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Creation of Simulated *Phulkari* Patterns Using Computer Aided Designing

Mandeep Kaur

Student, Department of Apparel and Textile Science,
College of Home Science, Punjab Agricultural University, Ludhiana, Punjab, India

Dr. Sandeep Bains

Senior Scientist and Head, Department of Apparel and Textile Science,
College of Home Science, Punjab Agricultural University, Ludhiana, Punjab, India

Dr. Sumeet Kang Grewal

Assistant Professor, Department of Apparel and Textile Science,
College of Home Science, Punjab Agricultural University, Ludhiana, Punjab, India

Abstract:

Handicrafts display the creative, artistic skill possessed and inherited by the folks of a region practiced by hand or simple tools. These ethnic crafts bear strong relations to the soils where they evolved or were popularly practiced since the historic times. Phulkari, a traditional style of embroidery from Punjab faces transformation as being passed forward to the younger generations and fears to be overpowered by automation. Many of the traditional aspects of this needlework get misapplied due to misinterpretation or inability to convey the ideas. Simulation of Phulkari embroidery designs through Computer Aided Design (CAD) was created and illustrated on fashion articles to overcome the above mentioned barrier. This would help to blend the traditional craft with modernity, making it capable to compete in the modern technological world. It will create an everlasting trend for the modern consumer and keep the craft alive.

Keywords: Ethnic fashion, Phulkari, traditional, computer aided design, simulated

1. Introduction

India is steeped in tradition of needle crafts defined by their fine designs and high quality of workmanship. Each of these needle work employ distinguished styles of embroidery with roots linked to various regions of the country, which are rendered on various base fabrics. According to Joshi (1983), embroidery provides a mode of creative expression for the people of the soil. Their love and expression of nature, patience, and perseverance in making beautiful things are expressed through the art of embroidery.

Phulkari, from Punjab is one of the traditional, creative, colourful dimensions of these needle crafts. The inheritable craft in its traditional essence is a geometrical translation of motifs from nature and surroundings of the rural village life of the state, embroidered on a coarse khaddar fabric using untwisted silken floss, the pat. The needlework traditionally was the creation and ethnic fashion of Punjabi women carried out most often for shawls, executed from the wrong side of the fabric creating beautiful patterns on the front side. These creative women manipulated the length of the darn stitch which is primarily used in this embroidery, to produce beautiful colourfull patterns. The smaller stitch would indicate finer embroidery. The darn stitch was at times accompanied by running stitch, double running stitch, satin stitch, stem stitch, cross stitch, chain stitch and herring bone stitch for markings and borders, while button-hole stitch was used for edging and finishing. When the entire surface of the base khaddar was covered with embroidery then it took the form of a Bagh.

This artefact was used as the sacred canopy over the Guru Granth Sahib, the holy book of the Sikhs treated as their living Guru (their religious teacher). The traditional craft has also been worn by the women of the state on the festive and other auspicious occasions. The glory and originality of the traditional craft are unfortunately at stake. This remains to be an outcome of the automated replications which poses to be a big challenge for the survival of the folk craft. This, along with the changing needs of the consumer, demand alteration in the techniques and materials used for this embroidery craft. The traditional embroidery which was done by counting the threads of the base fabric now involves tracing of the traditional patterns on the fabric using wooden blocks. The untwisted silken floss, the pat thread is now synthetic; either of viscose or polyester and the base fabric is no longer limited to khaddar alone. Changes brought in the techniques and materials of the traditional embroidery by the craft workers as a means to compete, however aids for the preservation and survival of the craft though not in its original form. But the mass produced replicas of Phulkari on computerized machines pose to be a serious threat to its existence.

In the modern world, design ideas wrap the traditional crafts into themselves, generating innovative designer products that are soon followed by the masses. These tools have been well employed by many of the Indian and international designers thus offering ethnicity in modern packaging bringing the traditional handicrafts to the forefront. A couple of the Indian designers like Ritu Kumar, Manish Malhotra, and Surabhi Chawla applied their creativity on the traditional craft of Phulkari. Such efforts helped to revive the craft and broaden its acceptance in the era of contemporary fashions, but the conventional methods of designing fail to do justice with the traditional craft in the long run as the needlework involves lot of time and effort. Thus, there is a need to adopt an approach which overcomes these barriers.

The traditional craft can be suitably blended with the Computer Aided Designing (CAD) to enhance the pace of production in this fast changing world of fashion. The CAD softwares can be used for storing and reproducing all kinds of traditional Phulkari motifs that are fading on its way to transmission to the future generations. The softwares can further be used for simulation of the traditional embroidery effects and visualisation of the embroidery patterns prior to the actual production of the product. The design ideas can be easily disseminated through computer generated sketches of Phulkari designs facilitating the production of improved innovative products developed as per the needs of the present day consumers. Moreover, in today's globalized world, where the Phulkari finds great acceptance from the foreign consumers as well, the computerized simulations could help in providing access to a world wide market through online retail. This would be the best way to reach out to the consumers located at distant places as well as aid in faster designing, approval, and development of the customized product as per their tastes and preferences. In case of craft productions, the creation of embroidery patterns, and their placement on the designed product would reduce the time, labour, material, or the cost involved in the development of prototypes for procuring orders from vendors.

2. Traditional Motifs

As Phulkari emerges from the rural Punjab where still the traditional craft is practiced, the traditional motifs were influenced by the village life, nature and the surroundings. These motifs would comprise of geometric shapes like vertical, horizontal or zig zag lines, triangles, squares or involve complicated patterns like lozenges, pentagons and wavy lines; nature like flowers, leaves, birds, animals, vegetables, rivers, sun, moon, fields, etc. The motifs of domestic articles like velan, handfans; village scenes from day-to-day life were depicted like a woman churning the buttermilk or spinning charkha, a man bouting, etc., human figures, houses, trains were also embroidered. The traditional ornaments like hansali, tika, kada, singhar-patti, and guluband were also embroidered as motifs. The motifs were mostly transformed into geometric form and embroidered in golden yellow, orange, crimson, red, green, dark brown, violet, blue, and white coloured pat thread.

3. Simulation of Phulkari Patterns

Patterns of Phulkari were designed and made to simulate the Phulkari embroidery using Coreldraw XIII, Adobe Photoshop and Corel Photo Paint softwares.

1. The motifs were drawn in Coreldraw on a new template using bezier tool from the toolbox at the left side of the coreldraw page Fig.1 (a).
2. The shape tool from the toolbox was used to make changes in the developed motif.
3. For motifs with curves freehand tool from the tool box was used instead of bezier tool
4. The motif was then filled with the required colours Fig 1(b).

The different parts of the motif were filled with effects similar to that of Phulkari stitch Fig 1(c). The patterns to be filled with darn or satin stitch were dragged to a new page in Adobe Photoshop where:

1. The pattern filled with colour was selected using magic wand tool.
2. At the toolbar of the top, filter tool was selected in which from the texturizer, the texture of canvas was applied with scaling ranging from 90% to 100%, relief from 2 to 4 and light direction to left (for vertical stitch effect) and right (for horizontal stitch effect).
3. This filled pattern was then dragged to Coreldraw using the move tool from the toolbar at the left side in Adobe Photoshop.
4. A white background brought with the pattern except square or rectangle shape. The white background was removed by the shape tool.

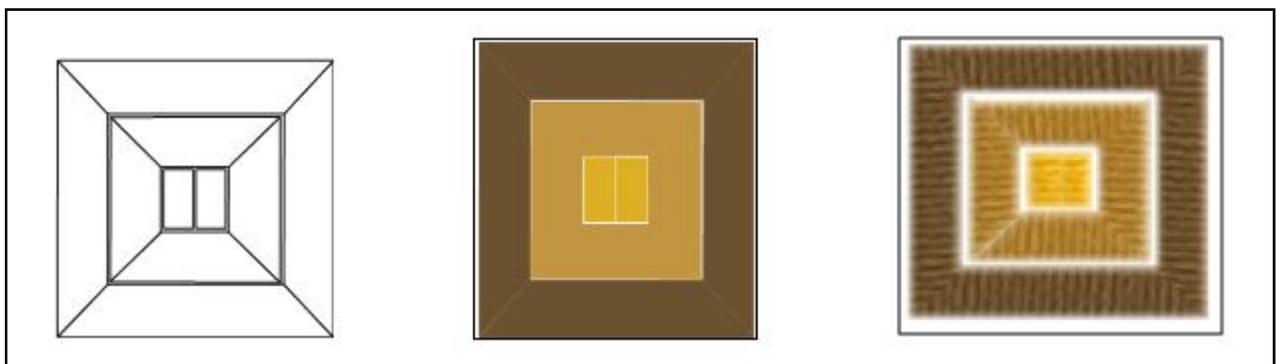


Figure 1(a). The motif

Figure 1(b). The motif filled with colours

Figure 1(c). The motif with Phulkari stitch effect

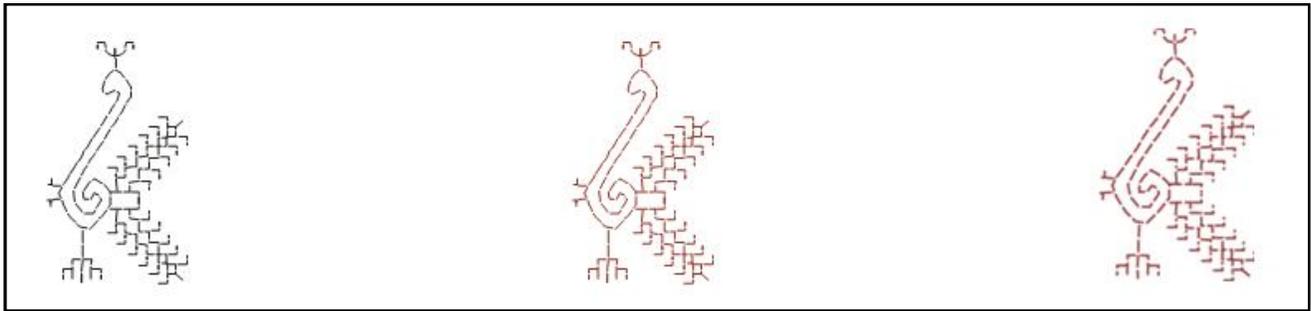


Figure 2(a). The motif Figure 2(b). The motif filled with colours Figure 2(c). The motif with Phulkari stitch effect



Figure 3: Simulated Phulkari patterns



Figure 4: Placement of Phulkari patterns on fashion articles – (i) Jacket, (ii) Stole, (iii) Handbag, (iv) Footwear, (v) Potli bag, (vi) Belt, (vii) Headband and (viii) Bracelet

After this the pattern was copied to Corel Photo Paint to give feathery and raised effect.

1. From the menu bar at the top the object - feather effect was applied with width 3 and edges linear.
2. Then again from the menu bar the 3D effect - emboss was given with depth 3, level 9, direction 34 and emboss colour of the original.
3. The different parts of the motif were assembled in the Coreldraw.
4. The patterns, where stitch effects of running stitch, herringbone stitch, stem stitch, cross stitch, back stitch, double running stitch or a single stitch were required in the design, the motifs or stitches after being drawn in Coreldraw were given effects only in the Corel Photo Paint.
5. Then motifs with *Phulkari* stitch effect were repeated and assembled into a design which was placed on a suitable background as shown in figure 1 to 3.

4. Placement of Simulated *Phulkari* Designs on Fashion Articles

Fashion articles like jacket, handbag, stole, potli bag, belt, footwear, and headband were designed and illustrated on Coreldraw and Corel Photo Paint. The articles were drawn and filled with the required colours on Coreldraw. The shading effects were given using an effect tool from the toolbox in the CorelPhoto Paint. With the selection of the effect tool, property bar for the same appears at the top and settings can be made as per the effects needed e.g. shade or lustre. In the menu bar, the emboss effect and textures from the effects were applied as per the requirement. After completing the designs of the fashion articles, the simulated *Phulkari* patterns were placed on the specific article for which the patterns were designed (Fig. 4).

The designed fashion articles were then selected with the most suitable *Phulkari* design placements. These designed fashion articles were later used in the preparation of the fashion articles.

5. Discussion and Conclusion

Hand embroidery, one of the oldest craft of decorating the fabric with needlework have been acclaimed since its existence in the world. The traditional craft of *Phulkari* follows the notion enjoying acclaim in the past and the present world. This traditional craft faces stiff competition from the forces of the modern hi-tech world. In the modern world of fashion, people demand trendy fashion goods that suit their taste. The important area that needs focus tends to be the design aspect of the traditional craft. With the availability of the designer products online and consumer desire to visualize the designed product prior to production, the designers, and the manufacturers need to adopt CAD for illustration and presentation of the designed patterns and articles to the consumers. CAD enhances the speed of illustration as against the conventional method of illustration through hand and the softwares used in CAD helps to render a realistic touch to the developed designs. The design ideas expressed on computers, would be useful for online interaction with the consumers and for better interpretation of the designs as well as stitches by the craft workers. The implementation of CAD may also help in storing and preserving the traditional *Phulkari* motifs facing extinction. Hence, the simulation of *Phulkari* embroidery using various softwares would help to convey the innovative designs to the consumers without actual effort to embroider. The modern day consumer shows good response to the fusion of traditional handicrafts with fashion items. The innovative patterns of *Phulkari* using traditional motifs were simulated and illustrated in various fashion articles. This would help the designers and entrepreneurs to reduce the time, labour and material cost involved in preparing prototypes for approval. This would consequently also help to reduce the cost of these handcrafted *Phulkari* fashion items.

6. References

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