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MASTER OF FINE ARTS

CONSTRUCTED CLOTHING: FIBER TO FINISH

By Catherine Grota Sahlin July 12, 1984

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The Dedication of this thesis is to my parents:

Dr. and Mrs. Lee J. Grota

for their unending love and support.

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#### I. INTRODUCTION

#### PURPOSE OF THESIS

The purpose of this thesis was to concentrate on garment designs using a variety of textile techniques. Because clothing is a combination of both function and decoration, the artist chose to overlap, rather than separate the two. The total concept of both the fabric and garment shape was designed together in a coordinated way, rather than designing one to fit the other. This results in a unified overall design. A garment shape can look many different ways and say many different things, just by changing the fabric. In turn, the type of fabric used can alter the garment's shape and flexibility, depending on its hand, body, and materials used in its makeup. These two areas are closely related and it is impossible to design for one without the consideration of the other.

#### DESIGNER'S VIEW

In today's garment industry there is a trend towards creating volume sales by changing fashion styles as rapidly as possible. But to accomplish this increase in volume, there has been a decrease in the quality of industry-made garments. This is disappointing to the consumer and to this designer as well. In order to counteract this trend the designer has taken a different approach toward garment and fabric design, based on the theory that it is more practical to own a smaller number of

quality produced garments that will last longer. Therefore designs are approached with this in mind, with styles that are not overly trendy and meant for one season only. Neither are the fabrics meant for one season only; seasonless dressing, clothing that can carry over from one season to the next, is preferred.

One way to achieve this is by using fabrics that are neither overly heavy or light in weight and that can be combined to produce a warmer or cooler feeling for the wearer. Another way is through a layering approach that is adjustable with changes in daily climate. For example, a cape over a shawl, over a vest, over a blouse, which can be combined, added to, or taken away from to accommodate the season, climate, and temperature.

Besides being functional in nature, layers can also portray an important design element, because they can become a visual combination of different fabrics. Each fabric by itself may be of simple color and texture, but when combined in proportion they can produce a unified total appearance. The statement in proportion is emphasized because this process of design could evolve into an overworked and overly complicated piece. By keeping the garment shapes simple, and focusing centrally on the fabric design and coordination undue complication can be avoided.

These garments are meant to be "one-of-a-kind" and unusual, but not shockingly so. The designer prefers them to be subtly unusual; something that is unique, but also wearable by social

standards. They are tastefully different from industrially produced clothing in a positive, not negative way.

During production of industrially made goods, and in craft production as well, there are many limitations placed on the designer in order to meet production levels and inevitably to meet a certain profit quota. It was determined by the designer in this thesis that the clothing produced would have no limitations in terms of cost, materials, color, or fabric choices. The garment could be as rich and complete as the original design idea itself, without cutting certain details, viewed as nonessential. The only limitation was that the works had to be completed in time for the thesis show. With careful consideration for the amount of extended time required for detailed handmade goods a general schedule was made leaving extra time at the end.

This concept of no limitations in production was important to the designer because in the future, there will probably always be limitations in the workplace. However when in school, your primary purpose is not to be financially profitable, it is instead to develop one's technical, aesthetic, and overall sensitivity towards design.

The thesis is an excellent opportunity to accomplish this.

#### HISTORICAL PERSPECTIVE

Man's necessity to decorate objects around him can be traced back to early cave man drawings and to decorative markings on functional vessels. Even though functional aspects of an object have been solved, there seems to be a need to distinguish and transform them further. Humans use the techniques and images of their own culture to transmit an attitude or message from generation to generation.

There are many factors that influence the diversity of costume design and decoration including: the effects of the natural environment, the supply of raw materials, the technical skills of the people, moral standards and religious values, as well as aesthetic and political ideals. One simple example is the straw hat; it was developed in many areas as a combination of availability of materials: reeds and grasses, and environmental factors: for protection from sun and rain. Technical skills and development of equipment such as the number of harnesses on a loom, can limit or expand the quality and type of final product. Liturgical symbols marking life and time passages may be shown by the use of color and pattern. For example weddings in China are symbolized by the color red, while in the western world white is used. (14, 193)

Historical designs are constantly being absorbed, changed, and used for inspiration by current artists and designers. We

learn about the present from our past. However, many designs are altered and expanded to reflect the present society, while still alluding to the past. Recombining past design elements can produce a very unique look, and show new ways of using the same principles. The designer in this thesis used historical motifs and overall design principles in her works, not by copying them, but by alluding to certain styles of the dress. In some cases the materials are a new variable. In others, shapes may be similar, yet color is changed. These interpretations are done in a subtle, non-obvious way, focusing instead on the properties of the materials themselves, looking at them historically, and how they were used in various situations.

In the following chapter, techniques used by the artist are discussed. The historical uses and applications of these techniques will also be explained with a correlation between the old and current use of the materials shown.

## II. PROCESSES AND TECHNIQUES OF DESIGN AND CONSTRUCTION

In choosing the processes, techniques, and materials to use for these garments, a need for variety was determined by the designer, rather than focusing on one technique and exploring it solely. Four major areas of primary interest to the artist were chosen: handmade felt, painted silk, handwoven fabrics, and the technique of reverse applique. Each process offers a very different end result and adds a different quality to the pieces in each design line. Before any designs could be developed, extensive research and experimentation had to take place in order to discover the variety and special characteristics inherent in each. These experimental efforts are explored as each technique is discussed.

Research and development are an extremely important factor in designing textiles. Without it there are too many variables left to chance. This designer feels that both science and art are intricately linked in textiles. As a science, textile design must be approached with precision and exactness. Yet as an art there is also a need for freedom of expression. This constant play between the two allows a textile design to be exciting.

## PORTFOLIO OF DESIGNS

When beginning the early stages of design, one infallible resource is an artist's sketchbook. That is, only if it is

added to, and if it is continuously under revision. A sketchbook is a necessary collection of ideas from which to draw upon. It is a place for brainstorming, for saving fragments of historical design to be used at a later point in time. Perhaps the sample is only the strategic use of a band of trim on a peasant blouse, or the angle of drape that a 1920's Parisian gown exudes.

Perhaps it it is the range of colors in the painted desert, or the curve of a rose petal circling its bud. To forget is only human, but a sketchbook has wonderful capabilities of reviving past ideas and recording spontaneous thoughts.

In working out rough sketches for a design, the idea that comes to mind first is only a start. It should be altered, changed, and manipulated in ways to determine if any other possibilities are more worthwhile than the original. In developing designs for this portfolio, the designer changed and reworked sketches until the proportion of shape, texture, and color balance was satisfactory. However, even after the final design has been decided the designer must be prepared to accept necessary changes during production of the work. Just because it looks good on paper doesn't guarantee that it will work in production.

In rendering these designs for use in a portfolio, three major problems had to be reviewed and changed. The first was the materials being used. Originally renderings were made utilizing

a combination of design markers and prismacolor pencils on marker paper. The look of these renderings was slick, and left little attention to texture. They were very flat and graphic, and what the designer wanted to achieve was a more textural look that would enhance the quality fabrics used for the garment. She also wanted the renderings to be of interest in themselves as drawings, in terms of composition, texture, and line quality. After many trials and errors, a new style of rendering was decided upon utilizing a textured drawing paper with various neutral colored pulps. This gave the drawings a more solid, richer feeling of color, replacing the previously used white background. Prisma color pencils were used as the primary rendering tool to define the shape, add texture, and to soften the overall effect, rather than defining figures with a hard edged black marker.

A second problem was the rendering of the figure itself.

Many times the pose, gesture, and facial expression became the focus of attention, rather than the clothing itself. Some of the figures were not proportioned correctly and gave a contorted feeling to the image. To overcome this, a closer view was shown of the figure, leaving out the lower legs, and half of the face. Compositionally the fabric was the main emphasis, it was now more detailed and richer in texture, with less emphasis placed on the gestural pose or facial features.

A third obstacle in developing the portfolio was how to display the fabrics used in each design Prior works had utilized swatches slipped in the vinyl folder which held the drawing. These were frayed and sloppy in nature. A more professional approach was suggested by Professor Bujnowski: the swatches were matted and placed between the vinyl pages to be flipped accordingly.

These changes in portfolio style made a definite overall improvement, and in the end were worth the struggle endured to produce them. (Fig. 1-4) From these designs and ideas in the portfolio and sketchbook, garments were selected for actual construction, keeping in mind the need for a variety of techniques, materials, and various styles used.

#### HANDMADE FELT

One major technique used by the designer because of its specific properties was handmade felt. Felt is a pressed, matted fabric formed by the interlocking of certain unspun fibers, most notably wool. It is formed through a combination of heat, moisture, and pressure and develops into a self-tightened mat. Not all protein fibers felt; the reason wool does is that each fiber is a series of scales which swell and interlock when subjected to the above conditions. The feltmaking process itself is quite simple and involves washing and carding the wool, dyeing

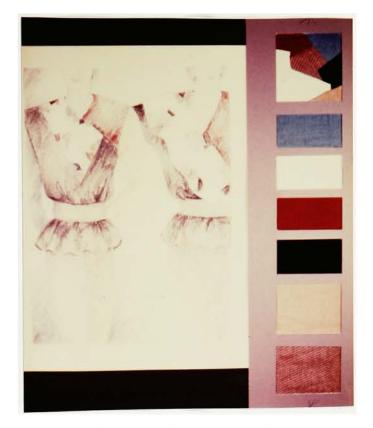


Fig. 1. Portfolio Rendering

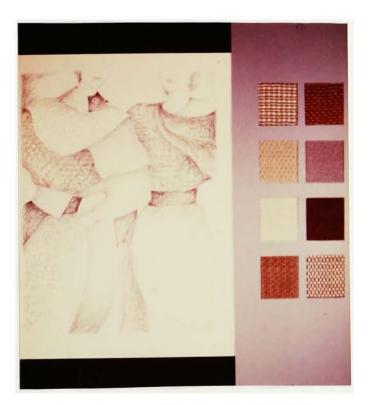


Fig. 2. Portfolio Rendering



Fig. 3. Portfolio Rendering



Fig. 4. Portfolio Rendering

if intended, laying the batt, hardening with heat and pressure, and fulling to further felt the mat. Shearing, singing, sanding, or brushing may also be done to the felted surface. Once this felt fabric is constructed, it can be cut, sewn by machine or by hand, and sculpted into numerous different shapes.

Historically it is believed that felt was developed by the nomadic people of Central Asia, some historians speculated it may have predated spinning and weaving. The oldest pieces of felted fabric to have been found date from about 1500-1000 B.C. (9,20) For many groups of Nomads wool was a natural product of their sheep, which were abundant and with whom they traveled. sheep were a fundamental part of their lives. From these sheep, wool could be produced into felt and made useful for numerous purposes. One major purpose was for the home, not only for rugs and blankets, but for the actual walls and roofs as well. These portable homes could be rolled up, placed on horseback, and carried to other grazing lands. Felt was also used for the saddle blankets and other horse trappings in riding. purpose was for religious and ceremonial idols. These felt idols were made by the women and hung from the roofs of the homes to protect the dwelling and the lives of those residing inside.

However, of primary interest to this designer was the use of felt in clothing. It was used for accessories such as boots and boot liners, gloves and mittens, and hats, which offered good protection against the elements. Many of these items contained complicated inlaid designs, often symbolic. Colors were indigenous to the local area at the time; natural white, brown, gray, and black shades were combined with vegetable and mineral-dyed blues, reds, and yellows. (9, 21) Of greatest inspiration was the "kepenek" mantle or cape, one of the few felt garments used today. The kepenek is a heavy sleeveless felt garment used as a wrap by shepherds in Turkey and Iran. (9,32) It may also be used for a sleeping bag or a cover for a lean-to, providing unsurpassed protection from the elements.

The reasons the artist chose to use felt in garments include both properties of wool and the matted structure created, and also the actual process that takes place to achieve it. One of the most important qualities of wool is it ability to withstand changes in thermal and moisture insulation. In a garment it keeps body heat in and the elements out, that is until it reaches its saturation point which is very high compared to other fibers. Wool also accepts dye easily, and do to this fact rich colors can be achieved. Once the wool has been felted, more advantageous properties are formed. The fibers are an entanglement with no yarn or woven element; this material won't ravel or fray. It can be stamped or cut into any shape desired, and can be sewn and manipulated into a three dimensional unit. The process of felting leaves many decisions and options up to

the feltmaker. Creatively there are few limitations by process because the process itself is so simple. Felt can be made thicker, or thinner; yarns, scraps, or really any material can be laid into the felt batt and bonded in permanently. It can be two and three dimensional in nature because it is soft in quality. Since the beating and heat are regulated by the feltmaker, the extent to which the wool felts is controllable to achieve effects desired.

Before attempting a final project in felt, experimentation was developed which proved very helpful to the artist in determining shrinkage of wool and other fibers to be used, dye testing results, and combinations of materials. Various samples were produced, recording method used, length of felting, and materials used for each. (Fig. 5) Dye notebooks using benzyl dyes on wool and silk were also developed in order to have a color source to choose from. (Fig. 6)

From this experimentation and the sketchbook, a preliminary felt garment of a vest was designed; the simplicity in its shape consisting of three major pattern pieces. Several colors were chosen from the dye notebooks and were dyed in larger quantity in both wool and mohair fibers. The wool batt was laid in the shape of the three garment pieces using a pre-drawn pattern as a guide. Diagonal bands of color were offset with contrasting wisps of mohair, laid on an opposite diagonal plane. The pattern was made

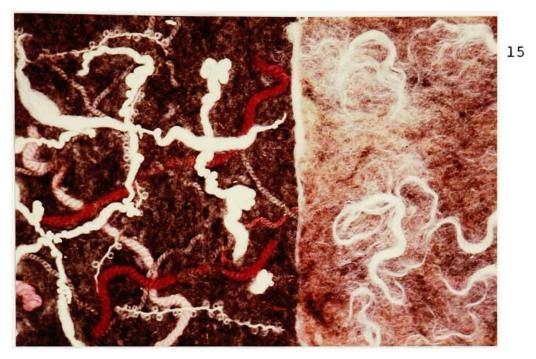


Fig. 5. Felt Samples utilizing inlaid materials: yarn, and wisps of mohair



Fig. 6. Dye Notebook testing color results of benzyl dyes on wool and silk.

approximately 15% larger to accommodate for shrinkage and every percent was necessary as the wool shrunk right up to the desired size. Each pattern piece was felted twenty minutes and by this time had achieved a hardness necessary for an outer garment weight.

Sewing of the vest proved to be very easy when a heavy machine needle was used. Inner seam allowances were shaved with scissors and iron-on interfacing used to hold them flat and to prevent a ridge from showing through the lining. A silk broadcloth lining was dyed red and worked very well as a heavier weight was needed. This same fabric was used for a coordinating jumpsuit to be worn underneath. A large nonfunctional felt button was suggested by Professor Lenderman which added a finishing touch to the playful, fun quality of the vest. Interior yarn-covered hooks actually function to hold the vest closed. Overall this piece was a learning experience that evolved into an unexpectedly nice vest. (Fig. 7, 8)

From the experience of creating the felt vest, the historical usage of felt in outer garments, and also from one sample swatch in particular, a felt cape idea was developed. The cape idea intrigued the designer because it could tie in with the garment underneath, and as a secondary layer it could provide extra warmth if needed, yet be detachable. A coordinating ensemble of a felt cape and woven wool and mohair coat were



Fig. 7. Handfelted Vest, Silk Broadcloth Jumpsuit.



Fig. 8. Detail of Handfelted Vest.

designed. The cape consisted of ten different colors, two of natural wool shades and eight which were dyed using the dye notebook again as a reference. Through carding, combinations of these colors could also be achieved, resulting in a very subtle blending. The cape shoulders were a light gray which graduated to a rich purple at the bottom. A coordinating shawl collar was also made to fit to the cape. In forming the felt mohair was laid on top of the batt and most of it caught into the wool in wispy forms. The cape provided a nice large area to work on, almost like painting on a canvas, only with wool. Because of its size, the cape was felt in sections instead of all at once, the most productive method being stomping with rubber boots. edges were thin so a hem was a definite solution. Then the piece was refelted again to shrink more and hold the mohair in place The gray natural colored wool worked well to tone down better. the piece and coordinate with the coat fabric. After hemming the cape, it was apparent that the hand stitches showed and a dark lining was attached, giving the cape a finished look. 9, 10)

The matching coat can be worn with the cape or if desired can be worn separately with its won detachable collar. This coat is made of a modified twill fabric in grays, purples, and creme; the colors drawn from a seashell. This is an example of one source of inspiration the designer turns to time and time again:

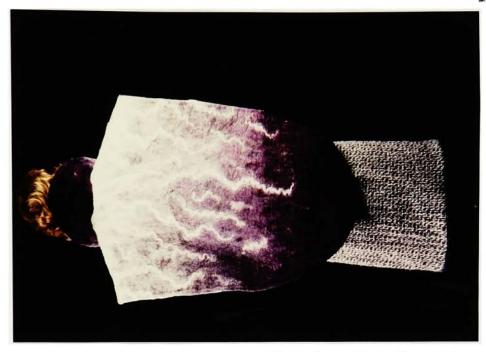


Fig. 9. Handfelted Cape, made of wool and mohair.

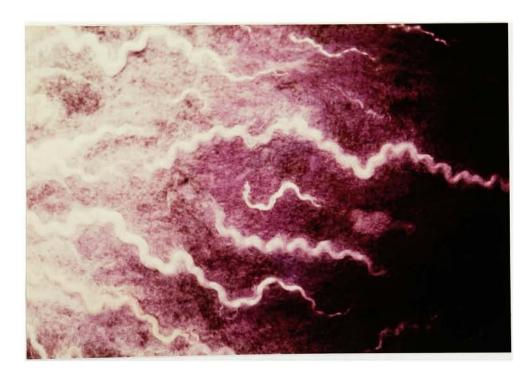


Fig. 10. Detail, Handfelted Cape.



Fig. 11. Woven Coat with detachable felt collar.



Fig. 12. Detail, Woven Coat.

natural objects and nature itself. From nature, there is an unending supply of ideas: color combinations, textures, forms, and more. We can never equal nature's greatness, as it was conceived by the ultimate designer, our Creator. Yet we can turn to it for help in forming or furthering our design ideas.

During a class critique it was suggested that something was needed in the design to carry the rich color of the cape and collar into some details of the coat. Many helpful ideas were contributed by others, and the final decision was made by the designer to add a felt piping to the center front and hem, and also to the sleeve edge. The piping graduates from the collar where it is gray, to a rich purple at the bottom center corners. These corners were rounded to go with the rounded design of the cape. The coat shape was quite bulky so some changes were made in construction. Two pleats were added on either side of the front pieces. The interior facings were made of a cotton twill eliminating the bulk created from using the exterior wool fabric. A deep purple silk lining the same which lined the cape, was hand stitched in. (Fig. 11, 12)

The outcome of this garment was only fairly successful, and during future construction of this kind various changes in the plan would be made: smaller shoulder pads, a more unified hem on the coat, and a less uniform edge on the felt cape. It was however a worthwhile learning experience.

## REVERSE APPLIQUE

Reverse applique is a process that involves detailed construction of pieced fabric hand sewn to a backing of some kind. It is very two-dimensional in nature, lending itself to graphic images. The technique is loosely related to applique and when combined the two can be used very effectively. After some investigation into this technique the designer felt it would lend itself perfectly in creating, out of fabric, the images she desired.

Reverse Applique was developed by the San Blas Indians in Molas, which were pictorial blouses worn by Cuna Indian women near the coast of Panama. (3, 26) These molas are constructed from commercially woven cotton cloth purchased from trading boats that visited the islands. Originally, about 100 years ago, they served as a front and/or back yoke on a woman's blouse. (3, 339) They have since developed as decoration and structure for handbags, trims for other garments, and as entire wall pieces.

These Molas are made by the technique of applique, reverse applique, and embroidery. They are formed from panels of two or more layers of cloth cut into to form a design. The edges of each shape are tucked under and carefully handstitched down, leaving a window that shows the colored fabric underneath. Small pieces may be appliqued to the surface and touches of embroidery used to fill in undecorated areas which are usually never left.

Even the tiniest scrap of fabric is saved for future use. In the past, designs were religious and mythological in nature, or were derived from island and ocean flora and fauna. More recently current events, political figures, and other examples of western cultures have served as design inspiration (23, 339).

The use of reverse applique in this designer's work borrows from these Indians their technique, but not their imagery. The imagery in these designs is geometric in nature. Some shapes, and the colors of rust, turquoise, creme, and black are drawn from American Indian imagery, particularly that of the Arizona and New Mexico Navajos. American Indian imagery is mainly two-dimensional but in the artist's current designs the shapes are transformed to create a third dimension, one of depth, by manipulating the shapes and colors in appropriate areas.

From portfolio designs, one outfit consisting of slacks and a shirt were constructed, utilizing this and other techniques. The slacks are made of a hand woven satin in 20/2 cotton, the colors coordinating with the shirt. The design of the weave was chosen from a satin sampler developed in Professor Max Lenderman's class. It presented quite a challenge to the designer, as it was her first attempt at a yardage of this scale and fineness. The weft was an added challenge: six different consecutively colored shuttles in 20/2 cotton as well. By working in an extremely cautious manner, there fortunately were

no large problems of tangling or of broken warp threads. Once completed, the yardage was washed, shrunk, and the slacks pattern laid out against the grain, on the weft side of the satin. This was to enable the six color weft to run vertically on the slacks.

Due to the unraveling nature of handwoven fabric, the finishing of seams was a necessity. At first they were done with French seams which created an immense problem of bulk. Therefore another solution was used; seam binding the raw edges separately, and pressing them flat open. Press cloths were used under the seam allowance to prevent a ridge from showing on the right side. The slacks are lined with commercial fabric which was less clingy than silk.

The shirt consists of a v-shaped yoke of reverse applique, a simple square bodice, with gathered three-quarter length sleeves. The yoke was decided to be the center of attention, inspired by the original Mola blouses. It is also fitting to display detailed work near the face, where it can be viewed easily, rather than at a skirt hem for instance. It was intended that the shirt be of a heavy weight, between that of a blouse and jacket, so all pattern pieces were self lined individually, and then sewn together. This served as a finish, keeping all raw edges in the interior. All zippers and armhole seams were hand picked to tie in with the hand work in the reverse applique of the yoke. A belt was added to enhance the yoke, at first styled



Fig. 13. Reverse Applique Shirt and Belt, Handwoven Satin Slacks.



Fig. 14. Detail, Yoke of Reverse Applique Shirt.

after a cumberbund. Later an extending flap was added so that the belt would hang to calf length, emphasizing the American Indian imagery as well. The Hopi Indians have traditionally worn long wrapped belts with extended flaps hanging down. (Fig. 13, 14)

#### TEXTURAL WEAVES

When one thinks of weaving or of something woven, the element of texture is often included. Woven texture is not just an illusion as in a printed texture. There is an actual three-dimensional surface as well as the visual surface that emerges. In order to have a wide range of sample fabrics from which to choose for garment designs, an experimental project dealing with woven texture was devised.

This step in the woven design process of experimentation or "sampling" is extremely valuable to the weaver. It is the basic fundamental for designing textiles, and something this designer finds fascinating. To discover that another artist was equally enthusiastic towards this topic was delightful. Her name is Anni Albers, a woman who was an early student of the Bauhaus School of Design in Dessau, Germany. (4, 141) She later became an accomplished weaver, textile artist, and author on textiles.

Like this designer, Mrs. Albers would use natural and found objects as inspiration for studies, sometimes arranging them in

small "compositional studies". From these textural studies, woven studies were a logical next step. Her basic theory was that there are two major weaving elements that produce variety in woven texture: the composition of the actual weave, and the properties of the particular fiber or fibers used in the weave. A third and more subtle textural element is that of color strategically placed to create or enhance existing woven texture. By keeping one element constant, or by changing one or the other elements, a vast variety in effects can be achieved. This experimentation is an important step for any weaver because in future works, a sample and an understanding of the materials to be used can save many problems later on.

From her writings, one can tell that Anni Albers also valued this experience greatly. She says that "Unburdened by any practical considerations, this play with materials produced amazing results, textiles striking in their novelty, their fullness of color and texture, and possessing often a quite barbaric beauty." (4, 141) She mentions that these weaving improvisations were a wealth of information to relate to when more practical problems were begun. Examples of her samples show a variety and subtle sense of texture necessary for anyone working in the textile area.

For the woven series of garments, the designer chose to concentrate on texture and to eliminate dominant color choices by

using neutral tones. In this way color was not the dominant element in the weaves; texture was predominant and value changes in the neutral colors were secondary. A second constraint was the fiber used in the weave, 10/2 cotton only, leaving the weave itself as the creator of the textural change. A large sample blanket was constructed, consisting of seventeen three-inch wide sections, each of a different threading sequence. In this way, a treadling sequence for one warp section would produce seventeen different weaves. A gray dividing grid was used to separate the weaves so that afterwards the 56" by six yard sampler could be sewn and cut up to be filed. (Fig. 15) One indispensable reference used in the creating of this sample blanket was Marguerite Porter Davison's A Handweaver's Pattern Book.

Some of the portfolio designs developed combined a variety of these textural weaves. The design chosen to construct was a layered dress combining seven different fabrics from this study. They are not all complicated weaves but when combined in one garment they become visually stimulating. In order to determine how large a piece to weave of each fabric, the pattern had to be made first. Then, from this pattern, warp calculations could be made. Four of the fabrics were in solid colors, two in two/color combinations with one color dominant, and one a weave that combined all of the other six colors in its weave. This last weave helps unify the entire garment. Each separate warp wove

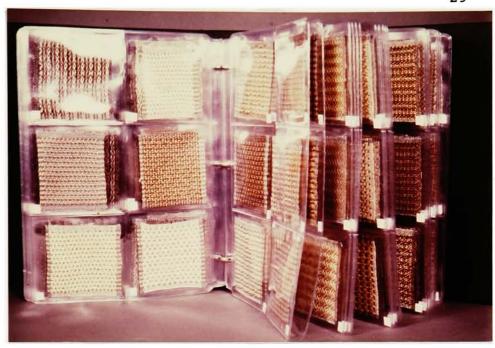


Fig. 15. Woven textural sample blanket, filed for reference.



Fig. 16. Detail of textural weaves used in woven dress.



Fig. 17. Woven Dress, front view.



Fig. 18. Woven Dress, back view.

fairly quickly as they were not very large, and were all of 10/2 cotton. Only one yardage was wider than 45 inches. When washed and shrunk the individual patterns in each weave stood out much better, and the drape of each improved greatly due to the loss of the sizings that are added in the manufacturer's spinning process.

After cutting each layer of the dress, the pieces were overcast and lined with commercial lining in either gray, tan, or brown. They were connected and adjusted to hang correctly, which was best done on a dressmakers form using draping techniques. A detailed explanation of these techniques can be found in <a href="Draping for Fashion Design">Draping for Fashion Design</a>, by Hilde Jaffe and Nurie Relis. Numerous adjustments were made during this process. Most changes dealt with the drape of the layers, which was difficult to predict by flat pattern methods alone. Many were made smaller to form an asymmetrical balance that was pleasing to the eye. The skirt was cut on the bias to give a better flow and drape. A clasp at the neck was missing and it was decided that a large gray textural button in the shape of a draped swatch of fabric would be used, adding the finishing touch.

## HANDPAINTED SILK

Handpainting on silk is a very direct surface design technique which is one reason the designer choose to include it in her thesis. The emphasis of the technique is not placed on

its technical process as it is not very complicated. It is instead placed on the design and drawing that takes place during the production. Loose fluid lines can be achieved, and a spontaneous sense of design expressed. The drawing is produced by a rubber resist called gutta extruded from a small bottle. After the gutta dries, open areas of silk can be painted with a natural brush or sponge tool, filled in with French dyes, a basic type dye. Due to the wonderful dye-accepting qualities of silk, deep rich colors, as well as pastels, can be achieved. These dyes must be set with steam in order to resist water. The rubber resist is then removed through dry cleaning.

In designing fabric and garments using this technique the designer choose to create a line of bridal wear. This was due to the elegant nature of the silk, the challenge of such a complicated project, and work experience in bridals. The central theme of the bridal line is floral in nature; many sketches of each flower were developed before final renderings of the dresses were finally made. Six bridesmaids dresses were designed, the subject of each one a different flower: a peach tigerlily, pink gladiolus, purple iris, yellow daffodil, blue delphinium, and a red rose. The design of the garment shape was kept very simple in order to focus attention on the painted design of the fabric. This has been done successfully in many other garments, one good

emphasis placed on the embroidery, print, or brocade of the fabric instead.

The shape of these bridesmaids dresses is a rectangularly shaped calf length tunic with a central circle and slit for the neck, attached with a pearl clasp. A plain white "spaghetti-strappe underdress acts as a slip and hangs to the ankle. The bridal gown was designed to have a creme background color with white roses in bud shapes and also in full bloom. Small silk samples were painted using different techniques and approaches to discover those most suitable for the gowns.

From these renderings and samples it was decided to paint and construct the bridal gown and to paint three of the bridesmaid fabrics. The first step was to draft a pattern in the style of the gown rendered. In constructing the gown, the pattern was made up in muslin and was modeled on the body. In this way an accurate fit was determined and exact pattern shapes were defined ahead of time. The muslin was then ripped apart, and used for a pattern. Rose drawings taken from sketchbook work were made first on large paper cut in the exact scale of the pattern piece. Then they were drawn with the gutta onto the silk. The French dyes were applied to the background in a creme color, with darker shading in the interior of the flowers to define the petals. All pieces were steamed and dry cleaned to remove the gutta. Now the outline quality from the gutta was

greatly reduced and the dress was ready to be cut out and constructed.

To give the silk more body, bridal illusion was used as a backing for each piece before being lined. In this way the pearls could be sewn into the flowers to the backing, keeping the lining clean of stitches and knots. Nylon hem braid was attached to keep the lower skirt flared out. A hoop underneath also helps keep its shape. The cumberbund was hand caught in place at the waist, and very fine piping edged the asymmetrically curved bodice neckline, cumberbund, and sleeve edges as well, which are petal like shapes. The bodice consists of painted rose buds and leaves, and as a central focus, these buds were highlighted with many more pearls to obtain more attention. A headpiece was designed to match the sleeves in this petal shape, with pearls sewn on to give an illusion of organic leaves and vines. A white net gathered veil comes out of the flower headpiece and hangs to the waist.

Overall this design is asymmetrically balanced which is non-traditional yet the designer feels adds more drama and interest to the entire look. The organic quality hints of Art Nouveau, and creates an aura of a floral fantasy. The butter-creme color of the silk is also non-traditional, but still delicate in its own way, and necessary in order to show off the white roses.



Fig. 19. Handpainted Silk Wedding Gown.



Fig. 20. Detail, Bodice of Handpainted Silk Wedding Gown.



Fig. 21. Painted Silk Bridal Headpiece, accented with pearls.



Fig. 22. Handpainted Bridesmaids Fabric, Purple Iris.



Fig. 23. Painted Bridesmaid Fabric, Pink Gladiolus.



Fig. 24. Painted Bridesmaid Fabric, Peach Tigerlily.

## III. CONCLUDING THOUGHTS

## PERSONAL LEARNING EXPERIENCE

After conclusion of this thesis one might ask what was accomplished and learned by the designer. Much progress was achieved in the mental and technical process involved in carrying an idea through the design stage, illustrating this idea in visual form, experimenting with the techniques required for its completion, and production of the final work. The designer became much more organized in her work, especially in keeping notes and references on experimentation, filing data, and recording samples for future use so that valuable information is not lost. She has also learned to work independently with only one major deadline, to pace herself with personal time management and small deadlines along the way.

One important note to make is that projects may not progress as originally planned, and this must be dealt with in a positive, not discouraged manner. A problem becomes another challenge. Personal standards of quality cannot be sacrificed when time is running out, however, for this will only result in disappointment. Another important concept is that a designer must become open towards input and comments about the work in an objective way from both professors and peers. Too many times, valuable ideas are ignored because of the pride or stubbornness of the original designer. But only those suggestions that are truly

valid and agreeable to the designer should be carried out. This process of elimination is a difficult one to become successful at doing, and comes only with experience.

Another benefit of this thesis, as seen in the portfolio of designs, is an improvement in the way ideas are displayed and presented to others, whether professors or clients. Actual design lines as well have become more unified, yet still unique in themselves. The fabric speaks of itself, its properties are the main attraction. In many cases simplicity can be the better design, keeping the fabric in focus. This can be shown by eliminating those qualities of the drawing unnecessary for clear communication of the idea.

In the opinion of the designer much more was learned by using a variety of materials and techniques, rather than by focusing on one single area of textiles. There is more variety and room for inspiration, new ideas and combinations of materials are constantly developing. There is less chance of developing monotony and stagnation in the work, and more freedom for change.

## SELECTED BIBLIOGRAPHY

- Albers, Anni, <u>Anni Albers: On Designing</u>. Middletown, Connecticut: Wesleyan University Press, 1971.
- Albers, Anni, On Weaving. Middletown, Connecticut: Wesleyan University Press, 1965.
- Auld, Rhoda L., <u>Molas:</u> <u>What They Area, How to Make Them.</u> New York: Van Nostrand Reinhold Co, 1977.
- Bayer, Herbert, et al., <u>Bauhaus</u> <u>1919-1928</u>. Boston: Charles T. Branford Co., 1952.
- Davison, Marguerite Porter, A Handweaver's Pattern Book. Chester, Pennsylvania: John Spencer, Inc., 1981.
- Erte. New York: Rizzoli International Publications, Inc., 1978.
- 7. <u>Fashion Illustration</u>. New York: Rizzoli International Publications, Inc., 1979.
- 8. Foley, Daniel J., <u>Garden Flowers In Color</u>. New York: The MacMillan Co., 1947.
- 9. Gordon, Beverly, <u>Feltmaking</u>. New York: Watson-Guptill Publications, 1980.
- 10. Hollen, Norma R., <u>Pattern Making by the Flat-Pattern Method</u>. Minneapolis: Burgess Publishing Company, 1981.
- 11. Horn, Marilyn J., <u>The Second Skin</u>. Boston: Houghton Miflin Co., 1968.
- Jaffe, Hilde and Relis, Nurie, <u>Draping for Fashion Design</u>. Reston, Virginia: Reston Publishing Co., Inc., 1973.
- Knutson, Linda, <u>Synthetic Dyes for Natural Fibers</u>. Seattle, Washington: Madrona Publishers, 1982.
- Murphy, Brian, <u>The World of Weddings</u>. United States of America: Paddington Press, 1978.
- Parker, Ann, <u>Molas:</u> <u>Folk Art of the Cuna Indians</u>. Barre, Massachusetts, Barre Publishing, 1977.

- Penn, Irving, <u>Flowers</u>. United States of America: Conde Nast Publications, 1980.
- 17. Penn, Irving and Vreeland, Diana, <u>Inventive Paris Clothes</u>.
  New York: The Viking Press, 1977.
- 18. Poiret. New York: Rizzoli International Paperbacks, 1979.
- 19. Sloane, Eunice Moore, <u>Illustrating Fashion</u>. New York: Harper and Row, 1968.
- 20. The New Rose Book. London: Marshall Cavendish Publications Limited, 1974.
- Vinroot, Sally and Crowder, Jennie, <u>The New Dyer</u>. Loveland, Colorado: Interweave Press, Inc., 1981.
- 22. Wilcox, Ruth Turner, <u>The Mode in Costume</u>. New York: Charles Scribner's Sons, 1958.
- Wilson, Kax, <u>A History of Textiles</u>. Boulder, Colorado: Westview Press, 1979.
- 24. Women's Wear Daily, Fairchild Publications, New York.

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Thesis Proposal for the Master of Fine Arts Degree

College of Fine and Applied Arts Pochester Institute of Technology

Title: Constructed Clothing

Submitted by: Catherine M. Grota

Date: September 27, 1983

Thesis Committee:

Chief Advisor: Max Lenderman

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Departmental Approval:

Date: 10/5/83

Approval, Assistant to the Dean for Graduate Affairs:

10/10/83

Final Committee Decision:

Date:

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The purpose of the thesis is to design a portfolio of clothing involving various textile techniques. The portfolio will consist of a series of design lines with corresponding fabric swatches. I will research and experiment with the textile techniques of felting, weaving, silk painting, and reverse applique. From this experimentation I will choose the appropriate fabric samples for the garments which I will construct.