



Interpretation of Vernacular Techniques in Interior Space: A Case of Himalyan Region

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ABSTRACT

Vernacular architecture of the Himalayan region presents localized design solutions in response to mountainous terrain, climate, material availability and cultural needs. This thesis provides an interpretive analysis of traditional vernacular interior spaces, focusing on the construction of floors, roofs, ceilings and walls in domestic architecture. Floor analysis examines the use of terracotta, wood planks and stone panels in response to climatic and lifestyle factors. Roofing techniques covered include thatched and wooden roofs as well as flat terracotta roofs. The study looks at indigenous solutions for insulated ceilings to cope with extreme temperature fluctuations. Wall construction methods include stacked stone, rammed earth, corn cob, and wood framing. The thesis emphasizes how these indigenous building elements not only respond to environmental pressures but also support cultural and religious activities. The spatial arrangement demonstrates similarities between ethnic groups while preserving distinct local identities. The study concludes by assessing the environmental relevance, sustainability and cultural sensitivity of indigenous Himalayan architecture, providing lessons for contemporary design in mountainous regions. Given these findings, future study should go deeper into new design trends, analyse the integration of technology into modern time , and look into the long-term influence of these design decisions on consumer loyalty and satisfaction. Finally, this dissertation contributes significantly to the greater discussion of interior design by emphasising the mutually beneficial relationship between walls, floors, and the development of meaningful and memorable settings.

Keywords: sustainable , interior , himalayan architecture , interpretation , walls , floor , ceiling.

Introduction:

The fusion of vernacular architecture techniques and materials with contemporary building processes is a powerful example of the fusion of innovation and tradition. b) The distinct environmental, cultural, and social circumstances of certain places are reflected in vernacular architecture, which is based on the knowledge of generations. c) The present revival of interest in vernacular architecture provides an opportunity to create designs that are visually pleasing, culturally relevant, and sustainable. d) The purpose of this investigation is to examine the ways that modern building techniques can benefit from and be informed by vernacular architecture. e) There are many advantages that vernacular building methods and materials offer to the contemporary architectural scene, ranging from sustainability to cultural preservation. f) This exploration of the blending of the old and the contemporary promises to produce resilient and environmentally conscious constructions.

Aim

The aim is to bring in the extinct vernacular technique into interior design by combining both the modern and vernacular techniques so that we can get the touch of both modernity and vernacularism into our building.

Objectives

- a) Sustainability, cultural preservation, contextual relevance, resilience, community engagement, innovation, education, socioeconomic development, artistic enrichment, and environmental responsibility are the main goals of incorporating vernacular architecture techniques and materials into contemporary construction.
- b) To encourage the use of locally accessible, renewable building materials and passive design techniques that draw inspiration from vernacular architecture in order to promote environmentally sustainable building practices.
- c) To employ building techniques that are becoming less common in both interior and architectural design.

Methodology

This research employs a qualitative approach to investigate how the design of interior spaces can engage the vernacular based interior design as to the locally available material, sustainability to create more profound emotional connections and meaningful architectural encounters. The methodology consists of the following components:

1. Literature review
2. Case Study Analysis
3. Comparative Analysis
4. Findings and Insights

Scope

The use of vernacular architecture techniques and materials in contemporary building is expanding and changing, reflecting a greater understanding of the advantages of conserving cultural heritage, encouraging sustainability, and producing contextually-based architecture.

- b) It provides a blank canvas on which communities, architects, and builders can work together and create in ways that respect tradition and seize current chances.
- c) The use of vernacular architecture techniques and materials in contemporary times is wide-ranging and includes many facets of architectural design, building, and cultural interaction.
- d) To revive the antiquated vernacular approach in the modern era.

Limitation

The constraints that we must bear in mind are that we must combine elements of the long-gone vernacular building methods with modern technology, so that the methods can likewise be practiced now.

- a) In order to provide our clients or the individuals utilizing that location with a singular experience. Naturally abundant and sustainable, capturing the history and character of the locality. We must learn about the building methods that are still in use in the northern section of India.
- b) With the aid of these methods, we may infuse modernity and vernacular architecture into the present age and educate the next generation about these construction processes in Handcrafted Furniture: Many cultures have a rich tradition of handcrafted furniture using local materials and techniques.
- c) Natural Materials: Vernacular insides plan regularly emphasizes the utilize of common materials like wood, stone, clay, bamboo, and cover. These materials are not as it were promptly accessible but moreover eco-friendly and maintainable..
- d) Decorative Arts : Numerous societies have one of a kind embellishing expressions such as ceramics, ceramics, mosaic, or carving. Joining these carefully assembled things into insides spaces can include a touch of realness and social lavishness.

BACKGROUND

Overview of Study

The Himalayan region has a rich vernacular architecture that has evolved over centuries, reflecting the local climate, terrain, material availability, and cultural needs. The study emphasizes the significance of these indigenous building elements, which not only respond to environmental pressures but also support cultural and religious activities.

The research delves into the use of terracotta, wood planks, and stone panels for flooring, examining how these materials were chosen based on climatic factors and lifestyle requirements. It also explores various roofing techniques, including thatched and wooden roofs, as well as flat terracotta roofs.

The dissertation investigates indigenous solutions for insulated ceilings, which were crucial in coping with the extreme temperature fluctuations in the Himalayan region. Additionally, it examines wall construction methods, such as stacked stone, rammed earth, corn cob, and wood framing, and their suitability for the local environment.

The study highlights the similarities and differences in spatial arrangements among various ethnic groups in the Himalayan region, acknowledging the preservation of distinct local identities while observing common threads.

In conclusion, the dissertation assesses the environmental relevance, sustainability, and cultural sensitivity of indigenous Himalayan architecture, aiming to draw lessons for contemporary design in mountainous regions. The author suggests that future research could delve deeper into new design trends, analyze the integration of technology into modern times, and examine the long-term impact of these design decisions on consumer loyalty and satisfaction.

Brief on the significance of local material and sustainability .

Based on the file provided, here is a brief on the significance of using local materials and sustainability in the context of the Himalayan vernacular architecture:

The use of local materials is a cornerstone of vernacular architecture in the Himalayan region. Traditional buildings in this area were constructed using materials that were readily available in the local environment, such as stone, wood, mud, and thatch. The choice of these materials was not only practical but also environmentally sustainable, as they were locally sourced and often renewable.

Elements of the interior design wrt building

Floors: [The use of materials like terracotta, wood planks, and stone panels for flooring, and their suitability for the Himalayan climate and lifestyle.]

Roofs: [The techniques used for thatched roofs, wooden roofs, and flat terracotta roofs, and their ability to withstand environmental conditions.]

Ceilings: [The indigenous solutions for insulated ceilings to cope with extreme temperature fluctuations in the Himalayan region.]

Walls: [The wall construction methods, including stacked stone, rammed earth, corn cob, and wood framing, and their role in supporting cultural and religious activities.]

Comparison Between Vernacular Interior Design & Contemporary Interior Design**Vernacular Interior Design**

Cultural Influence: Rooted in Tradition: Vernacular design is deeply rooted in local traditions, reflecting the culture, climate, and materials of a specific region. **Historical Significance:** Often, vernacular designs have a historical significance, with elements passed down through generations.

Materials: Local Materials: Vernacular designs use materials that are locally sourced and readily available, promoting sustainability. **Natural Elements:** Natural materials such as wood, stone, and clay are commonly featured.

Color Palette: Earth Tones: Colors are often inspired by the natural surroundings, featuring earthy tones and muted colors. **Organic Hues:** Colors may be derived from local flora, fauna, or geological features.

Contemporary Interior Design:

Cultural Influence:

Current Trends: Contemporary design reflects the current design trends and styles, which can evolve rapidly. **Innovative Solutions:** Embraces new materials, technologies, and design philosophies

Materials:

Mix of Materials: Contemporary designs often incorporate a mix of materials, including glass, metal, and synthetic materials. **Innovative Use:** Designers may experiment with new and unconventional materials to achieve a modern aesthetic.

Color Palette:

Neutral Tones: Contemporary interiors often feature a neutral color palette, with bold accents for visual interest. **High Contrast:** Contrast is used strategically to create focal points and highlight architectural features.

Evolution of ceiling

Local Materials and Techniques: In vernacular architecture, ceilings were often constructed using locally available materials and traditional building techniques. For example, thatch, bamboo, mud, wood, or other indigenous materials might be used.

Introduction of New Materials: The Industrial Revolution brought about a shift in building materials. Steel, concrete, and glass became more widely used, allowing for new possibilities in ceiling design.

There's an emphasis on durable and low-maintenance materials in modern designs. Engineered materials, such as porcelain tiles or sealed concrete, are popular for their resilience and ease of cleaning

Evolution of flooring

Traditional designs inherently often utilized locally sourced and sustainable materials.

Traditional floor finishes were chosen for their durability and suitability to local conditions.

There's a growing emphasis on sustainable and eco-friendly floor finishes in modern design, with the use of recycled materials, bamboo, and other environmentally conscious options.

Evolution in wall coverings, panels , etc

Vernacular wall designs were influenced by local cultural and artistic traditions. Ormentation was often handcrafted and reflected the cultural identity of the community.

Modern interior walls tend to be more minimalistic. Clean lines, smooth surfaces, and a focus on functionality characterize modern design. Ormentation, if present, is often more subdued and integrated into the overall design.

Modernization Of Materials Such As Bricks , Stones

Krupachaya Farmhouse, Pune

Open space in the form of a kund, with stepped seating designed keeping the mango tree at its center. To keep the red laterite stone in its original form rather than painting it or covering it with any other material The flooring was kept raw where they have used sahabad stone which is easily available in the region To provide natural ventilation and natural lighting in the space by using huge skylights. To keep the nature in context which will help in making the space more natural air conditioning ather than providing artificial air conditioning.

Vashi Farm House , Mumbai:

Twisted brick columns encircling a stone courtyard create a threshold between public and private realms. The textural masonry and negative space distinguish the zones while framing views. The staircase ascends gracefully with steps of Kadappa stone grounded by warm wooden planks. The pairing flows through the home, tying spaces together. Ceilings lower overhead with cozy intimacy, earthy clay pots adding warmth against the rawness of exposed RCC. Traditional meets modern industrial. Living spaces unfold tales of ancient Warli art through mural paintings below stained glass. Folk symbols blend with bold color, the stories come to life pairing the old with the new

The Himalayan Vernacular: Kath-Khuni Architecture

A bequest of unmistakable conventional building hone known as kath-khuni development, survives and flourishes within the Himalayan slopes of India. This vernacular architecture has evolved over centuries to create structures optimized for the harsh mountain climate. The characteristic expansion to the information of prohibiting scene, cruel climate, accessibility of nearby materials and devices, has resulted in homes profoundly established to the environment. . Local wood, stone and mud are used for walls, roofs and floors. Small windows help retain heat while open verandas connect interiors to exterior living spaces. The different development components, materials and joinery subtle elements in conventional kath-khuni development showcase the creativity and problem-solving skills of Himalayan builders. Intricate wooden framing patterns for walls and roofs, along with hand carved decorative elements on doors and windows, reflect local craftsmanship. The compositional lavishness within the making of dividers, openings and corners exemplifies the engineering judgment and magnificence of this vernacular tradition. Kath-khuni architecture remains deeply connected to the social hones and conventions of the locale.

Traditional Himachali Home Restored

Sensitive restoration allows these venerable buildings to withstand the passage of time. Their ancestral materials, construction techniques, and artistic embellishments provide a tangible connection to the past that should be protected for future appreciation. By valuing the material authenticity of historic structures, restoration efforts keep their legacy alive. The restoration of historic buildings requires careful consideration of the existing structural and decorative materials. When renovating an old structure, architects and preservationists aim to retain and repair original materials as much as possible to maintain the integrity of the architecture

Taj Rishikesh resort & spa, Uttarakhand

Sloping roofs with slate shingles echo the vernacular style of nearby structures. Facades clad in native stone and wood reflect the natural hues and textures of the landscape.

Inside, the clean-lined contemporary design achieves continuity with the exterior through repetition of shapes, surfaces, and vistas. Precise architectural details abound, from the intricate woodwork ornately framing each window to the linear stone patterns woven across the floors. The nuanced articulation of these elements lends the interiors a sleek yet warm aesthetic. The taste for precision is evident in the meticulous integration of traditional and modern forms, seamlessly evoking a sense of place. Every detail is thoughtfully composed to complement the whole.

Findings and discussion

Vernacular building techniques in the Himalayan region are deeply rooted in the local climate, terrain, material availability, and cultural needs.

The study focuses on analyzing the construction of floors, roofs, ceilings, and walls in traditional Himalayan domestic architecture.

Floor constructions examined include the use of terracotta, wood planks, and stone panels, which were chosen based on climatic and lifestyle factors.

Roofing techniques covered include thatched roofs, wooden roofs, and flat terracotta roofs, which were suitable for the region's weather conditions.

Indigenous solutions for insulated ceilings were developed to cope with extreme temperature fluctuations in the Himalayas.

Wall construction methods analyzed include stacked stone, rammed earth, corn cob, and wood framing, which were adapted to the local environment.

The spatial arrangements of vernacular Himalayan architecture demonstrate similarities among ethnic groups while preserving distinct local identities.

The study concludes by assessing the environmental relevance, sustainability, and cultural sensitivity of indigenous Himalayan architecture, providing lessons for contemporary design in mountainous regions.

The author suggests that future research should explore new design trends, analyze the integration of technology into modern times, and investigate the long-term impact of these design decisions on consumer satisfaction.

CONCLUSION

While designing we need to know and study about the local material of the location, local practices which they use and what are the other crafts which they use in their homes to give a personal touch. We need to design a space using all the local available materials so that it will help the people to know about the regional architectural style of the specific region. If we use the modernized way of vernacular methods it will help in keeping the buildings more sustainable, cost efficient and it will also help the local artisans in showcasing their techniques. We can use the material in raw form rather than applying ample amount of paint or plaster on it to give the space a good antique and rustic effect. Keeping the façade exposed and providing huge and large number of skylights helped in provision of natural light and ventilation in the space where we didn't need to provide the artificial air conditioning or artificial lights. And most importantly to provide comfort to the user rather than focusing on the aesthetic purpose of the space. To provide small yet intricate patterns in the space related to the local crafts of the space so that it will add another element to the space which is rather than local material or local techniques also the local arts and crafts.

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