TRANSFORMATION OF SPACES IN OCCUPATION BASED COMMUNITY HOUSING

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Abstract: Living spaces have been influenced by various factors since the evolution of human beings. Initially, as a barrier from climate and wild animals, through a social living clusters, the houses are now far more than necessity but status symbols in the current trends. But the uniqueness to any built form arrives from the basic necessity of its users. This study is to focus on one such influencing factor which is occupation which had played a vital role in deciding the allocation and matrix of spaces, specific to the artisans of South India. The study covers the transformation process in the past three decades where the originally dedicated work and live spaces take a swirl and starts neglecting the importance of work spaces as the occupation are endangered or at a decline. This is analyzed with live studies at few places in and around Chennai, trying to draw reasons for transformations.

Index Terms – **Settlement Pattern, Community Housing, Spatial Transformation, Culture.**

I. INTRODUCTION

The aim of this paper is to explore the characteristics of spaces in a settlement as well as individual dwelling, transforming through ages, losing or gaining its identity with reference to the occupation of the dweller. The scope is to identify the transformation chronologies of architecture influenced by the owner's occupation limiting the target community to artisans of folk art and culture.

II. HUMAN SETTLEMENT

2.1 Shelter

Shelter is one of the basic necessities of human being. Man settled in tree branches, caves or pits or rock cut hiding places. These shelter places become the most concrete expressions of human cultural activity and assume various forms as well as names. (Singh R. Y., 1994). Houses, dwellings, group of dwellings or houses, abodes, habitations – all form human habitat, more specifically, SETTLEMENTS.

2.2 Classification of Settlements

Singh R. Y. (1994) classifies the settlements under different categories on the basis of Setting, Spatial distance between dwellings and Occupation of setters (Function based).

2.3 Factors influencing Settlement

The pattern of human settlement is practically influenced by:

- Physical features – relief structure, climate, availability of water
- Cultural an ethnic factors – social structure, caste and religion
- Security factors – defence against thefts, robberies, etc.

III. CULTURE AND BUILT-ENVIRONMENT

3.1 Culture

Culture encompasses the social behavior and norms found in human societies, as well as, the knowledge, beliefs, arts, law, customs, capabilities and habits of the individuals in these groups. Culture is the degree to which the individual have cultivated a particular level of sophistication in Arts, Science, Education or Manners.

3.2 Built-environment

Built environment or spaces includes definite material elements, especially a base, that allow one to perceive its boundaries and is perceived as a whole, serves human functions of habitation, shelter or circulation, and is intentionally built or appropriated by man to serve such functions.

3.3 Impact of Culture on Built-environment

Indian villages differ from others in some respects and internal structure. The varied environmental conditions in conjunction with the cultural variations and many thousand years of living history enrich diversity of settlements. In the case of traditional built environment, the user is the designer, builder, landscape specialist, artist and craftsman. The impact is seen at Settlement level as well as dwelling unit level.

IV. CASE STUDIES

The literature studies with the streamlined parameters can be studied with reference to few live studies. The areas identified for study is looked in and around the metropolitan city of Chennai. Different artisan communities were overviewed which help us to understand the concept in detail.

4.1 Case Study 1 – Chintadripet, Chennai

4.1.1 Settlement Level Analysis

Figure 1 – Street view of settlement

The settlement is analyzed with reference to the original intention or planning and the current scenario, which is tabulated below (Table 1).

Table 1 – Settlement level analysis – Chintadripet

Description	Original Intent	Present Scenario
Structure of settlement	Linear settlement – Laid along the Iyya Mudali street with linear plot flanged on either side	No change seen
Social organization	The entire linear street was occupied by the same community	The houses in between are demolished and rebuilt to serve different purposes creating random gaps within the community

4.1.2 Built-space Analysis

The traditional buildings in the settlement are Neo-classical and Indo-saracenic styles. But less than half of the original structures still remain here. However, the renovated buildings adapt the traditional architecture to the maximum efficiency, managing to adapt with the old style.

Table 2 – Built-space analysis – Chintadripet

| Description	Original Intent	Present Scenario
Spatial organization	No strict restriction between occupational and living spaces	Only the person managing the business accesses the work space
Building typology and materials	Burnt clay bricks, Madras terrace roof	Retained structures are renovated with minimal interventions like tile flooring, addition of toilets. Joinery is retained. New buildings are entirely out of context.
Market spaces	The work space in the frontage acts as a display and retail space too	Customer specific goods are produced now, reducing the need for dedicated marketing spaces
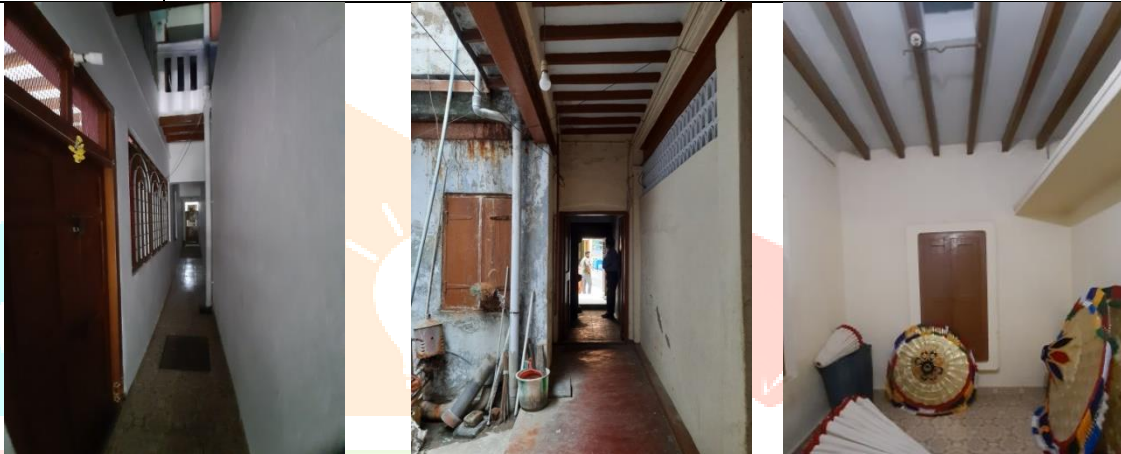
Figure 2 – Usage of corridors and courtyards, jaalis and glass architraves for lighting and madras terrace roofing technique

4.1.3 Open-space Analysis

Traditionally the street itself was used for making large scale umbrellas and other items like palanquins, etc. This was a shared open space. Apart from this, very small cut-outs in the building mass served as private open spaces which were the only source of lighting and ventilation. At present, most activities are done indoor. Communal open space is not available. Public parks and temple grounds are used for such activities.

4.2 Case Study 2 – Kosapet, Chennai

4.2.1 Settlement Level Analysis

The settlement is analysed with reference to the original intention or planning and the current scenario, which is tabulated below.

Table 3 – Settlement level analysis – Kosapet

Description	Original Intent	Present Scenario
Structure of settlement	Compact and clustered	Haphazard settlement without clear demarcation between plots
Social organization	The entire settlement was occupied by the same community	Private open spaces initially used for occupational purposes are sold to other people creating a mixed user community

4.2.2 Built-space Analysis

Figure 3 – Niches for placing the clay idol – a cultural element of the potters community, a renovated house

Table 4 – Built-space analysis – Kosapet

Description	Original Intent	Present Scenario
Spatial organization	No strict restriction between occupational and living spaces	Only the person managing the business accesses the work space
Building typology and materials	Clay brick walls and thatch roof with semi-open spaces for occupational activities	The kutcha elements of the houses are replaced with permanent or semi-permanent elements
Market spaces	No separate market spaces. Whole sale dealers bought goods in bulk.	No separate market spaces. Few buyers walk-in for individual shopping apart from wholesale dealers.

4.2.3 Open-space Analysis

Traditionally, most of the open space activities were carried out in private spaces except for large scale production at times. At present, most activities are done indoor. Community temple ground is used for open space activities now as there is no much of activity taking place.

4.3 Case Study 3 – Vedapalayam (Uthiramerur), Kanchipuram

4.3.1 Settlement Level Analysis

Figure 4 – Transformation of settlement pattern from clustered to linear along the highway

Table 5 – Settlement level analysis – Vedapalayam

Description	Original Intent	Present Scenario
Structure of settlement	Nuclear settlement – semi-circular with lake on one side	Linear settlement along the highway
Social organization	The potters community contributed more than half of the village population and lived in a confined area as a community	Change in village caste based hierarchy system made people to settle at comfortable areas depleting community living

4.3.2 Built-space Analysis

Table 6 – Built-space analysis – Vedapalayam

Description	Original Intent	Present Scenario
Spatial organization	No strict restriction between occupational and living spaces	Only the person managing the business accesses the work space
Building typology and materials	Clay brick walls and thatch roof with semi-open spaces for occupational activities	Old buildings are renovated or demolished or incremented as required
Market spaces	Produced items are displayed and sold in the weekly bazaar 'santhai' which absorbs maximum population from the villages	Apart from santhai, few dealers procure products against bulk orders directly

Figure 5 – Transformation of workspaces becoming different from living spaces (Top), Incremental spaces being added with the growing family/occupation (Bottom)

4.3.3 Open-space Analysis

Community open spaces were not in practise since the beginning. Availability of land made private spaces enough for occupational activities. However, the lake and other public areas were used individually in no particular order with mutual understanding among the community. But, at present, no such public spaces are being in use. The weekly bazaar 'santhai' happens in an open space with temporary sheds, assigned by monthly or weekly auctions for the particular piece of land.

V. FINDINGS

5.1 Comparison of findings from Literature and Case study

Since our study involves analysing the scenario of artisans and their built structures in present day, and no such variety of documentation were available in literature, the influencing parameters are compared with the case studies in the table below (Table 7). The parameters are further concentrated to provide a hint for its role and importance in the further part of thesis.

Table 7 – Comparison of findings from literature and case study

S. No.	Parameter	Case study	To find
1	Social stratification	Identified in all case with encroachments	Possibilities for community living
2	Spatial patters	Linear, clustered and grid pattered settlements	Pattern satisfying the particular type of occupation
3	Socio-economics	Capacity for renovations and additions differ within the community	Flexible modules, socio-economic matrix
4	Vernacular architecture	Minimum iconic style	Borrow vernacular design elements

5	Built-heritage	Not considered much due to the requirements for the changing needs	Percentage and frequency of changes
6	Land value	Increased real estate price lead to the decrease in open spaces	Work area flexibility in vertical distribution of living spaces
7	Functional interdependency	Work and live spaces were not differentiated much but transformed to complete independent spaces over the years	Work-live matrix
8	Cultural industry	Native artisans well known only among the surrounding districts	Crafts making procedure – traditional and suitable alternate methods
9	Modern context	Nature of art streamlined as per modern day requirement	Demand and future of the industry
10	ICT	Digital learning and incorporation in occupation taking a lead	Exposure of workers to technology

5.2 Reasons for Transformation

With reference to the studies in different areas, the reasons identified in all the cases are as below:

- Industrialisation
- Urbanisation
- Education
- Transportation
- Real estate
- Social advancements

VI. CONCLUSION

With the world on the road to digitalisation, it is tough to preserve the history and culture of our motherland.

Based on the analysis of the above studies, it is inferred that transformation is constant and the intensity changes from time to time. Self-built houses and settlements are now moving towards a professional designed environment. Hence, it is the responsibility of architects and planners to project a sustainable settlement pattern in prime focus on the major influencing patterns of the daily routine of the user in dwelling unit level and settlement level.

REFERENCES

[1] Singh, R. Y. (1994). Geography of Settlement. Rawat Publication, Jaipur, India.

[2] Rapoport, A. (2005). Culture, Architecture, and Design. Locke Science Publishing Company, Inc., USA.

[3] Daketi Srinivas (2015). Impact of Culture on Rural Built Environment. International Conference on IT Architecture and Mechanical Engineering (ICITAME'2015).

[4] Vijayasree, V. (2018). Understanding and Analysis of Weaver's Habitat, Kanchipuram – A Vernacular Study. International Journal of Engineering Sciences and Research Technology.