

## The Research and Development of the Future Fashion Design

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### Abstract

*With the contemporary socio-economic, political, and cultural diversity, Fashion Design leads us toward a broader field rapidly. Under the "people-oriented" principle, Fashion design which integrating the design concept of multi-angle, multi-paradigm and multi-aspect should be on the stand of severing people so as to meet people's physiological and mental needs and to enrich people's spiritual and material life for the purpose. It further opens up a new vision for Modern fashion frontier and will be bound to the clothing design practice.*

**Keywords:** fashion design, people-oriented, Crossover Design, Electronic intelligence, Virtual network, Environmental health

### Introduction

There are many theories about the origin of clothing. To sum up, it includes two aspects: Because of people's physiological and psychological needs, clothing's progress along with the development of human civilization for millions of thousands of years. Until now, its motive power does not change. That is to say, clothing is the physical form which is most close to human body. People's demand for clothing is the direct reflection of the original material and spiritual needs of human beings. This fundamentally determines the nature of fashion design based on "people-oriented" and the overall development trend. But, along with the social material continuous abundance, it seems that the higher requirements of material and spiritual of clothing for human, the more difficult to meet. This put forward higher request to the designers who have entered or will enter the garment industry. There is no doubt that people need to think deeply about where is the future path of fashion design.

To our minds, just under the background when politics, economy and cultural are becoming increasingly diversified, we should be based on the essence of clothing and blended with the design concept of multi-angle, multi-paradigm and multi-aspect. It is the only way to seek the new clothing and design patterns which are more in line with the needs of contemporary people and enrich people's spiritual and material life. Under the guidance of such ideas, we think about the future of fashion design through some examples and comb in this paper, in order to help people adapt to the evolution of social trends and needs in the new era.

### 1. Expand the Fashion Design Thinking——Crossover Design

The "Crossover" in the so-called "Crossover Design" refers to the cooperation of two or more different areas. It is the cross-border cooperation. As the name implies, "Crossover" is the meaning of crossing. This means that the design based on crossover is doomed to be the integration of cross-curricular interests. The crossover design trend is sweeping across the world and is becoming a kind of new design method and design strategy.

For the fashion design, Designers should not be limited in the clothing art itself but to fully be free from the limitation. They should come out a narrow turn son, broaden their horizon, grasp the pulse of the development of the clothing art and expand the dimensions of fashion design, so as to make the clothing art become more stereo and full. Fashion Crossover Design conforms to the multi-level needs in contemporary society and is the inevitable choice to meet the diversification of consumer demand. In this material saturated Era, Goods exceeds the demand. Humans also produce a new selection criteria on consumption and higher requirements. Goods of the combination of the external form and internal cultural taste are more attractive to people.

It is especially reflected on clothes. Designers prefer to the cooperation of fashion design and art, and implant the foreign art elements into the fashion art to extend brand culture and enhance the value of clothing.

In 2012, Marc Jacobs, the design director of Louis Vuitton, and Yayoi Kusama, The Japanese multimedia artist, co-launched a series of products. LV has always maintained close cooperation with contemporary artists, including Richard Prince who is known for his erotica articles, Graffiti artist Stephen Sprouss and Takashi Murakami. Crossover Design brings good sales performance for LV.

According to the great success of LV, Crossover design made for the occasion. The large background of design itself is a diversified way. Fusion is the increasingly clear development direction. More profound innovation principles hide behind the "Crossover". It contains the creative way of breakthrough should also arouse people's thinking and concern, this is worth people reviewed. Only the essential core of Crossover is transplanted for the power of design, fashion design will have continuous vitality and sustainability. Under the diversified background, fashion design will no longer have unified standard and fixed principle, but is becoming a comprehensive subject that is much more open, various styles co-existed and interdisciplinary cooperation.

## **2. Make "Impossible" into "Possible"—Smart Clothing**

With the rapid development of science and technology, the form design of fashion art has a great change. Science and technology provides a new means for clothing form. With the support of high-tech, modern clothing fuses multidisciplinary advanced technology and broadened the space for development of clothing art. It realizes the future high-tech clothing which exists only in imagination and science fiction one by one, driving the traditional style design moving towards intelligent garment design.

The progress of science and technology drive the development of fashion art, therefore, people of clothing are getting higher and higher requirements. People will not only based on the basic function of warm and cover the body clothing, and also not only are not satisfied with the effect of the pleasant decoration. People are eager to dress more for human function, in order to meet that they wear efficient intelligent clothing to deal with more psychological needs in the complex survival environment. Meanwhile, it also can bring more convenient conditions for people's life.

### **2.1 The Development of Innovative Fabrics**

As the crossover design, the intersection and infiltration of the disciplines of science and art have further improved the high-tech modern fabrics. The cross of multi-disciplinary with the human body engineering, medicine, chemical technology, nanotechnology, biotechnology, optics etc has greatly promoted the development of the clothing with new material, changed the traditional pattern of clothing materials, supported the development direction of clothing to higher performance, multifunction and intelligent. It provides a broad space of creation for designers.

Kanebo, a Japanese company, will cover the screw pyran photosensitive material in the microcapsules. They use the printing to make photochromic fabrics and garments of which the surface patterns can be different in different light conditions. British researchers have developed an anti-scald garment which is made of nickel titanium alloy. This is a kind of shape memory clothing. The plastic deformation of material is through the change of temperature. When heated above a certain critical temperature, the material returns to its initial shape. An American company has made the sun-protective clothing combined with ceramic fiber and synthetic fiber. This dress is prevented bask in effect is twice that of an ordinary clothing and it can also reflect the harmful ultraviolet rays out of human body. These technologies are except applied to safety protective clothing, to a large extent, they will also expand fashion design ideas.

### **2.2 The Combination of Electronic Products**

In recent years, the design of intelligent clothing is no longer limited to the use of high-tech fabric, more electronic products combine with ordinary clothing. The use of high-tech has also opened up new territory for fashion design. Electronic products gradually become a part of the garment. The built-in high-tech electronic products have been preferred by young people. With the continuous innovation of technology, electronic clothing has been constantly improve on the function and design and been applied to the forefront of medical research and other advanced areas. Because of the special function of smart clothing, it has higher standard requirements comparing with the traditional clothing fabrics. It is not only to consider the costs, but also to use environmentally friendly materials.

It is not only to meet the garment's wash and wear, but also to ensure the electronic product placed into the garment can be used for a long time. The solutions to these problems are to expand the space for fashion design.

In 2005, the company Textronics produced a kind of high-tech sports bras, which can transmit the wearer's heart rate data to the watch display. In 2006, LEVI'S and Ipad have collaborated on Redwire series. It is a kind of jeans which people can listen to music when wearing it. DADA companies in the United States launched a basketball shoes with MP3 function. In 2007, the students of New York University designed a solar bikini. It only takes 2 hours' light to charge the ipod. The telecom enterprises "Samsung" and the watch enterprise "Swatch" also developed fashion watch phone. In September 2013, Samsung has released the Galaxy Gear smart watches products. This product can push and control music playback. There are all kinds of time display interface.

With the rapid development of science and technology, the development of fashion design has not been able to narrow the art itself. It is good to find a way out in the latest achievements of natural science and be applied to clothing art and design practice.

### **3. New Design Patterns——Virtual Interactive Design**

The digital and network technology makes the online clothing virtual and interactive design become possible. On one hand, with the help of computer, it can realize that the design effect is presented immediately and showed intuitively in the process of fashion design. Many complicated sample preparation steps are greatly reduced in the traditional design. It can save a lot of manpower and material. On the other hand, it also satisfies modern people's psychology demand for convenience. People can experience the process of fashion design directly. To make designers and people who have been designed have a full range of perception for the overall design.

With the help of CAD or CAM, fashion design can be more close to people's virtual life style. It is adapted to the designers' working and living style in the future.

#### **3.1 Network Virtual Clothing Design**

Network virtual clothing design is a kind of brand-new clothing design concept. It can realize the simulation of the fabric assisted by virtual technology. At the same time, it can be used to simulate the way and the process of fashion design. It makes them have immersive feeling and a full range of perfect experience on the whole design. People not only can "see" the effects, "hear" the sound, "smell" the smell and "touch" the texture, but also "feel" the dynamic. It truly presents the authenticity of the design. It is the optimal combination of fashion designers and electronic computer technology and animation techniques.

MIRA lab at the university of Geneva, Switzerland, as for creating interactive environment of fashion design and simulation, has proposed a powerful garment simulation system based on mechanical——VLNET system. Kyoto Japan Toyobo's research has developed Dressing Sim digital fashion software.

In addition, nowadays network virtual fitting has become a kind of effective means in online garment marketing. In America, online garment marketing has accounted for a certain proportion in the clothing sales. Using 3D technology, consumers can select suitable clothing for themselves through the network as long as they upload the necessary body's data of their own.

#### **3.2 Ultra-Dimensional Visual Clothing Design**

Ultra-dimensional visual clothing design establishes the concept of ultra-dimensional visual design. Simply, it is the improvement of transcendence on the basis of comprehensive consideration of original five-dimensional dot, line, plane, solid, time and space. Clothing in different space will have different spatial location. It includes a means of fashion design combined with art design, such as color, light, area, location, flat, three-dimensional, visual and spatial features combined with design, etc. Network clothing design not only emphasizes the clothing effect in harmony with the theme, but also should attach great importance to the local physical environment and the interconnected factors of psychological environment such as space form. The creation of space visual environment is the comprehensive care system which people, clothing and the environment were dissolved. Design is based on humanism as center and makes people's emotional, psychological, aesthetic perception, and many other factors into it. Ultra-dimensional visual design is the use of environmental psychology and ornamental psychology. It pays more attention to the space concept of community and environment. The new field of virtual design is one of the direction which is worthy to be further explored for today's clothing art design.

#### **4. Sustainable Design of Clothing Art**

The concept of sustainable development has won support among the people. Ecological environmental clothing has become the direction of sustainable development in modern clothing art and gradually become a new hot pursuit of fashion. The negative effects caused by the modern life are increasingly reflected. Many disastrous irreversible trends make human survival at stake in the short – term, such as global warming, air, water, land pollution and energy depletion. People no longer blindly pursuing economic benefits, but gradually realize the importance of ecological environmental health and pay more attention to the quality of life. The design concept of ecological and environmental protection is more in-depth in people's life and production. Environmental protection clothing design has become a powerful trend, in order to meet people's physiological needs of health and hygiene and sustainable psychological needs. This feature is what we must grasp in the fashion design.

##### **4.1 The Fast-Changing of Eco-Friendly Materials**

Environmental Apparel Design needs eco-friendly materials. From the point of view of Textile Ecology, eco-friendly material itself is not contaminated and won't cause pollution to the environment in the process of production. What has been abandoned and lost value can be recycled. It is not only harmless to human body, but also is friendly to environment and beneficial to humans. No wonder, green natural fiber and green regenerated fiber have been used in the environmental clothing. Ecological organic cotton, bamboo fiber, color natural silk, soybean fiber, milk fiber, corn fiber and Modal have been widely used in life. At the same time, human have injected the traditional fibers into high-tech. Some new synthetic materials emerge at a historic moment which has the environment protection and corresponds with consumption needs. These new materials make up the shortcomings of the traditional green fiber in function and make the clothing more comfortable, breathable and functional.

##### **4.2 Return to the Combination of Traditional Crafts and Modern Technology**

The combination of science, ethics and aesthetics spirit makes people pay more attention to the production of green clothing, which gradually raises a hot wave of technology back to nature in the world. The combination of traditional crafts and modern technology make environmental clothing more wonderful from the designers. People use natural dyes and dyeing fabrics by hand. By weaving, knotting, embroidering, wrinkling, topstitching, pulling the net, beading, tie-dyeing, batik, bonding, stitching, hollowing out and other traditional decoration crafts, it can change and enhance the appearance of the fabric. The modern seamless splicing, digital printing and laser cutting technology can make up some limitations in the traditional craft. It is not only environmental protection, but also can greatly improve the efficiency of the clothing production. The combination of the two has realized the product of renewability and recyclability. It has practical significance for green clothing and high economic and environmental value for the further research and development.

Fabric reconstruction is the extension of designer's idea. It is a secondly innovative design to the fabric. In order to meet the need in design, on the basis of the aesthetic principle, it makes the finished fabric secondary processed. It combines the combination of traditional crafts and modern technology to generate a new artistic effect. This greatly reflects the theme of green design and has realized the reuse of fabric. Not only it can save resources, but also is low-carbon green. Making use of traditional handicrafts and different methods to secondary design of fabric and building new fashion space is to get more rich fabric effect and make the clothing more fashion. The most important is that fabric reconstruction is more in line with the requirements of environmental protection clothing.

##### **4.3 Recreation of Green Textile**

Recently, the famous British designers cooperate with scientists to make a plastic clothes which will dissolve in the water. The inventor's original intention is to let people pay more attention to environment. At the same time, it is better to make use of clothing to protect environment. This kind of clothing is made by Helen Dorian, a professor of London College of fashion, and Tony Ryan, a professor of Sheffield Interaction Research Center of British University. They are trying to find a way to reduce discarded clothes are sent to landfills resulted in pollution and waste. This kind of plastic clothes is made from biodegradable polyvinyl alcohol, as well as capsule will dissolve in the water. It is reported that researchers are working on another project -- Designing "contact reaction clothing". They expect to control the pollutions with the surface of the garment. And then washing and neutralizing. Dorian said, the clothes have a large surface area which can be used to purify the air.

### **Conclusion**

The purpose of the fashion design is not only the pursuit of fashion and aesthetic. It is a multi-disciplinary comprehensive design art. Entering a new era of science and technology, fashion design should be based on the "people-oriented" principle. It develops forward to meeting people's psychological and physiological needs.

Nowadays, multicultural, environmental protection and intelligent digitization have become the theme of the fashion design. Technology drives the rapid development of clothing art. The garment has been a qualitative leap. The rapid development of the network informatization makes clothing design more efficient. People's demands for environmental health gradually achieve the integrative development of production-green -health with the help of science and technology. It is beneficial for human beings and does not damage the environment.

Grasping the frontiers of modern garment design art, exploring a new perspective of modern art of clothing, starting from the multi-angle and multi-dimensional unceasingly, communicating with multi-culture and setting up a new conception of taking health as the center all that are to lead the fashion design to a broader field with the backing of a strong technical force.

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