

## A Study of Fashion Design using Mondrian's Neo-Plasticism - Using Textile CAD System -

Young Row\* and Youn-Hee Lee<sup>†</sup>

Dept. of Clothing & Textiles, Hanyang University

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### Abstract

*By introducing Mondrian's creative world into the field of fashion design, I examined how its application can satisfy not only visual expressions but also the desire of fashion design for its simplicity, individuality, and sensitivity. As a program developing designs and guiding how to produce, the textile CAD system helps to develop a variety of textile systems. In case of dyeing or textile printing, a variety of free expressions of print patterns and functional color simulations are possible by the configuration of colors or enlargement of design. It can also confirm the flexible simulation with a variety of color changes through the monitor by treating the knit design with dots. Especially in case of consulting for the design with ordering customers, the system is very speedy and effective, because it is possible to correct on the spot those complicated elements of designs and color sensation and see the prints in the light of marketing, processing and artistic value. Mondrian's Art, beauty of balance and proportion in the Mondrian's plastic forms, the changes of coloring and texture were added into vertical and horizontal lines and the divisions of faces for the dressmaking. Whether they were the reciprocal action of human body, texture and color or the reciprocal action of human body and colors, these changes will be interpreted differently, depending on the individuals' experiences and psychological moods of situations. The emphases of the sense are also different, depending on the activity and functionality.*

*Key words : geometric design, Mondrian's Art, Neo-Plasticism, textile CAD system.*

## I. Introduction

### 1. Research Purpose and Background

Modern Neo-Plasticism can be represented as a new and pure visual art of Op-Art style or as the abstract artwork of contemporary people in the industrial society. There is the tendency for these isolated people to try to be freer and completely independent from the logical and philosophical way of the pre-twentieth century.

Based on this tendency, many artists led Neo-Plasticism up to the point of realizing the harmony between material and spirit.<sup>1)</sup>

Influenced by the Neo-Plasticism, the field of fashion design moved its focus from its practical and functional goal to the communication between people and environments. By introducing modern paintings into the world of fashion design, not only new sense and sensibility were added, but also fresh ideas were created in the rapidly expanding fashion world. In particular,

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E-mail : yiyhee@hanyang.ac.kr

<sup>1</sup> Leonard, "Painting & Painters 25", edited by Bong Jin Go, (A Hankook Publishing, 1978), 101.

Piet Mondrian as a pioneer of abstract artwork created his unique world of painting by expressing his ideas with flat primary colors of red, yellow, and blue and with colorless colors of white, black, and gray. He basically refused all curved lines in favor of straight horizontal and vertical lines and right angles.

The purpose of this study, by introducing Mondrian's creative world into the field of fashion design, I am going to examine how its application can satisfy not only visual expressions but also the desire of fashion design for its simplicity, individuality, and sensitivity. We can see how effective it would be in the case of commercialization by using the textile CAD.

As a matter of course, the due process will guarantee the possibility of high values by producing a right amount of products with a variety of different kinds. It means the proper adjustment of the textile industry in the middle of a changing international economy.

## 2. The Content of Research and Its Method

This study will provide first the theoretical background with the research of relevant literatures, and then survey the specific designs in which Mondrian's products were applied. Finally, the textile design in the family wear, by using computer programming, will be reviewed and placed in the context.

As for the theoretical background, Mondrian's world of art and its abstract concept would be analyzed and then the design products applied by his paintings would be researched. Based on the background, the textile design will be reviewed as follows.

Review 1 : Textile design will be reviewed as one of various fabrics expressions in the light of the orderly sense of uniformity derived from the division of faces by crossing of straight lines.

Review 2 : By applying the beauty of uni-

form proportion derived from mutual parity of plastic objects, a variety of representations by the combination of contemporary straight lines and primary colors will be reviewed.

Review 3 : Mondrian's straight lines and faces will be reviewed in the light of composition lines of various clothing.

Once again, by using computer programming for Prima vision(Textile CAD), Adobe Illustrator 10 and Photoshop 7.0. I am going to review the family wear design, the concept of which is to pursue Non Generation Unisex Easy Casual family wear with simple, comfortable, and rational polysensuality.

## II. Mondrian's Art

### 1. Mondrian's Pure Plasticism (1872-1944)

The vertical and horizontal lines in Mondrian work of art means "the universal plastic elements existing in everywhere of the nature".<sup>2)</sup> When we analyze his paintings from the early stage of naturalism until the complete geometrical abstraction later from the perspective of plasticism, we can see that those are the plastic elements by continuously simplifying and reducing natural forms.

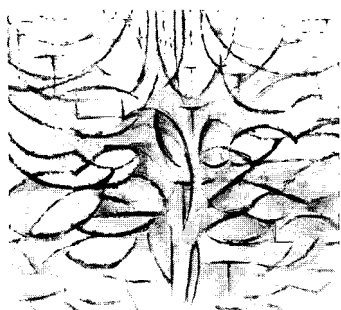
In other words, his early works show the substance of materials by means of the simplification of those materials rather than the cubism pursuing the reality as it is.<sup>3)</sup> They expressed style and simplification in the shape and color and also showed the form with the constructional value out of realistic nature. In his work with the subject of tree, curve gradually disappeared and the rhythm with vertical accent and structural order was taken out of the materials. In his work with the subject of building, there is a tendency to prefer the horizontal order as an oval structure(Fig. 1).<sup>4)</sup>

### 1) Mondrian's Paris (1912-1938)

<sup>2</sup> Boung-Gwan Jeong et. al, *Trends of Modern Art*, (Mi Jin Co.), 162.

<sup>3</sup> Young-Bang Lim, *Understanding of Modern Art*, (Seoul University Publishing), 135.

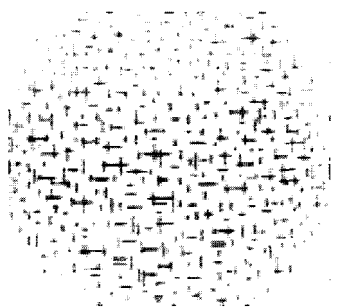
<sup>4</sup> <http://www.100empas.com/pentry.html?i=1343840&v=42>



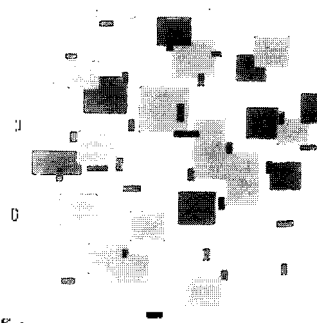
〈Fig. 1〉 Flowreing Apple Tree (Mondrian, 1912).

From 1914 to 1917 as a + and - period,<sup>5)</sup> the subjects of building and tree were selected for expressing masculine and vertical ones. On the other hand, the subject of ocean was picked up for expressing the feminine of safety and horizontal ones. He did let them cross and meet each other by using + or - forms and short vertical or horizontal units(Fig. 2).<sup>6)</sup>

From 1917 to 1919 as a colored square period, he expressed a circular structure that is a unified and basically contrasting form of vertical and horizontal lines on a plane without paying attention on a specific subject too much. Square gave some feeling of expansion that they look like continuously expanding over canvas and



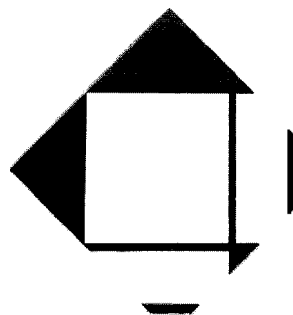
〈Fig. 2〉 Composition by Line (Mondrian, 1917).



〈Fig. 3〉 Composition by Color (Mondrian, 1918).

made as if it has a new space(Fig. 3).<sup>7)</sup>

From around in 1920, his works found the balanced harmony between vertical lines and three primary colors on the one hand and the horizontal lines and three colorless colors on the other as a basic painting element. Each coordinate element forms a universal harmony by maintaining the relationship with a basic balance.<sup>8)</sup> This means that the harmony is a balance of oppositions,<sup>9)</sup> a basic rule of the new plastic theory(Fig. 4).<sup>10)</sup>



〈Fig. 4〉 Lozengc Composition with Red, Black, Blue, and Yellow (Mondrian, 1925).

<sup>5</sup> Hyea-Sook Joen, A Study of the vertical and horizontal lines in Mondrian Paintings, The Graduate School of Ewha Womans University, 57.

<sup>6</sup> <http://www.mondrian.co.kr/mondrian/gallery/gallery.php>

<sup>7</sup> [http://arthistory.pc.kr/20\\_content03.html](http://arthistory.pc.kr/20_content03.html)

<sup>8</sup> Luc Daval Jean, *History of Abstract Art*, edited by Hong Seung Hyea, (Mi Jin Sa), 62.

<sup>9</sup> Hyea-Sook Joen, *Op. cit.*, 70.

<sup>10</sup> <http://imagesearch.yahoo.co.kr/isurl/59/73/13376/13389/16364/0000283005.html>

For Mondrian, because most of basic oppositions are in the direct angle, the continuous balance will be expressed by various direct angles each other. Those lines form shapes on the surface by making the system of squares, and those squares are filled with colors. The range of colors is narrowed down to two basic groups, and they are three primary colors of red, yellow, and blue and three achromatic colors. The basic and universal harmony is expressed through the relationship of this kind of shapes and colors. The place of vertical and horizontal lines and the size of square were decided based on the principle of this non-symmetry and the rule of this relationship(Fig. 5).<sup>11)</sup>

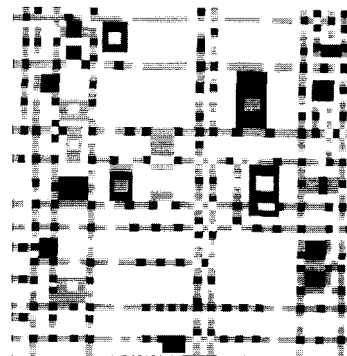
## 2) Mondrian's New York (1940-1944)

In 1938, Mondrian moved to New York. His experiences there were very exciting. Straight lines of orderly streets, repeated forms of right angles from the vertical skyscraper's long straight lines, and various races and languages together with jazz, those were simply thought and art themselves. His paintings around this time try to draw the contemporary or even future cities after getting out of the pure abstraction. His canvas was covered with simple emotional feelings and joy of life away from the strict and heavy structure and control. Robert Motherwell described this change as follows: Mondrian came to this world from the Paradise.<sup>12)</sup> Also, another critical viewer defined his master work, Broadway Boogie-Woogie, as the recreation of the image of New York(Fig. 6).<sup>13)</sup>

The basic and universal harmony is expressed through the relationship of this kind of shapes and colors. Therefore, the place of vertical and horizontal lines and the size of square were decided based on the balancing principle of this non-symmetry and the rule of this relationship.



〈Fig. 5〉 Composition with Red, Yellow and Blue (Mondrian, 1930).



〈Fig. 6〉 Broadway Boogie-Woogie (Mondrian, 1942~43).

## 2. The Plastic Character of Mondrian's Paintings

### 1) Mondrian's Plastic Art and Theosophy<sup>14)</sup>

Theosophy is the thought from which Mondrian has been most influenced during the process. As the Greek combination of 'theo' and 'sophid' suggests, Theosophy is the outlook on the world which was amalgamated by religion and philosophy, but nevertheless a rather unique, esoteric thought different from theology or religious philosophy. Under its influence, one tries to depend upon God's wisdom in having a

<sup>11</sup> <http://www.mondrian.co.kr/mondrian/gallery/gallery.php>

<sup>12</sup> Oh Gwanag Soo, *Understanding of Abstract Art*, (Il Jee Sa), 41.

<sup>13</sup> Norbeert Lynton. *The Story of Modern Art*, edited by Nan Ji Yun, (Ye Koung Publishing Sa), 234.

<sup>14</sup> Theosophy-Religious philosophy or speculation about the nature of the soul based on mystical insight into the nature of God.

feel on the mystery and secrets of everything in the universe and in solving its riddle. What is important in doing so is not to depend upon intellectual observation or analysis but to face God through the Revelation carried out by intuition.<sup>15)</sup> The mysterious unity with God would be possible only by people who completely believed in God's wisdom.

Deeply influenced from the Theosophy, Mondrian refused capricious phenomena of the nature and created his style of abstract paintings with universality and balance. In his sketch book from 1912 to 1914, he shows the characteristics of mystery and duality in connection with Theosophy. Dualism can be said not only as the universal symbol in this world, but also as the balanced tension found from coordinate objects. He is letting vertical and horizontal lines stand face to face as a dual element of male and female.<sup>16)</sup>

## 2) Vertical and Horizontal Lines As Pure Plastic Elements

To Mondrian, the vertical line means vitality and the horizontal line is tranquility. Mondrian thought that if these two lines cross each other with the right angle, they can reach to the dimension of the so-called vital tranquility. In his drawings of rectangles, he shows the stoical style by making rectangles only with the black lines. He uses only the flat primary colors of red, blue, and yellow and the colorless color of white, black, and gray. By making delicate configurations of these elements, he sought the coordination of the rhythm, which tries to reach at unequal balance and yet tranquil symmetry. Even though his latticed drawings look similar each other, each of them is completely different and well arranged with calculation.<sup>17)</sup>

The vertical and horizontal lines in Mondri-

an's painting are the means of intuition in order to express fundamentals in the order of nature. Balanced evenness between the nature and mind, between individuality and generality and between male and female is the plastic principle of Mondrian. This principle is reflected not just in the plastic art but also in the whole society. This society is maintained by balanced harmony between material and spirit.

## 3) The Plastic Principle of Mondrian's Paintings

In 1926, Mondrian briefly explained the general principles of Neo-Plasticism in a magazine of Paris. First, planes or prism with three primary colors and three colorless colors should be the plastic means. In construction, colorless colors indicate empty spaces and colors mean subject matters. Second, all the plastic means are considered as equivalence. In other words, regardless of sizes and colors, they are treated as having the same values. Third, the dual coordination in composition is as important as the one in the plastic means. Fourth, the constant balance will be obtained through coordinate relations and be represented with squares, the extreme plastic means formed with the basic coordination of straight lines. Fifth, it is because of the proportional relationship that coordinate plastic means could be accommodated and neutrally balanced. This proportional relationship creates lively rhythms. Sixth, all kinds of symmetry should be excluded and the clear duality would be held.<sup>18)</sup>

In the plastic means, if one side is expressed with primary colors, the other will be presented with planes of orderly rectangles. In positioning, if you can find vertical lines in this side, you will see horizontal lines in that side. If the duality is located too far away each other, it is very difficult to maintain the balance.

<sup>15</sup> *Abstraction - Constructivism* (Sin Do Publishing Sa), 13.

<sup>16</sup> Hyea-Sook Joen, *Trends of Modern Art* (Mi Jin Sa), 162.

<sup>17</sup> Carol Strickland Click, *History of Art*, edited by Kim Ho Koung (Yekyong Publishing, Co.), 260.

<sup>18</sup> *History of Fine Art*, (Dept. of Fiber Arts The Graduate School of Ewha Womans University Publishing), 6.

### III. Mondrian's Paintings in the Contemporary Design

#### 1. Mondrian's Painting Applied in The Field of Modern Fashion

Fashion designers, in many ways, tried to make connections between the fields of art and fashion. One of the basic ways is to apply the products of artists as prints or patterns. Mondrian's paintings are actually quite popular in the world of fashion design. The first dress applying Mondrian was introduced in the Paris collection of 1965. Yves st. Laurent geometrically designed a sleeveless one-piece with a round neckline, which became so fashionable that it earned its name as 'Mondrian Look'(Fig. 7).

In some cases, Mondrian's paintings were moved into clothes just as they were as if clothes were canvases. In other cases, you can still notice a variety of applications. The structure of straight lines and faces was used as composition lines or bias. Tapes used to be attached or prints were copied on the surface of the textile. Mondrian's paintings also have been reflected in the simple and straight silhouette jacket or on the top of one-piece. In order to recreate the same feeling as people could get out of his paintings, straight lines and color senses of primary colors have been expressed. Even now, Mondrian's geometrical and simple composition is still introduced often in the fashion world.

#### 2. Mondrian's Painting Applied in The Life in General

Starting from Naturalism and seeking the plastic idea all along, Mondrian tried to create his art not as changes but as a series of evolutions. His life also showed his intention of going beyond the canvas and reflected his expectation that his art would move into the middle of environments and ascertain its true existence within

the society.<sup>19)</sup> His relentless will to try new stuffs is identical with his lifetime goal of 'Always Further'. In connection with stoical Calvinism as showed in his daily life, his plastic idea has achieved geometrical and compositional abstract. It represented the common sense of the time. When its artistic image was combined with machines as an idealistic vision in the utopian society, the aesthetics of compositional clarity and mechanical discipline reached to a climax.

Mondrian's art, by stimulating the environment of the times, internally and externally brought about a true innovation for every aspect of the modern times. His plastic idea, by trying to combine the art and the real life in the society, was to predict a harmonious future of human beings. As a result, his theory and products formed a significant current in the field of the abstract art. De Stijl movement he led had a true influence on architecture, interior design, and furniture design as well as the contemporary paintings in that it was not just one for the plastic movement of paintings or sculpture but also one for other fields in the daily life in general. Many artists in the different fields made the presentations of their designs Mondrian's paintings were applied. Starting from 'Chair of Red and Blue' by G. Littenbelt, newly created manufactures based on the aesthetics of Neo-Plasticism were coming out<sup>20)</sup>(Fig. 8).

The wrapping design of 'Studio Line' for the use of hair from the company 'L'OREAL' was also decorated with Mondrian's abstract minimal art. What it try to do with customers is to present the new and contemporary 'Stage of Youth' without boundary and based on the general symbol system of Mondrian. It also tries to share fundamental elements, inevitable especially to young customers, such as music, freedom, pleasure, exercise and change<sup>21)</sup>(Fig. 9).

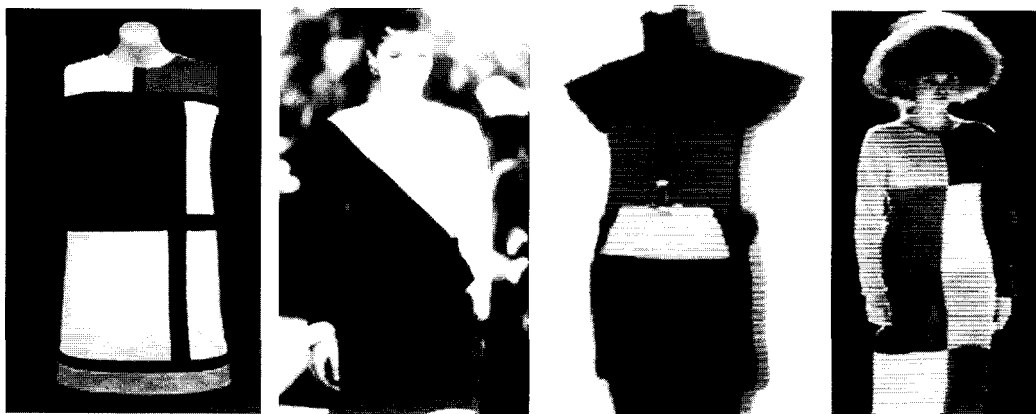
<sup>19</sup> Stewart Duetner, *American Art Theory 1945-1970* (UMI Research Press), 43.

<sup>20</sup> <http://www.kimk2s.net.mh152.html>

<sup>21</sup> <http://www.kimk2s.net.mh152.html>



[www.samsungdesign.net](http://www.samsungdesign.net)



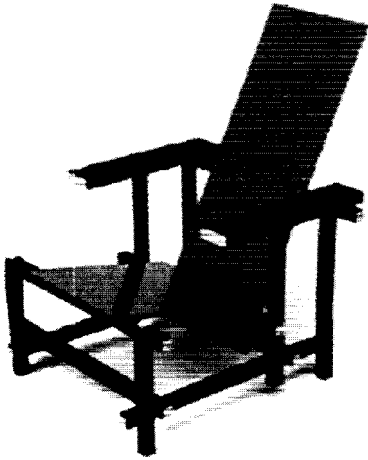
Yves st. Laurent, 1965

Donna Karan, 1991

Gcoffrey Beenc, 1996

Comme des Garsons,  
1996

<Fig. 7> Mondrian Look.



〈Fig. 8〉 Chair of Red and Blue (G. Littbelt, 1924).

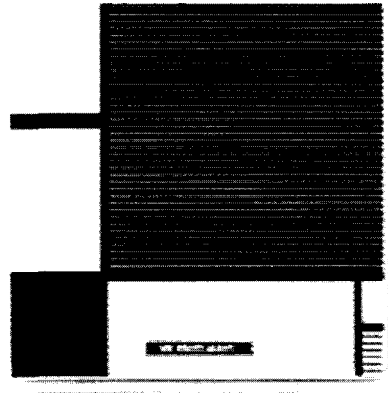


〈Fig. 9〉 Studio Line (L'OREAL).

LS-CO61FA, the air conditioner of LG electronic, which is for hanging on the wall, is a first commercial product identical with the artistic product. Customers feel that Mondrian's image always goes ahead of the time. The reason is that the concepts like the sense of rhythm, free-

dom, pleasure and exercise appears in the Mondrian's minimal abstract and that young customers with creative senses love these concepts<sup>22)</sup> (Fig. 10).

Korean-American Bank also used the image mark with Mondrian image. By providing both of customers and employees with images of colorfulness, high quality, youth and neatness, it could differentiate itself from other banks<sup>23)</sup> (Fig. 11). Sam Sung 'Hauzen', the interior home appliances of high quality and sensibility, was advertised with the use of Mondrian's image like composition, lines and moderate beauty<sup>24)</sup> (Fig. 12).



〈Fig. 10〉 Hanging on the wall the air conditioner LG electronic.



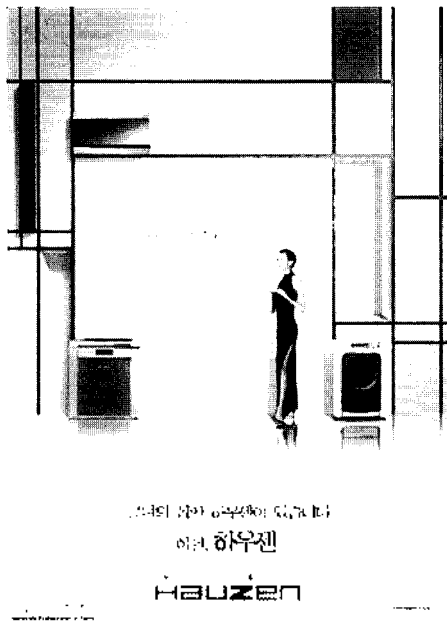
〈Fig. 11〉 Good Bank.

<sup>22</sup> <http://www.zeo.buyking.com/magazin/200306/article200306191029196>

<sup>23</sup> <http://www.goodbank.com>

<sup>24</sup> <http://www.hauzen.com/intro/tintro.asp>





〈Fig. 12〉 SamSung Hauzen.

#### IV. The Family Wear Design using Textile CAD System

##### 1. Textile Computer Aided Design System

As a program developing designs and guiding how to produce, the textile CAD system helps to develop a variety of textile systems like plain fabrics, twilled fabrics, satin weave and special fabrics. In case of dyeing or textile printing, a variety of free expressions of print patterns and functional color simulations are possible by the configuration of colors or enlargement of design. It can also confirm the flexible simulation with a variety of color changes through the monitor by treating the knit design with dots. Especially in case of consulting for the design with ordering customers, the system is very speedy and effective, because it is possible to correct on the spot those complicated elements of designs and color sensation and see the prints in the light of marketing, processing and artistic value.

The characteristics of the system will be specifically reviewed. First, as a composite function extracting the part of the stored patterns in order to make a certain composition of design, it is possible to make up to 640 patterns in each case.<sup>25</sup> Second, it is still possible to recompose after dividing them. In other word, in the case that the pattern is too big to do scanning in one time, it is possible to take parts and do scanning first and then to recompose the compartmentalized patterns. Third, it is the function of automatic repetition. It is the function of making the finished pattern by continuously making the connections and configurations out of one motif. It shows on the screen so that the samples on the monitor can be corrected in size or measured. In addition, after the measurement of the distance between motifs, it can be placed in desirable distances. When the pattern having input through scanner gets a shadow in the texture or there is an issue because of the quality differences of surfaces, it is possible to supplement and fix it. It is even possible to control the size of texture making because of the speedy power of generating films and dividing colors.

##### 1) Weave CAD

To work out a textile, first choose from the program the kind of texture such as plain fabrics, twilled fabrics or satin weave, second decide the kind of thread and colors and the numbers of warp and woof, and then do the yarn setting. Even from the finished textile, you can try a variety of simulations with colors and the kinds of texture and threads. If you choose the best out of the designs and print, you can have the kind of actual textiles and don't need operating directions separately because it has all the data for making a textile.

Other benefits are that it can show the samples from the screen accurately and elaborately and that it makes easy and fast the complicated works such as yarn data processing, pattern making and yarn setting. And, it works out newly

<sup>25</sup> Sung-Won Yang, Image Design using Divine Bell of King SFONG-DEOK Bronze.

created patterns as a design by appropriately realizing from the original image.

There are two ways of idea sketching to carry out the program. One simple way is to input and store images by using color scanner. The other is just to draw in the monitor with cordless brushing work pen as one of other drawing functions such as pencil, brush, marker and chalk the menu of the program suggested. Once the idea is decided, the textile will be composed with the kind of threads and colors. By presenting rectangles and squares as a function of similar changes or by moving only a cursor, you can not only enlarge or reduce but also continue routine repetitions the design in the screen. Mesh mapping is also possible. By mapping the bright or dark parts of the drawings or pictures, you can observe the composition of the textile realistically and in three dimensions.

### 2) Textile Printing CAD

Out of two ways, one is to express the print pattern by drawing in the digitizer with the electronic pen. As the case of using the existing textile patterns, the other is that users designate the parts they want to and enlarge, reduce, or correct their images. It is basically possible to control the size of the print pattern. As for the use of colors, because even one color is different in many ways depending upon its brightness or blotches, a variety of textile patterns is possible. Once the design is done by CAD, it is directly connected to the automatic system like CCM (computer color matching) and CAM (computer aided manufacturing) that the operating hours of the manufacturing process will be reduced.

The program is carried out through various compositions of the design pattern and expressed with the repeat of the composition or amalgamation with other patterns. It is also possible to use embroidery into which colors and images were added with scanner, by changing or erasing it. By recomposing and amalgamating as a basic pattern, a purely creative textile printing design is made through the enlargement or reduction and repetitions.

### 3) Knit CAD

CAD system has been used more in the field of knitwear than in the textile field. The reason is that a knitting machine goes together the CAD system. If you input the finished design from the computer in the machine, it will knit the design in the monitor as ordered. Because it automatically does the finishing touch around the neck, a full fashion is possible. The desirable composition of loop will be decided by a variety of simulations with the various combinations of design and loop. There is a difference between textile and knit here. While it is good enough to measure the size in the case of textile, it is important to decide the gauge in the case of knit because the style of knit composition will be different depending on the change of the gauge.

It is okay to change the gauge in the loop simulation before the composition of the loop is decided. In the organization of the loop composition, a color is designated in each loop style. For example, yellow goes to the front knit, or navy is with the back knit. In this way, colors are decided. Of course, there is a difference between the loop simulation and direct knitting, especially in the elasticity of threads. But, it is still convenient in that the general feeling of the whole picture can be confirmed.

In addition, the textile CAD system has a variety of functions. As instrumental means, the system continues to expand its utility areas into necktie design, electric stand design and sofa design in that it is art-oriented and has a capability of marketing.

### 2. Family Wear

In the middle of the expansion of the unique, small-sized nuclear families, the cultural assimilation between young and old generations and the 5 days a week working system bring about the environmental change of society, economy and culture. The change guides our life style into the tendency of going back to your family in the nature, which is seeking trust and coziness. Because of the new style of the leisure culture and

the expansion of entertainment activities in addition to this change, relevant products get attention and the field of fashion also goes through the change. The shopping style also went beyond the simple way of the consuming public already. It changed into shopping everything in one place, the experimental shopping and a variety of ways seeking the self-satisfaction and individual personalities.

The style of dress that each family member shows its uniqueness yet it makes harmonious as a whole represents the new concept of a family wear brand. The fact that you are wearing the same clothes as somebody else's means to express the special affection and feelings of integration through an intermediary. This kind of psychology appeared first as a form of 'couple look'. In the early of 1990s, the couple look of stripe T shirts or check-designed aloha shirts made everybody feel loved and happy as a uniform for couples, and the psychology extended into the whole family. The starting point that family wear got noticed in the fashion world is considered to be when junior brand started bringing out the big sizes.

The family wear brand 'Waltons' settled down as life style total look brand seeking healthy and stylish inner life and also enjoying daily lives. 'Yellow Stone' as an out door family brand proceeded into adding juvenile section in the basic lines of men and women sections. 'Eigenpost' of SK Global is simply casual wear itself as a family wear brand the whole family can enjoy. In 'eigenpost' eigen means peculiar and post is place. In other words, as a place satisfying the desire of sensitivity, customers can rest, feel pleasant and are attracted into. The strategy of the eigenpost is not just a marketing place to sell. As its name suggests, it is to exchange trust and pleasure by making communications with customers under the title of culture in the peculiar place, so that more customers can understand the whole concept bit by bit but gradually.

In this way, the Family Wear as a basic casual wear is the concept of clothes that all the family members can enjoy within the range of

reasonable prices in one place, regardless of the differences of their ages or sexes. It encourages love and solidarity among the family members with the sensitive marketing that cherishes happy memories of the past and plans the hopeful future and with the culture marketing that transcends the differences of ages.

### 3. The Representation of The Design

#### 1) The Design Concept

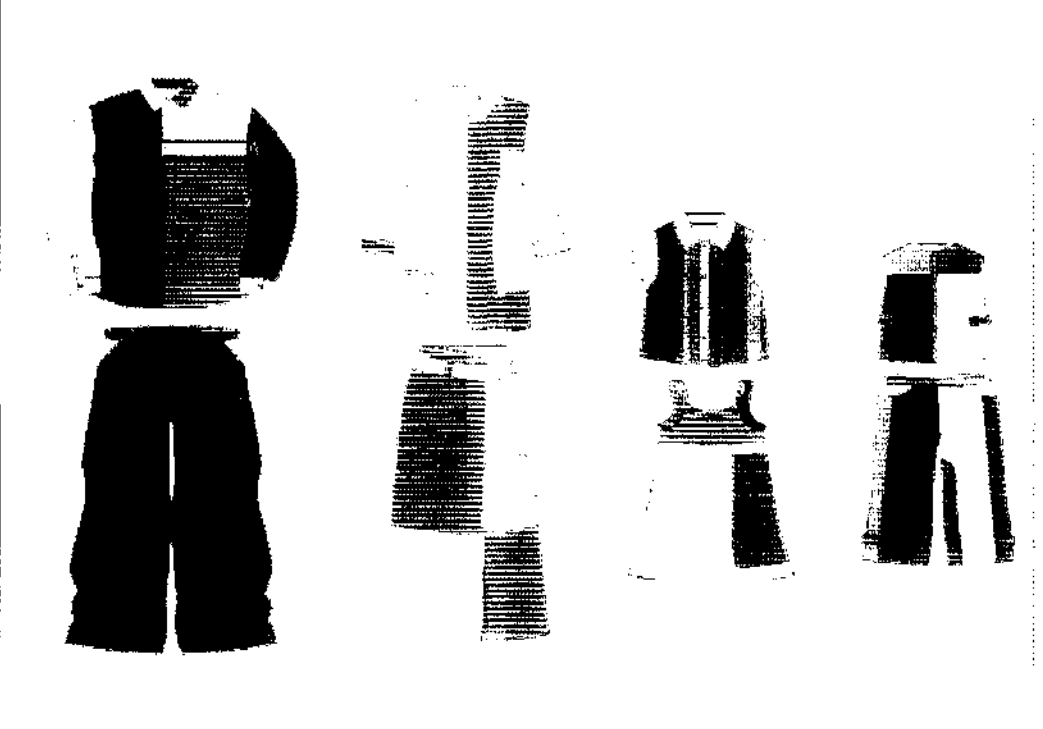
The well-being code became the main focus in the current culture due to the expansion of the 5 days a week working system and the rapid growth of the entertainment industry based on the cutting edge IT technology. As a result, consumers value present-oriented quality of life highly and their life style changed from the tendency of reasoning and formality to the one emphasizing their emotional feeling and sensitivity. Based on the environment of society, its culture and economy, the field of fashion needs the kind of design that is lively, challenging and flexible to change. Therefore, fashion designers should understand this context, suggest the new tendency of the future and try their best to develop creative ideas satisfying social and economical desires for fashion.

Therefore, this study is to develop individual and sensitive clothes designs that can satisfy simplicity and mobility required from what is closely connected with the family life. As a way of closeness between paintings and clothes, Mondrian's pure plastic art will be introduced. The development of sensitive designs in this way for the contemporary family, by guaranteeing the common ground for paintings and clothes, would also open the possibility for the new family wear design. As for the colors, Mondrian's three primary colors and three colorless colors would be used. These colors give the images of liveliness, brightness, activity and splendor. By reinterpreting the nature optimistically and exposing the inner feelings out, its freedom and pleasantness will be expressed instinctively, stimulatingly and extemporarily.

## 2) The Representation of Designs Using the Weave CAD

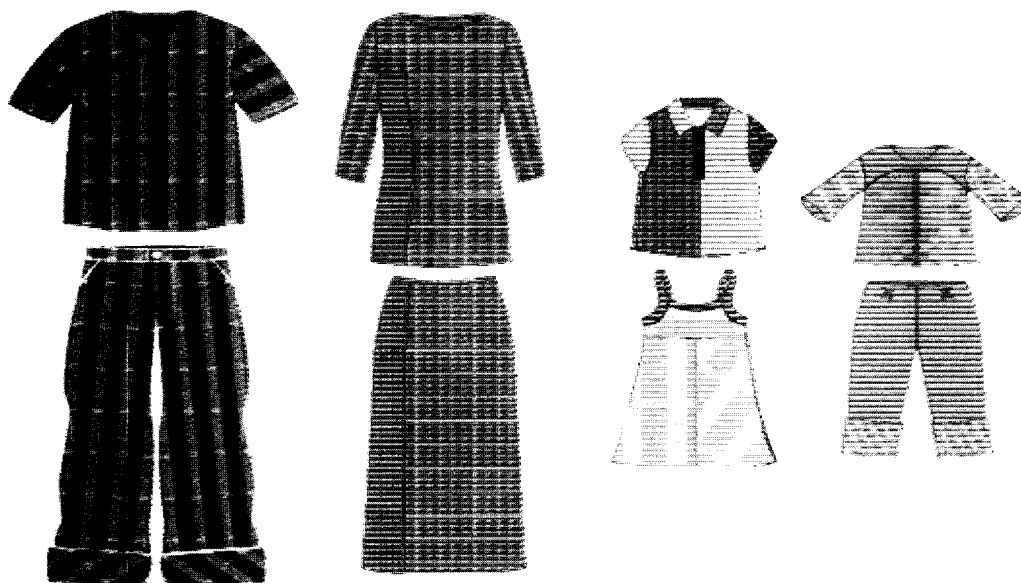
Theme 1. City Modern	
Image	Simple minimalism of contemporary urban style
Use	As a basic casual of the urban style, inner richness and functional comfort were sought and you can wear during the certain times of the day
Fabric	Using the weave CAD, visual sensitivity and sensibility were emphasized by giving change to a variety of composition and pattern.
Color	Being calm, stable, quiet and prudent, the colors of those images are also bright, classic, pleasant and frank.
Style	With the combination between transcendence of times and pragmatic value of new stuff based on classic, it is tried to upgrade the quality of the daily life and to move the life style into the artistic dimension.
Design Point	It could express and develop designs of modern urban elegant image by introducing and applying through the surface division of vertical and horizontal lines, and through the comparable beauty of symmetry and unification.

**3) The Representation of Designs Based on the Color Changes**

Theme 2. Free to Move	
Image	Bright, active and rhythmical sporting image
Use	The sports casual, getting out of the daily routine of the urban life, seeking richness of life and its experiments based on various cultures
Fabric	Having the durability of the natural material and sporty material with full of energy
Color	Having the harmonious contrast of strong and splendid colors and creating unique combination of function and sense resisting the disciplinary urban life
Style	In the hard life of the city, having chic impression with attractive flexibility which is optimistic, peaceful and controlled
Design Point	Mondrian abstract system could develop various sporty designs by composing the comparable beauty of unified harmony and uniform geometrical order plastically by the comparable beauty of symmetry, harmony and balance through the change of color by providing new ideas and design motives.
	

#### 4) The representation of the Design Based on the Composition Line

Theme 3. Team Spirit	
Image	Retro modernism seeking richness of life
Use	Training sport casual together with individual's cultural activity and daily comfort
Fabric	The combination of sensitive material with refinement and modernity and material with luster and softness
Color	Keeping in mind the contrasting effect out of arrangement of colors, especially one between pattern and solid, with the use of trimming
Style	With mystery and purity of various cultures being grafted with the contemporary civilization, the fusion style which is exotic, relaxed and sensitive of the urban contemporary style will be represented.
Design Point	Mondrian abstract system could be composed of the simplification conforming to the enlarging system of modern industrial society considering simple, plastic, functional and economic ability, the modernity harmonized with functional ability and the line composed of the dress of sense.



## V. Conclusion

Together with the industrial development, customers value the quality of life as number one priority and seek the present oriented lives. The tendency of reasoning and formality also gave way to the life style of sense and sensibility. As an effort to satisfy contemporary customers whose tendency in fashion is getting to more diversity and individuality, I introduced Mondrian's pure plastic principles into the field of design development. My intention was to create functional and individual designs from the geometrical forms based on his theory, by changing the composition of the texture, by giving the color changes or its arrangement and by changing composition lines or both of textures and color arrangements.

The outcomes out of the representation of the design are as follows. First, when the divisions of faces by intersections of straight lines give the orderly sense of uniformity as Mondrian's plastic theory suggests in the case of the representation of design using a variety of the textile expressions, this phenomena will be analyzed from the visual angle. In other words, the quality differences of textures or the reciprocal action by the quality of texture or the size of faces may bring about the optical illusion or too much emphasis visually. Then, it will look like showing the ascetic characteristic visually or emphasizing attractive, pragmatic refinement externally. Therefore, the various arrangements of textures can bring about the clothes with the modern sense by the harmony of simplicity and pragmatism.

Second is when the beauty of uniform proportion coming from mutually equivalent value of plastic means is proceeded as a design using the change of coloring according to the Mondrian's plastic principle. Coloring is taken subjectively based on the past experience or culture, and visually depending on the given situation. The phenomenon of optical illusion is coming out especially in the case of the arrangement of color like the harmony of similar colors or contrasting colors. In this way, the beauty of geometrical contrast through the harmony of the

human body and contrasting colors emphasizes the clothes' activity sense of dynamism by showing clearly the beauties of the contemporary function and proportion.

Third, when you represent the dress making and its ornaments through the various composition lines of clothes, using Mondrian's straight lines and faces, you realize that the analysis of designers make possible the dress making of various shapes and senses by providing new ideas and design motif. Even with identical designs of composition, you may have different psychological impressions, depending on the differences of texture and colors. In the combination of various natures, what matters most is the harmony because it provides the unified feelings. In the dress making, this kind of mutual interaction will support stable and comfortable sense by showing clearly variety, functionality and activity of individuals.

Focusing on the beauty of balance and proportion in the Mondrian's plastic forms, the changes of coloring and texture were added into vertical and horizontal lines and the divisions of faces for the dress making. Whether they were the reciprocal action of human body, texture and color or the reciprocal action of human body and colors, these changes will be interpreted differently, depending on the individuals' experiences and psychological moods of situations. The emphases of the sense are also different, depending on the activity and functionality.

In applying paintings into the dress making, this study has a limitation in that the potential of designs from the paintings was not thoroughly examined or suggested from many angles. Therefore, it is my belief that a new way of expression grafting materials and colors together this study could not include should be tried. I believe that endless experiments are required for the creation of diversified sensibility to fit in with the contemporary fashion.

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