

Jamia Masjid Bhera: Architecture and Decorative Motifs

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Abstract:

Jamia Masjid Bhera was constructed by the Suri's Sher Shah Suri in 1540 CE and is one of the best preserved pre-Mughal Islamic structures in Punjab, Pakistan. It is locally known as Badshahi Masjid of Bhera, and is not only remarkable for its architectural majesty, but also for the extraordinary richness of its interior decorative Program, with its three white onion domes, pointed arches, ornate gateway, and flanking minarets. The frescoes on its dome, the stucco carvings on its mihrab, the carvings on its spandrels, the bands of calligraphy, and the floral patterns in tile work are a complete visual library of Islamic decorative art. This study in the Bhera Heritage Series, offered an architectural survey of the mosque, systematically analyses its decorative motifs according to their pattern families, cultural sources, and visual grammar and suggests specific practical proposals for its re-appropriation for creative use in textile and surface design in a modern context. The study is based on anthropological fieldwork and visual analysis of the photographic documentation collected in the field.

Keywords: *Architecture, Jamia Masjid Bhera, Bhera Heritage, Badshahi Masjid of Bhera*

1. Introduction

1.1 Background of the Study

Each great building has two stories. The first is the story of its construction who built it, when and why. The second is the story that was etched into its surface via the patterns, colours and symbols that its craftsmen painted, carved, and tiled on its walls. Both stories are told with great richness in Jamia Masjid Bhera.

The mosque was built in 1540 CE and is the main attraction of the old walled city of Bhera in Sargodha district in Punjab, Pakistan. It was established under the patronage of Sher Shah Suri, the founder of the Afghan empire that once ruled the Indian subcontinent for a brief period before he was defeated by Akbar the Great and was succeeded by the Mughals. The mosque itself is a physical reminder of his time that made a unique imprint on the architecture of South Asia, a fusion of Afghan boldness and emerging Mughal refinement.



Fig. 2 Aerial view showing the mosque complex, open courtyard, flanking minarets, and surrounding urban fabric.



Fig. 3 Close-up of the three-bay prayer hall façade with pointed arches, ornate spandrels, and triple domes.

Jamia Masjid Bhera is of special significance for the art students and art designers because the interior decoration scheme of the Masjid has survived and even in places been restored. The interior of the domes are decorated with rich fresco paintings, including radial floral patterns, geometric star fields, botanical vase designs and calligraphic cartouches in terracotta reds, dark greens, cobalt blues and warm ochres. The stuccoed mihrab wall work has a complex design of arabesque. The decoration of the gateway consists of relief Quranic calligraphy and scrolling acanthus-style foliage. These surfaces together represent a highly evolved vocabulary of design, relevant to current textile, print and surface design. This Study defines names

and classifies such motifs, classifies them by design families and suggests clear lines of progression for their use in the process of designing textiles.

1.2 Statement of the Problem

The architectural and artistic importance of Jamia Masjid Bhera, however, is not well documented in comparison with better known Mughal era monuments of Lahore, of which the fresco programme and kashi-kari tilework of the Wazir Khan Mosque have been studied in detail (Bilal & Pervaiz, 2017; Qureshi, 2025). Current literature focuses on the general history of Bhera, its communal role (Mujahid & Jamil, 2018) and the wider urban and craft heritage of the town (Dar, 1982, 1988); however, the decoration of the mosque, represented by the arabesque, geometric, botanical, calligraphic, medallion and lamp motifs that are spread across the domes, mihrab and gateway of this building, has not yet been systematically classified, named, or contextualized with other pre-Mughal and Mughal decorative traditions in Punjab. The lack of a structured visual record is worsened by the fragility of the surfaces of the frescoes, as detailed in Section 6 of this study: the secondary dome already has significant loss of plaster and fading of the pigments; motifs that are recognizable today in the secondary dome may not be preserved in another ten years. Meanwhile, the modern surface design and textile industry of Punjab is still relying heavily on imported or generic ornamentation lexicons, despite the fact that the historic architecture of the region has been preserved with design-ready motif systems that have repeat logic, colour grammar, and cultural interpretation that have never been formalized as design-practice guidance. The question being posed through this study is thus two-fold – firstly, a near absence of a systematic architectural documentation of Jamia Masjid Bhera against similar monuments of Punjab and secondly, absence of any practical and evidence-based documentation of how this documented decorative program can be effectively utilized in contemporary textile and surface design before further deterioration eradicates the visual record.

1.4 Objectives of the Study

In order to address the problem identified above, this study pursues the following objectives:

- To provide a systematic architectural description of Jamia Masjid Bhera
- To identify, name, and classify the mosque's decorative motifs into coherent pattern families.
- To propose specific, practically usable strategies for translating the identified motif families into contemporary textile and surface-design applications.
- To document the present conservation condition of the mosque's decorative surfaces and identify priorities for their preservation

1.6 Significance of the Study

This study holds value on several interconnected fronts. In spite of the clear influence of Sher Shah Suri in later Mughal building practice, it has its own place in the historical and architectural literature of the period known as the Suri period, which has been under-studied compared to the period known as the Mughal period. It also provides the first systematic and named typology of the families of decorative motifs that are

found at the Jamia Masjid, Bhera, which design researchers, art historians and heritage professionals can draw upon, expand, or challenge. The study is intended to address the need of the textile and craft industry in Punjab to design local, culturally relevant motifs and vocabulary due to their practical application in textiles and surface designs, thus contributing to the limited research on the interpretation of built heritage as contemporary design practice (Lungu et al., 2021). Lastly, because of the known erosion of the secondary dome of the mosque, the study has conservation and documentation value: the photo and analytical documentation it yields may prove one of the last comprehensive visual documents of the fresco program in its present state, and a valuable basis for future restoration planning, for the Archaeology Department of Punjab, and in general for future researchers.

2. Literature Review

A survey of this literature reveals that the Islamic and colonial-style decorative architecture of Punjab is much more evolved and developed for Lahore than for smaller historic towns like Bhera, and this study can be located within an existing but geographically selective field. The Wazir Khan Mosque in the Walled City of Lahore is the most documented comparandum; constructed around the same time as Jamia Masjid Bhera. Multiple studies describe its use of kashi-kari (glazed tile mosaic), naqqashi (fresco painting) and tazakari (incised faux brickwork) decorating almost all exterior and interior surfaces (Bilal & Pervaiz, 2017). The Wazir Khan Mosque spreads its ornament throughout the entire building skin, while Bhera has ornamentation focused in the dome interiors, mihrab, and gateway arch, and the identified conservation issues of fading frescoes and crumbling tile faces for the Wazir Khan Mosque parallel those found in Bhera's secondary dome described in Section 6. In recent times, there has been an interior design scholarship on the mosque that interpreted its ornamentation as geometric and vegetal as a manifestation of Islamic cosmology, where pattern and light are read as a guidance towards spiritual elevation, a symbolic reading which coincides with the association of the mosque with the paradise garden that is reflected in the gulbuta botanical family at Bhera, in Section 3.3 below. The digital documentation projects have also meticulously documented the calligraphic, geometric, and botanical vocabulary of the mosque, which repeats the three broad categories of ornament that were found at Bhera, and are the dominant grammar of Mughal-era religious architecture of Punjab.

Another, materially separate comparandum is in Chiniot (some seventy kilometres from Bhera) where architectural ornament is not expressed primarily as relief wood carving, not as fresco nor as tile. The most documented example is the Umar Hayat Mahal, which dates to 1930; the facades, jharokas and window grilles are made from geometric lattice work and floral relief carving, both of which were completed by master craftsmen whose training can be traced back to the same regional artisan networks that are also associated with woodwork for Mughal-era commissions throughout Punjab. A more general study of Chiniot woodcarving has been undertaken as a living economy of woodcarving under modern economic pressures, examining the floral and geometric decorative vocabulary, and advocating for greater institutional support to preserve the woodcarving base for the production of the same (Khan et al., 2018). Geometric lattice, and stylised floral relief, are also used as a common decorative language, regardless of

the building material or time period in the complementary regional surveys of carved wooden doors in Punjab (Kamal & Dar, 2022) and of vernacular pavilion or baradari architecture (Khaskheli & Zhang, 2021).



Fig. 1 Jamia Masjid Bhera: Front elevation showing the three white onion domes and ornate central arch. Built c. 1540 CE by Sher Shah Suri.

Literature cited showed that Jamia Masjid Bhera's six-motif-family program was a regional variant of a decorative grammar that had been documented in full so far, mostly in Lahore, in the Mughal monuments of that region. While general reading on Bhera is still scanty, for example, as a community (Mujahid & Jamil, 2018) or as a craft town in general terms (Dar, 1982, 1988), no systematic classification of Bhera's own decorative motifs, such as is undertaken here, and has been developed. Similarly, the literature on transferring architectural and textile heritage motifs as design components to contemporary design practice is also in its early stages: Recent research on the transfer of traditional textile motifs to furniture surfaces created by CNC routing has shown that the formal identity of a traditional motif can be transferred across different media by performing a structured tracing-abstraction-repeat process (Lungu et al., 2021), which directly applies to the proposed source-to-design process (Section 5.1). This study fills this void by systematically and comparatively categorizing the decorative motifs of Bhera and further expanding the documentation to design by adding a new documentation level to a monument which has been dealt with in a general way in ancient history.

2.2 Historical and Architectural Overview

2.2.1 Builder and Period: The Sher Shah Suri Connection

Sher Shah Suri (1540-1545 CE) was among the most important rulers in South Asia, the builder of the Grand Trunk Road, the reformer of the revenue system and a temporary threat to the authority of the

Mughals. He was also one of the patrons of architecture, and Bhera was one of the cities he decided to establish a congregational mosque. It is confirmed from the plaque inscribed in Urdu in the mosque complex that the mosque was founded and later repaired by the scholars and leaders of the local community, over the course of many centuries, a testament to the ongoing role of the mosque in the local community (Mujahid & Jamil, 2018).



Fig. 4 The Urdu inscription plaque recording the mosque's founding under Sultan Nasir-ud-Din Humayun Suri (Sher Shah Suri) and subsequent restorations, a crucial primary historical document.

The Suri architectural style is sometimes referred to as Sur style, and is defined by "relatively simple" exterior form and "densely ornamented" interior decoration. It is inspired by Afghan and Central Asian architecture and is starting to incorporate influences from Timurid architecture. The effect is a strong emphasis on strong geometric massing on the exterior (white-plastered surfaces, pointed arches, massive domes) and a fascination for the viewer who enters the building (colors, patterns, visual complexity).

2.3 Architectural Components: A Systematic Description

The mosque complex comprises several architecturally distinct elements, each contributing to the overall design vocabulary:

2.3.1 The Exterior: Courtyard, Gateway, and Minarets

The entrance to the mosque is through a large open brick paved courtyard, with an ablution pool in the centre. The Darwaza building the entrance to the courtyard, which is defined by a large gateway in deep red brick with white marble and lime-plaster surrounds, was designed in the style of Sarfraj Qazi of the

19th century. Two small white-plastered domed minarets with small octagons on their corners rise at the two flanking corners of this gateway. The contrast between red and white is especially prominent on the exterior of the complex and presents a great opportunity for two-tone and/or block-print textile applications.



Fig. 5 The red-brick Darwaza (gateway) with white trim, ornate spandrel panels, and flanking minarets a study in geometric contrast.



Fig. 6 The courtyard colonnade and minaret: arched arcade in terracotta and white with rhythmic repeat pattern.

2.3.2 The Prayer Hall Façade

The prayer hall has a three bay façade with three pointed arches, a larger middle bay enclosed by two smaller bays. All three arches are supported by engaged pilasters and all have ornate spandrel panels containing carved and painted arabesque foliage. There is a horizontal band of white plaster geometric lattice (jali) over the arches. Just above this band three white onion-shaped domes are placed with metal finials at the apex. The Suri period façade materials white lime-plaster over brick is characteristic.

2.3.3 The Ornate Gateway Arch (Main Entrance)

The most striking architectural aspect is the inner gateway arch that leads from the courtyard into the prayer hall, which is most photographically impressive. The Program of decorative work on all sides of this arch is very dense. On the uppermost level, there is a large black Quranic calligraphy on white, painted. There is also a deep relief dark brown on white band of scrolling acanthus derived leaves below it. The side panels and arch spandrels feature a complex Program of polychromed and painted plasterwork and geometric, botanical and calligraphic designs.



Fig. 7 The inner gateway arch: a complete decorative Program in one frame. Quranic calligraphy bands at top, scrolling acanthus foliage frieze, polychrome tile spandrels, and botanical cartouche panels the richest single surface in the complex.

2.3.4 The Prayer Hall Interior and Mihrab

The walls of the prayer hall are whitewashed on the inside, including plaster mouldings around the arched bays. The most richly ornamented aspect of the inside is the prayer niche (mihrab) which marks the direction of Mecca. It is framed by a pointed arch with a dense stucco arabesque which consists of interlaced fleurons, palmette sprays and geometric lattice, both in white and rust-red on a cream ground. Hanging lamp motifs (qandil) are painted on either side of the mihrab arch in rust-red on white, adding a three-dimensional quality to the flat surface.



Fig. 8 The ornate mihrab: dense arabesque stucco work covering the prayer niche arch, with geometric lattice and floral scroll motifs.



Fig. 9 Interior of the main dome showing the complete radial fresco Program: central rosette, radiating floral bands, botanical cartouches, and geometric borders.

2.3.5 The Dome Interiors: Fresco Paintings

The most spectacular decorative surfaces in the mosque are the painted interiors of its domes. The interior of the central dome is decorated with a complete fresco Program designed in radial-symmetrical layout. The central rosette is a multi-pedalled flower shape, with radiating lines that bring the dome surface into geometrical segments at the apex. The paintings in each section feature decorative floral patterns in stylised forms of roses, tulips, irises and carnations, painted in cream ground and terracotta red and olive green. A border band encircles the domed top around the perimeter at the springing line of the arches below, alternating between small vase-and-flower compositions, geometric chevrons and calligraphic cartouches.



Fig. 10 Close-up of dome fresco upper zone: central rosette medallion with radiating petals and surrounding floral medallions in terracotta and ochre.



Fig. 11 Dome fresco mid-zone detail: isolated botanical sprays (roses, carnations, iris) in cartouche frames perfect repeat-pattern source material.

The second dome is broken, leaving traces of the original base plaster layer, and an earlier, perhaps more richly coloured decor of polychrome frescoes, consisting of cobalt blue and deep green as well as the terracotta palette. This is a poor example of a dome, and a valuable reminder of the fragility of these surfaces and the urgency of their conservation.

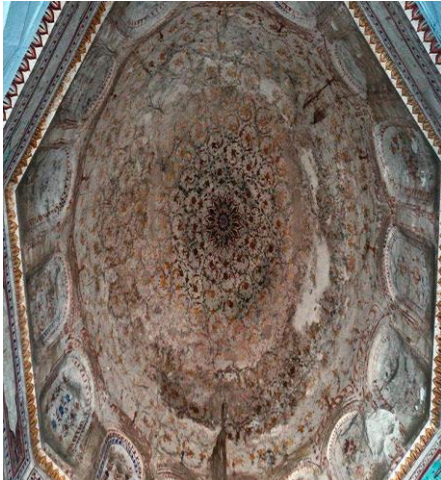


Fig. 12 Partially deteriorated dome fresco showing cobalt blue and green pigments from the original scheme under later overpainting.



Fig. 13 Dome border zone: alternating geometric chevrons, small floral heads, and calligraphic bands forming a repeat border pattern.

3. Methodology

3.1 Research Design

The study is a qualitative, single site, exploratory-descriptive case study design (Yin, 2018) that is suitable for a monument that has not been catalogued systematically. This design is in keeping with the current practice in built heritage research in which the building fabric is used as a main source of documentary information, to be read, cross-checked and interpreted in the light of the available documentary written sources (Australia ICOMOS, 2013).

3.2 Data Sources

The primary data includes photographic documentation obtained on site from Jamia Masjid Bhera during the fieldwork phase that includes the exterior elevations, the courtyard, the gateway arch, prayer-hall façade, mihrab and interiors of both domes. In addition to this photographic documentation, the author obtained first-hand observations of the mosque's construction materials, surface condition, and spatial organisation, and the Urdu plaque inscription on the interior of the complex, which is considered a primary epigraphic source for the date of the mosque's foundation and the history of its repairs. Secondary data also include published historical and architectural literature about Bhera (Bugvi 2012; Dar 1982, 1988; Mujahid

& Jamil 2018; Rehman 1997) and comparative literature for Lahore and Chiniot which was reviewed in Section 2.

3.3 Analytical Procedure

The data obtained from the photographs were analysed in two phases. To describe the spatial elements of the mosque (courtyard, gateway, prayer hall and dome interiors), a systematic approach to the building-component was employed, similar to that used in Section 2.2, during the architectural description stage. A decorative-motif analysis stage was then used to identify and classify individual motifs within the systematic boundaries of the visual and content-analysis (content) dimensions, such as the quality of the lines, type of the symmetry, the colour palette used and the way the motifs are composed, by looking for recurring formal characteristics that led to the identification of the six motif families presented in Section 3 (inductive classification). Every family was cross-referenced with the broader Islamic and Punjab ornament literature examined in Section 2, to determine the cultural-historical source of the design, and then compared against parameters of textile production examined in the literature (repeat mode, colour palette and production technique) to generate the design-translation recommendations considered in Section 5, in line with the tracing-abstraction-repeat process documented in similar heritage-to-design transposition studies (Lungu et al., 2021).

3.4 Limitations

As a single-case qualitative study, the findings describe the specific decorative program of Jamia Masjid Bhera and are not intended to generalise statistically to all pre-Mughal or Suri-period mosques in Punjab; comparative claims regarding Lahore and Chiniot rest on the published literature reviewed in Section 2 rather than on original fieldwork at those sites. The photographic collection is comprehensive, but does not consist of multispectral or conservation-grade images and is not laboratory tested for pigment identification and pigment dating purposes. The degradation of the secondary dome (Section 6) is only partial and some areas of the original decorative scheme were not reproduced but are indicated (see Note to Reader). Lastly, the recommendations on textbook design for the calligraphic motif family (3.4) are conservative and deliberately aimed at design-research, and should thus be understood as proposals that may need further input from the community and from academic circles prior to commercialization of the designs.

4. Decorative Motif Analysis: Classification and Pattern Families

The decorative Program of Jamia Masjid Bhera can be systematically classified into six major motif families. Every family shares a visual grammar, a traceable cultural heritage and a number of traits that are appropriate for the textile design applications. The knowledge of the family of a motif provides the designer with insight into the rules of the family and thus into how the motif can be used, extended and recomposed in a correct manner.



Fig. 14 Interior arch with complete decorative Program visible: arabesque mihrab surround, painted hanging lamp (qandil) motifs, geometric lattice panels, and calligraphic frieze a reference sheet for all six motif families identified in this study.

4.1 Motif Family 1: Arabesque (Islimi) The Scrolling Vine

The arabesque known in Arabic as islimi (meaning 'Islamic vine') is the foundational vocabulary of Islamic decorative art. It is based on an endlessly branching, spiralling vine that splits and curls back on itself, generating a mathematically infinite, rhythmically repeating pattern. The mihrab arch and the spandrels of the gateway arch are notable places of arabesque work in Jamia Masjid Bhera.

The Bhera arabesque is relatively bold and with high contrast from a visual point of view, vine stems are thick and well defined, split leaf palmette endings (khatai) size and style are large and not naturalistic. It is well suited to transfer to textile design as the motif can be easily read at a smaller size and can be used effectively for block printing, screen printing and embroidery.

Textile Design Application Arabesque Family

Repeat mode: Half-drop or ogee grids repeat. Colour palette: terracotta on cream, or deep navy on ivory.

Suggested uses: Border prints for Dupatta and Shawls, All Over repeat for furnishing fabric, Embroidery guide pattern for Zardozi or crewel work. Scale range: Scale to between 8 cm and 40 cm in repeat width.

The thick stem structure translates directly into block-print lines without fine engraving.

4.2 Motif Family 2: Geometric (Handasiyya) Stars, Grids, and Lattices

The second most prominent family of motifs in Bhera is geometric patterns, called hand asiyya in Arabic. They are seen in the jali (lattice) panel over the arches of the prayer hall, in the border areas of the dome frescoes, in the tile work of the gateway and in the incised plasterwork panels between the arches.

The geometric vocabulary observed at Bhera includes: the six-pointed star (hexagram) formed by two interlocking triangles; the eight-pointed star (khatam) formed by a square rotated 45° over itself; a simple chevron or zigzag border band; and a square-within-square grid used as a background field. The line a variation on the battlements motif is also crenelated or scalloped in the dome border zone, and is repeated in small units.

Textile Design Application Geometric Family

Repeat mode: straight set or brick repeat. Colour palette: dark brown on terracotta, white on deep red, or monochrome black on cream. Suggested applications: geometric repeat for cotton shirting or dress fabric, all-over jacquard weave structure, woven border on khaddar fabric. The eight-pointed star is particularly suited to use as a block-print unit which is capable of continuous tiling. The chevron/zigzag border is ideal for hem and cuff trim embroidery guides.

4.3 Motif Family 3: Botanical Floral (Gul-Buta) The Garden of Paradise

The botanical floral motif family in Urdu textile tradition called gul-buta, meaning 'flower and plant' is the most visually dominant family in the Bhera dome frescoes. It draws on the rich tradition of paradise garden imagery in Islamic art: the garden (bagh) as a symbol of heaven, and flowers as divine creation.

The flower types that are seen in the dome frescoes are: the stylised rose (gul-e-surkh) in profile, represented as a symmetrical multi-petal disc; the tulip (lala), which is represented as cupped form with three or five petals; the iris (zambaq) with its characteristic three-fall petal structure; and the carnation (qaranful) with its serrated petal edges. These flowers are used as single flower cartouche and also in larger vases and flowers (guldasta).

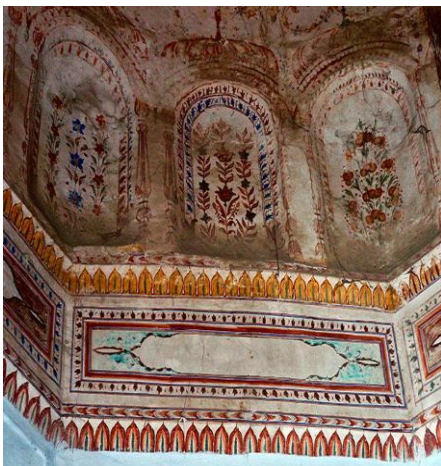


Fig. 15 Vase-and-flower (gul-dasta) botanical composition from the dome fresco border zone: one of the most directly adaptable motifs for textile print applications.



Fig. 16 Isolated floral cartouche from the dome fresco mid-zone: a single stylised iris/carnation motif suitable for embroidery or block-print buta.

Textile Design Application Botanical Floral Family

Repeat mode: tossed (scatter) layout, stripe arrangement, or medallion-with-filling. Colour palette: terracotta red and olive green on cream the original fresco palette or recoloured in indigo and gold for a contemporary feel. Suggested applications: the single-flower cartouche is ideal as a buta motif for printed lawn or chiffon. The design in the vase is directly used to create a block-print or screen-print medallion for shawl centres. Individual flower forms (rose, tulip, iris) work as embroidery motifs for phulkari-style work.

4.4 Motif Family 4: Calligraphic (Khattati) the Written Word as Pattern

A Quranic calligraphy form an integral part of the decorative Program and cannot be separated from it it is as much a visual pattern as a textual message. At Bhera, calligraphy is found in three different sizes: a large painted inscription in black on white above the main gateway arch (the Shahadah, the declaration of faith); a medium-size strip in Duluth script down the spandrel zone of the gateway; and small cartouche inscriptions embedded in the border band of calligraphy around the dome.

Calligraphic motifs are particularly suitable to be used as band elements in the border or as isolated medallion forms for textile design. Placing Quranic text directly into the fabric of clothes must be taken with care and is more appropriate for furnishing, tapestry or wall-hanging applications. The shapes of the lettering, though, their curves, angles and rhythm can suggest abstract graphics to be used in textiles.

Textile Design Application Calligraphic Family

Suggested applications: A gold thread woven border on furnishing fabric; wall-hanging or tapestry decoration; application of tile transfer in architecture. For wearable textile: the calligraphic forms can give inspirations for abstract geometric letterform-derived patterns for jacquard weave. Cultural note: It is not recommended to use Quranic text on worn clothes; rather it is recommended to use it in architecture and furnishings.

4.5 Motif Family 5: Medallion and Rosette (Shamsa) Radial Symmetry

The radial medallion known as shamsa (sun/star) in the Persianate decorative tradition is most spectacular in the central rosette at the apex of the main dome. This is a multi-petal flower form, viewed from directly below, with petals radiating outward like the spokes of a wheel. One of the oldest universal symbols in human visual culture, it reads as a flower, a star and a sun.

The Bhera dome rosette is about sixteen petals with smaller petal units. The composition is contained in a circular frame that has radiating lines running to the periphery, which partition the surface of the dome. This radial organisation principle emanating from a central point is the governing structure of the entire dome decorative scheme.

Textile Design Application Medallion / Rosette Family

Repeat mode: Isolated medallion layout, medallion-and-fill layout (the medallion in the middle surrounded by smaller fill motifs), and radiating stripe layout. Colour palette: gold and terracotta on deep green, or white on indigo. Suggested applications: centrepiece of a shawl design (the medallion as the central panel element); woven circle medallion in carpet or kilim; embroidered centre motif for a dupatta; screen-print centrepiece for a bed cover or table cloth. For embroidery convenience, the sixteen-petal rosette can be reduced to eight petals.

4.6 Motif Family 6: Architectural / Lamp Motifs (Qandil) Suspended Forms

A distinctive and lesser-discussed motif family at Bhera is the hanging lamp or qandil motif painted on either side of the mihrab arch. The design of the hanging oil lamp is a style used in the decoration of mosques throughout the Islamic world, frequently associated with the well-known Verse of Light (Ayat al-Nur) in the Quran. In Bhera, the qandil motifs are executed in rust-red on white and the body of the lamp is in the form of a teardrop; there is a chain hanging from the lamp and the small flame/light source is placed above the lamp.

These forms, though figurative in origin, have been sufficiently abstracted at Bhera to function as purely geometric/decorative elements. They are one-of-a-kind and underutilized as a design resource.

Textile Design Application Lamp / Qandil Family

Applications: as a vertical border stripe element of a shawl or curtain; as a pendant motif in a drop repeat print for fabric; as a single embroidery motif for fabric accessories. The teardrop shape of the lamp body is also similar to the paisley/boteh motif which is already so integrated in South Asian textile tradition making this motif an ideal conduit between the Bhera decorative scheme and the current vocabulary of South Asian textile making.

4.7 Motif Classification Data Table

The following table provides a systematic reference summary of all six decorative motif families identified at Jamia Masjid Bhera, their locations within the building, their cultural-historical origins, and their recommended textile design applications:

Motif Family	Location in Mosque	Cultural Origin	Visual Characteristic	Textile Application
Arabesque (Islimi)	Mihrab arch, gateway spandrels	Persianate-Islamic, 9th C. onwards	Spiralling branching vine with palmette terminals	Border print, ogee repeat, block print, zardozi embroidery
Geometric (Handasiyya)	Jali panels, dome borders, tile work	Mathematical Islamic tradition, 8th C. onwards	Stars (6 & 8-pt), chevrons, grids, scallops	Jacquard weave, block-print all-over, woven border, shirting fabric

Motif Family	Location in Mosque	Cultural Origin	Visual Characteristic	Textile Application
Botanical Floral (Gul-Buta)	Dome frescoes (all domes)	Persianate paradise garden, 15th C. onwards	Rose, tulip, iris, carnation; vase compositions	Lawn/chiffon print buta, shawl medallion, phulkari embroidery
Calligraphic (Khattati)	Gateway arch top, spandrel bands	Arabic Thuluth & Naskh scripts	Quranic text in flowing cursive letterforms	Furnishing tapestry, woven gold border, wall-hanging
Medallion / Rosette (Shamsa)	Dome apex (central rosette)	Timurid-Persianate, 14th C. onwards	16-petal radial rosette; radiating symmetry	Shawl centre, dupatta motif, carpet medallion, screen-print centrepiece
Lamp / Qandil	Mihrab flanking panels	Pan-Islamic, Ayat al-Nur tradition	Teardrop lamp with chain; abstracted figurative form	Pendant drop repeat print, border stripe, botch-related embroidery

4.8 Textile Design Strategy: From Wall to Fabric

4.8.1 The Source-to-Design Workflow

Translating an architectural motif into a usable textile design is not a simple act of tracing and copying. It requires a thoughtful process that respects both the source material and the requirements of the target medium. The following workflow is recommended for working with the Bhera motifs:

- **Step 1 Observation and Photography:** Photograph each motif family in detail, capturing both full compositions and close-up detail shots. Note scale, colour palette, and structural organisation.
- **Step 2 Tracing and Abstraction:** Trace the core structural lines of each motif, removing accidental deterioration or restoration inconsistencies. Identify the repeat unit.
- **Step 3 Repeat Construction:** Determine the appropriate repeat mode for each motif family (straight set, half-drop, brick, ogee, radial). Construct a minimum of 4 repeats to test the pattern flow.
- **Step 4 Palette Extraction and Translation:** Extract the original colour palette from photographs (cream, terracotta, olive, ochre, cobalt). Test the original palette first, and then develop contemporary colour variants.
- **Step 5 Medium Adaptation:** Adapt the motif for the specific production technique simplify fine lines for block printing; increase contrast for screen printing; reduce to outline for embroidery transfer; adjust weight for jacquard weave.
- **Step 6 Sampling and Testing:** Produce sample yardage or a sample panel and compare with the source material. Evaluate for visual authenticity, production feasibility, and market positioning.

5. Conclusion and Recommendation

Jamia Masjid Bhera is not simply a historic monument it is a working design school, built in brick and plaster and fresco, and open to anyone willing to look carefully. Its six decorative motif family's arabesque, geometric, botanical floral, calligraphic, medallion, and lamp together constitute one of the richest and most coherent bodies of applied design knowledge surviving in Punjab.

For students of art and textile design, this mosque offers something rare: a complete, multi-technique, polychrome decorative Program that can be studied in situ, documented in detail, and translated directly into contemporary practice. The motif families identified in this Study have clear rules, identifiable cultural origins, and proven visual power they have, after all, survived five centuries and continue to move viewers today.

The next Study in this series will examine the other oldest buildings in Bhera, with its distinctive Afghan geometric design vocabulary and will compare its geometric tradition with the more botanical Program documented here.

5.1 Colour Palettes from the Fresco Program

The dome frescoes offer two distinct colour systems that can serve as the basis for textile colour development:

Palette AOriginal Fresco Palette (Traditional)

Background: warm cream / aged ivory (#F5EDD6). Primary accent: terracotta red (#B85C3A). Secondary: olive green (#6B7C3F). Tertiary: ochre gold (#C8962A). Outline: dark brown (#3D2410). This palette works particularly well for printed cotton, linen, and block-print fabrics with a heritage or artisanal market positioning.

Palette BContemporary Reinterpretation

Background: deep indigo (#1A2E5A) or off-white (#F7F3EC). Primary: burnt sienna (#C45E2A). Secondary: sage green (#8FA67A). Tertiary: dusty gold (#D4A843). Outline: charcoal (#2C2C2C). This palette translates the fresco vocabulary into a more contemporary market language suitable for fashion fabric, interior textiles, and export markets.

5.2 Product Category

Based on the analysis of the six motif families, the following textile product categories are most directly and authentically served by the Bhera motif vocabulary:

- Printed lawn and chiffon fabric (the gul-buta botanical motifs as buta/all-over print)
- Embroidered shawls and dupattas (the medallion rosette as centre motif, arabesque as border)
- Block-printed cotton fabric (the geometric handasiyya patterns as all-over repeat)
- Woven jacquard fabric (geometric and arabesque combined as woven self-pattern)

- Interior furnishing fabric and curtains (full-width arabesque or medallion compositions)
- Hand-embroidered accessories (individual gul-buta motifs for bags, cushion covers, table runners)

The decorative Program of Jamia Masjid Bhera is in uneven condition. The recently restored parts, especially the Mihrāb stucco work and the fresco in the main dome, are in reasonably good condition, and offer good opportunities for the documentation of the original design intent. The secondary dome (Fig. 17) is deteriorated, most notably by loss of plaster, crumbling surfaces, and widespread pigment fading, which has left many areas with ghost images of the original composition.

This decline makes today an important time to document. Today's recordable photograph may not be recoverable in 10 years. Design Researchers associated with these motifs have a responsibility to not only creatively use them but to also document them in as thorough a way as possible. Each detailed photograph made by a design student is a part of the on-going visual documentation of this monument.

The conservation priorities identified in this study are as follows: Controlled humidity and temperature in the dome areas; Stable the primary dome professionally by fresco; Ensure protection of the decorated surfaces by using protective grilles; Prepare a complete photographic motif catalogue, consistent to the internationally recognised principles for the conservation of places of cultural significance and authenticity (Australia ICOMOS, 2013; ICOMOS, 1994).

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