

Developing Value Added Silk-Linen Sarees Through the Adaptation of African Adinkra Motifs

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Abstract: Throughout history, inclusion of motifs in textile designing process reflects cultural influence and handweaving symbolizes the versatility and creativity of a living craft. This sector needs to be empowered in a sustainable and reliable manner by providing them with new and appealing design motifs and patterns. As the predilection of eco-friendly garments caught on, handwoven linen and linen blends have become a fashionable alternative to rather expensive silks as they are aesthetically and functionally valued for its luxury, properties and comfort parameters. African Adinkra textiles are block printed with Adinkra symbols and are characterized by their bright colors and intricate patterns. A black dye made out of a root is the mainly used and is what gives its name. The research focused on reviving both the traditions and involved the adaptation of these motifs on handwoven silk linen sarees. Various Adinkra motifs were collected and analyzed for design development. Design layouts developed were evaluated and the selected design was edited using computers to suit the weaving particulars and was woven at a reliable source. The raw materials required were procured and the weaving was done successfully. The final product was collected and report of the study was prepared.

Index Terms: Adinkra Textile Designs, Design Adaptation, Revival of Traditions, Silk-Linen, Sustainability, Weaving.

I. INTRODUCTION

Textile art, one of the ancient arts known, was always inspired by nature and developed through natural resources and available tools and materials. Handmade textiles made from natural fibres and their blends stands as a symbol of versatility and creativity of living craft. It is the need of the hour to empower the handloom weaving with new and appealing design patterns to

compete in the domestic as well as global market in a sustainable manner. Linen is no longer luxury but is ideal for today's weather. As a commitment to sustainability along with aesthetics, silk-linen blends evolved as the perfect choice for experimentation. Africa's textile tradition especially Adinkra Textile prints are a wealthy source for adaptation. Hence the present study involves the adaptation of the said Adinkra Textile motifs for designing borders and pallavs of saris. This study also serves as the initiative towards popularizing African tradition and towards the aesthetic value addition of hand-woven saris with, eco-friendliness, awareness and rejuvenation.

Objectives of the Study:

- Highlight the eco- friendliness and comfort factor of silk –linen fabrics
- Create awareness about the value and wealth of the said tradition and traditional wears
- Identify the most suitable Adinkra motifs to be recreated on silk –linen sarees
- Rejuvenate the charm and beauty of one of the world's oldest surviving garment.

II. METHODOLOGY

A number of Adinkra motifs from various books and web where first taken for consideration. Even though, these motifs are associated with specific meanings, their aesthetics and suitability for weaving was only taken into account while collection.

The collected design motifs where arranged in five layouts suitable for sarees which was hand-drawn. According to the present trend in saree designs, the motifs were arranged in the

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body part and pallav, leaving the border to be plain. Only black colour was used for outline and filling as the proposed design was for weaving and not for printing.

Five saree design layouts with different placement of motives were prepared for evaluation. The screening was done by a panel of ten judges from various levels of the society. Depending upon the ratings of each design, the one with highest marks was finalized for further development. Evaluation sheet was prepared with four criteria which included motif aesthetics, placement of motifs, layout arrangement and overall appearance. The evaluation was done out of a total of five points.

A visit was arranged to Sathyamangalam, Tamil Nadu, where it was possible to find handloom weavers weaving pure silk sarees for commercial markets and who can accommodate to weave sarees with silk warp and linen weft as per the study. The weaving capabilities and capacities were analyzed and recorded. Based on the above recordings, the selected artwork was further edited in computers so as to suit the particulars of Sathyamangalam handloom weaving centre and to punch the cards that are to be placed on Jacquards. The cards were punched in the place of weaving itself.

Since the weavers of Sathyamangalam were used to weaving sarees with silk warps and wefts, it was decided to procure silk warps and wefts and zari yarns from them. Linen weft for saree was sourced from Coimbatore.

The punched cards were mounted on the loom to facilitate the weaving of designs on sarees using the jacquard. The saree was woven on traditional pit looms. Base colour was finalized to be off white, the motifs in the body part to be in bright color and the designs in the pallav part to be woven using zari threads. The loom particulars and ends per inch (EPI) were kept the same as their regular production. The picks per inch (PPI) were adjusted so as to weave with linen weft.

Since the regular production of sarees at Sathyamangalam was not to be disturbed, it was necessary to wait till the regular production to get over to weave the new product. The saree was collected from the weaving centre, checked for quality, folded and packed.

After collecting the product, a talk was conducted with the weaver and the weaving centre officials to identify any problem or difficulty faced during weaving. Since linen was used as base weft and as it was new to them it was necessary to identify any difficulty so that there should be no problem if the saree has to be produced commercially.

The cost for the development of the design, raw material, cost for sample weaving and final weaving was calculated so as to find out the final cost of production of a saree. The above calculated cost was evaluated by a panel of ten judges who are selected for evaluating the art works and the ratings were done on three levels such as low, adequate and high.

III. RESULTS

A. Collection, Identification of Suitable Motifs and Design Development

Adinkra motifs such as *Ananse Ntontan* (Spider's web) symbolizing wisdom, creativity and the complexities of life, *Nyame dua* (Altar of God) representing God's presence and protection, *Sankofa* (Learning from the past) representing wisdom and past experiences, *Bese saka* (Sack of Cola nuts) symbolically showing power, abundance and affluence, *Dwannimmen* (Ram's Horn) representing concealment, humility and strength, *Eban* (Fence) showing protection, security, safety and fortress, *Mmusuyidee* (That which removes ill luck or evil) depicting good fortune, sanctity and spiritual strength, *Nyame nti* (For God's Sake) symbolizing God's grace, faith in God, *Kramo bone* (The Bad) showing warning against hypocrisy and *Akomo ntoso* (Extension of the Heart) representing understanding and unity were the motifs identified for initial study. However, a combination of motifs was also considered while designing.

Five layouts with different placement of motifs in the body and pallav area of the saree were prepared for evaluation. As the present design trend in saree include plain border made with either zari or thread alone along with an elaborately design rich pallav, the borders of the newly developed layouts were kept plain without any kind of ornamentation. The developed designs were then screened according to the four criteria mentioned in the methodology by a panel of ten judges from various levels of the society. Depending upon the ratings scored, the design with highest score was selected for further development.

B. Identification of Reliable Weaving Source

As Tamil Nadu is well known for weaving, it was not very difficult to find a reliable source to weave the developed design. A visit was arranged to Sathyamangalam, Tamil Nadu, where it was possible to find handloom weaving centers that produce pure silk saris for commercial markets. Their weaving capabilities were analyzed and recorded as follows.

Warp	:	2ply 20/22 Silk
Weft	:	3ply 20/22 Silk
Extra Weft	:	4ply100/120 Dupion silk
Reed	:	100*; 3/Dent
Jacquard Capacity	:	240 Hooks

Based on the various design parameters and weaving capacities, the selected designs were edited using computers to suit the particulars for weaving at that weaving center.

C. Weaving of Silk-Linen Saree Using Developed Design

Since the weavers of Sathyamangalam were using 2ply 20/22 silk yarn as warp for their regular saree production, it was decided to weave the newly developed design with the existing count of silk warp. The proposed study insisted the use of linen

as the weft and therefore 80's linen was sourced and was used as the base weft. For figuration 4ply 100/120 Dupion silk was chosen. Therefore, the final weaving particulars were

Warp	:	2ply 20/22 Silk, 200D Zari
Weft	:	80's Linen
Extra Weft	:	4ply 100/120 Dupion silk, 200D Zari
Reed	:	100's; 3/Dent
Total no. of Ends	:	6400
Jacquard Capacity	:	240 Hooks
EPI	:	144
PPI	:	60
Saree Width	:	48 Inches
Saree Length	:	5.5 Meters

The colors were randomly chosen from those that are associated with Adinkra designs. Base color was decided to be off-white owing to two reasons – one being the difficulty in dyeing linen flawlessly and the other being the classic beauty of off-white color. Hence the silk warp and the linen weft were undyed. The color for figuration was chosen from the weaver's shade card. Navy blue, Brown and Gold were taken initially for trial. After sampling however, it was decided to finally use navy blue 4ply 100/120 Silk Dupion for figures while weaving. The border of the saree was kept plain with zari warp and linen weft so as to go along with the present design trend in sarees. The pallav of the saree was also woven according to the developed design with zari as extra weft alone in order to remain subtle and not to overlook the effect of the design motifs formed in the body part of the saree. The woven saree was cut from the loom, folded and packed as per their traditional way.

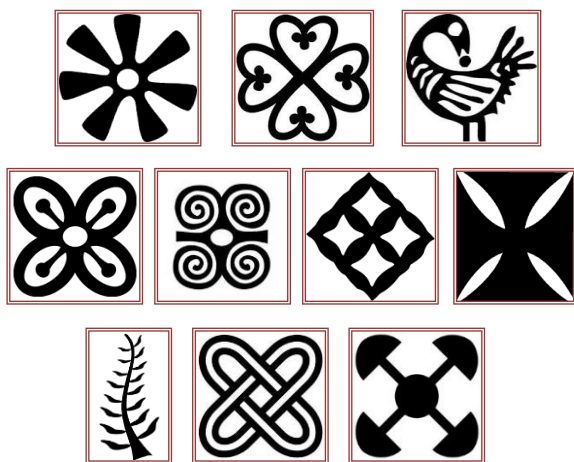


Fig. 1. Adinkra Motifs Considered for Design Development

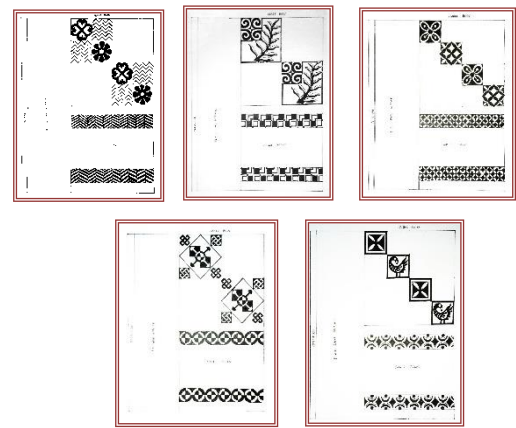


Fig. 2. Saree Layouts Designed for Evaluation

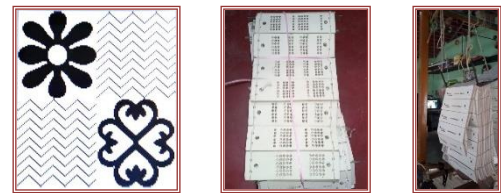


Fig. 3. Computer Edited Selected Saree Design and Punched cards



Fig. 4. Weaving Saree at Sathyamangalam



Fig. 5. Final Product

D. Costing and Evaluation

Items		Quantity	Rate	Amount
Designing		1	750	750
Editing		1	250	250
Card Punching		300	4.80	1440
Silk	2ply20/22 Warp	330gms	5.2/gm	1716
	4ply100/120 Weft	300gms	2.3/gm	690
80s Linen		330gms	2.2/gm	726
Zari 200D	Warp	180gms	1.75/gm	315
	Weft	20gms	1.75/gm	35
Sample Processing		1	500	500
Sample Dyeing		1	500	500
Sample Preparatory		1	2000	2000
Sample Weaving		5.5	650/m	3575
<i>Total Cost</i>				<i>12497</i>

Fig. 6. Cost Calculation

The designing and card punching cost came up to Rs. 2440/saree. The raw material cost was Rs. 3482/Saree. The preparatory and weaving cost was Rs. 6575/ Saree. Since it was sample weaving the preparatory and weaving cost has been more when compared to regular weaving. The evaluation was done based on three levels such as high, adequate and low by a panel of ten judges who were selected for evaluating the artworks. 50% of them reported that the cost was adequate; 40% of them evaluated high and 10% suggested that the price was low.

E. Problems and Difficulties

Since the weavers of Sathyamangalam were used to weaving silk, not any noticeable difficulty in doing the sample was identified. Only change was to adjust the picks per inch from 64 to 60 as 80s linen weft was used instead of the 3 ply 20/22 as base weft.

F. Discussion

Tradition always possesses beauty and simplicity, whether it be textile or the craft of making textile. The idea of adapting Adinkra motifs on sarees was proposed to serve as an initiative towards popularizing the less known African textile tradition and towards the aesthetic value addition of the Indian traditional hand-woven attire - the saree.

Hand weaving deserves a tension here as a symbol of versatility and creativity of living craft. Even though handloom sector is facing stiff competition from the power loom and mechanized sector, there are a number of hand loom weaving centers and villages across Tamilnadu. One way to empower and facilitate them to enhance, competitiveness of products in the domestic as well as export market in a sustainable and reliable manner is to provide them within new and appealing design patterns.

In this context, the idea of cultural integration in designing for hand wovens through the combination of traditions of different parts of the world seemed to be a viable option as previous experiments have gained enough popularity.

The motifs of traditional African Adinkra textiles characterized by bright colors and intricate patterning were selected as a source of inspiration. The detailed study about Adinkra Textiles revealed that it is deeply rooted in African culture. It is also clear that the African people had a strong sense of colour, and designing along with the idea of textile manufacturing and natural dyeing. Looking onto sarees, one of the traditional attires of India, it is liked by all women irrespective of all diversities. It is suitable for all occasions in all weathers. As the predilection of eco-friendly garments caught on, natural made sarees have become fashionable. The idea of making the saree with silk and linen emerged as a result of the understanding that wearing linen is no longer luxury but ideal for today's hot weather and it absorbs a large amount of moisture unlike the pure silk sarees which generate a lot of heat while wearing.

Since at Sathyamangalam where silk saree weaving is a regular activity, was chosen for doing the project, it was comparatively easy for sourcing raw materials, to convey the idea behind the project and to carry out weaving flawlessly. They welcomed the idea wholeheartedly and in spite of their day today busy activity, it was agreed to complete the project on time. The only difficulty was to source 80s linen as there is a smaller number of organizations stock it and also a smaller quantity for sampling was not easily available. Finally, it was sourced from Coimbatore through Dinesh Textiles, Kannur who were into using it for making shirt fabric.

The final product was evaluated to be a well appreciated one in terms of its feel, durability, luster, design and colour which are the most desirable qualities of a saree. However, the idea of incorporating different traditional motifs in designing for woven or printed textiles extends a wide scope for future experiments in this regard. The study was definitely evaluated as an attempt to familiarize African textile tradition, to preserve the wealth of tradition, to rejuvenate the charm of sarees and to the value addition of hand-woven products.

CONCLUSION

As per the present study the traditional African Adinkra textile designs were studied initially. Even though these motifs are associated with particular meanings and are meant for wearing during occasions like marriage, worship and especially funerals, their aesthetic appeal was only taken into consideration while designing. Ten of the popular motifs consisting of *Ananse Ntontan*, *Nyamedua*, *Sankofa*, *Bese saka*, *Dwannimmen*, *Eban*, *Mmusuyidee*, *Nyamanti*, *Kramo bone* and *Akomontoso* were identified for initial

study. A combination of these motifs were applied in five different arrangements in the saree layout confining to the limitations of the selected source for weaving. The size of the design area of body part of the saree was restricted to either 2.5 inches or 5 inches. The prepared artworks of 5 different saree layouts were subjected to evaluation. Out of the evaluated designs, Design 1 scored 15 marks over the scores of Design 2, Design 3, Design 4 and Design 5 which scored 14, 13 12 and 12 respectively. Thus Design 1 was taken for further development. Initial preparation of the layout was done by hand and with black outline and filling. But for further development, the selected design was edited using computer to facilitate card punching for the jacquard and thereafter for weaving. For the construction of the saree, the prevailing count of silk yam 2ply 20/22 was decided to use as warp, 4ply 100/120 silk Dupion for figuring and 200D gold zari for ornamentation in the borders and the pallav portion. The reed on the Loom was 96s with 3/dent facilitating the making of a saree with a 144 EPI. The loom had a total of 6400 ends forming a 48-inch-wide saree. Since 80s linen was used as base weft along with 4 ply 100/120 silk Dupion for extra weft figuring, the PPI was adjusted to be 60. The length of the saree was 5.5meters.

The colour of the saree was fixed to be of off-white due to two reasons - one being the lack of confidence of the weavers to dye linen flawlessly and other being the classic beauty of off-white color. The color for the extra weft was navy blue which was chosen from the weaver's shade card and it does not possess any particular significance to Adinkra motifs.

A final visit was arranged to Sathyamangalam 2 months after extending the design, raw material and technical assistance for completing the weaving of the product. The time consumption for weaving the sample saree was relatively more when compared to the regular production as the regular work could not be disturbed. The final product after completion was cut from the loom, checked for defects, folded and packed in their traditional way. The remaining yarns, the punched cards and the finished product were taken back for documentation.

However, the present study of developing value added silk linen sarees through the adaptation of African Adinkra motifs was an aesthetic innovation based on the old but with additions from other traditions. The product came out to be handcrafted, eco-friendly traditional attire that matches every mood, occasion and budget. It also serves as an eye opener for further studies in this area. The study also claims to have familiarized the lesser known traditions and preserved the same in many ways possible.

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