# Spatial Characteristics of Mithila Architecture

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*Abstract* — **Mithila, a region steeped in history and culture, nestled within the Indian subcontinent, emerges as a captivating tapestry of geographical and architectural heritage. Bounded by significant natural landmarks, Mithila's rich history dates back to 6000 BCE, enduring diverse epochs under various rulers. In the face of relentless urbanization, the study of Mithila's architecture becomes a crucial endeavor to conserve the essence of this community. This research explores the intricate layers of Mithila's architectural legacy, delving into the living history of its people and providing a roadmap for integrating tradition into contemporary developments. Through a comprehensive literature review, the study navigates cultural and historical transitions, architectural intricacies, and traditional residential structures in Mithila. The research methodology employs qualitative methods, including participant observation and semi-structured interviews, focusing on Janakpur as a research site. Analyzing spatial characteristics reveals intentional orientations, meticulous planning, and the ingenious use of bamboo, mud plaster, and vibrant paintings in building materials and technology. The elevation treatment of Mithila houses emerges as a dynamic manifestation of cultural identity seamlessly blended with architectural innovation. This research contributes to the discourse on cultural and heritage conservation, emphasizing the urgency of empowering local communities to preserve and celebrate Mithila's unique architectural legacy.**

*Keywords—Architecture, Mithila, Janakpur, traditional, houses, Mithila art*

## Introduction

Mithila, often referred to as Tirhut, Tirabhukti, and Mithilanchal, stands as a captivating geographical and cultural tapestry within the Indian subcontinent. [1] Bounded by the Mahananda River to the east, the Ganges to the south, the Gandaki River to the west, and cradled by the foothills of the Himalayas to the north, this region encapsulates certain portions of Bihar and Jharkhand in India, alongside neighboring districts in the Koshi Province, Bagmati Pradesh, and Madhesh Province of Nepal. [2] Anchored in a rich history dating back to 600 BCE, Mithila has weathered diverse epochs under varying rulers. Despite the passage of time, the core values of the Mithila people have remained unwavering.

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As urbanization reshapes the global landscape at a relentless pace, the imperative to conserve Mithila's architectural heritage transcends mere historical preservation; it becomes a vital endeavor to safeguard the very essence of a community. The study of Mithila's architecture delves into an exploration of the living history of its people, where cultural practices, traditions, and the rhythms of daily life find tangible expression in the structures that grace the landscape. In the mosaic of vernacular architecture projects globally, a closer examination of Mithila's architectural intricacies promises to preserve heritage and provide a roadmap for seamlessly integrating tradition into contemporary developments. Limited accessibility of data within Nepal emphasizes the urgency of this research, as it serves as a vital tool to empower local communities, fostering a deeper connection with their cultural roots. The study contributes substantially to the ongoing discourse on cultural and heritage conservation, providing a roadmap for preserving and celebrating the unique architectural legacy of Mithila.

## Literature Review

We conducted a thorough literature review on Mithila traditional architecture in three stages. Starting with a narrative review, we explored historical and cultural aspects. Transitioning to a systematic review, we focused on architectural intricacies. The final phase delved into traditional residential architecture. Our goal was to understand motivations, pinpoint gaps, and contribute to the discourse on Mithila architecture.

### A.      Study of cultural and historical transition in Mithila

Mithila's intricate history unfolds through dynamic shifts, commencing with the thirteenth-century Afghan invasion that heralded the era of Maithili Brahman rule. Rooted in the Vedic period and potentially founded by Videha Madhava or Mahadeva, the kingdom thrived under the Videha-Janaka lineage. Janaka, renowned for his generosity and intellectual vibrancy, embodied the cultural zenith of Mithila. [3] The overthrow of the Videhan Monarchy marked a pivotal juncture, giving rise to an aristocratic republic centered in Vaishali. [2] Videhan princes played integral roles in the Vajjian confederacy, orchestrating the shift from monarchical rule in Mithila to the Vajjian oligarchy, with Vaishali emerging as their metropolis. The subsequent rise of

the Khandavala Dynasty during Akbar's reign, peaking with the Darbhanga Raj estate becoming the largest Zamindari in the British era, and the influence of Maharaja Kameswar Singh underscored Mithila's enduring values, notably in religion. Amidst evolving political and social landscapes, the people of Mithila steadfastly preserved their religious identity, weaving a rich tapestry of cultural continuity across diverse historical epochs. [4]

*B.    Architecture of Mithila*

Mithila's architectural heritage, evolving from early absence in Maithili works to later featuring temples made of perishable materials, reflects a dynamic history shaped by rivers and natural calamities. Floods, especially from the Koshi and Balan rivers, led to the demise of cities. Limited standing monuments and scientific exploration hinder the study of ancient Maithili architecture. From the 15th century, temple records influenced by Indo-Islamic art emerged, surviving in dilapidated conditions. Literary works describe structures made of stone and later brick during the Karnata and Oiniwara dynasties. Abundant alluvial clay facilitated brick production, with fired clay bricks forming the primary material for structures. Stone was sparingly used, and Mithila's temples, dedicated to deities like Siva and Vishnu, predominantly feature brick construction. The art and architecture showcase diverse temple types, including the Sikhara type, with ancient Siva temples having a unique Garbhagriha below the surface. Stone temples are rare, with evidence found at Bhit-Bhagwanpur. Mithila's art, primarily religious, exhibits exquisite temple facades with ornamental styles and intricate decorations, reflecting a romantic attitude.



Fig1 Temple Architecture of Mithila

[5] Architectural members, crafted in wood or stone during the Pala period, are scattered across the region, providing insights into the grandeur of ancient edifices. The ornate facade of the Bhit-Bhagwanpur temple exemplifies the richness of the ornamental style, showcasing floral and geometric patterns and depictions of sensuous figures. The carvings provide a glimpse into devotional practices, incorporating songs and dances in the rich tradition of Indian art. [6]

*C.    Traditional Residential Architecture of Mithila*

The spatial structure is clustered and nucleated, indicating a social hierarchy with landlords in central positions. The clustered houses create a strong neighborhood feeling and

feature mud relief and paintings, signifying varied use of space. [7]

Mithila houses are planned based on socio-cultural needs, aligned along Main Street and facing east due to Vaastu beliefs. They are built incrementally around open courts, with sizes proportionate to inhabitants. The architectural focus involves small openings, including bamboo lattice work (jafadi), ensuring privacy while allowing views. The intentional off-center placement of front doors guides residents along an axis to central courtyards, emphasizing the significance of light and ventilation in Mithila house design. Overall, Mithila's architecture reflects a thoughtful blend of cultural, social, and practical considerations.

I.    Research Methodology

The study is based on studies using a qualitative method in general. To understand why things are the way they are, a qualitative research design is used to uncover the causes and processes underlying a system or a situation. The research technique is inductive since it begins with collecting actual data. The research is designed to be descriptive and interpretive, resulting in increased knowledge.

*A.    Research Methods*

**Participants Observation**

Participant observation was utilized as a primary data collection method to gain firsthand insights into the target location, its people, and the prevailing conditions. This method involved active engagement with the environment under study, allowing for a nuanced understanding of social dynamics, cultural nuances, and contextual factors that may be challenging to capture through other means., here I played a direct role in the data collection process, immersing themselves in the experiences of the community. [8]

**Semi-Structured Interview**

To enrich my study of Mithila, I employed semi-structured interviews alongside participant observation. Despite their demanding nature, these interviews provided flexibility in guiding discussions and tailoring focus. Face-to-face interactions generated rich data, offering depth and authenticity to my findings. Crucially, interviews revealed missing data, especially concerning traditional architecture in modernized houses, a detail not captured through visual observation alone. This personalized engagement facilitated a comprehensive understanding of cultural changes in Mithila, underscoring the importance of a mixed-methods approach in capturing nuanced aspects of transformation. [5]

**Selection of the research site**

In this study, the mapping of Janakpur was done to understand the orientation and formation along with the study of some houses, Janaki mandir, and Janaki Women Development Centre to understand spatial characteristics in Mithila Architecture

TABLE 1
ANALYSIS OF SPACES

| Cases | Space Analysis | | |
|-------|----------|----------|-----------|
| | *Entrance* | *Courtyard* | *Buildings* |
| Mithila House-Saptari | The entrance is from the road on the eastern side | Double courtyard one being angana and another being Darwaza where cattle shed is placed | Buildings are placed on the eastern, western, and southern sides |
| Janaki Mandir | East-facing Temple entrance | Double Courtyard | Buildings are placed alongside the courtyard with the temple in the center |
| JWDC | Entrance From Northen road but main building faces east | Single Courtyard but separated by landscape elements | Mithila buildings are deliberately oriented west, north, and east, reflecting architectural precision and adherence to Vaastu principles. |

An analysis of the overall planning of Janakpur, including Pond, was conducted to comprehend the current settlement pattern. The examination revealed insights into courtyard planning, as evidenced in the literature. However, a notable shift has occurred with many traditional houses being replaced by modern concrete structures. The case study of traditional Mithila residential architecture was primarily reliant on interview questions and observations of the remaining mud houses near Janakpur. Given the limited availability of traditional houses, additional inferences were drawn from the architectural elements of Janaki Mandir and Janaki Women Development Centre.

**Analysis of spatial characteristics**

The following is a comparative analysis of the five aspects of the spatial characteristics of the research sites along with inference derived from structured interviews and participant observation: Orientation, planning, Building material and technology and elevation treatment.

*B.    Orientation*

In the examined cases, it becomes evident that a predominant orientation choice for buildings is toward the east, while a deliberate avoidance of south-facing structures is noted. This practice aligns with Vaastu's beliefs, where the orientation of a building is considered crucial for positive



Fig. 2 Tej Prasad House

in this orientation choice, particularly in mitigating the impact of harsh sun rays and regulating indoor temperatures, especially on hot and humid days. The intentional east-facing positioning allows for the gentle absorption of morning sunlight, creating a comfortable and well-lit interior environment, while concurrently minimizing the direct exposure to the intense afternoon sun from the south. This synthesis of Vaastu principles with practical climatic considerations underscores a holistic approach to building design, where cultural beliefs harmonize with environmental responsiveness, contributing to the overall well-being of the occupants.

*C.    Planning*

In the artful planning of Mithila village, the concept of open spaces unfolds in two distinct forms: the unplanned, like open land behind structures, and the purposeful, carefully organized at various community levels. At the village group level, a lively market square becomes a weekly convergence point, intertwining social and economic activities. At the village level, an expansive open area beneath a banyan tree, home to a temple, becomes a spiritual anchor for communal rituals. Progressing to the neighborhood level, the "Darwaza" acts as a communal meeting point, fostering clan unity during off-hours and accommodating activities like "Khalyan" during harvest. On an individual level, private courtyards, hidden from view, become personal spaces for household activities. This intentional mix of organized open spaces thoughtfully addresses social, cultural, and economic needs while maintaining a balance between natural evolution and conscious design, contributing to the cohesive fabric of Mithila village life.
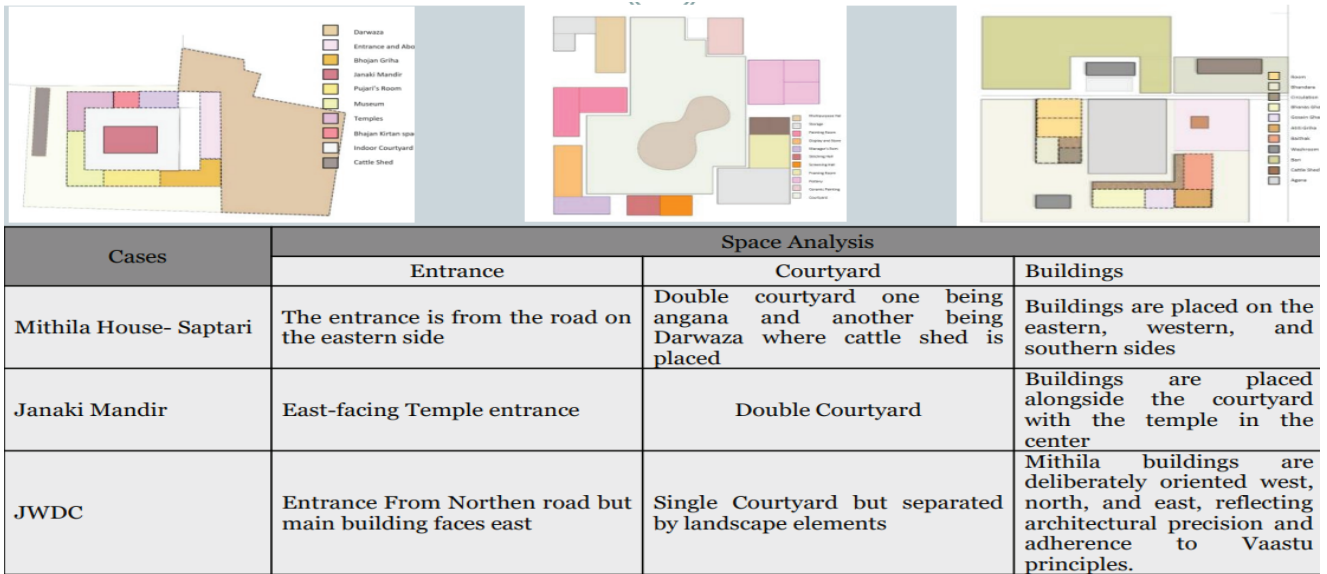
Fig. 3 Planning

| Cases | Space Analysis | | |
|---|---|---|---|
| | Entrance | Courtyard | Buildings |
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In the smart choreography of courtyard planning within Mithila village, a thoughtful spatial organization reveals itself, showing a purposeful division of zones. Two courtyards unfold, with the Darbajja as an outer space for agricultural and public activities, including a cattle shed. The inner courtyard, accessible through a gate and surrounded by three strategically placed houses, establishes a spatial hierarchy.  The main house on the east accommodates daily activities, while the northeast house becomes the sacred Gosain Ghar (Puja room), and the southeast house functions as the kitchen.

The inclusion of a guest/living room on the western side strategically forms a welcoming space, fostering communal interactions within the Mithila village. This spatial arrangement is intricately designed to achieve a harmonious balance between private and communal needs, accentuated by the cultural significance of a dedicated Puja room. The overall courtyard planning in Mithila village is a testament to spatial equilibrium, seamlessly intertwining cultural heritage with practical considerations, resulting in an architecturally harmonious.

*D.    Building Material and Technology*

The architectural heritage of ancient Mithila houses is intricately woven from bamboo, mud plaster, and a rich tapestry of vibrant paintings. Typically, single-storied, with the occasional use of wooden structures for second floors, these dwellings boast foundations of compressed mud, providing a robust base for the entire structure. Vertical and horizontal posts, fashioned from wooden logs, serve as the skeletal framework, with some instances featuring a protective layer of mud plaster.

The walls of these homes are a testament to resourcefulness, employing thin bamboo layers intricately spun to create an inner structure (that), subsequently coated with mud plaster on the exterior. Adorning these walls are captivating Mithila paintings, showcasing the artistic prowess of the inhabitants.
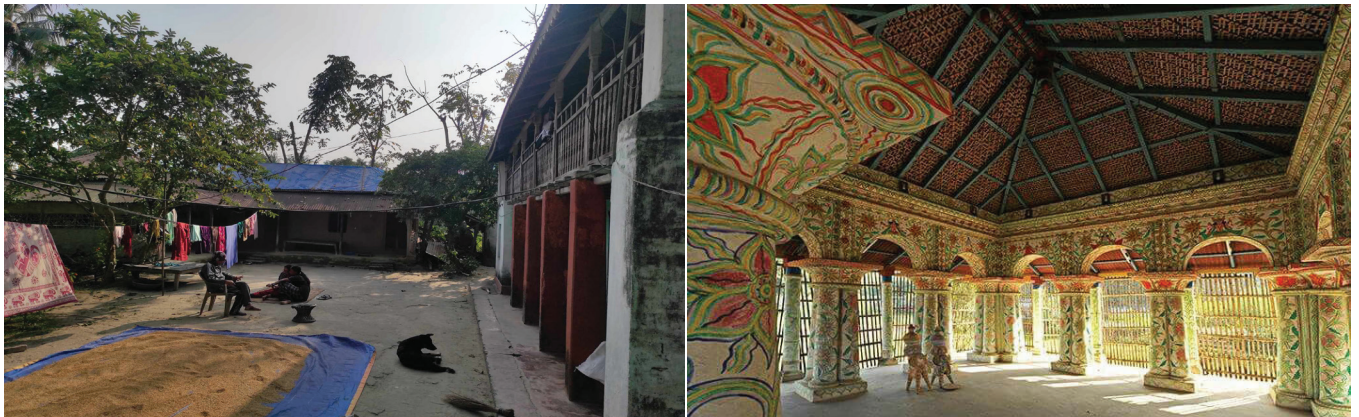


Fig.4 Darwaza and Decoration

For added strength and durability, mud bricks, known as Kachhi bricks, find occasional use. The roofing technique involves the placement of spinned bamboo layers, covered with straw (rari, laar), and in certain cases, Khapada— an application of sun-dried mud—adds an extra layer of insulation and structural integrity. This amalgamation of bamboo craftsmanship, mud plaster, and vibrant paintings not only defines the physical structure of these ancient houses but also serves as a living testament to the resourceful ingenuity of the Mithila people.

*E.        Elevation Treatment*

The elevation treatment of traditional Mithila houses embodies a harmonious fusion of cultural aesthetics and architectural functionality. At the core of this treatment is the elevated plinth area, colloquially referred to as "osara." Beyond its structural role, osara serves as an elevated communal space, allowing residents to engage in shared activities and contemplate the surrounding natural beauty. The walls of these houses, coated with a meticulous blend of cow dung and mud plaster, become canvases for vibrant paintings executed with natural dyes derived from local flowers. This cyclical plastering process, occurring biannually, not only maintains structural integrity but also facilitates the continuous evolution of artistic narratives on the walls. Complementing this, the roofing structure features sloped thatch roofs supported by bamboo-woven elements and wood.

Doors and windows, crafted with precision from wood, provide both security and aesthetic expression, further enhancing the unique character of Mithila houses. In essence, the elevation treatment stands as a tangible and dynamic manifestation of Mithila's cultural identity, where architectural elements seamlessly intertwine with artistic innovation.

When upper floors are incorporated into traditional Mithila houses, they serve as sleeping spaces, providing a vertical dimension to the dwelling. A distinctive feature is the extension of a balcony directly above the osara, adorned with a wooden railing. This elevated platform not only offers an elevated view of the surroundings but also contributes to the architectural aesthetics. The roof of these houses is not merely a utilitarian covering; it becomes an artistic canvas. Elaborate wood carvings or designs embellish the roof's edges, adding a touch of sophistication and cultural richness to the overall structure. This attention to detail in both the functional and aesthetic aspects showcase the thoughtful planning and craftsmanship inherent in Mithila house architecture.

**Conclusion**

In conclusion, our comprehensive exploration of Mithila's architectural heritage is a vital undertaking amid the challenges posed by urbanization. Through meticulous research methods and an in-depth literature review, we unearthed the region's intricate historical transitions, architectural complexities, and the nuanced planning of traditional residential spaces. Mithila's enduring journey, marked by unwavering religious and cultural commitment, is vividly mirrored in its architectural evolution, shaped not only by historical shifts but also by the pragmatic integration of Vaastu principles for orientation.

The deliberate eastward-facing structures, informed by Vaastu beliefs, not only hold profound cultural significance but also offer pragmatic benefits by effectively managing sunlight and temperature. The careful choreography of spatial planning, which intricately balances social, cultural, and economic needs, creates a harmonious equilibrium, ensuring the preservation of Mithila's unique identity. The judicious use of indigenous materials like bamboo, mud plaster, and vibrant paintings not only showcases the resourceful ingenuity of the Mithila people but also emphasizes the urgent need to safeguard this architectural legacy. As we confront the challenges of urbanization, this research provides valuable insights into a distinctive heritage that calls for both protection and celebration. Given the limited accessibility of data within Nepal, this study acquires heightened significance in empowering local communities, fostering a deeper connection with their cultural roots, and contributing to the conservation of Mithila's architectural legacy. Ultimately, the study serves as a bridge between the past and future, offering essential lessons for sustainable development that reverently preserves cultural heritage and maintains the vibrant and identity-rich tapestry of Mithila.

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