THE ARTISTRY OF MIRROR EMBELLISHMENTS IN FASHION

Jahnavi Rayalwar, E Mokanaasri

ABSTRACT

Mirror work is a traditional textile embellishment technique that involves stitching small pieces of reflective material, often mirrors, onto fabric. This intricate craft has been used for centuries to adorn garments, particularly in Indian culture, where it is believed to ward off evil and bring good luck. This style combines traditional craftsmanship with modern manufacturing methods, producing high-quality, market-ready products. Digital design techniques have streamlined the process, enabling precise and repeated patterns that enhance the visual appeal. This fusion of traditional craftsmanship with contemporary technology exemplifies the potential for innovation in the textile industry. This study explores the historical significance, Global Designers and Innovation in mirror work, various types of mirror work, techniques, variations used in the fashion fields, and different methods of attaching mirrors to fabric, including frames for the mirror. This study also discusses the applications of mirror work in fashion, highlighting its use in traditional and trendy garments. The fusion of mirror works into textile designs, informed by extensive secondary data, has led to the development of innovative and aesthetically pleasing products.

1. INTRODUCTION

Mirror work, or shisha or abhala bharat embroidery, is a unique form of hand needlework. It involves the meticulous sewing of tiny mirror bits onto fabric. This art form originated in Persia and was introduced to India during the Mughal Empire in the 13th century. It was not just a decorative technique but a cultural practice aimed at warding off bad luck and protecting the wearer from the evil eye Chopra (2019).

The artisans of the Jat group, hailing from Gujarat’s Kutch district, brought with them a rich heritage of traditional embroidery and mirror work when they migrated from Balochistan in the 17th century. This migration marked a significant turning
point in the popularity of mirror work in India. With their deep appreciation for the craft, the states of Gujarat, Rajasthan, and Haryana became significant markets for mirror work, further fueling its popularity (2024).

Mirror work is an intriguing fashion embellishment because of its inherent properties. A captivating array of colour and light is produced by the mirrors’ reflection and absorption of light. Every piece of clothing has a magical touch as the wearer moves around and causes the mirrors to glitter and dance. Mirror work is a timeless heritage in worldwide fashion because of its ability to bring glitz and brilliance (2022).

This study is limited by two primary factors: secondary data and the techniques for incorporating traditional mirror work into contemporary fashion. The secondary data includes various types and variations of mirror work and its cultural background, making it challenging to understand and adapt it to modern trends fully. Additionally, design development was used to assess the garment’s output visually. Modern textiles may not be suitable for traditional processes due to their weight, drape, and movement. They involve creative solutions to merge historical techniques with contemporary aesthetics.

The research gap identified in this paper need for comprehensive documentation on the traditional techniques, patterns, and regional variations of mirror work embroidery and also technical aspects of incorporating mirrored materials into fashion design. Conducted detailed studies and recordings of these elements is essential to preserving this heritage for future generations.

Figure 1

![Mirror Work in Fashion](Figure 1 Mirror Work in Fashion)
Source Chopra (2019)

2. REVIEW LITERATURE
2.1. HISTORICAL SIGNIFICANCE OF MIRROR WORK EMBROIDERY

Mirror work embroidery, or "shisha" embroidery, originates in 13th-century Persia. This intricate craft involves using tiny mirrors to create elaborate and
reflective designs on fabric. The technique spread to India during the Mughal era, and it was brought by travellers and traders who introduced it to the Indian subcontinent. The Mughals, known for their rich cultural contributions, adopted and refined this craft, integrating it into their textile traditions. Over time, mirror work became particularly popular in the western regions of India, such as Gujarat and Rajasthan, where local artisans embraced and further developed it. The vibrant and colourful nature of Indian textiles provided a perfect canvas for mirror work, allowing it to flourish and become an integral part of traditional Indian embroidery. Mirror work remains a celebrated and widely practiced art form, blending historical techniques with contemporary designs Chopra (2019).

2.1.1. EVOLUTION OF MIRROR WORK EMBROIDERY IN INDIA

Each Indian state and community has developed its unique styles of mirror work embroidery, characterized by distinct motifs, colours, and shapes inspired by nature. In Gujarat, for instance, the embroidery often features intricate floral and animal patterns, while Rajasthan's mirror work incorporates geometric designs and vibrant hues. The techniques used in mirror work have evolved significantly over time. Initially, artisans used mica and hand-blown glass mirrors, later replaced by machine-cut glass and reflective metal pieces, allowing for more precise and varied designs. The process of attaching these mirrors to fabric has also seen innovation. Traditional intricate cross-stitch embroidery was used to secure the mirrors and enhance the overall aesthetic of the garment. This detailed embroidery around the mirrors added depth and richness to the designs, making each piece unique. These evolving techniques have kept the craft dynamic, blending tradition with modernity. As a result, mirror work embroidery continues to be a vibrant and essential part of India's textile heritage, reflecting the diverse cultural expressions of its communities Pedia (2017).

2.1.2. GLOBAL DESIGNERS AND INNOVATIONS IN MIRROR WORK EMBROIDERY

Mirror work embroidery has a rich history in India; Designers in India have played a key role in reviving and modernizing this ancient craft. Designer duo Abu Jani and Sandeep Khosla were among the first to bring mirror work to the couture grandstand, using oversized square mirrors and gold threads to give it a fresh, high-fashion expression Dangor (2019). Designers like Anita Dongre and Anamika Khanna have also incorporated mirror work extensively in their collections, working with hundreds of artisans to keep the craft alive Chopra (2019).

Contemporary designers are experimenting with mirror work innovatively, blending it with modern silhouettes, prints, and embroidery techniques. Designer Abhinav Mishra uses mirror work to create deconstructed motifs with gota and silk threads and prints. He has also applied mirror work to contemporary choli designs with shoulder-baring, deep neck, and backless styles Chopra (2019).

Beyond fashion, mirror work is also used in interior design and architecture. Designers are drawing inspiration from the mirrored rooms and domes of historic Indian palaces to incorporate the craft into their work. This cross-pollination of mirror work across different creative disciplines helps to further its evolution and ensure its continued relevance.

Overall, the timelessness and versatility of mirror work have made it a beloved craft that designers are working hard to preserve and reinterpret for the modern
era. By blending traditional techniques with contemporary aesthetics, they ensure this ancient Indian art form thrives.

2.2. TYPES OF MIRROR WORK

In the art of mirror work, various techniques are employed to securely attach mirrors to fabric while enhancing the overall aesthetic of the garment. These methods ensure the mirrors' durability and add intricate decorative elements to the design Hunar. (2021). Some common types used in mirror work are shown in Figure 2.

Figure 2

![Figure 2 Types of Mirror Work](Source Hunar. (2021))

1) **Framed Elegance**: This technique demands your meticulous attention and skill. It involves coiling embroidery thread around the mirror's perimeter with utmost precision. The thread is then securely stitched onto the fabric using various stitches, such as the chain or satin stitch, creating a defined and polished border for the mirrored element. This adds an extra layer of intricacy to the design, making you feel accomplished with your craft.

2) **The Star Stitch**: This method is not just about attaching the mirror; it's about adding a unique and beautiful decorative element. To achieve this, bring the thread over the mirror and insert the needle into the fabric on the opposite side of the mirror, creating a straight stitch across the mirror (Tiny star-shaped stitches). This fastens the mirror to the fabric, lending a touch of celestial charm to the design. This method inspires creativity and adds a personal touch to your work.

3) **Triangular Frame Stitches**: This visually captivating approach is sure to catch the eye. It utilizes a series of geometric triangles stitched meticulously around the mirror. The base of each triangle is then securely sewn onto the fabric, creating a structured frame for the mirrored element. This technique tempts curiosity and makes you eager to try it out.

4) **Anchor with Chain Stitch**: This secure and versatile technique utilizes a series of chain stitches to anchor the mirror to the fabric. This method is particularly effective for attaching mirrors of various sizes, ensuring they remain firmly affixed to the garment Corbet & Corbet (2017).

2.3. TECHNIQUES AND VARIATIONS

Mirrorwork's dazzling effect is a result of not just the technique but also the type of mirrors used. Let's search for the fascinating world of mirror selection and secure attachment methods.
1) **Size of the mirror:** Mirrors come in different sizes, ranging from small to large, depending on the design and the fabric used.

2) **Material Considerations:** While traditional glass mirrors remain popular, contemporary designers increasingly explore alternative materials for their unique properties. Acrylic is lightweight for intricate embellishments, while plastic allows for vibrant colour incorporation. With their inherent textures, metal mirrors can add a touch of dimension and depth to a design.

3) **Shape Dynamics:** The size and shape of the mirrors employed can drastically alter the overall aesthetic of the garment. Circular mirrors represent a timeless classic, offering a sense of elegance and fluidity. On the other hand, square mirrors exude a modern and structured feel. Using geometric shapes, such as triangles or hexagons, injects a playful and contemporary edge into the design [Loom (2022)].

4) **The Art of Embroidery Techniques:** The secure attachment of mirrors to the fabric is paramount in creating a well-constructed and visually appealing garment. Embroidery techniques like the straight stitch, blanket stitch, and couching stitch provide robust and aesthetically pleasing methods for anchoring the mirrors in place [Mirror Work on Fabrics – 10 Simple Embroidery Designs you Could use. (2022)].
2.4. APPLICATIONS OF MIRROR WORK IN FASHION

FIGURE 4

2.4.1. EMBELLISHING HERITAGE

1) Cholis, Sarees, Lehengas, and Kurtis: Mirror work, a symbol of our rich South Asian heritage, is deeply ingrained in our traditional attire. Cholis (blouses), sarees (draped garments), lehengas (skirts), and Kurtis (tunics) are adorned with these dazzling embellishments, creating garments that are not just beautiful but also carry a profound cultural significance Dhrutikothari. (2015), Zoysacorrea. (2023).

2.4.2. MODERN INTERPRETATIONS

1) Contemporary Designs and Modern Silhouettes: Mirror work is not confined to traditional attire. Modern designers are pushing boundaries by incorporating this technique into contemporary silhouettes. Mirror work adorns dresses, gowns, jackets, and even pants, creating an exciting fusion of tradition and modernity Loom (2022).

2.4.3. BEYOND GENDER

1) Use in Menswear and Accessories: Traditionally associated with women's clothing, mirror work makes inroads into menswear. Embellished jackets, shirts, and shoes add unexpected glamour to men's fashion. Mirror work also finds its way onto accessories like bags, clutches, and belts, creating a cohesive and dazzling look The Significance of Mirror Work on Saree Belts. (2024).

2.5. MODERNIZING MIRROR WORK

1) Traditional Techniques with a Modern Twist: Skilled artisans stay within their time-tested skills. Instead, they are incorporating traditional mirror work techniques into contemporary styles. It can...
involve using mirrors in unconventional shapes or sizes or employing innovative embroidery methods to create unique textures and patterns Chopra (2019). Mirror work is blended with other embroidery techniques, such as chain stitch and herringbone stitch, to create intricate patterns Mirror Work on Fabrics – 10 Simple Embroidery Designs you Could use. (2022).

2) **Deconstructed Dazzle:** The deconstruction of traditional motifs is a prominent trend in contemporary fashion. Mirror work is no exception. Designers are experimenting with deconstructing the traditional placement of mirrors, creating fragmented patterns, or even using them as three-dimensional elements to add depth and intrigue to a garment Patel (2023).

### 3. METHODOLOGY

#### 3.1. RESEARCH DESIGN

This study adopted a secondary source approach to analyze existing literature and data on the use of mirror work in professional fashion fields. This paper is divided into two phases: Literature review and Design development, as shown in Figure 5

**Figure 5**

![Process Flow of Methodology](image)

**Figure 5** Process Flow of Methodology

#### 3.2. PHASE 1: LITERATURE REVIEW

This study utilized a secondary source methodology to explore the historical and cultural significance, types, techniques, variations, and applications of mirror work in fashion. The research aims to comprehensively understand mirror work's evolution and contemporary relevance by analyzing existing literature, fashion magazines, academic journals, and multimedia sources.
3.3. PHASE 2: DESIGN DEVELOPMENT

3.3.1. ANALYSIS OF COLLECTED DATA

Data from secondary sources were analyzed to identify standard designs and garment patterns for mirror work. The design elements were then documented and categorized.

3.3.2. IDEATION AND DESIGN DEVELOPMENT

Based on the analysis of secondary data, traditional and contemporary design concepts were digitally created to visualize this concept. Additionally, a customized mirror design was developed. The colour palette for this study is inspired by the natural reflections of sunlight, blending traditional vibrant hues with modern metallics and pastels. This fusion enhances the reflective quality of the mirrors, creating a contemporary yet culturally rooted aesthetic. The result is a fresh, dynamic interpretation of traditional mirror work embroidery.

Figure 6

Figure 6 Digital Design Development - (Garment-1)

Figure 7

Figure 7 Digital Design Development – (Garment-2)
From **Figure 6**, **Figure 7**, and **Figure 8**, digital garment development is in well-defined stages. This process contains various stages, from the initial design phase to the garment pattern creation and thorough visual analysis. Each step ensured the accuracy and quality of the final digital garment.

**Figure 9** clearly shows that the mirror designs underwent digital development and iteration before laser-cutting, motifs inspired from nature and incorporating traditional and feminine touches. This process ensured each design was meticulously crafted to enhance its aesthetic appeal and cultural significance.
4. RESULT AND DISCUSSION

4.1. RAW MATERIAL AND PROTOTYPE DEVELOPMENT

For mirror work, selected design concepts were transformed into prototypes using acrylic sheets, georgettes, net fabric, and raw silk fabrics. Initially, laser cutting was employed to create the mirror designs, which were applied to the fabric using aari embroidery, as shown in Figure 10. Following this process, the garments were constructed according to the design specifications. Raw materials are sourced from Banjara Hills, Hyderabad, Telangana.

**Figure 10**

![Process Flow: Laser Cutting and Mirror Placement on Fabric](image10)

**Other mirror designs**

**Figure 10 Process Flow of Mirror Cutting and Placement on Fabric**

**Figure 11**

![Aari Work Incorporating Mirrors](image11)

**Figure 11 Aari Work Incorporating Mirrors**
4.2. GARMENT DEVELOPMENT

Figure 12

Figure 12 Final Garment - 2 (Tints of Orange)

Figure 13

Figure 13 Final Garment - 1 (Salmon)

Figure 14

Figure 14 Final Garment - 3 (Mulberry)
From **Figure 11**, the process begins with designing on tracing paper and transferring the pattern onto the fabric using chalk or pencil. The selected fabric is secured on an embroidery frame to maintain tautness for precise stitching. "Shisha" mirrors are strategically placed based on the design layout. Using an "aari" needle, artisans anchor the mirrors with basic stitches, then employ intricate aari stitches resembling chains to secure them and create elaborate patterns. Silk threads add depth and detail, after which excess threads were trimmed. Following a thorough inspection for imperfections, final adjustments ensure durability. Gentle pressing smooths wrinkles and sets the stitches, giving the embroidery a polished finish. The completed fabric is then used to create garments that beautifully represent ethnic elegance and traditional artistry. Each piece of garment, radiating cultural richness, showcases the exquisite blend of aari work and mirror embroidery, transforming the fabric into a stunning representation of timeless ethnic fashion as shown in the **Figure 12**, **Figure 13**, and **Figure 14**.

### 4.3. Graphs on Prototype Development

This study presents graphs illustrating various aspects of the prototype development process, including time, material usage, and quality assessments based on experiential data. These visualizations provide insights into the efficiency and effectiveness of the development stages.

**Figure 15**

![Graph - Time Spent at Each Stage](image)

**Figure 15** Graph - Time Spent at Each Stage

**Figure 15**, This bar graph shows the hours dedicated to each process stage. It shows that the most time-consuming stage was Garment Construction (40 hours), and the final stage contains the cutting, stitching, and assembly of the garment according to the design specifications. This stage is the most time-consuming, highlighting the complexity and attention to detail required to construct the final prototype. Furthermore, ‘Aari Embroidery’ (30 hours) is the stage where mirror designs are applied to the fabric using aari embroidery, a traditional and intricate technique. The time required for this stage reflects the detailed and labour-intensive nature of the embroidery work.
Figure 16, This bar graph illustrates the cost of materials used at each stage. The "Garment Construction" stage has the highest price of $250 (20,865 INR), indicating the extensive use of high-quality fabrics (such as georgettes and raw silk) and the complexity of assembling the final prototype.

Figure 17, This line graph demonstrates the quality score achieved at each stage, rated out of 100. The quality score improves progressively through each stage, culminating in the highest score during the "Garment Construction" phase, indicating the successful integration of all elements into the final product.

4.4. FINDINGS

Thus, results provided a thorough examination of the prototype development process, a detailed method, and techniques involved in working with reflective materials in garment construction. This study could include practical insights into draping, cutting, and integrating mirrors into various fabric types (Raw silk, net...
The time analysis reveals the significant effort involved in each stage, especially in garment construction and aari embroidery. The cost analysis highlights the considerable investment in high-quality materials necessary to achieve the prototype’s final quality. Additionally, the quality assessment demonstrates that the combined effect of time, materials, and craftsmanship results in an exceptional final product. Finally, the data concluded that the efficiency and effectiveness of the development stages, emphasizing the balance between time, cost, and quality in producing high-quality embroidered garments.

5. CONCLUSION

This study explored the secondary source, which included an intricate process of integrating traditional mirror work into contemporary fashion. Originating from Persia and popularized in India, mirror work is known for its cultural and aesthetic appeal, particularly in Gujarat, Rajasthan, and Haryana. A literature review highlighted diverse Historical significance, Global designers and innovation in mirror work, techniques and materials used, from framed elegance to anchor with chain stitch, and modern adaptations involving different mirror sizes, shapes, and materials. The methodology included a detailed literature review and digital design development, followed by transforming these designs into prototypes using acrylic sheets, georgettes, and raw silk fabrics. In this study, results indicated that garment construction is the most time-consuming and costly stage, reflecting the detailed work and high-quality materials. Limitations of this study include the range of materials and a single design methodology that constrained design possibilities and due to time limitation, only three prototypes were constructed. This study underscores the complexity and creativity required to blend traditional techniques with modern trends, demonstrating mirror work’s enduring appeal and adaptability in contemporary fashion.

Future perspectives on incorporating traditional mirror work into contemporary fashion involve exploring sustainable materials, adopting innovative design methodologies, and enhancing consumer engagement through education and cross-cultural collaborations. These strategies aim to preserve the art form while broadening its accessibility and relevance in the modern fashion industry.

CONFLICT OF INTERESTS

None.

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None.

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