

Study on people's Psychodynamic influences towards various spaces in Tamil-Nadu

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Abstract

In modern communities' people are interested in customized housing and the design of building structures/ Houses which are primarily to fulfill the basic need i.e., Shelter. For Found that the people have a deeper negative connotation on to their living space and particularly towards accepting the attributes of the different spaces in housing both mentally and physically. However, people at large, reject certain housing in Tamil-Nadu. It is learned that there are definite internal processes that influence the people's attitudes toward rejecting the certain building structure as their physical setting for living. In light of this fact, this paper attempts to study and explore the psychodynamic factors that influence the rejection of Low-cost houses in Tamil-Nadu In pursuit of this, the people's psychodynamic aspects like: needs, drives, emotions, thoughts, feelings, rational thinking, cognition, anxiety, pride, desires are assessed and analyzed by ANOVA analysis – Minitab to verify the variation between in the hierarchy of the factors and also ranked by applying Henry garret ranking method. The results indicate that certain psychodynamic components are strongly responsible for rejection and whereas certain others are moderate in rejecting and few others are low in influencing the rejection of housing and their spaces by people in Tamil-Nadu.

I INTRODUCTION

Architecture means to art or practice of designing and constructing buildings. It had evolved over centuries and histories and distinct cultures. The architecture was classified into a few types i.e., Commercial Architecture, Residential Architecture, Sustainable / Green Design architecture, Industrial architecture, Conservation Architecture, Landscape architecture, and Vernacular architecture. Vernacular architecture is referred to communal, provincial, and regional architecture. The vernacular design was recognized as a sort of area or regional improvement utilizing most conventional and topographical materials and methods. It varies from small housing to multistore buildings. The design and development of the structures are made based on geographical conditions, Environmental elements, and regional aspects. Thus, they are novel to better places on the

planet, turning out to be even a method for acknowledging structure and architecture. However south Indian vernacular architecture plays a diverse part in the history of architecture. And based on the southern Indian culture, climate and environment mainly housing contains Water Bodies, Courtyards, Verandahs, balconies, and Jallis. Every one of these has its utilization and remaking to make the vernacular design more feasible and adaptable. Home has a crucial role in our daily lives, which connects with components of culture in a specific context of place and time. People are connected to their homes by affective and emotional bonds. Social and individual connections are displayed in spatial and mental terms at whatever point individuals use objects and the actual space in the home to have social communication and widespread support. It is inferred from previous studies that the home can qualify as a symbolic

representation of certain relationships, associated with memories of the past transaction and bonds between people. Nevertheless, all these interactions that take place at home happen within a cultural framework of that place people, and time. The cultural components like Arts, science, technology, values, signs, symbols, social customs, rituals traditions, and language plays a key role in propelling the interaction, transaction, and daily activities that happen at Home. Thereby, the home is perceived as central in reflecting a variety of social and cultural values considering individual and family identities

2 BACKGROUND STUDY:

1) History of Southern Vernacular Architecture:

The principles of vernacular architecture and integrating them with contemporary knowledge and technology. It elucidates the evolution of vernacular architecture from the Paleolithic Period to Neolithic Period. The paleolithic period cites the stone age and period of 2.58 million years ago. During this period human remains stayed at Huts, Molodova, Dolnvestonice, and Tents Which is A more complex looked-for, wood structure covered with skins, held set up by harsh oval mammoth bones, encasing 15 hearths. Whereas housing architecture magnifies to huts and pit houses these structures are comprised of bamboos and plans were trapezoidal with the size varying from 5.5 m – 30 m and entrance provided widely facing the water bodies and floors were plastered with lime with posts were reinforced with stones. in Mesolithic Period. However, housing was enhanced to Timber frame houses and longhouses in Neolithic Period i.e., end of the stone age[1].

2) Usage of different spaces in architecture:

The usability of any architectural things with objective and subjective analysis. Depends on multidisciplinary construction. Ergonomics of the built environment place's leading role in usage for work services leisure, quality of life, and safety. However, the impact of the

architecture on the mindset of different people with their perceptions. And Interior design refers to optimizing the space, environmental comfort which helps for ease of living. Accessibility, Readability, orientability, safety, Environmental comfort, and Functionality makes people emotionally to the housing. key angles to think about in the plan of design spaces overall and exhibit their cozy relationship with the clients' prerequisites and their abilities to arrive at their objectives as agreeably as could be expected.

Few studies attempt to demonstrate the spatial usage and physical attributes of Thinnai and the Transaction between the Built environment Occupant's collective environment. Available spatial order, physical settings of permanent feature variable, semi-permanent feature, and ambiance to conduct the function in the physical space. Results by Prem Kumar indicate that the spatial usage and attributes of There are significant in promoting the Helping behavior of the occupants besides the other uncontrolled variables[3]

The central courtyard is a significant element in the customary houses which is liable for forming and fostering the enthusiastic part of the inhabitants. The yard structure is made by the spatial articulation achieved by ordinary materials, normal parts, and its disposition gave the various limits of the porch which bangs advance a good impact achieving supportive sentiments among the inhabitants. The focal patio is where the occupants of the setting are most often drawn in with normal development. In this way yard's design articulation is firmly related to the mental course of the inhabitants[4]. All vernacular design structures are made for answering specific requirements, characterized living characteristics, and societies' ways of life made by them. Lodging spaces are tweaked and picked considering the need and ease of use of the tenants Mohammad Taghi Nazarpour tells that Understanding the vernacular design can bring about an understanding of the public, a general public that was resistant to nature since its creation[5]

3) Psychodynamics

Architectural Psychology is a branch of environmental or ecological psychology. It is the interaction between human and their environment. It combines traditional psychology, engineering, architecture, domestic planning, and more to guide the people in better designing, specific features of the buildings according to the requirements[6]. Mentally people examine Privacy, Personal Space, and Territory from engineering, and considering a spot plan either for seclusion or swarming Maslow's progressive system of necessities will be accomplished[7]. Lodging is a basic need of people and mental sentiments about a structure differ starting with one and then onto the next. And architects should take these psychological feelings as a priority in designing them and building houses[8]. Based on the survey conducted among the people of different cities to explore significant requirements in the perspective of their residential environment to elevate the quality of life it was found that based on locations and the environment the behavior of residents will change from one place to another [9].

4) Henry

Henry garret's system is used to measure percent position and to check the places of different components it is used to sort out t most basic part and which influences his responders with the help of Garrett's Table, the percent position evaluated is changed over into scores[10]. Ashok Kumar Sahoo et al utilized the Garrett Scoring Techniques for Assessment of the Farmer Problems in Obtaining and Repayment of Agricultural Credit. The author analyzed the data of 200 people to understand the predominant factor. This respective study look seems suitable for adaptation.[11]

5) Anova

Analysis of variance (ANOVA) is utilized to check the method for various gatherings and contrast and them one another. It utilizes F-Test to evaluate the equity of means measurably. It is utilized to validate ate the means are genuinely altogether not the same as one another or indistinguishable from each other[12].

3 METHODOLOGY

1) Southern Vernacular Architecture:

Architecture is the essential requirement for individuals who achieve a scope of exercises including present moment and long-haul socio-social objectives that support human home on our planet. Design is constantly seen because of a social reason sifted through upsides of social parts. Housing spaces gained gigantic significance in architecture. These spaces were got well known as it fundamentally has an impact on the approach to everyday life. This space helps in fulfilling explicit mental and psychical necessities. This substantial number of spaces are different in various kinds of design. The architecture evolved based on local climatic conditions, geographic conditions, culture, customs, and live hoods. The different engineering shows various highlights given the necessities of individuals around there. It additionally changes with time-sensitive on the speed of development at that spot. It has been upgrading in many ways over many years anyway this development was occurring for the advantage and simplicity of people. However, every architecture has a unique feature that makes it out from the rest. For instant Mughal architecture, show contrasts their own culture and customs in all constructions they do. In the Same way, southern vernacular good huge recognition as it was based on traditions of India. Vernacular architecture serves prompt, neighborhood needs; is obliged by the materials accessible in its specific district and reflects nearby customs and social practices. The investigation of vernacular engineering did not analyze officially educated planners, but rather the plan abilities and customs of neighborhood manufacturers, who were seldom given any attribution for the work.

2) Spaces in housing :

For human beings, space becomes the unit of life, and architecture deals with the design of space for living in general Monadic architecture refer to the process of articulating spaces by repetition, of modules with purpose and meaning for living. The aspect of demarcating the physical space for distinct functions and

activities becomes the embryonic framework of housing design typology. Since the design of houses is an assemblage of personal attitudes, beliefs, intentions, subjective norms, and inherited cultural components like art, science, technology, values, belief systems, language, lifestyle, customs, etc. The division of space is to manifest the space for its temporal effect among the occupants of the house. One significant strategy to articulate the spatial form is by repetition and variation of a range of environmental stimuli. Considering this fact, this paper discusses the effects of spatial repetition which reinforces spatial memory in architecture focusing on the relationship between the purpose of monadic architecture in housing typologies and its effect on socio-cultural components like territoriality, adaptability, privacy, identity, unity, and variety.

3) psychology Behavior

People always tend to attach psychological, social, and cultural significance to objects and physical spaces that support living in a specific context. Reasonable related to the social parts like Traditional qualities, signs, images, social qualities, ceremonies, cosmological conviction frameworks, propensities, and language. mental, enthusiastic, and deliberately characterized processes, including the inclination and the sensations of the person. Conduct alludes to showing individuals' brain, quality, brain science, or various parts of various everyday conduct or outer movement. Space would have no utilitarian sense if it does not associate with individuals' activities. Specifically, the correlational review endeavors to explore whether the experiential relationship as a blend of social parts and home aspect is interceded by a scope of actual element factors of the home settings. Emotions and Human behavior are fundamentally connected to the place of living and their association with nurturing different emotions. Mind and environment are interlinked Unconscious and conscious, mental activity, environmental settings, and human motivation in driving human behavior. For instance, consider early childhood experiences and ventral patterning of

an individual's emotions and environment and its role in regulating life aspects. Humans and their transactions at different territories due to internal and or external demands. Impact of the differential physical feature variables on functions of human attitude. Using this study, we would like to understand spaces and their impacts on human emotions and attitude though all spaces might not impact more certain spaces have a crucial role in the human live hood and this changes from person to person and area to area. Accepting this as fundamental information from different individuals was gathered to recognize the predominant housing space that people are willing to have. As this information will be exceptionally un uniform specific numerical techniques to be embraced to analyze and figure out the ruling space.

4) Henry Garret

Garrett Ranking Method is utilized to rank the arrangement of factors in the measurable examination. The strategy was utilized to rank the inclination referenced by the respondents on various variables Garrett's positioning method to figure out the main component which impacts the respondent, Rank, or appraisals surveyed from the respondents will be changed over into the score utilizing the beneath the recipe.

$$\text{Percentage Position} = 100 * \frac{(R_{ij} - 0.5)}{N_j}$$

R_{ij}

= Rank given for the i th variable by j th respondents

N_j

= Number of variables ranked by j th respondents

Post observing the percent position, With the assistance of Garrett's Table, the percent position assessed is changed over into scores by alluding to the table given by Garret and Woodworth (1969).

Scores = By referring to garretts table

This score is utilized to figure out the main element. Score of all respondents is added and afterward absolute worth of the scores.

$$\text{Total Value} = \text{SUM (Scores)}$$

5) Anova Analysis

Analysis of variance (ANOVA) is an analysis tool used to find out the divergence between the

groups and their data. Analysts use the ANOVA test to determine the differences between the set of statistical data from diverse groups

Minitab is used to determine the differences between group means are statistically significant

To verify any variations between the mean are statically significant, compare the P-value to the significant value to find the null hypothesis. The null hypothesis states that all groups' mean is the same and behaves the same. However, the rejection of the null hypothesis states that all groups' mean is different

Analysis of Variance					
Source	DF	Adj SS	Adj MS	F-Value	P-Value
Paint	3	281.698	93.8993	6.02	0.0043
Error	20	312.068	15.6034		
Total	23	593.766			

Table - IIIB

P-Value > 0.05 indicates that we cannot reject the null hypothesis and all the groups have the same mean which is identical behavior. Refer to Table -IIIB for P-Value

P-Value \leq 0.05 indicates that our null hypothesis is rejected, and all the groups have the same mean and identical behavior. Refer to Table -IIIB for P-Value

4 Experiment and scope:

1) Karaikudi Scope of Research:

All over the world, there is a strong need in studying the vernacular home features to decipher the relationship between the identity, culture, social dimensions, and emotional components of the occupants. Since vernacular architecture is evolved over different periods to people's needs and cultural demands of the place, it is impossible to determine by commonality in terms of spatial form and spatial layout. The usage of locally available materials and construction techniques that are practiced and hereditarily passed over to the next generations makes it more complex to enquire into the development of the vernacular architecture, especially its socio-physical environmental outcomes. Karaikudi was picked as the scope of this study. As vernacular spaces are ancient early 1900's houses can illustrate the more detailing. However, all these houses are not acting as people tend to modernize their housing. Yet then certain places like Karaikudi still have lots of active vernacular structures. This has been the main reason to opt Karaikudi as most

of the houses are still active. In addition, Karaikudi was selected. Karaikudi has a few exceptional actual attributes of metropolitan and provincial arranging which make it an interesting architectural group with many palatial houses. Because of their movements, they have coordinated various impacts into the Tamil practices. This mix addresses the uniqueness of Karaikudi. Karaikudi design is additionally rigidly connected to the lifecycle ceremonies of the Karaikudi people group. The houses were imagined filling the various roles, ceremonies, and family festivities throughout life from birth absurdly. Notwithstanding the lifecycle customs, the sanctuary and town celebrations are essential for the Karaikudi culture framing a huge arrangement of ceremonies all around the Tamil year.

2) Survey and data collection:

Research and data collection was done using questionnaires and rating polls that indicate the psychodynamic factors impacting the people's opinion on different spaces. As questionnaires were qualitative research, data was collected in person through face-to-face interaction. Based on the psychological study, certain questionnaires are made and asked for people around the above-mentioned places. In intention to keep the responses, conservative videos and photographs were collected.

3) Questionnaire

Based on the vernacular setting and psychology of the people belonging to the Karaikudi area.

Refer to the below-mentioned questionnaires for reference.

1. Certain dwelling spaces are denied due to cost feasibility.
2. People are professionally aware of different technologies involved in new-age construction
3. Misguiding by senior professionals to young budding professionals led to the elimination of vernacular spaces.
4. The dilemma in decision making for customized housing and opting for housing spaces.
5. Impact of social media/cinema/commercial advertising in the selection of component of the housing.

Analyzing the response given by the respondents it was found that people cumulatively in all the regions have few factors that are showing the impact of different housing spaces. However, collecting the information using only questionnaires is not sufficient to conclude that these psychodynamic factors of people regarding the different spaces and their emotions in the questionnaire system has their demerits i.e., Dynamic, and hypothetical responses from people

To evolve much. With this as a baseline survey has been done. As part of this people from the division have provided their ratings from 1- to seven on a hierarchy of the factors that are impacting them for different housing spaces. Refer to table IV B for the ranking classification.

S.no	Statement on adopting Housing spaces	Ranking
1	Strongly Agree	1
2	Agree	2
3	I more or less Agree	3
4	undecided	4
5	Strongly Dis-Agree	5
6	Dis-Agree	6
7	More or less Dis-Agree	7

Table – IVB

As mentioned in the methodology with help of questionnaires, seven housing spaces were studied to understand people’s opinions. The

rating was polled for these factors which are mentioned in table IVC

To attain diversity in the research, data collection was done from people of different genders, age groups, and cultures. Considering a person's privacy, the people’s personal information is not disclosed. Using these ranks as a reference, Data analysis was done to identify the major factors causing top to opt for certain housing spaces instead of adopting all. Opinions, ranks, and questionnaires were collected from 250 people around Karaikudi. These respondents include people from various places, cultures, ages genders, and occupations. As mentioned in Table IVD. A poll of 250 people which included 150 females and one hundred males responded from the Karaikudi.

Details		Region-2 North Tamil Nadu
No of respondents		250
Gender	Females	150
	Male	100
Age	00 - 10 Years	2
	10 - 20 Years	52
	20 - 30 Years	97
	30 - 40 Years	63
	40 - 50 Years	31
	50 - 60 Years	1
	60 - 70 Years	2

Table – IV-D

However, as mentioned in the methodology psychological people are distinguished based on their occupation that they opt for livelihood. As it is a critical and deciding factor poll was conducted by people who belong to different occupations. Refer to Table IVE for the details

Profession	Karaikudi - Population
Architect	56
Handloom Weavers	34
Homemaker	24
professor	43
Student	86
Self-Employee	7

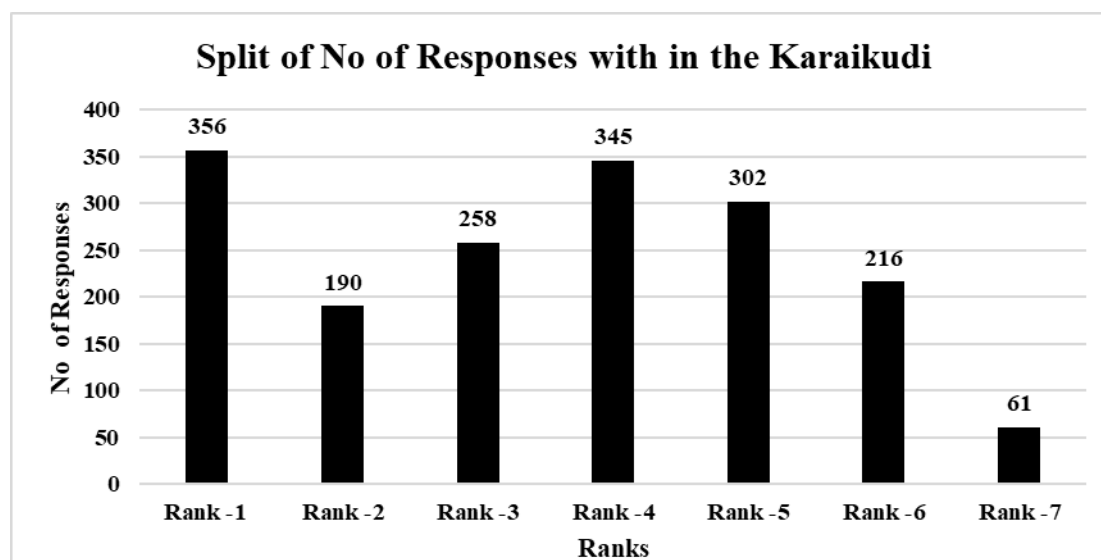
Table – IV-E

5 Results and Analysis:

As mentioned above opinion poll was conducted across the Karaikudi location. Data that was collected from extensive sources was filtered and sorted out below table- which provides the statistics of the collected responses.

Table – V - A

S.no	Row Labels	Rank Given by the Respondents of Karaikudi						
		Rank - 1	Rank - 2	Rank - 3	Rank - 4	Rank - 5	Rank - 6	Rank - 7
1	F 1 - Puzhakkadai (backyard)	42	21	23	153	8	1	2
2	F 2 - Koodam (living hall)	4	50	41	21	112	13	9
3	F 3 - Thaalvaaram (veranda)	21	9	30	23	31	130	6
4	F 4 - Thinnai (sit-out-house front)	160	16	9	43	0	0	0
5	F 5 - Nadai koodam (passage)	4	23	104	7	28	53	31
6	F 6 - Sutrukattu (surrounding spaces)	8	45	37	43	98	10	9
7	F 7 - Muttram (courtyard)	117	26	14	55	25	9	4



As per the above table V a Given the outcomes greater part of respondents surveyed and major positions 1,4&5 mirrors that a larger part of individuals are interested in opting for certain housing spaces however other responses

dismiss some housing spaces or scarcely tolerate the certain housing spaces anyway the elements affecting them inconsistent from one individual to another. As referenced in graphs V - C massively 356 individuals surveyed ranked 1. To overcome the variation in the data and

ranking for concluding the predominant factor, Anova one-way examination in Minitab was used to find variation between the reactions and it gives the possibility to concentrate on the

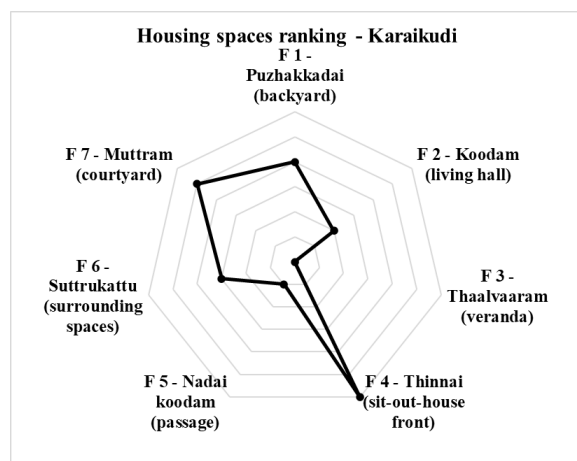
conduct of the outcomes and think about one another.

Factor Information - Region - 1 - South Tamil Nadu					
Factor	Levels	Values			
Factor	7	F 1 - Puzhakkadai (backyard) F 2 - Koodam (living hall) F 3 - Thaalvaaram (veranda) F 4 - Thinnai (sit-out-house front) F 5 - Nadai koodam (passage) F 6 - Suttrukattu (surrounding spaces) F 7 - Muttram (courtyard)			
Analysis of Variance					
Source	DF	Adj SS	Adj MS	F-Value	P-Value
Factor	6	1405.208	234.2013	94.22797	0
Error	1743	4332.184	2.485476		
Total	1749	5737.392			

With Anova analysis it was observed that P-value = 0.000. As P-value < α (i.e., 0.05 significance Level) which indicates that the assumed null hypothesis is incorrect and

expresses that there is a variation observed within factors. As variation within the factors was observed HG method was opted to find out the predominant housing spaces.

The hierarchy of factors predominates housing space opted for by the occupants	Factors	Hierarchy
	F 1 - Puzhakkadai (backyard)	3
	F 2 - Koodam (living hall)	5
	F 3 -Thaalvaaram (veranda)	7
	F 4 - Thinnai (sit-out-house front)	1
	F 5 - Nadai koodam (passage)	6
	F 6 - Suttrukattu (surrounding spaces)	4
	F 7 - Muttram (courtyard)	2



Graph – V - Addresses that the House sit front out was liked by most of the people at Karaikudi In addition to that people also prefer

Courtyard, Backyard and Surrounding spaces to be in their home exclusively. Considering the first 4 spaces as crucial elements we assume most people would prefer to have these four housing spaces out of all seven. However, every individual does not look like the same component in likewise. Ideologically people are different from each other, and this difference was triggered by both emotional and psychological factors of the human being. Both these emotional and psychological factors are different from person to person and impact most things in human life and evolution. These factors always indicate that though people are diversified each has its ideology.

6 Results

The results indicate that there is a meaningful relationship with certain variations between specific physical feature variables of vernacular architectural settings and emotional behavior like showing affection and concern for others, taking cognition of the social environment, and maintaining harmony in their social climate. It is inferred that this study can be extended to various other vernacular settings in Tamilnadu to get collective and substantial evidence in this direction.

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