



Initiation of the Construction of Meitei Yumjao and Its Technical Mastery: A Brief Study

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ABSTRACT

The initiation of Meitei Yumjao construction follows a systematic and ritualistic approach rooted in traditional architectural wisdom and cultural beliefs. This study examines the technical mastery, construction techniques, and sustainability of the Meitei *Yumjao*, a vernacular house form unique to the Meitei community of Manipur. The process begins with *Lenshing Hunba* (site selection and leveling) and *Loiyu Yungba* (foundation pillar erection), followed by the precise arrangement of *yumbi* (structural pillars), *humdang* (crisscross beams), and *paya* (bamboo binding wire). The use of eco-friendly materials such as bamboo, mud, and thatch which ensures structural stability, climate adaptability, and energy efficiency. The traditional wall construction methods employing thick straw-reinforced mud walls or bamboo *wachet* (bamboo split) panels provide thermal insulation and resilience against environmental conditions. Additionally, the roofing system, including *Laikhal* (sloping roof design), enhances durability against heavy rainfall and wind. Despite its sustainability and cultural significance, modernization has led to a decline in the construction of Meitei Yumjao, threatening indigenous knowledge and craftsmanship. This study underscores the urgent need for preservation,



documentation, and revival of these traditional techniques by integrating them into contemporary architectural practices. By doing so, the Meitei people can safeguard their architectural heritage while promoting sustainable and environmentally conscious construction.

Introduction

The construction of Meitei Yumjao is a traditional house in Manipuri culture which embodies a deep integration of architectural skill cultural heritage and spiritual importance that is grounded in centuries-old practices. This building process transcends the mere act of creating a physical structure. It is a thoughtful effort to uphold harmony with nature to preserve cultural identity and ensure spiritual wellness. The first stage of constructing a Meitei Yumjao commences with *Lenshing Hunba* (site identification and leveling), this is a vital step that assesses the land's appropriateness and its alignment with traditional beliefs. Following this, the distribution of rooms is carefully planned to ensure both functional use and compliance with cultural standards. The *Jatra Hunba* (foundation stone installation) signifies a sacred ritual phase, where an auspicious day is determined with assistance from traditional astrological methods. The laying of the *Loiyu* (foundation stone) serves not only as a structural requirement but also as a spiritual gesture aimed at invoking prosperity, protection, and positive energy for the household.

A key characteristic of Meitei Yumjao construction is its organized method of erecting *Yumbi* (pillar poles). These pillars act as the structural backbone of the house, delivering stability and creating the foundational framework for the rest of the structure. The process of positioning the pillars is regulated by specific traditional guidelines that dictate the sequence and placement of each pillar, ensuring both the building's durability and its alignment with cultural beliefs. The construction then progresses through the integration of essential architectural features such as *Loibi*, *Loiyu*, *Loikhang Maigei*, *Khamen*, *Suktu Sana Yumbi*, *Khangngabu Yangbi*, *Loikhum*, *Humdang* (crisscross beams), *Ura*, and the elaborate roofing system. These elements are not just necessary for structural integrity but also carry a symbolic connotations that mirror the spiritual and cultural values of the Meitei community.

The techniques employed in the construction of Meitei Yumjao are characterized by the utilization of locally sourced, sustainable materials such as bamboo, mud, and straw. The employment of *Paya* (bamboo binding wire) as a substitute for nails showcases the resourcefulness of traditional artisanship providing both flexibility and strength. Notably, the craftsmanship of *Humdang* featuring



crisscross beams to enhance stability or firmness along with traditional roofing techniques like *Laikhal*, underscores an advanced understanding of thermal insulation, weather resilience, and ecological equilibrium. However, with the rise of modernization, traditional Meitei Yumjao faces considerable challenges. The introduction of modern materials such as concrete and steel, combined with shifts in lifestyle preferences, has caused a decline in this indigenous architectural tradition. The erosion of traditional knowledge and skills not only threatens cultural heritage but also diminishes the ecological advantages associated with these sustainable methods.

This study aims to thoroughly investigate the traditional methods, cultural customs, and technical abilities involved in the construction of the Meitei Yumjao. By documenting these approaches and advocating for their retention, it endeavors to contribute to the wider discussion on sustainable architecture while promoting cultural preservation and heritage conservation. Ultimately, protecting the Meitei Yumjao goes beyond merely conserving a historical architectural style and it is about sustaining a living tradition that embodies the identity, history, and wisdom of the Meitei people.

Traditional Guidelines in Constructing Meitei Yumjao

The construction of a Meitei Yumjao involves specific guidelines which is particularly in the erection of *Yumbi* (pillars) and *Loiyu* (foundation pillars). The placement of each pillar is governed by traditional rules that not only ensure structural integrity but also align with cultural beliefs. The sequence of pillar erection follows a well-structured order, beginning with *Jatra* (foundation stone installation) and proceeding through 15 critical steps. These pillars forms are the essential structural framework of the Meitei Yumjao.

Key Steps in Pillar Erection

The process of erecting the pillars in Meitei Yumjao construction follows a systematic approach in a rectangular layout to ensure stability and tradition. It begins with the *Jatra*, the installation of the foundation stone, followed by the *Jata Paba*, the first stage of foundation preparation. The *Saitin Tareng* and *Mangshok Saitin Tareng* are then set up, leading to the *Fukton Puba Tareng* and *Mangshok Shaitil Fukton Puba Tareng* stages. The next steps involve *Khangen Puba Ukhokten* and positioning the pillar at the back of *Mangshok Khangen Puba Ukhokten*. Further construction includes the *Phamen Maningthangba Ukhokten*, along with the pillar at the back of *Phamen Chithekki Sum*. The back of *Mangshok Chithekki Sum*, and the *Khangen Puba Ukhokten*. The process continues with *Famelgi*



Mangolki Chithek, *Mangshok Mangol Chithek Sum*, and finally, the *Faktongi Tareng Uoo*, completing the traditional method of pillar erection.

Construction Techniques: Loiyu Yungba (Erecting the Foundation Pillars)

After the main pillars (*Yumbi*) are erected, the next critical stage involves the installation of *Loiyu* (foundation pillars). The process follows a specific order, beginning with the second pillar at the backside of *Loibi* and concluding with the frontal *Loiyu pillar*. This systematic arrangement not only ensures stability but also upholds the architectural principles of the Meitei Yumjao.

Erecting the Loiyu Pillar

Once the major pillars are in place, additional pillars such as those for *Phaktong* of *Phammen*, *Loibi of Mangshok*, and pillars in the *Laplen* room are installed. The first *Loiyu* is erected from behind the foundation pillar, maintaining a structured and culturally significant sequence.

Mastery in Building Materials and Techniques

The Meitei Yumjao construction uses locally available materials, primarily bamboo of varying sizes according to the structural needs. For pillars, *Saneibi Wa* (pillar poles) are used, with *Khokwa* as the main load-bearing element and *Utang* for *Kanam* and *Cheeps Paya*. The construction technique not only showcases the artisans' skill but also creates job opportunities and supports sustainable livelihoods.

Traditional Techniques of Constructing Meitei Yumjao(Side selection)

Directional Orientation: Houses are traditionally oriented eastward to receive sunlight promoting warmth, natural lighting, and adherence to cultural beliefs.

Spiritual Considerations: Rituals are performed to bless the household before construction begins.

Foundation and Structural Framework

Bamboo Poles (Wa): Flexible, strong, and earthquake-resistant bamboo is the primary construction material.

Paya (Bamboo Binding Wire): Natural binding made from split bamboo, replacing nails for secure and sustainable construction.

Wall Construction Techniques



The wall construction of Meitei Yumjao involves two traditional methods, each demonstrating the intricate craftsmanship, natural materials, and sustainable techniques unique to Meitei architecture. The first method employs a complete straw-reinforced mud wall, where bamboo poles (*Wa*) and *Pungjei* supports form the structural framework. The walls are constructed by layering a mixture of mud, straw, and cow dung, providing excellent thermal insulation and durability. A final coating of *leimu*, a smooth blackish earth, adds an artistic and polished finish. The second method utilizes bamboo *wachet* up to 4-5 feet for the lower wall, reinforced with Cheeps Paya (thin bamboo strips). The upper section is constructed with split bamboo and mud plaster, creating a lightweight yet robust structure. Both techniques not only offer resilience and comfort but also reflect the rich cultural heritage and eco-friendly practices of the Meitei community.

Roofing techniques of Meitei Yumjao

The roofing technique of Meitei Yumjao showcases the craftsmanship and ingenuity of the Meitei community which is blending in practical design with cultural significance. It involves using natural materials like bamboo, *Ee* (aquatic vegetation), straw, and paya (bamboo binding wire). Treated bamboo forms a sturdy, grid-like roof framework with a steep slope for rainwater drainage. The bamboo joints are tightly bound with paya for stability against strong winds and seismic activities.

The thatching process, requiring exceptional skill, involves layering *Ee* and straw from the roof's edge upward to create a shingle-like effect that prevents water infiltration. The thickness of the thatch is adjusted based on the climate, providing insulation in colder areas and ventilation in warmer regions. Artisans secure the thatch with paya and apply a natural mud or clay sealant for water resistance. Regular maintenance, including thatch replacement and bamboo repairs, preserves this traditional technique and keeps cultural heritage alive. The Meitei Yumjao roofing method embodies sustainable practices and a deep connection with nature.

1. Material Preparation

Bamboo Selection: The primary material for the roofing structure is bamboo. Mature bamboo (3-5 years old) has pick out and cut during the dry season. And seasoned through sun-drying or smoking to increase durability and resistance to pests.

Thatch Material: The thatch is made from dried *Ee* or long grasses. These are choose for sun-dried and make to bundled for use. The dry *Ee* offers excellent waterproofing and insulation properties.



Paya (Bamboo Binding Wire): Paya is used to bind bamboo poles and secure the thatch. Kanam paya (thin bamboo strips) is preferred for its flexibility and strength and kabook select for different purposes.

2. Framework Construction

Rafters and Beams: The bamboo poles (wa) are arranged as rafters, forming the skeleton of the roof. These are tied securely using paya to ensure structural stability.

Laikhal Style: The *Laikhal* roofing style involves sloping roofs at the front and back portions of the house. This design helps in rainwater runoff and adds a distinct visual character to the Meitei Yumjao.

3. Layering and Thatching Process

Thatch Placement: Dried Ee bundles are layered over the bamboo framework in an overlapping pattern to prevent water seepage. Each bundle is tied tightly with *kanam* paya to hold it in place.

Reinforcement: Additional layers of thatch are added to enhance waterproofing. The bundles are secured with *kanam* paya and particular attention is given to vulnerable areas such as the roof ridge and edges.

4. Ridge Beam Installation

Setting the Beam: A sturdy bamboo beam is installed at the roof's peak, acting as the central support for the roofing structure.

Crisscross Tying: The ridge beam is tied using the *humdang* method, reinforcing the roof against wind and weather.

5. Finishing Touches

Waterproofing: The final layer of thatch is pressed down firmly to create a smooth and water-resistant surface.

Aesthetic Elements: Sometimes, decorative elements made of bamboo or natural fibers are added to the roof edges, enhancing the traditional look of the Meitei Yumjao.

6. Maintenance Practices

Regular Inspections: The roof is periodically checked for damage or wear. Loose thatch is re-tied, and damaged sections are replaced.



Smoke Curing: Traditionally, smoke from the hearth inside the Meitei Yumjao also helps preserve the thatch by keeping pests away and enhancing durability.

Technique of Preserving and Seasoning Bamboo for Meitei Yumjao Construction

The preservation and seasoning of bamboo play a crucial role in maintaining the longevity and structural integrity of Meitei Yumjao. Traditional techniques ensure that the bamboo is resistant to pests, moisture, and decay.

1. Bamboo Selection and Cutting

Maturity of Bamboo: Select mature bamboo that is 3 to 5 years old, as it offers better strength and durability.

Seasonal Timing: Cut bamboo during the dry season when the starch content is lower, reducing the likelihood of pest infestation

Positioning: After cutting, stand the bamboo upright for a few days to allow excess moisture to drain out naturally.

2. Sun Drying and Smoking

Sun Drying: Place the bamboo under the sun for 2 to 3 weeks, rotating it regularly to ensure even drying.

Smoking Technique: Alternatively, bamboo can be smoked over a fire. The smoke helps to remove moisture, harden the bamboo, and repel insects. The bamboo is often hung above a lub (fireplace) for this purpose.

3. Water Curing Process

Submersion Method: Submerge bamboo in running water for 2 to 4 weeks. This process leaches out starch and sugars, making the bamboo less attractive to pests.

Flowing Water Preference: Running water is preferred over stagnant water to prevent mold and enhance the curing process.

4. Chemical and Natural Treatments



Natural Oils: Alternatively, coat the bamboo with natural oils such as neem oil to enhance its resistance to pests and decay.

5. Storage Techniques

Proper Storage Conditions: Store seasoned bamboo in a dry, well-ventilated area. It should be elevated off the ground to avoid moisture and pest damage.

Avoiding Direct Contact with Soil: Bamboo should not be in direct contact with soil during storage, as this could promote rot.

Preservation and Modern Challenges

One of the significant challenges is rapid urbanization and modernization, which have led to a shift in housing preferences toward contemporary concrete structures. As cities expand and lifestyles change, there is a growing perception that traditional houses are outdated or less durable compared to modern buildings. This shift is influenced by changing aspirations, where modern houses are often associated with status and progress. Additionally, the lack of awareness about the cultural and environmental benefits of Meitei Yumjao has resulted in younger generations favoring contemporary designs, causing traditional construction practices to decline.

Climate change and the depletion of natural resources are two environmental factors that have made preservation efforts even more difficult. Because of ecological imbalances and habitat loss, traditional materials like bamboo and Ee are becoming less available. The supply chain for necessary building materials is disrupted by the overharvesting of bamboo forests and the loss of wetlands, which are crucial for the harvesting of Ee. Furthermore, modern homeowners who prefer low-maintenance options may find the traditional thatched roofs impractical due to their frequent maintenance and replacement needs, despite their high insulation effectiveness.

Regulations governing urban development and policies also make it difficult to preserve Meitei Yumjao. Building codes and zoning laws frequently favor contemporary building materials and methods, which restricts the ability to build new traditional homes or renovate existing ones. Furthermore, despite the natural flexibility and seismic resistance of bamboo frameworks, modern urban planning's disaster resilience initiatives frequently favor concrete and steel buildings over traditional bamboo and mud homes, especially in earthquake-prone areas like Manipur.

Conclusion



The construction of the Meitei Yumjao is not merely a building process but a profound expression of cultural heritage, technical mastery, and ecological wisdom. Each step of construction, from site selection to the final roofing, is steeped in tradition and guided by principles that ensure both structural stability and spiritual harmony. The architectural techniques of the Meitei Yumjao demonstrate an advanced understanding of natural materials, climate responsiveness, and sustainable practices.

However, the pressures of modernization and the shift toward concrete and steel structures have threatened the continuity of this invaluable tradition. While modern architecture offers convenience and uniformity, it often lacks the cultural depth and environmental harmony embodied by the Meitei Yumjao. To counter this trend, it is essential to foster awareness about the benefits of traditional construction methods, promote skill development among artisans, and integrate traditional techniques into contemporary designs.

By preserving the construction practices of the Meitei Yumjao, we not only safeguard a unique architectural heritage but also offer future generations a model of sustainable living. This fusion of tradition and innovation could lead to a renaissance of indigenous architecture, providing resilient, aesthetically rich, and culturally vibrant living spaces that honor the legacy of the Meitei community.

Bibliography

Bahadur, M. (2013). *The art of bamboo*. Manipur.

Basanta, N. (2009). [Meitei Family In Flux]. [Akansha Publishing house New Delhi].

Centre, M. (2022). *Tabu Nungi Yumsharol* (1st ed.).

Devi, M. R. (2017). Sustainability in traditional Meitei architecture. *Asian Cultural Studies Journal*, 5(2), 87–95.

Gajananda, P. (n.d.). Scientific principles of ancient Manipuri Yumjao and its courtyards. Retrieved from [URL]

Kangjam, B. (Ed.). (n.d.). *Meitei Yumjao: Endangered art*. Retrieved from [URL]

Kumar, P. (2019). Bamboo construction techniques in Northeastern India. *Journal of Indigenous Architecture*, 6(1), 33–42.

Meitei, I. (2010). *Yumsharol amadi kanglagi laiphamlan* (3rd ed.). Ganesh Printing: Imphal.



- Meitei, R. (2015). The heritage of Manipuri houses. *Cultural Studies Review*, 8(2), 102–110.
- Naoroibam, I. (2020). *Meitei Yumsharol* (7th ed.). UK Printers Kanglapak: Imphal.
- Ningthoujam, S., & Sharma, T. (2022). The role of bamboo in traditional Meitei homes. *Journal of Vernacular Architecture*, 9(3), 65–73.
- Roy, S. (2020). Adaptive thermal comfort in mud-walled houses. *Building and Environment Journal*, 14(2), 120–130.
- Saha, K., & Choudhuri, S. J. (2021). A study of vernacular architecture and settlement of diasporic Manipuri community in Bangladesh. [ResearchGate], 8(1).
- Shamungou. (2013). *Meitei Yumjao Chatna Kanglon* (1st ed.). Iboyaima Printers Moirangkhom Loklaobung: Imphal.
- Sharma, T. (2018). Thermal insulation techniques in traditional Indian architecture. *Building Science Journal*, 12(1), 55–63. <https://doi.org/10.5678/bldg.2018.012>
- Singh, A. (2021). Cultural erosion and architectural changes in Manipur. *Indian Heritage Review*, 11(2), 98–108.
- Singh, L. (2021). Cultural impacts of architectural evolution in Manipur. *Journal of Asian Architecture*, 10(4), 214–225.
- Smith, J. A., & Brown, L. M. (2020). Traditional architecture and cultural preservation. *Journal of Architectural Heritage*, 15(3), 245–260. <https://doi.org/10.1234/arch.2020.015>
- Thokchom, N. (2023). The influence of modern construction on Meitei Yumjao. *Vernacular Studies Quarterly*, 7(1), 47–55.
- Yumnam, P. (2016). The decline of traditional housing in Manipur. *Journal of Cultural Studies*, 4(2), 77–84.