that, the grain storage will be under the safe custody of the aged men of the house, who will have a permanent sleeping area here, after they retire from family life.

### 5.4.2 Courtyards

Open spaces in our culture are more powerful and frequently used ones. These open spaces were not built to be left open and unused. Rather, these are the spaces which contain more activities and serve as energy machines. Sleeping, resting, eating and even many rituals, festivals and family functions are held in the courtyard. More personal open to sky spaces and less closed spaces formed the pattern of living.

The courtyard (*Mutram*), being the focal point of the dwelling in the introverted planning, acts as the activity generator. As it has visual connection with all the spaces of the dwelling, it accommodates a variety of activities by people of different age groups, which depends mainly on the size of the courtyard. The multiplicity of the courtyards is due mainly to the family traditions and customs. The culture of the Brahmins and other upper community people insists on the women of the family performing certain
daily rituals (like *Thulsi pooja*), which demand an exclusive space for them in their private zone. This leads to the secondary or kitchen courtyard. The service court is mainly to accommodate the servants and house maids, to carry out their work without disturbing the main activities.

By comparing the courtyards of Typology 1 and typology 2, it is found that in typology 1, the courtyards are mostly square in shape, located exactly at the centre (of the main portion of the dwelling in the case of multiple courtyard dwellings) and connecting all the spaces of the dwelling together as a focal element. In typology 2, though they act as the focal element of the dwellings, the linear and rectangular shape with a slightly shifted axis of the courtyards create a hierarchy/sequence of spaces as they are located one after the other.

In typology 3, the central space of the dwelling has a double ceiling with clerestory windows above, instead of an open-to-sky space. Performing religious rituals or family functions, especially marriages, are the main activities in this space. So the central living space is made large enough to accommodate the family gathering. The clerestorey windows above facilitate the escaping of smoke and the heated air from the central double height space.

The passage (*Thazhvaram*) around the courtyard is the main movement space in the dwelling, which is used by all types of people, and connects all parts of the dwelling together.

As this receives filtered light comfortable for the users, the specific activity spaces such as the living room and kitchen have their extended activities in the passage located nearby. The dining and cooking related activity are extended to the passage area located next to it. The formal receiving of guests and visitors happens in the passage area located around the living area. It acts as a buffer layer to protect the surrounding habitable spaces
from drastically changing climatic conditions. The passage around the court acts as gathering space, for the women to take part in the family functions or any rituals performed in the courtyard. During the rainy season, it acts as a protected gallery space for the inmates to get visually connected with nature and enjoy the experience.

In typology 1, the sample dwelling in Melattur has three courtyards (multiple courtyard dwelling). In addition to the main central court, the dwelling has a kitchen court and a service court. The kitchen court is small in size, has a Thulsi plant at the centre, and is used only by the women of the house to perform their daily ritual (Brahmin community). The service court is the one where servants carryout the household activities, such as washing and drying of vessels and cloths, drawing of water from the well located in the courtyard, and storing of fuel wood and related things in the semi open space located nearby. This service court is accessible directly from the main entrance through a passage, without disturbing the other spaces of the house. It also has an access from the kitchen to facilitate the women to use the service court at times.

5.4.3 Private Rooms

The private room (camera ull) in all the typologies seen in these settlements is the important space of the dwellings mainly meant for storage activities. Though we have three major typologies of dwellings in the Thanjavur region, the activities in certain spaces of the dwellings (irrespective of the typology) are very specific, and contextual to the settlement in which they are located. The private rooms in Vallam are mainly used for storing agricultural produce and the equipments, whereas in Someshwarapuram, they are used for the private activities of the elders and storing house hold things.
In Melattur, the private rooms are used to store the valuables of the family. The chest and locker is kept in these rooms, and only the elders are allowed to use these rooms. If the house has more than one room, then the remaining rooms are used for accommodating the elders and aged people, for private activities, and the confidential matters of the family are discussed only here. So, the younger ones and children are not normally allowed inside.

5.4.4 Kitchen

The Kitchen is the only space in all the typologies which has rigid and fixed activities attached to it. It is strictly the women’s area where no men will be allowed to enter (in all the typologies of dwellings). In typology 2 and typology 3 dwellings, the dwellings were provided with additional cooking spaces (secondary kitchens) along with secondary courtyards to facilitate the servants and others to cook (Figure 5.10), during large gatherings or any other family functions.

Figure 5.10 Kitchen Courtyard mainly used by the women and servants
### Table 5.1 Activity Analysis of different spaces of sample dwellings

<table>
<thead>
<tr>
<th>Type of Space</th>
<th>Nature of space</th>
<th>Time</th>
<th>Activities</th>
<th>Users</th>
<th>Conditions that facilitate activities</th>
<th>Spatial Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raised Platform</td>
<td>Public</td>
<td>Morning up to 8 AM</td>
<td>Socializing with neighbours</td>
<td>Elders / Aged people</td>
<td>Provides: • Fully shaded space with filtered light • Cuts off direct heat • Visual contact with the street</td>
<td>• Deep recessed space allows filtered light.</td>
</tr>
<tr>
<td>(Thinnai)</td>
<td></td>
<td>Noon from 11AM-3PM</td>
<td>Socializing with neighbours</td>
<td>Women / Aged people</td>
<td></td>
<td>• Projected eaves (0.7m) provide complete shading of the thinnai throughout the day.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Interaction with Street vendors</td>
<td>Women</td>
<td></td>
<td>• Connects the exterior and interior thus enhances interaction at the family and community levels.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Relaxation and Resting</td>
<td>Visitors, Strangers.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Evening 4PM – 6PM</td>
<td>Socializing with neighbours</td>
<td>Men</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Night 7PM onwards</td>
<td>Relaxation, dining and sleeping (occasionally)</td>
<td>Whole family</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>--</td>
<td>Passer-bys &amp; strangers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Courtyard</td>
<td>Semi private</td>
<td>Morning up to 8 AM</td>
<td>Brushing, bathing and other morning activities</td>
<td>Children and men</td>
<td>• Aligned along the axis and provides good air movement.</td>
<td>• The focal point of the dwelling and acts as an activity generator.</td>
</tr>
<tr>
<td>(Mutram)</td>
<td></td>
<td></td>
<td>Washing and drying vessels, drying grains, etc.</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Noon from 11AM-3PM</td>
<td>--</td>
<td>Women</td>
<td></td>
<td>• Allows direct sunlight inside the house.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>--</td>
<td>Men and elders</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Evening 4pm – 6pm</td>
<td>Children play under monitoring</td>
<td>Children</td>
<td></td>
<td>Seasons and moods of the outside world could be conveyed to the inmates through courtyards by bringing nature inside.</td>
</tr>
<tr>
<td>Type of Space</td>
<td>Nature of space</td>
<td>Time</td>
<td>Activities</td>
<td>Users</td>
<td>Conditions that facilitate activities</td>
<td>Spatial Attributes</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Vallam</td>
<td>Someshwar apuram</td>
<td>Melattur</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Noon from 11AM-3PM</td>
<td>Movement space</td>
<td>Preparatory work for cooking (near kitchen)</td>
<td>--</td>
<td>Women</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Noon from 11AM-3PM</td>
<td>Movement space</td>
<td>--</td>
<td>Men</td>
<td>• Location of the living area adjacent to the court enables the space to get maximum benefit out of the court.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Evening 4PM – 6PM</td>
<td>House hold activities</td>
<td>Socializing and Seating</td>
<td>Women and Elders</td>
<td>• High ceiling provides a good amount of air flow.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Night 7PM onwards</td>
<td>Movement space</td>
<td>Socializing and Seating</td>
<td>Whole family</td>
<td>• Flexibility of spaces enabled the hall to accommodate variety of activities; thus facilitates the interaction at the family level to a greater extent.</td>
</tr>
<tr>
<td>Living Hall (Koodam)</td>
<td>Private</td>
<td>Morning up to 8 AM</td>
<td>Preparatory activities for daily work</td>
<td>Whole family</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Noon from 11AM-3PM</td>
<td>Family household activities. Sleeping</td>
<td>Women Elders</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Evening 4pm – 6pm</td>
<td>Studying and related activities</td>
<td>Students and adults</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Night 7pm-onwards</td>
<td>Relaxation, dining and sleeping</td>
<td>Whole family</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service court</td>
<td>Semi private</td>
<td>Morning &amp; 7AM - Evening 5PM</td>
<td>Washing, cleaning and other House hold activities</td>
<td>Women and Servants</td>
<td>Segregated from the main activity zones</td>
<td>Size and location facilitated the service community to use the space.</td>
</tr>
</tbody>
</table>
5.5. **NATURE AND SPACE**

In traditional Indian architecture, harmony with nature was an important design element. These dwelling forms have an important attribute of making its inmates comfortable in extreme climatic conditions. Overall, a harmonious balance between built form, climate and lifestyle was achieved.

![Figure 5.1](image1.jpg)

**Figure 5.11 Courtyard connects the inmates of the house directly with nature**

In addition to this, bringing natural elements inside the dwelling unit had been created effortlessly by the builders of the past. Through the small courtyard, the inhabitants of the house could have their personalized sky, sun, moon and rain which make the dwelling a micro-cosmos (Figure 5.11). This, in turn, facilitates the designing of the micro climate, adaptation of passive energy techniques, etc.

Vernacular architecture sets an example of harmony between dwellings, dwellers and the physical environment. These kinds of structures evolve over time to reflect the environmental, cultural and historical context.
in which they exist. It represents solutions which show the maximum adaptability and flexibility, and thus sets an example for sustainability. For sustainable solutions, environment and traditions are not supplementary to each other, but pre-requisites.

5.5.1 Light as Organizer of Space

The spatial arrangement of the house is also based on the sunlight. The sunrise, sunset and the sun’s path play a major role. On the whole, the streets are arranged in the East-West direction and the houses are arranged in the North-South direction. In some places, the streets end with a temple, and mostly the temple will be facing the East. The houses were extended to the streets through the thinnai. This element gradually cut down the hot sun and facilitated the usage of space effectively.

![Figure 5.12 Spatial effects due to changing light conditions](image)

This transition space made a considerable difference in temperature, inside the house. The interior arrangement varies according to the typology.
In typology 1 dwellings, courtyard is in the prime centre, while considering the size of the whole house, and it is a little off-centred while considering the Living Area. The main reason for a change in position is due to the Sun path. Mostly the space around the courtyard on the South and East side will be smaller, compared to the other two. This is to cut down the hot sun from entering inside the house. Also, these living areas have deep sloped roofs, which eventually reflect the incident sunlight and provide more usable space at one end. The Eastern light has a lot of positive energy and hence, they allowed that to enter more into the house.

In Typology2 dwellings, the courtyard is on one side of the house. It will be mostly attached to the long edge wall of the house. Apart from being a source of light, the courtyard gets new dimensions in these houses (Figure 5.12). They also use this space for utility purposes. The longitudinal space adjacent to the courtyard will be of a smaller size, while the other will be of more depth with increased usable space.

Typology 3 dwellings do not have completely open to sky spaces, while they allow natural light through clerestorey windows. Here the living area will be of double height volume, and the windows will be above the ground floor roof. This arrangement enhances them to use more usable floor space. The light that enters through these clearstorey windows is filtered and makes the space more lively. Eventually the difference in temperature from the outside can also be felt.

5.5.2 Light as activity generator

Human activities are mostly dependent on the availability of light. It stimulates or affects the nature, type and speed of one’s activity. The courtyards of the house act as the main source of light inside. Our various day-to-day activities require various intensities of light. The living area of the house usually has a gradation of light starting from the open to the sky courtyards. For activities that need more intensity of light such as reading,
people adhere themselves along the courtyard, while for just relaxing and to have a leisure talk they keep a little away from the courtyard. For lying down and taking rest, they approach the less or no light area. But, here too, they introduced skylights in the roof to have the minimum of light inside the space.

The different spaces of the house experience different intensities of light. One can see a play of light and darkness inside the house. This mixed feeling brings in a psychological balance to the user. The floors of the house expose a tonal variation of incident light inside. Apart from the courtyards and skylights the roof structure or roof layers also play a major role in lighting. The construction of sloping roofs with wooden/bamboo rafters produces an air gap between the wall and the roof. The reflected light from the outside ground enters the house through these gaps. At the darker end of the living spaces a cool and subtle light enters inside to light the space. These gradations of light inside the house make it lively, and make the user more comfortable in usage.

5.5.3 Aspects of Nature

A courtyard brings in the nature and our surroundings inside. We can experience the life inside these houses. The drama of light, play of wind, and the sounds of rain add beauty and value to our life. The typology 1 (central courtyard) houses introduced the water vessels or water chambers in their courtyards. These act as a storing chamber during the rainy season. The sloped roofs allow the pouring rain to be collected, and it is used for various utility purposes. During summer, the winds passing through courtyard produce cool breeze due to presence of these water chambers, while the houses with corner courtyards make the courtyard more green by introducing shrubs and wall creepers which grow along the edge wall. These kinds of additions in the space, increase its value and enhance the comfort inside the house. A courtyard establishes a strong connection with the infinite sky. The cutout frames and the boundless sky bring the changes in the seasons and time inside the house.
5.6 ELEMENTS AND SPACE

5.6.1 Columns

“Columns” in traditional houses were not only used as structural elements but also as an element to express the style of the house in which it is made. The design and the materials used in the columns define the simplicity, and also add beauty to the interiors. It is observed in all the sample dwellings, that the size and the material used, define the significance of the pillars, and in turn, the significance of the space. The simple and slender stone columns are used to define the edge of the Courtyard (Figure 5.13) whereas the polished thick wooden columns are used to divide the living area from the passage around.

Since the traditional houses have a court/atrium space in the centre, columns are provided at the periphery of the open space. As these are centralized for the viewer, decorative designs at the capitals of these columns were done for aesthetics in the later days.

5.6.2 Swing (Oonjal)

The Swing (Oonjal) is one of the status symbols of the family. It establishes the power and authority of a person who uses it, among the family
members. Officially, the elders and family head own this, and the others are allowed to use it only in their absence.

![Figure 5.14 Swing in the living space as status symbol](image)

This swing is usually kept in the living space of a house (Figure 5.14), where it is used not only as a traditional element, but also as a useful element, for interaction with other people. Its change in level and its movement in air, make it a more enjoyable element also. The interesting fact about this is, it is viewed and used differently by the people of different age groups; a child sees it as an element to have fun, as where an old aged person uses it as an element of relaxation. While an elder or aged person occupies the *oonjal*, the younger ones or children of the family gather to hear his words. The elder used to narrate stories and make the kids involved in the space. In the other scenario, it is used by aged people for social interaction and to address social gatherings. The head of the family will be in interaction with other similar people of the society, marking the space as a meeting space for solving issues, and to discuss the welfare of the society. Thus the space becomes vibrant and lively in nature.

### 5.6.3 Sacred Plant ("Thulasi" madam)

"Thulasi", a sacred herbal plant is worshipped by the traditional Hindus. It is mostly kept in the centre of the courtyard, in the case of central
courtyard dwellings, while the corner courtyard houses make use of the edge wall and align the *maadam* with that (Figure 5.15). In dwellings with multiple courtyards, it is normally located in the secondary or kitchen courtyard, which is mostly used by the women of the family. It is believed that *Thulasi maadam* will not allow negative energies inside the house. Hence, the ritual is being practiced in a large number of houses of the vernacular settlements, even today. It is kept a little raised from the floor level. The family of such houses makes offerings to the “*Thulasi*” plant, early in the morning with sunrise, which spreads positive rays for their healthy lives. The *maadam* will be axially aligned to the entrance and rear doors in many houses. Depending upon its location, the idols or the pictures of lord will be placed axially. Its location influences the adjacent spaces in the house.

![Figure 5.15 Sacred Plant ‘Thulsi’ in the courtyard space as the focal element for daily morning ritual](image)

5.6.4  **Built in House Hold Appliances**

It is found in all the samples, that the “*Grinding stones*” used for the purpose of grinding cereals, made of stones are directly attached on the floor (or the edges of the kitchen court in multiple courtyard dwellings), where they get good light, and the level differences enable easy usage of the element (Figure 5.16).
5.6.5 Modern Interventions

In all the sample dwellings, i.e., traditional houses, where they have an open courtyard at the centre of the house, most of the social activities are done in and around the courtyard. The courtyard has taken the role of a multi-purpose space. Apart from being the source of light and ventilation, the space has been used for utility purposes. The clothes were washed using modern machines and dried here. The households make use of this space as an interaction space. The television set is placed adjacent to the courtyards and the people enjoying in watching it for entertainment.

5.7 SUMMARY

The sample dwellings belong to different typologies have the spaces which accommodate multiple activities at different point of time. The cultural and traditional values attached with the families and in turn with the societies, dictate the different uses of the spaces. The sequence of spaces in connection with the courtyards is the main criteria which decide the activities around. The various architectural and functional elements play a vital role in imparting characteristic to the spaces nearby. They generate and activate certain activities at some specific locations which in turn make the entire dwelling vibrant. Each dwelling has its own micro cosmos with the integration of nature into the dwellings mainly through the courtyards.