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Study on development of criteria's for suitability of fabrics for Chamba embroidery

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ABSTRACT

In embroidery, selection of right kind of fabric was imperative in achieving ultimate effect. Chamba embroidery was one of the finest embroideries of India. However, for sustaining the craft in local environment, it is crucial to study the traditional resources, their significance along with contemporary substitutes available in recent times. In the field survey conducted it was observed, varied fabrics were being used for Chamba embroidery which were not suitable in terms of fiber type, thickness and color. It was one of the prime factors contributing towards decline of quality of embroidered products. The present research was undertaken to develop criteria's for selection of fabric appropriate for double sided embroidered coverlets, articles with folk embroidery and single sided embroidery. Varied range of fabrics was collected and documented in form of fabric catalogue. The relationship between thread count of different fabric types and its effect on embroidery was studied. These embroidered samples were closely examined to see if the needle passed through the fabric easily, double sided satin stitch appeared same on both sides of fabric and whether the stitches laid flat on the fabric surface or not. It was also found that higher thread count resulted in finer fabric and produced better quality of workmanship. Fabrics with lesser thread count were found suitable for simpler and less detailed work such as floral, animal figures or for utilitarian purposes with single sided embroidery.

Key Words : Chamba embroidery, Folk embroidery, Fabric catalogue, Thread count, Satin stitch

INTRODUCTION

Embroidery was the embellishment of fabric with thread, accessories and other decorative materials such as horns, shells, beetle wings, metals and mirrors which were held on fabric using diverse stitches. In traditional embroideries selection of base fabric was considerately done which was suitable with thread and stitches, to create an overall mesmerizing effect. Similar observations were made in exquisite Chamba *rumal*s; the cloth used was a

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muslin fabric. According to an author, it was found most suitable for double satin stitch embroidery as the work was double sided, it needed the support of the ground fabric and at the same time the fabric was fine enough so that needle could pass through it easily (Khurshid, 1988). The muslin like cloth was preferred without much finish. The muslin cloth appeared textured, which served as a background. Since cloth's texture was not conspicuous, it heighted the effect of the colorful embroideries. The study of ancient pieces in museums revealed that the fabric for *rumals* was not dyed. Since a large white background was not compatible with the colors of the embroidery, the cloth selected for the purpose was invariably unbleached (Ohri, 2001).

Another different variety of cloth used as the base for *rumals* and articles was coarse *khaddar.* It was hand-woven with hand-spun yarn. It became the most popular fabric because of its easy availability, low cost, and durability (Sharma, 2005). In later specimens of late 19th century, machine made fine cotton cloth was used for embroidery. With the onset of the 20th century, the captivating craft culture of Chamba witnessed a slow and gradual decline. The fall in standards started around 1920 with the decline of court patronage and embroidery was not executed in its traditional form (Ohri, 2001). Numerous changes were seen in the embroidery work of Chamba by the middle of the 20th century. The fabric used was mill made terycot or bleached cotton fabric. This fabric with its machine finished sheen did not add value to the embroidered piece, unlike the hand woven fabric with pleasing dimensions. The thread required was untwisted silk floss. Due to its unavailability the embroiderers were using synthetic twisted yarn after unwinding. When products made from them were washed in cold water the same effect was achieved as in case of untwisted yarns. However, colors of synthetic yarn used were not in line with those used in traditional times also silk yarns were no longer used. Therefore, research was undertaken with following objectives:

– To prepare fabric catalogue to broaden the choice for base cloth used for embroidery and to explore other substitutes similar to the traditional fabrics.

– To develop criteria's for selection of fabric suitable for embroidery for coverlets and articles.

– To create awareness amongst artisans regarding the traditional fabrics and selecting the right kind of fabric for embroidery.

METHODOLOGY

A wide range of fabrics were collected, assessed for suitability of embroidery and fabric catalogue was formed.

Survey and collection of fabrics :

The fabrics were initially selected on the basis of visual appearance with respect to texture, thickness, translucency and color. In order to collect appropriate contemporary substitutes for the traditional base cloth, a market survey was conducted in various shops located in Chamba, selected markets and textile exhibitions held in Delhi using purposive sampling technique.

Varied fabrics were collected to suit various end uses. In cotton category, 53 fabrics were collected including unbleached and colored varieties. Other fabrics were also collected

such as 15 silk fabrics and 8 *chanderi* fabrics. Also samples of linen, bamboo fabric basket weave cotton fabric and *kota* fabric were collected to explore their suitability for embroidery.

Assessment of fabrics :

The right kind of fabric was essential in achieving the ultimate finish of the product and for its end use. The assessment of collected fabrics was carried on the basis of thread count and suitability for embroidery.

Thread count :

The thread count of fabrics was determined using pick glass method by counting number of threads per square inch in warp and weft direction. Fabrics were arranged in ascending order of thread count. Different fabrics such as cotton, silk and *chanderi* were classified according to the thread count as shown in Table 1.

Table 1 : Classification of fabrics on basis of thread count

Fabric	Thread count
Cotton	70-100
	101- 120
	121- 160
	161 and above
Silk	120- 160
	161 and above
Chanderi	150 and above

Suitability for embroidery :

The fabrics were assessed for their suitability for Chamba embroidery in a four day workshop. Small motifs were selected and drawn by the artist on the fabrics collected. These fabrics were given to the embroiderers for embroidery using untwisted synthetic yarns. The embroiderers worked in their own color preferences. The following criteria's were kept in mind to study the effect of embroidery viz:

- Needle should pass through the fabric easily without any tension.
- Double satin stitch should appear same on both sides of fabric.
- Embroidery should be flat on the fabric without giving a raised effect.
- Detailing of the motif should be clear and prominent.

Creating awareness for traditional raw material :

Awareness was created amongst craftspeople regarding raw materials used in traditional times for base cloth and yarns. Training was divided in two steps:

Visual appearance of fabrics :

Images of museum pieces were shown and emphasis was given on the base cloth and yarns used traditionally for embroidery. The color of the base cloth was shown by close examination of selected photographs. Collection of appropriate contemporary substitutes

similar to traditional fabrics was shown to the artisans using fabric catalogue.

Effect of embroidery on different fabrics :

To understand the effect of embroidery on different fabrics, three samples of *muslin*, *khaddar* and chanderi were given to each embroiderer. In the three samples, same motif was worked in similar colors by the artisans using untwisted synthetic yarns.

RESULTS AND DISCUSSION

The fabrics collected were different types of cotton, silk and chanderi. They were classified on the basis of thread count and assessed for their suitability for embroidery. The significant findings were as follows:

Cotton fabrics :

On the basis of thread counts cotton fabrics were divided in four groups. These were 70-100, 101-120, 121- 160 and 161 and above. It was observed that thread count above 120 have finer fabrics resulting in neater embroidery. In fabrics with thread count above 160, finer workmanship and minute detailing was easier to achieve.

Thread count 70-100 :

The fabric in this range had coarser yarns. While executing embroidery, handling and working on fabric was difficult. It was observed that base fabric was visible between embroidery stitches and embroidery also had a raised effect (Fig. 1). Hence, fabrics with thread count 70-100 were not found suitable for the embroidery. Moreover, it was seen that while embroidering coarser fabrics, extra pressure applied for inserting the needle hurting the embroiderer's finger.

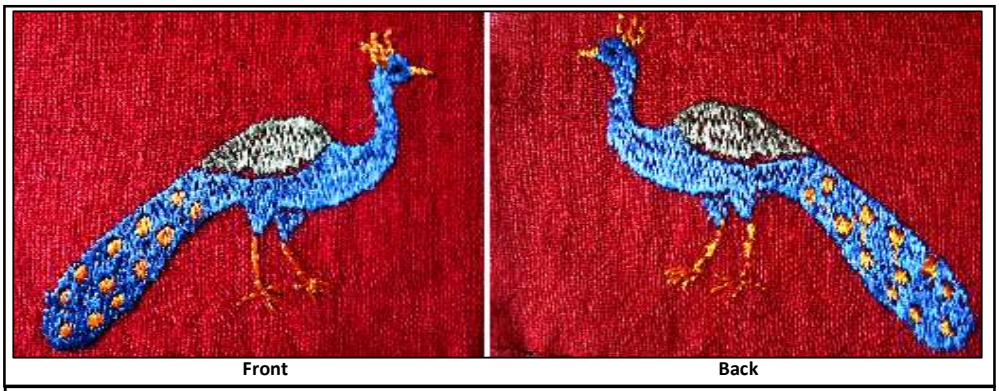

Fig. 1 : Base cloth visible between embroidery stitches

Thread count 101-120 :

Embroiderers found handling and embroidery on these fabrics difficult. It was observed that embroidery was satisfactory on front side of the fabric but on back side of the fabric, base fabric was visible between the embroidery stitches (Fig. 2). Detailing of figures, sharp

pointed features of human face, fingers etc. was difficult to achieve in the fabrics of this range. Hence, these fabrics were found suitable for only single sided embroidery and for simpler as well as less detailed work such as floral, animal figures etc. This category mostly included *khaddar* fabrics which were also used traditionally for utilitarian purposes with single sided embroidery as well as for folk style.

Fig. 2 : Base cloth visible between embroidery stitches on the back side

Thread count 121- 160 :

Embroiderers, found easier to embroider on fabrics with higher count. The increased thread count, gave same effect of embroidery on both sides of fabric. The base fabric was not visible between the embroidery stitches on either side of the fabric (Fig. 3). Fabrics in this range were found suitable for medium size coverlets and *rumal*s with less detailed features and articles.

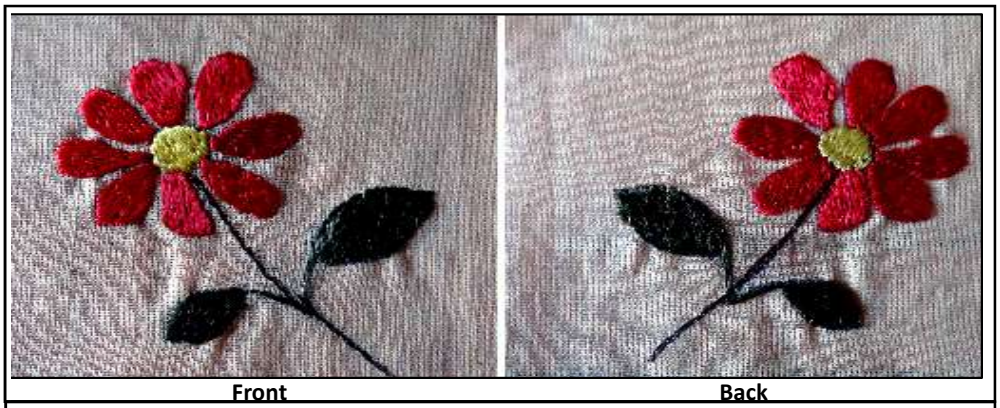

Fig. 3 : Embroidery similar on both sides of the fabric and raised appearance

Thread count 161 and above :

This category comprised of 13 samples and it was seen that working and handling of fabric was easier. Effect of embroidery was same on both sides of fabric of the base fabric was not visible between embroidery stitches on either side of the fabric. This range of

fabrics was found most suitable for embroidery in terms of workmanship of fine quality designs and minute detailing of figures (Fig. 4). The embroidery fell flat on the surface due to fine yarns. Moreover, final effect of embroidery was most appealing due to transparency of base fabric. Fabrics in this range comprised of muslin fabrics and were found suitable for *rumal*s with elaborate themes. Therefore, it can be concluded that for miniature style of embroidery, fine, smooth finish muslin fabric was used traditionally.

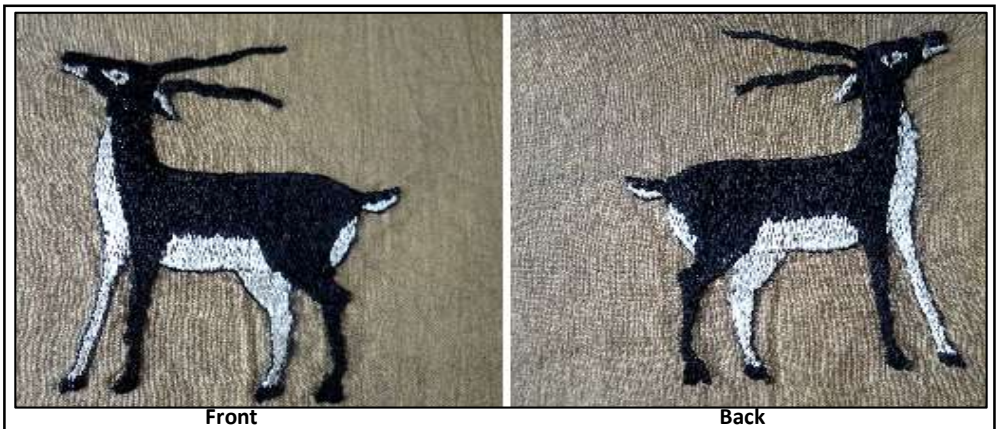

Fig. 4 : Fine embroidery lying flat on the surface of the fabric

Silk fabrics :

The silk fabrics included categories 120- 160 and 161 and above. Most of the artisans felt that working and handling of silk fabric was more difficult as compared to cotton fabrics.

Thread count 120- 160 :

Yarns of the base fabric were displaced due to the pull of embroidery yarns and irregular symmetry of stitches was observed (Fig. 5). Fabrics in this range of thread count were not found suitable for the embroidery**.**

Fig. 5 : Irregular symmetry of stitches

Thread count 161 and above :

This category comprised of 6 fabrics and embroiderers felt that handling and working on these fabrics required more expertise as it would otherwise lead to puckering. It was observed that effect of embroidery was same on both sides of fabrics. Fabrics in this range were suitable for fine quality workmanship and detailing work (Fig. 6). Due to rich surface appeal of base fabric the effect of embroidery was appealing. These fabrics were found suitable for *rumal*s with elaborate themes and other product categories.

Front Back

Fig. 6 : Fine quality workmanship with slight puckering

Chanderi fabrics :

The thread count of these fabrics was ranged between 150- 220. While executing embroidery artisans found working and handling of these fabrics easier. The effect of embroidery was same on both sides of fabrics. The fabrics were suitable for fine quality workmanship and detailing (Fig. 7). However, they were not suitable for *rumal*s with elaborate themes as slippage of yarns may occur in case of heavy embroidery.

Front Back

Fig. 7 : Embroidery similar on both sides of the chanderi fabric

Other fabrics :

Samples of other fabrics were also collected such as cotton fabric in basket weave, linen, bamboo fabric etc. However, the effect of embroidery was not appealing in basket weave and bamboo fabric due to their inappropriate surface texture. In linen, the thread count of sample was less than 120. The effect of embroidery was not same on both the sides as gaps were visible on the back side of the fabric (Fig. 8). This fabric was suitable for single sided embroidery and less detailed work.

Front Back

Fig. 8 : In linen base cloth visible between embroidery stitches on the back side

Creating awareness for traditional raw material :

Awareness regarding the base cloth used traditionally and its significance was explained in steps with respect to identification of fabrics on basis of visual appearance and effect of embroidery on different fabrics. Artisans were given different fabrics to understand the effect of embroidery.

Visual appearance of fabrics :

The photographs of old museum pieces showing the fabrics used traditionally were identified and they were shown to the artisans. The texture, thickness, color and translucency of the background fabric was discussed. Two fabric types were discerned such as fine muslin and other one coarser like *khaddar*. The appropriate contemporary substitutes similar to traditional fabrics were shown to the artisans by using fabric catalogue. Unbleached muslin (*kora khadi)*, *khaddar*, tussar silk and tissue chanderi were some of the fabrics which were found suitable for embroidery. These fabrics in different varieties and colors were shown from fabric catalogue.

Effect of embroidery on different fabrics :

In order to make artisans understand the effect of embroidery on different fabrics, three different types of fabrics such as muslin, tissue chanderi and *khaddar* were selected.

Motif, color and the type of stitch used were kept same for different fabrics used. The motif was taken from old museum photograph and embroiderers worked in long and short stitch in same colors as that in original.

In case of fine fabrics like muslin fabric (Fig. 9) and tissue chanderi (Fig. 10), the effect of embroidery was same on both the sides. Though, the visual appeal of embroidery was higher in case of tissue chanderi due to its fabric appearance.

Front Back

Fig. 9 : Motif showing embroidery similar on both sides of muslin fabric

Front Back

Fig. 10 : Motif showing embroidery similar on both sides of chanderi fabric

Whereas, in *khaddar*, embroidery was not same on both the sides as gaps were visible between the embroidery stitches on the back of fabric (Fig. 11). Detailing was also much superior in case of fine fabrics in comparison to the coarser fabric.

Summary and conclusion :

The analysis of above mentioned fabrics revealed that hand spun, hand woven, plain weave fabrics with smooth finish and fine texture were found best suitable for the embroidery. Transparent fabrics also accentuated the effect of the embroidery as compared to opaque

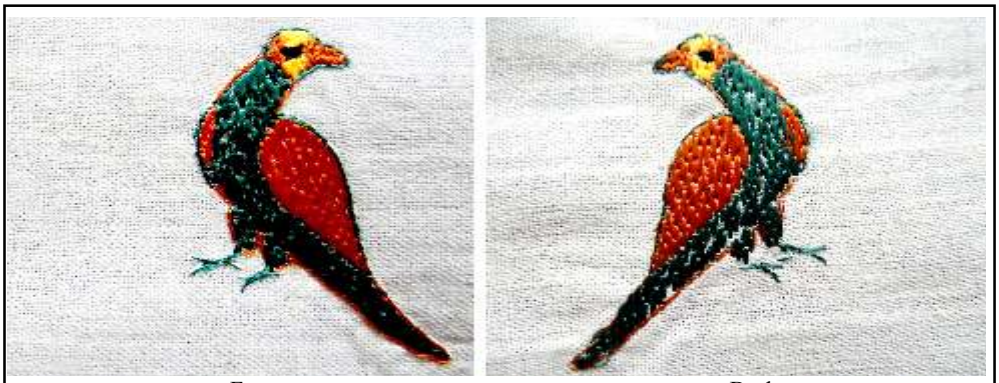

Fig. 11 : Motif showing base cloth visible between embroidery stitches on back side of *khaddar*

finish fabrics. The compactly woven and loosely woven fabrics should be avoided. According to the opinion of embroiderers, the effect of detailing in embroidery was easier to achieve in finer fabrics than in coarser fabric.

The analysis of various types of cotton, silk and chanderi fabrics revealed that higher the thread count, finer the fabric and better quality of workmanship could be achieved. The above results were supported by examination of old museum pieces, as it was seen that the effect of embroidery was fine in muslin fabric, as the execution of stitches was smaller in size and detailed (Fig. 12). In khaddar fabric, stitch size was bigger and less detailed work was seen (Fig. 13). Khaddar fabrics were used for simpler and less detailed work such as floral, animal figures or for utilitarian purposes with single sided embroidery.

Fig. 12 : Embroidery on fine muslin, Courtesy: National Museum, New Delhi

Fig. 13 : Embroidery on Coarse *khaddar,* Courtesy: Bhuri Singh Museum, Chamba

Silk fabrics with thread count 160 and above were suitable for fine quality workmanship and miniature style embroidery. *Chanderi* fabrics were found suitable for less elaborate themes as slippage of yarns might occur in case of heavy embroidery. For capacity building of the artisans interventions through workshops proved invaluable. Fabric catalogue exposed artisans to other substitutes similar to traditional fabrics and broadened their choice for base cloth.

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