

A Study on the Design Development of Lady's Down Wear

Soon-Ja Lee* · Hyon-Sook Choy**

Instructor, Dongduk Women's University*
Professor, Dongduk Women's University**

Abstract

The rapid development of science technology during the 20th century has greatly lowered the hours for labour, thus giving members of society extra time for leisure.

With the increasement of leisure activities, sports casual wear has become one of the foremost leading items in the fashion industry, and among such sports casual, down wear has become the F/W season's most popular item. Because it generates high profits, many recognize it as a very important factor in lady's wear. Since the 1990's, down wear was widely applied to various sections of lady's, men's, and children's wear, and it has ceased to be limited to sports casual only.

The purpose of this study was to fully understand the characteristics of down, and to develop crossover garments design desired not only in the F/W season but also the S/S season.

It has been taken into consideration that many restrictions in sewing technique and material selection in manufacturing down as a fashion product exist when choosing a means of manufacture. That was why this study focused on the history and characteristics of down while analysing the works of domestic and foreign designers to concretely applicate them in fashion products.

This study has divided the resulting down wear products according to consumer preference: vest, jacket, coat, one-piece, and skirt to applicate design manufacture of lady's wear in general, while designing and making artistically expressed down wear.

There were 48 works developed as a result of this study, of which 41 were ready-to-wear, and the remaining 7 works were creative art wear.

Key words : history of down wear, characteristics of down, analysis of designer's works,
artistic down wear, Lady's wear, sports casual wear.

I . Introduction

1. The Purpose and Significance of the Study

The current trend of the 21st century is that of a powerful character freely exploring new areas of design, under the main theme of the New Millennium.¹⁾ The 00/01 F/W season faithfully reflected this trend in the coexistent images of individualism and futurism. This could be said to be a liberal expression of character by the designer, and clothes based upon various ethnic cultures could be seen alongside futuristic ones.²⁾

A strong tendency towards character casual design based upon people's lifestyles was shown, and a sports casual look with humanism and individuality added for flavor was introduced into the limelight.³⁾ Such changes in the fashion world have greatly influenced Korea, making sports casual not only a trend, but also a strategically important item for leading sales in brand names.

The design area of down wear is visibly expanding, especially in lady's wear. This phenomena is not limited to only sports casual or character casual groups, but it is also appearing in elegant lady's wear, missy casual, contemporary, and feminine groups. Despite of all this, there was virtually no research centering on down wear up till now, and the need for research in this field is all the more greater.

Therefore, it was proposed in this study to emphasize the characteristics of sports wear by expanding the design areas of down to lady's wear and artistic luxury wear, not simply confining it to protection against the cold. Furthermore, it was proposed that down wear merchandise be included in design-oriented lady's wear groups.

The thus of this study were as follows;

First, to assist in the planning · manufacturing of down wear by the systemization of design and development.

Second, to assist in developing down wear as a competitive value-added commodity in the world fashion market.

Third, to pursue a high class/luxury status in down wear by developing artistic design in not only lady's wear, but also other fashion groups.

2. Methodology of the Study

The main method applied in this study was the parallel research of relevant documents and actual work in the field. The research of documents was conducted by the inquiry and analysis of relevant publications, essays, newspaper articles, and

magazines, both domestic and foreign. The latter was conducted by the use of photographs displayed in magazines such as Collection, ELLE, GAP, Marie Claire, Bazaar, and Vogue. Photographs from newspapers and the Internet were also used for the in-depth analysis of down wear in modern fashion.

II. General Investigations into Down Wear

1. The Definition and History of Down Wear

1) The Definition of Down(feather & hair)

down is called Woo-mo(羽毛) in Korea, which means FEATHER & HAIR, and it is also known as wing feathers, pinfeathers and plumage.⁴⁾ Among these, the down used in the fashion industry is collected from the feathers of waterfowl such as ducks and geese. The quality of the down is determined by the ratio between down and feathers, and a higher proportion of down means higher quality. (e. g. if the ratio between down and feathers is 80:20, it is marked 80/20, and if the ratio between down and feathers is 90:10 it is marked 90/10)⁵⁾ One may find out the differences between down & down fiber and feather & feather fiber by comparing <fig. 1> and <fig. 2>.⁶⁾

down is divided into 2 types; white feather down and grey feather down. The marking of down content is classified according to the ratio of grey feather down included. If there is 15% or more grey feather down, it is called GDD, and if there is less than 15%, it is called WDD. If there is only 1.5% or less grey feather down it is called PWDD. This can be presented in the following table.

<table 1> Table of contents for down

| color | black point |
|-------------------------------------|----------------|
| GDD (washed grey-duck-down) | 15% or above |
| WDD (washed white-duck-down) | less than 15% |
| PWDD (washed pure-white-duck-down) | less than 1.5% |

The standard for marking the contents of down is the ratio between down and feather, and the amount of down in relation to feathers is always shown first, as shown above. The national standards for the content of down in Korea, Japan, and the USA are shown in the following table.

2) History of Down

The biggest producer of down nowadays is China, and it can be inferred from historical records that the down of geese was already used in the Ming Dynasty.⁷⁾ The softness and warmth that down gives has spread its use in quilts, blankets, pillows, and outdoor sleeping bags. It can be said that the history of down is one that coincides with that of down quilts. To elaborate, down quilts were introduced in 14th century Northern Europe. They were used in the Bourbon dynasties of 16th century France, and there are records of down quilts being used in the palace of Henry VIII.⁸⁾

Germany, the largest supplier of down quilts, has been manufacturing them since 150 years ago, and is still going strong. Lorch, the world's largest maker of down quilt machinery, and Home Buring House, the famous maker of down quilts themselves, both call Germany home.⁹⁾

Japan saw the introduction of the down quilt during the Meiji period but the use of it was strictly limited to the aristocracy and affluent foreigners. It was in the 1960's that such quilts became available to the public as luxury bedding. Despite the stagnation of the 1970's oil shock, down quilt has satisfied the consumer's desire for high class bedding.

The manufacturing of down quilts in Korea began in 1972, and was widely popularized around 1975. Korea was a world power concerning needlework in the 1970's, and the export of sports down wear was an important beginning step.

2. Materials and Sewing Techniques of Down Wear

1) Characteristics of Down

The foremost characteristic of down is its ability to retain warmth.¹⁰⁾ The down clusters are shaped like those of the dandelion, and the branches of the fluff do not tangle up, thus allowing for a 'swelling up' without becoming hard.

The second characteristic of down is its bulkiness,¹¹⁾ and this also helps for the containment of more air.¹²⁾ The cubic capacity of cotton is 87.8cc/g, synthetic fiber is 90.7cc, and that of wool is 82cc. Compared to these down has a superior capacity of 106.5cc, resulting in excellent bulkiness.

The third is good elasticity recovery. Compared to synthetic fiber's 100%, cotton's 75%, and wool's 99%, down has 100% elasticity recovery,¹³⁾ which means that it will respond with its own softness even against small pressure.

The fourth is hygroscopic diffusion.¹⁴⁾ down automatically opens and closes according to changes in temperature and moisture. The simultaneous absorption and

diffusion of sweat, moisture, and etcetera¹⁵⁾ can give an agreeable feeling even in the summer, when temperature and moisture levels are high.

The fifth is momentary recovery,¹⁶⁾ and this happens because down feathers repel each other, and this results in prevention of bending and changing of shape.

2) Characteristics of Manufacture

The manufacturing techniques employed in down wear must satisfy the characteristics of feather down and processing conditions. Keeping the bulkiness and distributing feather down towards the top end, elimination of stitch holes, ventilation, drape, fitness, and stability of form after laundering all are standards for judging quality.¹⁷⁾

The distinctive traits in manufacturing down wear are as follows; choice of down, base material, sewing, and the process of manufacture. The foremost priority is to choose high-quality down. From this comes the fitting effect as a dress, and it is also the most important factor in choice of locking. The base material is also important; the more ventilation the chosen textile provides, the more it gives life to the performance of the feather down. Densely woven textile given down-proof treatment is essential; if the texture is loose the feather down might come out.¹⁸⁾

The requirements for the manufacture process of down wear are as follows; first, the down bag, the right side of fabric, and the lining is cut out in the above order. Then the down bag is stuffed, then it is stitched to the right side. After stitching this to the lining, subsidiary materials and accessories are attached. The last step is to iron the product while fixing its form.

Cutting out the original fabric takes 2 more inches to the warp and 3 more inches in weft material compared to ordinary fabrics, and the material for the down bag take 5~8% more. This is because it needs 1~1.5cm more for the inseam before stitching it with the right side.

3) Sewing Techniques

When stitching down wear light material is often used for the right side to emphasize bulkiness. This is the reason a puckering effect is often seen in the stitches. It is recommended that the needle used for the sewing machine is a ball point No.9.¹⁹⁾ The thread should be durable 60/3, and close stitches or overlock should be used for the down bag. There should be no puckering effects due to the volume of the down, and there should be no pinching in the right side. In case of a

jacket, the neckline inseam should be stitched naturally while pulling.

After the aforementioned sewing processes, the reeling should be done thoroughly. When ironing, the iron should be directly applied to the inseams while finishing off the right side with steam.

Various types of stitches are used as design details in down wear. This is to give an optical illusion of slenderness as opposed to looking fat due to the volume of the down.

The most artistic style of stitches is the compound form, which can be expressed in many different ways according to the interval and shape of the stitches.

Curved lines are seldom used in down wear needlework detail, and this is probably due to the difficulties in the uniform distribution of the down. This study aims to broaden the area of needlework detail in down wear by creating and developing art wear which utilizes curved lines.

III Analysis of Trends in Down Wear

1. Analysis of Foreign Designer's Down Wear Works

The history of down wear application in fashion is short compared to that of wool due to the complications in manufacturing, thus disallowing easy access to designers.

Ever since a quilted Eskimo anorak stuffed with goose down was introduced in 1952 as a mode of everyday dress, the breaking of boundaries confining down wear to sportswear has become an ongoing process, making it a trend in everyday dress. After the 1970's appearance of a quilted down parka for snow boarding made from metallic nylon material, it has become a staple favorite of the F/W season for designers.²⁰⁾

At the 97/98 collections Moschino presented skiwear made from glossy material which utilized the quilting lines as design detail.<fig. 1>

The 98/99 F/W collections saw a trend in Haute Couture designers beginning to use down as a material in full-scale. Christian Dior used down both fully and partially, adding a voluminous and cubic feel to the works.²¹⁾ By



<fig.1> Moschino: skiwear of glossy material, 97/98

using silk jacquard material, Christian Dior successfully elevated down wear into luxury status. <fig. 2>

The down wear coat designed by Louis Vuitton had no quilting lines that were visibly exposed, thus making it look like it was padded with cotton.<fig. 3>

Gomme applied geometric patterns to show an unbalanced design that did not restrict the body. The use of down in his works was helpful to avant-garde expression, successfully conveying a new silhouette.<fig. 4>

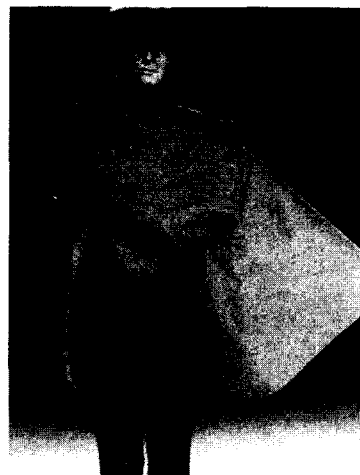
Jean Paul Gaultier partially used down in a jacket, giving it an amusingly unique image. The use of down in an elegantly designed skirt gave it a rich silhouette. These were presented in the 99/00 F/W collections.<fig. 5>



<fig.2> Christian Dior: luxury down wear, 98/99



<fig.3> Louis Vuitton: invisible quilting line



<fig.4> Avant-garde expression of down wear

Alexander McQueen succeeded in expressing a futuristic look with a pure, pale image by using shiny organdy, a transparent see-through material.

Gian Franco Ferre presented a long coat with a rich shawl collar feel, and the silhouette of this work was imitated in the 00/01 F/W lady's wear collection in Korea.<fig. 6>



<fig.5> J.P. Gaultier: elegant down skirt, 99/00 <fig.6> Ferre: long down coat with shawal collar, 00/01 <fig.7> Y. Yamamoto: garceful & dressy down jaket with full skirt <fig.8> O. The ykens: futuristic techno design of down wear

At the 00/01 F/W collection, Chanel's Karl Lagerfeld presented a charming, vivid down jacket which used rectangular quilting. A semi-shawl vest giving life to the rich feel of down, and a skirt using striped quilting were also presented.²²⁾

Yohji Yamamoto harmonized racoon fur in a rich down long skirt which had a dressy feel. A down jacket with a fitted silhouette that emphasized the body line was presented with a down long coat which boasted the most graceful lines through a geometric color scheme and freely expressed quilting lines.<fig. 7>

Olivier Theyskens, a newcomer to Paris, presented a futuristic techno type of down wear. The partial application of down in technical materials gave the works in his collection a cubic effect.<fig. 8>

Gucci utilized vertical and diagonal lines in the quilting of down in a leather coat, maximizing the effects of padding. Unbalanced belt accessories gave the finishing touch to this voluminous work.<fig. 9>

Victorio & Ruchino used curved quilting in the shape of seashells in its half down coat, bringing out the duplex feel of the material.<fig. 10>

Hiroko Koshino put down in the hemline of a silver colored skirt incised in layers, expressing it like a stairway or waves.<fig. 11>

As seen above, down can express various impressions through original dress lines. Also, designs added with sports casual, easy casual, and character casual are used

widely, in order to cater to the customer's tastes.



<Fig.9> Gucci:
vertical & diagonal
quilting on leather



<fig.10> Victorio
& Ruchiano:
seashell-shaped
down half coat



<fig.11> H. Koshino:
siver-colored layered
down skirt

By investigating the works of other major foreign designers, in addition to the examples above, the styles can be classified in to the following categories in <Table 2>.

<Table 2>

| | Styles | Designer |
|---|---------------------|--|
| 1 | Sports casual | Moschino, Nautica, Tommy Hilfigher, Marithét François Girbaud |
| 2 | Character Casual | Claude Montana, Michel Klein, Byblos, Olivier Theyskens, Martin Sitbon, Helmut Lang |
| 3 | Elegant Design | Celine, Jean Paul Gaultier, Alexander McQueen, Salvatore Ferragamo, Gianfranco Ferre, Victorio & Ruchino, Keita Maruyama |
| 4 | Feminine | Chanel, Ghost, Yoichi Nagasawa, Issey Miyake, Synthia Lauri, Carrolina Herrera, Hiroko Koshino |
| 5 | Missy Casual | Thierry Mugler, Sonia Rikyel, Gucci, Krizia |
| 6 | Contemporary | Louis Vuitton, DKNY, Gomme, Yohji Yamamoto, John Galiano |
| 7 | Artistic Futuristic | Christian Dior et al. |

2. Analysis of Trends in Domestic Lady's Down Wear

Compared to foreign brands, the down wear designs in Korea are extremely developed. Foremost among the reasons to this phenomenon is the climate. The four seasons in Korea are easily distinguished between each other, and the 3 month long winter season allows the natural development of winter sports and appropriate cold weather gear. Down wear was simply developed as sportswear at first, but nowadays it is showing original changes in various fields ranging from active everyday wear to lady's wear. The second reason is a socioeconomic one. The rise in our national income resulted in more time and money which can be invested in leisure activities.²³⁾ Because of these reasons, the functional details of sportswear were naturally incorporated into an aesthetic factor of design, thus resulting in the strengthening of the consumer's desire to purchase down wear.

More down wear designs by domestic national brands than the Haute Couture designers are popular in Korea. Hansum Co.'s System and System Jeans brand have been manufacturing down wear as its main seller since the 90's.²⁴⁾ Dai-Hyun(co)'s ZOOC, Nice Claup, and CC Club,²⁵⁾ DaeHa Co.'s ENC,²⁶⁾ Nasan Co.'s YSB,²⁷⁾ ShinWon Co.'s VIKI, SI,²⁸⁾ and Deco Co.'s XIX²⁹⁾ are all leading brand names in the F/W collection of young casual down wear.

Foreign license brands such as Guess, Synthia Lauri, Eska sports, BlueMarine, Elle, Laurel, Marella, Stefanel are also competing in the domestic markets.

ID Look Co.'s GIVY³⁰⁾ <fig. 12> has excellent ideas and individuality that are expressed through the brand's original characters, making GIVY the vanguard of creative domestic down wear. The originality of design in applying prints to down wear, and the exquisite harmony displayed in the stitching technique are notable.

While foreign designers in Haute Couture are striving to create and express down wear as a new realm in fashion design, our counterparts in Korea are not doing much.

Korea's world-class designer YoungHee Lee presented quilting dresses in a rich HALF COAT form with cotton stitched inside. <fig. 13>Artistic luxury

Hasangbaek, a new generation of domestic designer tied a symbolic scarf with down around the model's head to give a transformation effect. <fig. 14>Avant-Guarde

Kim, Dongsoon presented a casual racoon trimming HALF COAT <fig. 15> Contemporary Character, and the designer Chung, Kuho, who pursues a contemporary minimalist New York style, expressed a comfortable silhouette in his down COAT. <fig. 16>Contemporary



<fig.12> Givy: prints on
down jacket & coat



<fig.13> Young Hee,
Lee: down coat with
Korean aesthetic selection



<fig.14> Hasang
beaek: new form
of down wear



<fig.15> Dong Soo,
Kim: fur trimmed
down coat



<fig.16> Gu Ho,
Chung: contemporary
minimalistic
approach

IV. The Intentions and Methods of New Design Works

The main concern of today's world fashion market is sportswear and easy casual, and among these down wear is an important theme in the 00/01 F/W collection as a lead seller in winter fashion trends.

The problem is that except for a few creative brands, the main issue for most domestic brands is market sales, and because of this most domestic brands are declining into a state of standardized uniformity.

Concerning this matter, this study intends to develop and manufacture designs which are differentiated from established brands, pursuing aesthetic value in lady's down wear.

The methods applied in manufacturing are as follows:

First, through analysis of data concerning 00/01 F/W trends, the works are developed in a group of series according to theme in each fashion trend, giving unity to the overall composition. Fashion trend themes are based upon the analysis of lady's down wear.

Second, in addition to fashion trend themes, new designs in down wear skirts and one-pieces, previously areas unexplored by existing brand names were developed.

1. Lady's Down Wear Design

In this section, various works of lady's down wear designed and manufactured by the researcher are presented.

1) Vest

The VEST is not just a simple clothing article for keeping warm. It gives the whole dress a sense of balance, and is thus used as an important item to effectively coordinate the clothes in question.

A down wear vest can be worn in all seasons except summer, and the volume and level of warmth is adjusted through changes in the amount of down. Because of the mobility resulting from the lack of sleeves, vests are widely worn by active people. The 6 vests developed are presented in <table 3>.

<Table 3> Down wear vest designs

| Item | Style Classification | Characteristics in Design |
|--------|----------------------|---|
| Vest 1 | Elegance/Feminine | Feminine design with reverse triangle structure |
| Vest 2 | Sports Casual | Sporty design with woven hood attached to neckline |
| Vest 3 | Character Casual | Style with detachable fur hood |
| Vest 4 | Character Casual | Detachable woven hood, Vertical lines in needlework detail make wearer look slender |
| Vest 5 | Sports Casual | Fur hood trimmed with rabbit fur, Zipper used in front closure |
| Vest 6 | Contemporary | Detachable hood with Lamb Fur trimming, front closure line uses hidden dots. |

2) Jacket

down wear jackets are the best items to investigate when looking for current fashion trends. Completely different styles can be created by just changing the position and decoration of pockets.

<Table 4> Down wear jacket designs

| Item | Style Classification | Characteristics in Design |
|-----------|---|---|
| Jacket 7 | Contemporary Feminine/ Elegance | Jacket with down scarf for decoration and keeping warm |
| Jacket 8 | Character • Missy Casual Feminine | Attached woven hood, front closure with hidden dots. |
| Jacket 9 | Missy Casual/ Contemporary Elegance | Rabbit Fur used for lining of hood to keeping warm and decoration, Placket attached to front closure |
| Jacket 10 | Sports • Missy • Character Casual | Detachable hood with racoon fur trimming, closure finished with zipper |
| Jacket 11 | Missy • Character Casual | Suede jacket for expansion of materials utilized in down, lining of hood is in contrast colors to give cheerful feeling |
| Jacket 12 | Feminine/ Elegance | Maximum warmth achieved by using artificial fur for entire inner lining |
| Jacket 13 | Missy Casual | Attached woven hood, front closure. Dots hidden in the placket give a simple look |
| Jacket 14 | Character • Missy Casual | Rabbit fur used in lining of hood gives the design a high class look |
| Jacket 15 | Feminine/ Elegance | Typical down jacket with bulkiness emphasized in collar, fitted waistline |
| Jacket 16 | Missy Casual | Zipper for front closure, Small plackets add cuteness, Lamb fur hood lining |
| Jacket 17 | Contemporary/ Character • Missy Casual | Toggle buttons used for casual feeling, detachable fur collar |
| Jacket 18 | Feminine | down jacket with diamond-shaped hood line, hidden double dots closure. |
| Jacket 19 | Missy • Character Casual / Feminine | Maximum warmth achieved by using artificial fur for inner lining |
| Jacket 20 | Sports Casual | down jacket for skiwear, detachable hood with White Fox Fur is luxurious. |

* Placket: Cloth attached to the front closure of upper garments to cut off air

Also, variations in the quilting of down can express all kinds of feelings. Jackets are the most preferred style of down wear, and they make up for most of the production of lady's down. <table 4> shows 14 new jacket designs by the researcher.

3) Jumper

The typical length of down wear jumpers are usually above the waist or they lightly cover the hips, while the girth and sleeves are wide and suitable for activities. Jumpers are mainly designed in casual style where the lines of the body are hidden.

Lady's fashion parka style jumpers are sportswear for winter sports such as skiing and mountaineering, with a touch of trendiness. Jumpers have the widest range of consumers. Skiwear³¹⁾ is defined as clothing worn for skiing, and its functional requirements in being waterproof, windproof, coldproof, and elastic must be pursued along with being fashionable. The colors used are usually vivid or in a strong tone, so that the skier is easily seen on the snow white slopes. Jumpers are classified in to the sports casual group, and can be worn in Spring, Fall, and Winter seasons with vests and jackets. The researcher's designs for down jumpers are presented in <Table 5>.

<Table 5> Down wear jumper designs

| Item | Style Classification | Characteristics in Design |
|-----------|-----------------------------|--|
| Jumper 21 | Character • Sports Casual | The amount of down contained is lessened, giving a light feel. Attached woven hood |
| Jumper 22 | Sports • Character Casual | Tightening of woven hood possible with inserted string cord. zipper used for front closure, hidden dots placket. |
| Jumper 23 | Missy • Sports Casual | Leather used for right side to give luxurious feeling. String cord in hem line allows for tightening |
| Jumper 24 | Sports Casual | Rubber placed along hemline helps jacket stick to body, rich silhouette |
| Jumper 25 | Missy • Character Casual | Woven hood with White Fox Fur trimming gives luxurious feeling, elastic cord in sleeves and hemline for retention of warmth. |
| Jumper 26 | Sports Casual/ Contemporary | Elastic cord in sleeves and hemline for retention of warmth. Elastic cord in waistline gives slender appearance. White Fox Fur trimming in hood. |

4) Coat

down coats are excellent for retaining warmth and for silhouette expressions, but there are certain limitations. High prices due to high quality down, and the large volume limit the wearing of down coats to only winter. Newly developed down Coat designs

are presented in the following table.

<Table 6> Down wear coat designs

| Item | Style Classification | Characteristics in Design |
|---------|---------------------------------------|---|
| Coat 27 | Elegance/Casual | Emphasis of luxuriousness by using suede for right side, artificial fur used for lining. Hood strings give casual feeling. |
| Coat 28 | Contemporary Character • Missy Casual | Nylon spandex fabric. Artificial fur used for hood lining. Front closure of coat has unbalanced feel. Toggle buttons on dots. |
| Coat 29 | Missy • Character Casual | Long coat with detachable hood. Zipper in front closure, Hidden dots in the placket for closure. Sleeve ends trimmed with artificial fur. |
| Coat 30 | Feminine/ Character Casual | Detachable hood trimmed with lamb fur. Toggle button accessories on zippered front closure. |
| Coat 31 | Elegance/ Missy Casual | Long coat with elegant shawl collar. An unbalanced front closure is used. Point button on hidden dots. |
| Coat 32 | Contemporary Missy • Character Casual | Detachable hood trimmed with racoon fur. welted zipper closure is used. |
| Coat 33 | Contemporary Missy • Character Casual | Center front trimming with rabbit fur. Hidden dots in the placket, zipper closure |
| Coat 34 | Feminine/Elegance | Detachable hood with White Fox Fur trimming. Flower print of right side gives elegant, high-class feeling. |

5) One-piece

Although a one-piece dress made of down is not what most consumers are looking for, interest in this is increasing because of its unique atmosphere. Many brand names are participating in the development of designs.

The down original one-piece designs by researcher presented in <table 7> can be worn in the spring/fall season, excluding the hot summer.

<Table 7> Down wear one-piece designs

| Item | Style Classification | Characteristics in Design |
|--------------|---------------------------------------|--|
| One-Piece 35 | Character Casual | down stuffed inside thinly to give a light, slender look. Cheerful hood. |
| One-Piece 36 | Contemporary/ Elegance/ Feminine | Minimized use of down makes the one-piece looked single- layered. |
| One-Piece 37 | Contemporary Missy • Character Casual | Volume of down gives retention of warmth, but has shortcoming in making the silhouette look swollen compared to actual bodyline. |

6) Skirt

The development of design in down wear skirts is very complicated and difficult, because any miscalculations in the amount of down applied can make the garment and its wearer look swollen. Attempts to develop design in this area are being started. The down skirt designs presented in <table 8> are the results of research in the preferences of Korean national brands.

<Table 8> Down wear skirt designs

| Item | Style Classification | Characteristics in Design |
|----------|--|--|
| Skirt 38 | Contemporary/Sports • Character Casual | Decorative zippers attached to the pockets. Rear train of skirt is wide, in avant-garde style. |
| Skirt 39 | Feminine/ Missy Casual | York in the waistline. Decoratively stitched pocketlines and belt loops give a lively feeling. |
| Skirt 40 | Missy Casual/ Contemporary/Elegance | Knee length skirt with dart put in without any incisions in waistline |
| Skirt 41 | Feminine/ Contemporary/Elegance | Color code match through incised waistline. Square double stitch used for overall details. |

2. Artistic Down Wear Design

down wear with added artistic taste can be linked to futurism. The grafting of modern technology sense with traditional classic mode leads to new lines in feminine expression.³²⁾

The harmony shown in modern geometric structure emphasizes the volume and bulkiness that down wear already has. The aim of this section it is to give sensibly analyzed added value while presenting new details in design.

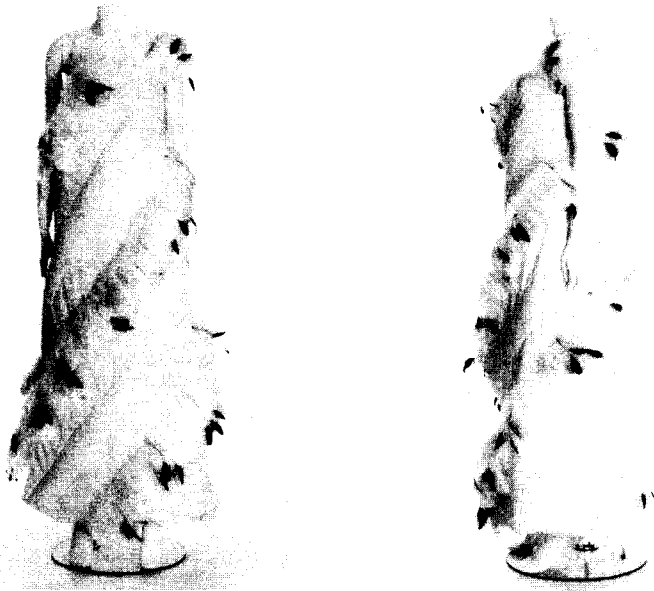
It is quite impossible to find ART wear which utilizes down in Korea, and this is the reason the researcher aims to present new forms in this study by developing manufacturing artistic works according to theme.

1) Art Wear Theme 1 - Luxury

Under this theme, the rich, brilliant dress style which was fashionable in 18th century European court³³⁾ is emulated in Haute Couture down wear design. By using high quality materials such as silk and wool, and all natural fur,³⁴⁾ an aristocratic, affluent look was pursued.

Work I

- (1) Item : One-piece Dress
- (2) Style : Feminine, Elegance
- (3) Colors : Pure White
- (4) Details : Ostrich feathers, curved stitches.
- (5) Description : This work is a down dress which cubically visualizes the forms of seashells. Graceful expression of beauty is presented by utilizing curved stitch details, which are rarely used in down wear. The curved stitch lines are used both on the front and back sides, but by uneven application of down to only one line, the volume is greatly emphasized. The line with no down is decorated with black ostrich feathers on white ones, giving a point effect. The overall silhouette of this cocktail dress is fit & H-line, by which the subtle curves of the body appear to be slender.<fig. 17>

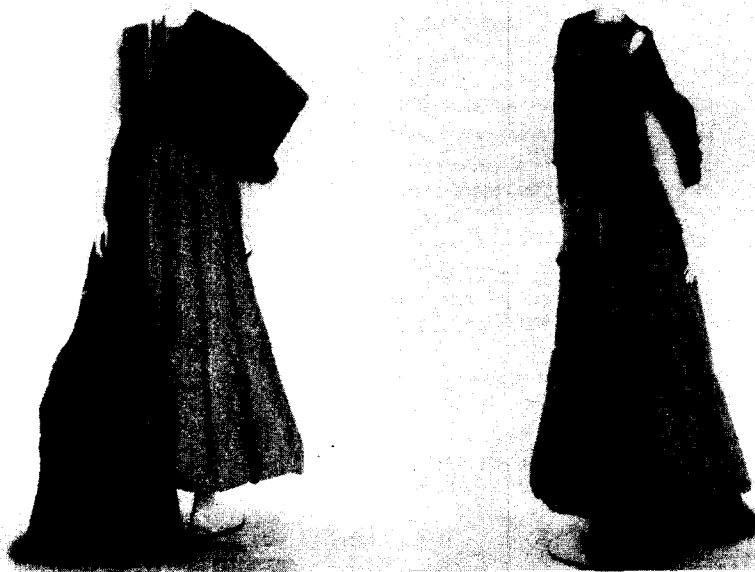


<fig.17> Work I

Work II

- (1) Item : One-piece Dress
- (2) Style : Feminine, Elegance
- (3) Colors : Two-tone Gold
- (4) Details : Raccoon Fur

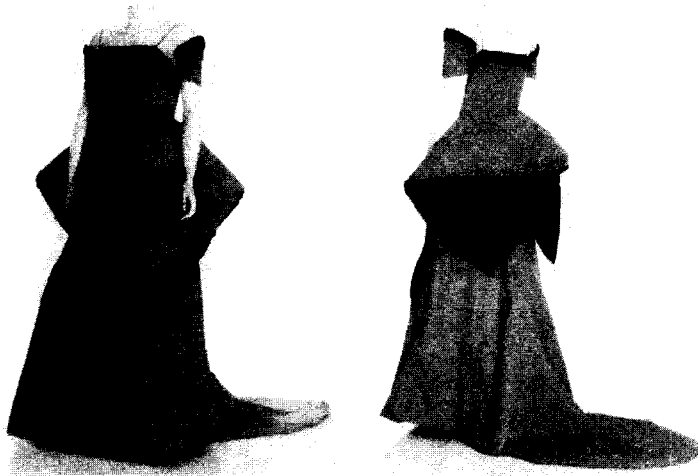
- (5) Description : This work expresses a feminine silhouette by using straightly incised patterns which maximize volume. The down cape which covers the shoulders trimmed with Raccoon Fur exude an air of luxuriousness. The absence of sleeves give a feeling of graceful lightness, and the vertical incisions in the shoulders and dress skirt make the body look longer than it really is. The overall silhouette is a fit & A-line, and the down is distributed as much as possible to create a gorgeous party dress.<fig. 18>



<fig.18> Work II

Work III

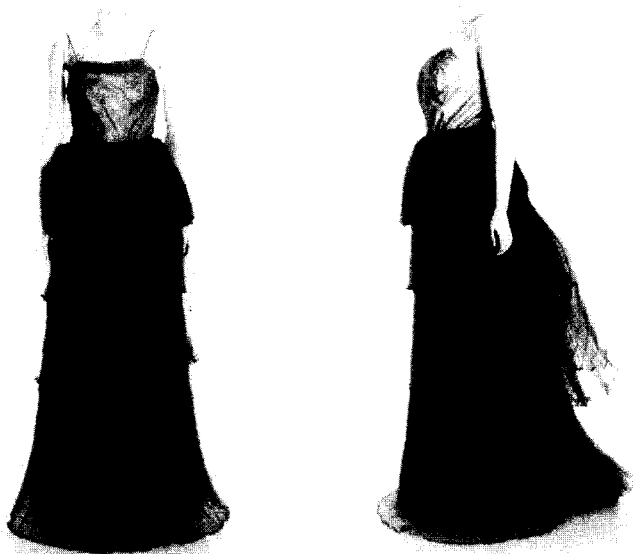
- (1) Item : One-piece Dress
(2) Style : Contemporary, Avant- Garde
(3) Colors : Yellow, Black
(4) Details: down Cape.
(5) Description : The design of this work emphasizes the herring bone stitch detail by using a complementary color match. The down Cape covering the hips from the waistline expresses an exaggerated silhouette, while 18th century palace dress style is emulated in the skirt train. Modern geometric structure is expressed through partial application of down. Concealed zipper on the center back seam fastens the garment, and the overall silhouette is a fit & H-line which shows off the body line in a sharp form.<fig 19.>



<fig.19> Work III

Work IV

- (1) Item : One-piece Dress
- (2) Style : Feminine, Avant- Garde
- (3) Colors : Light Gray, Red, Pink, Brown, Blue, Silver Gray, Black.
- (4) Details : Machine wrinkles, Chiffon organdy double skirt
- (5) Description : This work is a rectangular stitch detail down skirt utilizing a



<fig.20> Work IV

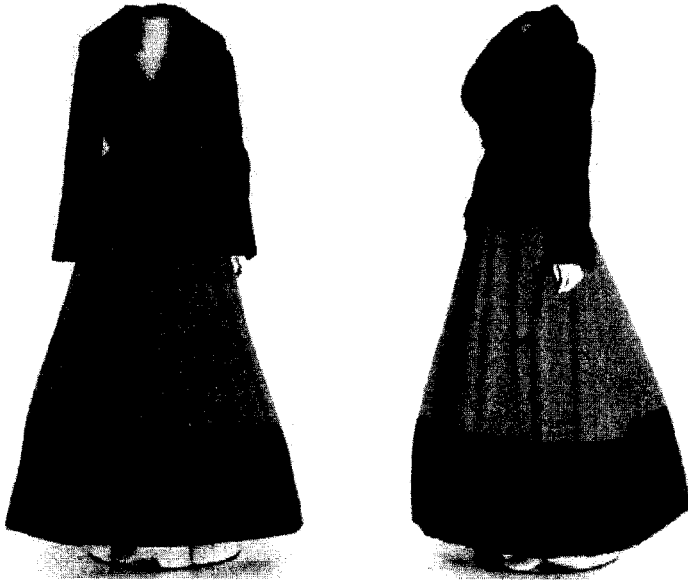
color match scheme. Chiffon organdy is attached to the base skirt for a fantastic expression, and the silver top made from PU coating material successfully matches the skirt as its urban counterpart. A modern sensation is created by the top made from PU coating material incised in a bias pattern, and the OWN skirt's color pattern in surface shapes emanates a cubical graphic effect. In order to present the skirt's extreme color contrast in a soft, elegant manner, a light gray chiffon organdy skirt overlapping the upper garment is used.<fig. 20>

2) Art Wear Theme 2 - Harmony of Nature and Science

The grafting of technical materials which do not restrict the mobility of the human body to needlework technique³⁵⁾ gave birth to a new wave of sporty down wear designs. The garments naturally blend with the human body and express the desire to be comfortably free, thus proving new technologies.³⁶⁾ This trend is pursued by putting emphasis on the unique feel and flexibility of down wear.³⁷⁾ <fig. 21>

Work V

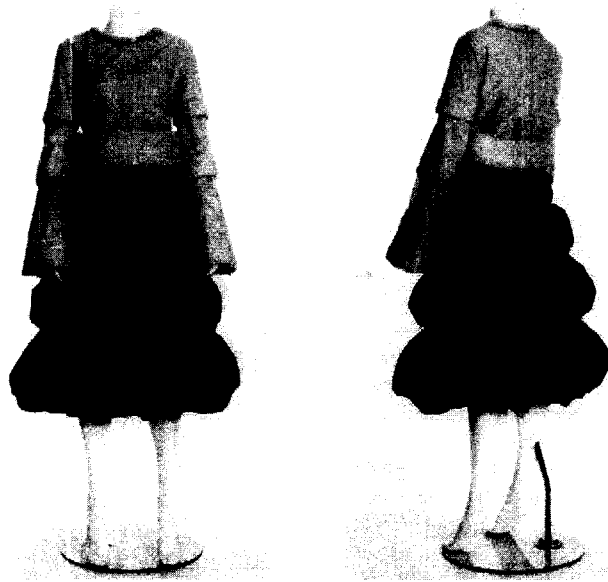
- (1) Item : Jacket, Skirt
- (2) Style : Elegance, Sporty
- (3) Colors : Deep Brown, Orange, Light Olive Green
- (4) Details : Breast-tie, Reinforcing Cloth Strip
- (5) Description : The design of this work uses a typical Korean color match and its hidden sewing detail. By distributing down only to the Cape collar a cubic effect is expressed. Orange colored reinforcing cloth strips are attached to the sleeves up to the elbow, and besides functioning as zippers, the color match gives a lively feeling. An orange breast-tie is attached to the closure of the jacket to complementarily contrast with the brown color, thus emphasizing a sporty feel. By emulating Christian Dior's New Look silhouette, the jacket fits the body quite closely. The distribution of down to the skirt's hemline gives a light, technical feel, and the image of a Korean hanbok skirt is harmonized by closure of orange coat strings to the waistline. The overall silhouette is a Fit & A-line which helps the body look slimmer, and by use of stretch material a comfortable sensation is given.<fig. 21>



<fig.21> Work V

Work VI

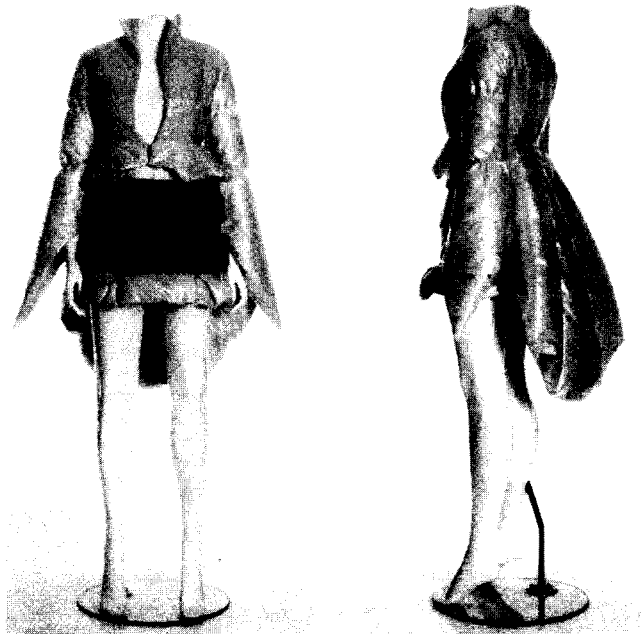
- (1) Item : T-shirt, Skirt
- (2) Style : Avant-Guarde
- (3) Colors : Yellow Green, Red
- (4) Details : shirring, Volume Effect
- (5) Description : This work consists of a T-shirt and a skirt. bias cut details are attached to the round neck and hemline of the T-shirt, and this is where down is applied to give a feminine sense. The sleeves are endowed with down-filled bias cut details also, and these give a gradation rhythm effect which expresses feminine elegance. The 100% poly tiered skirt is given a sand-wash effect to fully show the feel of the textiles, and by increasing the amounts of down put into each tier going down, a new technology is actively expressed. The overall silhouette is a Fit & A-line which unites modern simplicity.<fig. 22>



<fig.22> Work VI

Work VII

- (1) Item : Jacket, Skirt
- (2) Style : Futuristic
- (3) Colors : Pink, Yellow, Ivory
- (4) Details : Swallowtail, Hanging Sleeves
- (5) Description : This work was manufactured by placing cotton wool in pink and yellow, with transparent threads stitched in vertical lines. The jacket and skirt are composed of nylon given a see-through coating treatment. The jacket is a deeply cut V neck with a zipper for the front closure, and a modified standing collar was used. The stitch lines in the miniskirt are stitched with transparent thread. The sleeve details are designed to express the natural bulkiness of down by emphasizing gradation rhythm, and the hemlines are hanging sleeves which show a modern graphic effect. The back side of the jacket is cut along the princess line, and it emphasizes the tail part which has down distributed within by means of men's dress-coat details. The jacket is manufactured by stuffing yellow-colored cotton wool into see-through fabric. The skirt is made in the exact same way, but the pink-colored cotton wool of the skirt is a vivid color match with the yellow of the jacket. The glittering particular to see-through fabric shows a high-class futuristic feel.<fig. 23>



V. Conclusion

As we enter the 21st century, people's needs for various consumer goods concerning the desire for a comfortably higher quality of life has increased. The spending patterns have shifted from quantity-based patterns to quality-based ones. Consumers of lady's wear have come to prefer clothes that are compatible to their needs, clothes that are light and easy to store, and clothes that do not restrict the wearer's movements.

down wear, which uses relatively new material to express various silhouettes, is no longer just sportswear or winter gear, but now is an important group of fashion goods in that down wear can emphasize character in lady's wear, while expressing trends in various ways. This assertion is supported by the fact that the design area of down wear has grown at an alarming rate in the lady's wear market.

As a popular item in the F/W season, down wear generates large sales profits, and this is the main reason many lady's wear brands are competing to gain a vantage point in the market by systemizing planning, design, and manufacture. The researcher aims to expand the range of materials used in the fashion market, by presenting several ways to satisfy the needs concerning the systemization of planning, design, and manufacture.

There are many limits in choosing the materials and needlework technique to be

used in the manufacture of down wear. Because of these limits, choosing the appropriate methods is very important.

First of all, foreign designers works were analyzed along with domestic lady's wear brands to investigate the current market status of down wear. While foreign designers expressed down wear as creative works, domestic brands are taking a more pragmatic stance, since down wear is the leader of sales in the winter season of Korea. Among a total of 48 works, 41 of them were designs based upon trend conditions in the domestic down wear market. The remaining 7 works were artistic creations of high-tech images with formative traits and materials.

Sewing technique has long been established as the most important factor in merchandising down wear, and many designers all over the world have been using it to manufacture winter gear. But the results of their attempts to elevate the status of down wear to high class luxury fashion through artistic creativity are quite mediocre at best. Therefore, the purpose of this study is to present artistic down wear by utilizing curved stitches, a needlework technique never used before by foreign designers or Korean lady's wear brands. The true significance of this study is that it presents a new planning process, while assisting in the continuous development of sewing techniques.

Also, the various methods used to express down material are important factors in the manufacture of both lady's wear and artistic fashion creations. It is proposed that future research be conducted in this area in order to expand the range of materials used in down wear through continuous development.

References

- 1) Peclers, *00/01 F/W trend book*.
- 2) *00/01 F/W collections*, pp. 46~190.
- 3) Shinwon Fashion Information Department, *00/01 F/W Trend Book*.
- 4) Joodong Yang et al. (1986). *Gook-eo daesajon*, Samsung MoonHwa Sa, Seoul, p. 1234.
- 5) Go · Woon tradings(Co) (2000). *Choose the new down*. Company PR Magazine, p. 6.
- 6) *ibid.*, p. 4.
- 7) Hansoo Kim. *The world of down*, Kyomoonsa, Seoul, pp. 9~10.
- 8) Hansoo Kim. *ibid.*, p. 11
- 9) Hansoo Kim. *ibid.*, p. 9, p. 13.
- 10) Sungryun Kim (2001). *Materials for clothes*, Kyomoonsa, Seoul, p. 36.
- 11) Youngbin Min (1995). *Shisa elite concise english-Korean dictionary*, Shisa Youngeosa, Seoul, p. 287.
- 12) Kyunghwan Kim (1985). *Methods of textile testing*, Hyungsul Publishing Co, Seoul, p. 59.

- 13) Sungryun Kim. *op. cit.*, pp. 30~31
- 14) Sungryun Kim. *ibid.*, p. 43. the nature of a material absorbing/diffusing moisture in the air.
- 15) Sungun Kim (1984). *Clothing management*, Kyomoonsa, Seoul, p. 124.
- 16) Judong Yang. *op. cit.*, p. 1852.
- 17) *ibid.*, p. 141
- 18) Youngsoo Yook (1986). *Gicho jikmool gujohak*, Dongmyungsa, Seoul.
- 19) Youngsoo Yook. *ibid.*, p. 246.
- 20) Sunae Yoo (2001). *A study on the sports look design*. Master's Thesis, Ewha Women's Univ., p. 15.
- 21) 98/99 F/W Collections
- 22) 00/01 F/W Collections
- 23) Kwangho Ahn. *op. cit.*, p. 11.
- 24) www.system.co.kr
- 25) www.daehyun.co.kr
- 26) www.enc.co.kr
- 27) www.ysb.co.kr
- 28) shinwon.sw.co.kr
- 29) www.deco.co.kr
- 30) www.givy.co.kr
- 31) Changjun Kim (1991). *Fashion dictionary*, Seoul, Rasara, p. 217.
- 32) *Samsung Fashion Trends 00/01 F/W Trend Book* (www.sfi.co.kr)
- 33) *Inter-Fashion Planning 00/01 F/W Trend* (www.ifp.co.kr)
- 34) Peclers. *ibid.*
- 35) Samsung Fashion Trends. *op. cit.*
- 36) Peclers. *op. cit.*
- 37) *00/01 F/W Trends* (www.promostyl.com)