

Research on the Technological Innovation of Miao Pile Embroidery Against the Modern Aesthetic Demand

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Abstract—As one of the most representative embroidery methods in Miao embroidery, pile embroidery has been rated as a national intangible cultural heritage as early as 2006. Miao's pile embroidery is usually summarized in the category of appliqué embroidery. This type of embroidery is popular in the area along the Qingshui River in southeastern Guizhou. The traditional pile embroidery has the characteristics of high color saturation, high contrast, high stacking unit density, and multi-hand combination performance. Based on the vision of making the piles embroidery return to the daily life of modern people, the author starts from the aesthetic taste of modern people, the raw material conditions of modern industry, and the modern and diversified craftsmanship to carry out corresponding experiments and arguments towards its technical innovation.

Keywords—pile embroidery; decorative craft; aesthetic demand; modeling

I. INTRODUCTION

Pile embroidery, also known as heap embroidery and stack embroidery, is one of distinctive embroidery methods among Miao embroidery. It was listed as a national intangible cultural heritage as early as 2006. The pile embroidering process is to fold the small pieces of the starched silk into a plurality of triangles, and stack the desired patterns by overlapping methods. Due to its special modeling method, the pile embroidery has a sense of three-dimensional and extension different from ordinary embroidery. This makes it widely used on the Miao "dressing". The pile embroidering can not only emphasize the grandness of the festival, but also reflects the aesthetic tendency of the Miao people to pursue strong ornamentation in general. In Miao language, the "pile" has a meaning of beautiful, so the pile embroidery means beautiful embroidery. [5] Miao's pile embroidery is mainly popular in Kaili, Wengxiang, Qinggang, Diwu, Kaitang, Geyi, Shidong and other areas along the Qingshui River in southeast Guizhou. It is a typical Qingshuijiang embroidery style. The theme of the Miao pile embroidered patterns can be roughly divided into animal patterns and geometric patterns. [4] The animal pattern is dominated by birds and fish. The bird has always been a totem worshipped by the Miao people. This is also a

reflection of the sky worship. In addition, the bird is considered to be a symbol of male productivity, and it is used in the pile embroidery to convey wishes to their ancestors. While fish is a symbol of women, it is pinned on the desire to seek pregnancy and more children. [7] The geometric patterns in the pile embroidery are more diverse, and the octagonal pattern and the "卐" pattern are the most commonly seen. The embroidered patterns of the two themes, although different in style and arrangement, both contain the Miao people's understanding of a better life and their hope for happiness and auspiciousness. In recent years, with the widening of cultural communication channels and the speed of communication, the Miao pile embroidery skills have been recognized and loved by more people. The research on pile embroidery is also constantly improving. The focus of the research of the pioneering scholars is on the exploration of the artistic value of the Miao pile embroidery, the analysis of the cultural connotation and the analysis of the craft techniques. However, the application research of the pile embroidery technique in modern design is often limited to a specific field. Based on this situation, the research attempts to develop experimental research on the traditional pile embroidery technique, which is driven by modern aesthetic needs, from the perspective of development, to promote the inheritance and revival of traditional techniques and realize the truly constant emergence and survival of the magnificent and colorful Miao embroidery technique in modern design. Based on the above purposes, the author analyzes and explores the features and the innovation of the traditional Miao pile embroidery based on the demands of modern aesthetic.

II. THE CHARACTERISTICS OF TRADITIONAL MIAO PILE EMBROIDERY

A. High Color Saturation and Contrast

The Miao pile embroidery presents different color systems according to the region, and the same color matching law exists in different color systems. [3] In terms of the unit color relationship, pile embroidery can be roughly divided into two types: similar color matching and contrast color matching. Whether it is similar color or contrast color,

the colors appearing in the Miao pile embroidery are thick and colorful, which is also related to the use of the pile embroidery for the festive costumes and as a part of the clothing decoration features in addition to the traditional Miao people advocating the aesthetic tendency of the high saturation color matching and the strong decorative effect. In terms of the production materials, the pile embroidery fabrics are mostly made of silk satin fabric, and the silk satin fabric is white when first bought. It is necessary to dye the fabric with chemical dyes into desired various colors. [2] Chemical dyes have the characteristics of bright coloring effect, so it may also be one of the reasons for the colorful color of the Miao pile embroidery. Whether it is subjective or objective, the color characteristics of high saturation and contrast of the pile embroidery are very clear and representative.

B. The Stacking Unit Is Small and the Arrangement Density Is High

The pile embroidered pattern should be composed of hundreds of triangles. The pattern is neat, compact and

complicated, presenting an ever-changing pattern effect. In the pre-study, Gao Yan conducted a survey on the stacking method of the Miao pile embroidery, roughly dividing it into 6 types: tile type, double-layer and two-color style, serrated style, fish-scale style, triangle and four-square combination style, sunflower seed style. Although the combined patterns are ever-changing and themes are different, no matter what kind of embroidery patterns are used, they are dense, layered, and have a large number of unit blocks. The pile embroidered pieces can even reach a square centimeter block consisting of doubles of small triangles. It is the large number and dense space that can reflect the feeling of "heap". Because of its high density, small unit and full use of the superposition and pressure release of the fabric, it is able to present a sense of richness similar to mosaic mosaics. (See "Fig. 1")



Fig. 1. The case of the embroidery with the pattern of "卍" in the kaili area.

C. Miao Pile Embroidery Is Often Combined with Other Embroidery Methods

The pile embroidery is often decorated with seed embroidery, entangled embroidery and two-needle embroidery. In the process of visiting and investigation, the author also found that the combination of pile embroidery and other embroidery is often limited by the way of embroidering method, style and other factors. As shown in "Fig. 2", the pile embroidered block surface and other embroidered blocks are dominant. So is reinforcing the border of the pattern by pile embroidery. Although this method combines two or more embroidery methods, in fact, the splitting of the unit elements of the pile embroidery itself is not prominent, resulting in a combination of the two or more embroidering methods together and the depth of the combination not visible from the surface. And the embroidering method combined with the pile embroidery is

more about the embroidery method of the wire as the main material, in other words, the combination of the embroidery and the pile embroidery which are completed by the wire in the traditional seedling embroidery is visible, and the special embroidery with relatively rare material (for example, tin embroidery) is relatively rare because it is difficult to achieve with the combination of processing.



A. The pile embroidery is combined with the double needle lock embroidery in the form of decorative edges.

B. The pile embroidered with decorative side and square pattern combined with rectangular seed embroidery.

Fig. 2. The case of combination of pile embroidery and other embroidery methods.

III. INNOVATION OF PILE EMBROIDERY TECHNIQUES AGAINST THE TREND OF MODERN AESTHETICS

Through the combing and induction of the characteristics of traditional pile embroidery, the author believes that it is an inevitable trend to rationalize the design and transformation of the pile embroidery process in the daily life of modern people. This paper proposed technological innovation directions as follows based on the analysis of traditional pile embroidery technique and aesthetic demand of modern people.

A. Process Innovation Based on Simplified Design Trends

Traditional pile embroidering is more suitable for dressing, so the focus is on highlighting its rich colors and complex levels. In fact, this is not consistent with the simplicity and convenience advocated by modern urban life where efficiency and practicality are advocated. The shape of the pile embroidery should be appropriately weakened based on simplifying demand and practical need. The weakening of decorative details is actually a common means of modern design of national elements. The reduction of brightness and chroma of color; the reduction of decorative elements; and the flat use of decorative elements, etc., is used to realize the complex stacking effect of the pile embroidery. The triangles of its modeling units can be extracted and dispersed. It can be used in single or in groups. (See "Fig. 3") Such usage can both remain the core elements of the pile embroidery and liberate the pile embroidery from the dense composition of visual embroidery, making it possible to express the artistic conception and beauty of the empty space, showing different effects from the traditional techniques, and conforming to the styles and needs of modern life. This weakening not only stays in the form but also reflects the weakening of connotation. The originally densely embroidered pattern may be a symbol of auspicious "卍" and the scattered embroidered elements may not have any special meaning, but only strengthen the embroidered elements. This also breaks

through the traditional principle that "the map must be intentional and the meaning must be auspicious". The selection of materials does not have to follow the natural worship of "the same as the beast, the family and all things". It is only to present the designer's design intent, or to play a decorative role, or to present a texture effect. [1] Is this uncomplicated and accurate elemental identification more in line with the aesthetic needs of the modern public? This weakened processing method reduces the number of overlapping products and processing steps of the pile embroidery products, and can reduce cost indirectly, which provides greater possibilities for mass production, thereby promoting the application and promotion of traditional pile embroidery process in modern life.

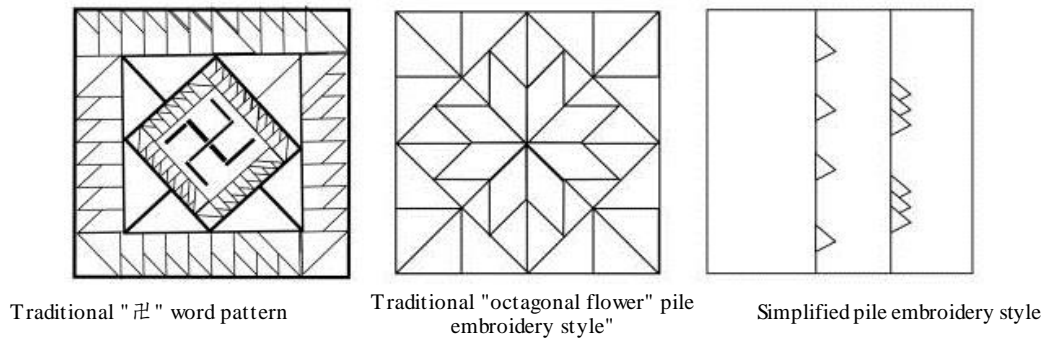


Fig. 3. Comparison of traditional pile embroidered styles and simplified styles.

B. Innovation Based on Changes in Materials and Techniques

The traditional Miao pile embroidery is mainly popular along the Qingshui River. It is often necessary for embroiders to fold the embroidery first and then shape it in order to avoid loosening of the woven fabric during the process of production given the relatively remote area of Guizhou, the inadequate materials, and the limited materials used for the pile embroidery due to objective conditions, resulting in a cumbersome process of stacking. While the modern clothing industry is mature, the breadth of choice of surface and auxiliary materials has been greatly improved compared with that of the past, so many new materials can actually give new vitality and charm to traditional handicrafts. It is a good choice to change the material of the pile embroidery to mesh belt. The mesh belt is long in shape and the upper and lower edges are not easy to be scattered. Therefore, the folding step of the unit triangle in the pile embroidering process is reduced. In this way, the thickness of the unit triangle is also correspondingly thinned, and the number of stacking of the pile embroidery can be increased, so that the number and color of the overlap are increased, thereby achieving a richer visual effect. (See "Fig. 4") In addition, because the pattern of the mesh belt itself can be folded to exhibit the pattern deformation effect, which undoubtedly increases the visual change and taste of the pile embroidering. This is a change of materials. In addition to this, the unit element folding method of the pile embroidery can also be changed and innovated. Whether the traditional pile embroidery is to fold the unit triangles in a plane either for practical consideration or decorative effect, and the unit triangles are all flattened. However, modern people use textiles more in daily life, and the demand for aesthetic effects is more diverse than that of the ancients. Therefore, the folding method of the pile embroidery can also be adjusted according to the nature and aesthetic requirements of the decorated product. For example, the handbag design in part 2 of "Fig. 6" does not fix the unit element of the pile in a flat form on the surface of the product, but only seam the two ends of the unit element to retain the sense of space of the tip of the triangle, and the multi-unit continuous reflects the three-dimensional sense. This attempt breaks through the

original single flat surface overlapping fixing method, which makes the handbag full of design and more impressed in visual. This innovative process is applied to accessories, which is obviously more suitable than the use of clothing, because from a certain point of view, the decoration of the jewelry is much higher than the clothes.

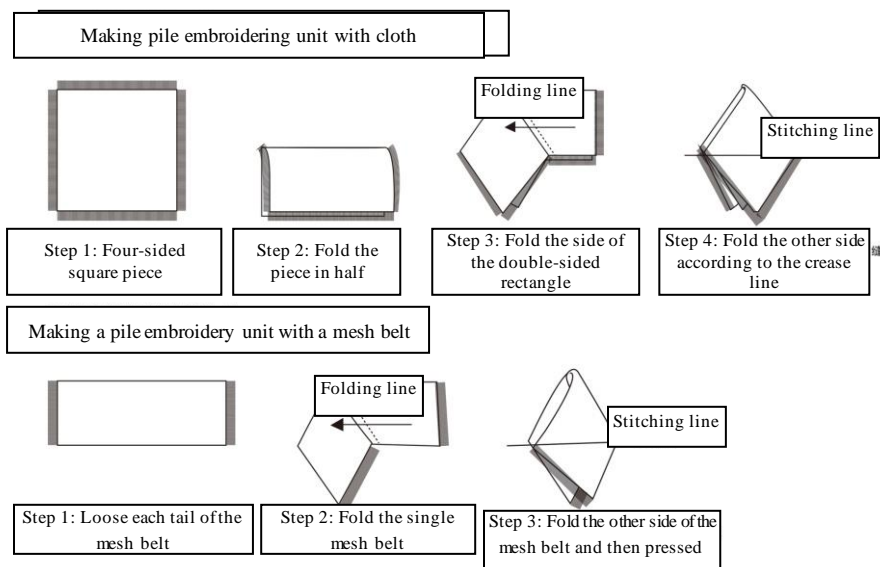


Fig. 4. Analysis of the fabrication of different material stacking units.

C. Innovation Based on Additional Use of Process Trends

The characteristics of the traditional Miao pile embroidery in the previous article mentioned that the traditional embroidery process of Miao costumes is often combined with other embroidery methods. However, its combination with traditional is not high, and often the pile embroidery is combined with other embroidery as a block or edge decoration technique. The additional use of modern pile embroidery and other processes is combined on the basis of the unit elements of the pile embroidery. Compared with the traditional combined pile embroidering, this kind of practice is deconstructed, combined and deformed from the unit individual of the pile embroidery. The effect obtained is higher than that of the traditional combination method, and the visual feeling is more natural and the level changes are more abundant. The effect of the two sets of experimental cases presented in "Fig. 5" is the combination of the triangular elements of the pile embroidery with the edging

process in the traditional cheongsam process and the combination of beading process of the western dress and embroidery elements with the traditional quilting process. The first group uses the edging and red diamond beads to make the pile embroidery elements more delicate and colorful, while the second group can be flexibly set and organically combined with the embroidered elements, so different visual rhythms and effects can be presented. In addition to the process of edging, beading, quilting, etc., the pile embroidery can also be combined with the patchwork and the burning process to make it more modern and fashionable. In addition, the multi-process additional presentation method fully satisfies the aesthetic needs of modern ornamentation, and can be more applied to indoor soft decoration, product packaging, and fashion jewelry design than clothing (see "Fig. 6"). Different attributes of the process will produce different decorative effects, which is yet to be further studied and practiced by more designers and scholars.



Combination of embroidered elements and edging process and beading process



Combination of embroidered elements and quilting process

Fig. 5. Innovation experiment based on the process of pile embroidery.



Fig. 6. Application of pile embroidery process in modern design.

IV. CONCLUSION

With the continuous deepening of intangible work and the increasing attention of the people to the traditional national culture, a series of work from discovering, protecting and inheriting the magnificent and special crafts of the Miao traditional pile embroidery is gradually improving and deepening in. Through the combing and analysis in the text, it can be seen that the pile embroidery is a very specific kind of Miao embroidery technique. Therefore, the modernization innovation of the method of pile embroidery is mainly based on three big aspects: the aesthetic orientation of modern people, the raw material conditions of modern industry, as well as modern and diversified craftsmanship. There should be no disintegration of the style and needs of modern life, and try not to fall into empty talk and high-mindedness. It is believed that the real protection is not only to study the style of traditional pile embroidery and to restore it accurately, but to enable traditional crafts to participate in modern life reasonably and properly. In fact, inheritance is a kind of protection, and inheritance should not be a copy of the lost soul and a simple patchwork to reflect the national elements. The core of the subject of applying traditional techniques to the daily life of modern people is how to innovate. Against what background and conditions can further innovation be made? Applying traditional techniques to the daily life of modern people by overcoming the above problems is the true value of design and research. In addition, the generalization of modern people's aesthetic trends and design trends in this study is still insufficient, and it needs to be complemented and deepened by subsequent research. The author hopes that in the near future, the pile embroidering process can have the rationality of design and the feasibility of production, so that

more people can discover and love it and it can really "lives" in a gorgeous and beautiful life, and is no longer just precious collection in the museum.

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