The Hong Kong Polytechnic University

Institute of Textiles and Clothing (ITC)

Conceptual Embroidery For Fashion In A Chinese Context

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A thesis submitted in partial fulfilment of

the requirements for the degree of Doctor of Philosophy

May 2009

Certificate of Originality

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Abstract

Chinese embroidery has a glorious history, which has become a rich source of inspiration for modern fashion design. However, to inherit Chinese traditional embroidery is not simply a matter of imitating its techniques and restoring its appearance, but more importantly it is to carry forward its substance and key cultural values, as embroidery is an activity that combines art, craft, design and culture. This research heads out by making a comparative study between Chinese and Western embroidery, so as to gain a deeper understanding of the concept of embroidery, and set the foundation for the study. From the rich resources of Chinese culture and the beauty of Chinese traditional embroidery, a new embroidery design concept is developed for contemporary fashion embroidery design.

Embroidery involves a design process that runs from initially defining the artistic concept all the way through to implementation of the design concept. During the design process, it is common that fashion and embroidery designers tend to follow their artistic intuition and experience, which may lack a controlling strategy to take them through the whole design process. This study generalizes an embroidery design process model by case studies and experimentation methods. The design process model, together with the parameters analysis method (PAM), creates a control mechanism system that can be beneficial to designers to capture the design features, and to work as an overall control mechanism throughout the design process in fulfillment of the design concept.

Finally, the study is reinforced by the fortification of case studies and experimental methods to support and verify the results of the conceptual design process model.

Publications arising from the thesis

Conference Papers

1. Zhang, Y; Ng, JY; Tan, J (2008) “Parameter Analysis in Fashion Embroidery Design”, 86th Textile Institute World Conference. November 18-21, 2008. Institute of Textiles and Clothing, The Hong Kong Polytechnic University. Conference Proceedings and Poster. Poster Paper in Section of Fashion and Textile Design, p. 2350-2362. Processing Abstract, p. 26.
2. Zhang, Y; Ng, JY (2008) “On the Development of A Design Process Model for Project Based Fashion Embroidery”. 8th AUTEX Conference World Textile Conference, June 24-26, 2008, Città Studi – Biella, Italy. Conference Proceedings and Poster. Poster Area 2, No. 219, p. 1-5.

Exhibitions and Awards

1. Zhang, Y (2007) Finalist, Fabric China Creation Competition 2007, China.
2. Zhang, Y; Ng, JY; Tan, J; Au, R (2007) 2007 International Fashion Exhibition – World Fashion Asia, HK
3. Zhang, Y (2007) Finalist, 2007 International Machine Embroidery Competition, HK.
4. Zhang, Y (2006) Finalist, Hand & Lock Prize for Embroidery 2006, UK.

Other Publications

1. Zhang, Y (2007) Design gallery of Fabrics China Creation Competition 2007- Pattern Design Branch, p.19-20.
2. Zhang, Y; Ng, JY; Tan, J; Au, R (2007) 2007 International Fashion Exhibition – World Fashion Asia. Catalogue, p. 77.
3. Zhang, Y (2006) Hand & Lock Prize for Embroidery 2006 Book of Finalists, p.15.

Acknowledgements

My sincere thanks go to Dr Judyanna Ng as my chief supervisor and Dr Raymond Au as my co-supervisor from the beginning to the completion of the research. Without their supervision and guidance, the research could not have been completed. Acknowledgement also goes to Dr Jeanne Tan who acts as my second co-supervisor at the later stage of the study.

My special thanks also go to Professor Edward Newton for his invaluable insight and thoughtful comments.

I am very grateful, too, to my husband Kevin, daughter Ida and son Ian, who have always supported me, particularly in difficult times.

My sincerest apologies go to my father and mother, who expected me to be a scientist or engineer rather than an embroidery designer.

My special memory goes to my grandma, who did not punish me after my cutting up her precious fabric to create my dolly's dress. From childhood I learned from her how to use needles and threads.

I also give my thanks to Frances, my first embroidery teacher in London and lifelong friend, for her shining eyes, delightful smile and encouraging words every time she stares at my work; this has become one of the sources of energy for my continuing on the way towards perfection.

It should be acknowledged that this study is financially supported by The Hong Kong Polytechnic University.

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Chapter 1

Introduction

1.1. Background to the Study

Once upon a time, Chinese embroidery was outstanding in the world of textiles, in particular with its glamorous history of silk embroidery, which reached its peak in the past. By the 19th century, Chinese silk embroidery was fashionable in England and America (Gostelow, 1975, p. 47). An oil painting, "The New Necklace" by William McGregor Paxton in 1910 (Figure 1.1) shows a young lady wearing a Chinese silk embroidered garment, this being just as one of the many evidences.

In the 1980's, China opened its door again to the outside world, and since then China has changed dramatically. Coming into the 21st century, with its fast development of the economy and globalization, China has once again become an important player in the world in many respects.

Figure 1.1. A Western lady in Chinese silk embroidery in 1900s

Note: The New Necklace by William McGregor Paxton, 1910. Oil on canvas.

Image source: Steele & Major, 1999, p. 68.

In the recent years, one of the highlights of this phenomenon was marked by the publication of a special issue of American *Newsweek*, “China’s Century”, on 9th May 2005. Chinese film star Zhang Ziyi, featuring a broad smile, appears on the magazine’s front cover (Figure 1.2).

Figure 1.2. Chinese Actress Zhang Ziyi on Newsweek Cover
Source: Retrieved October 2, 2008, from http://cgi.ebay.com.sg

Even with such magnetism, compared with the fast development of its economy, China has yet to re-establish its cultural identity with the inheritance of its key traditional values after the incursion of Western cultures and values following the open-door policy. In seeking out the Chinese cultural identity and key values, one successful artist is Wu Guanzhong, a leading master in 20th century Chinese painting. His characteristic painting style not only conveys both a Chinese cultural identity and outlook, but as well a unique combination of modern conceptions and Western techniques (Figure 1.3 Dream Home). Most of his works embody the color sense and formal principles of Western paintings, but also preserve the spirit and tonal

variations of ink that are typically Chinese. Wu's path sets a logical model for the way-out of Chinese traditional embroidery.

Figure 1.3. Dream Home by Wu Guanzhong
Sources: Retrieved October 31, 2008, from www.chinanart.com/.../200703/53.html

Another successful case that demonstrates the Chinese cultural identity was the 2008 Beijing Olympic Games Opening Ceremony, directed by Zhang Yimou. From the Silk Road to the Four Great Inventions, the ceremony presented China's five thousand year history and cultural traditions. The opening ceremony was full of Chinese content and identity, presented in a modern language and using technology that makes it understandable to and

appreciated by the Western world. Figure 1.4 is one scenery of the students of the Master teacher of Kongzi (551—479 BCE).

Figure 1.4. 2008 Beijing Olympic Games Opening Ceremony
Source: Retrieved December 13, 2008, from
http://www.boston.com/bigpicture/2008/08/2008_olympics_opening_ceremony.html

This momentous event extracted and refined many typical symbols and features from Chinese history and culture. It also pointed in the right direction, and was an inspiration for the identity of Chinese fashion, as well as for embroidery innovation.

Embroidery, as one of the traditional Chinese art forms, can be traced back through thousands of years of China's history. By reviewing its history,

the development of Chinese embroidery can be said to be vertical in general, but lack a horizontal exchange with foreign culture over a long time span. Having said that, a few international exchange incidents still stand out in its long history, among which Zheng He's global navigation, and the Silk Road to the West, are typical cases. This situation is also true in the development of Chinese embroidery.

By reviewing the development of Chinese embroidery and making a comparative study of both Western and Chinese embroidery development, a deeper understanding of the concept of embroidery is reached, and this lays a solid foundation for research.

Previous studies of embroidery have focused on the techniques and materials, on the culture, or on the arts and crafts. There has been little on conceptual design as a systematic approach in fashion and embroidery design, although conceptual design has been well established in other areas such as product and engineering design. This study adopts the conceptual design approach, in order to gain a deeper understanding of the interaction between embroidery and the fashion design process, and to inject a new design concept into fashion embroidery.

Embroidery is dynamic in terms of the reflection of social evolution. Going beyond craft, embroidery is a combination of art and cultural symbols, and is a reflection of the development of the economy and society, and of new materials and technology. With this in mind, a comparative study

between Western and Chinese embroidery becomes necessary in order to identify both the different and the common features of Western and Chinese styles. These features can reflect the development and diversities of different cultures, and form the soil in which the flowers of embroidery have been growing in different colors and shapes in different lands.

To inherit the Chinese tradition is not to go back to history but to continue the history with its substance and key values. Therefore, the aim of this study is first to extract and refine the Chinese cultural identity, and then to re-apply the new concepts into contemporary fashion and embroidery design. The concept of Chinese embroidery is not just about the techniques and materials. It also carries symbolic meanings and the philosophy of Chinese culture.

With the above mission in mind, this study first identifies the difference in features and identities of Chinese embroidery, by a comparative approach with Western embroidery in Chapter 4. It will then develop the design concept of Chinese embroidery from its traditional culture and embroidery styles.

Secondly, this study applies the parameters analysis method (PAM) as a control mechanism in implementing the new design concepts into contemporary fashion and embroidery design. PAM is designed to minimize the biases that affect subjective opinions, especially for projected based design (Spector, 1993, p. 1).

Finally, this study applies case studies and experimental methods to support and verify the results of the conceptual design process model.

1.2. The Rationale of the Study

The purpose of the study is to explore the way to carry forward the beautiful heritage of traditional Chinese embroidery into modern fashion design and modern-day fashion trends. Although traditional Chinese embroidery has a glorious history, one may consider that traditional Chinese embroidery is conservative, time consuming and lacks economic considerations. To most people it may no longer be considered suitable for today's fashions and life style. However, there are rich resources in Chinese traditional embroidery that allow for innovative fashion design for our modern society.

This study is therefore initiated in order to investigate the future role and structure of Chinese embroidery in contemporary fashion design. This study is to explore the way to carry forward the beautiful heritage of traditional Chinese embroidery into modern fashion design.

1.3. The Research Outline

1.3.1. Scope of study

The nature of the research study is interdisciplinary, and mainly involves three disciplines, which are: 1) embroidery, 2) fashion, and 3) design theory. The study focuses on the interface and relationships of the three research disciplines, as illustrated in Figure 1.5. The study also involves a comparative study of Chinese and Western embroidery, using the case study method and the experimental method of real world design projects.

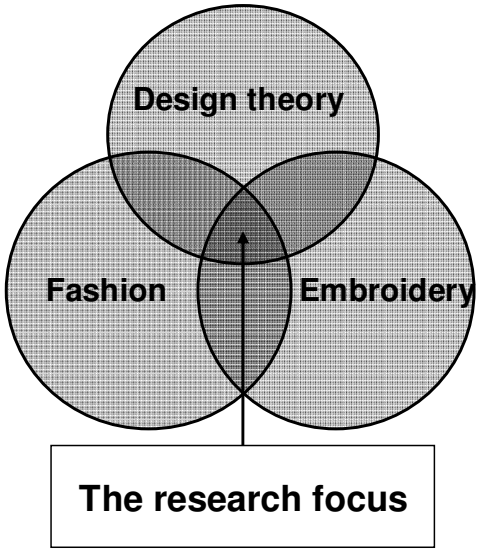


Figure 1.5. Scope and focus of the study

1.3.2. Research diagram

In this study, the term 'conceptual embroidery design' refers to the systematic approach of: A) refining the design concept, B) constructing a design process model by the inductive method, and C) implementing the design concept and process model by the parameter analysis method.

Figure 1.6 is the flow-chart diagram of this research, and shows the relationship between the various parts (shown in rectangles) of the research, and the methods (shown in ovals).

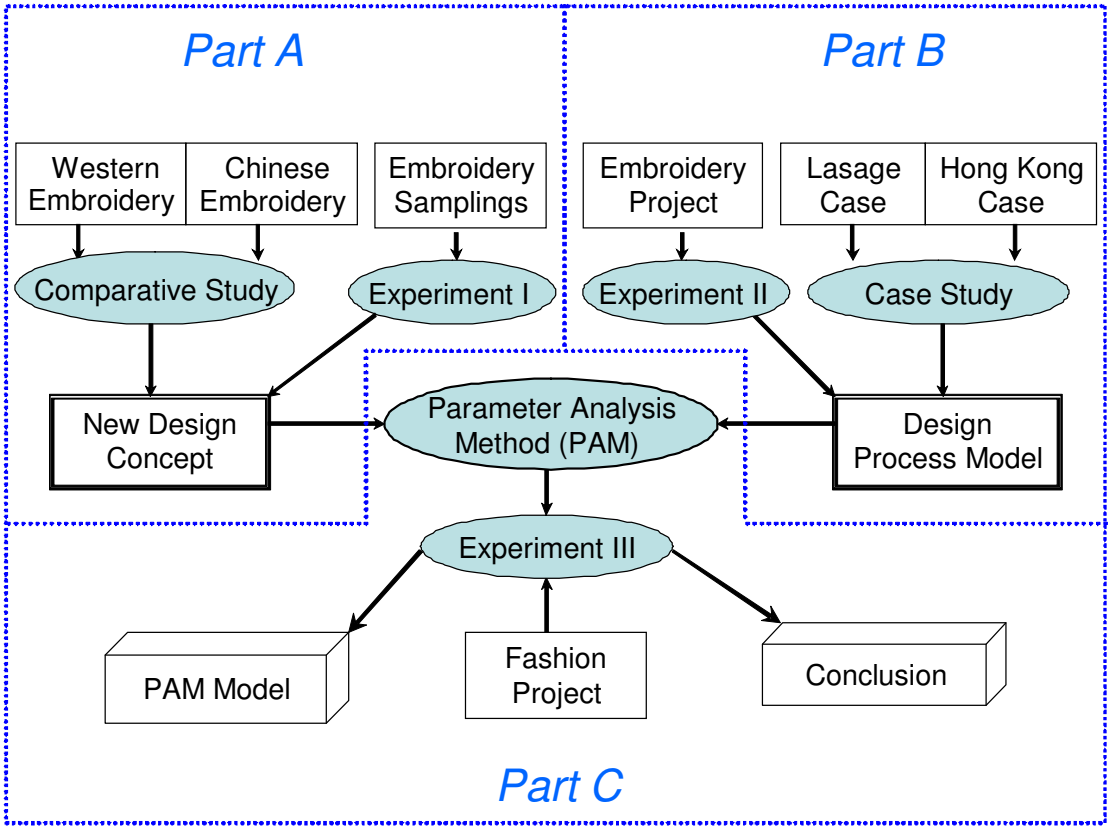


Figure 1.6. Research Diagram

Part A shows the process of development of a *New Design Concept*, using a comparative study, and an experimental method (Experiment I) for embroidery samplings.

Part B shows the process of deployment of a *Design Process Model* using case studies and the experimental method (Experiment II).

Part C demonstrates the implementation of a *New Design Concept* and *Design Process Model* using the *Parameter Analysis Method* (PAM) as a control mechanism.

1.3.3. The research workflow

As shown in Figure 1.7 the structure of the research can be explained in three stages.

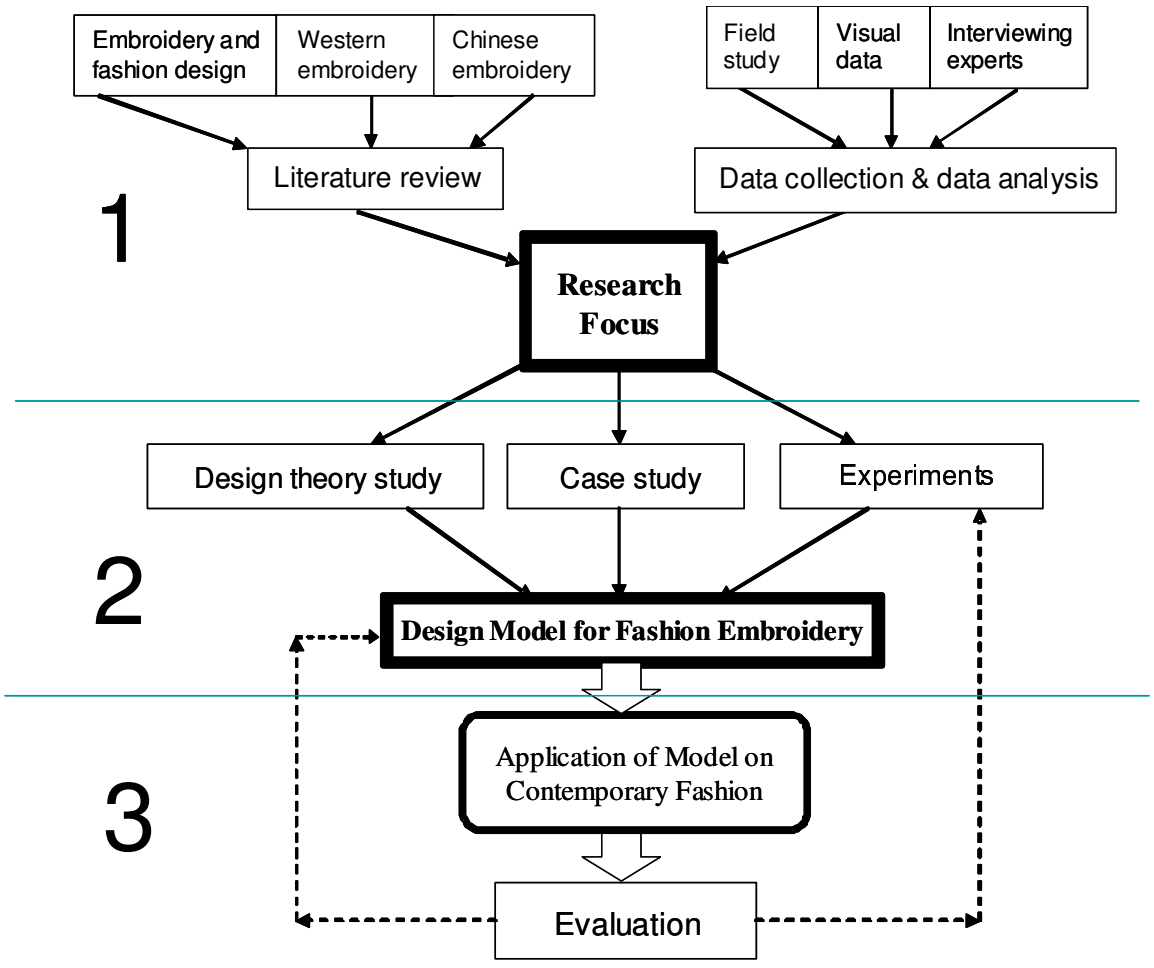


Figure 1.7. Structure of the research

Stage 1- Identification of new design concepts

After an introduction in Chapter 1, Chapter 2 reviews the background knowledge of embroidery, and identifies the role of embroidery design in the fashion design process. Chapter 4 makes a comparison between Chinese and Western embroidery, and identifies the features of contemporary embroidery. In Chapter 5, the design concept for modern Chinese embroidery is established.

Stage 2 - Research methodology and design model

This stage is to address the question, “How can the design process be controlled to meet the requirements?”. In response to such issue, relevant and suitable methods, and the design model need to be studies before opinion can be established and developed. Chapter 3 reviews relative design theories, and introduces the principles and theories of the Parameter Analysis Method (PAM). PAM plays a vital control role in the design process. Chapter 6 sets out to generalize and categorize embroidery design process models.

Stage 3 – Application and evaluation

Chapter 7 sets the application of the new design concepts (developed in stage 1) and embroidery design process models (developed in staged 2)

under the control mechanism of PAM. Evaluations are then conducted and conclusions reached.

1.4. The Objectives of the Study

The objectives of this study are as follows:

1. To develop a new concept for Chinese fashion embroidery design.
2. To adopt Chinese traditional embroidery into contemporary fashion embroidery by the introduction of modern design concepts and theories.
3. To explore the way to carry forward the beautiful heritage of traditional Chinese embroidery into modern fashion design, and to investigate the future role and form of Chinese embroidery.
4. To develop a systematic design approach to fashion embroidery design, incorporating a control mechanism for conceptual embroidery, consisting of a Parameter Analysis Method (PAM) and design process model for fashion embroidery.

1.5. Research Methodology

This study adopts plurality research methods at different stages to form a comprehensive research system. First, it takes a comparative approach to

ascertain the difference in features between Chinese and Western embroidery, to summarize the general principles of modern embroidery design and establish a new design concept for the development of traditional Chinese embroidery, and to gain a deeper understanding into the concept of embroidery that will form the starting point for this research. The design concepts and principles can be generalized, to be followed by application of experiments under the PAM structure. Design concept is difficult to quantify. Therefore, there is a need to introduce design parameters to describe the features of modern fashion Design parameters may determine techniques (hand or machine embroidery), materials, pattern, colors, time, cost and other constraints.

To understand the latest development of the industry and profession, the case study is carried out by less formal interviews and questionnaire survey methods. The adoption of experimental method is to establish the different artistic effects through the use of different embroidery techniques, materials or patterns, as this method can involve the deliberate manipulation of one variable (technologies or materials or patterns), while trying to keep all other variables constant. This study applies the parameter analysis method (PAM) as a control mechanism to implement the new design concepts into contemporary fashion and embroidery design. PAM is designed to minimize the biases that affect subjective opinions, especially for project based design.

1.6. Contribution and Limitation of the Study

1.6.1. Contribution

First, a new fashion embroidery concept is established, presenting five parameters that can be a reference, and a guide for the future development of Chinese fashion embroidery.

Second, this study establishes a conceptual embroidery design model by using parameter analysis design theory, which is believed to be a pioneer study on systematic design theory for embroidery. As a control mechanism, PAM helps the designer to select, define, and meet customer requirements; it also assists the designer to fulfill design tasks by application of the design concepts refined from the parameter analysis. The method can be applied as an alternative way of thinking and reasoning for project based fashion and embroidery design.

Last, it applies PAM on a research project to bridge traditional Chinese embroidery and modern fashion design by fusing western embroidery methods and design theory; this study can contribute to further development of the Chinese embroidery and fashion industry.

1.6.2. Limitation of the study

The art design process should be full of imagination. Art designers like free space with no limitation. Like other art design, the fashion and embroidery

design process is not looking for a solution to a particular problem – in fact, there should be more than one solution to a design task.

However, with a project-based design, constraints and requirements are usually there from the outside and from customers. Under such circumstances, a clear and logical design can always be helpful. The parameter analysis method provides the possibility of an alternative thinking and control mechanism.

For the first time, this study uses the parameter analysis method in embroidery design. For future studies, more case studies may be necessary in order to verify the model and test the result. More verification of this approach is needed for embroidery and fashion design.

Chapter 2

Concept of Embroidery

2.1. Introduction

Compared with other forms of art, embroidery has its own language and techniques. Fashion designer Gianfranco Ferrè well summarizes this about embroidery: 'Craft technique, motifs and patterns, materials: I should say that the greatest attention must be paid to these three elements in order to achieve a unique result.' Another fashion designer, Anna Molinary, has similar comments: "What interests me in a piece of embroidery is the technical aspect, the material aspect and the design." (Rocca, 2006, p. 93).

Embroidery design, materials and techniques are the three fundamental components of embroidery – similar to words, sentences and grammar in a language. As language changes over time, so embroidery which dynamically reflects the development of society, especially fashion embroidery. However, the cultural identities reflected in embroidery are distinctive and diverse among the different nations throughout the ages.

2.2. Definition of embroidery

Many believe embroidery is merely a craft. They believe that embroidery relates mainly to skills; the Farlex Dictionary (2009) defined craft as, “skill in doing or making something”. However, at the same time, many claim that embroidery is an art; as defined by Gillow & Sentence (1999, p. 170), “Embroidery is the art of using stitches as a decorative feature in their own right”.

Giving a more balanced view, Springall states that, “The most wonderful aspect of embroidery …… is its status as both an art and a craft. For the people who adopt it for leisure, it may remain a craft; for the others who choose to adopt it in search of peace, courage and so many other aspirations, it is often therapeutic and constructive.” (Springall, 2005, p. 11)

The nature of embroidery can be related to craft, art, and design. Quite clearly, embroidery is craft because it needs specialized skills. However, the relationship between embroidery, art and design is more complicated. One of the verifications includes, “the boundary between design and art is not always clear” (Carr & Pomeroy, 1992, p. 17). From Bevlin’s point of view, both art and design are composed of the same elements – line, space, shape, form, color, and texture – combined by means of the same principles – unity and variety, balance, emphasis, rhythm, proportion and scale, and these also apply to fashion and embroidery design. In the same way that art may incorporate design and many designs can legitimately be considered works of

art (Bevlin, 1994, p. 8). Since fashion and embroidery also incorporate design, and therefore many embroidery works are of course works of art.

If a distinction has to be made, we can say that designers work with specific purposes in mind – needs to be met, either functional or artistic (Bevlin, 1994, p. 8), such as in fashion or architectural design. The original meaning of design is the way in which something is planned and made or arranged (Steel, 2001). Artists, on the other hand, “are primarily involved in subjective expression of a personal experience, reaction, or mood” (Bevlin, 1994, p. 8).

In the exploration of fashion and embroidery design, it is almost impossible to make a consistent distinction between the concepts of craft, design and art. Therefore, this study adopts a broader meaning of embroidery, one defined as the combined activity of craft, design, and art working mainly with stitches and thread.

2.3. Concepts of Embroidery Design

As with other kinds of design work, embroidery also needs design thinking – process for practical, creative resolution of problems (Simon, 1969. p. 55). The design thinking process has seven stages: “define, research, ideate, prototype, choose, implement, and learn” (Simon, 1969. p. 55.). Within these seven steps, problems can be framed, the right questions can be asked,

more ideas can be created, and the best answers can be chosen. With regard to the design process, detailed discussion can be found in Chapter 6.

Embroidery design should follow these basic design principles: unity and variety, balance and emphasis, rhythm and contrast, proportion and scale (Bevlin, 1994, p. 8.; Faimon & Weigand, 2004). Apart from the design disciplines, designers also need to appreciate the materials and techniques. Embroidery designers have the opportunity to use threads and stitches in a great variety of ways.

2.3.1. Embroidery design elements

Similar to other design works, the design elements for embroidery art can also be classified as lines, shapes, colors, patterns and textures. In embroidery, stitchery is one of the important tools with which to form design elements. “Stitchery can be as meaningful, as evocative (as shown in Figure 2.8), as mysterious as painting, sculpture, assemblage, collage, and the varied combinations of these. It is as legitimate a medium for expressive art as any other.” (Krevitsky, 1966, p. 18). “There is something about stitchery,” Julia Caprara said, “which sets the mind free to dream.” (Embroidery, July 2003, p. 40).

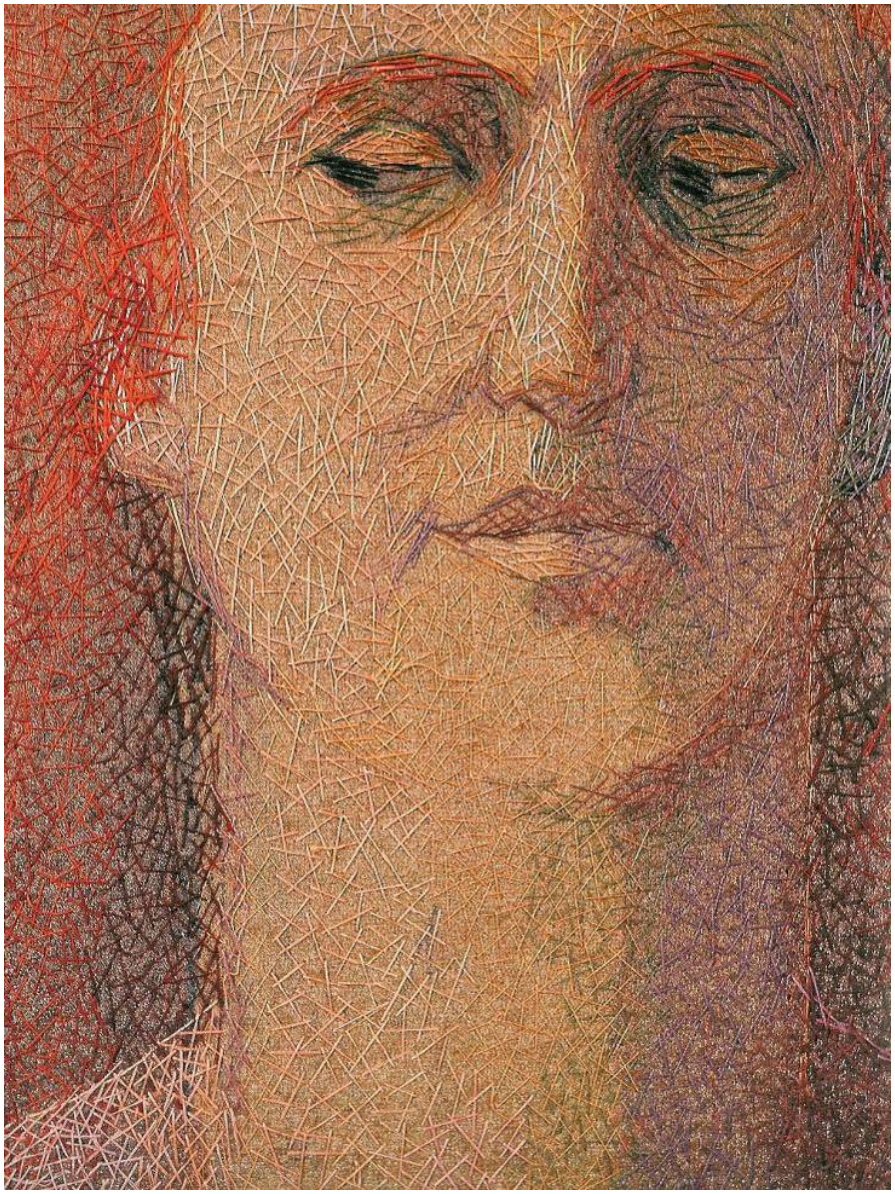


Figure 2.8. Meaningful stitches
Note: Eve – by Audrey Walker, 2000.
Image source: Walker, 2000, p. 20.

Lines

Different threads, strings, and fibers have their varied characteristics of 'textile line'. Other things of a linear nature – wires, wooden spills, canes, grasses, etc., can bring further variety to experimentation as shown in Figure 2.9. With all these materials for manipulation, the designer can produce a diversity of creation of lines (Whyte, 1969, p. 96).

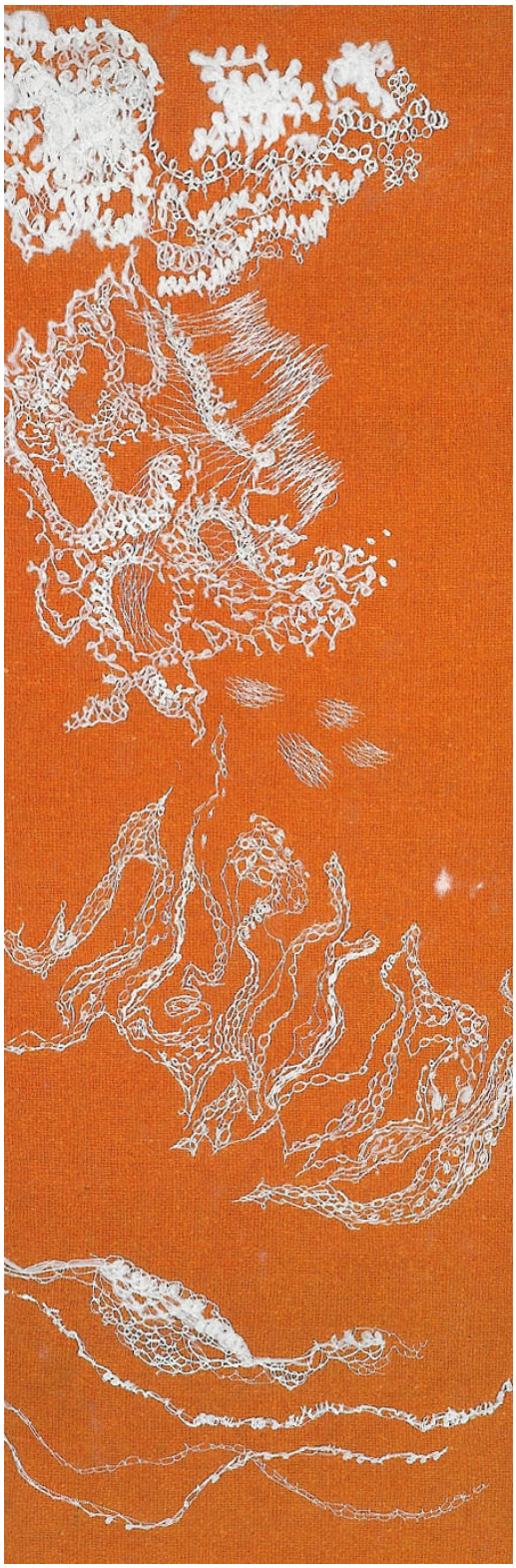


Figure 2.9. Embroidery lines

Note: White Wave – by Kathleen Whyte, 1965.
Image source: Springall, 1984, plate 20.

Shapes

Embroidery stitchery can create all kinds of shapes with different textural effects in limitless ways. Cutting materials by scissors provides an effective way of obtaining shapes of color and texture (Whyte, 1969, pp.117-118). The shapes with bulging effect in Figure 2.10 are achieved by cutting and machine stitches.

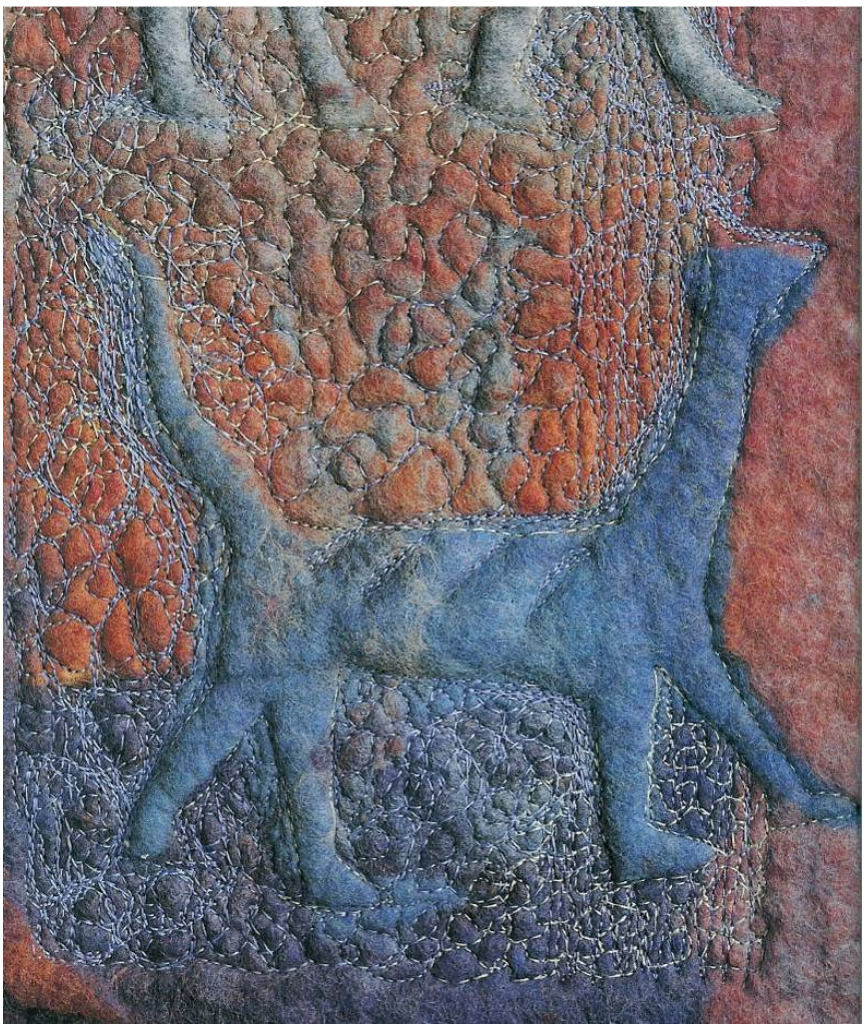


Figure 2.10. Embroidery shapes
Note: Ishtar Images (detail) – by Jeanette Appleton, 1994.
Image source: Koumis, 1996, p. 92.

Colors

Embroidery is a perfect medium to work with colored materials, creating its effects from threads and fabrics dyed in different colors and having a variety of textures. Wools, silks, cottons and synthetics, ranging from pale through brilliant to very dark tones – all with their different textural characteristics – are able to accentuate tonal variety as shown in Figure 2.11 (Whyte, 1969, p.161).

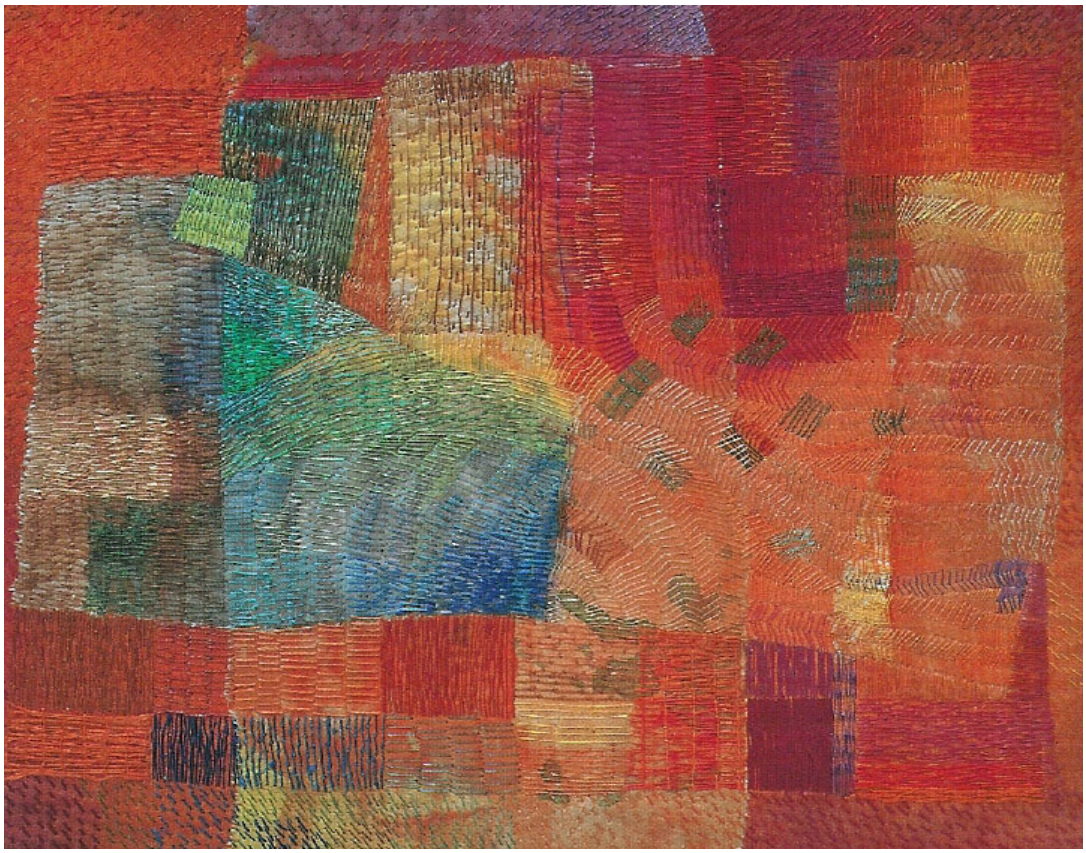


Figure 2.11. Embroidery colors
Note: Rotation – by Louise Baldwin, 1999.
Image source: Embroiderers' Guild, May 2002, p. 34.

Pattern

"There are two aspects of pattern in embroidery – organic stitch design and planned layout, which in no way conflict as each prepares for the other." (Whyte, 1969, p.133). The design concept runs through the whole of design in embroidery. The stitches as small units achieve the pattern and keep large planned layout each in mind. Techniques and design concepts complement each other. As in Figure 2.12, the pattern is achieved by stitch design and appliqué pattern design.

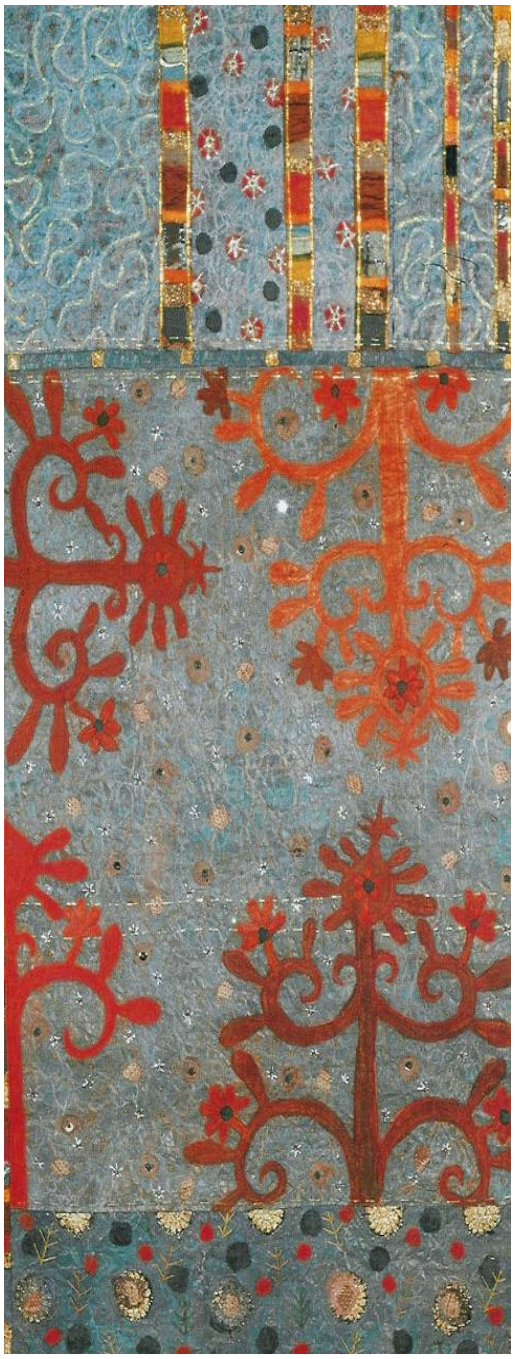


Figure 2.12. Embroidery patterns

Note: Sunrise – by Ritta-Liisa Haavisto, 2002.
Image source: Embroiderers' Guild, May 2002, p. 33.

Textures

Everything has texture, whether it is smooth, silky, velvety, satiny, shiny, bumpy or rough, but “embroidery is a textural art.” (Whyte, 1969, p. 169). The word ‘texture’ has come to denote surface quality, not only by the eye, but also involving the sense of touch (Messent, 1980, p. 94). As Richard Box (1993, p. 118) pointed out, “……texture is tactile rather than visual”. Example shown in Figure 2.13 can demonstrate embroidery is really a textural art.

Figure 2.13. Embroidery texture
Note: Sibelius – by Jan Messent, applied knitting, crochet, and fabrics to canvas, with canvaswork stitches.
Image source: Messent, 1996, p. 105.

Texture can be achieved using various skills such as distorting, cutting, fraying, mixing different fabrics, attaching other objects, using different threads, and combining other techniques with embroidery. Experiments adopting these ways of texture creation are presented as follows (Messent, 1980, p. 94).

Distorting fabrics

Distort the fabric by smocking, 'scrunching', padding and quilting, pleating, making coils, twists and rolls of fabric, or applying pieces of fabric-covered card. (Figure 2.14)

Figure 2.14. Distorting fabrics
Note: Image work by Gwen Hedley
Image source: Beaney & Littlejohn, 1991, p. 101.

Cutting and fraying

Change the nature of the fabric by cutting holes, fraying, drawing and pulling threads as demonstrated by Figure 2.15.

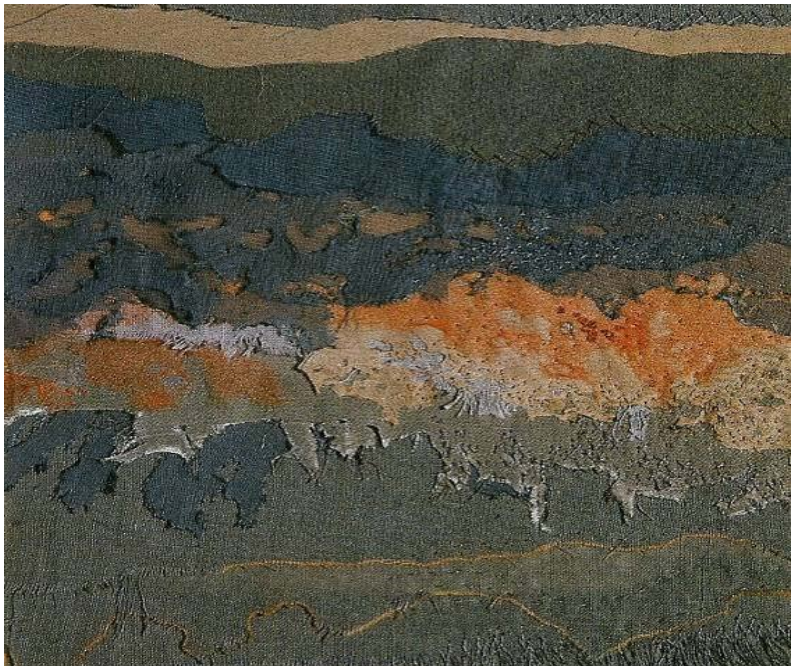


Figure 2.15. Cutting and fraying
Image source: Beaney & Littlejohn, 1991, p. 97.

Mixing different materials

Use fabrics with exciting textures such as shiny, plastic-coated fabric, leather, fur fabric, velvet, satin, scrim, hessian (burlap), silk, tweed, chiffon, net, lurex and corduroy shown in Figure 2.16.

Figure 2.16. Texture fraying on fabric forms

Note: Skirt 23 – by Alison Willoughby
Image source: Embroiderers' Guild, March/April 2005, p. 15.

Adding other objects

Attach three-dimensional objects to the fabric: beads, wood and metal pieces, buttons, washers, rings, studs, jewels, stones, shisha glass, plastic and wooden tubing, dowel, wire, feathers and shells as shown in Figure 2.17.

Figure 2.17. Attaching 3-D objects
Note: Bead Baroque (detail) – By Pam Gaunt, 1995.
Image source: Koumis, 1999, p. 57.

Using different threads

Textured bumpy wool, handspun yarn, string, cord, fine crochet thread, machine and button thread, rug wool, thread unraveled from fabric as shown in Figure 2.18.

Figure 2.18. Using different threads
Note: Work by Lindsay Blow

Image source: Barton, 1989, p. 101.

Experimenting with stitches

French and bullion knots, Astrakhan (velvet) stitch, satin stitch, Rhodes stitch (for canvas work), raised chain band, seeding, and straight stitch as shown in Figure 2.19.

Figure 2.19. Stitches experiments

Note: Work by Lindsay Blow

Image source: Barton, 1989, p. 71.

Combining other textile techniques

By combining knitting, crochet, hairpin crochet, tatting, macramé and off-loom weaving to create different effects as shown in Figure 2.20.

Figure 2.20. Other textile techniques

Note: Joy of Alec's Grandmother – by Virginia C. Bath

Image source: Smith, 1991, p. 4.

2.3.2. Transition of design to embroidery

2.3.2.1. Traditional transition methods

Embroidery has traditionally been regarded as an art that has to be carefully planned before stitching is begun. Designs may be pre-drawn directly on to the ground or material surface as in traditional Chinese embroidery. In counted-thread embroidery, transferring the pattern to the fabric is unnecessary, because each small square on graph paper represents a stitch pattern (Harris, 1993, p. 33). The most common and useful way is transferring the design from a paper. Two traditional methods are introduced here:

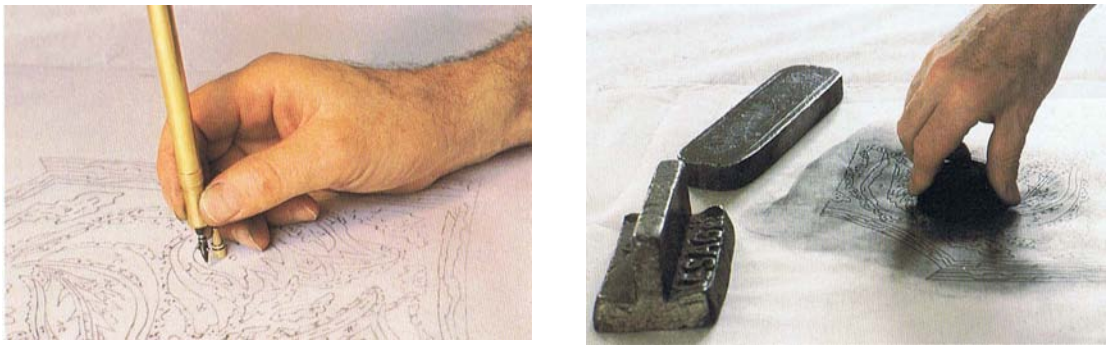
Prick and pounce method

Traditional methods for the transition of design to embroidery are prick and pounce, and tacking through tissue (Barton, 1989, p. 56). Prick and pounce is an old method, but is the most accurate means. The steps of prick and pounce are as follows:

- First, trace the design onto tracing paper and prick from the wrong side of the paper, then
- Place the pricked tracing paper onto the fabric and rub the pounce powder over it.

- When the tracing paper is removed, the design appears as a series of dots.

House Lesage still uses this method to transfer the design pattern onto materials (White, 1988, p.148-149) as illustrated in Figure 2.21.



a. The perforation of drawing paper b. Stenciling with black powder

Figure 2.21. Prick and pounce method
Image source: White, 1988, p. 149.

Tracking through tissue

Tracking through tissue is a method that traces the design onto tissue paper and then uses running stitches along the lines of the design as showed in Figure 2.22. When the whole design has been transferred, tearing away the tissue paper leaves the design outlines on the fabric. The prick and pounce method is more accurate and detailed than the tracking through tissue method. Prick and pounce is more suitable for delicate patterns.

Figure 2.22. Tracking through tissue method
Image source: Barton, 1989, p. 57.

2.3.2.2. Modern methods

Although some contemporary embroiderers work without a pattern, most embroiderers use modern methods, which include using various fabric paints, transfer paints, and printing with digital technology. For digital embroidery, there is no need to transfer the design onto the fabric, as the machine can work automatically on the fabric according to the pattern designed by the software.

Permanent fabric paints

Permanent, pearl and metallic fabric paints can be used easily by applying them directly onto the fabric by brush or sponge. The pigment retained on the

surface does impair the feel and quality of the cloth, giving it a stiffish feel, which is not so comfortable to stitch into. However, the results can be stunning, and you may consider that such effects are necessary for your design needs and thus override any negative considerations (Beaney & Littlejohn, 1991, p. 90).

Silk paints

These versatile paints can be used to color most fabrics. They are non-toxic, water-soluble and can be fixed by ironing when the fabric is dry. Gutta is a solution that is painted onto the cloth to act as a boundary preventing one color from flowing into another (Beaney & Littlejohn, 1991, pp. 89-90).

Fabric markers

These markers are specially designed for drawing onto fabrics. They can be used on wet fabric or to add details to a piece of dry, painted fabric. The colors are fixed by ironing (Barton, 1989, p. 54).

Transfer paints & transfer crayons

These paints and crayons are designed to be used on synthetic fabrics. As illustrated in Figure 2.23, patterns can be painted, printed or applied onto

paper, which is then ironed so as to transfer the design onto the fabric (Beaney and Littlejohn, 1991, p. 78; Barton, 1989, p. 55).

a. Paint the design with transfer paints on paper

b. Place the design right side up on the fabric and press it with hot iron. The image is transferred on the fabric.

Figure 2.23. Transfer paints

Image source: Barton, 1989, p. 55.

2.4. Concept of Embroidery Materials

2.4.1. Fabrics & threads

Fabrics and threads are the basic materials for embroidery.

Embroiderers today are faced with an immense choice of attractive fabrics. “Almost any fabric is potentially useful for embroidery.” (Barton, 1989, p. 19).

Threads

“Embroidery is made of threads.” (Whyte, 1969, p.14). Thread has different meanings in different contexts. Threads can be made of cotton, linen, silk, wool, rayon, polypropylene, plastics, and other synthetics. Threads can also be laces, hairs, and fibers, purls, plates, and cords. As Whyte (1969, p.14) concludes “In fact, anything that can form a stitch …… can be considered as a kind of embroidery”. There are many choices in using materials as embroidery threats.

Beside the use of fabrics and threads, decorative materials are important for embroidery works as well as for fashion design. In addition, there are thousands of kinds of beads, sequins, pearls and precious stones, as well as innumerable manmade decorative items, that can be used for embroidery design; thus the possibilities and options for embroidery design are endless.

2.4.2. Supplementary materials

During the embroidery process, certain materials are used but are not visible on the final product. These supplementary materials are helpful in

contemporary embroidery design. Here two popular supplementary materials are introduced:

Soluble Fabric

For creative embroiderers, water-soluble fabric was one of the most exciting discoveries at the end of the 20th Century. The material was initially made for use in hospitals as bags in which to store soiled linen in order to prevent the spread of infection. Once in the washing machine, the bag dissolves during the wash cycle. It has since also been used in the fashion industry to support machine embroidered motifs and decorative cutwork.

In the1980's, machine embroiderers were given the opportunity to purchase the cloth. Since then, an amazing variety of machine lace has been created. By machine stitching on to a soluble fabric and ensuring that all sections link one to another, a type of machine-made lace can be created. It is a versatile technique, an ideal choice for decorating a garment, creating textile jewellery and fashion accessories, or for the construction of a background cloth or additional sections for wall panels or hangings (Beaney, 1997, p. 1).

Bondaweb

Bonding in terms of fabric may be briefly described as the application of one material to another by means of fabric-glue. It is not only practical and useful, but is capable of being used to create amazingly subtle or complex surfaces

for stitching. There are many products especially designed to use with fabric, such as fusible web in various forms, but most often it is supported on a silicone paper. By ironing bondaweb to the back of a fabric, the paper backing temporarily stiffens it, which makes it much easier to cut out intricate shapes.

Once the shapes have been cut out, the backing paper can be peeled away and the motif positioned and ironed to bond in place. Bondaweb is a versatile and practical material when used for appliqué (Beaney & Littlejohn, 1999, pp. 1-2).

2.5. Concept of Embroidery Techniques

General speaking, techniques are concerned with the mechanical part of an artistic production (Whyte, 1969, p. 47). The art of embroidery embraces many different techniques, each with its own distinctive character. Embroidery techniques include stitches and other skills including canvas work, cut work, quilting and other traditional methods.

2.5.1. Embroidery stitches

Embroidery stitches are considered to be the basic techniques of embroidery. Stitchery itself can be called a technique. Embroidery stitches can be classified into three categories: 1) hand embroidery, 2) machine embroidery and 3) digital embroidery. Combination of hand stitchery with machine

embroidery could achieve a wonderfully spontaneous quality, which has been exploited so imaginatively by embroiderers (Barton, 1989, p. 12). As the computer develops, digital embroidery can be readily found, especially in the fashion industry.

2.5.1.1. Hand stitches

In this study, hand embroidery refers to embroidery done by hands without the assistance of a sewing machine. Hand stitching is probably the oldest method of fabric decoration, and has been used all over the world. Although different styles of embroidery have been developed by different cultures, certain stitches are common around the world. To learn a stitch is not difficult, but to use it in an expressive manner is often a matter of experience (Howard, 1978, p. 57).

Contemporary fabrics and threads have exquisite textile characteristics, and provide the opportunity for designers working with even simple hand stitches to produce impressive and elegant surface textures. (Howard, 1978, p. 68). Figure 2.24 demonstrates how even simple hand stitches can build up a rich texture.

Hand embroidery stitches can be divided into four main groups:

1) Straight stitches (See Table 2.1-2);
2) Looped stitches (See Table 2.3);

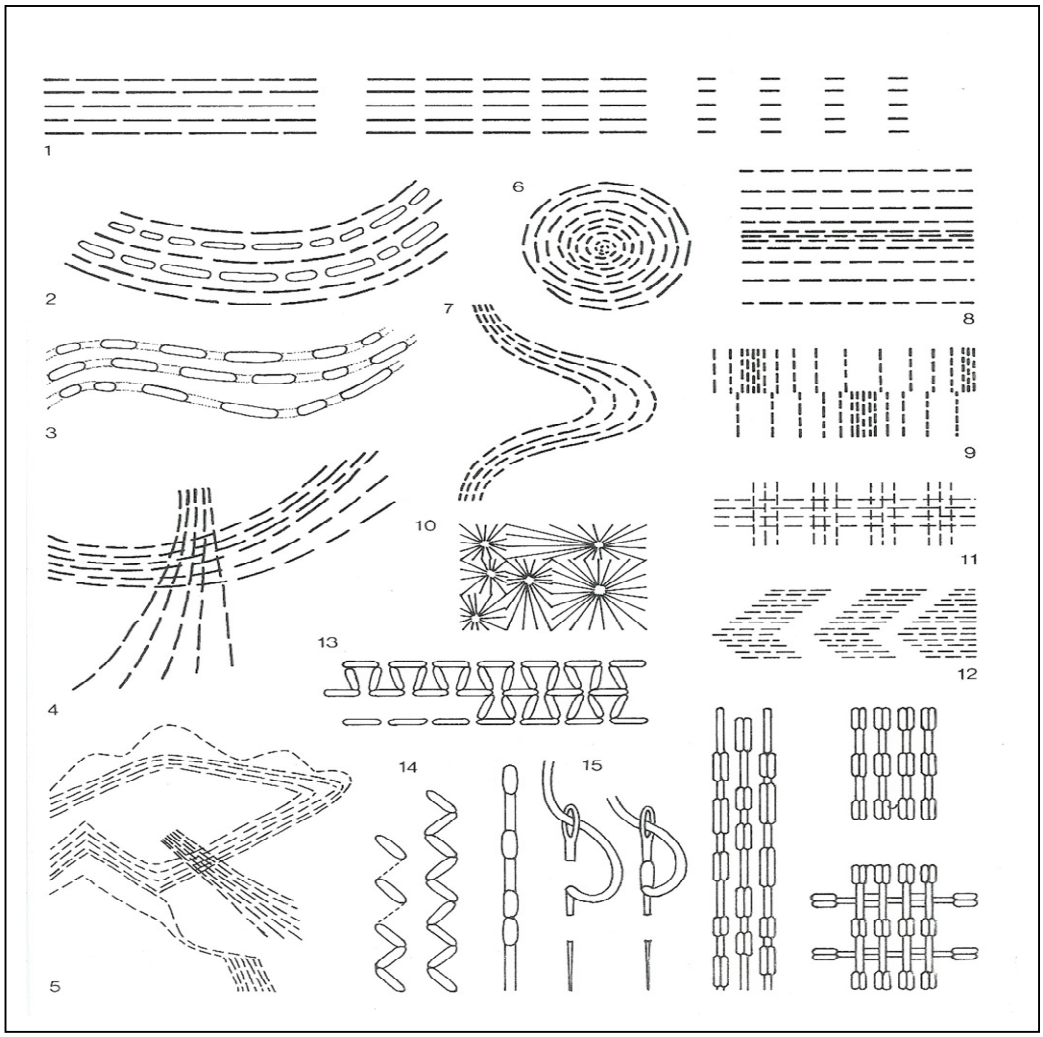
3) Knotted stitches (See Table 2.4);

4) Couching (See Table 2.5).

Figure 2.24. Hand embroidery

Note: Image work by Jan Beaney
Image source: Beaney & Littlejohn, 1998, p. 76.

Table 2.1. Hand Stitch Techniques: Straight Stitches 1

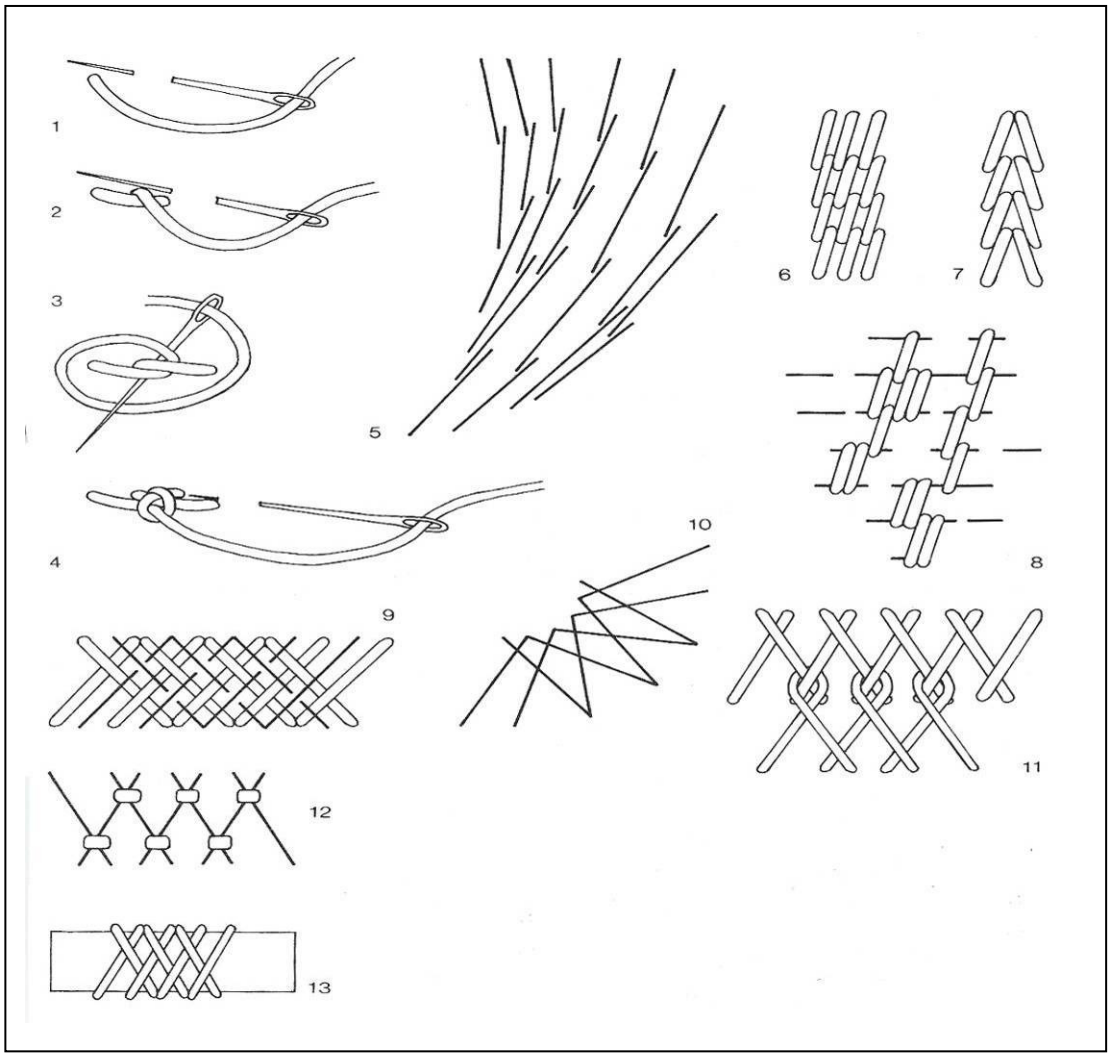


Straight stitches 1 – Running stitches （Source: Howard, 1978, p. 59）

1. Running stitches
2. Thick and thin threads used for running stitches
3. The backs and fronts of running stitches as seen on transparent fabric
4. Running stitches crossing in bands
5. Running stitches – partly even, partly uneven

Various running stitches used to make patterns:
6 & 7. Spirals and swirls
8 & 9. Areas of density
10. Eyelets
11. Basket weave
12. Darning patterns
13. Japanese darning
14. Holbein stitch
15. Back and running stitches, and the various effects that can be achieved using them together

Table 2.2. Hand Stitch Techniques: Straight Stitches 2



Straight stitch 2 – Stem and herringbone stitch

（Source: Howard, 1978, p. 61）

1. One stem stitch
2. Two stems

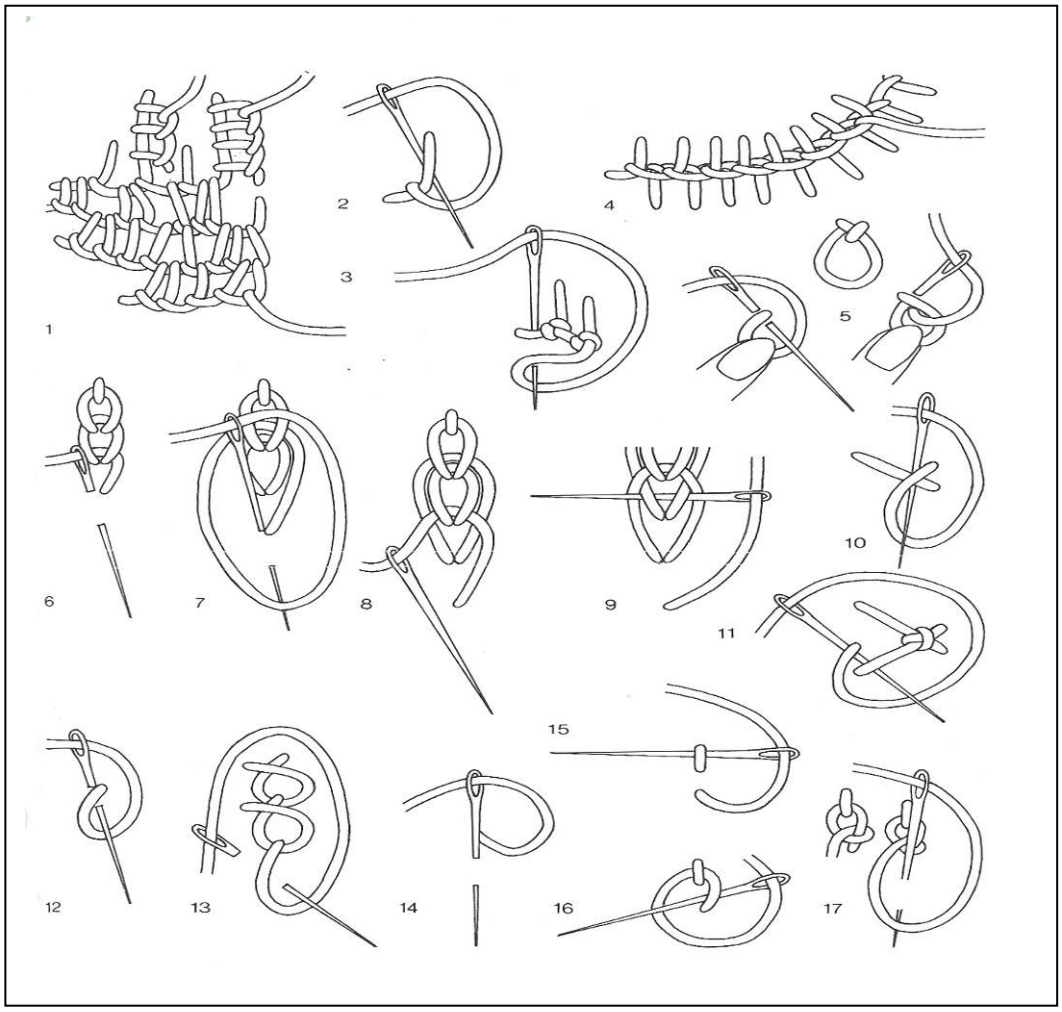
3 & 4. Twisted chain made through two stem stitches, not through the fabric

5. Random stem stitch in a fine thread
6. Stem stitch in level rows
7. Stem and outline stitches combined
8. Raised stem band freely worked

Herringbone stitch:

9. Closed herringbone in two colors and two weights of thread
10. Closed herringbone in a curve
11. Laced herringbone
12. Thin herringbone tied with a thick thread
13. Herringbone worked over a template

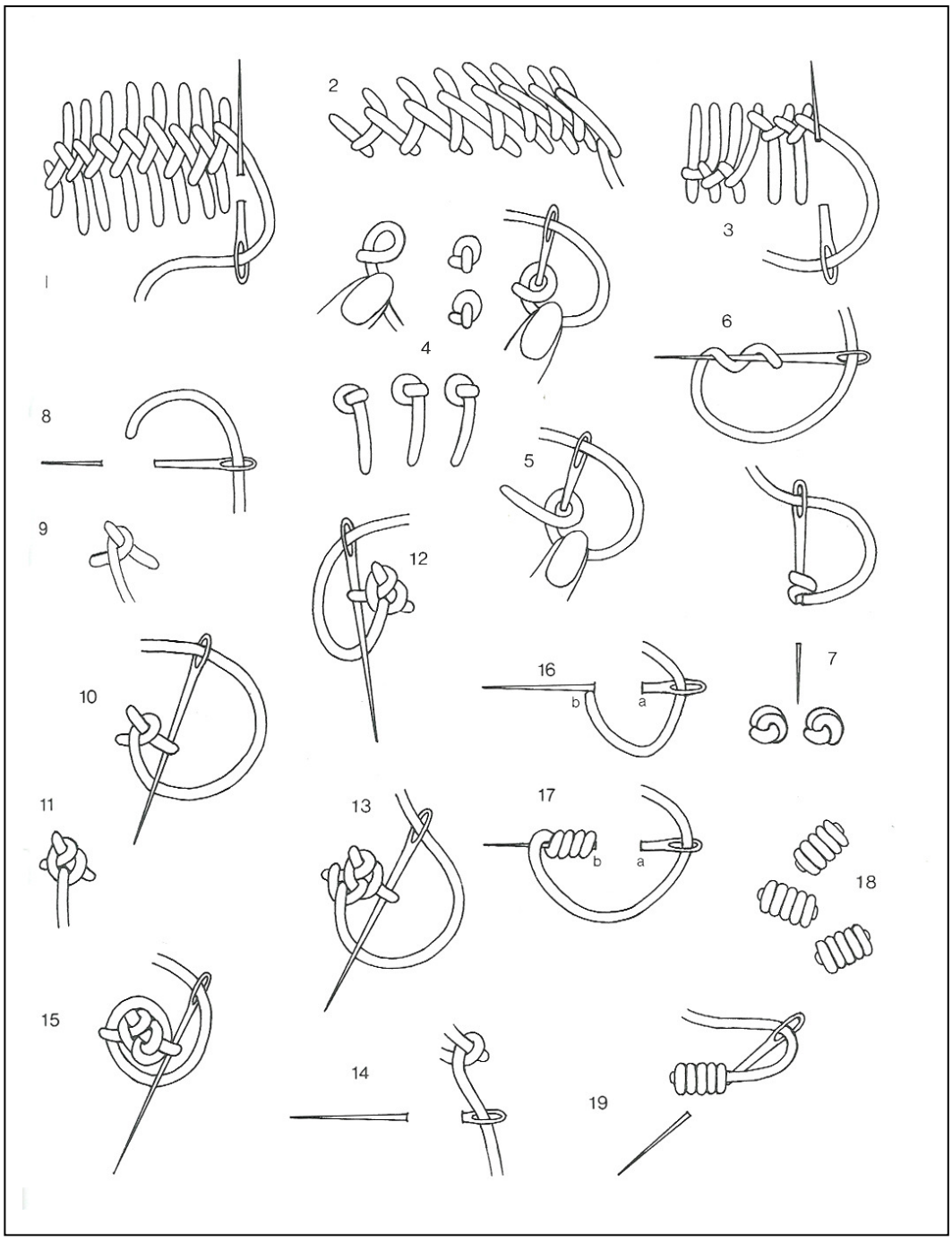
Table 2.3. Hand Stitch Techniques: Looped Stitches



Looped stitches （Source: Howard, 1978, p. 63）

1. Free buttonhole stitch
2 & 3. Twisted buttonhole
4. Two rows of buttonhole interlaced on a curve
5. Loop stitch
6. Broad chain stitch
7. Heavy chain
8 & 9. Variation of heavy chain
10 & 11. Twisted chain worked on herringbone. Instead of working herringbone from left to right, work vertically downwards, with the point of the needle always upwards. After each bar of herringbone is made, work on a twisted chain in the usual way
12&13. Twisted chain; the way the needle is inserted changes the appearance of the stitch
14 to 17. Link chain stitch; a simple way to make the stitch with rhythmic movements

Table 2.4. Hand Stitch Techniques: Looped & Knotted Stitches



(Source: Howard, 1978, p. 65**)**

Notes to Table 2.4:

1. Cretan stitch.

2. Cretan stitch worked diagonally.

3. Cretan stitch showing the change in the crossover made by taking up different amounts of fabric in the needle at the top and bottom. This technique makes the stitch very versatile.

4 & 5. Chinese knot; similar to a French knot, except that it has a straight tail that may be elongated as required (as in 5).

6. French knot; the thread is twisted clockwise twice round the needle rather than once to make a larger knot.

7. The needle is shown entering the fabric below the French knot, coming out again for the next knot. The finished knots show their bead-like quality.

8 – 11. Palestrina or double knot stitch; the loops are taken over a diagonal bar.

12 &13. Variation of the double knot stitch; a loop is made on the left-hand bar and another one on the right-hand bar to make a raised stitch.

14. Continuing the double knot stitch to make the next stitch.

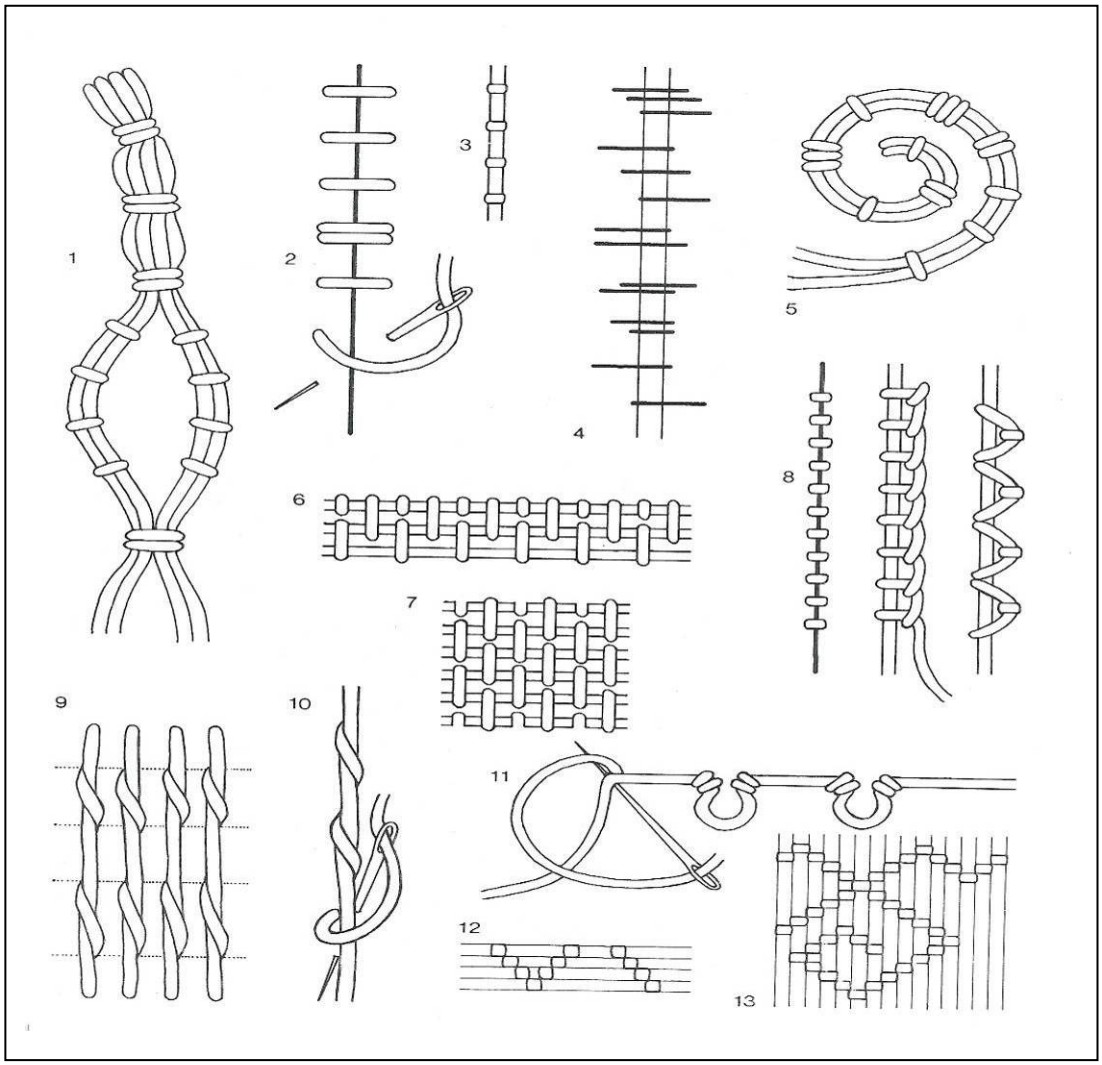
15. A variation of the double knot stitch, in which the thread is taken through the right-hand bar and down through the left-hand one, then over and through the right loop again, making a buttonhole stitch; this produces a raised effect, and in thick thread a very lumpy result.

16 & 17. To work the bullion knot: Bring the needle out at (b) and back to (a) according to the length of stitch required. Bring it through again, leaving just the eye showing. Wind sufficient twists on the needle (clockwise), then pull both needle and thread through the twists, smoothing them carefully. Insert the needle in (a) again, tightening the thread to make an evenly twisted coil.

18. Bullion knots.

19. The coil taken back, and the needle inserted for the next stitch.

Table 2.5. Hand Embroidery Stitch Techniques: Couching



Note to Couching Technique: (Source: Howard, 1978, p. 67)

1. Four strands couched together, or a skein bunched up, then the four strands opened up to two
2. Thick thread couching thin thread
3. Thick thread couching thick
4. Thin thread couching thick
5. Two threads couched at random in a coil
6. Burden stitch over three threads
7. Burden stitch over six threads producing a basket weave effect
8. Three ways of couching down thread: very closely; with buttonhole; and with fly stitch

9 & 10. Romanian couching

11. Thread looped and couched

12 & 13. Hungarian couching

2.5.1.2. Machine stitches

In this study, machine stitches refer to the stitches done by a sewing machine, either freehand or built-in stitches. Until the invention of the sewing machine in the late 19th century, embroidery was done by hand. Compared to human hands, machines have a greater advantage in handling a large quantity of repetitive work, so they not only save time but also gain greatly through economy of scale.

Today, both hand and machine embroidery are popular, but each technique has its own definite qualities. There are hand techniques that can never be superseded by a machine, and as well there are those techniques that are better accomplished on a machine. Together they can complement each other (Howard, 1978, p. 40). Machines have improved embroidery development in many areas, but can never replace hand embroidery.

Since machine embroidery has been developed as a separate art, it involves as much dedication and technique as hand embroidery. Contemporary machine embroidery is considered to be an original, unique form of art as shown in Figure 2.25.

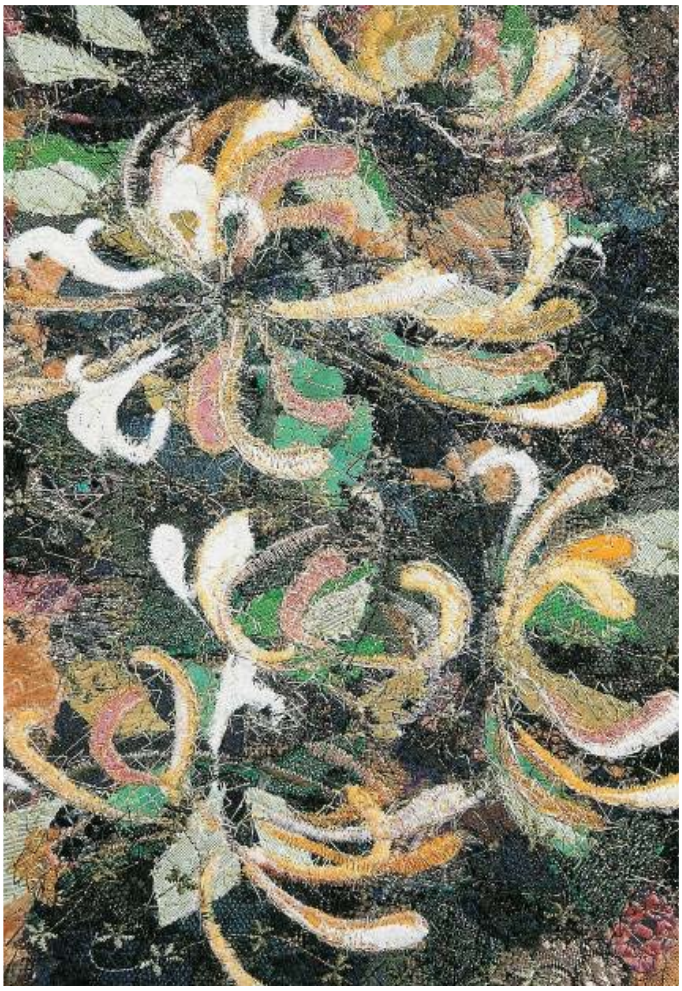
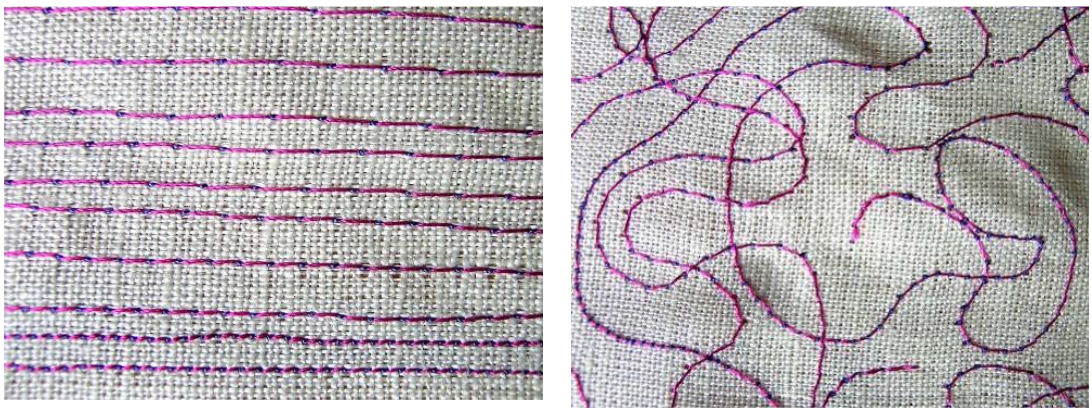


Figure 2.25. Machine embroidery
Note: Honeysuckle – machine and hand embroidery with beading by Richard Box, 1992.
Image source: Box, 1993, p. 57.

According to Campbell-Harding & Watts (1989), machine stitches can mainly be divided into five groups: A. Running Stitch; B. Whip Stitch; C. Cable Stitch; D. Zigzag Stitch; E. Satin Stitch. Each stitch type can result in several different appearances.

Group A. Running stitch

The Running Stitch is a single line of stitches that form the basic stitch of any sewing machine. The running stitch is formed with the presser foot down and the feed dog up; whereas a free running stitch is done with the presser foot of the sewing machine up and feed dog down, so that stitches can easily go in any direction (Figure 2.26).

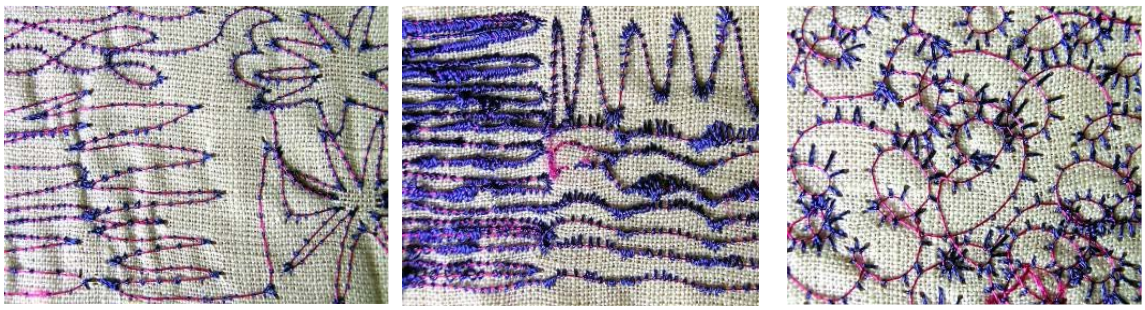


Running stitch Free running stitch

Figure 2.26. Machine embroidery – Running stitch
Image source: Samples created by author

Group B. Whip stitch

The Whip Stitch is more raised and textured than a running stitch: Select running stitch, remove the presser foot, lower the feed dog and frame the fabric. The embroiderer can then choose two contrasting color threads for the top and the bobbin, increasing the top tension until there is a solid line of the bobbin color. Further variations of the whip stitch can be the moss stitch and the feather stitch (Figure 2.27).



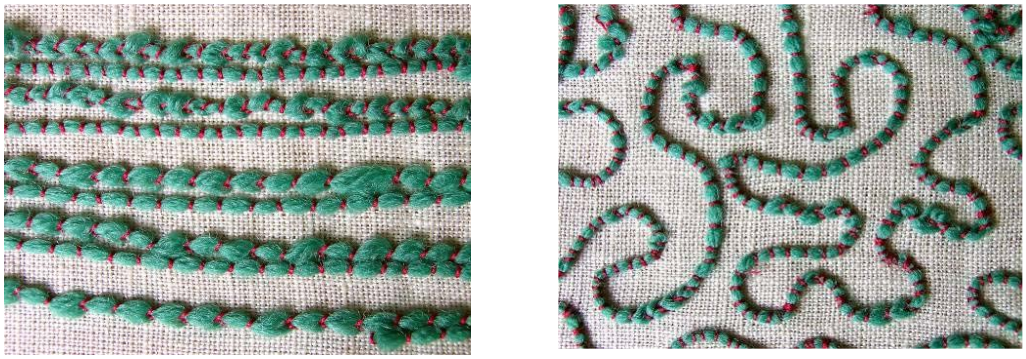
Whip stitch Moss stitch Feather stitch

Figure 2.27. Machine embroidery – Whip stitch

Image source: Samples created by author

Group C. Cable stitch

The Cable Stitch is formed when threads used is too thick to pass through the upper tension system and the needle can be wound on the bobbin such that "underside" of the work becomes the "right side". It is usually necessary to loosen the lower tension to allow the thick threads to pass through easily. With the presser foot removed and the feed dog lowered, the cable stitch can become a free cable stitch (Figure 2.28).



Cable stitch Free cable stitch

Figure 2.28. Machine embroidery – Cable stitch

Image source: Samples created by author

Group D. Zigzag stitch

The Zigzag Stitch is a stitch from side to side by swinging the sewing needle, giving a zigzag look. The zigzag stitch can be a free zigzag by lowering the feed dog and removing the foot. Zigzag is a good technique for couching and for holding down a variety of items on a background fabric. With a tailor tacking foot, the top thread has to loop as the machine stitches. These loops slip off, leaving a raised pile (Figure 2.29).

Zigzag stitch

Free zigzag stitch

Couching

Tailor tacking/looping foot

Figure 2.29. Machine embroidery – Zigzag stitch
Image source: Samples created by author

Group E. Satin stitch

The Satin Stitch is very similar to the zigzag. When zigzag stitches are worked closely together with no space between them they are called satin stitches. Free satin stitches can be achieved by lowering the feed dog and removing the foot (Figure 2.30).

Satin stitch

Free satin stitch

Figure 2.30. Machine embroidery – Satin stitch
Image source: Samples created by author

The details of each stitch and the basic technique guidelines as following Table 2.6 showed.

Table 2.6. Machine Embroidery Stitch Techniques – Itemization

Stitch Groups	Stitch Types	Top Tension	Bobbin Tension	Presser Foot	Feed Dog	Stitch Length	Stitch Width	Fabric	Needle Size
A	Running Stitch	Normal	Normal	On	Up	Very short to long	0	Framed	90
	Free running stitch	Normal	Normal	Off	Lowered	0	0	Framed	90
B	Whip stitch	Tight	Normal or loose	Off	Lowered	0	0	Framed	90
	Moss stitch	Tight	Very loose	Off	Lowered	0	0	Framed	90
	Feather stitch	Tight	Very loose or bypassed	Off	Lowered	0	0	Framed	100
C	Cable stitch	Normal	Loose	On	Up	Any	0	Un-framed	90
	Free cable stitch	Normal	Very loose	Off	Lowered	0	0	Framed	90
D	Zigzag stitch	Normal	Normal	Satin stitch foot	Up	Any	Narrow to wide	Unframed	90
	Free Zigzag stitch	Normal	Normal	Off	Lowered	0	Narrow to wide	Framed	90
	Couching	- Normal	Normal	Off	Lowered	0	Narrow to wide	Framed	90
	Tailor tacking or looping foot	Normal to loose	Normal	Tailor tacking foot	Up	Any	Mediu m to wide	Framed	90
E	Satin stitch	Normal to loose	Normal	Satin stitch foot	Up	Very short to long	Very narrow to wide	Un-framed	90
	Free satin stitch	Normal to loose	Normal	Off	Lowered	0	Wide	Framed	90

Source: Campbell-Harding & Watts, 1989.

2.5.1.3. Digital stitches

In this study, digital stitches refer to those done by a computerised sewing machine with a pre-set pattern. In 1980, Wilcom International Pty Ltd. introduced the first computer graphics embroidery design system running on a mini-computer. The operator would “digitize” the design into the computer using similar techniques to “punching”, and the machine would stitch out the digitized design. Wilcom International enhanced this technology further in 1982 with the introduction of the first multi-user system that allowed more than one person to be working on a different part of the embroidery process, vastly streamlining production times.

Followings are the basic steps for creating embroidery with a computerized embroidery machine (The Computerized Embroidery Process, 2007):

A. Purchase or create a digitized embroidery design file

B. Edit the design and/or combine with other designs (optional)

C. Load the final design file into the embroidery machine

D. Stabilize the fabric and place it in the machine

E. Start and monitor the embroidery machine

A. Design Files

Digitized embroidery design files can be either purchased or created. In the current market, there are many different brands of machines, and each may use a different format. When purchasing or downloading free designs, one has to ensure that the format selected has to complement with the machine.

B. Editing Designs

Once a design has been digitized, it can be edited or combined with other designs by software. With most embroidery software the user can rotate, scale, move, stretch, distort, split, crop, or duplicate the design in an endless pattern.

C. *Loading the Design*

After editing the final design, the design file is loaded into the embroidery machine. Different machines expect different file formats.

D. Stabilizing the Fabric

To prevent wrinkles and other problems, the fabric must be stabilized. The method of stabilizing depends to a large degree on the type of machine, the fabric type, and the design density. Many types of stabilizers exist, including

cut-away, tear-away, vinyl, nylon, water-soluble, heat-n-gone, adhesive, open mesh, and combinations of these. These stabilizers are often called Pellon. For details of these stabilizers please see Appendix 1. Stabilizers & interfacings.

F. Embroidering the Design

For commercial machines, this process is a lot more automated than for the home embroiderer. In most designs, more than one color would be adopted, and often additional processing for appliqués, foam, and other special effects would be added. Since home machines only have one needle, every color change requires the user to cut the thread and change the color manually.

As with hand and machine embroidery, digital embroidery also involves different stitches and effects. Digital Stitch types divide broadly into two categories: out line stitches (Table 2.7) and filling stitches (Table 2.8). Fill stitches are used to large areas or ‘color blocks’ in a design.

Table 2.7. Digital Embroidery Outline Stitches

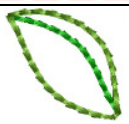
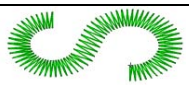
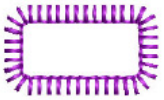
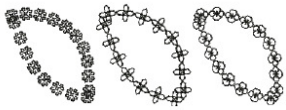
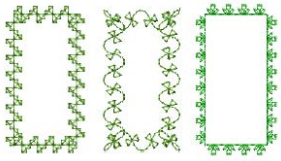
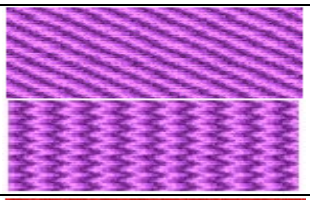
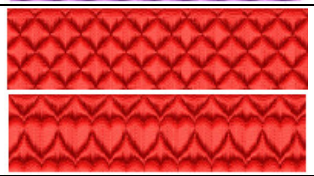
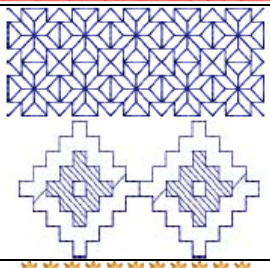
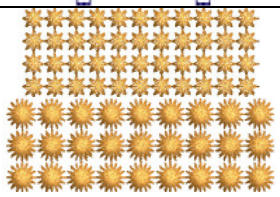
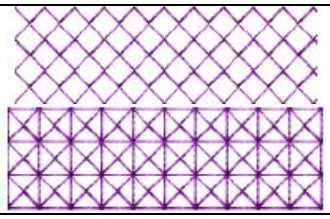
Outline stitches	Features	Examples
Single	for thin outlines	
Triple	for thicker outlines	
Backstitch	for delicate outlines. This small, evenstitch follows intricate curves well.	
Stemstitch	a detail stitch that can be used to outline, for specify various settings including line thickness, spacing, angle, single or triple, and stitch thickness.	
Satin	for adding thicker borders	
Blanket	for long, narrow borders with a 'comb' effect	
Blackwork Border	a few simple stitches to create complex designs.	
Candlewicking Border	a traditional white-on-white embroidery technique, usually done on white linen or cotton fabric with heavy cotton threads. Stitches used are mostly knots, both Colonial and French, as well as stemstitch. Can be used for ornate borders.	
Pattern Run	Creates pattern repeats along a digitized line. Can be used to create decorative outlines	
Source: Wilcom International Pty Ltd, 1997-2006.		

Table 2.8. Digital Embroidery Fill Stitches

Fill stitches	Features	Examples
Satin Fill	for narrow shapes.	
Step Fill Samples	for larger, irregular shapes.	
Fancy Fill	to fill wide and large areas with unique artistic effects while keeping the appearance of a solid field of stitching.	
Fancy Blackwork Fill	To employ simple stitches to create complex scrolling or geometric patterns.	
Candlewicking Fill	Can be used either as borders, as fills, or even pattern stamps.	
Lacework stitch	Consists of an open square trellis-like pattern which gives objects a lacey.	
Pattern Fill	A decorative fill stitch with which you can fill closed objects. Patterns are repeated in parallel rows to fill a shape.	
Source: Wilcom International Pty Ltd, 1997-2006.		

Digital embroidery is mainly used for commercial purpose and mass production. However, some designers also use digital embroidery for creative art. In fact, the *Pfaff Art Embroidery Challenge* is a global competition, which encourages using home sewing machines to produce embroidery work by either freehand or digital or both techniques (Pfaff, 2008). Art work shown in Figure 2.31 is produced by computerised embroidery machine (Brennand-Wood, 2008).

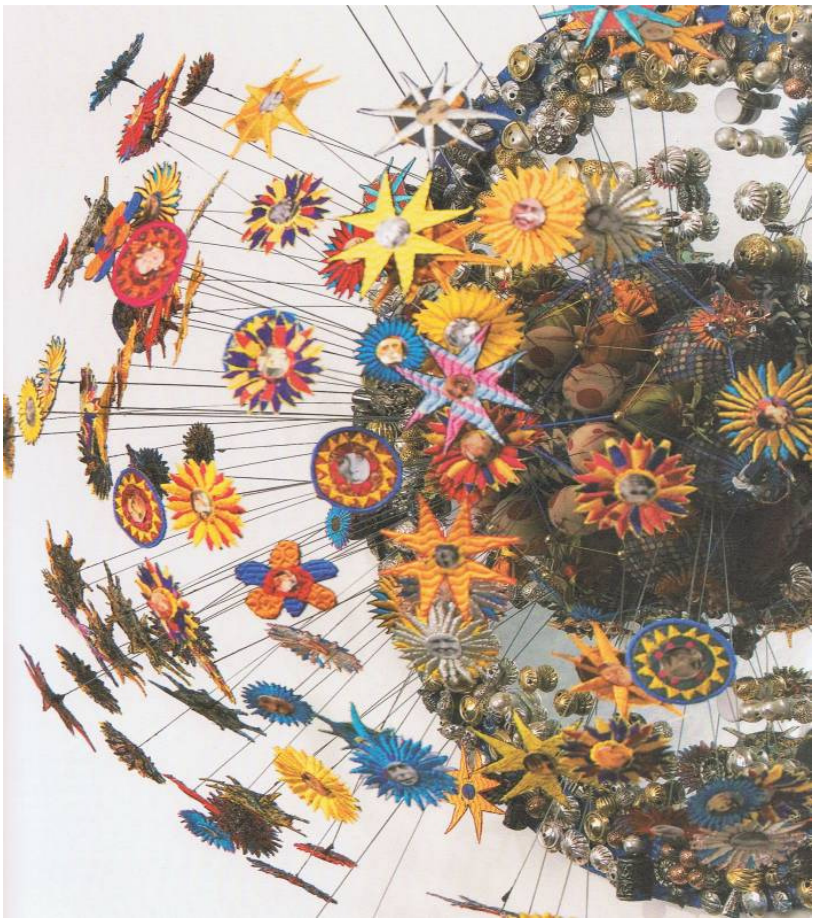


Figure 2.31. Digital Embroidery

Note: Flower Head – Narcissistic Butterfly, by By Michael Brennand-Wood (2005)
Image source: McFadden, 2007, p. 37.

2.5.2. Other Embroidery Techniques

In addition to stitches, there are innumerous other embroidery techniques, commonly used techniques including canvas work, cut work, quilting and other traditional methods.

Canvas work

Canvas work is often called ‘needlepoint’. Originally it was embroidery worked on coarse linen in tent stitch and other stitches (Howard, 1978, p. 74). Canvas work depends on color, texture and mass for impact. Mass rather than line should be aimed at in design, with a contrast of tone. Color can be fully exploited too in this embroidery, as can tone, which results from the direction in which the stitch is worked (Howard, 1978, p.75), see Figure 2.32.

Figure 2.32. Canvas work
Note: Detail of a tea cosy. Image source: Box, 1993, p. 119.

Cut work

In this type of embroidery, areas of fabric are cut away to make spaces, raw edges of the fabric being secured with stitches (Howard, 1978, p. 78). Today, cut work is less popular, but it can be an interesting means of decorating costumes and household articles (Howard, 1978, p. 78) (Figure 2.33).

Figure 2.33. Cut work
Note: Brown, 2002, p. 110.

Fabric manipulation

Fabric manipulation simply refers to methods of organizing and stitching fabrics into a design (See Figure 2.34).

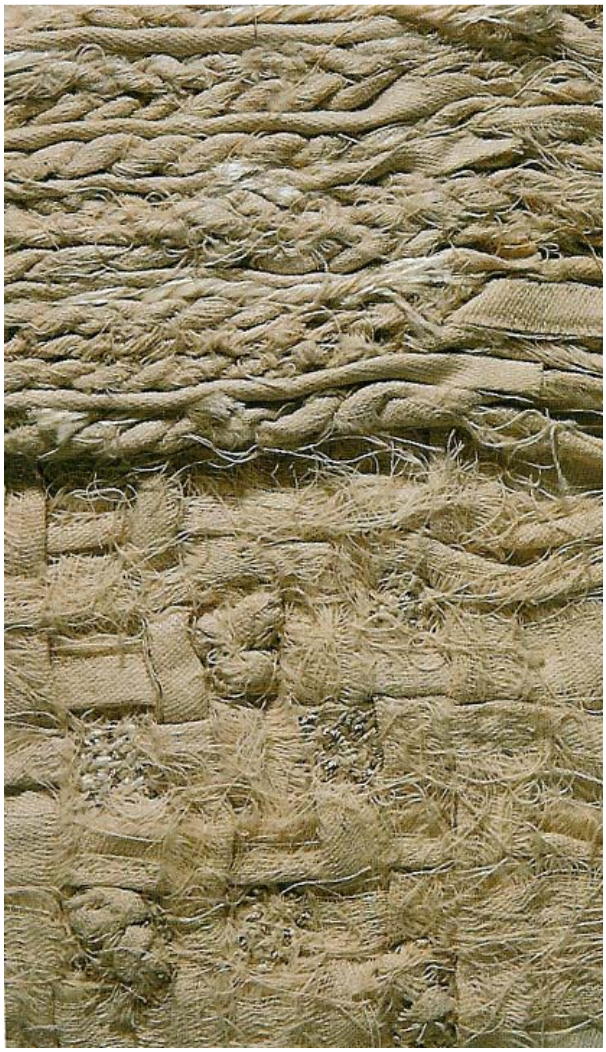


Figure 2.34. Fabric manipulation

Note: Work by Louise Ellis
Image source: Beaney & Littlejohn, 1991, p. 101.

This may be a free textured surface or a formal regulated pattern (Littlejohn, 1986, p. 14). According to Littlejohn (1986, p. 14), the numerous possibilities include those in Table 2.9.

Table 2.9. Possibilities for fabric manipulation

torn strips	rolls of fabric	gathering
twists and curls	fraying	ruching
folding	plaiting	pleating
rouleaus	tucking	cords and braids

Source: Littlejohn, 1986, p. 14.

Quilting

Throughout history, quilted articles have been made for warmth, and in many cases for decoration. The main types of quilting are English (see Figure 2.35), Italian and Trapunto, each giving a different effect. So-called shadow quilting using felt shapes between sheer fabrics is a technique that gives padded effects to an embroidery work.

Figure 2.35. English quilting
Note: A detailed part of a quilted waistcoat, made in England early in the 18th century.
Image source: Barton, 1989, p. 80.

In English quilting (wadded quilting), three layers of fabric are used, as this type is for warmth. In Italian quilting or corded quilting, cords are used instead of padding. Trapunto quilting (stuffed quilting) is also decorative, with small patterns raised on a flat background (Howard, 1978, p. 83). The stitches used for quilting are the back stitch, chain stitch and running stitch. For decoration, any surface stitches may be added after the fabrics have been quilted (Howard, 1978, p. 85).

Appliqué

This is a technique of applying one fabric to another to make a design. Patterned and plain fabrics may be mixed; different textures may be placed together (Figure 2.36) (Howard, 1978, p. 85).

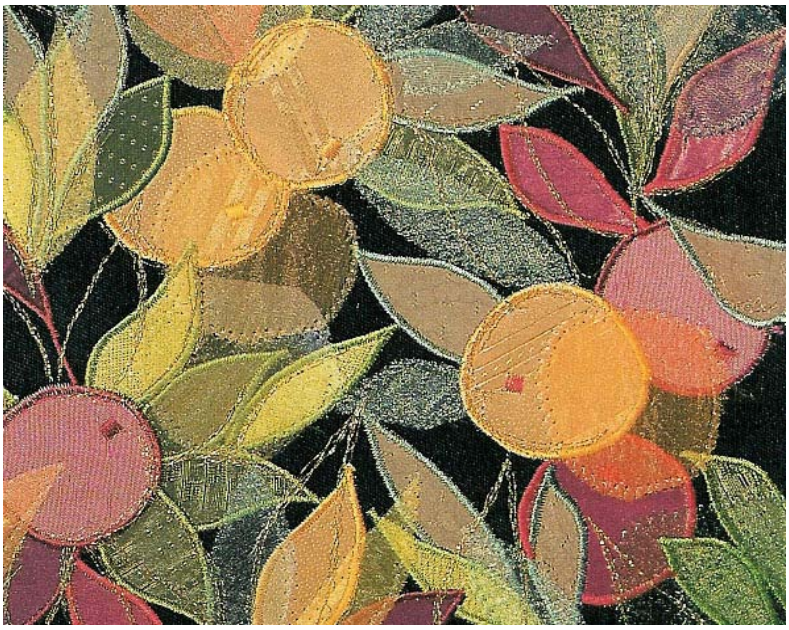


Figure 2.36. Appliqué

Image source: Brown, 2002, p. 97.

Embellishment

An ancient technique, embellishment has long been used for decorative details on cloth, textiles, and embroidery by adding interesting items to them. Typical items of embellishment include metal threads, mirrors, coins, sequins, shells, feathers, fringes, tassels and beads. Items that normally serve as functional items such as buttons, zippers, and buckles may also be used for embellishment. Figure 2.37 is an example of embellishment in fashion by Christian Lacroix.

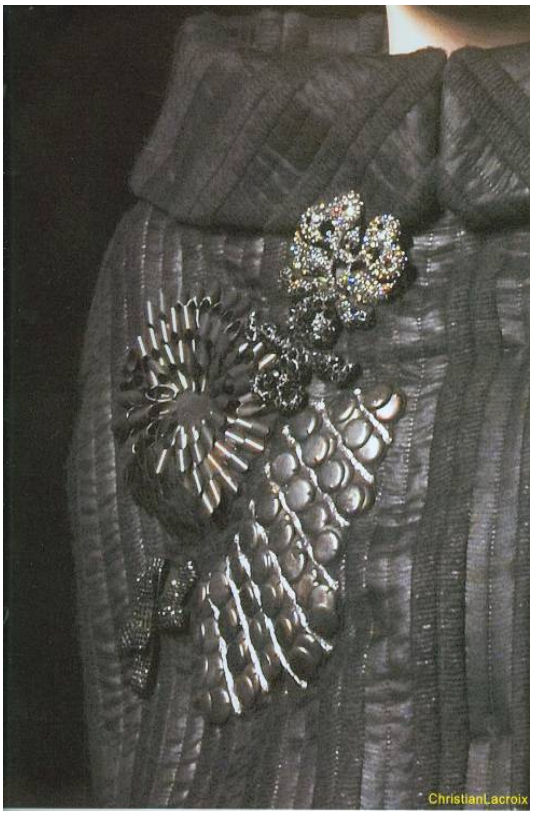


Figure 2.37. Embellishment
Note: Work by Christian Lacroix, 08-09 Autumn & Winter.
Image source:Fashion Consultant Ltd: Top Fashion Embroidery, No14.

2.6. Embroidery for Cultural Identity

Culture can be defined as all the aspects of life, including arts, beliefs and institutions of a people, which are passed down from generation to generation. Culture generally refers to patterns of human activity. Culture can also be "understood as systems of symbols and meanings" (Wikipedia, 2008) that even their creators contest, that lack fixed boundaries, that are constantly in flux, and that interact and compete with one another. Embroidery arts of different cultures tend to have their own distinguishing patterns, embroidery techniques, and use of materials – Chinese silk hand embroidery, English blackwork, and Indian mirror-work embroidery being examples of this.

Cultural identities are represented by cultural products. Fashion and embroidery works, as cultural products, hold an important position in reflecting cultural identities (Back, 2007). Roberts (1997, p. 9) summarised four functions of cloth and embroidery in depicting a cultural identity, as follows:

1. Reflecting the status and aspects of the times in which people live;
2. Highlighting or concealing people's history, traditions and ideologies;
3. Linking together the cultural history and social life of a nation;
4. Reflecting changes, in particular the impact of social, cultural, political and economic forces. (Roberts,1997, p. 9)

Some people also see fashion as a mirror of social development (Foreword by Fiusi Ferrè for Rocca, 2006). As a good example of this, Chinese fashion and embroidery both embrace the meanings, symbolisms and philosophies of Chinese culture. As one of the oldest decorative artifacts, embroidery always goes hand in hand with fashion design. “Fashion has always been changing” (Stone, 2008), so different time periods and cultural epochs can then be distinguished along all these diverse lines (Back, 2007). Fashion and embroidery reflect the development of society, just like new materials, new technology, and art movements (Lurie, 1981). Design concepts are dynamic, and change with the development of the economy and society, as McKelvey & Munslow (2003, p. 1) correctly point out that, “The very word fashion signifies change.” Traditional Chinese embroidery has preserved its purity as a traditional art form, but has, however, limited application in fashion.

Chapter 3

Methodology and Data

3.1. Introduction

Fashion and embroidery designers tend to rely on intuition and educated opinions. However, logical thinking is not enough, especially in art design (Geoffrey, p. 22); neither is human judgment always correct and efficient (Spector, 1993, p. 1). "Conceptual design is the thought process of generating and implementing the fundamental ideas that characterize a product or system" (Kroll et al., 2001, p. 1). In order to gain a deeper understanding of the embroidery process it is necessary to implement a new concept developed systematic control. This study applies the parameter analysis method (PAM) as a control mechanism to implement new design concepts into contemporary fashion and embroidery design. PAM is designed to minimize the biases that affect subjective opinions, especially for project based designs. "One of the strengths of parameter analysis is in providing a systematic methodology to develop an initial, rough idea into a viable conceptual solution. Compared to other approaches, we observe that

conceptual designs developed through parameter analysis are considerably more detailed and firm." (Kroll et al., 2001. p. 6)

Previous studies of embroidery have mainly focused on the techniques and on the material, culture, art and craft. There is little on the conceptual design as a systematic approach, even though it has been well established in other areas, such as product design. This study will take a systematic design approach by applying conceptual design theory to embroidery design. This chapter introduces the methodology adopted in this research, including the principles and theory of the Parameter Analysis Method (PAM) and related methods used in this research.

3.2. Conceptual Design Theory: Parameter Analysis

In today's market driven world, satisfying customer's requirements and following fashion trends have become a necessity for modern fashion designers. Moreover, they tend to work on project-based design tasks more and more. As with other types of design, projects required by customers or clients are usually resolved in the form of a design brief. Because of such excitement, project based designs are more challenging than those initiated by designers themselves. The Parameter Analysis Method (PAM) is used as a means of capturing customer requirements. It is designed to minimize the biases that affect subjective opinions, especially for projected based design (Spector, 1993, p. 1). This study introduces the principles and theories of the

Parameter Analysis Method (PAM) and analyzes, defines and transforms the requirements into parameters, ready for their application in fashion embroidery design.

PAM can be used to reveal the subconscious thought and logic of successful fashion designers, and can also be used as an alternative way of thinking and reasoning for project based fashion and embroidery design. This systematic approach is also useful in training fashion students to cultivate a practice of structured reasoning in their early design career path. It is a way of developing a systematic design approach, including a Parameter Analysis Method (PAM) and a design process model, for fashion embroidery.

PAM is suitable for examination of the features and characteristics of customer requirements, and to map the journey from the beginning of the design process to the finished product. The PAM method has been used as a control mechanism in various design areas, such as in engineering design, product design, and computer science. The method also is particularly a useful tool for project based fashion design.

3.2.1. Literature review

Previous studies of embroidery tend to limit their scope to techniques, materials and design methods (Whyatt & Oxland, 1975; Whyte, 1969;

Nicholas & Teague, 1975; Beaney & Littlejohn, 1991). There have been few studies of a systematic approach to the embroidery design process.

Parameter analysis can be used in very differing design areas, such as in engineering design, product design, and computer science. In engineering design, Condoor & Kroll (2008) present parameter analysis as a tool to create effective configurations incorporating fundamental design principles. The process is presented in a structured manner to effectively describe the approach. It elaborates on the parameter analysis cycles dealing with the principles of direct and short transmission paths to illustrate the means of applying the principle during design. Wielinga and Akkermans et al (1995) use a formal analysis of the problem of parametric design on the basis of the competence-theory approach to problem solving methods. As Pipes (2003) rightly pointed out, “design can be considered as a form of problem-solving. But unlike math, in art there is never a single correct solution. Artists often set their own tasks; designers are given a brief with strictly defined parameters, and attempt a design based on those constraints.” (Pipes, 2003, pp. 9-10) In science and engineering, parameter analysis is often used for problem solving, and therefore searching for solutions is the primary objective (Faimon & Weigand, 2004, p. 168). However, in fashion and embroidery design, problem solving is less important than in science and engineering design, since the primary objectives of fashion and embroidery design also embrace the taste preferences of both the customers and the designers.

3.2.2. Concepts for parameter analysis

As time goes, design theory has been well developed in other design fields, such as product design and architecture. This study will take a systematic design approach by applying design theory into the fashion embroidery design process.

Fashion embroidery design can be defined as a process in which a set of requirements and desires are met, and a final product produced to satisfy all these needs and desires. Often, the requirements of customers and the desires of the designers can be specified in an informal way that leaves much unsaid.

The fashion designer has to go through an analysis process – expressed or implied – and then transform these requirements and desires (constraints) into a more formal and complete set of parameters by which these initial requirements and desires can be reflected and presented by the resultant visible fashion product. During the process of parameter analysis, using their design knowledge and artistic sense the designers make design decisions that satisfy the customer requirements.

For this study, relevant concepts are defined as follows:

(i) *Requirements (R)* are defined as “the wanted or necessary properties that a design must have in order to be acceptable as a solution”

(Brazier et al., 1994), which come mainly from outsiders, e.g. customers;

(ii) *Desires (D)* are defined as the tastes of the designers;

(iii) *Constraints (C)* are used to indicate limitations on what counts as a possible design solution.

3.2.3. From constraints to parameters

There are typically three steps of PAM. Figure 3.38 demonstrates the three-step process:

(i) Consolidation of requirements and desires to constraints;

(ii) Extraction of parameters;

(iii) Synthesis of design process.

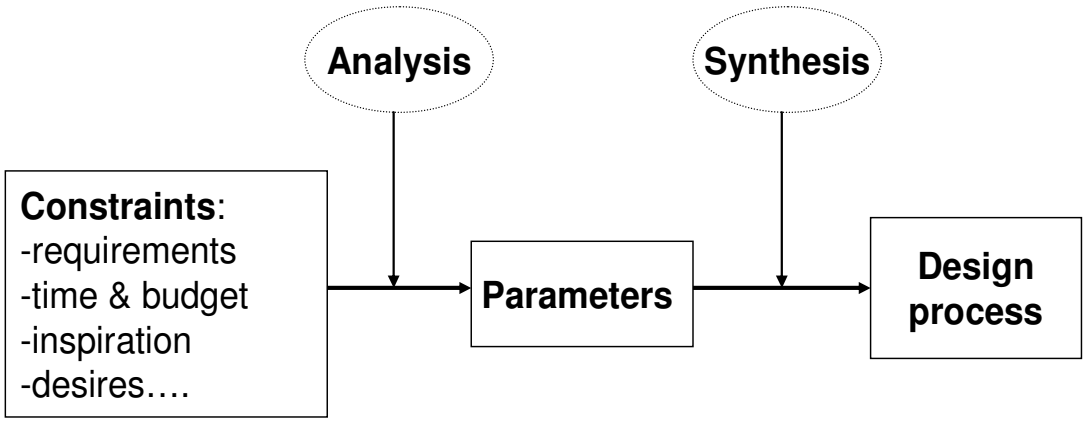


Figure 3.38. The process of parameter setting
Note: This figure is created by author, 2008.

R and *D* are not all elements of *C*; there could be other elements, e.g. time and budget constraints. So we can describe the relationship between "requirements/desires" and constraints by using the formula (1):

$$R+D \in C \quad (1)$$

Which means that *R* and *D* are elements of the set *C.*

As constraint (C) factors cannot be fully described, they can best be covered and described logically by parameters (P). So the relationship between C and P can be described by formula (2) and (3):

$$P :\Leftrightarrow C \quad (2)$$

Which means that *P* is defined to be logically equivalent to *Q*.

The relationship between one parameter p_i and all *P's* can be shown as:

$$p_i <\bullet P \quad (3)$$

Which means that p_i is covered by *P*. Hence, the synthesis process of PAM and the result *P* produced by the PAM synthesis can facilitate the designer's completion of the project.

3.2.4. Constraints and free design space

Fashion design is a process of exploration and expression of the inner desires of the designers under constraints. Freedom cannot be under-valued by any designer. *Free design space* Ω can be defined as the space enclosed by boundaries that are the constraints of the task (Kroll et al., 2001, p. 20). *Free design space* Ω is demonstrated in Figure 3.39.

The constraints limit the ways in which the design can be realized, and thus reduce the size of the free space. The more constraints (requirements), the narrower the free space – thus, less freedom is left to the designers. To artistic designers (e.g. embroidery designers), the more free space the better; on the other hand, to those designers with a scientific mind, such as engineers, less free space may be of advantage in the sense of determination. However, in both directions, the function of PAM is to set the parameters and then to define the free space Ω.

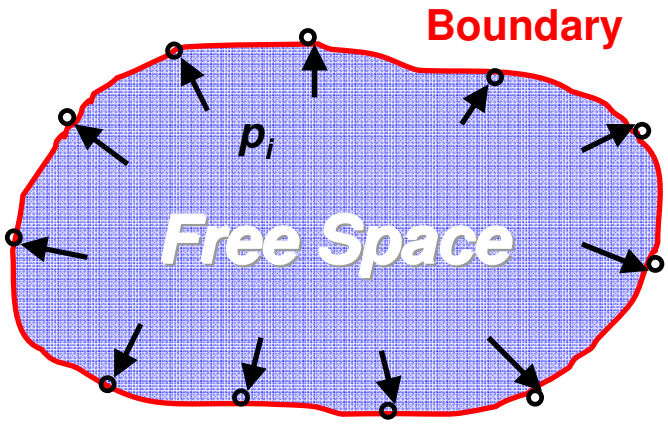


Figure 3.39. Free space for fashion design
Note: This figure is created by author (2008), referred to Kroll et al, 2001, p. 21.

Referring to Van de Velde (1998), the notion of Ω can be defined as a tribe as in formula (4):

$$\Omega=<P, Sol, solution> \quad (4)$$

Where P is the set of parameters in Ω, Sol is the set of solutions in Ω, and the solution is the relationship between P and Sol, i.e. in formula (5):

$$solution \subset P \times Sol \quad (5)$$

A solution for a specific parameter $p \in P$ is in the free (solution) space Ω, which holds all solution (p, sol). By definition, design conceptualization means to analyze in more detail all the ingredients that are included in Ω. For each parameter p, there will be relevant sol.

The major weakness of any design method is the difficulty of having a controlling strategy in normal design situations, and when many people are working on a individual design project. PAM can be helpful in this regard, as requirements and constraints can be transformed into parameters (design criteria) based on the design solution concluded upon.

In today's market driven world, satisfying the customer's needs and following fashion trends have become a necessity for modern fashion designers, who are now facing an increasing number of project based design tasks. As with other types of design, projects required by customers or clients are usually presented in the form of a brief. Therefore, project based designs are more challenging than those initiated by designers themselves. The PAM

is used to capture customer requirements. This study introduces the principles and theories of the PAM and analyzes, defines and transforms the requirements into parameters, ready for their application in fashion embroidery design.

PAM can be used to reveal the subconscious thought and logic of successful fashion designers, and can also be used as an alternative way of thinking and reasoning for project based fashion and embroidery design. This systematic approach is also useful in training fashion students to cultivate a practice of structured reasoning in their early design career path.

A full application of PAM on fashion embroidery design is carried out in Chapter 7.

3.3. Supplementary Methods

As supplementary methods, the case study, comparative study and experimental method are also used to support and verify the result of the conceptual design process.

3.3.1. Case study

In general, case studies are the preferred method when “how” or “why” questions are being posted (Yin, 2009, p. 2). Gerring (2007, p. 37) defined “case study” as “an intensive study of a single unit or a small number of units

(the cases), for the purpose of understanding a larger class of similar units (a population of cases)." As Gerring pointing out (2007, p. 1), there are two ways to learn how to build a house – one might study the construction of a particular house (a case study), or of many houses (a cross-case study). This research contains both a case study and a cross-case study (Gerring, 2007, p. 38).

Table 3.10. Research design in case studies

Research goals	Affinity	
	Case Study	Cross-Case Study
1. Hypothesis	Generating	Testing
2. Validity	Internal	External
3. Causal insight	Mechanisms	Effects
4. Scope of proposition	Deep	Broad

Source: Gerring, 2007, p. 38.

Table 3.10 demonstrates the differences between a case study and a cross-case study, which complement each other. A case study gives deep, internal understanding while a cross-case study gives broader support for the results found. In this study, case studies will be used to address how and why designers and experts are thinking and doing in that particular way in their embroidery work process. At the same time, cross-case studies will apply in the case study of Lesage House, and of the Hong Kong industry general principles or process model for fashion embroidery design. For details, see Chapter 5.

In order to gain first hand experience and knowledge, and to understand the latest developments in the industry and profession, the case study is carried out by interviews and questionnaire interview methods. Email questionnaires have also been sent to two fashion designers in Hong Kong for their views and comments on the application of embroidery in fashion.

Appendix 5 and 6 contain the feedback from Questionnaire 1 and Questionnaire 2 in the case studies.

3.3.2. Comparative method

After examination of the development of embroidery in China and the West, it becomes apparent that in some respects the two are similar, and in some respects they are different. These differences become the focus of examination. Cross-national comparative research is a growing phenomenon (May, 1997). The goal of this comparative study is to find out the differences between Chinese and Western embroidery on their respective development paths, and how to apply the general principles of design theory to Chinese fashion embroidery. For a detailed discussion and conclusion see Chapter 4 and Table 4.17.

3.3.3. Experimental method

The experimental method seeks to answer the question “What if?”, and is especially useful for observing the effects when the researcher introduces some new element into a situation (Allison, 1996, p. 17). The experimental method seeks to establish the different artistic effects of using different embroidery techniques, materials or patterns, as this method can involve the deliberate manipulation of one variable (technologies, materials or patterns), while trying to keep all other variables constant.

As to the differences between creative embroidery and commercial embroidery, Risley (1973, p. 8) comments that ‘Creative work differs from trade work in so far as time and money are not limited, and there is only one personally designed and supervised end product instead of several reproductions of the same design, usually worked with imposed restrictions’. In this study, the experiments are conducted for creative embroidery at the conceptual stage, but with the consideration and possibility of commercialization at a later stage. There are three projects in this study that use the experimental method to test the results.

Experiment I – Embroidery samplings

The purpose of this experimental project is to build up a *New Design Concept* on the following aspects:

- Pattern: Experiments on motif design – developing from traditional Chinese patterns to a different proportion, scale, balance, color, etc;
- Materials: Experiments on materials – using varied materials from traditional to modern, even experimenting with non-traditional embroidery materials;
- Techniques: Experiments on techniques – examining hand, machine and digital embroidery;
- Combination: Experiments on combining embroidery with other textile methods – such as applying dye, paint, and print techniques.

For experimental samples refer to Chapter 5.

Experiment II – Embroidery design project

Through two case studies, embroidery design process Model is built up. The purpose of this experiment is to test and fine tune the embroidery design process model. Details refer to Chapter 6.

Experiment III – Fashion design project

This fashion design project is to implement the New Design Concept and Parameter Analysis Method (PAM) in the Embroidery Design Process Model. For details, refer to Chapter 7.

3.4. Data Collection

Apart from literary review, visual data (photos and images), field studies, case studies and interviews of experts provide supplementary information that gives a better understanding of the role of embroidery in fashion design. Analysis of the collected data is needed for this study, as a result of which a more accurate conclusion can be reached. Special data collection will cover Chinese embroidery, embroidery fashion and embroidery techniques.

To study the features of both Chinese and Western embroidery and its development, using firsthand materials and information in conjunction with the literature review method, will enable the field study to enrich the understanding, knowledge, and experience. For this purpose, the author has visited Suzhou in China and London in the UK as part of the comparative study between Chinese and Western embroidery.

3.4.1. Chinese embroidery field study (20-30 December 2006)

Suzhou embroidery was one of the first embroidery styles to be developed in China, and its detailed needlework and intricate images are still produced today. It is a style characterized by brightly colored silk embroidered with well-proportioned and uncluttered representations of almost any pastoral scene, person, animal, or object. Examples of Suzhou embroidery were so detailed and intricate that many people used the pieces as artwork, and some of the oldest pieces still in existence date back hundreds of years. During the field study, data has been obtained from:

1) China Su Embroidery Art Museum
2) China Suzhou Silk Museum
3) Suzhou Embroidery Research Institute (SERI) (Appendix 3)
4) Interview the Chinese embroidery experts (Appendix 7)

During the visit, two experts in the embroidery field were interviewed. One is the Director of the Suzhou Embroidery Research Institute in China, Ms Zhang Meifang. The other is Chen Zhuqing, who is the Chief Artistic Director of Shen Young's Chinese Needle Painting Company, and is also the third descendant of Yang Shouyu.

3.4.2. Western embroidery field study (24 June 2008 – 6 August 2008)

England has a splendid history of embroidery spanning thousands of years, and holds a leading position in the development of contemporary embroidery. London, the capital city, is the centre of embroidery teaching and research, and is the first choice for a western embroidery field study. This field study enables the researcher (applicant) to understand the history, new technology and latest trends in contemporary embroidery teaching and research.

The visit to London covers the development of different aspects of western embroidery, such as fine arts, crafts, fashion embroidery, soft furniture, religious embroidery, and so on. London has many museums that can be visited to gain an overall understanding of western embroidery development. During the field study, some embroidery related organizations and exhibitions have been visited as follows:

1) Crafts Council, London
2) Embroiderers' Guild, London
3) William Morris Gallery, London
4) Fashion and Textile Museum, London
5) Victoria & Albert Museum, London
6) Hand & Lock Embroidery, London (Appendix 8)
7) Royal College of Art Postgraduate Art and Design Show, 2008.

8) Extending the Boundaries, the contemporary embroidery exhibition of the Embroiderer's Guild, Worthing, West Sussex.

9) Lesage House, Paris

3.4.3. Data on embroidery techniques

This study has collected together data on embroidery techniques that have been classified as either into hand, machine, or digital embroidery as follows:

- Data on Hand Embroidery Stitch Techniques has been reviewed and classified (see Tables 2.1-5)
- Data on Machine Embroidery Stitch Techniques has been reviewed and classified (details in Figures 2.26-30, and Table 2.6)
- Data on digital embroidery technology has been collected and reviewed base on BERNINA Embroidery Software V5 (Tables 2.7-8)

3.4.4. Data on symbolism in traditional Chinese embroidery

Symbolism is a very unique feature of traditional Chinese embroidery. It has special code for certain animals, flowers and other items in daily use. Visual data on traditional Chinese symbolic embroidery (see Chapter 4) has been also collected.

3.4.5. Data on contemporary embroidery fashion

This study has collected together 2007-2009 top fashion photos that are related to embroidery techniques, and classified them into various features of contemporary embroidery (see Chapter 5):

- Using traditional Chinese patterns for inspiration
- Using various modern materials
- Using modern technologies: machine embroidery or digital embroidery
- Highlighting with hand embroidery when necessary
- Combining other alternative techniques using dyes, discharges, paints, screen printing or digital printing along with embroidery
- Considering other dimensions

Chapter 4

East Meets West – a Comparative Study

This chapter examines the development of embroidery both in China and the West. The goals of this comparative study are to find out the differences in features between Chinese and Western embroidery, to summarize the general principles of modern embroidery design, and to establish a new design concept for incorporating traditional Chinese embroidery into modern fashion designs and trends.

4.1. Western Embroidery

4.1.1. Development of Western embroidery

Western embroidery in this study refers to embroidery developed in European countries and centered on English embroidery.

4.1.1.1. Early works

The earliest written reference to embroidery was that by Moses about 3500 years ago in Biblical times. Needlework skills were used to decorate the sacred vestments, as recorded in Exodus 39:3, and to decorate the screen of the tabernacle with blue, purple and scarlet threads, as recorded in Exodus 26:36 (New World Translation of the Holy Scriptures, 1984).

The ancient Egyptians were also skilled craftsmen. The earliest surviving embroideries are in Egypt, from the tombs of pharaohs about 1400-1300 BC (Harris, 1993, p. 56). Ancient Mediterranean peoples also practiced embroidery. Centers of fine embroidery developed in ancient Persia, Babylon, Israel, Phoenicia and Syria (Harris, 1993, p. 200).

In the medieval Byzantium period, court garments, ecclesiastical vestments and altar cloths were embroidered in rich colors and ornate designs, often copied from Persian models and enhanced with pearls and gold and silver threads.

In late medieval Greece, linen panels were embroidered in silk in colorful geometric and floral patterns influenced by Persian and Italian decorative motifs. The influence of Byzantine art is found throughout Europe, particularly in Italy and southern Europe. The Byzantine figural style was commonly used on church vestments made in Italian workshops, and also in German ecclesiastical embroideries of the 10^{th} and 11^{th} centuries.

The earliest embroidery surviving in England (from 906 AD) is a stole and maniple (church vestments Figure 4.40) from the tomb of St. Cuthbert at Durham. It is in silk, on a background of gold thread. The design and embroidery were all in very much higher quality than those found in Europe during the same period (King & Levey, 1993).

Figure 4.40. St Cuthbert's Maniple (909-916 AD) England

Note: Surface couching in gold thread, with colored silk in split and stem stitches. Image source: Warner, 1991, Color plate 1.

The most famous British embroidery piece and the largest hanging to survive from the medieval period is the 11th century Bayeux Tapestry as shown in Figure 4.41. The vast dimensions of the Bayeux Tapestry are rare, being 221 feet long and 18-21 inches wide. Technically speaking, it is an embroidery piece rather than a tapestry. It recorded historical events surrounding the Norman conquest of England. Using colored wool on a linen background, it portrays a lively and vigorous design and workmanship (Whyte, 1969; Wardle, 1970; Warner, 1991, pp. 18-21; King, 1993).

Figure 4.41. Detail of Bayeux Tapestry (1070-80 AD)

Note: Linen embroidered in colored wool in laid and couched work, using stem and outline stitches.
Image source: King & Levey, 1993, p. 32.

English liturgical embroidery of the 13th through to the 15th centuries – called Opus Anglicum ("English work") – was famous throughout Europe. Ecclesiastical vestments and textiles were embroidered in silks and silver and silver-gilt thread, using seed pearls and semi-precious stones with images of saints (Figure 4.42).

Figure 4.42. English chasuble (Early 14th century)
Image source: Synge, 2001, p. 50.

From around 1250 to 1350, it was the period when Opus Anglicanum embroidery reached its great height; a period of luxurious taste related to English Gothic architecture and illuminations of manuscripts (Warner, 1991, p.

24). As Opus Anglicanum declined during 14th century England, the ecclesiastical embroidery of Europe reached new heights by using a new technique, Or nué (a metal thread technique that completely covers the background fabric, often used with spit stitch depicting the faces and hands) (Warner, 1991, p. 48). Although the surviving specimens from this period are exclusively ecclesiastical items, there is documentary evidence that embroidered costumes and furnishing items were also produced (King & Levey, 1993, p. 13).

4.1.1.2. 15th and 16th Centuries

During the 15th century, English religious embroidery went into decline. The major change during the 16th century was the swing away from ecclesiastical embroidery to secular and domestic work. Those works surviving from the reigns of Elizabeth I (1558-1603) and James I (1603-1625) were almost exclusively secular (King & Levey, 1993, p. 15). The splendor of the reign of Elizabeth I brought about a great variety of embroidery techniques, with many new surface and knitted stitches. Many varieties of cross stitch also came into prominence. The black-on-white color, worked in double-running or Holbein stitch, developed into the popular Elizabethan blackwork (Figure 4.43).

Figure 4.43. Blackwork was popular in the 16th century

Note : Blackwork is a technique that developed in England and was popular all over Europe in the earlier part of the 16th century.
Image source: Synge, 2001, p. 77.

In the 15th and 16th centuries, during the Renaissance, embroidery was increasingly used for secular purposes in Europe. In the 15th century, white-on-white cutwork gave rise to reticello (Italian, "little net"), which was an early stage in the development of lace making. In Germany, after the Protestant Reformation, embroidery was used for both secular and domestic objects, and crewel embroidery became popular. In eastern and central Europe, embroidery flourished as a folk art, and was used to adorn pillows, towels,

sheets, valances, and other household items. Geometric and floral motifs were common, and the palette was generally bright and colorful.

4.1.1.3. 17th and 18th Centuries

During the 17th and 18th centuries, the previously established techniques continued in use. Embroidery continued to make a major contribution to home furnishings (Figure 4.44) and dress throughout the 17th century, as well as during the first sixty years of the 18th century (King & Levey, 1993).

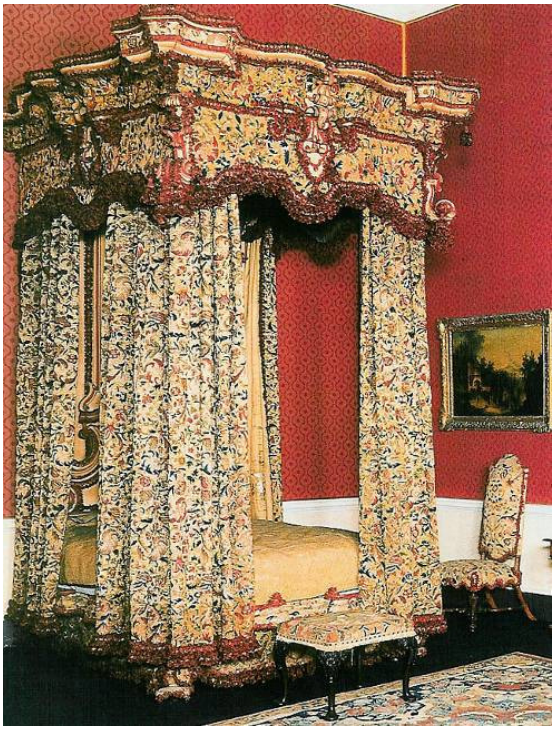


Figure 4.44. Embroidered bed in 17th century
Image source: Synge, 2001, p. 90.

During this period, samplers came into use as a means of recording stitches and patterns (figure 4.45). In the 18th century, samplers also became pictorials (Figure 4.46).

Figure 4.45. English sampler in first half of 17th century
Image source: Browne, 1999, p. 42.

Figure 4.46. English sampler in late 18th century
Image source: Browne, 1999, p. 82.

Three techniques became important during the 17th century, these being Canvaswork, Stumpwork and Crewelwork. The Canvaswork is a type of counted-thread embroidery in which yarn is stitched through a canvas or other foundation fabric. In the 17th and 18th centuries, Canvaswork was used for chair seats and backs, wall hangings, carpets and fire screens (Figure 4.47).

Figure 4.47. English sofa using canvaswork (early 18th century)
Image source: Synge, 2001, p. 240.

The second is Stumpwork, which is a kind of heavily padded embroidery on a background of ivory colored satin. In the 17th century, it was often used for Biblical scenes with figures, to decorate objects such as boxes or mirror frames (Figure 4.48).

Figure 4.48. Stumpwork casket (17th century)
Image source: Synge, 2001, p. 135.

Crewelwork, also termed as ‘Jacobean Embroidery’, is created with crewel or worsted wool on a twill background of linen warp and cotton in varied stitches and colors, with exotic leaves, birds, and scenes. Crewelwork was used for hangings, curtains, bedspreads and other domestic furnishings (Figure 4.49).

Figure 4.49. Crewelwork hanging (late 17th century)
Image source: King & Levey, 1993, p. 83.

The Baroque style began in Rome in the late 16th century, and spread throughout Europe, reaching its peak in the 17th century. The Baroque style is bold, elaborate, and theatrical. Embroidery in the 17th century reflects the Baroque style, as in Figure 4.49. With the arrival of the second half of 18th

century, the neo-classical style became the fashion (Figure 4.50) – pure and simple.

Figure 4.50. Curtain in first quarter of the 18th century
Note: Linen embroidery with silk in stem, satin, long and short and fern stitches.
Image source: King & Levey, 1993, p. 93.

4.1.1.4. 19th Century Trends

European embroidery during the 19th century showed "a gradual degeneration of skill before the artistic re-appraisal of the craft in the 1870s." (Parry, 1988). Between the 18th and 19th centuries, embroidery also developed in appreciation art – 'needlepainting' – which is the art of transposing a painted picture to an embroidery picture.

Mrs Mary Knowles (1733-1802) was one of the embroidery masters in the 18th century. She used straight stitches, closely worked to copy the brush-marks of an artist working in oils (Figure 4.51). Another best-known exponent was Mary Linwood (1755-1845), who specialised in worsted embroidery on a linen background. She embroidered in irregular straight stitches, using specially dyed wool (Figure 4.52). Her portraits brought her great fame in the latter half of the 18th and the first half of the 19th centuries (Jones, 1969; Gostelow, 1975).

Figure 4.51. Knowles' embroidery self-portrait
Image source: Beck, 1999, p.79.

Figure 4.52. Linwood's needlepainting
Image source: Beck, 1999, p.102.

In the 19th century, a trend toward simpler styles set in. The most widespread popular technique of the 19th century was the Berlin work (Figure 4.53), a variety of needlepoint or canvas work executed in silk and sometimes beads on brightly colored wool. Needle workers followed designs painted or printed in Berlin that were sold throughout Germany and exported to Great Britain, the United States, and elsewhere (hence the name Berlin work) (Warner, 1991, p. 147).

Figure 4.53. 19th century Berlin work

Image source: Benn, 1995, p. 39.

William Morris (1834-96) was the best-known personality of the Arts and Crafts Movement, and some of his contemporaries led to embroidery of a different kind, being created first in the home by the wives, daughters and sisters of artists and designers. Morris's daughter, May, was a leading practitioner of the craft. Her work is shown in Figure 4.54. Commercially referred to as 'Art Needlework', this included all surface techniques, but instead of counting threads, the embroiderers translated their designs (provided by the leading artistic figures of the day) in a much freer way than before, choosing outline or filling stitches according to the effects they wanted (Parry, 1988).

Art needlework was evidence of the influence of the Arts and Crafts Movement, the designs being very naturalistic, unlike Berlin wool work. The Royal School of Art Needlework was founded in 1872 to promote and teach the techniques. Warner (1991, p. 151) mentioned that "By the end of the 19th century, Art needlework completely dominated embroidery".

May Morris, photographed by Frederick Hollyer, about 1890.

Image source: http://www.vam.ac.uk/images/image/9056-popup.html

'The Orchard'- Embroidered wall hanging , embroidered in silks on a silk ground, 1893.

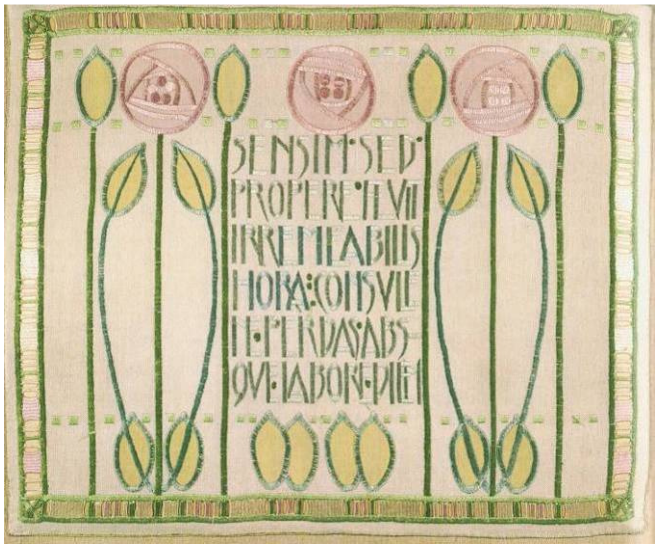
Image source: Parry, 1988, Color plate 79.

Figure 4.54. May Morris and her embroidered wall hanging

From the late 1890s until the First World War, the style of Art Nouveau spread throughout Western Europe and North America. The style accentuated the lines of nature, creating elegant, sweeping designs that pervaded all areas of art and craft. The main development in Britain was led by the Glasgow School of Art (Parry, 1988, p. 125). A new type of embroidery was developed with simple stitchery in a stylized design (Figure 4.55).

Jessie Newbery, c.1905.

Jessie Newbery founded the department of Embroidery of Glasgow School of Art in 1894 and retired at 1908.
Image source: Arthur, 1996, p. 2.



Linen appliqué cushion-cover by Jessie Newbery (c.1900)
Note: Embroidered in silks with edges of needle weaving, worked by the designer.

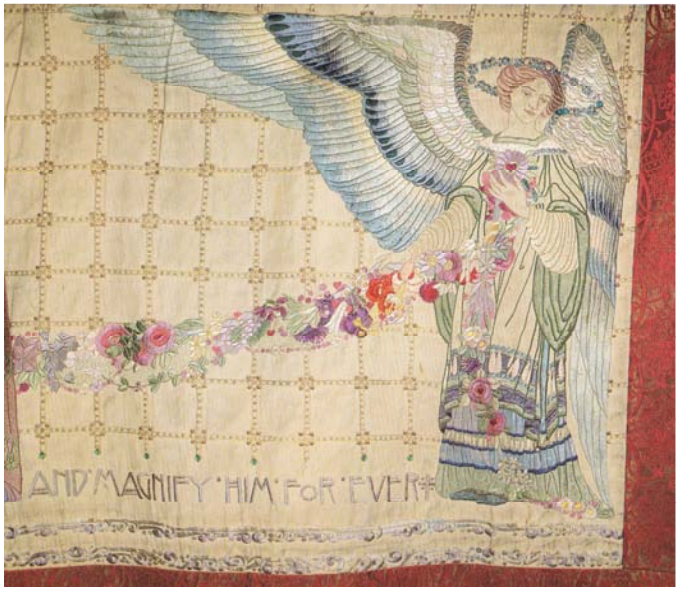
Image source: Parry, 1988, color plates 82.

Figure 4.55. Jessie Newbery (1864-1948) and her work

Jessie Newbery (1864-1948) (Figure 4.55) and Ann Macbeth (1875-1948) (Figure 4.56) were leading figures of this influential revolution, which promoted simplicity both in design and materials. Jessie Newbery and Ann

Macbeth also contributed to embroidery education. Both of them were teaching at the Glasgow School of Art in Scotland (Warner, 1991, pp. 175-178).

Ann Macbeth, c. 1908.
Image source: Parry, 1988, p. 42.



Altar frontal (detail) by Ann Macbeth, 1908.
Image source: Arthur, 1996, p. 7.

Note: Ann Macbeth acted as head of embroidery at Glasgow school of Art from 1908 and taught until 1928.

Figure 4.56. Ann Macbeth and her work

4.1.1.5. 20th Century to Contemporary

Embroidery has always developed hand in hand with the development of technology, economy and social changes. Particular In the 20th century, it saw the wide use of embroidery machines, which was seen at the time as being a threat to hand embroidery (Harris, 1993, p. 214). However, hand embroidery has not only survived the machinery revolution, but has also

developed to a new level. The invention of machine and digital embroidery has not only created an economic impact but also emerge as a new form of embroidery – the combination of machine and hand embroidery, which is adopted by this study.

In the earlier part of the 20th century, some avant-garde embroiderers had a great influence on the embroiderers of the late 20th century, such as the Wiener Werkstätte workshop established 1903, the Omega Workshop established in 1913, and the Bauhaus established in 1919 (Harris, 1993, p. 214). The Art Nouveau style continued from the 19th century and into the early 1920s. In the 1930s, the geometric and abstract Art Deco style influenced architecture, furnishings, dress and embroidery (Warner, 1991, p. 180). Modern art movements, from cubism to abstract art and free expression, have greatly influenced European embroideries.

The Embroiderers' Guild, a British educational charity founded in 1906 to promote the craft to the highest possible standards, has however been influential in coordinating new ideas of design and technique. The Guild also has a substantial historic collection to protect the embroidery heritages (Synge, 2001, p. 324). From the beginning of the century, the teaching of creative embroidery, along lines laid down by Ann Macbeth and others, continued in some schools and colleges. It was a movement that bore fruit after 1950, as an increasing number of colleges developed embroidery courses, and painters and graphic artists within the colleges turned to

embroidery as an exciting medium for new ideas (Harris, 1993, p. 214). Designs and techniques became much freer during the 1960s, and the general interest in embroidery increased. The barrier between the crafts and art was removed.

Particularly after the 1960s, embroidery development became split in two directions - one continuing with the traditional values and techniques, and another emphasizing the art aspect of embroidery. However, in Britain, these two were well combined to grow together hand in hand. The Embroiderers' Guild made efforts to bridge the gap by the use of magazines, exhibitions and competitions (Harris, 1993, p. 214). As Springall (2005, p. 11) concludes, "in Britain, embroidery is a subject unique in bringing professionals and amateurs together as equals."

During the 20th century, there were some distinguished embroidery artists worthy of special mention, such as Dorothy Benson (1902-77), Rebecca Crompton (1895-1947), and Constance Howard (1910-2000).

Dorothy Benson (1902-77) was a skilled embroidery machine technician, and probably the first to see the creative possibilities for embroiderers. She published two books in 1952 – one was *Machine Embroidery: the Artistic Possibilities of the Singer Sewing Machine*, and the other was *Your Machine Embroidery* (Stanley, 2002).

Rebecca Crompton (1895-1947) was one of Dorothy Benson's students. Rebecca promoted the use of simple materials and simple stitches

to create impressive pieces, and the use of the domestic sewing-machine as a useful tool for embroidery (Harris, 1993, p. 214) (Figure 4.57).

Figure 4.57. A machine embroidery mat by Rebecca Crompton 1938
Source: Golden Hands, 1973.

Constance Howard *(1910-2000)* was senior lecturer at Goldsmiths College of Art in London. As the foremost pioneer of creative embroidery in Great Britain in the 20th century, Constance encouraged experimentation with

a wide range of materials, and raised the status and profile of embroidery to an art form (Figure 4.58). Her books included *'Inspiration for Embroidery'* and *'Embroidery & Color'*, which had a great influence on embroidery design for nearly half a century, and also *'Embroidery in Great Britain - 4 Volumes'*, which was an excellent source of reference for contemporary English embroidery (Littlejohn & Beaney, 2000, p. 16).

Figure 4.58. Doves – panel by Constance Howard 1950.

Source: Littlejohn & Beaney, 2000, p. 9.

Jan Beaney (Figure 4.59) and Jean Littlejohn(Figure 4.60) are two leading teachers needing to be mentioned. They have explored the possibilities of the combination of machine embroidery with hand embroidery,

and of fabric paints and other experimental methods, which expanding the frontiers of embroidery even wider. They co-authored many books like *'Complete Guide to Creative Embroidery'*, *'Stitch Magic: Ideas and Interpretation'*, and series of books on creative embroidery by Double Trouble, which have had a great influence on the development of modern embroidery.

Figure 4.59. Embroidery panel by Jan Beaney 1999.

Source: Beaney & Littlejohn, 1999, p. 21.

Figure 4.60. Embroidery panel by Jean Littlejohn, 1999.

Source: Beaney & Littlejohn, 1999, p. 15.

4.1.2. Features of Contemporary Western Embroidery

This section reviews the features of Western embroidery that have developed into the present-day stage, in order to compare them with those of Chinese embroidery.

4.1.2.1. Celebration of materials

Experimental embroidery has become a fashion, which included a variety of techniques since the late 1960s. Felting, painting, dyeing and photography are now part of the embroiderer's choice, and materials range from traditional fibers to plastic, leather, wood, paper, plaster and metal. The finished items may be worn, hung as a picture, or displayed as free-standing sculpture. embroidery has become "a living craft" (Harris, 1993, p. 216).

4.1.2.2. Experimental and creative

Innovation and experimentation have been an important part in the art of embroidery, which is extremely multipurpose and creative. Modern embroiderers use a wide variety of materials and of methods. "Many different media are employed, including hand-made papers, fabrics stiffened with plaster, wire and other found objects." (Barton, 1990, p. 11). Some of these modern materials and methods are far from conventional, and which can enhance to produce an exceptional effect and great originality.

As Barton (1990, p. 12) concluded, "One of the main developments in contemporary embroidery is the extensive use of fabric paints to color both fabrics and threads." These techniques have a spontaneous quality, which makes them well-suited to modern tastes and lifestyles. They also combine happily with hand stitchery. The hand stitches worked by modern

embroiderers have a free, adventurous character, totally unlike traditional work; but even today they remain the essence of the art (Barton, 1990, p. 12).

4.1.2.3. Machine embroidery

Since the introduction of the first patented machine for embroidery in 1755 by C.F. Weisenthal (Warner, 1991, p. 156), machine embroidery has had a great influence on Western contemporary embroidery. During the 19th century, the Cornelly machines for chain stitches were only for factory use. Domestic machines for embroidery were only available at the end of the 19th century. In the 1880s, the Singer sewing machine company promoted 'art ' pictorial embroidery done on a Singer sewing machine, and published a book – *Singer Instructions for Art Embroidery*. With respect to machine embroidery, two ladies must be mentioned, Dorothy Benson (1902-1977) and Rebecca Crompton (1895-1947), who promoted the use of the domestic sewing-machine as a useful tool in embroidery (Harris, 1993, p. 214). In the late 70's and early 80's, embroidery fabrics and garments became popular and fashionable in England (Howard, 1986).

Today, both hand and machine-embroidery are popular, but the two techniques have distinct qualities. There are hand techniques that can never be superseded by the machine, and there are also those techniques that are better accomplished on the machine. Together they can complement each other to create new form of embroidery (Howard, 1978, p. 40).

4.1.2.4. Availability of design software & digital embroidery

Wilcom International Pty. Ltd in 1980 introduced the first computer graphics embroidery design system running on a mini-computer. The operator would "digitize" the design into the computer using similar techniques to "punching", and the machine would stitch out the digitized design. Wilcom enhanced this technology in 1982 with the introduction of the first multi-user system that allowed more than one person to be working on a different part of the embroidery process, vastly streamlining production times. High quality computerized embroidery has been out of reach for the casual hobbyist. However, as costs have fallen for computers, software, and embroidery machines, computerized machine embroidery has rapidly grown in popularity since the late 1990s (Wikipedia, 2009).

4.1.2.5. Free expression of embroidery

Free expression of embroidery here refers to the use of different materials, new design concepts, and skills available to the embroiderers. In 1990s, the works of textile art has demonstrated confidence and maturity. For free expression of embroidery, the main stream techniques include machine embroidery, discharge, devour or extract printing; and stitching was used to add detail to dyed fabric collages (Leonard, 2002, p. 15).

Since the end of the 19th century, as Synge (2001, p. 324) observes that “it would appear that, needlework, like most other art forms, has been feeling for a course and journeying through experiments in order to discover satisfactory expression.“ Compared with past generations, modern fashion and embroidery designers inherit all the experience and knowledge that have been generated over time, and have more choices in materials and techniques. They should in theory to create greater works in free expression.

By free express of embroidery, the social and cultural significance, and meaning of textiles themselves had become the subject matter, which began to dictate technique. Stitches became less important, as artists strove to create fabric out of which images could emerge (Leonard, 2002, p. 15).

Figure 4.61 and Figure 4.62 show the embroidery as an art form whilst Figure 4.63 and Figure 4.64 focus on contents of free expression.

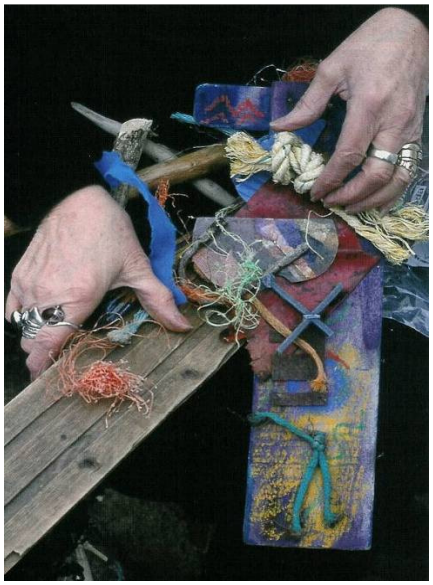


Figure 4.61. Embroidery as multimedia art
Note: Julia Caprara sorting through flotsam

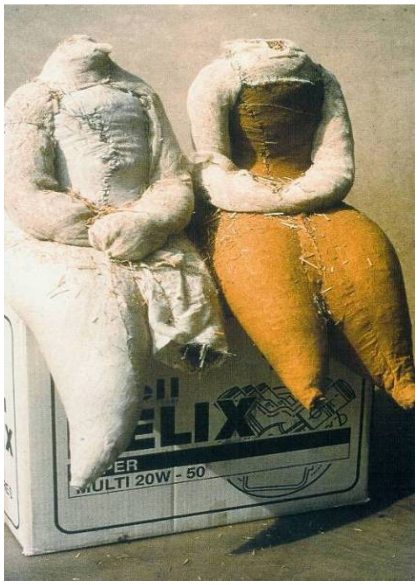


Figure 4.62. Embroidery Sculpture
Note: Everafter – by Ruby Chishti, 2001.

found on beaches
Source: Embroiderers' Guild, July 2003. p. 40.

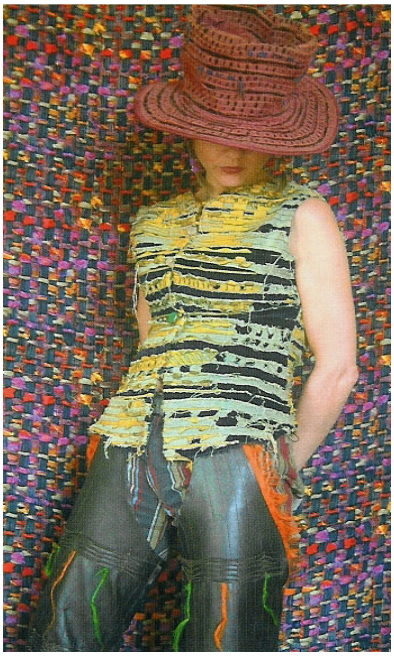


Figure 4.63. Embroidery as personal identity
Note: Work by Jilli Blackwood, 2001.

Source: Embroiderers' Guild, Nov. 2003. p. 15.

Source: Embroiderers' Guild, Sept. 2003. Front cover.

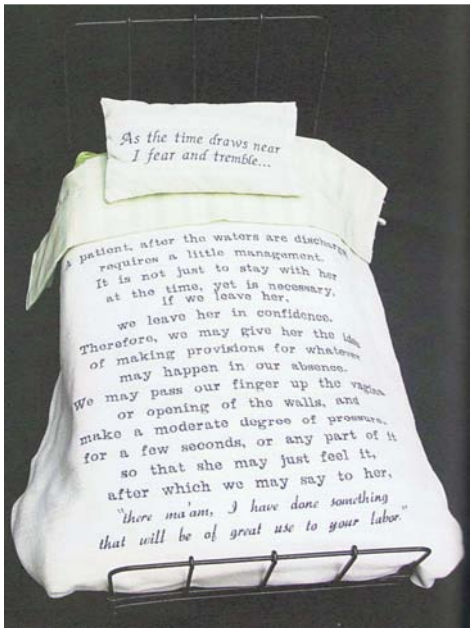


Figure 4.64. Embroidery as personal statement
Note: A case of confinement (details) – by Tamar Stone, 2005.
Source: McFadden, 2007, p. 28.

4.2. Chinese Embroidery

This section introduces the development of Chinese embroidery through the background to its history map (see Appendix 2 of Chinese Dynasties), with some highlighting of historical pieces of embroidery works and events, in order to gain an overall picture and to summarize certain features.

4.2.1. Development of Chinese embroidery

4.2.1.1. Early years - Zhou Dynasties (1027 BC- 221 BC)

The art of embroidery has a long history in China. The earliest archaeological evidence of sericulture and silk-weaving in China can be traced back as far as five thousand years (Wang, 1995, p. 56). The early historical literature record of the Qin Dynasty (秦 221—206BC) mentions embroidered robes and undergarments (Xia, 1979; Wang, 1987, p. 10). Shang Shu (尙書), a history book of two thousand years ago, recorded an embroidery robe for the legendary emperor Shun (舜).

The earliest material proof was the traces of embroidered rhombic designs on a Shang bronze wine vessel (Figure 4.65), and the impression of embroidered work executed in chain stitches found in a Western Zhou (eleventh century – 771 B.C.) tomb at Rujiazhuang, Baoji, Shanxi Province. The earliest embroidery piece identified is a Western Zhou geometric pattern of embroidery found in a tomb in Xinjiang, China (Figure 4.66).

Figure 4.65. Embroidered in Chain Stitch (Western Zhou)

Note: This impression of embroidery work found in a West Zhou tomb in Baoji, China.

Image source: Chang, 2004, p. 2.

Figure 4.66. The geometric pattern of embroidery (Western Zhou)

Note: The earliest piece found in a tomb in Xinjiang, China.

Image source: Chang, 2004, p. 4.

4.2.1.2. Warring State Periods (475 BC - 221 BC)

Back in the Spring and Autumn Period, the embroidery of the Chu State was known for its vivid portrayal of romantic motifs, dragons, phoenixes, tigers and birds, as well as flowers, leaves, and geometric vines.

Figure 4.67 shows a phoenix design, Figure 4.68 shows a tiger design found in a Chu tomb at Mashan, Jiangling, Hubei Province, China.

Figure 4.67. Embroidery of phoenix design in Chain Stitch

Note: Note: Phoenix design in Chain Stitch, found in a Chu tomb at Mashan, Jiangling, Hubei Province, China.

Image source: Chang, 2004, p. 15.

Figure 4.68. Tiger design embroidered in Chain Stitch

Note: Tiger design in Chain Stitch found in a Chu tomb at Mashan, Jiangling, Hubei Province, China.

Image source: Chang, 2004, p. 10.

4.2.1.3. Han Dynasty (206 BC-AD 220)

By the Han Dynasty, the silk handicraft industry in China had reached another phase. The development of silk fabrics also led to improvements in clothing and embroidery (Zhang, 1999, p. 21). The most typical are the findings from No.1 and No.3 Han tombs at Mawangdui, Changsha, Hunan Province, and many of these embroidered works have been preserved intact (Figures 4.69). The quality and artistic styles are far above the previous findings (Zhang, 1999, p. 22).

Figure 4.69. Embroidery of Western Han
Note: Embroidery piece from Western Han tomb in Mawangdui, Changsha, Hunan province.
Image source: Chang, 2004, p. 37.

4.2.1.4. Northern Wei Dynasty (AD 386-538)

From the Northern Wei Dynasty, embroidery started to develop as purely for appreciation, rather than as embellishment for clothing or other practical items as before. From then on, Chinese embroidery started to develop in two directions, one being for the purpose of appreciation, and the other being for practical items (Zhang, 1999, p. 22). Figure 4.70 is the earliest known embroidery purely for appreciation discovered in the Mogao Grottoes, Gansu Province.

Figure 4.70. Silk embroidery hanging of Northern Wei Dynasty
Note: The earliest known embroidery purely for appreciation, rather than as embellishment for practical items, was discovered in the Mogao Grottoes, Gansu Province. Image source: Lin, 1989, p. 31.

4.2.1.5. Tang Dynasty (AD 618-907)

The Tang Dynasty was one of the most prosperous periods in China's history, with a thriving economy and rapidly developing culture. More progress in silk embroidery skills was made during this period than during earlier generations. The many kinds of embroidered articles made at that time included dresses, quilts, bed curtains and images of Buddha (Figure 4.71). From the Tang Dynasty onwards, embroidery for religious purposes started to move toward popular embroidery for pure appreciation (Zhang, 1999, p. 23).

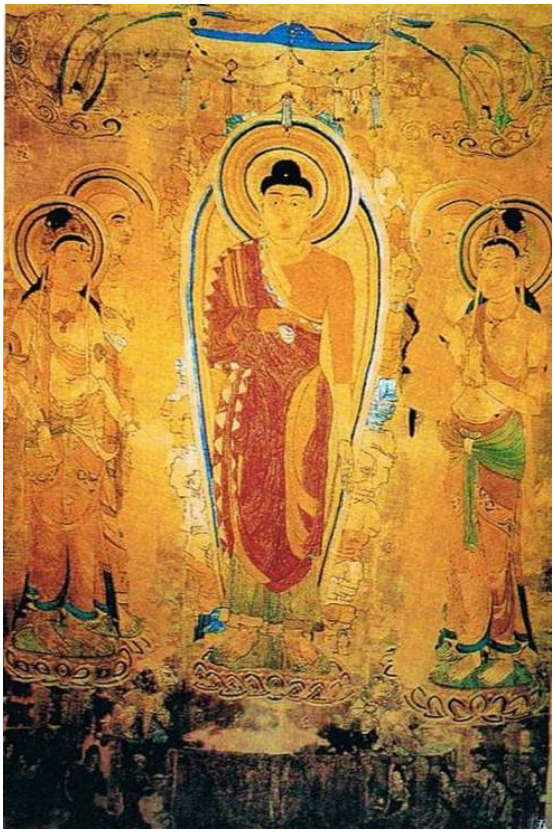


Figure 4.71. Embroidery hanging of Tang Dynasty
Note: Once stored in a cave room of the Dunhuang Mogao Grottoes, which is in the British Museum. Image source: Chang, 2004, p. 74.

4.2.1.6. Song Dynasty (AD 960-AD 1279)

During the Song Dynasty, China's historiography, literature, art, science, and technology all made great progress. Emperor Huizong was an artist in painting and calligraphy. He promoted education, founded an imperial art academy, and carried out a series of enlightened policies in support of painting, creating a favorable atmosphere for artists. It was also in this period that embroiderers began to cooperate with artists and painters, copying paintings and calligraphy onto silk fabrics with needle and thread (Figure 4.72). In particular, certain famous paintings were reproduced by "girls of the inner chambers" into embroidery works, which became a branch of embroidery lasting until now (Dowdey, 1999, p. 39).

Figure 4.72. Autumn hibiscuses and butterflies (Song Dynasty)
Image source: Chang, 2004, p. 99.

4.2.1.7. Ming Dynasty (AD 1368-1644)

In the Ming Dynasty, the imperial court set up a government-run weaving and dyeing bureau in Suzhou. An embroidery workshop was established under this bureau whose specialty was the production of household embroidered goods such as robes (Figure 4.73), shoes, and bed curtains (Zhang, 1999, p. 24). During the late Ming and Qing (1644 -1911) dynasties, embroidery became a commercial article, bought by the wealthy to be given to officials as a way to gain their favor, to be presented to monasteries or Daoist priests as objects of religious devotion, or for the decoration of their own homes (figure 4.74).

Figure 4.73. Emperor square badge (Ming Dynasty)
Image source: Chang, 2004, p. 162.

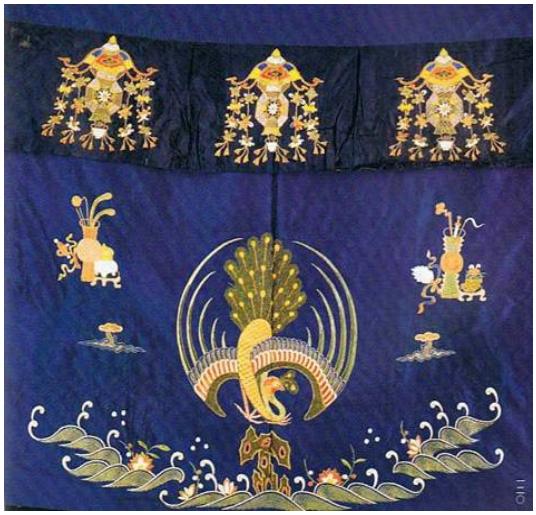


Figure 4.74. Table cloth (Ming Dynasty)

Image source: Chang, 2004, p. 158.

Gu family embroidery

In the Ming Dynasty, the most famous appreciation embroidery was made by the ladies of the Gu family. The Gu family specialized in embroidering reproductions of pictures done by famous artists, which can be traced back to Emperor Huizong in the Song Dynasty (Zhang, 1999, p. 23). They became leaders of fashion and taste (Dowdey, 1999, p. 35). Figure 4.75 is an embroidery painting by Gu family.

Figure 4.75. Washing Horse (Gu family embroidery)
Image source: Chang , 2004, p. 206.

4.2.1.8. Qing Dynasty (1644-1911)

During the Qing Period (1644-1911), with the revival of the economy embroidery developed on a large scale based on the sound foundation of the Sung and Ming Dynasties. Regional and other individual embroidery styles were developed further, and competed with each other in the open market. The most famous styles were in Suzhou, Guangdong, Sichuan and Hunan, each one gaining prominence in its own style and characteristics (Bertin-Guest, 2003).

The originality and main features of these four branches are as follows:

- Yue (粵) style: Embroidery is crafted in Chaozhou, Guangdong Province. It is composed of intricate but symmetrical patterns, vibrant colors, varied stitches and a defined weave. Its use of primary colors, light and shade are reminiscent of western paintings.
- Shu (蜀) style: Sichuan embroidery comes from areas around Chengdu, Sichuan Province. It is the oldest known embroidery style in the history of Chinese embroidery. Its raw materials are satin and colored silk; its craftsmanship is painstaking and refined. The emphasis is on even stitching, delicate coloration and local flavor. Sichuan embroidery is used to decorate quilt covers, pillowcases, garments, shoes and painted screens.

- Su (蘇) style: Suzhou embroidery is crafted in areas around Suzhou, Jiangsu Province. It is famous for its beautiful patterns, elegant colors, variety of stitches, and consummate craftsmanship. Its stitching is meticulously skillful, and its coloration is subtle and refined.
- Xiang (湘) style: Hunan embroidery comes from areas around Changsha, Hunan Province. It is distinct for its starkly elegant black, white and gray coloration. Its emphasis is on contrasting areas of light and shade that highlight the textural pattern to give a three-dimensional effect. Xiang embroidery composition combines both void and solid imagery, utilizing empty space.

The features and characteristics of these four branches are demonstrated in Table 4.11.

Table 4.11. Four branches of embroidery in Qin Dynasty

Yue (粵) style: • Usually symmetrical patterns and vibrant colors; • Varied stitches and a defined weave; • Use of primary colors, light and shade are reminiscent of western paintings.		Image source: Chang, 2004, p. 415.
Shu (蜀) style: • Work on satin and colored silk; • The emphasis is on even stitching, delicate coloration, and local flavor; • Used to decorate practical items and painted screens.		Image source: Chang, 2004, p. 442.
Su (蘇) style: • Beautiful patterns; • Elegant and subtle colors; • Variety of stitches; • Stitching is skillful and refined.		Image source: Chang, 2004, p. 419.
Xiang (湘) style: • Distinguished by its stark coloration; • Emphasis is on contrasts of light and shade; • Composition combines void and solid imagery, utilizing empty space.		Image source: Chang, 2004, p. 401.

4.2.1.9. Contemporary Chinese embroidery

In contemporary China, Suzhou embroidery is the most representative style of Chinese embroidery. He Shanan (1999, p. 8) well summarized that, "Suzhou embroidery combines the ancient industries of silk growing and silk making with the artistic tradition of inner chambers embroidery, in which women learned to create needlework based on paintings." Based on this tradition, Su embroidery was developed from inner chambers embroidery, which originated from the Song Dynasty and has a clear line of inheritance.

In the line of passing it on, this branch has produced some famous embroidery figures. Among them, Shen Shou (1874-1921), Yang Shouyu (1896-1981) and Ren Huixian(1915-2003) were the three embroidery masters, and the representatives of contemporary embroidery. Their main contributions to the innovative development of Chinese embroidery are summarized below.

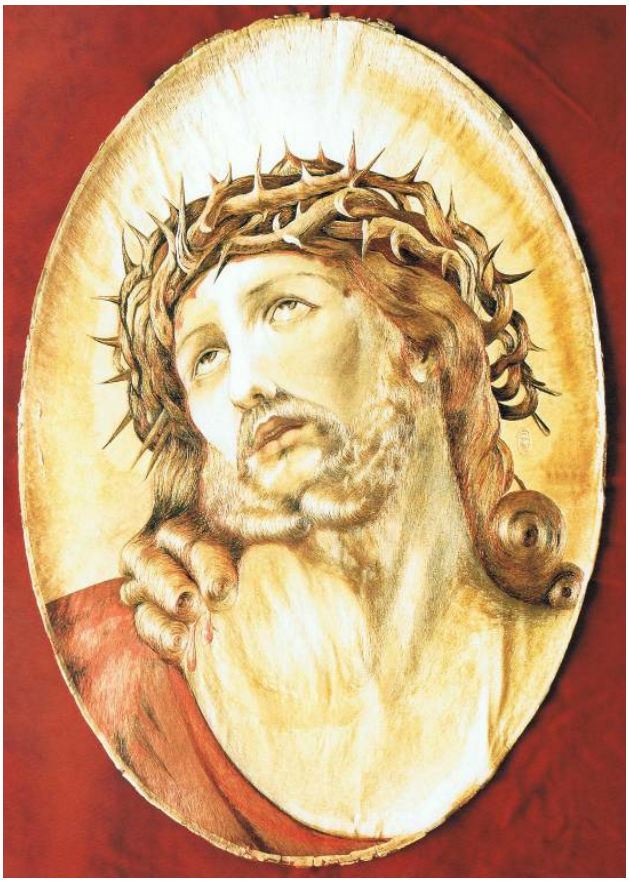
Shen Shou (1874-1921)

After her trip to Japan, Shen Shou developed this embroidery style known as *Imitation of Reality Embroidery (fang zhen xiu)*, This embroidery techniques try to achieve the detailed effect of Western painting by delicate needle work, which was a highlight of Chinese embroidery development and introduced new thoughts into Chinese embroidery (Dowdey, 1999, p. 42). Her success in adopting Western techniques into Chinese embroidery has

demonstrated the power of the marriage between Western and Eastern embroidery design as shown in Figure 4.76.

Photograph of Shen Shou (沈壽 1874-1921)

Image source: Zhang, 1999, p. 24.



Embroidery panel of Christ Jesus by Shen Shou

Note: Imitation of reality embroidery techniques developed by Shen Shou. Image source: Chang, 2004, p. 421.

Figure 4.76. Shen Shou and her Embroidery panel

Yang Shouyu (1896-1981)

Yang Shouyu was from Jiangsu Province. She was different from other historical embroiderers in that she graduated from an art school, so she was familiar with Western art. She invented *Random Stitch embroidery (Luanzhen Xiu)* in the 1930s. Random stitch embroidery was inspired by the techniques of Western painting art (impressionism) to demonstrate the interplay of light and shade (Dowdey, 1999, p. 44). This is again a successful case of interaction between the art and culture of the West and East as shown in Figure 4.77.

Ren Huixian 任嘒閒 (1915-2003)

Born in Jiangsu Province, Ren Huixian was a student of Yang Shouyu. At the end of the 1950s, she invented a new skill known as “random sketch”, which was inspired by the art of sketching. This innovative skill was developed on the basis of random stitching, but offered embroiderers more freedom and vitality. Her first masterpiece, *The Portrait of Lenin*, using “random stitching of void and concreteness”, was awarded the gold prize at a national handicraft exhibition in 1958. She used a dozen different colored threads, layer by layer, similar to crossed lines of thread, to produce a kind of three-dimensional (3D) effect, where viewing from different angles changes the color — soft and pale from the front, shiny and bright from the sides (Xiao, 2008). The portrait of Qi Bashi (Figure 4.78) shows using this technique.

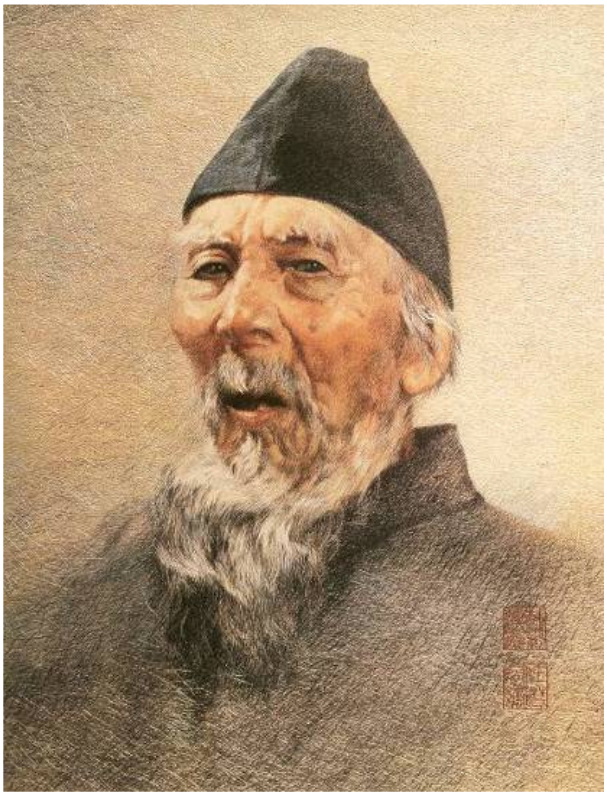
Photograph of Yang Shouyu (楊守玉 1896-1981)
Image source: Zhang, 1999, p. 25.

Embroidery picture Young Girl by Yang Shouyu
Note: In this work, Yang Shouyu first used random stitch style.
Image source: Zhang, 1999, p. 25.

Figure 4.77. Yang Shouyu and her embroidery picture

Photograph of Ren Huixian

Image source: www.szjnxz.com/peixun3.asp Retrieved on 5 December2008



Embroidery portrait of Qi Baishi by Ren Huixian

Image source: Chang, 1998, p. 115

Figure 4.78. Ren Huixian and her embroidery portrait

4.2.2. Features of Chinese embroidery

This section reviews the features of Chinese embroidery in order to compare them with those of Western embroidery. The review will continue with the aspects of materials, techniques, patterns, and symbols.

From this study, it has been discovered that Western embroidery features less symbolism, whereas symbolism is an important part of Chinese culture, and serves to relay a message via a piece of art work. Symbolism denotes social standing, moral messages, and historical and legendary events. Therefore, this study reviews the common symbols applied throughout Chinese embroidery as an outstanding feature of Chinese embroidery in comparison with Western embroidery.

4.2.2.1. Materials

When people talk about traditional Chinese embroidery, they naturally think of silk embroidery (Wang, 1995, p 56). For Chinese people too, many of them believe embroidery is all about traditional silk embroidery. Tsang (1995) pointed out that 'Chinese silks' often became synonymous with "Chinese textiles". This is not surprising, because for the Chinese these two objects, embroidery and silk, are usually linked together, as traditional Chinese embroidery is usually made of silk.

It is more appropriate to address traditional Chinese embroidery as silk embroidery. Silk yarn and fabric are characteristic materials for Chinese embroidery, as Bertin-Guest (2003, p. 14) claims, 'Silk forms a quintessential part of Chinese embroidery'. Silk floss is always used for artwork embroideries, and the support fabric for these embroideries is also generally silk (Hill, 1999, p. 91).

Twisted silk yarn and untwisted silk yarn were both used. The untwisted yarn could be separated into finer strands to create a smooth, delicate surface. Twisted yarn was thicker and used to portray rougher textures such as bark and rock.

Additional materials were also used to create special effects. Gold and silver were commonly used. Feathers, corals, pearls, human hair and a variety of other precious stones were also used (Yang, 1985.)

4.2.2.2. Techniques

In the early stages — from the Zhou Dynasty (C.1027 – 221 BC) to the late eastern Han Dynasty (206 BC – AD 220) — embroidery served a practical purpose, and the Chain Stitch was durable and useful, so in this respect the Chain Stitch played a predominant role. The varieties of Chain Stitch are the Open-ring Stitch, the Close-ring Stitch, the Daisy Stitch, the Fly Stitch and the Consecutive Stitch (Split Stitch) (Wang, 1987, p. 13).

The beginning of the Jin (金) and Southern and Northern dynasties saw a rapid development in the use of the Satin Stitch, because of the growing need to embroider the image of Buddha, human faces and other natural forms. This technique reached full maturity after the Sui and the Tang dynasties, and thereafter a new period began in which could be seen the mixed use of various skills and their development (Wang, 1987, p. 13).

Embroidery stitches are ways of moving needles and the arrangement of lines. In Chinese embroidery, stitch types are varied. Commonly used stitches are the Satin Stitch, Long and Short Stitch, Chain Stitch, Couching Stitch, Seed Stitch or Knot Stitch, and Pekinese Stitch.

“Painting with the needle” is often used when addressing Chinese embroidery, because of its realistic style to illustrate natural scenes and objects (Bertin-Guest, 2003, p. 22). In the development of contemporary Chinese embroidery, there are three remarkable styles that should be mentioned here.

Imitation of Reality (仿真綉)

The *Imitation of Reality embroidery style (仿真綉)* was developed by Shen Shou (1874-1921). This new embroidery style brought elements of Western pictorial convention into the practice of embroidery as shown in Figure 4.79.

Figure 4.79. Imitation of Reality embroidery style
Image source: Dowdery, 1999, p. 128.

Random Stitch embroidery style (亂針繡)

The *Random Stitch embroidery style (亂針繡)* was invented by Yang Shouyu (1896-1981). This embroidery style consisted of a variety of cross-stitching. In this style of embroidery, stitches go in different directions, and are of different lengths; also, threads of different weights are used. It is often utilized in the background of a design to create a general field of color with diffuse light reflection as shown in Figure 4.80.

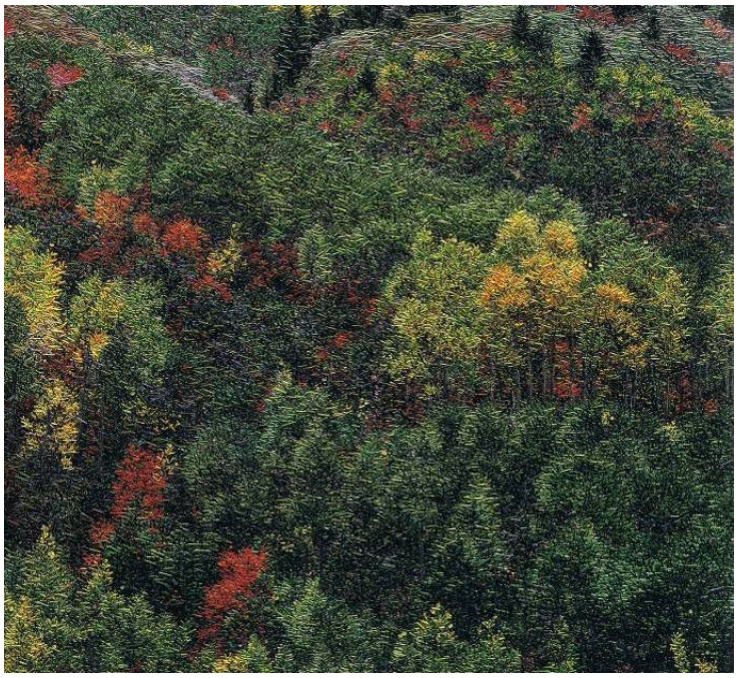


Figure 4.80. Random stitch embroidery style
Image source: Dowdery, 1999, p. 76.

Random sketch (虛實亂針綉)

The *Random Sketch (虛實亂針綉) embroidery style* was invented by Ren Huixian (1915-2003). This embroidery style was inspired by the art of sketching, the artist making a smart use of background colors and creating a cubic effect by striking a balance between thickness and blankness. This innovative skill was developed on the basis of random stitching, but offered embroiderers much more freedom and vitality as shown in Figure 4.81.

Figure 4.81. Random sketch embroidery style
Image source: Dowdery, 1999, p. 151.

Double-Sided embroidery (雙面綉)

In the mid-1960s, SERI developed new techniques of embroidery such as double-sided embroidery; the completely different images are embroidered on both sides of the silk cloth using different stitching, forms and colors (Figure 4.82). The ways of presenting embroidery have thus been further broadened.

Portraits of Charles　　Portraits of Diana

Figure 4.82. Double-sided embroidery

Image source: Embroidered by SERI and photographed by the author

4.2.2.3. Pattern and Symbolism

Symbol is “something that represents or stands for something else, usually by convention or association, especially a material object used to express an abstract idea” (Messent, 1996, p. 114). Symbolic meaning plays an important part in Chinese art designs, including textiles and embroidery (Wang, 1991, pp. 12-13; Bertin-Guest, 2003; Welch, 2008, p. 10-11). The symbolic motifs come mainly from three sources: Nature, religion and Chinese characters.

The greatest part is from the natural world, such as flowers and plants, fruits and vegetables, and both real and imaginary birds and animals.

The second source is from religious images and symbols, for example, the eight treasures of Confucianism, the eight treasures of Buddhism, and the properties of the eight immortals in Taoism. These religious patterns have had a strong influence on traditional embroidery (Paine, 1990). More details are given in Appendix 4. However, they have had less of an influence on people since 1949.

The last group of symbols is from Chinese characters that had a symbolic meaning (Apfel, 1992; Wang, 1991; Welch, 2008, pp. 11-12). For example, fu (福) is a character meaning good fortune, lu (祿) means success, and shou (壽) means longevity.

Certain symbols have been widely used, and some of them have become a universal part of Chinese language and daily life, as well as being part of decoration art (Wang, 1991, pp. 12-13). These symbolic meanings have changed very little over time, and have become a symbolical part of Chinese culture and identity (Welch, 2008, p. 10). The Chinese have used both Chinese characters and realistic objects as symbols for abstract words. Some objects were chosen because of the nature of the object, while others were used simply because the pronunciations are similar (Wang, 1991, pp. 12-13). There are a lot of homophonic characters in Chinese, due to the fact that most Chinese characters are phonograms. For instance, “bat” (蝠) in Chinese has the same pronunciation as “happiness” (福) in Chinese. So the image of a bat in Chinese culture represents happiness and blessing.

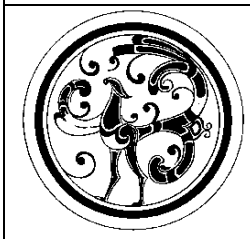
Pursuing peace, harmony, happiness, purity, unity, longevity, health, wealth, success, good fortune and friendship are some of the key values of Chinese culture (Wang, 1991, pp. 12-13). Here are listed some of the commonly used symbols for certain meanings:

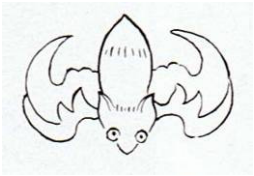
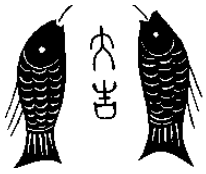
- Pictorial symbols for longevity and health: Chrysanthemum, peach, evergreen, bamboo, cat, butterfly, crane, tortoise, monkey, fungus, rock, sun, pine tree, swastika (Wang, 1991, p. 12).
- Pictorial symbols for happiness: Magpie, Ching (musical instrument made of stone) (Wang, 1991, p. 12).

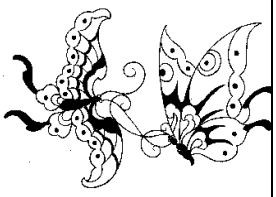
- Pictorial symbols for peace: Vase, quail (Wang, 1991, p. 12).
- Pictorial symbols for pureness: Plum blossom, lotus blossom, orchid, narcissus, endless knot (Wang, 1991, p. 13).
- Pictorial symbols for spring: Camellia, peach blossom, willow tree (Wang, 1991, p. 13).
- Pictorial symbols for children: Melon, pomegranate, daylily, gourd vine (Wang, 1991, p. 13).
- Pictorial symbols for marriage: Mandarin duck, waterlily (Wang, 1991, p. 13).

The most frequently used symbols in embroidery are listed below in Table 4.12.

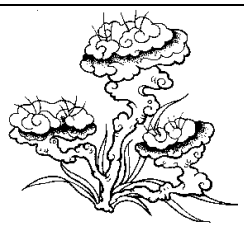
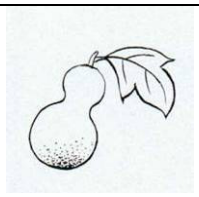
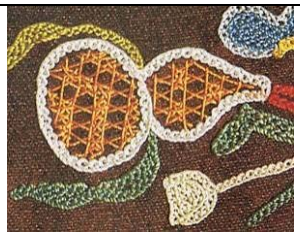
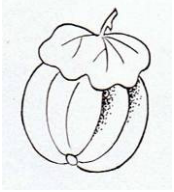
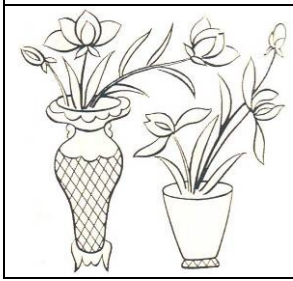
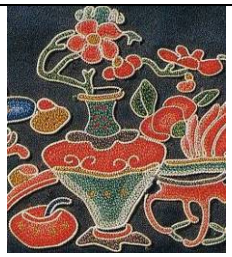
Table 4.12. Symbolic motifs often used in Chinese embroidery

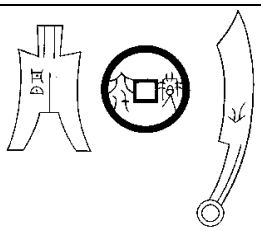
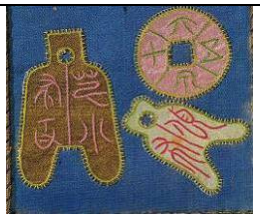
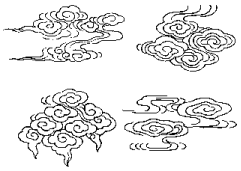
		龍 DRAGON Royalty, rain, spring. *Image Source : (Chinese Auspicious Patterns, 2008)* *Embroidery image source: (Mei & Tao, 2001, p. 233)*
		鳳 PHOENIX Empress, beauty, goodness, warmth, prosperity, peace, the sun. *Image source: (Chinese Auspicious Patterns, 2008)* *Embroidery image source: (Wang, 1991, p. 53)*
		麒麟 QILIN An imaginary Chinese mythical animal identified with peace, long life, power, kindness, and righteousness. Symbol of military officials of the 1st rank. *Image source: (Chinese Auspicious Patterns, 2008)* *Embroidery image source: (Wang, 1991, p. 60)*
		獅 LION Power and energy *Image Source: (Chinese Auspicious Patterns, 2008)* *Embroidery image source: (Wang, 1987, p. 115)*
		虎 TIGER Strength, military prowess, power and energy *Image Source: (Chinese Auspicious Patterns, 2008)* *Embroidery image source: (Wang, 1987, p. 116)*

		鹿 DEER Long life, official emolument, honor and success in study. *Image source: (Chinese Auspicious Patterns, 2008)* *Embroidery image source: (Wang, 1987, p. 118)*
		羊 SHEEP Sacrifice *Image source: (Chinese Auspicious Patterns, 2008)* *Embroidery image source: (Wang, 1987, p. 118)*
		鶴 CRANE Longevity *Image source: (Chinese Auspicious Patterns, 2008)* *Embroidery image source: (Wang, 1987, p. 107)*
		蝙蝠 BAT Longevity, prosperity, happiness. *Image source: (Wang, 1991, p. 13)* *Embroidery image source: (Wang, 1991, p. 87)*
		魚 FISH Plentitude and abundance of food, offspring, wealth and other riches. (Welch, 2008, p. 96) *Image source: (Chinese Auspicious Patterns, 2008)* *Embroidery source: (Wang, 1987, p. 113)*
		金魚 GOLDFISH Represents richness. *Image source: news.sohu.com/20080213/n255129147.shtml* *Embroidery image source: (Wang, 1991, p. 84)*

		蝴蝶 BUTTERFLY Longevity. *Image Source: (Chinese Auspicious Patterns, 2008)* *Embroidery source: (Wang, 1987, p. 108)*
		孔雀 PEACOCK Elegance, beauty and dignity, and communicates rank and wealth. (Welch, 2008, p. 78) *Image source: (Chinese Auspicious Patterns, 2008)* *Embroidery source: (Wang, 1991, p. 69)*
		公雞 Rooster Associated with the sun, strength and masculinity. (Welch, 2008, p. 85) *Image source: www.esgweb.net/.../Class137/200501/1329.htm* *Embroidery source: (Wang, 1991, p. 71)*
		喜鵲 MAGPIE A good fortune bird, was believed to herald good fortune. Magpies also represent marriage and happiness. (Welch, 2008, p. 77) *Image source : www.esgweb.net/Article/Print.asp?ArticleID=1335* *Embroidery image source: (Wang, 1991, p. 70)*
		鴛鴦 MANDARIN DUCK Expresses peace, prosperity and marital constancy and fidelity. (Welch, 2008, p. 71) *Image Source: (Chinese Auspicious Patterns, 2008)* *Embroidery image source: (Wang, 1991, p. 68)*

		梅花 PLUM Winter, represents a noble and unsullied person. *Image Source: (Chinese Auspicious Patterns, 2008)* *Embroidery image source: (Wang, 1991, p. 88)*
		松 *PINE* Longevity *Image Source: (Chinese Auspicious Patterns, 2008)* *Embroidery image source: (Chang, 2004, p. 453)*
		蘭花 *ORCHID* Represents a noble-hearted person. *Image Source: (Chinese Auspicious Patterns, 2008)* *Embroidery image source: (Wang, 1991, p. 68)*
		蓮花 *LOTUS* Represents nobility and purity. *Image source: (Wang, 1991, p. 13)* *Embroidery image source: (Wang, 1987, p. 93)*
		牡丹 *PEONY* Spring, riches, honor, love and affection, feminine beauty and prosperity. *Image source: (Wang, 1991, p. 13)* *Embroidery image source: (Wang, 1991, p. 54)*
		菊花 *CHRYSANTHNMUM* Autumn, longevity, joviality, life of ease. *Image Source: (Chinese Auspicious Patterns, 2008)* *Embroidery image source: (Chang, 2004, p. 471)*

		靈芝草 *FUNGUS* Strongly associated with long life and immortality. (Welch, 2008, p. 50) *Image Source: (Chinese Auspicious Patterns, 2008)* *Embroidery image source: (Chang, 2004, p. 253)*
		桃 PEACH Marriage, springtime, immortality, long life. *Image source: (Wang, 1991, p.13)* *Embroidery image source: (Wang, 1991, p. 52)*
		葫蘆 GOURD Represents a flourishing and long-lasting family. *Image source: (Wang, 1991, p. 13)* *Embroidery image source: (Wang, 1987, p. 46)*
		佛手 CITRON Symbol of Buddha's hand, a sign of wealth, divine protection. *Image source: (Wang, 1991, p. 13)* *Embroidery image source: (Wang, 1991, p. 51)*
		瓜 MELON Fertility. (Welch, 2008, p.50) *Image source: Embroidery source: Wang, 1991, p. 13.* *Embroidery image source: (Wang, 1987, p. 42)*
		花瓶 VASE Peace *Image source: (Wang, 1991, p. 119)* *Embroidery image source: (Wang, 1991, p. 50)*

		古錢 ANCIENT COINS Wealth. *Image Source: (Chinese Auspicious Patterns, 2008)* *Embroidery image Source: (Wang, 1991, p. 89)*
		火珠 FIRE BALL Pure intentions, genius in obscurity. *Image Source: (Chinese Auspicious Patterns, 2008)* *Embroidery image source: (Mei & Tao, 2001, p. 233)*
		如意 RUYI Granting wishes. *Image Source: (Chinese Auspicious Patterns, 2008)* *Embroidery source: (Wang, 1991, p. 64)*
		祥雲 AUSPICIOUS CLOUDS Beneficial rain and fertility. *Image source: (Chinese Auspicious Patterns, 2008)* *Embroidery image source: (Mei & Tao, 2001, p. 233)*
		雙喜 DOUBLE HAPPINESS Used exclusively in connection with marriages *Image Source:(Chinese Auspicious Patterns, 2008)* *Embroidery image source: (Wang, 1987, p. 31)*
		福 FU Chinese character meaning good fortune. *Image source: (Wang, 1991. p. 13)* *Embroidery image source: (Wang, 1991, p. 57)*
		壽 SHOU Chinese character meaning longevity *Image source: (Wang, 1991, p. 13)* *Embroidery image source: (Wang, 1991, p. 77)*

Imperial Robes & Rank Badges

The early historical literature record of the Qin Dynasty (秦 221-206BC) mentions embroidered robes and undergarments (Xia, 1979; Wang, 1987, p. 10). Shang Shu (尙書), a history book from an earlier period, recorded that the emperor's robes for the legendary emperor Shun (舜) were decorated with the so-call Twelve Symbols: Sun, moon, stars, mountain, (paired) dragon, pheasant, (paired) bronze sacrificial cups, water weed, fire, grain, axe and fu. As the supreme imperial authority, only the emperor could decorate his clothing with all 12 symbols, while other members of the aristocracy or officials would display nine, seven, five, or three of these symbols on their clothing, depending on their rank or status (Wang, 1987, p. 10, 1995). These embroidered images are the celebrated official costume in twelve patterns worn by the emperor, a system of loyal dress that has been passed from generation to generation until the end of Qing Dynasty as shown in Figure 4.83.

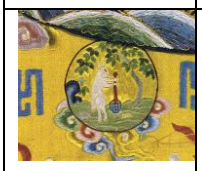
The Twelve Ornaments (十二章紋)

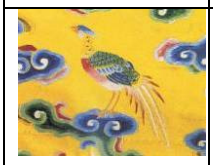
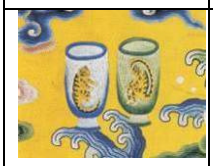
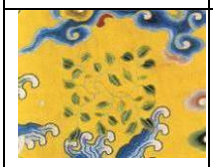
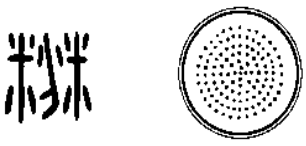
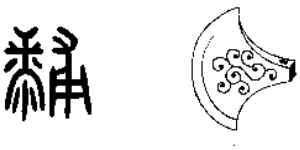
Figure 4.83. Imperial robe of bright yellow satin embroidered with gold dragon design and the twelve ornaments, Qianlong reign, Qing Dynasty (1735-1795).

Image Source: Mei & Tao, 2001, p. 211.

Details of the robe shown in Table 4.5 The twelve ornaments.

Table 4.13. The twelve ornaments

		On the left shoulder. The Sun with the 3 Legged Raven is a symbol of Yang Principle, Male, Imperial Sovereignty and Brightness. (Hawley, 1949; Welch, 2008, p. 234)
		On the right shoulder. The Moon with Hare pounding the Elixir of Life in a Mortar, a symbol of the Yin Principle, Female, Passiveness, Sacrifice. (Hawley, 1949; Welch, 2008, p. 234)
		At the neckline. The Stars represent China and the Heart of the Emperor, the Inexhaustible Source of Pardon, and Love. (Hawley, 1949; Welch, 2008, p. 234)
		At the neckline. Mountains, a Place of Worship, represent stability and the earth. (Hawley, 1949; Welch, 2008, p. 234)

		At waist height. A pair of small five-clawed dragons. The dragon is the symbol of the Emperor, and Eternity. (Hawley, 1949; Welch, 2008, p. 234)
		At waist height. The Pheasant represents Beauty and Good Fortune. (Hawley, 1949; Welch, 2008, p. 234)
		At knee height on the skirt of the robe. The Pair of Goblets represent Ceremonials and Sacrifices. (Hawley, 1949; Welch, 2008, p. 235)
		At knee height on the skirt of the robe. Pondweed or Waterweed is a symbol of the Spirit of Waters. (Hawley, 1949; Welch, 2008, p. 235)
		At knee height on the skirt of the robe. Flames represent the Spirit of Fire, Heat, and the Yang Principle. (Hawley, 1949; Welch, 2008, p. 235)
		At knee height on the skirt of the robe. Rice or Grains is the symbol of Prosperity and Fertility. (Hawley, 1949; Welch, 2008, p. 235)
		At waist height. The Axe represents Justice, Authority. (Hawley, 1949; Welch, 2008, p. 234)
		At waist height. The Conventional Bows or folded Embroidered Altar Cloth is a symbol of Peaceful Collaboration. (Hawley, 1949; Welch, 2008, p. 234).
Image source: Chinese Auspicious Patterns, 2008	Image source: Mei & Tao, 2001, p. 212-213.	

Another important representation of symbolism is the Badge of Rank, also called PuZi, mandarin squares as shown in Figure 4.84. Badges of rank originated in the Yuan Dynasty (AD1260-1368) and continued throughout until 1911. The badges are about 30 centimeter square, and embroidered or woven in beautiful colors. These coat-badges, worn divided on either side of the front, and in one piece on the back, of an official's robe, were indicative of professional rank. There are altogether nine classes of officials, both civil and military, and permissible representation of each was strictly controlled. Motifs varied slightly with each dynasty, but in general, civil officials wore bird symbols (Table 4.14) and military officers wore animal symbols (Table 4.15) (Gostelow, 1975; Wrigglesworth,1990).

3rd rank civil officer robe

3rd rank peacock badge

Figure 4.84. 3rd rank civil officer robe
Source: Wrigglesworth, 1990, p. 9.

Table 4.14. Civilian Identification

		
文一品 鶴	文二品 錦鷄	文三品 孔雀
1st rank: Crane	2nd rank: Golden pheasant	3rd rank: Peacock
		
文四品 雁	文五品 白鶴	文六品 鴛鴦
4th rank: Goose	5th rank: Silver pheasant	6th rank: Lesser egret
		
文七品 鸂鶒	文八品 鵪鶉	文九品 練雀
7th rank: Mandarin duck	8th rank: Quail	9th rank: Paradise flycatcher
Image source: http://www.zh5000.com/JS/buzhi/bz-online-0004.htm		

Table 4.15. Military Identification

		
武 親王五爪金龍	武 一品 麒麟	武二品 獅
5-paw Dragon for Emperor	1st rank: Qilin	2nd rank: Lion
		
武三品 豹	武四品 虎	武五品 熊
3rd rank: Leopard	4th rank: Tiger	5th rank: Bear
		
武 六品 彪	武 七品八品 犀牛	武 九品 海馬
6th rank: Biao or Tiger Cat	7th rank/8th rank: Rhinoceros	9th rank: Sea Horse
Image source: http://www.zh5000.com/JS/buzhi/bz-online-0004.htm		

4.2.2.4. Colors

In Chinese embroidery, colors also have symbolic meanings. There are five basic colors in the Chinese world order, which combinations can be demonstrated in Table 4.16.

Table 4.16. The five basic colors in Chinese culture

	Red	**White**	**Blue/Green**	**Yellow**	**Black**
Compass Point	south	west	east	centre	north
Basic Element	fire	metal	wood	earth	water
Compass Animal/Constellation	red bird	White tiger	Green dragon		black snake/tortoise
Season	summer	autumn	spring		winter
Source: Welch, 2008, p. 219.					

Each color presents one of five basic elements, four directions and four seasons (Apfel, 1992; Welch, 2008, p. 219). Meaning details are as follows:

- Red was the color of virtue and truth, the expression of joy and festive occasions, especially those connected with weddings and births;

- Yellow defined the Centre and the Earth, and was the Imperial color. Like the five-clawed dragon, yellow could be utilized only by the emperor and his direct lineage;
- White was the color of mourning;
- Black was equated with winter. It was, however, considered appropriate for elderly persons to wear.

The Five Colors appear very frequently on Chinese textiles as clouds or waves of water indicating auspiciousness. In modern Chinese society, these symbolic meanings in colors are not being strictly followed, but still have a great influence on people's daily lives, like wedding dresses being in red whilst garments for funeral ceremonies being in white and black. Symbolic meanings represent one of the important identities of Chinese traditional couture, and it is important for modern designers to understand these symbolic meanings.

4.3. Comparative Study of Western and Chinese Embroidery

In this section, a comparative study is made of Western and Chinese Embroidery, in order to outline the differences between the two, and to highlight the design concepts of modern embroidery. This comparison particularly focuses on the paths of development, embroidery design, techniques, and materials.

4.3.1. The paths of development

In the earlier sections of this Chapter, it became apparent that Western and Chinese embroidery maintained separate paths of development because of their geographical distance and because of the difference in cultures. Both branches of embroidery have their own features and characteristics in terms of design concepts, techniques, and use of materials.

4.3.1.1. Foundation of development

Embroidery, whether Western or Chinese, served mainly for high priests and nobles. As the economy progressed, embroidery also came to serve the common peoples, from functional purposes to pure appreciation art, like paintings. The undertaking of embroidery was mainly dominated over by women as amateurs, who formed the rich soil for its development.

Embroidery was important for demonstrating female virtues in both Western and Chinese culture (Dowdey, 1999, p. 36). In the West, the vast amount of samplers made by females between the16th and 18th centuries provide the evidence for this. In the 19th to 20th century, the amateur embroiderers played a major role in maintaining interest in the craft as a pastime (Harris, 1993, p. 214).

In China, it should particularly be referred to as so-called “inner-chamber embroidery”. The inner-chamber was the room in a Chinese home which was set aside for the exclusive use of the family. In larger houses, it often included a large second-storey room where the women, especially the unmarried daughters, spent their time (Dowdey, 1999. p. 39). Embroidery works by unmarried girls can demonstrate their intelligence, virtues and dreams for happiness. The origin of Suzhou embroidery can be traced back to “inner Chamber embroidery”. Figures 4.85 and 4.86 show the popularity of embroidery, both in the West and China, in the 19th century.

Figure 4.85. Sisters of Nightingale

Note: Florence Nightingale (1820-1910) and her sister Parthenope. Watercolor by William White, c. 1836.

Image source: Beck, 1999, p. 106.

Figure 4.86. Three Chinese ladies embroidering rank badges
Note: "Almost every garment worn by a middle- and upper-class Chinese was embellished with embroidery, as were all the soft furnishings for the home." (Garrett, 2007, p. 94).
Image source: Garrett, 2007, p. 92.

4.3.1.2. Social influence

Like other forms of art, the development of embroidery has been influenced by the development of economics, politics and society. In the West, embroidery was also typically affected by the art movements, such as the Arts and Crafts Movement, Art Nouveau and Art Deco, and by Modern Art movements from cubism to abstract art and free expression, as reviewed in section 4.1.1 of this chapter. In contemporary China, "the cultural revolution"

movement (1960s-1970s) had a fundamental impact on the development of all aspects of contemporary China, including its culture and art. Fashion and embroidery were no exception (Garrett, 1994, Preface). “Blue and green colors dominated the country in the 1970s” (Steele & Major, p. 45). Fashion embroidery almost disappeared in urban areas. Embroidery as appreciation art survived the movement, as it could be used for political reasons (Figure 4.87), such as using embroidery portraits as gifts for foreigner leaders.

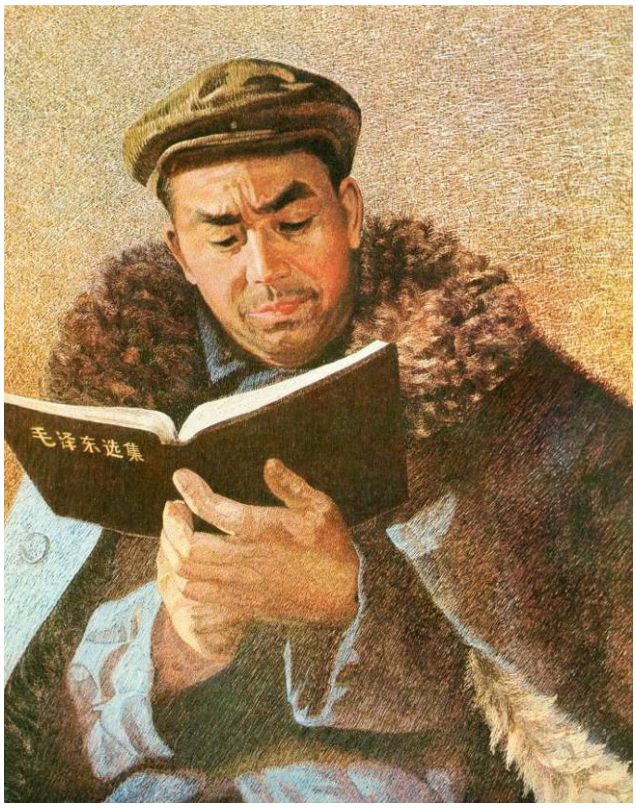


Figure 4.87. Portrait of Ironman Wan
Note: Ironman Wan was used as a good model during the Cultural Revolution.
Image source: Suzhou Embroidery, 1976.

4.3.1.3. Needlepainting

Needlepainting is an embroidery form that uses stitching to achieve the effect of a picture or painting, and was developed in the West during the 18th and 19th centuries. English needlepaintings (Figures 4.51 and 4.52) were about 150 years earlier than those in China. Mary Knowles (1733-1802) (Figure 4.51) and Mary Linwood (1755-1845) (Figure 4.52) were renowned at the time for their needlepaintings. However, needlepaintings were rejected by English academics for the reason of lacking in originality (Warner, 1991, p. 110).

Interestingly, even though needlepaintings have been under continuous development with regard to techniques and applications on new themes for nearly one hundred years, even down to today. Chen Shou (1874-1921) also mentioned in 4.2.1.9., was the first to introduce needlepaintings into China after she traveled to Japan and saw some of the Western arts. Her special technique in “imitation of reality” was inspired by this trip. After Chen Yang, Shouyu further developed needlepaintings using her “random stitch”, which was inspired by Western Expressionism, and Ren Xiuxian created her “random sketch”, which followed the Western sketching technique. One of the obvious and fundamental differences between Chinese and Western needlepaintings, however, is the use of materials — English uses wool, whilst Chinese uses silk. Silk fiber is longer, stronger and thinner than wool fiber,

and provides a richer light effect than wool. This makes silk more suitable for expressing details in the design and for achieving outstanding light effects.

4.3.1.4. Education and training

Education has played an important part in contemporary Western embroidery development.

The Royal School of Needlework is a London-based hand embroidery school, founded in 1872 to promote and teach the art of needlework that developed as a revival of the earlier crewelwork, and also showed the influence of the Arts and Crafts Movement. Students there are taught the traditional techniques of hand stitching. The embroiderers are not expected to design their own work. How students then go on to use the stitches is up to each individual. This approach encourages the greatest flexibility to use traditional stitches in a modern context (http://www.royal-needlework.co.uk/).

The Embroiderers' Guild was founded in 1906. On 12 January the Society of Certificated Embroideresses was founded by 16 graduates of the Royal School of Art Needlework, its aim being "to deal entirely with embroidery and with the first object of keeping up a high standard of work and design". Membership was open only to those holding a teaching diploma and the two years' certificate of the Royal School of Art Needlework. This was widened in 1907, and anyone could apply for Membership by submitting

embroidery for assessment by a panel of judges. The aims the Guild are to promote and encourage the art of embroidery and related crafts, to educate the public in the history and art of embroidery, and to undertake or support research in that subject and publish the useful results of that research, so as to collect, document, preserve, exhibit and interpret examples of fine embroidery that are of historical or educational merit, and to make such articles available to the public.

1935 saw a representative from the Guild sitting on the Examination Board of the City and Guilds of London Institute, and a year later a Diploma for Judges (of embroidery) was awarded. Embroidery became a School Certificate subject in 1938. The Guild publishes two embroidery magazines, Embroidery Magazine (since 1950) and Stitch (since 1999) (Embroiderersguild, 2009).

Nowadays, full-time and part-time courses are offered at many colleges and centres, some of the leaders in the field being Goldsmiths' College, London College of Fashion, and Manchester School of Art at Manchester Polytechnic. Manchester School of Art is currently the only provider of a full-time embroidery course in the UK, where students in Years 1 and 2 are introduced to both hand and machine embroidery, including computer aided embroidery equipment. As well as developing their skills base, students also learn about the history of embroidery, and work alongside the fashion and textiles courses through joint projects. Personal creativity through

an ongoing engagement with drawing and visual research is emphasized. Students have the opportunity to explore in both 2 and 3 dimensions, using a wide range of media and materials, as well as exploring the potential contexts and concepts. Students in Year 3 are required to synthesize the knowledge and skills acquired in order to work towards specialist outcomes — one-off craft pieces, or work intended for a gallery context.

In China, home education played the most important part in traditional Chinese embroidery development for thousands of years. As discussed previously, hobbyists have provided the soil for the development of embroidery. Embroiderers, and even embroidery masters, were mainly trained in the family, rather than in formal schools. Dowdey (1999, p. 36) suggests: “The quality of a girl’s embroidery was seen as a good index of her general ability, and was important in peoples’ estimation of her virtue”. The early embroidery education and training in China can be traced back to the Song Dynasty, when the imperial embroidery offices brought together girls from all over the empire to be trained by the master embroiderers and used to produce the embroidered items or clothes, and even embroidery pictures, for courts. During the late Ming and Qing dynasties, embroidery became a commercial article, and a big need arose for export to Western countries.

Embroidery schools

In 1911, Shen Shou founded the Independent Women's Training Institute (自立女工傳習所) in Tianjin, China. Nantong Needlework Training Institute (南通女工傳習所), supported by Zhang Jian (張謇), was established in 1914. *Xueyi's Embroidery Handbook* (1918) (雪宧綉譜) by Shen Shou is one of the first Chinese books to record the practices of an embroidery art. The school was a pioneer in China, introducing Western education ideas to train young women until 1926 (Dowdey, 1999, p. 42; Sun, 2007, pp. 122-123).

Another important embroidery school was the Danyang Training School for Women (丹陽女子職業學校), operating from the 1920s to the 1940s, and also the National Arts Academy when it was in Chongqing during World War II. Many famous embroiderers studied in this school, including Yang Shouyu and Ren Xiuxian (Dowdey, 1999, p. 42; Sun, 2007, pp. 122-123).

The Suzhou Embroidery Technical School was founded in 1952 with the assistance of the local government. Yang Shouyu was employed as a teacher, along with her best student. On the basis of this school, a folk art embroidery research group was set up in 1954 and gradually became the embroidery cooperative. Yang Shouyu believed that embroiderers needed to be trained in painting in order to produce the finest quality embroidery. This theory not only represented a breakthrough in the development of traditional

embroidery, but also served as a link between the past and the future (Dowdey, 1999, p. 42; Sun, 2007, pp. 122-123).

In the early 1960s, the Suzhou Embroidery Research Institute (SERI) was formally set up by Zhang Meifang. SERI focused on the research and development of Su embroidery, educating and training new embroiderers. The training usually needed several years, as they also had painting lessons, including sketching from real life and nature, together with learning traditional Chinese ink painting. In embroidery classes, the students learned forty traditional embroidery stitches, and gained a better understanding of how to integrate stitch techniques and aesthetics (Dowdey, 1999, p. 42; Sun, 2007, pp. 122-123).

In today's China, embroidery is not regarded as a main academic subject or degree in Chinese higher education. There are some embroidery training schools in China, but these focus mainly on basic skills rather than on design. These schools are established, either by companies or individuals, for the purpose of profit rather than education. Embroidery education in China still has a long way to go. This may suggest that there is a need for China to introduce embroidery courses into its higher education in the areas of fashion and textiles in order to not only preserve its traditional embroidery, but also to introduce modern design theory into the traditional art.

4.3.2. Features of embroidery

There are many features in the two systems that are clearly different. A systematic review is necessary, in order to facilitate further interchange between the two systems, and in particular to adapt Chinese embroidery into the modern fashion design environment.

4.3.2.1. Materials

Materials for western Embroidery are various in kinds and have a vast choice to select — almost any fabric is potentially useful for embroidery, and any kind of thread can be used for embroidery today as shown in Figure 4.88. On the contrary, materials for Chinese embroidery are relatively few, and are mainly dominated by silk threads and silk fabric as shown in Figure 4.89.

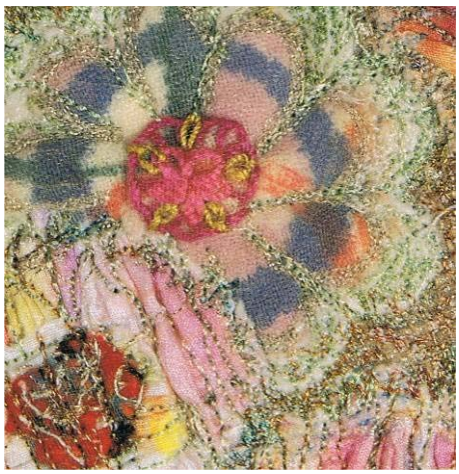


Figure 4.88. Materials comparison – Western
Image source: Beaney & Littlejohn, 1991, p. 87.

Figure 4.89. Materials comparison – Chinese
Image source: Zhan, 2003, p. 32.

4.3.2.2. Skills & Techniques

Western: Hand stitches have a free, adventurous character as shown in Figure 4.90. Machine is commonly used.

Chinese: Highly skilled hand embroidery as shown in Figure 4.91.

Figure 4.90. Comparative study – Western techniques

Image source: Sweeney, 2008.

Figure 4.91. Comparative study – Chinese techniques

Note: Suzhou fine embroidery silk thread on silk gauze. Based on a painting by Huang Xiang 黃蘅. Embroidered by Ren Huijuan 任惠娟; Shi Yi 施怡; Zhu Huifen 褚惠芬.

Image source: Dowdey, 1999, p. 115.

4.3.2.3. Texture

In Western embroidery, textured effect is achieved by materials, stitches, and techniques as shown in Figure 4.92. In Chinese embroidery, textured effect is a smooth, delicate surface achieved by mainly by stitches as shown in Figure 4.93.

Figure 4.92.Comparative study – Western texture

Image source: Beaney & Littlejohn, 2001, p. 17.

Figure 4.93.Comparative study – Chinese texture
Note: work by Suzhou Embroidery Research Institute, 1987.
Image source: Ketchum, 1999, p. 71.

4.3.2.4. Craftsmanship and Design

Design concepts and skills are the key elements, both in Western and Chinese embroidery. Nowadays, however, Western embroidery is focusing more on the design rather than on detailed skills or craftsmanship. Western embroiders focus on how to apply the design principles so as to best present their own design, by exploring all the way from materials to techniques.

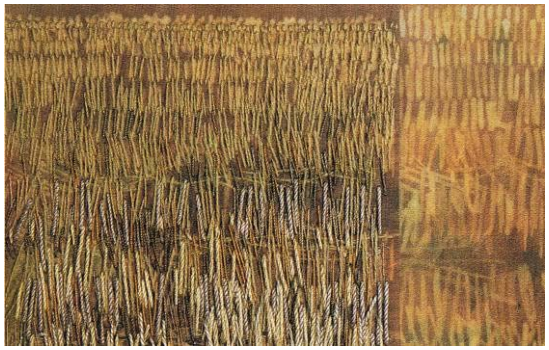
Embroidery is the way to express the embroiderer's own sensations. The embroidery designer's thinking process (Figure 4.94) is well described by Whyte (1969, p. 87).

DESIGN
initially depends on
LOOKING
training the eye to
SEE
to absorb appearances
to be alert and sensitive in
RECOGNISING
the elements of design
CONTRAST – HARMONY
RHYTHM – BALANCE
in
LINE- SHAPE-PATTERN
in order to
CHOOSE
and
ORGANISE
for a purpose

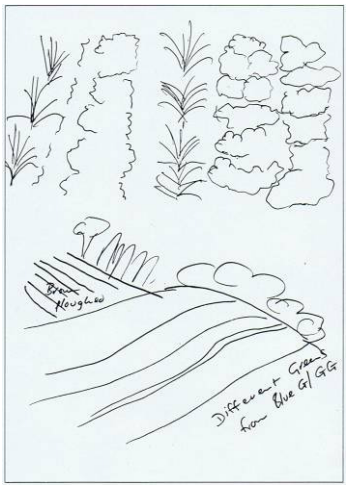
Figure 4.94. Embroidery thinking process
Source: Whyte, 1969, p. 87.

This design process can be seen in the following example (Figure 4.95). In this embroidery design, the design inspiration is from a photograph, but the embroiderer interprets the inspiration into his/her own creation.

Photograph for inspiration



Experimental embroidery sample



Design drawing by the embroiderer

Finished embroidery panel

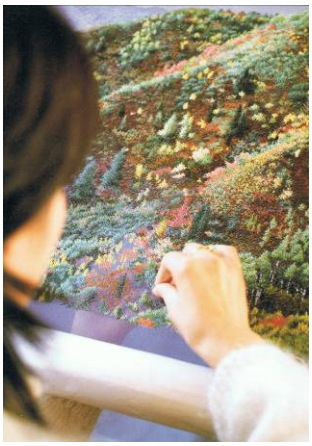
Figure 4.95. Design process of Western embroidery
Image source: Beaney & Littlejohn, 1991, p. 115.

In the meantime, embroiderers in China have been trained for many years in embroidery skills and an artistic sense, but with no focus on creation. Embroiderers generally work on the design patterns done by other painters or designers, and focus on how to represent the paintings or patterns by stitches with good, accurate color. This embroidery process can be seen in the

following example as showed in Figure 4.96. The embroidery design is from a photograph, and the embroiderer translates the photograph into stitches.

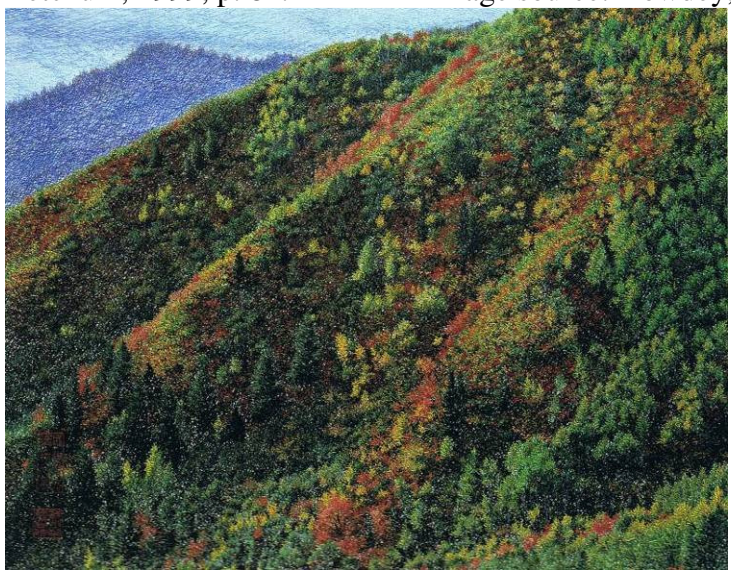
The original photograph for embroidery

Photograph by Robert Glenn Ketchum, 1989.
Image source: Ketchum, 1999, p. 84.



Embroidering based on the photograph

Image source: Dowdey, 1999, p. 60.



Finished embroidery work

Figure 4.96. Design process of Chinese embroidery
Note: work by Suzhou Embroidery Research Institute, 1998.
Image source: Ketchum, 1999, p. 85.

In this process, Chinese embroidery focuses more on the details. For example, one silk string “gen” (根) can be divided into two units called “guo” (股), which in turn is divided into 8 units called “si” (絲), which can be divided into another 8 units called “mao” (毛) as the smallest string unit. Chinese embroiderers can needle with the smallest unit of “mao”. It can take 6 hours to embroider one “eye” with different color strings. This detailed and time consuming work can easily cause health problem for the embroiderers, such as neck and back pains, as well as eyesight problems.

4.3.2.5. Symbolism

As Messent (1996, p. 112), symbolisms are “probably the most important and readily available design elements through which to express abstract thoughts, ideas, feelings, emotions and personal statements.” Tradition symbols are easily understood by most people, personal symbols which are meaningful only to yourself and which others will only be able to guess at unless you choose to explain them.

It has observed that symbolisms exist in both Chinese and Western embroidery. However, as a significant feather, symbolisms are widely spread culture phenomenon in Chinese culture and embroidery. As universal culture language, symbols are used to relay cultural messages and implications. In China, symbolism denotes social standing, moral messages, and events, both

historical and legendary. In the meantime, Western embroidery has less symbolic features compared with those of Chinese embroidery.

4.3.2.6. Summary

The main differences between Chinese Embroidery and Contemporary Western Embroidery can be summarized as in Table 4.17.

Table 4.17. Features of Chinese and Western Embroidery

	Chinese Embroidery	**Western Embroidery**
Materials	Mainly in silk. Silk fabric and silk threads.	Vast choice. Almost any fabric is potentially useful for embroidery. Almost any kind of thread can be used for embroidery today.
Skills & Techniques	Highly skilled hand embroidery. Techniques that are passed down by previous mentors or masters.	Hand & machine. Hand stitches have a free, adventurous character.
Texture	Create a smooth, delicate surface. Texture achieved mainly by stitches.	Textured effect. Texture achieved by materials, stitches and techniques.
Craftsmanship and Design	As a craftsman, the embroiderer focuses on representing the original design.	As a designer, the embroiderer focuses on expressing his or her own sensations.
Symbolism	Significant.	Less significant.

4.4 Conclusion

Traditional Chinese embroidery has been developed over thousands of years following two directions: The practical form and the art appreciation form. The most presentable Chinese embroidery, Su embroidery, has been focusing on

the art appreciate form for centuries. Development and experimentation has always been an issue. However, the application of embroidery on fashion has not fundamentally changed. It can therefore be concluded that the application of Chinese traditional embroidery into modern fashion design still has a long way to go (Appendix 7, interview Zhang Meifang).

Traditional Chinese embroidery has preserved its purity as a traditional art form, but has, however, limited application in modern fashion. It is regarded as being conservative, time consuming and lacking in economic consideration, and is therefore no longer suitable for today's fashions and life styles (Appendix 7, Interview with Chen Zhuqing).

In the meantime, Western embroidery development has maintained a close relationship with new technology and fashion evolution – its design concept has always been a part of fashion design. The features of contemporary embroidery can be described as follows:

1) Machine embroidery is commonly used;
2) No boundary to materials used;
3) Experimental and creative;
4) Blend with embroidery design software & digital embroidery;
5) Stitches and techniques less important than artistic expression of the embroidery art.

There are three areas of improvement for Chinese embroidery: 1) Its design philosophy needs to be updated, 2) Its production process needs to be more efficient and current, and 3) Embroidery materials can be expanded to meet the changes in modern aesthetic perspectives and lifestyles. Based on these conclusions, a new design concept for Chinese embroidery has been built up, which will be discussed in Chapter 5.

Chapter 5

Conceptual Design for Chinese Fashion Embroidery

5.1 Introduction

It becomes clear from the discussion in Chapter 4 that Chinese embroidery has preserved its purity as a traditional art, but has limited application in modern fashion. Its conservative and time-consuming nature leaves Chinese embroidery unsuitable for modern fashion and life styles. On the other hand, it has been noted that the history of Western embroidery has a close relationship with new technology and the evolution of fashion, and that it has become a part of fashion design. In this regard, Chapter 4, after a comparative study, summarized the different features of Chinese and Western embroidery.

In this Chapter, firstly the *design concept* for modern Chinese fashion embroidery is extracted and purified in order to explore the beautiful and rich resources in Chinese traditional embroidery. Secondly, the *design parameters*

as indicators will be defined, so as to describe and implement the design concept.

5.2 Design Concept for Chinese Fashion Embroidery

Based on the nature of embroidery, as well as the background study, field study and comparative study of Chinese and Western embroidery, the design concept for innovative fashion design for modern society has been established.

The design concept for modern Chinese fashion embroidery should include the following three elements:

1. Chinese identity;
2. Dynamism and modernization:
3. Innovation and creativity.

5.2.1. Chinese identity

As discussed in Chapter 2, embroidery has been used as a conveyance of human cultural identities, and this is particularly the case with Chinese embroidery. Symbolism is one of the most important features in Chinese embroidery, in which patterns, colors and Chinese characters bear meanings

and convey Chinese philosophy. This feature can be recognized as one of the cultural identities of modern Chinese fashion.

In the new design concept, this feature is accomplished by adopting Chinese traditional motifs for the inspiration of embroidery design.

5.2.2. Dynamics and modernization

As discussed in Chapter 2, embroidery and fashion have dynamically reflected the development of society and the economy. In turn, the new design concept should also reflect such changes. In an interview, Giogia Rapezzi points out that, “if embroidery is to be beautiful it must, fundamentally, be a modern one…” (Rocca, 2006, p.15). One of the primary features of fashion embroidery is to be dynamic and modern.

In this study, the features of dynamism and modernity are accomplished by using modern materials and modern techniques such as digital embroidery machines, digital printing and other new techniques.

5.2.3. Innovation and creativity

Innovation is not only important for scientists but also for designers. As discussed in Chapter 2, design, materials and techniques are the three fundamental components of embroidery. As in science, there has also been a great upsurge of interest in expanding the boundaries of embroidery art, by

using new technology, new materials and new ideas. As discussed in Chapter 4, innovation and creativity are two important features of modern embroidery. Innovation and creativity are also obligatory for the development of Chinese embroidery into the new era of modern fashion.

In this study, this feature is accomplished by adopting other techniques as alternatives, by mixing techniques, and also by considering modern Chinese embroidery as a 3-D effect.

5.3 Design Parameters for Chinese Fashion Embroidery

In general, design parameters can be used to describe any features and constraints, as discussed in Chapter 3. Parameters can indicate the most suitable techniques, materials, patterns and colors, as well as time, cost and other constraints.

The design concept for modern Chinese fashion has been defined as having different features. However, the design concept for modern Chinese fashion is difficult to quantify and implement. Therefore, this study introduces design parameters to describe the features. For example, the feature of Chinese identity can be indicated by the parameter of Chinese motifs.

5.3.1. Chinese motifs

Having developed over thousands of years, traditional Chinese motifs are one of the important parts of Chinese culture, and are widely used, not only in embroidery, but also in other art forms, such as textiles, clothing, architecture, ceramics and other decoration arts in use in daily life. Traditional Chinese motifs have grown out of Chinese culture, being deeply related to other areas of life, such as the economy, religion, philosophy and politics. They have now become one of China's chief cultural identities. Many fashion designers use traditional Chinese motifs for their inspiration, as demonstrated in Figures 5.97-100.

Figure 5.97 shows a Chinese dragon motif by Sommer for the 2008 spring/summer collection.

Figure 5.98 shows a traditional Chinese motif by Naeem Khan for the 2009 spring/summer collection.

Figure 5.99 shows a Chinese peony motif by Lilycomes for the 2008 spring/summer collection.

Figure 5.100 shows a Chinese flower and bird motif by Song Wei for the 2009 spring/ summer collection.

Figure 5.97. Chinese motif 1

Note: By Sommer for the 2008 spring/summer collection.

Source: Fashion Consultant Ltd, Top Fashion Embroidery. No. 11.

Figure 5.98. Chinese motif 2

Note: By Naeem Khan for the 2009 spring/summer collection.

Source: Fashion Consultant Ltd, Top Fashion Embroidery. No. 15.

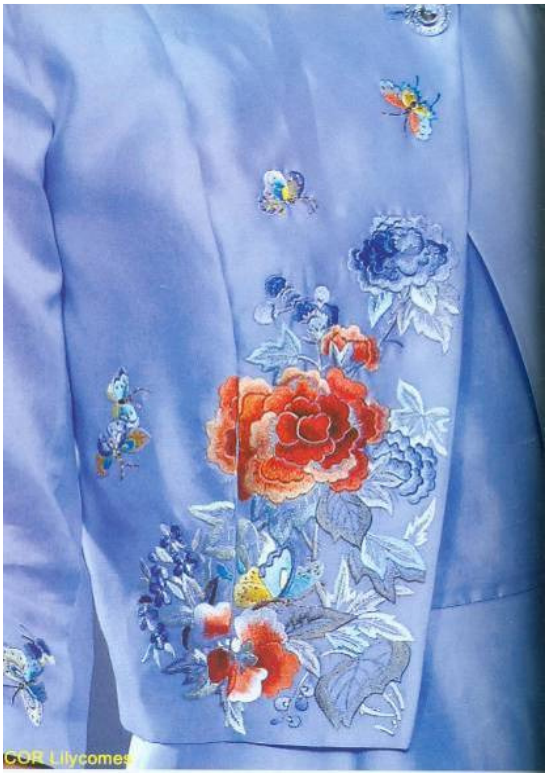


Figure 5.99. Chinese motif 3

Note: By Lilycomes for the 2008 spring/summer collection

Source: Fashion Consultant Ltd, Top Fashion Embroidery. No. 11.

Figure 5.100. Chinese motif 4

Note: By Song Wei for the 2009 spring/ summer collection

Source: Fashion Consultant Ltd, Top Fashion Embroidery, No. 15.

5.3.2. Modern materials

The use of various modern materials in embroidery can achieve a modern appearance in embroidery and fashion. Today, there are many choices of materials, from natural to manmade – almost any fabric is potentially useful for embroidery. This vast choice of materials provides the freedom and space for an embroiderer's creation and imagination. Using various modern materials is a trend in embroidery development, as demonstrated by recent fashion (Figures 4.101-102), and by the Hand & Lock embroidery competition, where the design briefs always encourage innovative design and use of materials, as in Appendix 8.

Figure 5.101 shows the use of different laces by Viktor & Rolf for their 2008 spring/summer collection.

Figure 5.102 shows the mix of different materials and embroidery objects used by D&G for its 2008 spring/summer collection.

Figure 5.101. Modern materials 1

Note: By Viktor & Rolf for 2008 spring/summer collection

Source: Fashion Consultant Ltd, Top Fashion Embroidery, No.12.

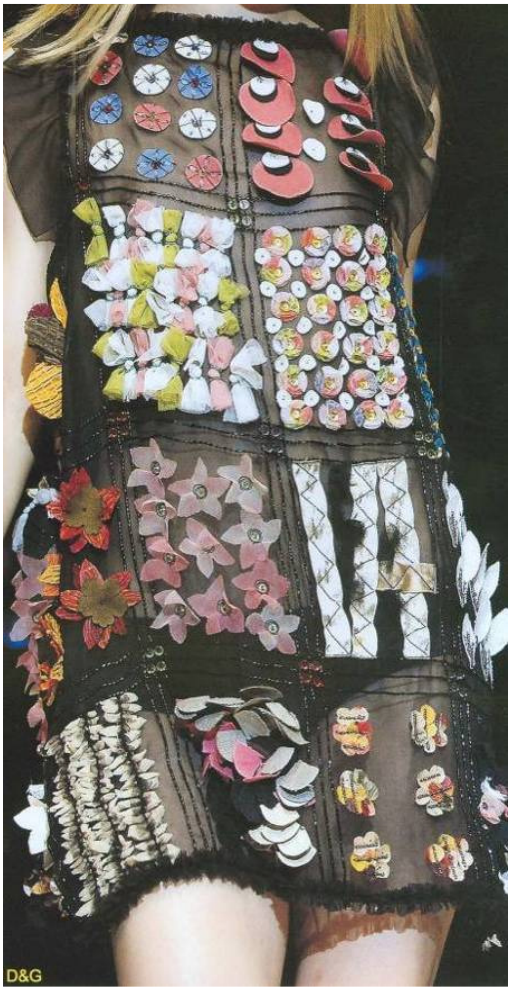


Figure 5.102. Modern materials 2

Note: By D&G for 2008 spring/summer collection

Source: Fashion Consultant Ltd, Top Fashion Embroidery, No.12.

5.3.3. Combination of hand & machine

Compared with hand embroidery, machine embroidery is speedy and suits the pace of modern life. However, mass production usually causes the effect of loss of originality and personality. After the flood of mass production by our modern economy, people tend to love hand-made things, as these display more individual character and personal feelings. It is thus so with hand embroidery. Therefore, a combination of both hand and machine embroidery can achieve the advantages of economic considerations along with the personal touch. Combining machine with hand embroidery highlights is a particular consideration of this study.

The work shown in Figure 5.103 is by the 1st prize winner Emma Crinion in the 2005 Hand & Lock embroidery competition. This sample shows the combination of free machine embroidery and hand stitches, and displays strong originality and personality.

Figure 5.104 is a sample made by Muller, a successful German embroidery company with four generations behind it. The sample was made by machine, with hand-embroidered highlights, this work being a one-off customized piece with exclusive value.

Figure 5.103. Combination of machine and hand 1

Note: By Emma Crinion, 1st prize winner in the 2005 Hand & Lock embroidery competition
Source: Hand & Lock

Figure 5.104. Combination of machine and hand 2

Note: By Muller

Source: Collezioni Trends, 81, p. 130.

5.3.4. Mixture of techniques

Innovation and creativity are important features of modern embroidery. Embroidery combining other alternative techniques such as dyes, discharges and paints, or screen printing and digital printing, has become an obvious feature of 21st century embroidery. This can also be seen in recent fashion, as shown in Figures 5.105-108.

Figure 5.105 shows the combination of screen printing with machine embroidery and beading by Diesel for their 2008 spring/summer collection.

Figure 5.106 shows the combination of applying paint with beading by Christian Lacroix for their 2007-08 autumn/winter collection.

Figure 5.107 shows the combination of printing with beading by Falguni & Shane Peacock for their 2009 Spring Summer.

Figure 5.108 shows a mixture of beading, embroidery, and digital printing by Christian Lacroix for its 2009 Spring Summer.

Figure 5.105. Mixture of techniques 1

Note: By Diesel for their 2008 spring/summer collection
Source: Fashion Consultant Ltd, Top Fashion Embroidery, No.11.

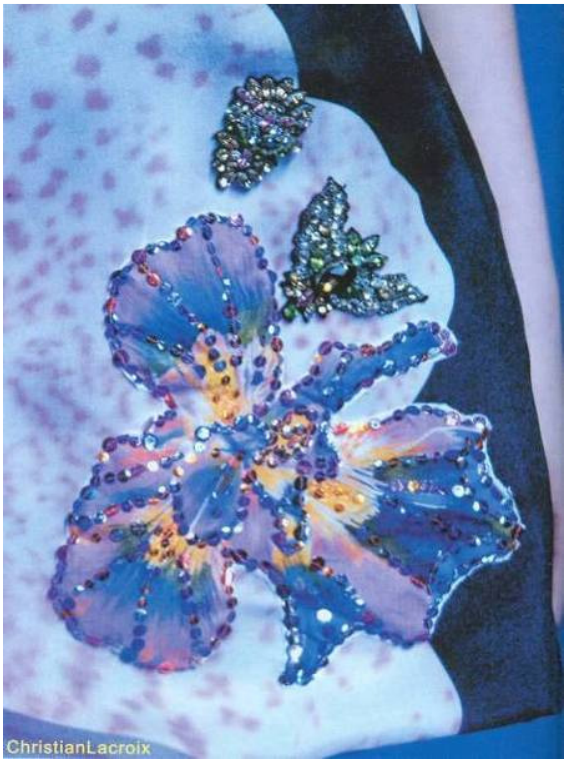


Figure 5.106. Mixture of techniques 2

Note: By Christian Lacroix for their 2007-08 autumn/winter collection.
Source: Fashion Consultant Ltd, Top Fashion Embroidery, No.10.

Figure 5.107. Mixture of techniques 3

Note: By Falguni & Shane Peacock for their 2009 Spring Summer

Source: Fashion Consultant Ltd, Top Fashion Consultant Ltd, Fashion Embroidery, No.15. 2009 Spring/Summer.

Figure 5.108. Mixture of techniques 4

Note: By Christian Lacroix for its 2009 Spring Summer

Source: Fashion Consultant Ltd, Top Fashion Consultant Ltd, Fashion Embroidery, No.16. 2009 Spring/Summer.

5.3.5. 3-D effect

Embroidery is normally presented in the form of two dimensions. However, three dimensional (3-D) embroidery has a special visual impact, and adds highlights to fashion. Embroidery has advantages for giving a 3-D effect, in comparison with other textile techniques like print and tie dye. This raised effect can be achieved by techniques like padded embroidery, fabric manipulation, quilting, raised gold-work, raised beading, using found objects covered with thread and material, and so on. In the overall brief of the 2008 Hand & Lock Embroidery Competition, it particularly emphasized 3-D effects (Appendix 8). The 3-D effect can be achieved by various embroidery techniques, as shown in the following.

The 3-D effect achieved by machine embroidery to imitate real flowers by Cecilia Yau for the 2008-09 autumn/winter collection in Figure 5.109.

The 3-D effect achieved by fabric manipulation by Amuleti J for the 2008 spring/summer collection in Figure 5.110.

Figure 5.109. 3-D effect 1

Note: By Cecilia Yau for the 2008-09 autumn/winter collection
Source: Fashion Consultant Ltd, Top Fashion Embroidery, No.13.

Figure 5.110. 3-D effect 2

Note: By Amuleti J for the 2008 spring/summer collection
Source: Fashion Consultant Ltd, Top Fashion Embroidery, No.12.

The 3-D effect achieved by the mixing of different fabrics and their manipulation by Antonio Marras for the 2009 spring /summer collection in Figure 5.111.

The 3-D effect achieved by cut work embroidery combines lace embroidery to build up different layers by Jean Paul Gaultier for the 2007-08 autumn/winter collection in Figure 5.112.

Figure 5.111. 3-D effect 3

Note: By Antonio Marras for the 2009 spring /summer collection
Source: Fashion Consultant Ltd, Top Fashion Embroidery, No.16.

Figure 5.112. 3-D effect 4

Note: By Jean Paul Gaultier for the 2007-08 autumn/winter collection
Source: Fashion Consultant Ltd, Top Fashion Embroidery, No.10.

5.3.6. Summary

To conclude the study, the design concept for Chinese fashion embroidery can be transformed to 5 parameters as Chinese motifs, Modern materials, Mixture of techniques, 3-D effect and also Combination of hand & machine. (illustrated by Figure 5.113).

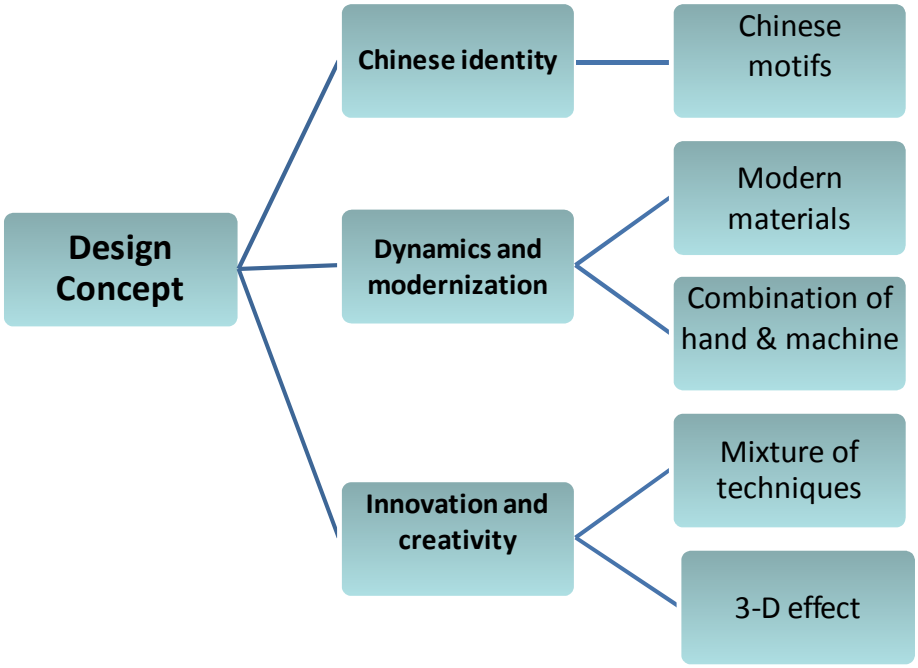


Figure 5.113. Parameters for Chinese fashion embroidery

To prove the design parameters are feasible, a series of design experiments were conducted by the researcher. Details of the experiments are as follows.

5.4 Experiment I – Design Parameter Setting

The aim of the experiments is to demonstrate that the design parameters are practicable, by implementing design parameters on embroidery samples. All samplings should satisfy the parameters of using Chinese motifs and considering various materials, and in addition, each sampling is to test one or more other parameters.

5.4.1. Sampling A – hand & digital embroidery

This sample is to test digital embroidery techniques by using a Bernina Artista730E sewing and embroidery computer and BERNINA Embroidery Software (BERNINA® DesignerPlus V.5).

This experiment includes the following aspects:

- Exploration of the digital embroidery software
- Usage of the computerized machine embroidery
- Editing and digitizing using the embroidery software

The experiment is based on the motif of a traditional Chinese flower pattern. Digital embroidery usually lacks originality and personality, which is of key value for the end customers and is thus the lifeline of the fashion industry.

Motifs from a Chinese flower series combined with digital appliqué and hand stitching in different materials are applied in this experiment. Through

this experiment, the concept of machine-hand embroidery is introduced, using machine embroidery as the main technique and the finishing touches applied using hand embroidery skills. Thus, the originality and personality of the embroidery design can be retained and extended.


Plum flower sample


Peony flower sample


Chrysanthemum sample

Figure 5.114. Samples of Chinese follower

Note: Samples made by author, 2007.

The experimental pieces were final listed by the 2007 International Machine Embroidery Competition (China). The samples are shown in Figures 5.114.

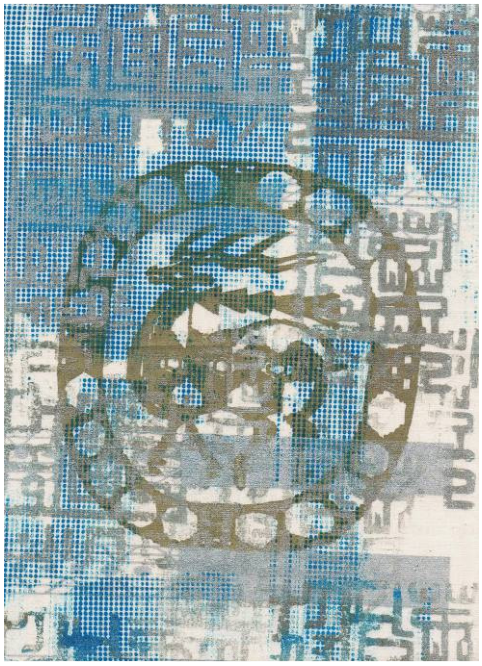
5.4.2. Sampling B – hand embroidery combined with screen prints

This sample is to test the techniques of hand embroidery on a screen print background. Screen printing is a printmaking technique that is used by industry for commercial printing, as well as for fine art and graphic design (*Printing Technique,* 2007).

Figure 5.115 shows the samples of combination of hand embroidery or hand beading with screen technique.

Screen print background before embroidery

After hand embroidery on screen print background



Screen print background before embroidery

After hand beading on screen print background

Figure 5.115. Hand embroidery on screen print background
Note: Sample prepared by author, 2008.

5.4.3. Sampling C – Free machine embroidery on a screen print

This sample is to test the techniques of combining free machine embroidery with screen print appliqué. The use of fabric paints and the increasing use of machine embroidery are two important features in contemporary embroidery developments. The aim of this experiment is to explore the possibility of combining screen prints with machine embroidery. In this experiment, the innovation focuses on the following aspects:

- The motifs of the embroidery design are inspired by traditional Chinese flower patterns and are screen printed
- Metallic threads are used to create another layer upon the printed fabric pieces to elaborate the design
- Neon color is used instead of traditional Chinese color

Embroidery design process can be divided into three steps as shown in Figure 5.116:

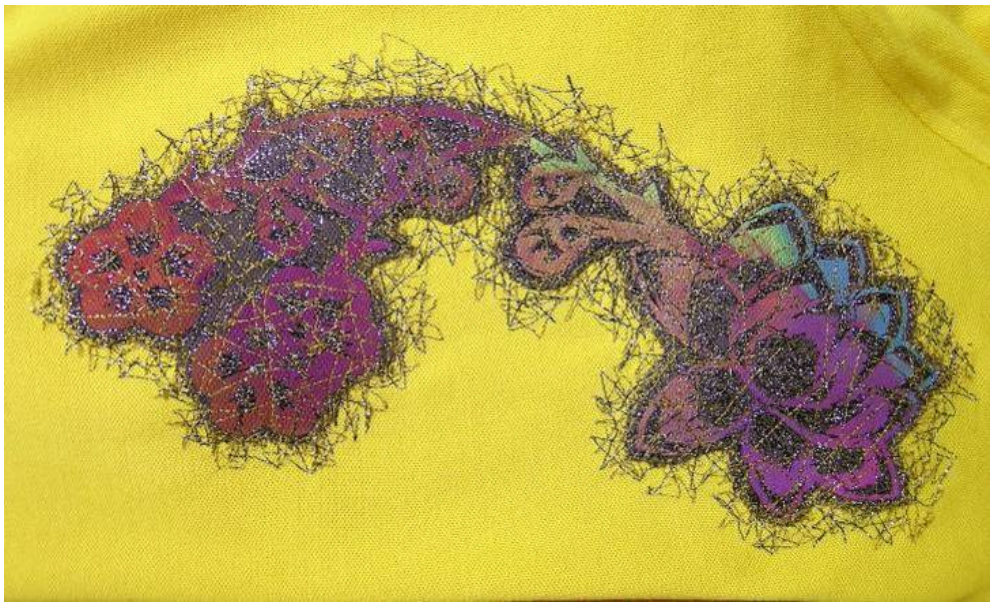
- Step 1: Screen printed motifs on appliqué fabric
- Step 2: Machine embroidery on the printed pattern, and cut out after stitching
- Step 3: Appliqué on the background fabric

As a result, the patterns from traditional Chinese flowers are imbued with a modern aesthetic sense. This experimental technique was used for a fashion collection selected for the 2007 International Fashion Exhibition and

World Fashion Asia catalogue.

Step 1 Screen printed motifs on appliqué fabric

Step 2 Machine embroidery on the printed pattern



Step 3 Appliqué on the background fabric

Figure 5.116. Free machine embroidery on screen print

Note: Sample prepared by author, 2007.

5.4.4. Sampling D – Embroidery on traditional Chinese fabric

This experiment is based on two kinds of traditional Chinese fabric. One is a fabric with stripes and one is brightly floral, both generally being used for bedding. By using machine embroidery, followed by cutting, dying and highlighting with hand embroidery, the traditional fabrics are modified or transformed into modern, trendy textiles for fashion, as shown as Figure 5.117,118.

Figure 5.117. Embroidery on traditional Chinese fabric 1
Note: Sample prepared by author, 2007.

Figure 5.118. Embroidery on traditional Chinese fabric 2
Note: Sample prepared by author, 2007.

The experimental pieces were sent to the Fabric China Creation Competition 2007 and selected for the final list and published in the Design Gallery of Fabrics China Creation Competition 2007— Pattern design branch catalogue.

5.4.5. Sampling E – Embroidery with 3-D effect

This sampling experiment is to achieve a 3-D effect by using digital embroidery machine. This sampling is based on traditional Chinese motifs. The raised embroidery effect is achieved by padding, cutting, layering, and beading. The finished products are a set of embroidery jewelry.

The working process can be divided into three steps, as shown in Figure 5.119:

- Step 1: Digital design motifs on leatherette
- Step 2: Padding the embroidery design, then cutting or layering
- Step 3: Adding the finishing touch with beading

Step 1: Digital design motifs on leatherette

Step 2: Padding the embroidery design, then cutting or layering.

Step 3: The finishing touch is made by beading the final product

Figure 5.119. Embroidery samples with 3-D effect

Note: Samples created by the author are based on designs by Judyanna Ng, 2007.

5.4.6. Experiment Sampling Analysis

To prove whether the design parameters are able to be produced in future products, experiment samples have been analyzed in accordance with features of the design parameters. For initial results of the experiment, see Table 5.18.

Table 5.18. Experiment Sampling Analysis

Design Parameters	**Sampling A**	**Sampling B**	**Sampling C**	**Sampling D**	**Sampling E**
Chinese motifs	4	3	4	5	5
Different materials	4	3	3	5	3
Hand embroidery	4	4	---	5	3
Machine embroidery	---	---	5	4	---
Digital embroidery	3	---	---	---	4
Combined hand and machine	4	---	---	5	3
Combined with screen print	---	4	5	---	---
Combined with dye or discharge	---	---	---	4	---
Embroidery with3-D effect	---	---	---	---	4

Note for Analysis value:

5 for Excellent; 4 for Very Good; 3 for Good; 2 for Satisfactory; 1 for Less than Satisfactory;

---for Not Appropriate

5.5 Conclusion

The design concept for modern Chinese fashion has been defined by different features, but the design concept is difficult to quantify and implement. Therefore, design parameters have been introduced to describe the features. Parameters can indicate the most suitable techniques, materials, patterns and colors, along with time, cost and other constraints. For example, the features of Chinese identity can be indicated by the parameters of Chinese motifs.

Chapter 6

Fashion Embroidery Design Process Models

6.1 Introduction

Embroidery involves a design process, starting with refining the design concept all the way through to implementation of the design concept. There has been great interest in and research into design thinking (Open University, 2008), as Simon (1969) points out that that design process “is a thinking process for practical, creative resolution of problems”.

Although similar to art, fashion and embroidery design is also subject to the personal taste of the designers, who share a common set of values – creativity, curiosity, inter-disciplinary skills and end-user focus (for project-based design). According to Simon (1969), a design thinking process can be divided into seven stages, these being to “define, research, ideate, prototype, choose, implement, and learn”. Within the seven steps, problems can be framed, the right questions can be asked, more ideas can be created, and the best answers can be chosen.

Based on the background review, field study and comparative study of Chinese and Western embroidery, this study has purified the design concept

for modern fashion embroidery design. Besides the general design theory, an examination of successful embroidery design processes is essential to build up an embroidery process model. Two typical case studies have been conducted. One is on Lesage House, for Haute-Couture fashion design; the other is on the Hong Kong industry, for mass production. This Chapter is to generalize and categorize the embroidery design process model by the case studies and experiment method (Experiment II). The design process model, together with PAM, comprises a system of control mechanism.

6.2 Embroidery in fashion design

Embroidery has been a part of fashion art since human history began. Over the years, embroidery works have been used for varied displays of wealth, status, and exuberance. Together with fashion and textiles, embroidery also plays its part in the performance of decoration, embellishment and visual luxury. As one of the oldest decorative artifacts, embroidery has always appeared hand in hand with fashion design, and has a close relationship with fashion (Rivers, 2003, p. 6). On the relationship between embroidery and fashion design, Valentino concludes that, “Asking me about the importance of embroidery is like asking a painter about the importance of oil colors.” (Rocca, 2006, p. 87).

As to the position of embroidery in the fashion design process, Valentino points out that, “Sometimes, embroidery suggests a garment.

Sometimes a garment claims its embroidery." (Rocca, 2006, p. 114). Therefore, embroidery design can occur *before*, *during* or *after* the fashion design process.

Scenario 1 - Embroidery before fashion design

In Scenario 1, embroidery design occurs before fashion design. Embroidery works (samples) can be the original inspiration for fashion design. This is also confirmed by Anna Molinari (Rocca, 2006, p. 94), who states that, "I very often start out with an idea of embroidery and build a dress around it." Lesage House, as a famous embroidery design house for French Haute-Couture Fashion, produces embroidery products for fashion designers (White, 1988). This model is also adopted by Lesage House, which is examined in Section 6.3.2.

Scenario 2 - Embroidery during fashion design

In Scenario 2, embroidery design happens during the fashion design. During the fashion design process, it may occur to the designer that an embroidery element is needed besides other considerations such as its silhouette, proportion, fabric, and construction. Embroidery as a surface embellishment may be added to a garment. In this situation, embroidery becomes a part of

fashion design. For this scenario, the design model of the Hong Kong fashion industry is examined in Section 6.3.3.

Scenario 3 – Embroidery after fashion design

Scenario 3 refers to embroidery occurring after the completion of fashion products. Embroidery becomes an independent design process based on the fashion products. In this scenario, the embroidery designer is working toward adding value to existing fashion products, either new or old. A design project of Scenario 3 is reported in Chapter 7.

6.3 Models for the Fashion Embroidery Design Process

6.3.1. Case 1 – Lesage House Model for Haute-Couture

Lesage House is a famous embroidery design house for French Haute-Couture Fashion. Each year, the owner of Lesage House, Mr. Lesage, designs two haute couture collections of between 250 to 300 samples each, and increasingly large collections for the expanding couture prêt-a-porter. He has reached a height of success that undoubtedly no other embroiderer has ever attained (White, 1988, p. 151). This study will use Lesage House as a case study for its embroidery design procedure. Figure 6.120 demonstrates how the design process proceeds in Lesage House.

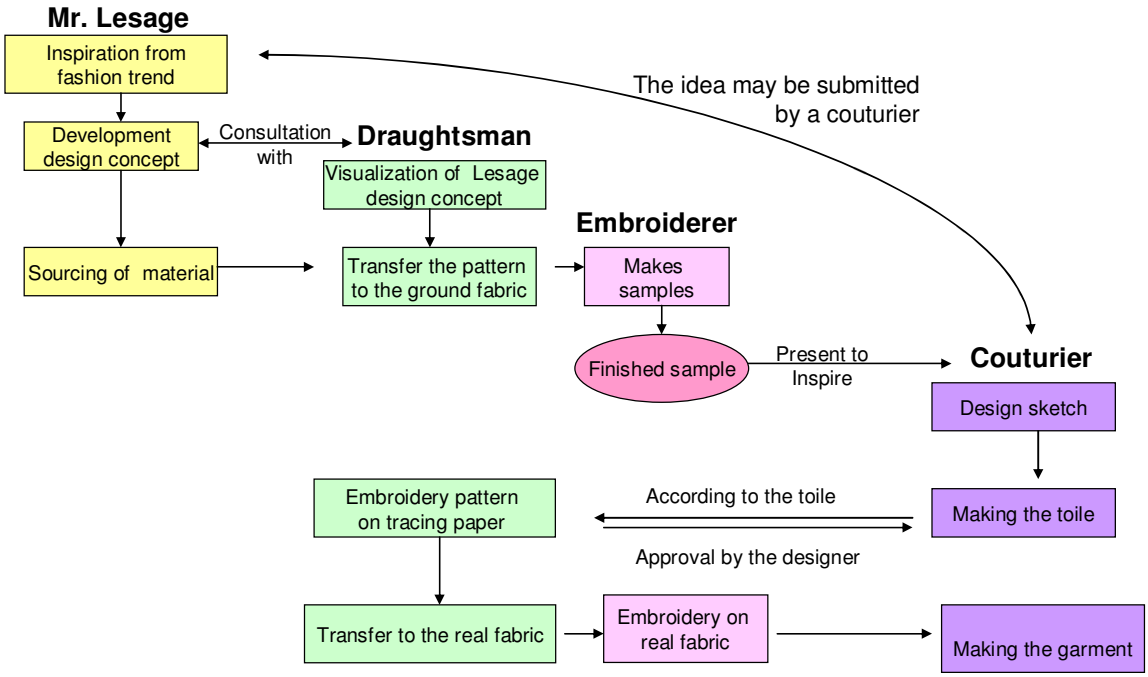


Figure 6.120. Embroidery design process of Lesage House
(Source: White, 1988, pp. 146-153)

In Chapter 6.2, interaction between embroidery and fashion design and three scenarios of embroidery design in the fashion design process are discussed. Both scenarios discussed previously can be found in the Lesage House design process. In Scenario I, the finished sample made by Lesage House can be the original inspiration for the Couturier (a high end fashion designer). In Scenario II, the embroidery theme can be submitted by a couturier. However, the former happens more often than the latter. The influence of Lesage House on haute couture is strong, as observed by White (1988, p. 151),

“If one is surprised to sense more and more a kind of overall unity in the haute couture presentations, it can be partially explained by the Lesage Effect. The couturiers derive ideas from the samples of embroidery. Though each couturier is hyper-secretive about his designs, the Lesage themes seep deeper and deeper into the substrata.”

6.3.2. Case 2 – Fashion Industrial Model for Mass Production

A questionnaire was sent to Ms Cam Ng, who is an expert in embroidery design at the Luenthai Garment Company Limited in Hong Kong. By investigating this inquiry into the practice of the Hong Kong fashion industry, scenario two, namely, *a garment claims its embroidery,* is supported. The design process of scenario 2 can be illustrated as in Figure 6.121.

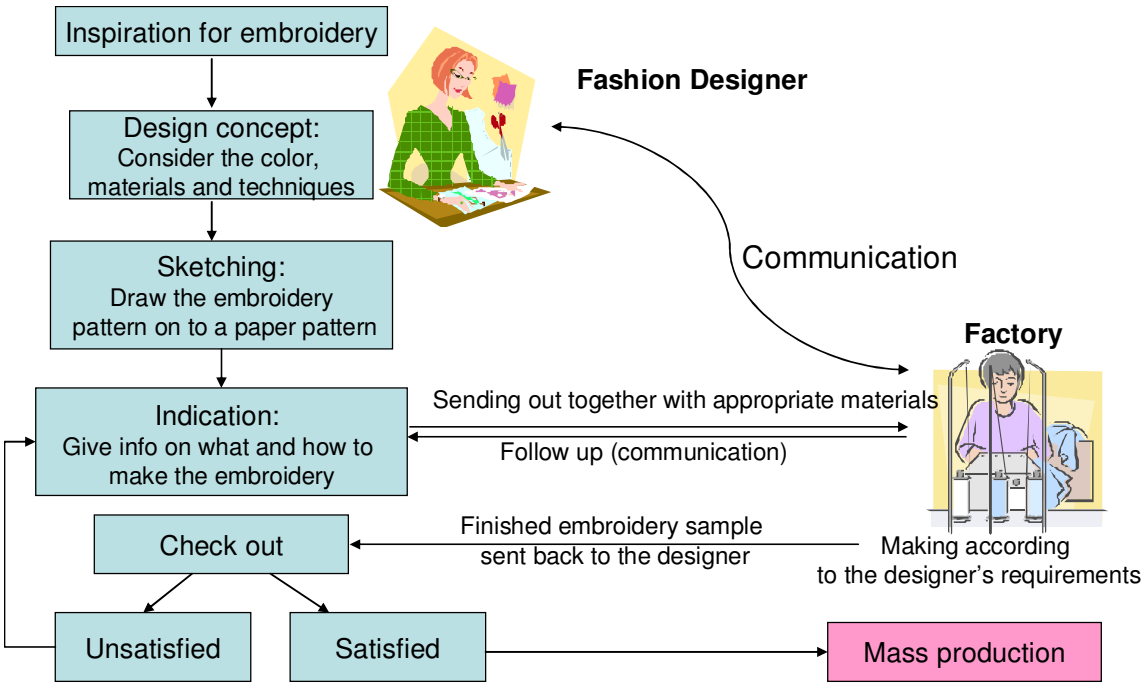


Figure 6.121. Design process in the HK fashion industry

6.3.3. General model for fashion embroidery design

Embroidery design, like other design activities, follows general design principles. Regarding a general design process, Aspelund (2006, p. xiv) summarizes the following steps: inspiration, identification, conceptualization, exploration and refinement, definition/modeling, communication and production, and describes design as “a plan of action” (Aspelund, 2006, p. 2). In many respects, embroidery design claims its own features, different from those of general design theory.

With reference to the model from Aspelund (2006, p. xiv), and based on the analysis of the process of Lesage House and the Hong Kong fashion industry, a fashion embroidery process model can be generalized as follows:

1. *Searching for inspiration*: The inspiration can come from magazines, the catwalk, reference books and other sources.
2. *Developing a design concept*: Design theme, mood, style, placement, pattern & color need to be considered; the design process will be guided all the way through by the design concept.
3. *Sourcing embroidery materials*: Embroidery design needs to add value, using stitches and various materials, e.g., beads, leather, lace, ribbon and so on; materials are important for the designer from inspiration to the final touches.

4. *Experiment sampling*: This stage includes exploration into different techniques, methods and textures to fulfill the design parameters; embroidery samples are made during this step, these being a most important and creative part of the whole embroidery design process.
5. *Decision making among alternatives*: Samples from the last step are compared, examined, and selected.
6. *Testing on the garment*: The whole effect is tested before production.
7. *Producing the final product*: This is the final stage of the design process.

The design process is a dynamic problem solving process that should be guided by design concepts. Some steps in the process can be reversible, as demonstrated in Figure 6.122. The designer revisits the design concept frequently to ensure it flows all the way through the process.

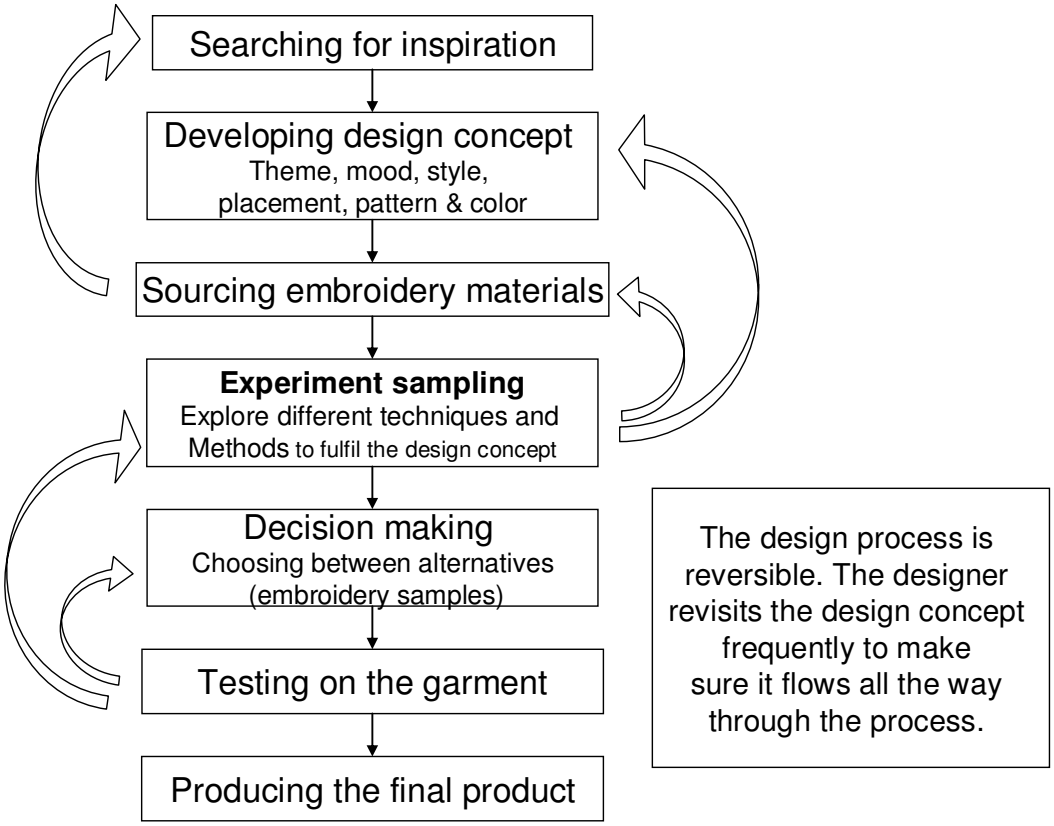


Figure 6.122. Design process for fashion embroidery

6.4. Embroidery Experiment II – Design Modeling

The purpose of this experiment is to test the model (Figure 6.122) for fashion embroidery design generated by Section 6.3. This project is a real world case as a result of attending the Hand & Lock Embroidery Competition 2006. The theme of the competition was “Hi-Tech Lo-Tech”, and the aim of the competition was, “to promote the use of hand embroidered surface embellishment within the fashion industry.” (Hand & Lock, 2006).

6.4.1. Searching for inspiration

Based on the model, the first step is to search for inspiration. The inspiration information provided by the competition brief puts the emphasis on "Technology and Nature", where it states that, "technology, which is part of our lifestyle today, can share its triumphs with materials nature supplies" (Hand & Lock, 2006). As a starting point, this project looks for inspirations from modern buildings, since they embrace modern materials, as well as various colors and shapes (Figure 6.123).

As to colors, the competition requires "shades of dusty pastels with brilliant accents" (Hand & Lock, 2006). The faded paint of buildings with dusty pastel colors becomes the color inspiration, as shown in Figure 6.124.

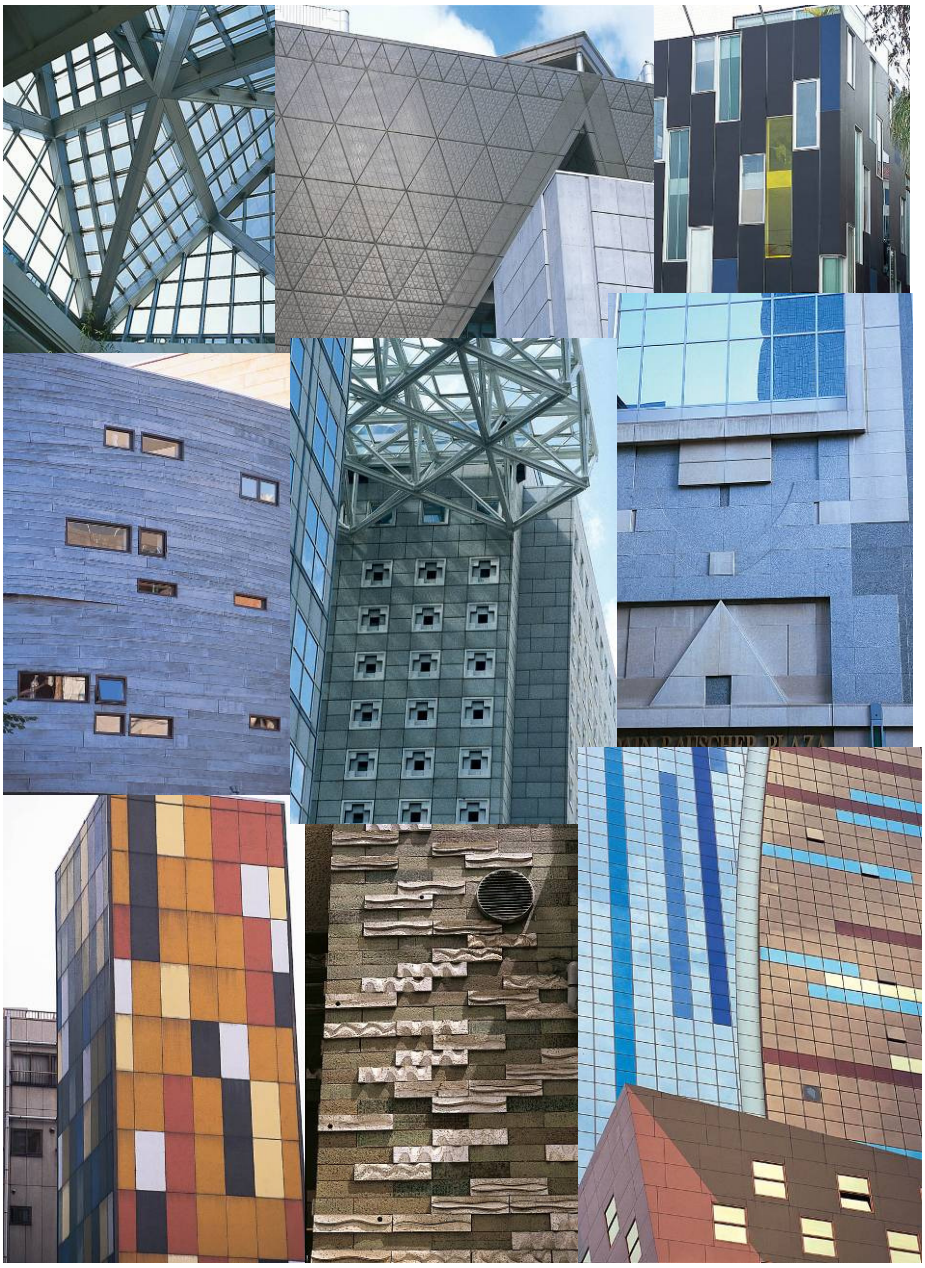


Figure 6.123. Design inspiration

Note: Images collected by author

Image source: Juracek, 2005.

Figure 6.124. Color inspiration

Note: Images collected by author
Image source: Juracek, 2005.

Based on the inspiration, some initial drawings were made in order to visualize the ideas in a sketch book, as shown in Figures 6.125, 126.

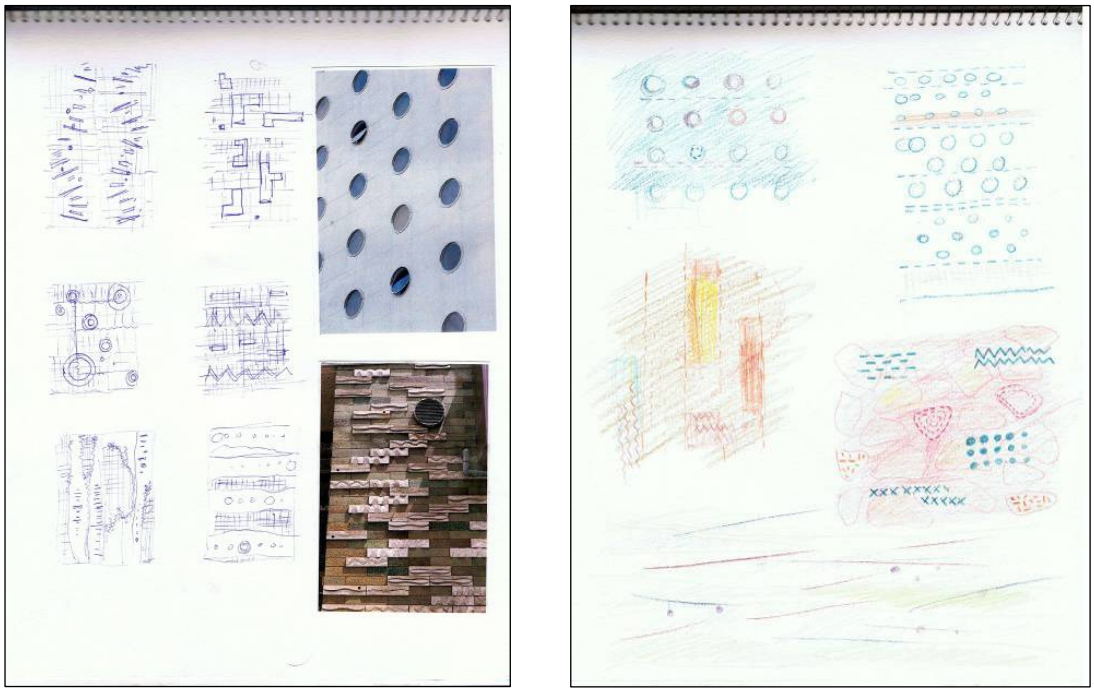


Figure 6.125. Draft drawing
Image source: From author's sketch book

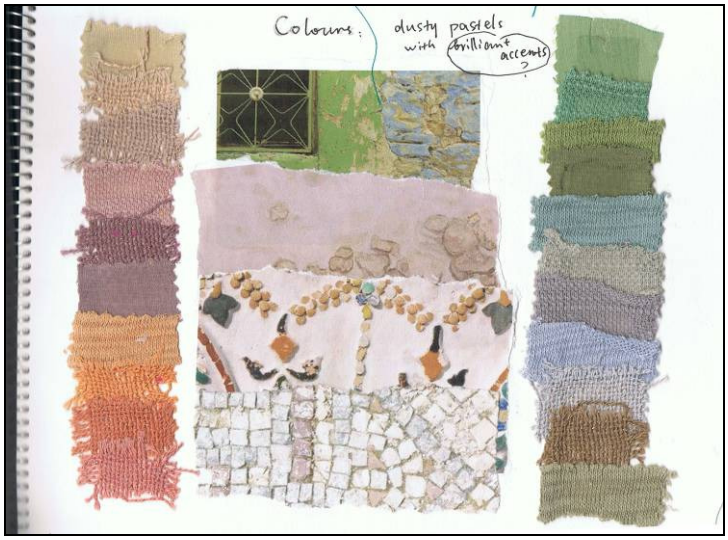


Figure 6.126. Swatches for color inspiration
Image source: From author's sketch book

6.7.2. Developing the design concept

The second step is to develop the design concept, which should reflect the theme, mood, style, placement, pattern, and color. Regarding the design concept, the competition requires "mixing different elements" (Hand & Lock, 2006). It seeks "original and creative ideas, innovative design and use of materials" (Hand & Lock, 2006).

The design concept became clear after taking a photograph of a building in Hong Kong, shown in Figure 6.127, which conveyed a mixed feeling of new and old, metallic and grey, hi-tech and lo-tech – a combination of traditional and modern. As to embroidery expression, it could use a mix of

hand and machine, a mix of natural and man-made materials, to demonstrate the harmony of hi-tech and lo-tech.

Figure 6.127. Manipulation of photograph for inspiration
Image source: Photo was taken and modified by author

6.7.3. Sourcing embroidery materials

As to the embroidery materials, the competition requires “natural materials”, and “man-made fibres and fabrics” (Hand & Lock, 2006). Materials are important for the designer, from inspiration through to the final touches. To express the mixed feeling of new and old, metallic and grey, hi-tech and lo-tech – a combination of traditional and modern – various materials were collected together, as shown in Figure 6.128.

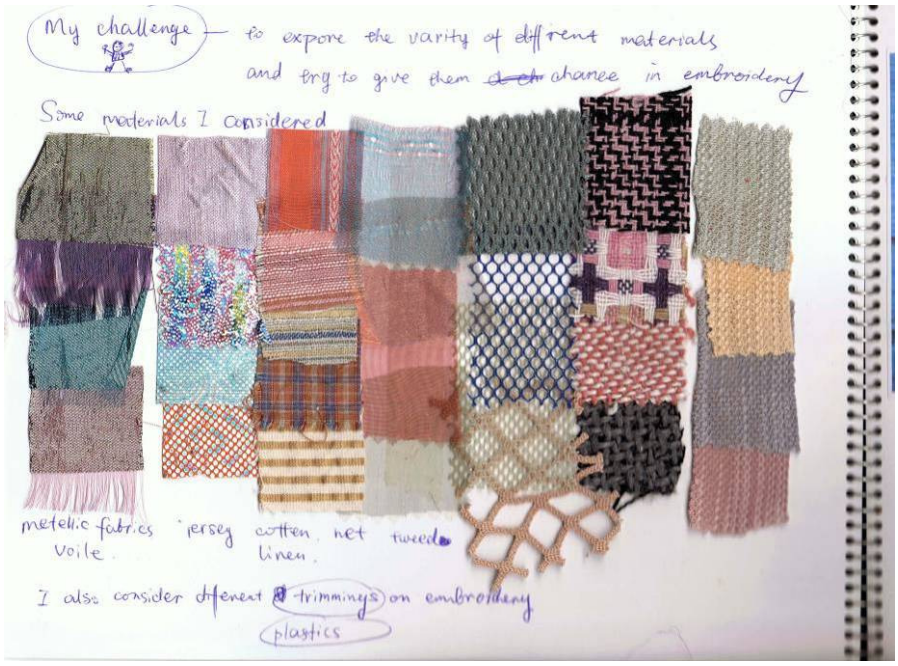


Image source: From author's sketch book

Figure 6.128. Embroidery materials
Note: Photos were taken by author.

6.7.4 Experiment sampling

This step includes the exploration of different techniques, methods and textures to fulfill the design concept. Embroidery sketches (Figure 6.130) samples (Figure 6.129) are made in this step, this being a most important and creative part of the whole embroidery design process. As to embroidery

expression, it can use a mix of hand and machine embroidery, and a mix of natural and man-made materials, to demonstrate the harmony of hi-tech and lo-tech, with geometrical strokes, dots and lines that are used to reconstruct architectural concepts on T-shirts.

Figure 6.129. Embroidery samples
Image source: From author's sketch book

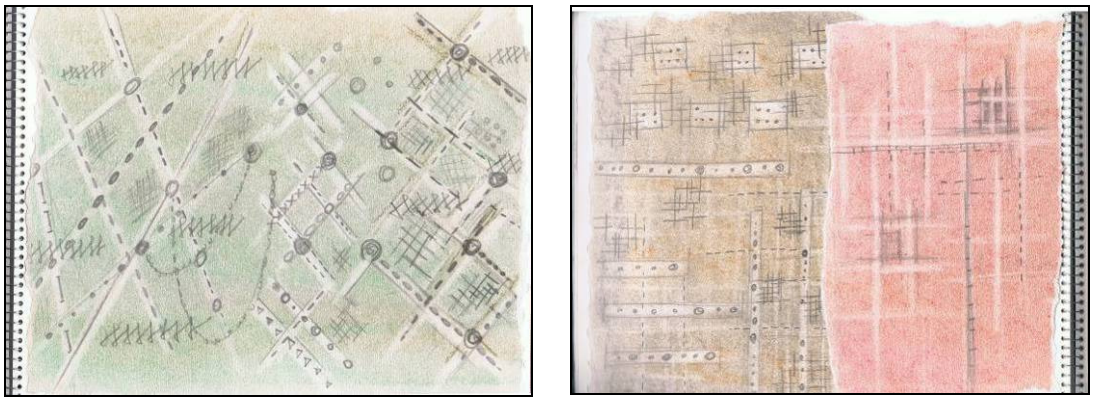


Figure 6.130. Design drawings
Image source: From author's sketch book

6.7.5. Decision making

After experiments and sampling, a decision has been made between the different alternatives as to what best suits the competition theme. With various types of materials it is possible to exhibit the modern metallic look on washed out cotton, in order to express the look of the buildings, the feeling of old and new, modern and traditional as shown in Figure 6.131.

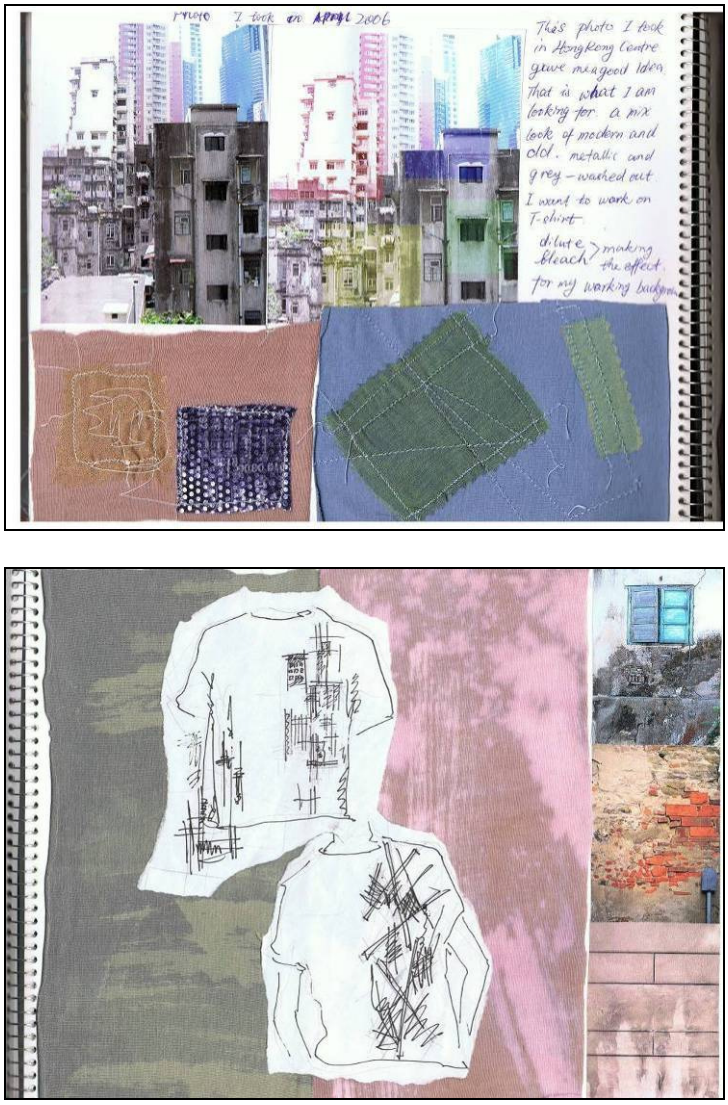


Figure 6.131. Decision making
Image source: From author's sketch book

6.7.6. Testing on the garment

Embroidery samples need to be tested on garment in order to achieve the best effect required on completion, and the finished product must be both "practical and commercially viable" (Hand & Lock, 2006). Figure 6.132 demonstrates the thinking and testing before making the final decisions.

Figure 6.132. Embroidery design testing

Note: Photos taken by author.

6.7.7. Producing the final product

Based on the theme of the competition, the finished product must be both "practical and commercially viable" (Hand & Lock, 2006), which needs to be tested and achieved by the final stage of the design process. For this project, the final production is a group of samples that can be classified into four color groups shown in Figure 6.133,134. Illustration of application is shown in Figure 6.135.

Geometrical strokes, dots, and lines are used to reconstruct architectural concepts on T-shirts, using various types of materials – just like the buildings – to exhibit a modern metallic look on washed out cotton. The collection has combined the concepts of traditional and modern, the skills of hand and machine, and materials of nature and man-made, so as to demonstrate the harmony between hi-tech and lo-tech.

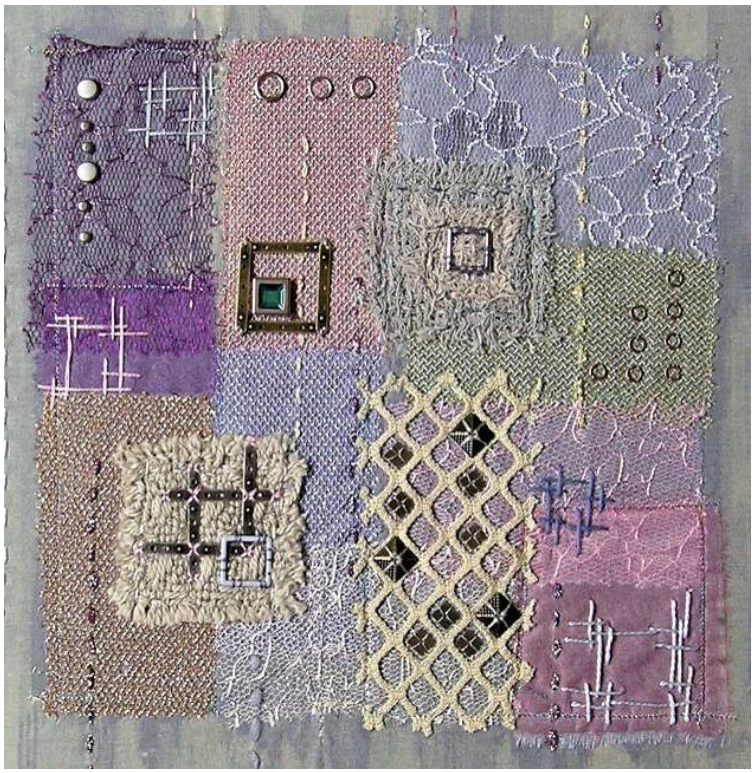


Figure 6.133. Final embroidery sample

Note: Sample made my author, 2006.

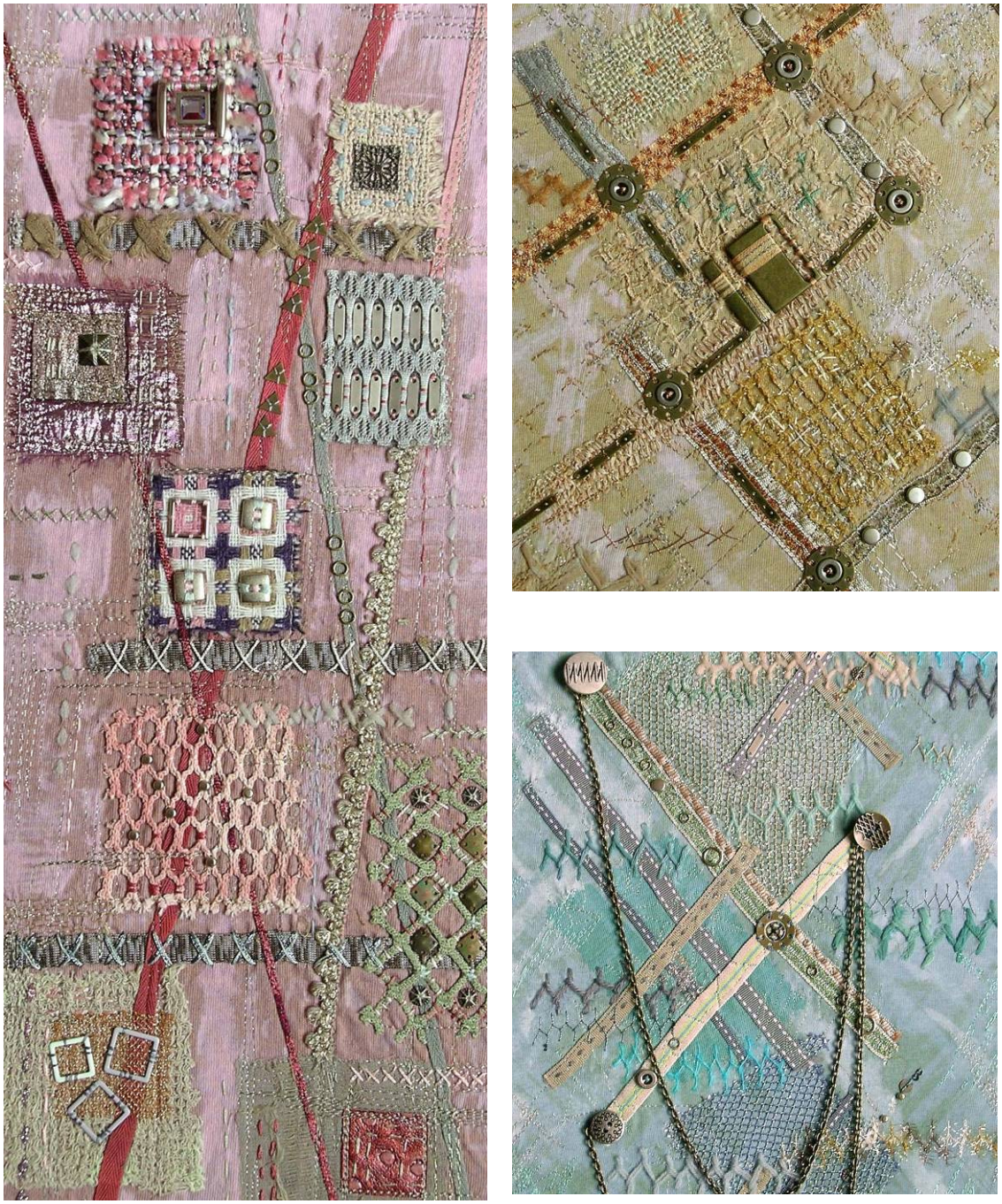


Figure 6.134. Other embroidery samples

Note: Sample made my author, 2006.

Figure 6.135. Fashion illustration

Note: Illustration prepared by author, 2006.

Note: Geometrical strokes, dots and lines to reconstruct architectural concepts on T-shirts, using various types of materials – just like the buildings – to exhibit the modern metallic look on washed out cotton. The collection has combined the concepts of traditional and modern, the skills of hand and machine, and the materials of nature and man-made, to demonstrate the harmony between hi-tech and lo-tech.

6.5. Conclusion

The project of Experiment II proves that the design model is useful. The end result is satisfactory, and the work is a finalist in the competition. However, the project is carried out under the feelings and preferences of the designer. During the design process, confusion and inconsistency occurs in implementing the design concept, since artistic intuition and experience is followed, and these lack a controlling strategy throughout the design process. It can be concluded that the natural model cannot control the design process in a systematic approach, due to the lack of a control mechanism to define the design concept and then implement it right through to the final production. This proves that a systematic method is needed, which will be examined in Chapter 7.

Chapter 7

Application of PAM with Fashion Design Model

7.1. Introduction

In Chapter 5, the *design concept* for modern Chinese fashion embroidery is extracted and purified, and the embroidery design parameters for modern Chinese fashion are established, these being supported by experiment I. This Chapter is to apply PAM as the *control mechanism* for the embroidery design model (developed in Chapter 6) to make sure the design parameters (as indicators) can be fulfilled in a design project.

7.2. Application of PAM on Fashion Design Process Model

Fashion and embroidery designers tend to follow their artistic intuition and experience during their design process, which could be called a natural design model. The major weakness of such a natural design model is the lack of a controlling strategy in the whole design process. The PAM can be helpful for the designer: 1) to capture the design features, 2) to indicate the most

suitable techniques, materials, patterns and colors, together with time, cost and other constraints, and 3) to work as an overall control mechanism in fulfillment of the design concept during the design process.

7.2.1. Process of PAM setting

The process of PAM can be demonstrated in Figure 3.38. As the first step, the setting of PAM is the consolidation of the constraints from the customer's requirements and the designer's preferences in relation to the design concept. The second step is to analyze those constraints and extract the parameters. The last step is to synthesize the parameters into the design process as the control mechanism.

7.2.2. Analysis of parameters

The design concept is usually vague and difficult to quantify and implement. Therefore, it needs the designer to generate implementable parameters from these vague requirements and constraints in relation to the design concept. Parameters may include: Sources of inspiration, time & budgets, client requirements and designer preferences.

Sources of inspiration

Sources of inspiration can originate from the designers or from the client requirements. Sources of inspiration can affect the design theme, mood, style, placement, pattern and color.

Time & budget

How the work is to be done partly depends on the time available and the budget – one week's time or one's month time can have quite different results. The time and the budget are important constraints for any project.

Client's requirements

The client's requirements need to be satisfied by the designer. Sometimes the requirements are clear, such as which materials or colors to use; sometimes the requirements are quite abstract and vague, so in this situation, generating implementable parameters become important for the continuation of the project. For example, if the requirement is that "the design needs to be innovative," the designer can interpret it into introducing innovative new materials, or using normal materials in an innovative way.

Designer's preference

The design work should not only please the clients, but also reflect the designer's unique style or personal taste and beliefs. These can be expressed in many ways, including the use of color, patterns, techniques and materials.

7.2.3. Synthesis of PAM into the design process model

As concluded in Chapter 6, the natural model (without PAM, as demonstrated in Figure 6.122) cannot control the design process by a systematic approach, due to the lack of a control mechanism to define the design concept and implement it through to the final production. This proves that a systematic method is needed.

Figure 7.136 in this chapter demonstrates the design process under the control of PAM, in which, between *Developing design concept* and *Sourcing embroidery materials*, one more step of *Set parameters* is added to the natural design model (Figure 6.122). In the PAM model, the design concept can be defined by parameters relating to the design theme, mood, style, placement, pattern, color and other requirements, which can prevent confusion and inconsistency in implementation of the design concept. The whole design process is reversible. The designer can revisit the design concept frequently so as to ensure it flows all the way through the process.

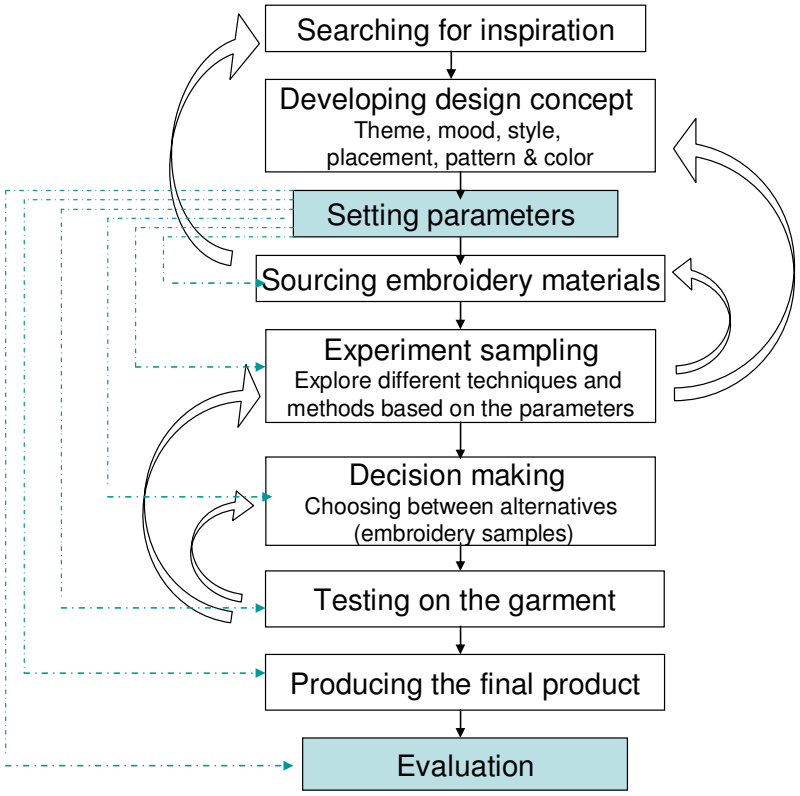


Figure 7.136. Synthesizing parameters into design process model

PAM plays a vital role in control of the design process. PAM requires the designer to formally list down the parameter settings, so that the designer can evaluate the parameters frequently, right up to the completion of the project, for which an initial PAM template is developed and shown in Table 7.19. The template shows the three parts need to be filled in. The first is parameters from the design constraints. The second is the solution of the parameters. The third is evaluation to assess whether the solution satisfies all the parameters.

Table 7.19. Template for application of PAM

Constraints	**Parameters**	**Solution**	**Evaluation***				
Sources of Inspiration			*5*	*4*	*3*	*2*	*1*
Time & budgets			*5*	*4*	*3*	*2*	*1*
Requirements from the client			*5*	*4*	*3*	*2*	*1*
Desires from the designer			*5*	*4*	*3*	*2*	*1*

*Note for Evaluation value:

5 for Excellent; 4 for Very Good; 3 for Good; 2 for Satisfactory; 1 for Less than Satisfactory

7.3. Experiment III - Application of PAM

There are three purposes of Experiment III. The first objective is to demonstrate the application of PAM to a fashion embroidery project, demonstrating how PAM can direct and control the design activities. The second aim is to verify Scenario 3 of the fashion embroidery design process, which is embroidery after completion of the fashion design. Scenario 3 refers to embroidery that occurs after completion of the fashion products, as discussed in Chapter 6. In this scenario, embroidery becomes an independent design process based the fashion products, and the embroidery designer is working on adding value to existing fashion products. The last is to demonstrate the practicality of the design concept purified in Chapter 5 as applied to modern fashion embroidery.

7.3.1. Project information

Figure 7.137. Knitted sportswear to be embellished

This project is to add embroidery design to a set of finished casual knitted sportswear (Figure 7.137). It is required to add value by embroidery techniques and design. The design requirements from the client can be summarized as follows:

- Add embroidery embellishments on to a casual knitted sportswear collection
- The design should be innovative in pattern, color, materials and techniques in contrast to tradition
- The project needs to be finished in one month, and the budget is less than HK$ 2000.

7.3.2. Design Inspiration

As for inspiration, there is no information or indication from the clients, so the sources of inspiration must come mainly from the designer's own initiative. To experiment using the design concept for modern Chinese fashion embroidery (details see Chapter 5), the designer chooses to use traditional Chinese motifs for inspiration in order to maintain the Chinese identity, so traditional Chinese paper cutting, especially that of flower patterns (Figure 7.138), is chosen as the inspiration for this project.

Figure 7.138. Design inspiration: Chinese paper cutting
Note: Images collected by author

7.3.3. Developing the design concept

Based on the design concept developed in Chapter 5 and illustrated in Figure 5.113, the embroidery design for this collection is trying to encompass innovation in using materials, patterns, colors and techniques. In addition, the style of embroidery design should also be energetic and active, to stay in line with the nature of casual sportswear.

7.3.4. Setting parameters

In accordance with the PAM Template set out in Table 7.19, parameters for this project can be divided into four groups, being: 1) sources of inspiration, 2) client's requirements, 3) time and budget, and 4) designer's preferences. The completed setting of parameters is listed out in Table 7.20.

7.3.5. Sourcing embroidery materials

The parameters for materials are set as, "suitable for the elasticity features of knitted fabric", so the designer considers nylons and other knitted elastic fabrics.

7.3.6. Experiment sampling

There are two parameters for techniques, namely: 1) “mixture of techniques”, and 2) “combination of hand & machine embroidery”. In this project, a combination of screen print and embroidery is considered, for which screen print samples are produced as a foundation for three embroidery tests (as shown in Figure 7.139).

Figure 7.139. Screen print samples
Note: Screen print samples prepared by Jeanne Tan

The first test, as shown in Sample 1, is a combination of a screen print with free machine embroidery. The second test, as Sample 2 shows, is a combination of a screen print with hand & machine embroidery. The third test,

depicted in Figure 7.140, is a combination of a screen print with free running machine embroidery.

Sample 1 Free machine embroidery

Sample 2 Combination of hand & machine

Figure 7.140. Experiment samples.
Note: Samples made by author.

7.3.7. Decision making

After experiment sampling, the designer needs to make a decision on choosing between the samples made during the experiment period. Often, it may be necessary to take the samples to discuss with the clients before making this decision. In this project, free machine embroidery using metallic threads is chosen, as shown in Figure 7.141, this one being under the time constraint of 6 working hours per garment.

Sample 1

Sample 2

Sample 3

Figure 7.141. Free machine embroidery technique
Note: Samples made by author.

7.3.8. Testing on product

Figure 7.142 shows the process of test samples on the garments.

Figure 7.142. Initial testing on product
Source: Made by the author, 2007

7.3.9. Final production

The final production of the whole collection can be seen in Figures 7.143.

Figure 7.143. Final production
Note: Photos taken by author.

7.3.10. Evaluation

The evaluation checks to see if the initial requirements have been fulfilled. Evaluation is a continuous task throughout the design process. For a full check list see Table 7.20.

Table 7.20. PAM application for fashion embroidery

Constraints		**Parameters**	**Solution**	**Evaluation**
Sources of Inspiration	Chinese motifs	Chinese paper cutting motifs	Screen print patterns	4
Requirements from the client	Wear must be comfortable and washable	Suitable for the elasticity features of knitted fabric	Nylons and other knitted elastic fabrics are selected	4
	The design needs to be innovative and not just following tradition	Not traditional color; not traditional motif placement and techniques	Neon colors are used; patterns are oversized or asymmetrical; machine and metallic threads are used to give the collection a modern look	3
Time & budgets	The work needs to be finished within one month	6 working hours for each garment	Machine embroidery used to reduce the time	4
	The budget should be under 2,000 HK dollars	Combine other alternative techniques	Screen print and materials kept within the budget	4
Desires from the designer	Traditional Chinese motifs for inspiration	Chinese paper cutting motifs	Screen print patterns based on Chinese paper cutting motifs	4
	Varied modern materials	Consider contrasting texture, color	Wool, nylon, metallic thread	3
	Combination of hand & machine	Machine appliqué with hand touches	Using free machine embroidery, hand finishing touches are not necessary	3
	Mixture of techniques	Combination of embroidery and screen printing	Machine appliqué lifts the screen print pattern successfully	3

*Note for Evaluation value:

5 for Excellent; 4 for Very Good; 3 for Good; 2 for Satisfactory; 1 for Less than Satisfactory.

The experiment is successfully completed, and the final product is exhibited at the 2007 International Fashion Exhibition – World Fashion Asia, and published in the Exhibition catalogue. The whole process of this experiment proves the helpfulness of the PAM design model in finishing the design project.

7.4. Conclusion

The results of the study revealed the designer's train of thought during the process of the design task. Experienced designers might not write down the parameters exactly, but they still need to remind themselves to work within the design boundary. The design process model can be used as an alternative way of thinking and reasoning for project based fashion and embroidery design. Therefore, the flow of design work can be planned and controlled in a more purposeful manner. This model is also useful in assisting fashion students to cultivate a structured reasoning habit in the early stages of their design studies.

Chapter 8

Conclusion and Recommendation

8.1. Introduction

Traditional Chinese embroidery has preserved its purity as a traditional art form. However, there is still limited application in fashion. Generally speaking, there are two hindrances to the further development of Chinese traditional embroidery. First, its design philosophy in embroidery design is quite stagnant if not out of date. Second, its production process is time consuming, running against our modern fast pace life style and economic considerations. With an attempt to revive traditional Chinese embroidery, this study has developed a new design concept for innovative fashion embroidery design with a combined thought process of both science and art. This systematic approach guided by the conceptual design theory sets a new direction for fashion and embroidery research.

8.2. Conclusion

8.2.1. The new concept of Chinese embroidery

Based on background review, field research and comparative study of Chinese and Western embroidery, a new design concept for innovative fashion embroidery design has been developed. The new design concept includes the three elements, namely Chinese identity, dynamism and modernization, and innovation and creativity. It is believed that this novel design concept can serve as a guideline for contemporary fashion embroidery design, and point to a new direction for the further development of Chinese traditional embroidery.

8.2.2. The design parameters for the Chinese fashion embroidery

The new design concept for modern Chinese fashion can be described as Chinese identity, dynamism and modernization, innovation and creativity, but it is difficult to quantify and implement. To visualize the new design concept, design parameters are introduced as follows:

- Chinese motifs represent Chinese identity;
- Mixture of techniques, and combination of hand & machine indicate dynamism and modernization,
- 3-D effect; Modern materials demonstrate innovation and creativity.

The design parameters for the new concept set a novel image for modern Chinese embroidery identity and provide a reference for modern Chinese embroidery development and fashion industry.

8.2.3. Systematic approach to fashion embroidery design

Based on the conceptual design theory, a conceptual embroidery design model with PAM is developed as an alternative method for fashion embroidery design. As a control mechanism, Parameters analysis method (PAM) can help the designer to select, define and meet the customer's requirements, and also assists the designer to fulfill the design task by means of the design concepts that are refined by the parameter analysis. PAM can be used to reveal the subconscious thoughts and logic of successful fashion designers. The design process models, together with PAM, comprise a system of control for fashion embroidery design. By applying Western embroidery methods and design theory, this design control system can form a bridge between traditional Chinese embroidery and contemporary fashion design.

8.3. Recommendation

8.3.1. Application of PAM

To implement PAM in fashion embroidery design, the study generalizes and categorizes the embroidery design process model by the case studies and experimentation method, and consequently, three design models have been developed. Embroidery design can occur prior to fashion design, in which case embroidery works (samples) can be the original inspiration for fashion design. In the meantime, embroidery design can occur during the fashion development phase. During the fashion design process, it may occur to the designer that an embroidery element is needed in addition to other considerations such as the silhouette, proportion, fabric, and construction. In the last case, embroidery can occur after the completion of the fashion products. Embroidery becomes an independent design process of the fashion products. In this scenario, an embroidery designer is working towards an adding value to existing fashion products, either new or old.

This study establishes a conceptual design model by using parameter analysis design theory, and is believed to be a pioneer study of systematic design theory for fashion embroidery, which can contribute to the development of Chinese embroidery within the fashion industry. The design concept for Chinese identity can be applied to enhance signature and brand

development, such as those international labels like Shanghai Tang and Vivienne Tam.

8.3.2. Embroidery education

In today's China, embroidery is not perceived as a main academic subject or higher education like undergraduate or postgraduate study. Currently, the embroidery training schools in China focus mainly on basic skills rather than design. These schools were established, either by the public sectors or private companies, for the purpose of profit, rather than education. All in all, embroidery education in China still has a long way to go. This may suggest that there is a need for China to introduce embroidery courses into its higher education, particularly in the fashion and textiles discipline, in order to maintain its traditional embroidery but incorporating the modern design theory into this long survived traditional art.

This conceptual embroidery design model, reinforced by the established parameter analysis design theory, can be adopted in embroidery education as a kind of thinking process and conceptual reasoning.

8.4. Limitations and Future Study

8.4.1. Limitations of the study

Today's art and design process should be full of imagination, and without limitations. Such free access in design development process will help to provide plurality in design solution, such as the three scenarios discussed earlier. However, when it comes to a project-based embroidery design, the constraints and requirements usually come from clients and external sources, or even from the designers themselves. Under such circumstances, a clear and logical thinking and design process can come into place. The first initiated PAM based design model developed by this study provides the possibility for an alternative thinking and control mechanism. If this investigational work needs to be future explored, there should be more studies to verify the model and test the result.

8.4.2. Future study

As the world enters the 21st Century, the society faces two extreme situations - on the one hand, over production and over consumption for some, and on the other hand, poverty and lack of necessities for others. This immediately brings to the forefront the issues of injustice and the environment. Massive

production and out of date fashion causes waste to both nature and human resources, as well as devaluation of fashion products.

This study suggests that embroidery can also play an important role in recycling fashion and add value to old and out of fashion products. In this situation, embroidery becomes the added value, which occurs after the completion of fashion products and becomes an independent design process. In short, in an ecological context, sustainability in such attribute like eco-fashion is a popular as well a potential area for further study, not to mention that a touch of the creative embroidery can add to the ever competing fashion industry a new reincarnation.

Appendices

Appendix 1 Stabilizers & Interfacings

Tear-Away Stabilizer: The most commonly used type of stabilizer, designed to provide *temporary* support of stitching. Placed on the wrong side of the project and carefully pulled away once stitching is complete.

Available in three weights – heavy, medium, and light. Multiple lightweight layers may be preferable to one heavy layer, as they are easier to remove. The Hydro-Stick version, available in lightweight and heavyweight tear-away, has water-activated adhesive on one side for a secure bond and a high degree of stabilization for very dense and/or intricate designs. Also available: Smooth Touch Tear-Away, Ultra Clean & Tear.

Cut-Away Stabilizer: The most widely used stabilizer in the commercial market. Does not break down under dense stitching, due to the high fiber (rather than paper) content. Excess stabilizer is trimmed away after stitching (leave approximately of stabilizer around the edges).

A Hydro-Stick version of heavyweight cut-away is also available.

Web/Poly-Mesh Type Stabilizer: A specially formulated cut-away stabilizer developed for use behind lightweight or light-colored fabrics.

Available in fusible or non-fusible versions.

Water-Soluble Stabilizer: Used for backing and topping, in single or multiple layers. Available in several weights: Aqua Film Universal Weight, Aqua Film Extra Weight, Badgemaster (very heavy), and Aqua Mesh Wash Away. Excellent for decorative stitching and cutwork as there are no remnants of stabilizer left after removal (it dissolves). As a topping, it keeps stitches from being lost in heavily napped fabrics such as velvet and corduroy.

Iron-On Tear-Away Stabilizer: A non-woven product similar to paper. Perfect for knits, this tear-away stabilizer is temporarily bonded to the fabric, inhibiting the tendency of the material to stretch.

Heat Removable Stabilizer: Woven from strands of fiber that are burned away at a low temperature, heat removable stabilizers are perfect for heirloom stitchery.

Liquid/Spray Stabilizers: Wonderful for sheer fabrics from which all stabilizers must be removed after stitching, these products are painted or sprayed onto the fabric. Several light applications are preferable to one heavy layer.

Appendix 2 Chronology of Chinese History

朝代 Name of Dynasty (From Shang to Qing Dynasties)		年份 Period (BC)
商 Shang		c.16th century—1208
周 Zhou		c.1207—221
西周 Western Zhou	*c.1027—771 BC*	
東周 Eastern Zhou	*770 —256 BC*	
春秋 Spring and Autumn period	*770—476 BC*	
戰國 Warring States period	*475— 221BC*	
秦 Qin		221—206BC
朝代 Name of Dynasty		**年份 Period (AD)**
漢 Han		206 BC—AD 220
西漢 Western Han	*206 BC— AD 8*	
新莽 Xin	*92—AD 4*	
東漢 Eastern Han	*AD 25—220*	
三國 The Three Kingdoms		220—280
魏 Wei	*220—265*	
蜀 Shu	*221—263*	
吳 Wu	*222—280*	
晉及十六國 Jin and Sixteen Kingdoms		265—439
西晉 Western Jin	*265—316*	
東晉 Eastern Jin	*317—420*	
十六國 Sixteen Kingdoms	*304—439*	
南北朝 Northern and Southern Dynasties		386—589
南朝 Southern Dynasties		
宋 Song	*420—479*	
齊 Qi	*479—502*	
梁 Liang	*502—557*	
陳 Chen	*557—589*	
北朝 Northern Dynasties		
北魏 Northern Wei	*386—534*	
東魏 Eastern Wei	*534—550*	
西魏 Western Wei	*535—556*	
北齊 Northern Qi	*550—577*	
北周 Northern Zhou	*557—581*	

朝代 Name of Dynasty		年份 Period (AD)
隨 Sui		581—619
唐 Tang		618—907
五代十國 Five Dynasties and Ten Kingdoms		907—976
五代 Five dynasties		
後梁 Later Liang	*907—923*	
後唐 Later Tang	*923—936*	
後晉 Later Jin	*936—946*	
後漢 Later Han	*947—950*	
後周 Later Zhou	*951—960*	
十國 Ten Kingdoms	*908—979*	
遼 Liao		916—1125
宋 Song		960—1279
南宋 Northern sung	*960—1127*	
北宋 Southern Sung	*1127—1179*	
西夏 Xixia		1032—1227
金 Jin		1115—1234
元 Yuan		1260—1368
明 Ming		1368—1644
清 Qing		1644—1911
中華民國 Republic of China		1912—
中華人民共和國 People's Republic of China		1949—

Source: Hong Kong heritage Museum .2005. *Exhibition catalogue: From Eastern Han to High Tang – a journey of transculturation.* Hong Kong: Leisure and Cultural Services Department.

Appendix 3 Suzhou Embroidery Research Institute

The Suzhou Embroidery Research Institute (SERI), now named Suzhou Embroidery Research Institute Co., Ltd. was located in Suzhou, a city with a long literary and artistic history. There are records of detailed embroidered pieces being produced in the Suzhou area around 200 BC, and of embroidered silk being used in the second and third century AD. However, it was during the Song Dynasty (960-1279) that the Suzhou style became prominent. Suzhou embroidery, with its long history, is characterized by beautiful pattern, elegant colors, and rich and meticulous stitching.

SERI was established in 1957, is an organization that combines scientific research, artistic work, and sales. It has over 100 specialized; experts including Chinese master craftsmen, senior craftsmen, and highly qualified artists, etc. Since its establishment, the Institute has inherited and carried forward this fine tradition and created new works. Suzhou embroideries have been presented to state leaders and exhibited world wide.

The embroidery products made by Suzhou Embroidery Research Institute can be categorized as follows: Embroidery clothes, Embroidery accessories, Embroidery home decoration items, and Embroidery painting.

Embroidery work shops of the Institute are opened to the visitors.

Address: 262 Jingde Road, Suzhou City, Jiangsu Province, China. Telephone: 86- 0512-5222460/5232297.

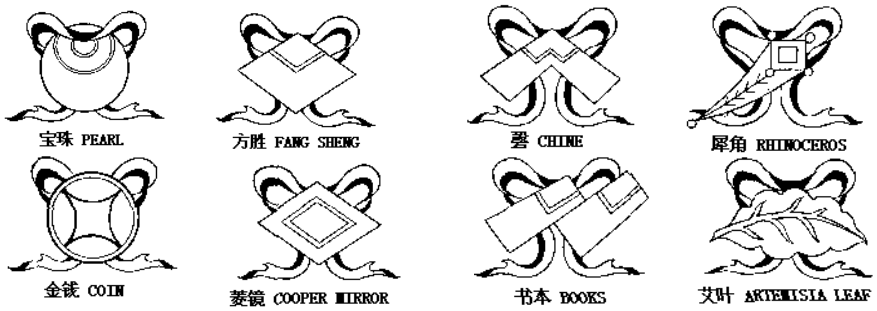
Embroidery clothes & accessories

Embroidery home decoration items

Embroidery painting workshop

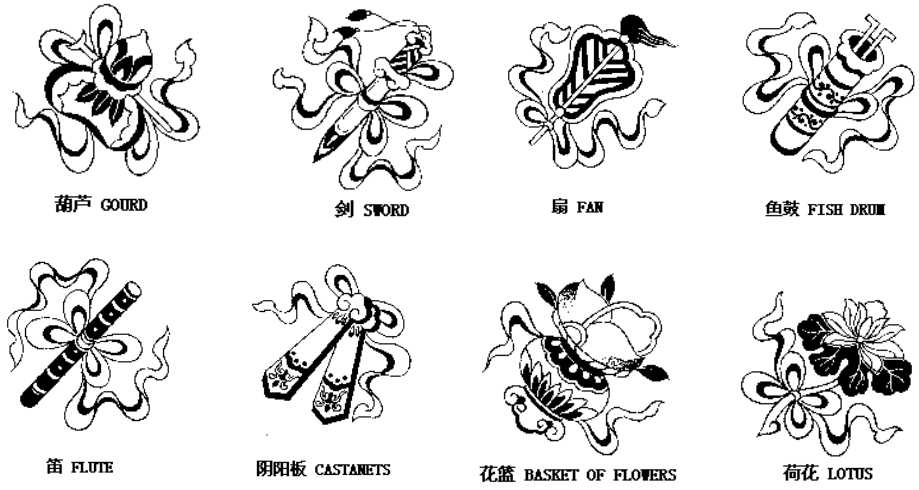
Appendix 4 Traditional Chinese Embroidery Symbols

EIGHT TREASURES 八寶 Image Source: http://www.grassy.org/art_cn/home-ptn.htm



THE EIGHT TREASURES OF BUDDHISM 八吉祥

PROPERTIES OF THE EIGHT IMMORTALS 暗八仙



Appendix 5 Feedback of Interview Questionnaire 1

1. What is the general situation of embroidery design in HK?

In terms of the task and expertise, there are no specific embroidery designers in Hong Kong. The role is currently taken by either Fashion designers or Graphic designers.

Since there are no formal training on embroidery design in Hong Kong, the specialists in these area are mostly embroiderers, fashion designers with solid experience or sense of beauty in embroidery.

2. What is the role of embroidery design in fashion industry?

Embroidery plays a secondary role in the industry, parallel to wet processing, and printing

Embroidery is part of a finish garment but may not be crucial. There are other application such as print, pleating and wet process. Therefore embroidery design is as important as a good print design, a good washing handfeel that turn a garment unique

3. Can you cite cases that embroidery design enhance the quality of fashion design?

Embroidery can be a design feature of a style but not crucial.

4. Do you think HK need more specialized embroidery designer to improve the embroidery quality in general?

We need better approach of both designers and technicians to improve quality of embroidery in Hong Kong fashion industry. Designers need to be more creative on the combination of stitches and fabric. Technicians need to be brave to use their technique and knowhow to execute creativity.

5. Do you think there is a tendency to use more embroidery technology in contemporary fashion?

Not exactly.

6. What is the interaction process between fashion design and embroidery design?

Within the human brain of a fashion designer. Embroidery is part of a garment, so as print, a buttonhole, a pleat, and a loop. Fashion designers should able to manage the ornamental technique in the best.

7. What do you think the future of embroidery design in HK?

It will be taken over by Mainland fashion designers and technicians.

Appendix 6 Feedback of Interview Questionnaire 2

Embroidery Design Questionnaire (28 May 2007)

I am a research student of ITC in PolyU. My research is focus on Embroidery in Modern Fashion. I need to interview some experienced designers work on embroidery or fashion background, I am seeking your help to comment on following questions, thank you for your help.

My email: eileen.zhang

1. Are you a fashion designer or a technician?

A. a fashion designer (*). B. a technician ( ).

2. Where did you learn your embroidery knowledge?

A. Professional training ( ) B. Learn from the work (*)

C. Learn by yourself ( )

3. Where is your design inspiration come from generally?

A. Your own original ideas (*) B. copy or reference from word fashion trend (*)

C. others, please write down _____

4. What method do you use in embroidery designing?

A. Hand drawing/painting (*)

B. Computer, which software (*)____AI +PHS_____

5. How much do you think embroidery can increase the value of the high fashion.

A. Very much ( ) B. Usually (*) C. not relevant ( )

6. How are embroidery pattern and materials decided?

A. decided by fashion designer (*). B. decided by embroidery technician ( ).

C. decision jointly made ( )

7. What level is embroidery design in HK or China compared with international standard?

A. High (*) B. Average ( ) C. Low ( )

8. Please describe the design process from design to finished embroidery cloth.

1) Inspiration – from magazine, catwalk, ref books….blah blah blah…

2) Consider the basic design concept - like, placement? Mood? Color way? Usage of materials? Such as wood beads or glass beads? Hand stitch or machine stitch?

3) Sketching – drawing the emb. pattern on paper pattern in actual size and actual opposition.

4) Indication – Give info on what and how to make the emb. Like, beads size and colors, type and colors of thread, which emb. techniqe should be use……or sometimes, the procedures of emb.

5) Sending out to factory - together with appropriate materials, (like fabric, sketch, paper pattern or beadings-if any), and, briefly describe the requirements to embroider factory.

6) Waiting/Follow up - (need to keep communicate with the embroidery factory during this period due to various factors, like, availability of beads, sequins and thread, the stability of fabric, or which kind of interlining should be use……)

7) Check out – Check out the final embroidery panel returned from factory to make sure you got what you want…..otherwise, please go back to stage 5 again!

Appendix 7 Interviews of Embroiderers

The first is the Director of Suzhou Embroidery Research Institute in China, Zhang Meifang. She has shown her great interest in the study. She believes that traditional Chinese embroidery and fashion should be an area for further exploration, while combination between embroidery and fashion is one of the niche area for further exploitation. Application of innovative idea and design process into Chinese embroidery are essential. “Repeat history equals zero progress.” Zhang quoted from Wu Guanzhong.

The second one is Chen Zhuqing, she is the Chief Artistic Direction of Shen Young’s Chinese Needle Painting Company, and the third descendant of Yang Shouyu. Yang Shouyu is the originator of “Random Stitch.” Mrs. Chen has worked on embroidery for about 40 years practically and theoretically. For the last 10 years, Chen has devoted herself into the research and developed “Chinese needle painting” – a new artistic form combining the western photography and Chinese traditional embroidery. She has commented that there is less young people would like to join the field as it takes long time to be trained as a skillful embroiderer. She thinks that “Chinese needle painting” as an art form embroidery can not be used for mass production, and. Chinese embroidery should develop into many directions and more functions, e.g. for fashion design, rather than only focusing on “Chinese needle painting”.

With Zhang Meifang, the Director of Suzhou Embroidery Research Institute on 25th December 2006.

With Chen Zhuqing, the Chief Artistic Direction of Shen Young’s Chinese Needle Painting Company on 30th December 2006.

Appendix 8 Hand & Lock Embroidery Competition

Hand & Lock is an embroidery company that is a fusion of two, great, long established, embroidery businesses.

In 1767 Goldlacemen called Hand, originally Huguenot refugees from Flanders, added embroidery to their range of laces, cords, and braids. Their skills came from the entourage of Catherine de Medicis, when she married into the French court in the 16th century. They learnt the ancient Italian secrets of gold lace and made them their own.

It was at this time that heraldic art was used to provide a sign of distinction, and to recognise the wearer's achievement. Garments trimmed with gold lace and embroidery set the wearer apart. The measure of their rank and status was the quality of their apparel.

In 1898 CE Phipps & Co. began an embroidery business. By 1956 it had survived the wars as a modest yet well established business when a brilliant young designer, Stanley Lock, took over from Mr Phipps on his retirement.

The company, based in Fitzrovia, was renamed, S Lock Ltd. It reached new heights throughout the next 45 years working with couturiers including, Christian Dior, Norman Hartnell, and Hardy Amies. A Royal Warrant was awarded. Royal commissions have included gowns for the Queen, the Queen Mother, and Princess Anne's wedding ensemble. Princess Diana added a new glamour with her love of richly embroidered clothes.

Showbusiness used the extravagance and showiness of embroidery and beading to full effect in many famous productions, from Barnum to The Lion King. The list is a long one! In 2001 these two, extraordinary companies; S. Lock and M. Hand, merged to form Hand & Lock. And more recently in 2003, joined with MBA Costumes bringing all the elements of military, fashion and couture, and entertainment together under one roof in Margaret Street, W1W and the Hand & Lock brand was created.

Hand & Lock's commitment to produce only the highest quality hand embroidered products, ensures that the company maintains its place as the leading supplier of all types of embroidery.

Hand crafted work will always give a touch of quality to any garment. Investment in new technology to the business will provide a faster design service and a better response to customer enquiries. All of which leads Hand & Lock confidently into the 21st century, whilst preserving all that is the best of its proud history.

Hand & Lock Prize for Embroidery 2003

The Brief

To design and produce sample swatches of hand embroidery for clothing and accessories.

What we are looking for?

Innovative design and use of materials to create either fully embroidered garments, embroidery details on garments or embroidery for fashion accessories. The work must be made by hand and must be backed up by supporting sketches/ idea sheets. We have kept the brief open deliberately to encourage a diverse range of work from entrants.

2003 1st Prize : Joanne Shand

Source: http://www.handembroidery.com/prize-conference/

Hand & Lock Prize for Embroidery 2004

The Brief

To design and produce sample swatches of hand embroidery for either Gentlemen or Ladies formal / evening wear.

What we are looking for.

We are looking for original and creative ideas, innovative design and use of materials to create either embroidered garments, embroidery details on garments or embroidery for fashion accessories. Please note the finished product must be both practical and commercially viable. The work must be made by hand and must be backed up by supporting sketches / idea sheets. Notes which explain the thinking and ideas behind your concept should also be included. The Judges should easily be able to see your development from initial concept through to realised design and a proportion of the marks will be allocated accordingly.

2004 1st Prize Winner: Laura Shambrook's work

Source: http://www.handembroidery.com/prize-conference/

Hand & Lock Prize for Embroidery 2005

The Competition

The Hand & Lock Prize for Embroidery 2005 (formerly the M. Hand Prize for Embroidery.) This prestigious competition attracts students of embroidery, fashion, and textiles throughout the world.

The aim is to promote the use of hand embroidered surface embellishment within the fashion industry. In doing so, it is hoped that contemporary design and fresh approaches can be matched up with the high quality and expertise expected of fashion and couture houses.

The Brief: ENCRUSTED

Written by the London College of Fashion

Inspiration:

Garnished Tweeds

In floral embroidered menswear fabrics, sensible English countryside haberdashery malingers with quirky Victoriana.

- Gentleman tweeds, plaids and pinstripes flirt with beading and embellishment.
- Practical neutrals mix with pretty-pretty pastels.
- Salvation Army chic meets Second-Hand Rose.
- Little herringbone blazers top elaborate jeans.

Baroque Beauty

Behind the balustrade, soulful cavaliers court elegant ladies-in-waiting.

- Versailles gentlemen and Romanesque muses
- Decorative, filigreed fans restore fanciful myths.
- Rococo renderings glow with rich gold.
- Silk shirts and printed boxer shorts

Wood Lodge

Frontier and outdoor looks merge in lumberjack plaids, Shetland woollens and prairie fauna Camouflage.

- Ski-cabin Nordic patterns in lavender and violet shades
- Soft, aged and faded prairie stripes and borders
- Colorful fleece and fur intarsia
- Gritty grey hunting vests and bison brown duffle coats

Photo-Tech

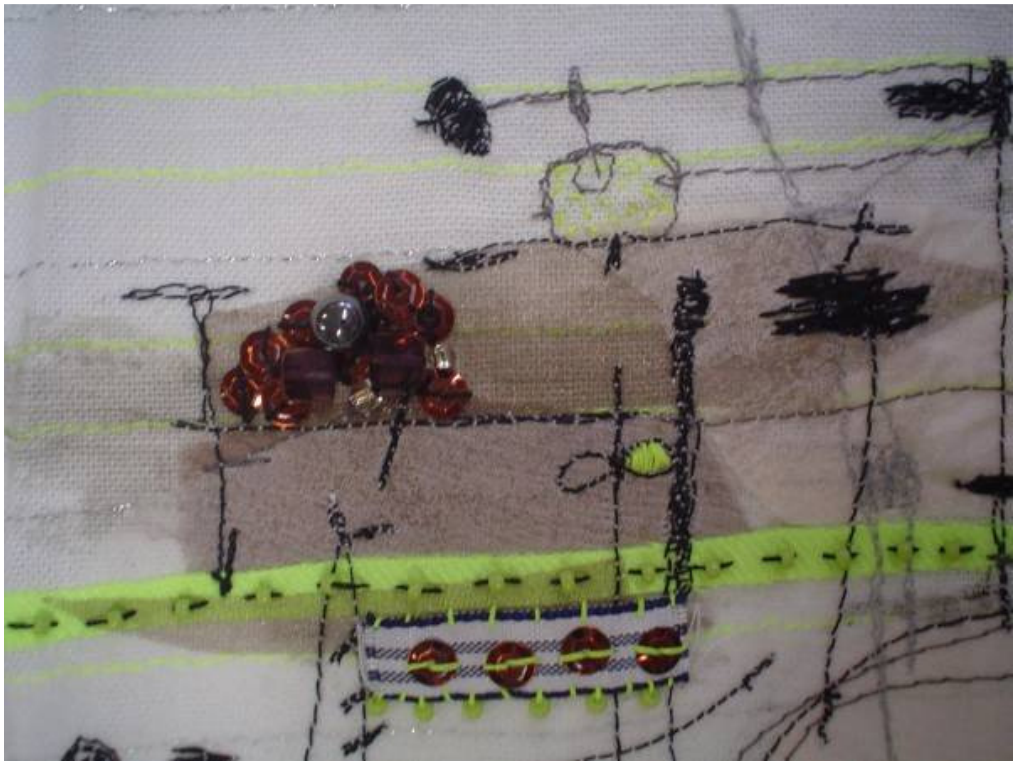
- Intensity, exaggeration and distortion re-define floral prints for winter
- Edgy beauty with a high-tech cachet
- Abstracted photo-realism is playfully optic
- Sweetly tough, whimsically muscular

Printed poplin shirts and slinky knit dresses The brief encourages a diverse range of work. Entrants are required to present designs and samples of hand embroidery for clothing. It seeks original and creative ideas, innovative design and use of materials.

The finished product must be both practical and commercially viable. The work must be made by hand (this includes hand guided machine but not computer aided machine). All work must be backed up by supporting sketches/idea sheets, with notes that explain the thinking and ideas behind the concept.

The judges must be able to easily see the design development from initial concept through to realised design.

2005 1st Prize Winner by Emma Crinion



Source: http://www.handembroidery.com/prize-conference/

Hand & Lock Prize for Embroidery 2006

This prestigious competition attracts students of embroidery, fashion, and textiles throughout the world.
The aim is to promote the use of hand embroidered surface embellishment within the fashion industry. In doing so, it is hoped that contemporary design and fresh approaches can be matched up with the high quality and expertise expected of fashion and couture houses.
The Brief: Hi-Tech Lo-Tech is written by the London College of Fashion
Inspiration:

- **Technology and Nature**

Increasingly in fashion-as in modern society - we have to get used to mixing different elements. Starting from Post Modernist culture we once again embrace natural materials, using a kaleidoscope of interpretations and applications, always supported by a wide variety of man-made fibres and fabrics. Technology, which is part of our lifestyle today can share its triumphs with materials nature supplies. Contrary to other sectors, where technology prevails, in the textile world we can say that 'techno-natural' is the key word for trend hunters. In this trend, we find natural raw materials, cashmere, angora, mohair, blended or used with magic-silver polyamides and active polyesters.

The developments are explosive/surprising. We see traditional fabric manipulated by technology, insertions of clear film and natural Indian rubber, floral laces doubled with clear polyurethane and embroidery, fabric with wide elastic ribs adorned with shiny varnishes, geometric embroidery with colored plastic threads and jerseys, enriched by a showering of iridescent plastics.

Colors are shades of dusty pastels with brilliant accents

- **From Chaos to Order**

Life is focused round a chaotic daily routine. A desire to stay calm helps us to avoid getting dragged away by negativity. The older generation, with its ambitious goals, has produced people who are lacking in direction and has brought about this situation of chaos. We have to make room for young people to express themselves in order to restore harmony. Today's young people are divided into two distinct categories either too mature or not mature enough. Since the textile sector, as in other aspects of life, is influenced by these anxious people, we suggest that we stop seeing winter as a bad season and create a happier atmosphere, almost as to evoke the exuberance of spring. A Nordic atmosphere, which is renewed by an almost playful vigour. Recycled aspects are revived by unprecedented new-style developments: fluffy Shetland and melange combined and mixed with shiny silk satins, woolly and cascading Mongolia effects combined with elastic and technological nylons and old elastic wool muslins together with shimmering polyesters and Smart fabrics. Surface pattern should rely on this mixture of natural and man made fabrics embellished with textural effects, contrasting surfaces and found objects. *Colors are British inspired with Shetland melanges strengthened with more intense solid colors*

- **A Window to the Past**

As in music, remakes inspired by the past are important in fashion, since they help us understand the changes that have incurred in lifestyles and dress, and create a future story. Nothing has to be like it was before; it is adapted to current needs and styles. The start of the post- industrial technological period is seen in a ritual extravaganza. As a starting point we looked to icons of the times, such as the first video-games with their metallic music and great pop and graphic artists, such as Andy Warhol and Keith Haring. Inspiration is drawn from the film 'My own private Idaho' and the allure of the first fashion designer, Walter Albini, who left an impressive mark and was the first example of 'metrosexual'. Let us turn again to the illustrations by Brunetta, with his childish sketches that heralded the beginning of 'Pret-a- Porter'. Seen in this group are; luminous velvets, geometric multicolor prints, jersey in shiny viscose and Pop Art and graphics. Colors are deliberately intense and brilliant with the use of three classics; white, black and titanium grey. The brief encourages a diverse range of work. Entrants are required to present designs and samples of hand embroidery for clothing. It seeks original and creative ideas, innovative design and use of materials. The finished product must be both practical and commercially viable.

- **The work must include HAND EMBROIDERY.**

All work must be backed up by supporting sketches/idea sheets, with notes that explain the thinking and ideas behind the concept. The judges must be able to easily see the design development from initial concept through to realised design.

2006 1st Prize Winner: Heidi Turner's work

Source: http://www.handembroidery.com/prize-conference/

Hand & Lock Prize for Embroidery 2007

Title : Ecclesiastical

Based on Textile View Magazine--- issue 72 Winter 05/06
Womenswear predictions for winter 2006/07

1. Lady in Black

Dark romance with a Victorian edge. Wilkie Collins-Lady in White with a Gothic feel. Victorian accoutrements, memorial memorabilia ecclesiastical vestments and furnishings. Mixed proportions in long skirts, romantic blouses, high necklines, puffed or leg-o-mutton sleeves, poet Byron style shirts and tunics, capes, fitted jackets and trousers. Wool crepe, lace, velvet and silk-all united. Blacks, anthracite and dark metallics. Feathers, jet beading and a variety of sumptuous thread work, played a major role in the decoration of fashion fabrics, particularly when Queen Victoria and the nation were in mourning for Prince Albert.

2.1001 Nights

A dramatic look drawn from empire and bra dress looks, crossed with a feel for Poiret proportions and costumes from Diaghelev's and Nijinsky's Ballet Russe. Scherezade, Russian Icons with a heavy Baroque feel, incense laden, an air, which evokes opulence and reverie.

Elaborate and sumptuous fabrics, decorated with a ceremonial feel. Decorated velvets, encrusted brocades, weathered gold, hints of devore, transparent chiffons, and embellished jacquards all feature in this exotic 'look'. 'The New Blue' dominates here with overtones of petrol, turquoise, purple, lilac, colored metallics, and jewels.

3.Travelling Circus

A real mix of gypsy, country, Irish (Celtic strap work) and Romanian craftsmanship. Joyous Pentecostal celebration, a continuation of summer's feeling, for item dressing and 'boho'.

Random fabric mixes-tweeds, plaids, florals, overprinted wools, embroidered flannels and cords, wool lace and reworked folk flowers, with dull silver accents. Craft bright reds, blues, yellows and greens, with sober darks. A striking worn, lived-in look evoking travelling entertainment and fun, combining distressed fabrics with heirloom pieces.

2007 1st Prize Winner: Tatiana Pogrebnyak's work

Source: http://www.handembroidery.com/prize-conference/

Hand & Lock Prize for Embroidery 2008

Brief taken from International Textiles Oct/Nov 2006 for winter 2007/8

Overall Brief: Dimension
Working on the theme dimension students should investigate fashion embroidery that explores relief effects or three dimensional fashion products using embroidered techniques as a foundation or integral part. This can be in the form of relief embroidery techniques – padded or raised embroidery methods such as fabric manipulation, quilting, raised goldwork techniques, raised beading techniques, found objects covered with thread / material, and construction processes made from embroidery alone. Please choose one of the following topics:

WISTFUL HIGHLAND
Think 'Scottish Tradition' meets 'romance' for this enchanted look. Clues are drawn from historical elements such as tartans and Celtic ornaments, while ethereal and glistening aspects are inspired by the proverbial magic forest.

POETIC EMPIRE
This is an exquisite, sensual theme, which draws inspiration from the Napoleonic era. Here we see lace covered gold buttons on slim-line military style cropped jackets and trousers, ethereal empire dresses ornamented with gold brocade, velvet ribbons and ruffled trims. Finely crafted accessories and footwear add elegance and sophistication to this delicate yet structured look.

TRADITIONAL PASTIME
This is a smart casual look for the preppy crowd inspired by traditional elements such as uniform attire. We see 'army medal' style badges and brooches on breast pockets, while 'uniform' style pins embellish lapels and schoolboy scarves. Buttons are luxurious and often utilise gold; decorative dome shaped buttons are particularly important. Crests and ornamental detailing are important.

NARRATIVE MARK MAKING
Old storybooks and stylised figurative drawings inspire printed and embroidered textile design. Graphics bear a resemblance to illustrations from children's novels and have a slightly retro feel. Loose marks and floral motifs keep the look fresh.
http://www.handembroidery.com/prize-conference/

2008 1st Prize Winner: Maria Lavigina's work

Source: http://www.handembroidery.com/prize-conference/

Hand & Lock Prize for Embroidery 2009

Overall Brief: Modern Goddess

The brief encourages in depth visual research, where sampling and follow through to a final conclusion is the order of the day. Whilst machine embroidery and or printing techniques may be utilised, they should never replace the uniqueness and individuality of any form of hand surface embellishment. You are asked to consider sumptuous surfaces highlighted with CRYSTALLIZED™ - Swarovski Elements, wherever appropriate.

NEW ATLANTIDE

Be inspired by the legend of Atlantis and it's women, highlighting the charm of classical elegance where the art of draping and Greco-Roman jewels reign supreme. Raised and padded bas-relief embroideries, iridescent mother of pearl, delicate minerals, laminated silks and metal and bronze accessories ornate this modern-day goddess.

Tones of grey, aluminium, silver, pistachio, jade and Parma violet.

TRAVEL FUSION

Bollywood style packed with patchwork prints, ethnic embroideries, applied sequins, mosaics, jewels and Indian pearls. A folk couture with sari-inspired gold and silver decorations, pompoms and braiding in loud colors, tie-dye muslin and kitsch charm
Tones mustard, magenta, ochre, orange and black
http://www.handembroidery.com/prize-conference/

SUNSET JUNGLE

An exotic and intriguing Garden of Eden with luxuriant Rousseau like vegetation full of tropical flowers and birds of paradise, where danger and mystery lurk. Tropical undergrowth protects the unexpected. Over exaggerated textured surfaces flow with liquidity and dancing lights.

Tones of bark, emerald, tangerine and lime

HIGH DEFINITION

Industrial rigour, the bearer of excellence and perfection of detail, dedicated to high definition and superior quality. Tiny inventions and multiple compositions, slits and punctures create micro ideograms, initials, and subdued tattoos. Variations on the Art Deco theme, diamonds, circles, linked squares, frames and moving graphics invent criss-cross geometrics with intertwining and embedding. New ethnic essentials translate into a technological concept, urban folk shown in graphic elaborations of tribal arabesques, stylised details, and transparent taping.

Tones of black and grey, with anthracite and aluminium. Shades of Parma violet, lilac punctuated with scarlet, lime and jade

REAL

The body, its appearance its imperfections. Skin, flesh, curves, roundness. Learning to leave ourselves in peace, rather than to love ourselves more. Living with our limitations, without forcing ourselves into identities that do not belong to us. 'Real', meaning authentic. The end of falsity, hypocrisy, and guilt. Low impact workouts, stretching, massage. Vitamin creams, natural, brightening make-up. Inspiration from lingerie and seamless comfortable garments, fluid close-up lines, not supporting or constructing, but courting the body without too much hassle.

Colors like light make-up-whites, peach, flesh, coral.

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