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Influence Of Indian Architectural Designs In Saree Weaving

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Abstract: Architectural heritage has played a significant role in shaping traditional textile aesthetics in India. This paper examines the influence of Indian architectural designs on saree weaving, focusing on Dravidian and Hoysala architectural traditions. Using a qualitative and descriptive research approach, the study analyses how architectural elements such as gopurams, mandapas, sculpted pillars, friezes, stellate plans, and geometric mandalas are translated into woven motifs, borders, and pallu compositions. Visual documentation, field observation, and design interpretation were employed to identify architectural references within major saree-weaving regions including Kanchipuram, Dharmavaram, Gadwal, Mysore, and Ilkal. The findings reveal that Dravidian architectural influence is reflected through bold temple-roof borders, figurative motifs, and structured pallu layouts, while Hoysala inspiration appears in fine detailing, layered friezes, and precise geometric arrangements. Techniques such as jacquard weaving, korvai borders, extra-weft brocading, and CAD-based design systems enable the effective adaptation of stone architecture into textile form. The study highlights that architectural motifs are reinterpreted rather than directly replicated, allowing harmony between visual expression and fabric structure. Saree weaving thus emerges as a dynamic medium that preserves architectural vocabulary while sustaining regional identity and cultural continuity.

Index Terms - Architectural motifs, Saree weaving, Indian architecture, Textile design, Dravidian and Hoysala traditions, Cultural heritage

I. INTRODUCTION

Architecture and textiles share a deep connection through their emphasis on structure, pattern, and aesthetics. In saree weaving, architectural designs represent a creative fusion of art and geometry, where inspiration is drawn from the grandeur of temples, palaces, and historic monuments. These designs capture the visual essence of arches, domes, pillars, and intricate latticework, translating solid forms into fluid woven expressions. The interplay of symmetry, proportion, and detailing found in architecture becomes a guiding principle for weavers, transforming sarees into artistic representations of cultural heritage.The concept of incorporating architectural motifs into saree weaving not only enhances visual appeal but also preserves the traditional essence of craftsmanship. Regional weaving traditions across India—such as Kanchipuram, Banaras, and Chanderi—beautifully reflect this connection, where temple borders, gopuram patterns, and geometric jaalis symbolize the enduring link between fabric and structure. Through this blend of design and architecture, saree weaving evolves beyond ornamentation to embody a dialogue between

material form and cultural artistry.This paper describes and states the relationships between architecture and traditional saree weaving and the significance of motifs and patterns.

Keywords: Architectural motifs, Textile design, Motiffs, Saree weaving, Cultural heritage

II. REVIEW OF LITRATURE

The integration of architectural motifs into textile design demonstrates how built forms influence traditional Indian art and clothing. Scholars have long acknowledged that the motifs found in saree weaving often originate from the aesthetic and structural principles of Indian architecture, such as balance, symmetry, proportion, and ornamentation. This connection between fabric and structure preserves not only artistic traditions but also the visual language of cultural identity.

Kumari (2019) examined the relationship between clothing silhouettes and Mughal architectural motifs, revealing that arches, domes, and jaali (lattice) patterns were frequently adapted into textile ornamentation. Her analysis emphasized that the geometry and rhythm seen in Mughal architecture directly inspired the repeated and symmetrical patterns used in traditional fabrics. This research supports the idea that textile designers drew aesthetic and symbolic inspiration from architectural compositions to enhance the visual richness of garments.

Patel (2022) extended this concept by studying the impact of architectural embellishments on traditional motif development. The author argued that ornamental details found in historical monuments—such as floral borders, pillar carvings, and dome engravings—served as a foundational source for textile motifs. By replicating such features through weaving, artisans were able to merge architectural beauty with wearable art, reflecting a deep appreciation of craftsmanship across both fields.

Keerthi and E (2024) presented a comprehensive overview of Kanchipuram silk sarees, highlighting how the temple town's architectural heritage shapes its woven designs. The study described how motifs like gopurams (temple towers), chariots, and floral carvings are translated into the borders and pallus of silk sarees. The researchers emphasized that these patterns are not mere decorations but are symbolic of spirituality, regional identity, and continuity of temple art traditions within textile culture.

Saba et al. (2023) explored the creative adaptation of architectural motifs from historic buildings into contemporary textile designs. Using the Sethi House as a reference point, their work demonstrated how digital design tools and weaving technologies can reinterpret arches, columns, and intricate façades into modern apparel fabrics. Their study illustrates how architectural inspiration continues to evolve, allowing traditional motifs to gain relevance in modern textile aesthetics.

Kordhanyamath and Bai (2019) investigated motif design and development in Ilkal sarees using the traditional Kasuti embroidery technique. Though focused on embroidery, their findings are relevant to architectural motifs, as many Kasuti designs are derived from temple towers, palanquins, and geometric floor plans. The research highlighted how such structured patterns maintain the mathematical precision found in architectural layouts, ensuring design harmony and visual stability in woven forms.

A related perspective was presented by Kaur and Hadi (2024), who analyzed floral and geometric motifs in the wall paintings of Amritsar's architectural heritage. While their focus was on mural patterns, the study's insights into the use of repetition, symmetry, and stylized floral geometry provide valuable parallels to textile design. The authors suggested that motifs often migrate across art forms from stone and wall to fabricpreserving aesthetic continuity across mediums.

Architectural motifs have long served as a reservoir of visual vocabulary for textile artisans, providing formal elements—arches, domes, pillars, lattice (jaali), and stepped forms—that are translated into repeatable motifs on sarees. Historical accounts and craft analyses point out that many regional saree traditions base their motif sets on local built heritage: temple sculptures and gopuram carvings inform designs in South India, while Mughal gardens and palace ornamentation shaped many north-Indian weaves. ([Indica][1])

The Kanchipuram (Kanjeevaram) tradition provides a well-documented example of direct architectural borrowing: borders and pallus frequently reproduce temple friezes, mythical animals and pillar-carvings found in local temples, conserving iconographies that date back centuries. Researchers and heritage writers note that Kanchipuram motifs—such as yali, peacock, horse, and temple-tower outlines—often reflect sculptural templates rather than purely decorative invention, which underlines a tangible link between stone architecture and woven surface. (Thenmozhi Designs[2])

In northern weaves, Banarasi sarees exemplify architectural influence through patterns such as jaal (all-over lattice), floral arabesques, and stylized domes and arches that carry Mughal aesthetic lineages. The development of techniques like the Kadwa (or separate-motif) method for dense brocade work enabled the precise rendering of such complex, architecture-derived patterns in silk and zari. Scholars and craft

historians describe the Banarasi repertoire as a syncretic outcome of Persian, Mughal and indigenous sources, expressed through brocade technology and motif-systematization. ([WeaverStory][3])

III. METHODOLOGY

The present analysis on architectural designs in saree weaving follows a qualitative and descriptive research approach, combining visual documentation, field observation, and design interpretation. The purpose is to understand how architectural forms are adapted, stylized, and integrated into traditional motifs and contemporary saree weaving practices across different regions of India. The study aims to identify how architectural features—such as domes, arches, pillars, latticework, and temple towers are represented through weaving patterns and structural layouts of sarees

Indian architecture is incredibly diverse, reflecting thousands of years of cultural evolution, regional craftsmanship, and religious influence.Saree weaving, being both functional and symbolic, incorporates these elements as woven expressions of regional identity. Dravidian, and Hoysala, architectures represent major artistic traditions whose motifs appear across different weaving clusters Below is an overview of the major types of Indian architecture that are often used as inspiration in saree weaving designs especially for motifs, symmetry, and ornamental detailing.

3.1. DRAVIDIAN ARCHITECTURE

Dravidian architecture, evolving primarily under the Pallavas, Cholas, Pandyas, Hoysalas, and the Vijayanagara empire, is distinguished by pyramidal towers (gopurams), sculpted pillars, mandapas, circumambulatory passages, and elaborate iconography carved into granite. Its rich visual vocabulary provides an abundant source of motifs for textile designers. Saree weaving traditions across South India have historically incorporated temple aesthetics, transforming stone carvings into woven art. This integration reflects the deep cultural association between textile craft and temple heritage.

3.1.1. Dravidian Architectural Elements Reflected in Saree Weaving

i. Gopuram Motifs

The multi-storeyed gopuram structure—dominating temples like Madurai Meenakshi, Srirangam, and Kanchipuram—features carved tiers filled with deities, guardians, and miniature shrines.

Textile adaptation:

- Pallu designs replicate the tapering form of the gopuram.
- Jacquard weavers stylize gopuram outlines using stepped or pyramidal motifs.
- Bright multi-color threads echo the vivid painted sculptures.

Figure:1.a Temple – Graph Design

Figure:1 Varadharaja Perumal Temple – Kanchipuram

ii. Mandapa Pillars and Sculptural Columns

Figure:2 Yali Sculpture in Temple Pillar **Figure:2a. Yali Sculpture Graph design**

Varadharaja_Perumal_pillar

Stone pillars carved with yalis, dancers, musicians, and mythological figures are key components of Dravidian temples.

Textile adaptation:

- Vertical pillar-inspired stripes appear along saree borders.
- Extra-weft motifs replicate yali, peacock, elephant, and divine figures found in mandapas.
- Symmetrical pillar patterns create rhythmic border compositions.

iii. Kirtimukha, Yali, and Mythical Beings

Dravidian architectural ornamentation includes fierce motifs like kirtimukha, yali, and makara at temple gateways and cornices.

Textile adaptation:

- Kanchipuram sarees often feature yali or makara motifs in gold zari.
- Temple borders (kovil reku) mimic the jagged temple rooftop design.
- Mythical creatures are woven as recurring motifs across the pallu.

iv. Temple Ceiling and Mandala Designs

Figure:3 Mandala Structure in Temple Roof **Figure:3a. Mandala Graph Design**

Lotus medallions, concentric circles, and geometric mandalas seen in temple ceilings (e.g., Chidambaram, Hampi, Thanjavur) serve as key visual references.

Textile adaptation:

- Central mandala-like motifs are woven into pallus.
- Lotus medallions appear as buttas throughout the body.
- Multi-layered circular patterns simulate ceiling carvings.

v. Friezes and Relief Carvings

Narrative friezes depicting mythological stories, animal processions, and floral vines evoke strong visual rhythm.

Designs from architecture

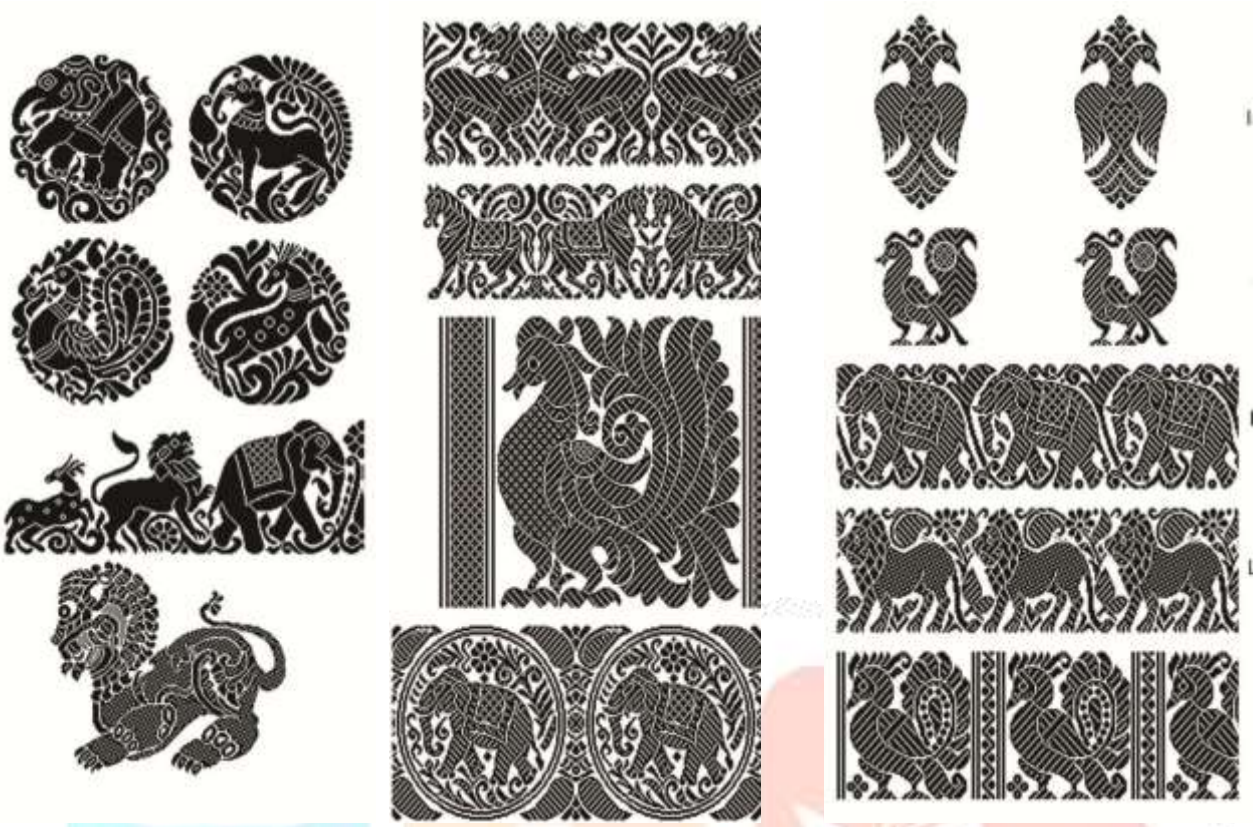


Figure: 4 Some Architectural Design in Textile Graph Design

Textile adaptation:

- Borders often reproduce horizontal layer-like friezes.
- Elephants, horses, and hamsa processions are woven in continuous repeats.
- Floral scrolls reflect Chola-era stone carvings

3.1.2. Regional Saree Traditions Influenced by Dravidian Architecture

i. Kanchipuram Silk Sarees (Tamil Nadu)

Kanchipuram weaving directly reflects temple aesthetics through:

- Kovil reku (temple roof) borders,
- yali and peacock motifs,
- gold zari inspired by temple jewelry,
- Thick borders resembling granite plinths.

ii. Madurai Sungudi Sarees

Though resist-dyed, Sungudi designs include stylized gopuram-like triangular repeats and lotus mandala arrangements.

iii. Dharmavaram and Gadwal Sarees (Andhra Pradesh/Telangana)

These weaving traditions includes multi-tiered temple borders, with richly brocaded pallu depicting deities and mandala forms.

iv. Mysore Silk Sarees (Karnataka)

Known for minimalistic elegance but include temple-frieze inspired gold borders derived from Hoysala and Vijayanagara motifs, part of broader Dravidian architectural tradition.

3.1.3. Techniques used to translate Dravidian Architectural Designs

- Jacquard Weaving - Used to translate detailed architectural motifs such as gopuram tiers, pillars, and figurative elements.
- Korvai Technique -Allows sharp color contrasts in borders, ideal for temple-inspired designs.
- Extra-Weft Brocade Weaving - Enables weaving of elaborate motifs like mythical creatures and floral reliefs.
- Digital Jacquard and CAD-Based Designing -Modern technology allows exact replication of architectural motifs into woven structures.

Figure: 5 Dravidian Architectural Design Forms in Indian Sarees

3.2. HOYSALA ARCHITECTURE

Figure:6 Hoysala Architecture

The Hoysala dynasty developed a distinctive architectural idiom visible in temples at Belur, Halebidu, and Somanathapura. Noted for soapstone sculpture, layered decorative panels, and rhythmic detailing, Hoysala architecture provides a rich motif repository for textile designers and weavers. Saree weaving, which has historically served as a cultural and artistic medium, reflects regional aesthetic influences through the integration of symbolic, geometric, and figurative elements. In South India, particularly in Karnataka, weavers have incorporated the structural and sculptural brilliance of Hoysala temples into saree borders, pallus, and body motifs, resulting in textile creations that echo medieval stone craftsmanship.

3.2.1. Hoysala Architectural Elements Reflected in Saree Weaving

i. Star-Shaped Temple Plans

Many Hoysala temples follow the stellate (star-shaped) ground plan, producing complex exterior walls with rhythmic projections and recesses.

Textile adaptation:

Saree borders reproduce stellate geometry through angular patterns and repeated star-like forms.

Some weavers integrate multi-pointed star motifs into the pallu to reflect the temple's planimetric symmetry.

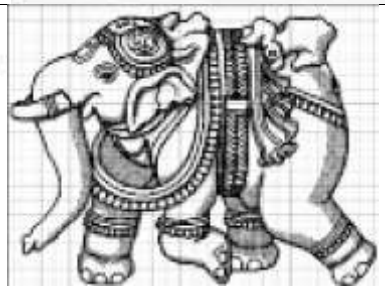
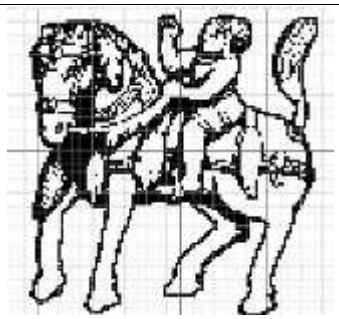
ii. Horizontal Friezes and Layered Carvings

Figure: 7 Horizontal Friezes and Layered Carvings

Hoysala temples are renowned for their multiple horizontal bands, each depicting themes such as:

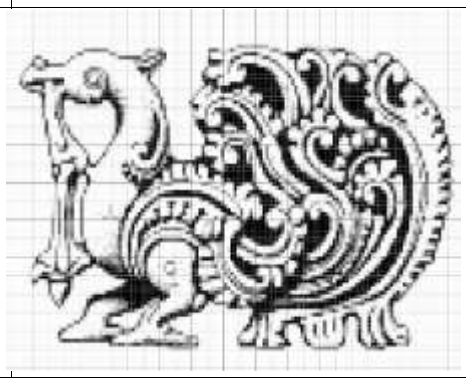
- elephants,
- horses,
- scrolls,
- epics (Ramayana, Mahabharata),
- makara (mythical animals),
- yalis,
- and celestial dancers.

Table 1: Layered Carvings and Sculpture Graph Designs

	
 Elephant	
 Horse	


Makara


Swan



Textile adaptation:
Borders often feature stacked motif bands similar to temple friezes.
Elephant, lotus, swan (hamsa), and peacock designs are woven as continuous repeats resembling narrative stone panels.

iii. Sculptural Ornamentation and Iconography
Soapstone carvings of deities, dancers, musicians, and floral garlands are hallmarks of Hoysala art.
Textile adaptation:

- Figurative panels (e.g., dancers, musicians, or divine motifs) are woven into pallus using extra-weft brocade techniques.
- Floral garland patterns (torana) visible on temple ceilings inspire saree pallu layouts and ornamental bands.

iv. Geometric Precision and Symmetry
Hoysala monuments exhibit meticulous geometric compositions—knot patterns, mandalas, rosettes, and interlocking scrolls.
Textile adaptation:

- Mandala-like motifs appear as central pallu medallions.
- Interlaced geometric borders reflect stone tracery patterns.

v.Ornamental Pillars and Lathe-Turned Columns
Polished, lathe-turned pillars are iconic elements in Hoysala temples.
Textile adaptation:

- Vertical patterned stripes in saree designs echo the segmented rhythm of lathe-turned pillars.
- Symmetrical pillar-like repeats are often used in body patterns.

Figure: 8 Hoysala Architectural Design Forms in Indian Sarees

3.2.2. Regional Saree Traditions Influenced by HoysalaArchitecture

1. Ilkal Sarees

Although older than the Hoysala period, Ilkal weaving has absorbed local temple motifs over time.

Kasuti embroidery (often paired with Ilkal sarees) directly uses motifs inspired by Karnataka temples, including chariots, lotuses, and architectural outlines.

2. Mysore Silk Sarees

Mysore silks incorporates temple frieze–inspired borders, geometric repeats akin to stone ornamentation and floral scrolls similar to Hoysala carvings.

3.2.3. Techniques used to translate Hoysala Architectural Designs

- Jacquard Weaving -Allows reproduction of detailed stone carvings through controlled warp-lift mechanisms.
- Extra-Weft Brocading -Ideal for sculptural motifs and layered friezes.
- Korvai and Tissue Techniques - Used to create temple-like borders with contrasting colors and metallic sheen.
- Digital Jacquard Adaptation -Modern clusters use CAD-Jacquard integration to reproduce temple motifs with photographic precision.

IV. RESULTS AND DISCUSSION

The analysis of architectural designs represented in saree weaving revealed a consistent relationship between regional temple aesthetics and the visual vocabulary of textile traditions. Across weaving clusters in Tamil Nadu, Karnataka, Andhra Pradesh, and Telangana, motifs derived from Dravidian and Hoysala architectural forms appear in borders, pallus, and body patterns with clear stylistic interpretation.

- Visual documentation showed that gopurams, mandapas, sculptural pillars, friezes, star-shaped ground plans, and mythical motifs are the most frequently adapted architectural elements.
- Jacquard and extra-weft techniques emerged as the dominant weaving systems enabling accurate translation of architectural details. In regions such as Kanchipuram, Dharmavaram, Gadwal, and Mysore, the motifs displayed structural alignment with stone carvings, especially in stepped temple borders, yali and makara motifs, lotus medallions, and rhythmic panel-like repeats.
- The study also observed that modern CAD-based Jacquard design has intensified the precision of architectural representation, allowing designers to reproduce layered patterns, mandalas, and geometric grids more faithfully.
- Field observation confirmed that sarees inspired by Dravidian temple architecture emphasize monumental motifs such as gopuram outlines and sculptural iconography, whereas those influenced by Hoysala architecture reflect fine detailing, stellate geometry, and horizontal band arrangements. Across both styles, weavers consistently adapt stone forms to textile-friendly structures, ensuring visual coherence while retaining cultural authenticity.
- The findings highlight the depth of interaction between architectural heritage and textile design. Saree weaving functions not only as a craft tradition but also as a visual archive that translates monumental art into portable, wearable forms.
- The manner in which architectural motifs are simplified or stylized demonstrates a deliberate design logic: large structural elements such as gopurams and mandapas are translated into bold pallu layouts, while finer sculptural details, such as yalis, floral garlands, or miniature friezes, are better suited for borders or butta placements.
- The study underscores the adaptability of weaving techniques in representing architectural complexity. In Dravidian-influenced sarees, contrasts created through korvai borders and zari highlights successfully mimic temple plinths, cornices, and vibrant iconographic surfaces.
- In Hoysala-inspired textiles, the use of extra-weft brocading reflects the layered precision of soapstone carvings, enabling the rendering of star-shaped geometry and multi-tiered friezes with rhythmic clarity.

An important outcome is the observation that architectural motifs are not replicated literally; instead, they undergo reinterpretation to maintain structural stability of the fabric. Designers modify proportions, line thickness, and spacing to harmonize with warp–weft constraints. This abstraction ensures that the woven motifs retain an architectural essence without compromising textile integrity.

Another significant point is the cultural continuity reflected in this adaptation. Weavers and designers deploy architectural symbols not merely as decorative elements but as markers of regional identity and

shared memory. In this sense, saree weaving emerges as an active medium through which architectural traditions continue to circulate beyond temple spaces.

The increased use of digital Jacquard systems introduces a contemporary layer to this relationship. While traditional weaves reveal handcrafted interpretation, digital techniques enable microscopic detail, offering new creative avenues while preserving historical motifs. This intersection between heritage and technology suggests an evolving design ecosystem that respects tradition while embracing modern precision.

V. **CONCLUSION**

The study concludes that architectural forms play a critical role in shaping the aesthetic language of saree weaving across South India. Dravidian and Hoysala architectural traditions provide a rich repertoire of motifs that weavers translate into textiles through techniques such as Jacquard weaving, korvai borders, extra-weft brocading, and digital CAD-based patterning. The results emphasize that saree weaving does not merely borrow architectural symbols but reinterprets them through stylization, proportion adjustments, and rhythmic pattern layouts suitable for fabric structures.

The influence of architecture is evident in both structural and ornamental components of sarees—ranging from gopuram-inspired pallus and temple-roof borders to lotus medallions, friezes, star-shaped geometries, and figurative panels. These adaptations contribute to a layered visual narrative where textile design becomes a parallel channel for expressing regional heritage.

Overall, the integration of architectural elements into saree weaving highlights the dynamic relationship between material culture and built forms. It demonstrates how traditional crafts continue to evolve by absorbing visual cues from historical monuments while balancing artistic creativity and technical constraints. The synthesis of stone architecture and woven fabric ultimately reinforces the cultural continuity, regional identity, and enduring aesthetic relevance of Indian saree traditions.

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