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## CO-RELATIONAL STUDY ON HOUSE FRONT SIT-OUT (THINNAI), ITS IDENTITY, AND EMOTIONAL EXPERIENCE AMONG THE OCCUPANTS OF ERODE -**TAMILNADU**

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ABSTRACT

Architecture persistently evolved from the need for shelter and living spaces. Subsequently, this is prominent and reinforced through the knowledge over Henry Garrett Method; Psychodynamics, some time through oral traditions and practices that are time tested and improvised to develop a unique expression termed Vernacular architecture. It is evident from the existing literature that the built environment as a subsystem has the potential to influence and direct behavior among the occupants of the settings. This paper attempts to determine the spatial feature of the vernacular setting in the selected context which has a certain identity and has the potential in inducing specific positive Affect like enthusiasm among the occupants. In pursuit of this, the physical setting feature of the vernacular house Thinnai is studied for its identity of the house in context and its impact in inducing the experience of positive affect enthusiastic effect through a set of data collected by questionnaire survey and semi-structured interview method. The result of the analysis indicates that Physical setting features induce affect when people habituate to the vernacular settings that stand for their identity daily and it confirms the hypothesis that a physical setting has a significant role in inducing Positive affective among the occupants of the vernacular settings.



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## 1. INTRODUCTION

Architects are crucial as they bring spaces, emotions, and comforts to one spot. 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 implies regional architecture. It uses provincial techniques and materials which can support geographical conditions, Environmental elements, and regional aspects. However south Indian vernacular architecture plays a diverse part in the history of Indian architecture. Based on the southern Indian cultural climate mainly housing contains open spaces, water bodies, Courtyards, Verandahs, balconies, and Jallis. Every one of these has its utilization which influences the reason for making the vernacular design more feasible and adaptable. Out of all these Housing spaces, Thinnai which is called

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house front sit-out has a significant role in modern and traditional vernacular architecture.

#### 2. BACKGROUND STUDY

# 2.1 History of Southern Vernacular Architecture

The principles of vernacular architecture integrate both traditional knowledge and localized techniques. It reflects the evolution of housing over the ages. As vernacular architecture is culturally biased it changes from place to place. Overage people preferred to stay in tents and huts however with the increase in the necessity of human being these houses changed into customizable cultures. However geographical conditions place a crucial role in change yet cultural bias over the same place led to distinct housing spaces. In Addition, the occupation of the people is a crucial element in housing selection. This brings incredible significance to vernacular architecture as these houses are supportive of various occupational activities. This makes people connect to home as this trigger an immense element of their livelihood. Apart from construction elements are important as local material tends to be cheap, affordable, and convenient solutions. This led to the innovation of various types of houses made of wood, stone, mud, etc. (P. Satheeshkumar et al, 2015). P. Satheeshkumar et al explained various housing types during different periods of history. Based on my earlier studies and observations and mentioned: "Study on people's Psychodynamic influences towards various spaces in Tamil-Nadu" (Komagal Anupama) it was proved that vernacular architecture has immense significance in people's livelihood. Traditional houses are given great importance in erode. (Komagal Anupama et al., 2022).

## 2.2 Usage of different spaces in architecture

The usability of any architectural things with an unbiased and abstract examination. Relies upon multidisciplinary development. Ergonomics of the built environment place's main role in usage for work services leisure, quality of life, and safety. However, the impact of the architecture on the mind-set of different people with their perceptions. Key viewpoints to think about in the plan of compositional spaces overall and show their cosy relationship with the client's prerequisites and their capacities to arrive at their objectives as acceptably as could be expected. Ranad Bahaa Afif introduces new approaches in the design process to tackle the cultural transformation, it aims at bringing back the vernacular architecture and creating affordable architecture in modern society without losing the people's culture through an anthropological perspective. Cultural anthropology it is proved that vernacular architecture is the main part of the architecture that transforms human lifestyle around the world from past to future. People are going to connect culturally, religiously, artistic, and also modern affordability with the help of vernacular architecture. (Afifi & Ismail, 2020).

#### 2.3 House Front Sit-out

Premkumar's research on spatial usage and physical attributes of House front sit-out (Thinnai), Transaction between Built environments including Occupants collective environment. Results by Premkumar indicate that the spatial usage and attributes of House front sit-out (Thinnai) are significant in promoting behaviour of the occupants besides the other uncontrolled variables. Accessible spatial request, actual settings of extremely durable element variable, semi-long-lasting component, and atmosphere to direct the capability in the actual space. (Premkumar K, 2012)

House front sit-out (Thinnai) had its advantages which were helpful for ease of living and improving the quality of life right from ancient ages as it is one of best spaces in engineering it has countless uses given the necessities of our own. It was used for fil to prevent unwanted guests from entering the house and maintenance. It was also used for homely work like cleaning vegetables, folding clothes, and grinding the cooking ingredients. It was also used for fun activities like playing games by kids and children. It assists with keeping the family solid and blissful. It was likewise huge with multi-reason functions that filled individual requirements, social parties, and a hang-out spot.

## 2.4 Identity and significance of House front sitout (Thinnai)

The space or part of the home always portrays the identity and characteristics of the people, generation, or culture. It reflects Individuality, territoriality, and uniqueness. Few studies by Heba-Talla Hamdy Mahmoud attempt to explain descriptive and interpretive approaches based on the survey on House front sit-out (Thinnai) and different architectural spaces in different regions. Studies explain architecture, interior architecture design, and the psychological status of residents. Its impacts on Person behaviour based on Privacy, Irwin Altman Diagram. Functionality/flexibility, Health/Safety, and Accessibility are the most significant psychological factors that are affected by House front sit-out (Thinnai) however it varies from person to person and geographically (Hamdy Mahmoud, 2017).

Maria Cristina Bittencourt details the usability of architectural spaces: objective and subjective qualities of the built environment as multidisciplinary construction. Accessibility, Interior design, and exterior design have a huge impact on the mind-set of different people with their perceptions. Thermal conditions, ventilation, insulation, acoustic and visual are important to provide comfort. House front sit-out (Thinnai) also

has an emotional connection to individuals it explains the "past" and "international potential of place". House front sit-out (Thinnai) built will have an identity of culture or person or community this identity provides the recognition for the place or region (Bittencourt et al., 2015).

#### 2.5 Human Memory

The sole preserve of psychology, the study of memory is now being used in Anthropology, Sociology, Cultural studies, literary studies, and history. French humanist Maurice Halb-wachs clearly states that memory is the power of gathering personality and remembering it. Memories are distinguished into various types as mentioned 'collective memory, 'social memory', 'public memory', 'historical memory', memory', or 'cultural memory. The author urges that the study with the memory of a specifically desirable and recoverable past is especially predominant. Known that the memory of a person showcases various factors including individual factors and social factors. That means the reactions of an individual to an event and the reaction of society to an event. Mowla states that human beings have a large impact on their memories due to their interaction with groups and physical environments. It always depends on how the people are associated with each other's emotions and feelings. To evaluate these let's consider cities that contain various types of people who migrated from various places (Mowla, 2004).

# 2.6 Correlation between human emotions vs memory

Emotions impact the psychological factors in people which helps in various ways. Feeling influences thought, especially adjusting the selectivity of thought similarly to energizing movement and lead. Tyng et al. (2017) explained that significant memories can be set up during passionate occasions that are recollected more obviously, precisely, and for longer timeframes than are impartial occasions. Enthusiastic memory upgrade seems to indulge both psychological and feelings. Also, the Seeking structures can create positive abstract which can trigger positive hope, energetic investigation, cheerfulness, and memory in the mind. All psychological movement is persuaded by fundamental enthusiastic and homeostatic requirements (inspirational drives) that investigate natural occasions for endurance while working with auxiliary cycles of learning and memory.

#### 2.7 Location study

As referenced above human inclination and recollections are geographic and occupational concentric. Agriculture is a crucial component in nations like India. Abdulbasit Almhafdy insights regarding the Analysis of the Courtyard Functions and its Design Variants. This Research has finished up the

calculation of the patio and the extent of influence conceal in the inner surface fundamentally. The concealing condition inside the yard might be affected by the sun's position overhead and the patio's math. (Almhafdy et al., 2013) In comparative applications heaps of spots, the House front sit-out (Thinnai) is utilized for agriculture and exercises that help agribusiness. As Tamil Nadu is Agri based express specific spots that have agribusiness as prevail occupations were picked and examined. As mentioned in previous studies are different from each other based on their psychological behaviours and attributes from various studies across Tamil Nadu. As mentioned: "Spatial Analysis on Psychodynamic Influences on Dwelling Spaces of Vernacular Architecture Tamilnadu".It was concluded that people from erode give more significance to house front sit-outs. It might be due to their livelihood or might be due to the ideology and culture of people. (Komagal Anupama et al., 2022).

#### 2.8 Henry Garret method

Henry garret's method has predominated application in various studies Heru Ismanto et al. (2018) used garret's method of Group Decision Support to Determine the Regional Prioritized Areas and Leading Sectors. In light of the after-effects of the examination, it tends to be seen that there is an exceptionally impressive connection between the positioning of the focused regions and the main areas utilizing the Garrett ranking method. Likely to my earlier studies we picked garret ranking in finding out the main emotions that are getting triggered by House front sit-out (Thinnai).

### 3. METHADOLOGY

#### 3.1 Significance of House front sit-out (Thinnai)

House front sit-out (Thinnai) is better called a verandah. Verandah has as many structures, as the actual word has implications. The custom of House front sit-out (Thinnai) was begun in India and Portugal. A portion of the famous words for it across the world have been Veranda, Varanda, Verandah, Varandah, Baranda, Barandah, Barmda, Baranda, Barandilla, and varada. A 'House front sit-out (Thinnai)' to represents a concealed spot to sit inside and notice environmental elements. Generally, House front sit-out (Thinnai)s in South India were intended for this very reason, to notice the encompassing area and converse with individuals as they would stroll by, making the component a facilitator of social association inside the area. Compositionally, a House front sit-out (Thinnai) is a concealed verandah or sit-out with worked-in seating at the entry to the home. Where the family would regularly sit to blather, talk about news, read or even have their evening rest. The House front sit-out (Thinnai) or verandah, being at the passage turns into a significant tasteful component of the home. Building and social impacts are frequently characterized by their style. It is a transient space that interfaces the inside with the outside, a space that kills the unexpected and brutal progress from the receptiveness of the outside world to the shut inside spaces. Tragically, in the present thick metropolitan condo improvement, we have lost a great deal of the conventional engineering highlights that were a necessary piece of the road scape and autonomous homes of days gone by. One of them is the House front (Thinnai)-a multi-practical, social, financially savvy include that leaves behind a solid example of feel and manageability. Nevertheless, even in lofts, extensive overhangs and sit-outs can be made fascinating and welcoming and whenever found right, can give an involvement with least suggestive of the customary 'House front sit-out (Thinnai)'- a portrayal of life that was slow-paced, loose but significant.

Various types of House front sit-out (Thinnai) and uses: In light of the utilizations and control of individuals, House front sit-out (Thinnai) are various sorts everyone enjoys its benefits and full fill the reason for individuals

## Type -1 (public/ Socio Gatherings):

Place of some kind sit-outs is utilized for neighbourhood conversation and day-by-day chatter. Besides the greater part of these houses has a place with provincial political pioneers or panchayats. Meeting here assists with settling the nearby issues and working on the organization of the spot. However, it was not confined to political and organizational meetings it was likewise utilized for family assembling. As referenced in the Literature audit these social affairs and emotions affected individuals' recollections and strongly memories. As represented below in picture Figure -1&2, these housing spaces lead the feasibility to filter out the public gathering to personal spaces which give a sense of safety and severance.



**Figure 1.** (Source of the image – Author)



**Figure 2.** (Source of the image – Author)

## Type -2 (Agricultural Housing):

Agribusiness is the spine of India. The larger part of the populace in India relies on agriculture. Also, agriculture needs parcel many supporting exercises like cattle's upkeep and food processing. Individuals utilize the House front sit-out (Thinnai) either to dry the food varieties or store manures. Know that erode is a yellow city and Tamil Nadu ranks first in terms of area and production of turmeric. Erode district is famous for turmeric production curing, drying, and polishing operations were important post-harvest processes of turmeric rhizomes, which occupied about three-fourths of the cost (about 73 %) of turmeric processing. Optimizing the processing cost is a key factor for farmers to get profits to achieve cost feasible processes need to opt. Thinnai is used to dry the turmeric produced. As it was a fully natural process it does not involve cost. This places the House front sit-out (Thinnai) in first place out of all key spaces. As shown in figure -3 these spaces provide space for the storage of agricultural materials.



**Figure 3.** (Source of the image – Author)

## Type -3(Customized based on Occupation)

Occupation alludes to the work that an individual or gathering does either with energy or with exuberant hood. Places of individuals in the towns are modified to deal with and support this occupation. As various occupations have various necessities and examples the engineering of the house should be capable full fill these requirements. As House front sit-out (Thinnai) is a fabulous open space in Indian vernacular design it tends to be utilized generally for day-by-day energetic hood exercises. Beneath pictures alludes to not many occupations and their admittance to utilize House front sit-out (Thinnai). Out of this multitude of occupations and networks, waivers get additional advantages from the House front sit-out (Thinnai). A benchmark study was made at erode where the waiver local area places a fundamental job. House front sit-out (Thinnai) provides immense benefits for various occupations. This brings culture into the home and lively hood into living spaces. Refer to Figure- 4&5 which shows weaving machines in the House front sit-out (Thinnai).



**Figure 4**. (Source of the image – Author)



Figure 5. (Source of the image – Author)

#### 3.2 Regional Analysis: Erode

Break down stays as the 11th most noteworthy state in India with a locale consideration of 1,30,058 sq. km geographically. The region fuses 5,722 sq. km. which covers 4.4%of the state's geological area. Given the most plausible information of enumeration 2011. Dissolves have 22.5 Lakhs out of them 50 % are male

and 50 % female. The average Literacy (%) of the erode is 88.29 % with 93% literate males and 83% literate females being the area driven by farming disintegrate remains the first set up underway of turmeric. As these individuals favour arrangements wish are plausible for agribusiness both socially and practically. House fronts sit out play a huge part in this supporting agriculture and its capacities. These components made ancient vernacular design still dynamic in some spots of disintegration. With this multitude of references and key elements dissolve was picked as the extent of exploration to study the character and enthusiastic experience among the occupants on house front sit-outs.

#### 3.3 Identity, Emotion, and Positive

Built environments have immense psychological effects on humans. However, sometimes these emotions are strongly bound out with the memories and emotions of the person. These recollections and emotions are identical to individuals having a place with the same geographic spots. Individual structure and normal culture show logic. Mentally each human has their insight or philosophy. This philosophy decides the choices and reactions of the individual to specific things. Nonetheless, it was observed that individuals are one-sided by their sentiments and emotions. The greater part of the elements that they are worried about is indistinguishable. This had taken reference to go the exploration on specific factors that affect the people on a positive memory.

Found that most of the identities are psychologically interlinked with positive emotions. Places that interfere more obtain crucial identities in our life. As referenced above more often than not individuals are either straightforwardly or in a roundabout way subject to the House front sit-out (Thinnai) for their day-by-day and live hood things. This enhances the space to trigger an immense effect on the memory of the people which creates the identity of the House front sit-out (Thinnai). Below refers to the certain emotions that are set off in table 1.

### 3.4 Data collection

Any kind of is unequivocally accentuated considering place and geology. Nonetheless, information-driven investigations will solidly factor or prove to finish up or grasp specific things. This can be used for authentic examination and multivariate assessment. Information gives the most flawless and best data which will assist with sifting through vulnerabilities in the field of study. As referenced, various strategies are taken on to check and figure out the emotions that the House front sit-out (Thinnai) is impacting more.

**Table 1.** Various emotions triggered by housing spaces

| S.No |  | Emotions   |  |
|------|--|--|--|
| E- 1 | Cheerfulness   | Feel to be light-hearted and happy. It implies being happy and having joy looking over circumstances.      |  |
| E- 2 | Serenity   | It means to be calm, steady, and people. Serenity implies internal peace irrespective of external aspects. |  |
| E- 3 | Enthusiasm   | Enthusiasm refers to having a self-<br>motivation and being prepared for the<br>things                     |  |
| E- 4 | Relief   | The feeling of getting rid of certain unplanned consequences   |  |
| E- 5 | Optimism   | The emotion of having self-belief and believing in ourselves to do things forward                          |  |
| E- 6 | - 6 Active Feeling of readiness and prepare do something |  |  |
| E- 7 | Excitement   | The feeling of eagerness and commitment to deliver the things  |  |
| E- 8 | Safe   | Being protected is the condition<br>safeguarded from hurt or other non-<br>positive results                |  |

#### A. Statistical data collection (Grading):

Collection of grading on basis of the Likert scale as referred to in table -2. To analyse the data and find out the predominant factor reverse Likert method was used this helped in statistical analysis and obtaining results.

**Table 2.** Likert scale of -7 with statements

| S.no | Statement                | Grading |  |  |
|------|--------------------------|---------|--|--|
| 1    | Strongly Acknowledge     | 1       |  |  |
| 2    | Acknowledge              | 2       |  |  |
| 3    | More or less Acknowledge | 3       |  |  |
| 4    | unsure                   | 4       |  |  |
| 5    | More or less contradict  | 5       |  |  |
| 6    | Contradict               | 6       |  |  |
| 7    | Strongly Contradict      | 7       |  |  |

## B. Photo elicitation

Another incredible research methodology used in this research is photo elicitation. In this method, occupants are shown different images of the House front sit-out (Thinnai) with requisitions of their opinions and emotions. This verbal communication will be recorded and analysed. As this method of study is purely descriptive and practical this alone can't give strong judgments in deciding the predominant emotion that a House front sit-out (Thinnai) is triggering in occupants. However, the primary reason for photograph elicitation talking is to record the way that subjects answer the pictures, ascribing their social and individual implications. The implications and emotions inspired may contrast from or supplement those acquired through verbal requests. Here are certain pictures used for photo elicitation.



**Figure 6.** (Source of the image – Author)



**Figure 7.** (Source of the image – Author)



**Figure 8.** (Source of the image – Author)



**Figure 9.** (Source of the image – Author)



Figure 10. (Source of the image – Author)



Figure 11. (Source of the image – Author)

## 4. DATA & RESULTS

As mentioned above erode opted for this research as it was found that the majority of the people over than are inclined to have House front sit-out (Thinnai). Taking this as a reference data on the scores was collected for various people. This data includes numerous amounts of responses from diverse people. Here comes the demographics of the research done.

**Table 3.** Population considered for studies

| Gender   | Female | Male |  |  |
|----------|--------|------|--|--|
| Strength | 184    | 116  |  |  |

**Table 4.** Age data of people considered for studies

| Age     | People Count |
|---------|--------------|
| 10 - 20 | 1            |
| 20 – 30 | 56           |
| 30 – 40 | 111          |
| 40 – 50 | 89           |
| 50 - 60 | 38           |
| 60 – 70 | 3            |
| 70 - 80 | 2            |

The above table -3, 4 indicates that data pulling was done equally from both females and males. However, in this survey, we have considered people of various ages. As the perception of housing changes over the age of the person. His diversity in the study helps us to validate the hypothesis well. As well to get more diversity into the data we would like to take the data from various professions below table refers to the people count of various occupations.

**Table 5.** Occupational data of people considered for studies

| Profession    | People count |
|---------------|--------------|
| Accountant    | 31           |
| Architect     | 66           |
| Farmer        | 20           |
| Homemaker     | 34           |
| professor     | 47           |
| Self-Employee | 29           |
| Student       | 73           |

Table 6. Quantity of houses studied

| No of the houses considered | Approx 150 |  |  |  |
|-----------------------------|------------|--|--|--|
| for the study               | Approx 150 |  |  |  |

As alluded to in Table 5 larger piece of people in crumbling has a spot with developing neighbourhood surmises extraordinary plan of people to assemble the information and continue with the review. Anyway, to figure out the results. As highlighted in table 6 incredibly 150 houses were selected. Various studies for this research gave strong outcomes for proving the hypothesis and analysing the results.

#### 4. ANALYSIS:

As mentioned, the above methodology research study was done across erode. As this research involves various factors and types of studies innovative way of analysis opts. This analysis was used to understand the emotional attachment of the person to the House front sit-out (Thinnai).

Photo elicitation results were verified from various angles as these data and responses collected from the

Komagal Anupama & Subramanian, Co-relational study on house front sit-out (Thinnai), its identity, and emotional experience among the occupants of erode – Tamilnadu

occupants are descriptive. The keyword filtering method was chosen. In this method, various keywords which are related to the emotions / psychological emotions of people are filtered and measured. This study gives a density of various emotions that are connected. However, as these results are purely descriptive and unquantified this alone can't be used to validate the hypothesis.

As descriptive analysis is not strong enough to prove the hypothesis the grades collected from responses were structured in various forms and these data were analysed using a special statistical analysis.

**Table 7.** Data of scores polled in the survey

|         | Scores by the Respondents of Erode |         |         |         |         |         |         |
|---------|------------------------------------|---------|---------|---------|---------|---------|---------|
| Factors | Score -                            | Score - | Score - | Score - | Score - | Score - | Score - |
|         | 1                                  | 2       | 3       | 4       | 5       | 6       | 7       |
| E-1     | 45                                 | 47      | 30      | 149     | 12      | 8       | 9       |
| E-2     | 7                                  | 54      | 43      | 25      | 141     | 20      | 10      |
| E-3     | 157                                | 21      | 15      | 45      | 10      | 37      | 15      |
| E-4     | 32                                 | 4       | 8       | 9       | 64      | 31      | 152     |
| E-5     | 9                                  | 36      | 130     | 12      | 28      | 52      | 33      |
| E-6     | 19                                 | 122     | 31      | 2       | 12      | 33      | 81      |
| E-7     | 8                                  | 50      | 38      | 42      | 109     | 18      | 35      |
| E-8     | 120                                | 31      | 20      | 75      | 27      | 17      | 10      |

The above table- 7 showcases the data and responses collected from various people across the erode. However, this unstructured data can't be used fully to validate emotions. So, to find the predominant emotion holistic data reviewing was needed.

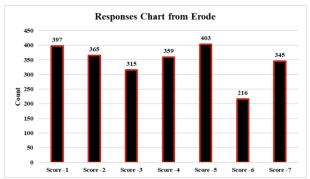


Figure 12. Graph representing the distribution of scores

Above Figure 12 gives the dissemination of the evaluation across different emotions varying from F-1 to F-7. What's more, this figure addresses that even conveyance across the positioning. As demonstrated in Figure 7 and Table 8 occupants from erode are triggered by various emotions which are getting set off by the House front sit-out (Thinnai). Seeing that comparable sort of conduct and positioning was found across Emotions. Anyway, a couple of emotions are

predominant. Thus, henry garret's technique assists to figure out predominant emotions.

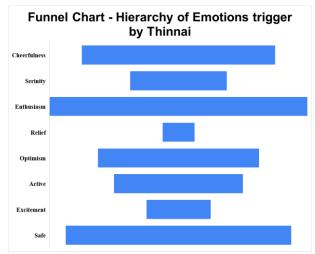


Figure 13. Funnel chart – Result of studies

The above Graph - 13 and table represent that people's enthusiasm was major emotion induced by the House front sit-out (Thinnai). However various emotions are also induced by House front sit-out (Thinnai) but those are not predominant. Even the results from the descriptive analysis provide a strong statement that enthusiasm is the dominant emotion.

#### 5. CONCLUSION

In pursuit of this, the physical setting feature of the vernacular house front sit-out (Thinnai) is studied for its identity of the house in context and its impact in inducing the experience of positive affect enthusiastic effect through a set of data collected by survey and Photo elicitation method. The result of the analysis indicates that Physical setting features induce the effect of enthusiasm when people habituate to the vernacular settings that stand for their identity daily and it confirms the hypothesis that a physical setting has a significant role in inducing Positive affect among the occupants of the vernacular settings. It is evident from the research study that the built environment as a subsystem has the potential to influence and direct behaviour among the occupants of the settings. Perhaps, behaviour is the overt action performed by the occupants in response to the environmental setting stimulus or self-generated stimulus and mediated by another subsystem or the ecosystem. This can be used by impending plans to understand the psychological and exciting essentials of people with the objective that the housing space can be planned to flourish with these necessities and factors.

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