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Sustainable Surface Ornamentation: Exploring The Art and Utility of Aari Embroidery

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Abstract: Traditionally, surface ornamentation has relied on various hand and machine techniques to enhance the aesthetic value of textiles. Among these, Aari embroidery stands out as a rich and versatile art form that has been a part of social wear for centuries. However, modern mass-production methods often overlook the precision and eco-friendly potential of traditional hand-worked Aari. This research explores the tools, materials, and specific techniques of Aari embroidery—such as the use of the hooked needle and specialized frames—to evaluate its role in contemporary fashion. The study aims to highlight how this traditional craft provides unique, embossed effects that digital prints cannot replicate, while maintaining a lower environmental footprint through manual execution.

Keywords: Surface Ornamentation, Aari Embroidery, Hooked Needle, Sustainable Fashion, Textile Embellishment.

I. INTRODUCTION

Color and texture are essential tools for design and aesthetics in textiles. While dyeing and printing contribute significantly to this process, surface ornamentation through embroidery offers a medium for expressive creativity and historical commentary. Aari embroidery is a specific branch of this art that utilizes a specialized hook-shaped needle to create intricate patterns. Unlike standard needlework, Aari is often performed on a stretched wooden frame, known as an Adda, which allows for high precision and the inclusion of various materials like zari, beads, and sequins. In the present day, this work plays a vital role in both traditional bridal wear and modern party wear.

II. RESEARCH QUESTION

While digital technology has introduced new ways to produce "print effects" that mimic embroidery, these often lack the authentic, three-dimensional texture of hand-worked Aari. The problem persists that mass-produced textiles often sacrifice the durability and uniqueness of traditional craftsmanship. Therefore, this study asks: How can traditional Aari embroidery techniques be optimized for modern garment construction to ensure both aesthetic uniqueness and sustainable production.

A. SIGNIFICANCE OF STUDY

The significance of this study lies in preserving a traditional craft that provides a livelihood for many artisans. Aari embroidery is highly versatile, allowing for the application of: Beads and Stones: Different shapes and sizes of shiny stones and glass beads. Zardozi and Zari: Metallic threads and spring-like gold/silver threads used for high-end ornamentation. Sequins (Sitara): Small spangles available in shapes ranging from circles to stars. By focusing on these manual techniques, the industry can reduce reliance on high-energy machinery, making the traditional method more eco-friendly and appealing to eco-conscious designers.

B. RESEARCH OBJECTIVES

The key objectives of this research are: To categorize the specific tools required for Aari, including the Aari needle and the stretched frame (Adda). To analyze the structural integrity of the Aari chain stitch compared to standard machine embroidery. To evaluate the utility and scope of Aari work in the current global fashion market.

III. REVIEW OF LITERATURE

The literature indicates that embroidery has been a medium for expressive creativity for hundreds of years. Aari Needle: The primary tool is a hook-shaped needle (typically size No. 14), which allows for continuous chain stitching. Materials: Common materials include silk threads, cotton threads, and metallic zari. Historical Context: Sequence and Aari work have been famous since the Mughal period and continue to enhance materials significantly.

IV. METHODOLOGY

The research utilized a qualitative analysis of traditional Aari tools and a comparative study of surface effects. **Frame Setting:** The fabric is stretched across four wooden bars and fixed tightly to ensure a stable surface for the needlework. **Stitch Technique:** The process involves using the hooked needle to pull thread through the fabric from beneath, creating a consistent chain stitch

1) Process:

Frame Setting: Fabric is stretched tightly across a wooden frame to maintain uniform tension.

2) Design Transfer:

Patterns are transferred using perforated tracing techniques and powder marking.

3) Stitch Execution:

The hooked needle pulls thread through fabric, forming continuous chain stitches.

4) Material Integration:

Beads, sequins, and zari are incorporated during stitching to create decorative textures.

V. RESULTS AND DISCUSSION

A. Structural Integrity

Aari chain stitches are strong and flexible, making them more durable than many machine stitches.

B. Aesthetic Superiority

- Produces 3D embossed textures
- Allows intricate detailing
- Offers handcrafted uniqueness

C. Sustainability

- Low energy consumption
- Minimal carbon footprint
- Promotes slow fashion

VI. CONCLUSION

Aari embroidery represents a perfect balance between art, tradition, and sustainability. While modern techniques prioritize speed, Aari emphasizes craftsmanship, durability, and individuality.

Reviving and integrating Aari embroidery into contemporary fashion can support artisans, preserve heritage, and contribute to sustainable textile practices.

REFERENCES

- [1] Collins, Dan. 1992. Anamorphosis and the eccentric observer: history, technique and current practice. *Leonardo*. 25(2): 179–187
- [2] Baltrusaitis, Jurgis. 1969. *Anamorphic art*. Paris: Flammarion.
- [3] García Guinea, Miguel Angel. 2004. *Altamira y otras cuevas de Cantabria*. Silex Beldon Scott, John. 2003. *Architecture for the Shroud: Relic and Ritual in Turin*. The University of Chicago Press.
- [4] Bucher Trantow, Katrin. 2019. Peter Kogler with.... *Ausstellungskatalog, Kunsthau Graz, Hrsg. VfmK, Wien*.
- [5] Cabeleira, João Paulo. 2016. Amplifying reality through quadratura. *Contrappunto among corporeal and visual space*. In *Utopia(s) - Worlds and frontiers of the imaginary*. Proceedings of the 2nd International Multidisciplinary Congress, October 20–22, 2016, Lisbon, Portugal. ed. M.R.
- [6] Monteiro, M.S. Ming Kong, M.J. Pereira Neto. 71–76, Taylor & Francis Group, London, UK.
- [7] Cabezos Bernal, Pedro; Cisneros Vivó, Juan; and Soler Sanz, Felipe. 2014. Anamorphosis, its history and evolution, *Revista de EGA*. Issue 23: 148–161. <https://doi.org/10.4995/ega.2014.2184>
- [8] Di Paola, Francesco; Pedone, Pietro; Inzerillo, Laura; and Santagati, Cettina. 2015. Anamorphic projection: analogical/digital algorithms, *Nexus Network Journal*, Vol. 17, no. 1. <https://doi.org/10.1007/s00004-014-0225-5>
- [9] Gleiter, Jörg.H. 2012. *A Critical theory of ornament, Ornament today: digital material structural*. ed.
- [10] Gleiter, Jörg H, 118–139. Bozen University Press.
- [11] Gómez Rodrigo. Maria 2008. *Anamorfosis, El angulomagico*. Universidad de València.



- [12] Fajardo-Hill, Cecilia., Giunta, Andrea., Alonso, Rodrigo. 2017. Radical women: Latin American art, 1960–1985. Los Angeles: Hammer Museum and DelMonico Books/Prestel.
- [13] Leopold, Cornelia. 2014. Albrecht Dürer's contributions to the European perspective research project in the Renaissance, Prospettivearchitettoniche. 9–22. Sapienza Università Editrice
- [14] Martin, Javier. and Martin, Daniel. 2018. Ornament & distortion. Superficial techniques for spatial distortion by means of CAD-CAM technologies. Computing for a better tomorrow - Proceedings of the 36th eCAADe Conference - Volume 2: 459–466, Lodz University of Technology, Lodz, Poland, ed. Kepczynska-Walczak, A, Bialkowski, S.



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