A Study on Exploration of Visitor's Responses to Encroached Heritage Sites

(A case study of Madurai)

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Abstract─**Madurai like most places across the globe is experiencing a rapidly increasing urban population associated with increased housing numbers and density. And this requires additional retail, commercial; transport and other infrastructure to retain the cities as 'livable'. The key to the long-term 'livability' of our cities is to manage change through processes that provide us with the conservation solutions that are sustainable.**

Keywords─*historical significance; core city issues; sustainable urbanization; holistic approach*
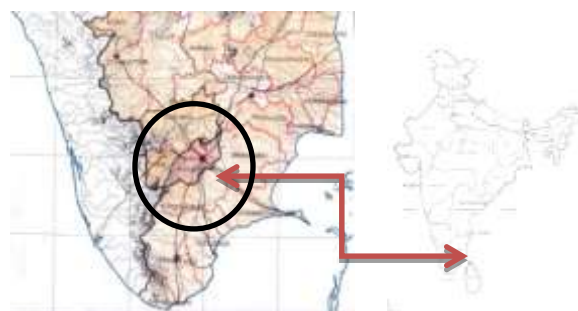
I. INTRODUCTION

The historic urban areas, evolved through processes of ancient town planning and cultural exchanges, lead to a townscape. While these distinctive historic urban areas are important to the overall quality of our communities, the views and visual relationships between historic townscapes and people are often destroyed during rapid change of urbanization, especially in developing urban settings. This study mainly focuses on understanding the social and economic benefits of heritage sites in a townscape [1].

In India, traditional cities are developed around a historic core, where the core area is called as walled city or inner city.

The typical plan of the inner cities shows the Temple or Mosque at the center, the markets immediately adjacent. Some of these ancient cities have well-defined boundary or setting. In historical south Indian cities such as Madurai (Fig. 1), Trichy, Srirangam, Thanjavur, Chidambaram, and Kumbakonam, the temple dominates the plan at the center. These sacred monuments were constructed in such a position that they would dominate the surrounding area, providing a focal point for the town or city.

Currently, there is a threat to these monuments; the urban development which is happening in the immediate setting of the temple is obscuring the importance or its aesthetic contribution, which these monuments had to the townscape. The monuments which once stood in isolation and were prevalent in their surrounding are now in danger of being lost to views. They no longer have their visual relationships in the wider setting and many cases they are

Fig. 1. Location of Madurai in Tamil Nadu map.

likely to lose in the immediate setting. This problem is caused mainly by the increase in height of the surrounding development which is also not coherent with the historic structures. There is strong need to investigate the social and economic relationship of monuments and their settings and the associated public value they inherit.

This research aims to understand the relationship among the historic monuments and its settings and its stakeholders. It is expected that the outcome of the research will give the new dimension of the setting for heritage monuments.

II. SIGNIFICANCE OF THE STUDY

This study will improve our understanding of the true value of an environment by considering both physical and emotional responses of people to a given place.

This study will identify important characteristics that are essential for place meaning and attachment which will help to clarify the conflict between development and conservation.

By understanding the relationship between historic setting and emotional bonding, the results could aid in the development of conservation planning guidelines that strengthen a sense of place and help preserve the monuments and its relationship with its setting and stakeholder.

III. LITERATURE REVIEW

The investigation begins with an extensive literature review based on the following areas:

- Preservation methods for monuments/heritage cities/areas.
- The findings on emotional attachment to places through recently published papers from journals and publications from Indian and other international authors.

Current material on the subject of historic environment, various international charters, regional conventions, declarations and guidelines specifically related with views and visual relationships to be referred.

Existing Legislative framework for heritage sites at national level and state level needs to be reviewed.

There is no comprehensive method available to study the socio-economic benefits of heritage monuments to people specifically in this context. Such a method will facilitate decision-making process in urban planning for conservation of significant views which the public value the most.

IV. STATEMENT OF PROBLEM

The identified problem areas in the heritage zone are the setting, the immediate surrounding and the interface area between the monument and public realm. The setting around a protected heritage resource or monument is often an unprotected urban, suburban or cultural landscape.

The dimensions of setting, how far it extends beyond the protected heritage property, are often vague and require a site-specific definition.

Identification and protection of views and relationship of historic monuments with people are two important components of sustainable development. Before identifying the views, the public perception and values they inherit should be assessed. The setting of historic monument is defined by mere prohibiting the construction activities within the 200 m radius from the protected property.

If there is a building outside this limit and causing significant visual impact on the heritage monument, then the existing legislations has no role to play. There is a need to relook at our legislative framework.

It is proposed in this research to:

- investigate the aspects of visibility towards historic monuments/ religious places;
- obtain the perceptual responses, values, preferences from various stakeholders towards these monuments; and
- Develop an objective tool which will comprehensively address all the issues related with identification and conservation of significance of historic monuments and their relationship with people.

The following research questions will be investigated.

V. RESEARCH QUESTIONS

The following basic objectives will guide this study:

- What are the developments in the intended setting and why?
- What are the relationship between specific monument setting and the emotional bonding that the people form with such settings?
- What values do people attach to heritage monuments?
- How do physical characteristics of the place affect the socio-economic benefits?

VI. AIMS AND OBJECTIVES

The main objectives of this study are:

- To identify significant areas in the townscape of heritage environments which needs to be enhanced or protected;
- To conserve the monuments to enhance the heritage value of the city for promoting tourism(to enhance economic benefits); and
- To rank the significant public views and classification of resources based on different user groups.

VII. METHODS OF INVESTIGATION

This study intends to understand the characteristics of the setting and also intends to understand the stakeholder's preferences and emotional responses to different views of the monument. The following stages will be necessary for the investigation:

- Field work to investigate social and economic importance through photographs
- Spatial analysis study of the setting and the monument to determine the developments at various phases.
- Questionnaire survey
  - Emotional values
  - Response from various stake holders
- Research analysis and results

VIII. PROPOSED STUDY AREA: MADURAI

Madurai, like most places across the globe, is experiencing a rapidly increasing urban population which is associated with increased housing numbers and density. This increase in population, housing and inflow of tourists requires additional retail, commercial, transportation and other infrastructure to maintain the city's livability [2].

These urban growth changes are overwhelming Madurai's heritage properties in such a way that these properties are losing their physical integrity and people are no longer able to view and or appreciate them.

A. Importance of the City: In Past

This research concentrates on the historic aspects of Madurai, which is one of the Ancient Historic cities of the world centered on the Sundareaswarar-Meenakshi Amman Temple complex founded in the eleventh century A.D. The temple served as a main generator for the development of this fortified city. The structure of the temple complex dictated the structure of the city. The different communities around these temples had specific functions and they are not dispersed at their will. Their architecture paid a high tribute to the temple complex. The concentric streets around the square temple complex were the product of the religious paths and rituals and this defines the historic city of Madurai.

This long unbroken history has rendered Madurai with a rich, diverse, ethnic, socio-cultural and religious set-up, reflected in the settlement, which is based upon caste, religion and occupational system.

1) Historical dimensions: The successive stages of the evolution of history in Madurai can be broadly classified and explained in the following sub-sections.

a) Stage I: The first stage can be traced from the period of Pandyas – twelfth century (Fig. 2). However no traces of these can be found now. The city structure can be explained from the literary sources available during the first few centuries. The city was formed on the southern banks of the river Vaigai. This part had full of the Kadamba trees and was thickly forested. Discovery of the Linga[1] near a pond led to the formation of the city at full stretch. This point was used as the origin point of the temple and the growth of the city [3].

b) Stage II: During the Medieval period, Vijayanagara kings ruled Madurai and it had a glorious history of development and expansion. Viswanatha Nayak (15591564) was the Architect of the properplanning of Madurai (Fig. 3). He planned the city according to Manasara principles. In this old city all the main streets run roughly, parallel with the walls of the great temple. Thus, there are Masi Street, Avanianimula Street, Chitrai Street, just outside the temple and Adi Street inside the temple complex. The significance of the names of the streets is that the deity of the temple, take procession during these Tamil months along these streets [3].
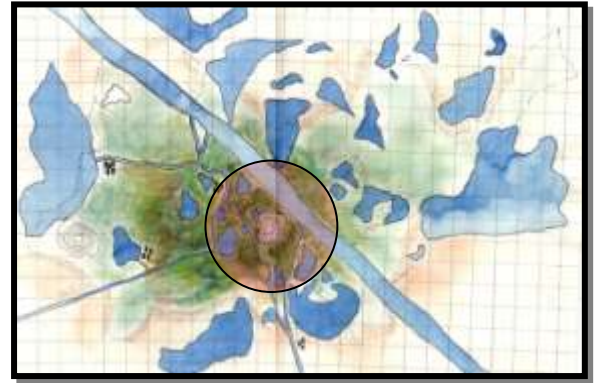

Fig. 2. Map of Madurai – Pandiyan time (twelfth century).

[1] Linga- iconography of the lord Shiva

Fig. 3.   Map of Madurai –Vijayanagara time (fifteenth century).

Next in the time of 'Thirumalai Nayak' many of the buildings with architectural splendors such as Thirumalai Nayak's palace, Pudumandapam, and The Mari Amman tank came up. Most of the people are Saivaites, i.e., worshipping Shiva, who dominated the center of the city. The Vaishnavites were given a site in the southwest corner of the city where Koodal Alagar temple was located in the city. This site was previously not allocated for any purpose. Thirumalai Nayak brought Sourastras-weavers from the region, presently Modern Gujarat and gave them a site near his palace. Most of western sides of the city were left as agricultural fields fed with water tanks and channels from river Vaigai. Koodal Alagar Perumal temple finds its place in the south western part of the city.

c) Stage III: During the period of Mughals, the number of residential colonies developed in and around the city: Khanpalayam near East veli street; Khajilpalayam near the south veli street; and Mahaboobpalayam near west veli Street. Goripalayam developed as a residential area around the mosque, north of river Vaigai. Many mosques were

built, the noted ones being Tashildhar mosque (East Masi), Munichalai mosque, and Kazimar mosque (south Veli) [3].

d) Stage IV: Madurai came under British rule in the year 1792. Since then the structure of the city changed dramatically (Fig. 4). The main factors responsible [3] for the structural change of the city are as follows:

1841- The fort walls were demolished thereby allowing the city to grow on all sides.

1866- Madurai municipality was formed and it became the headquarters for the southern districts.

1875-Railways were introduced in the city linking to the northern and southern parts of the state.

This resulted in the establishment of many industries, institutions and colonies. The architecture of the city can be classified as residential and institutional architecture. No doubt that this architecture is the mix of the local and colonial architecture. Railways occupied the western part of the city. A colony was setup close to it. Houses were of bungalow types with garden around it. Roads were wide and the canals and drains inside the colony were channeled. This colony was well separated from the city by Railway station and workshop. Cotton mills such as Madura cotton mills and automobile industries such TVS. Ltd. was set up close to the stations convenient for their transportation. The same architectural feature is followed for the institutional buildings such as the American College, Madurai medical hospital and Madurai municipal building that is on the other side of the river. The compact city planning (now the inner city) helped the British to set up excellent civic services. Recreational parks were set up in the city. Iron fencing was put up around the Meenakshi Amman temple and an over bridge was constructed across the river Vaigai connecting the southern and northern parts of the city. This bridge is of rubble stone masonry with arches in between them. Town halls such as Regal Talkies, Victoria Edward Hall were close to the railway station which served both as a theatre and as a meeting hall. This building is colonial in nature with gothic arches in between them.

e) Stage V: Post-independence, Madurai underwent a phenomenal urban growth. The maximum population explosion occurred during the year 1961-1971, the reason of which is attributed to the tremendous migration from rural areas. Its status rose to that of a corporation in 1971 [3].

Moreover 13 villages were attached to the corporation in the year 1973 (Fig. 5). Madurai became the second largest city in Tamil Nadu expanding to an area of 51.82 Sq.km. This period saw a growth of colonies such as Shenoynagar, Gandhi Nagar, Chokkikulam, and Krishnapuram. In most cases, the Kulams[2] were converted into residential colonies.

2) Architectural dimensions: From the aforementioned historical reasons' it is very clear that Madurai possesses diversified architecture. The architecture reigns from Dravidian style to Colonial style. The city planning is according Rajdhani and Sarvatobhadra[3], where streets run parallel to the temple walls guiding a specific pattern [4]. Architectural products ranging from rock-cut caves to magnificent temples can be dated from the third century B.C., where Jains and Buddhist monks started their design in granite and sandstone structures. The region of Nagamalai, Samanar malai, Yanaimalai bears these architectural manifestations. Jainism was found to stronger than Buddhism in Madurai. Some architectural elements of this period set an example where predecessors to temple architecture in World. The Pandiyan impressions remain around the temple complex of Meenakshi Amman Temple. The East Gopuram of the Meenakshi Amman temple was constructed during this period. This was the initiation which in due course of time evolved as the four majestic Gopuram of Meenakshi

Fig. 5. Map of Madurai (Present).

[2] Kulam- pond like structure or low lying area.
[3] Ancient South Indian texts on city planning.

Fig. 4. Map of Madurai - Colonial period.

Amman temple. The city was fortified with connectivity with the water bodies. Mughal layers can be seen in the construction of Mosques around the city (Gazimar Mosque). The architectural elements such as cusped arches, Chajas, dome were introduced to this temple town, which were new inclusions to Madurai. The previous architectural layers were greatly damaged by the Mughals. There architectural manifestations retained within the southern part of the inner city. The Vijayanagara layer marked new changes in architecture with introduction of more lavished elements and forms. The west and South Gopurams were built in this regime and town saw more architectural reforms like palaces, pavilions and mandapas which lead to the more evident layer of the town today. It was during Vijayanagara period the entire city was renewed and revitalized. The fort wall was again built with 72 bastions indicative of 72 polygar division in the region. The water tanks took different forms and marked great spatial impressions on the region. Planning was always integrated with ecosystem and water bodies. The Colonial Regime added to the Vijayanagara layer with its architectural manifestations mostly of individual buildings. Industries and institutions gave a new look to the existing architecture in the region. Indo-Saracenic architectural forms including public, institutional, religious buildings evolved from this temple town (Sourastras school, Collector office, American college building). Moreover, the concept of Churches and town halls emerged in Madurai region. Hospitals, educational institutions, residential buildings show colonial impressions with local materials and techniques. Thus, the architectural dimension of the town is multi-faceted with its architectural layers ranging from Sangam age to colonial age [5].

B. Importance of the city: In Present

The city at present shows the physical-historical evidences of the sixteenth century architecture and the colonial architecture, which is rare in the southern region of Tamilnadu. This historic core occupies 8.5% of the total city area and contains a population of 46% of the total city population. Moreover, this city is not only the official headquarters of the Madurai district, but also the commercial headquarters of the region. So it is difficult to separate the growth of religious architecture from that of the town: both developed in parallel formation. Therefore, based on duality, a multi-dimensional approach to the planning process is will be needed [6].

Madurai competes with Chennai both in population and administration. Moreover, the historic city provides employment nearly about 30% of the city population. Thus, the floating population alone stands around 1.5 lakhs per day, which comprises the tourist and pilgrim's population.

In this scenario, it is imperative to find ways and means of achieving a balance between heritage and development.

IX. CORE CITY'S ISSUES

This paper also discusses the issues dealt with core city as follows:

- Centralized activity leads to high density [7].

- Traffic congestion and pedestrian vehicle conflict occur almost everywhere.

- Increase in vehicular inflow leads to insufficient parking.

- Commercial hubs generate complementary activity.

- Commercialization had led to lack of green open spaces and formation of incoherent facades.

- Commercialization has led to

- Heritage buildings are surrounded by commercial clusters.

- Temple's floor level has been lowered due to repeated overlaying of roads.

- Massive hoardings visually pollute the city.

X. ISSUES OF CONCERN

The issues of concern inside Madurai [8] include the following.

A. Vasantha Mandapam

The Vasantha Mandapam (Fig. 6) now houses shops that have generally led to the decay of the Mandapam.

The shopkeepers out of shear ignorance have created shelters based on their needs and have done maximum damage to the priceless sculptures. On shifting these shops,

The Mandapam can be well lit and can be used for conducting cultural programs.

Fig. 6. Vasantha Mandapam.

B. The Rayagopuram

The shops at the base of the Rayagopuram (Fig. 7) have been blocking the access to reach to the top of this monument.

The presence of these shops has paved way to the hawkers to use the entire Rayagopuram as a backdrop to display their products. The terrace of this monument has been redundant open space for several years

The unclaimed space between the Rayagopuram and Vasantha Mandapam today houses two massive transformers of the TNEB, a corporation toilet, and some katcha shops which completely block the view of the Rayagopuram elevation [9].

Fig. 7. Rayagopuram.

This is the only elevated plane with 20,000 sft of open space in the core city which can allow the tourists and city dwellers to have a close glimpse of Pudumandapam and swami sannathi tower. It can become a wonderful viewing deck and place for taking pictures of Madurai for the tourists.

C. Villakuthoon

The 165-year-old monument is in a dilapidated state now. The plague that was kept commemorating the event has been buried in to the ground due to rise in the road level and construction of a traffic island around it.

D. Pathuthoon

Firstly, the presence of the monument itself is not publicized (Fig. 8).

The commercializing of the street having Pathuthoon has been more or less questioning the very existence of these pillars. The several hundred years old pillars are dealt with shear negligence and have been entangled by haphazard growth of settlement around it. The electrical cabling provided in this region and location of the lamp post is merely spoiling the beauty of the monument. The private buildings primarily the shops abutting these pillars are posing a severe threat to them [10].

E. Thirumalai Naicker Mahal

The interface between the ASI declared site and its surroundings has always been unimpressive to any visitor to the palace. There is about a lakh and odd square feet of area within the boundary of ASI monument which is completely unutilized.

Fig. 8. Pathuthoon.

Like any other heritage site of Madurai, this also lacks parking, toilet facilities, street furniture, lighting, etc.

The interiors of the Mahal (Fig.9) which has several cracks and plenty of other repair works are to be carried out with immediate action to rejuvenate the losing glory of the master piece [11].

F. Vandiyur Teppakulam

This temple stands on the edge of the Vandiyur Teppakulam (Fig. 10).

This Teppakulam is an artificial reservoir made by Thirumalai Nayak. It gets filled with water from the Vaigai River and lies at the extreme southeast corner of the town and is totally blocked by developments. It is almost a perfect square, measuring 300 m × 275 m and is the largest construction of its kind in South India. In the middle of the square island, also faced with cut granite, on which among green palms and flowering trees is a small white temple with a tower, flanked at the four corners of the island, with graceful little Mandapas.

G. Town Hall road Tank

The ancient monument and one of the fulcrums of our ritual and cultural heritage is at serious threat and is on date redundant space in the heart of the city. The boundary of the tank is subject to serious misuse. The encroachment has completely hidden the very existence of this sacred place [12].

H. Fort Wall Remains

Although this monument is more than 450 years old, it has not been declared as a heritage site. The monument had been always under severe threats because of the various uses assigned to it. It has been always damaged in all possible ways by mounting of posters and banners in all flat surfaces of the

Fig. 9. Thirumalai Naicker Mahal.

Fig. 10. Vandiyur Teppakulam.

monument. Also to suit the needs of the corporation office, internally it has been subjected to severe damage.

I. Rani Mangammal Summer Palace

The Gandhi memorial is housed in the three-century-old summer palace of Rani Mangammal Palace (Fig. 11) who ruled Madurai between 1689 and 1706.

This museum dedicated to Mahatma Gandhi has a good collection of paintings and sculptures, products of south Indian village industries and handicrafts associates with Gandhi. His letters and some of his personal belongings area also preserved with care.

A model hut on the lines of Gandhi's living quarters in Sevagram has also been built here. A library of Gandhi's books is also maintained here. This building also houses the school of Gandhian thought. The government museum is also located within the complex.

Apart from the summer palaces, Rani Mangammal has also built two more palaces, one on the North Chitrai Street (present PWD office)

Fig. 11. Rani Mangammal Palace.

and one on the South Chitrai street (present commissioner of police office). These palaces also stand testimony to architectural skill of Dravidian builders.

XI. CONCLUSION

Change, however, is inevitable. Buildings, streetscapes, and urban areas evolve and change according to the needs of their inhabitants. Therefore, it is important to determine the role of contemporary architecture in contributing to this change in ways that conserve and celebrate the special character and quality of the historic environment that communities have recognized as important and wish to conserve for future generations. Historic areas typically exhibit a range of heritage values, such as social, historical, and architectural. Frequently, they also have aesthetic significance; therefore, the design quality of new insertions in a historic area is important. However, increasing development pressure has pushed governments and the conservation community to provide more objective guidance to secure the heritage of the setting. Certainty in the planning system about what constitutes appropriate development; consistency in government decision making; and communication and consultation between government

decision makers and the development sector on creating successful outcomes will help the pressure come down.

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