



A STUDY ON TRADITIONAL VERSUS CONTEMPORARY VERNACULAR ARCHITECTURAL STYLE

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Abstract: This study has been done to look into the different approaches used by experience in the past as well as how it meets the various needs of users in the current scenario. The article discusses into extensive detail about how the conventional vernacular style gradually changed to fit the needs of the modern world. Vernacular architecture is about creating structures created by and for the people; it is a reflection of indigenous materials, traditions, and the environment. These days, architects all around the world use its concepts to build contemporary buildings with strong cultural and geographical roots. This growing trend is essentially altering our built environment through the mix of traditional and contemporary elements. Analyze whether this transition emphasizes aesthetics alone, or whether it successfully combines the essence of the traditional vernacular with contemporary trends, using case studies as support.

Index Terms - Contemporary, Traditional, style, Vernacular, Architecture.

I. INTRODUCTION

Using locally accessible materials and traditions to suit regional building and design criteria is referred to as vernacular architecture. Vernacular architecture frequently evolves over time to mimic the historical, cultural, and environmental context in which it is located. Every ethnic group in the world has a distinct vernacular architecture style, but individual approaches might differ from place to location and even within the group. Modern design originated from the vernacular style. Contemporary vernacular architecture is a popular architectural style that is based on modern materials and techniques. On the other hand, vernacular architecture is traditional design that makes use of straightforward yet efficient techniques, making it the most fundamental way to meet human needs.

II. CASE STUDIES FOR TRADITIONAL & CONTEMPORARY VERNACULAR STYLE

This study examines at the various aspects adopted for India's traditional as well as contemporary vernacular building styles. While modern vernacular was taken in Mumbai and Pune, traditional vernacular was taken in Rajasthan and Tamilnadu. The study examined both the traditional and modern vernacular styles of the residential buildings.

2.1 CHETTINADU HOUSE, TAMILNADU

The palaces in the Chettinad region are known for their expansive residences and broad courtyards that are decorated with teak and marble. Athangudi tiles, so named because of the Chettinad manufacturing location, are created using a special technique that uses local soil. They are available in a variety of colors and patterns.

The planning of the house was focused on Occupation.

ii. Values.

iii. Cultural influences.

iv. Climate.



Figure 1: View of the Courtyard for Lighting

Lighting: The main natural light source comes from the central courtyard.

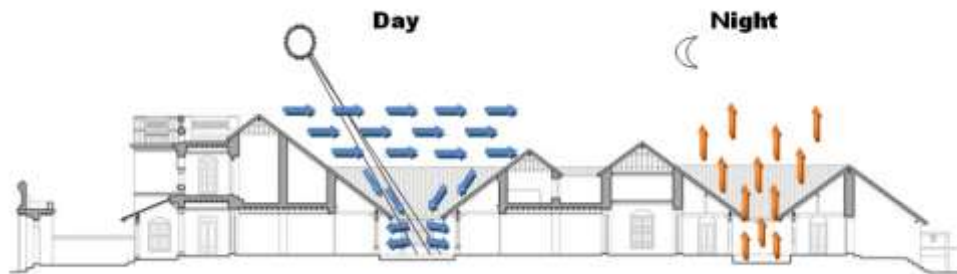


Figure 2: View of the Courtyard for Airflow

Ventilation: The courtyards of Chettinad houses are designed to provide cross-ventilation, which allows air to flow freely throughout the living spaces.



Figure 3: View of the Courtyard with Cultural Value

Cultural Significance: Courtyards are important to Chettinad culture and architecture. They typically serve as the focal points for resident social and cultural events as well as get-togethers with family and the neighborhood.



Figure 4: Courtyard View to Harvest Rainwater

Rainwater harvesting: The efficient collection of rainfall is the main objective of courtyards. This environmentally friendly method makes it easier to collect rainwater for a range of domestic uses, reducing problems about a lack of water.



Figure 5: View from the Courtyard: Linking with Nature

Connecting with Nature: By integrating nature inside the living area, a courtyard creates a connection between the interior and outdoor surroundings. This is related with the ancient Indian concept of incorporating elements of nature into architectural design.

2.2 PATWON KI HAVELI, RAJASTHAN

Haveli architecture is a distinctive vernacular architecture form that flourished in the 18th and 19th century in the pre-Partition western India, particularly in Rajasthan and Gujarat. The word was first applied by the Vaishnava group for their temples in Rajasthan and Gujarat. Subsequently, individual mansions adopted the architectural form.

The planning of the house was focused on

- i. Sociocultural aspects.
- ii. Climate.
- iii. Security and privacy
- iv. Different activities at different times

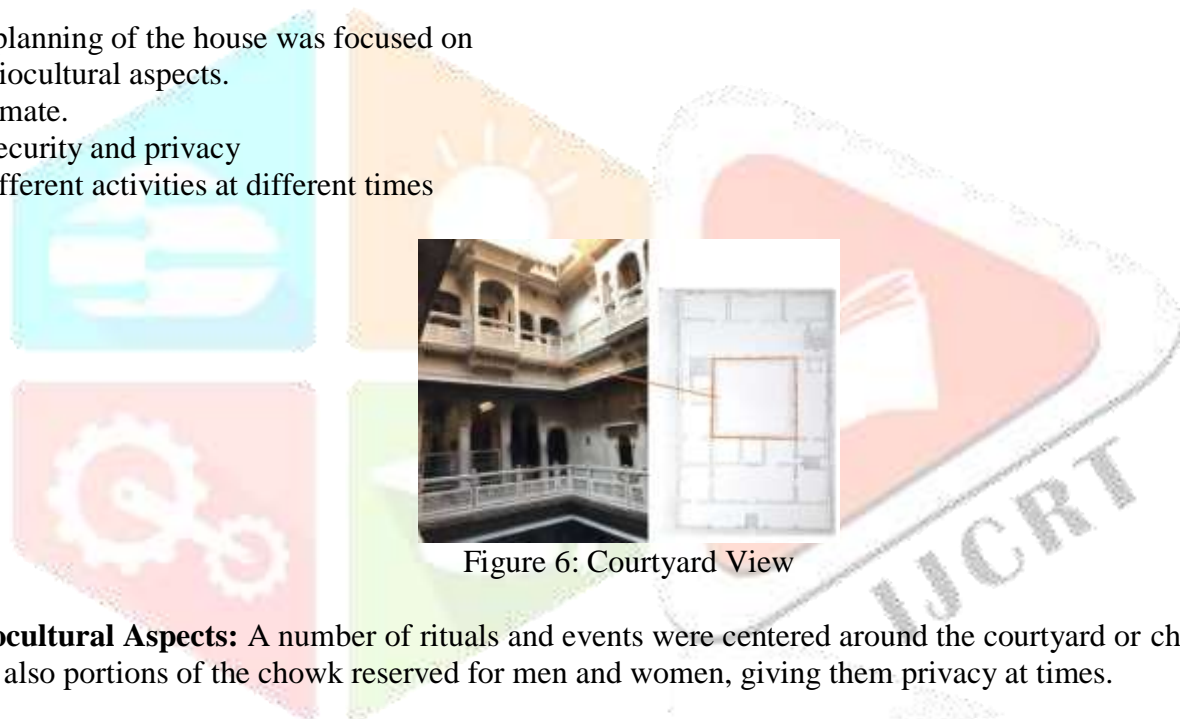


Figure 6: Courtyard View

Sociocultural Aspects: A number of rituals and events were centered around the courtyard or chowk. There were also portions of the chowk reserved for men and women, giving them privacy at times.

Climate: Chowk serves as a microclimate modulator, giving all the areas that surround it plenty of light and ventilation. The elements that provide the sturdy facade its sun protection are Jalis and Jharokhas.



Figure 7: Front View with Jharoka

Security and privacy: The courtyard served as a transition between the haveli's public and private areas. Jharokhas (balconies) or screened mezzanine galleries where ladies may view activities and festivals in the mardana (men's quarters). The jalis are designed to offer privacy as well as the ability for cool air to get in through small openings as well as interior lighting.



Figure 8: Front View

Different activities at different times: Women and household servants also carried out daily tasks in the courtyard. In the daytime, the court was used mostly by women to carry out their work and interact with other women in a private open space.

Materials used: The Patwon Ki Haveli is a collection of five tiny havelis, each with an attractive gold outer coat. The stone there has such natural color, which is where it obtains the nickname "The Golden City."

2.3 BRICK HOUSE BY I STUDIO ARCHITECTURE AT WADA, MUMBAI

The Brick House is a 2500 square foot farmhouse surrounded by farmland and hills in Wada, near Mumbai, India. It is located among rural villages. Methods that include using of local materials, built-in furniture, brick arches, infill slabs, rat-trap bonds, and brickwork. Because of these low-cost and environmentally friendly solutions, less steel, cement, and brick were needed to build the 2500 square foot construction. The building elements used to construct the house are raw bricks, stone, wood, bamboo, and ferro-cement, which gives the inside a feeling of earthy.

The planning of the house was focused on

- i. Advanced construction techniques.
- ii. Organic Form.
- iii. Light and Shadows.
- iv. Climate.



Figure 9: Front View

Materials used: First of all, this farmhouse is constructed entirely of unpainted wood, stone, bricks, and bamboo, and it is situated in the middle of a rural community. The exposed brickwork contrasts with stone walls, highlighting the visual coherence of both materials while providing the building an earthy, rustic feel.



Figure 10: Construction Techniques Followed

Construction Techniques: This 2500 square foot structure was built with less steel, cement, and bricks required because of low-cost and environmentally friendly technologies like rat-trap bonds for brickwork, filler slabs, brick jalis, and built-in furniture. The use of locally available materials and the rejection of unnecessary steps (like plastering) also give the space an earthy feel. Rat-trap bonds for brickwork contributed to material savings, offered built-in insulation, and made electrical conduit easily accessible.



Figure 11: Exterior & Interior View

Organic Form: Its organic form that rises from the ground and into the skyline, along with the curving rooms that flow into each other, are striking aspects that give it a contemporary touch.



Figure 12: Interior View with Jali work

Light and Shadows: Curving jali brick wall that draws the eye into dramatic light and shadow compositions by providing appealing views of the inside. To ensure natural light, cross ventilation, and passive cooling, climatology determines the sizes and placements of the openings.



Figure 13: Courtyard View & Floor Plan

Zoning based on Climate: Activities are zoned in response to weather conditions. The first floor bedroom's southwest orientation cools the water body and shades the patio. The jalis, and arched openings have all been crucial in bringing light and air into each interior area.

2.4 KRIPACHARYA FARMHOUSE BY Q DESIGNS IN PUNE

A project situated on the banks of the Walki River, spanning 10,000 square meters (2.5 acres) of land, is situated in the village of Kule, Tal Mulshi, approximately 35 kilometers west of Pune City. The way that people engage with their environmental, social, and economic surroundings shapes the way that the building form evolves.

The planning of the house was focused on

- i. Kund.
- ii. Chira.
- iii. Peth Culture.
- iv. Climate.

This home reflects every aspect of the local way of life, from padwi, or wide verandas, to kund, a usual central open space, and the red laterite stone known as chira.

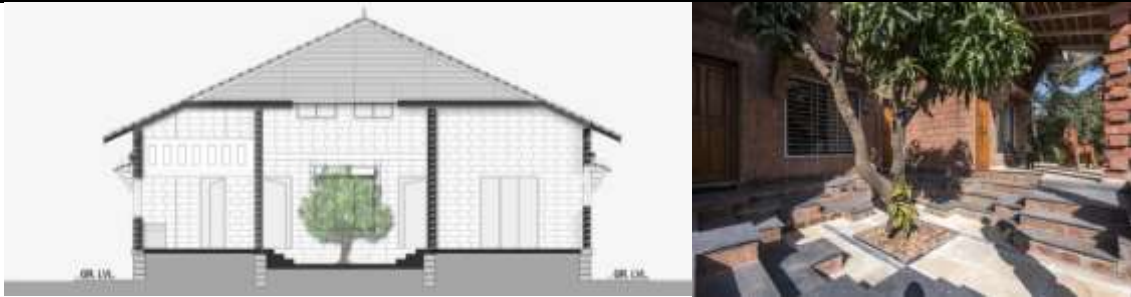


Figure 14: Section & Courtyard View

Kund: The King of Nepal had given the client a mango tree that was already there. The focal point of the home was originally thought to be the mango tree. The mango tree served as the inspiration for the design of this open area, that resembles the shape of a kund and has stepped seating.



Figure 15: Exterior View

Cultural Significance: The client is a resident of Pune's Sadashiv Peth and was raised in a traditional "Peth" culture, where homes are built on small lots and areas are distributed vertically. The primary need was therefore for a multifunctional place on one level where the family could gather and engage in the middle of nature.

Materials used: Material elements from Konkan architecture were used to achieve the client's desired "natural" look and feel, which was consistent with the architect's design philosophy of working with nature. The Konkan House is normally constructed of red laterite stone, also known as Chira. The resulting design is very climate responsive and significantly dependent on this required material expression.

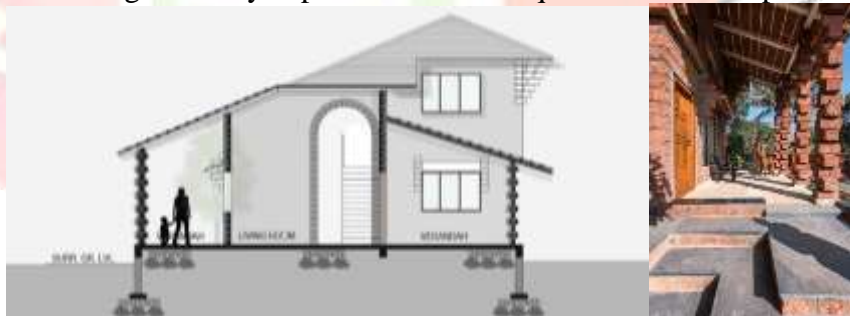


Figure 16: Section & Verandah View

Zoning based on Climate: Large verandahs (padwi) buffer the living room's eastern and western sides. As heat buffers, the restrooms and kitchen to the south are located. The house was designed with sloping roofs towards the eastern and northern sides to avoid direct heat gain from the south and west in response to the severe rains in the area. Some of the many creative solutions for climate responsiveness include double-layered terracotta roofing for insulation and glass holes for direct daylight.

III. COMPARATIVE ANALYSIS

Table 3.1: Comparative analysis of Case studies

Type	Examples	Location	Similarities				
Traditional Vernacular	Chettinadu House,	Tamilnadu	Locally available Materials used	Cultural influences	Climate Responsive design	Courtyard as a main element	Connecting with Nature
	Patwon Ki Haveli,	Rajasthan					
Contemporary Vernacular	Brick House	Mumbai					
	Kripacharya Farmhouse	Pune					
Inferences			These elements are present in both traditional and modern vernacular architectural styles. The built environment in each of these scenarios was developed taking into consideration the local environment, culture, and climate. A courtyard is an important component of the design. It also lets in light and ventilation and modifies the environment.				

IV. RESULTS AND DISCUSSION

Modern vernacular architecture promotes sustainability and gives a sense of place by fusing traditional materials with modern design. Additionally, by incorporating energy-efficient systems, passive design ideas, and eco-friendly technologies—a few architectural features that can be applied to modern vernacular buildings. This establishes a framework that takes into account context and satisfies user wants in a variety of ways to keep up with emerging trends. Modern design and building methods, together with the use of conventional materials, are all considered contemporary. Therefore, modern vernacular architecture is the advancement of traditional vernacular architecture in terms of understanding how to produce building forms that are sensitive to their surroundings and include contemporary ideas.

V. ACKNOWLEDGEMENT

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