

Technology Images in the 20th Century Fashion

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I. Introduction

Nowadays, we live in high technology society. For example, information and bio technologies bring us lots of amazing results.

The technological advancement affects fashion significantly in physical ways. It fundamentally promotes the changes of materials, production tools, production processes, and distribution, all of which can be considered as the physical changes of fashion. Interestingly fashion styles affected by the technological advancement are not uniformed, but different from natural to technology images. Also we can see various technology images in fashion. So it is worth analyzing why this variety was occurred.

This variety can be explained according to the fact that fashion is a kind of cultural phenomena related with society, expressing human being's values and identity(Hamilton 1987: 1-7 ; Roach-Higgins 1993: 29-38). In other words, with the physical base of technology, the mental aspects correspond to the social, cultural, and artistic changes which show different viewpoints on the technology affect fashion. Hence we think that these different viewpoints and the selected use of related technology have influenced on the diverse development of technology fashion images.¹⁾²⁾

This research aims to analyze plasticity and aesthetic values of the various technology images of the 20th century fashion from the viewpoints of social and cultural changes along with technological advancement.

For this purpose, we refers to technology as the whole method that is used for creating or manipulating something beneficial and as the artifacts created by the method. In addition, the technology fashion image also means an expression in fashion which reflects technology and its artifacts with multiple senses.

We set our research objectives as follows:

At first, to analyze various viewpoints on the technology in the discourses of the 20th century society and culture.

At second, to analyze the historical development of the technology fashion images in the 20th century.

At third, to analyze the plasticity and aesthetic values of the technology fashion images.

From our research results, we expect the followings: re-evaluating the fashion as a symbol of materials and spirit in the present technological society, acquiring information for future fashion trend, and lastly helping the development of various fashion designs.

As for the research methodology, literature survey was undertaken in order to study the history of technological advancement and related changes of society, culture, and fashion. In addition, a demonstrative study with fashion photographs³⁾ was performed for analyzing the plasticity of the technology fashion images. The scope of this research is from the 1910s to the year 2000.

II. Results and Discussion

1. Viewpoints on technology

Through the literature survey on the social and cultural changes associated with technological advancement, optimistic, pessimistic, and fusion viewpoints on the technology are discussed.

1) Optimistic viewpoint

The optimistic viewpoint strongly believes technology as a driving power for modernization - technology brings forth the advancement of human society and the realization of Utopia. Related discourse of culture is modernism.⁴⁾

2) Pessimistic viewpoint

The pessimistic viewpoint considers technology as a cause of the destruction of nature and dehumanization - technology brings forth Dystopia. This viewpoint is lack of the discussion about possible solutions for overcoming the detrimental side of technology. Related discourse of culture is postmodernism as anti-modernism.⁵⁾

3) Fusion viewpoint

The fusion viewpoint, we defined it as overcoming both optimistic and pessimistic attitudes, attempts to harmonize technology and human in order to enhance the quality of human life. So the Utopia of humanity⁶⁾ is the desired society in this viewpoint. Related discourse of culture is postmodernism as continuing and transcending

modernism.⁷⁾

2. Historical development of the technology fashion images in the 20th century with the three viewpoints

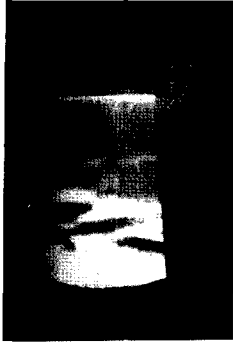
From the result of historical survey on the technology fashion images, major changes in fashion can be chronologically classified as European Avant-garde Fashion in 1910s-1930s, Space Age Fashion in 1960s, Techno Fashion between the late of 1980s and the early of 1990s, Cyber-Punk Fashion in the early of 1990s, Techno-Cyber Fashion since the mid of 1990s, and finally Fusion Techno Fashion since 1990s. Also, all of these fashion images coexist in 1990s.

1) European Avant-garde Fashion

European Avant-garde⁸⁾ Fashion has been experimented by Futurists, Constructivists and the artists of Bauhaus who had optimistic viewpoint on technology. They regarded machinery as the symbol of the new technological advancement and as the ideal of beauty. In particular, they admired the dynamics and velocity of machinery. They used to reflect the metaphorical forms, colors, and rhythm of technology in their arts (Lynton 1997: 96-7, 105-6). The dresses designed by the Futurists were geometrical and dynamic by using asymmetrical cuttings and discordant colors, as well as sanitary and functional. Also they tried to use new materials for designing dresses. Some of the Constructivists and Bauhaus artists experimented the subject of human body as machine (Addressing the Century 1998: 40, 86; Katsuhiro 1995: 18). The costumes designed by them were very geometrical. <Fig. 1> shows anticravatta designed by Renato Di Bosso, which was a necktie made of aluminum, a new material at that time.

2) Space Age Fashion

Some fashions of the 1960s reflected deep interest in the growing aerospace developments (Tortora 1994: 44). They were called as Space Age Fashion and influenced mainly by the objects, materials and colors related to aerospace science and scientific fiction movies. Namely, Space Age Fashion intended to express the optimistic aspects of the achievement of technology symbolized by space voyage. Up to now, Space Age Fashion has shown up frequently. <Fig. 2> shows simple, geometrical shape dresses in 1960s. <Fig. 3> shows astronaut's space suit style in 1990s.



<Fig. 1> Anticravatta, 1933
「Art & Fashion」



<Fig. 2> Pierre Cardin,
「Nylon」



<Fig. 3> Helmut Lang
「Collezioni」,
N.71

3) Techno Fashion

Techno Fashion was initiated by youth sub-culture groups, who tried to seek the meaning and pleasure of human life from high technology and its futuristic images (Min-Soo Kim 1994: 252). Techno Fashion consists of futuristic, protective clothes and high technological gears (Calefato 1997: 86; Polhemus 1994: 125). (see Fig. 4) Since the mid of 1990s, Techno Fashion has shown changes in design from its early exaggerated style. We named the changes as Modern Techno Fashion. Modern Techno Fashion is simple and sporty. (see Fig. 5)



<Fig. 4> Thierry Mugler, 1991
「Nylon」



<Fig. 5> Ally Capellino, 1995
「Collezioni」, N.47

4) Cyber-Punk Fashion

Cyber-Punk has the synthesized meanings of high technology and social, cultural

rebel or heresy. This style, beginning from London clubs and streets, combines primitive and high technology elements with Bricolage technique (Min-Soo Kim 1994: 252; Calefato: 87), and it expresses the pessimistic attitude on the technology using offensive, rebellious, and sensational ways. <Fig. 6> shows early Cyber-Punk style. In the figure, with dark make-up around eyes and electronic arm, armor made with industrial junk express pessimistic attitude on technology.

After the mid of 1990s, with the transition of the meaning of Cyber-Punk toward being optimistic (Sungtae Hong 1997: 201), this Cyber-Punk style has been changed to be refined. <Fig. 7> shows this tendency. The armor of metal bone symbolizes the combination of primitivism and high technology.

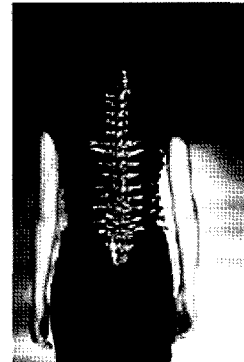
With the development of digital technology, techno style has been merged into Cyber-Punk. We named this as Techno-Cyber Fashion. Techno-Cyber Fashion uses digital technology for generating interesting effects. For example, the pattern of the dress dynamically changed by computer software. <Fig. 10> shows a Techno-Cyber Fashion where head gear makes 3-dimensional layers of lights.



<Fig. 6> Cyber Punk, 1991
「Street Style」



<Fig. 7> A. Mcqueen, 1998
「www.firstview.com」



<Fig. 8> W.& L.T., 1995
「Belgian Fashion Design」

5) Fusion Techno Fashion

Fusion Techno Fashion, a style which softens Techno Fashion, has attempted to harmonize human (or nature) and technology. This style proceeds towards the mixture of various other styles. One typical example is the style of combining classical or romantic designs with high-tech fabrics or trimming (see Fig. 9). Moreover, this style started either using new materials which are characterized as deliberately imperfect and irregular form (Handley 1999: 142), or applying handcrafted decorations. <Fig. 10> shows shirts that looks very soft, but has artificial shape which is a result of high technology.



<Fig. 9> Dolce & Gabbana, 1999
「www.firstview.com」



<Fig. 10> Yoshiki Hishinuma, 1996
「Techno Textiles」

In summary, European Avant-garde, Space Age, and Techno Fashions which have optimistic viewpoints on technology, express confirmative and geometrical forms in order to show the belief on human reason and the progress of history. On the other hand, early Cyber-Punk Fashion which has pessimistic viewpoint on technology, expresses indefinite and de-constructive forms to show the disbelief on human reason and the progress of history. From the mid of 1990s, Techno-Cyber Fashion has appeared, which has the optimistic viewpoint on technology. Lastly, Fusion Techno Fashion which has the fusion viewpoint of transcending the optimistic and pessimistic aspects on technology, represents the combined form to show expectation for the happiness and progress of mankind by harmonizing the reason and sensibility.

3. Plasticity of the technology fashion images

The plasticity of the technology fashion images was analyzed as geometrical forms, the use of high-tech materials, futuristic colors and lights, dynamic effects, and the mixture of various techniques. These properties are not competitively used, but are expressed in harmonized and integrated ways.

1) Geometrical forms

Compared with other fashion images, the technology fashion images intensively represent geometrical forms, which can be explored with human reason.⁹⁾ In other words, geometrical forms express the discovery of truth by science and technology and the confidence on technological advancement. Also, geometrical forms are an expression of the representative aesthetics of the Machine Age and high functionalism,¹⁰⁾ which are still in use.

<Fig. 11> shows geometrical form dress which consists of small geometrical units.

2) High-tech materials

Technology fashion images have used high-tech materials in the sense that the materials are the visual resultants of technological advancement in the way of symbolization and practicalness. The materials used in these images are created by technological advancement, from the viewpoint of clothing, however, there are two types of materials: normal materials and abnormal materials for clothing.

3) Futuristic colors and lights

Futuristic colors and lights are distinctively represented in the technology fashion images. Together with lights, white and metallic colors such as gold and silver, and artificial colors such as digital colors, maximally visualize the representation of technology. For example, white color symbolizes the image of light, cosmological universe, and hopeful world (Bulzone 1992: 33). Metallic colors, the representative symbols of Machine Age, are still favored in the present times as the symbol of technology. Digital colors, generated by computers and visualized through monitors, maximize visual effects so that they stimulate the interests of the users who live in cyber culture. In the technology fashion images, they are expressed as intensive color effects.

4) Using various techniques

The technology fashion images of postmodern ages, such as Techno Fashion, Cyber-Punk, and Fusion Techno Fashion, are characterized as using various techniques like Bricolage¹¹⁾, Parody¹²⁾, and Eclecticism.¹³⁾ Handcrafted decoration is also a unique characteristic.

<Fig. 12> shows a Fusion Techno style dress decorated by handwork.



<Fig. 11> Rabanne, 1996
「Techno Textiles」



<Fig. 12> Owen Gaster
「Collezioni」, N.71

4. Aesthetic values of the technology fashion images

The aesthetic values of the technology fashion images are understood as machine functionality, dynamism, creative avant-garde, utopia orientation and future orientation.

1) Machine functionality

Machine functionality is represented by the geometrical forms and intensified function which was the beauty of the production by machine. Even digital era, this machine functionality is still addressed. We can say, in social terms, commitment to the machine functionality implied a democratic approach to design and humankind (Sparke 1995: 46).

<Fig. 13> shows a high functional module coat, in which simple, geometrical parts can be assembled or decomposed.

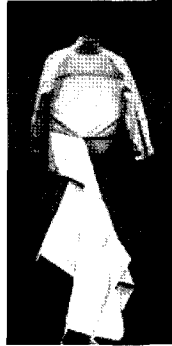
2) Dynamism

The expression of dynamics in the technology fashion images signifies human's stepping forward to the future. This expression has been changed from the symbolization of the machine aesthetics to the new aesthetics created by cyber culture and the condensation of time and space. As examples of the new dynamics, there are (1) the holographic clothes that express the depth of the fourth dimension changed according to visual angles, (2) the clothes of which patterns and colors are changed with temperature and body heat, and (3) the high-tech jewelry of which surface graphic is dynamically changed (Rucker 1992: 112). Moreover, the clothes that can be decomposed or assembled are regarded as having the dynamics.

3) Creative avant-garde

Avant-garde means innovative, experimental modern arts pursuing new aesthetic values, plasticity, and expression. So it is closely related to creative challenge spirit. That is, the technology fashion images have the meaning of creative avant-garde that creates novelty by actively accommodating technological advancement.

Particularly, the concept of post-corporality¹⁴⁾ is part of the aesthetic value, creative avant-garde. From the machine age to the present days, human beings have tried to overcome their body limit internally and outerly by developing technology. This effort has been reflected technology fashion images such as robot and cyborg¹⁵⁾, avatar.¹⁶⁾ <Fig. 14> shows robot images in 1990s, which express optimistic vision on the extended body through technology. <Fig. 15> shows an avatar fashion in the late 1990s. With virtual reality, human beings extend their body and identity to the cyber world.



<Fig. 13> Robert Carry Williams, 1999 «Collezioni», N.71
 <Fig. 14> Mugler, 1995 «Universe of Fashion»
 <Fig. 15> W. & L.T., 1997 «Belgian Fashion Design»

4) Utopia orientation

The technology fashion images represent the confidence that technology can realize much better world like Utopia. In modernism, since Utopia was attempted to achieve by the reason and intelligence of human being, the images that reflect the rationalism were used in fashion. Whereas, in postmodernism, due to the desperation that Utopia cannot be realized, the images of Dystopia appeared. Finally, the Utopia-oriented images that focus on the recovery of humanity while accommodating the rationalism of modernism were addressed.

5) Future orientation

The future orientation has the dynamics of actively preparing the future and exploration spirit. As the result, the technology fashion images have the implication of preparing more promising future on the basis of the realities of life. In other words, through technology fashion images, human being not only express accommodating contemporary technology and exploring of the future, but also connect the present with the future.

<Tab. 1> shows the plasticity and aesthetic values of technology fashion images of the 20th century.

III. Conclusion

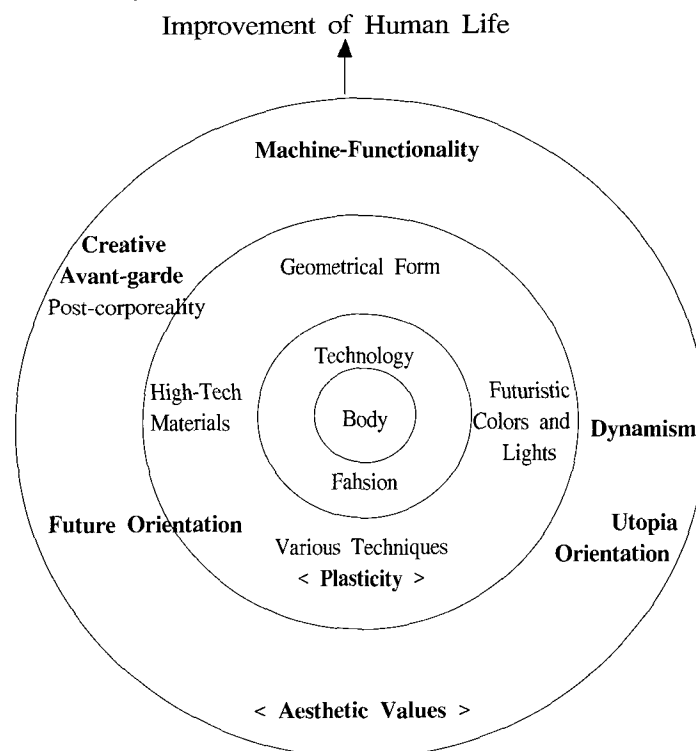
The technology fashion images in the 20th century have been brought forth associated with optimistic, pessimistic, and fusion viewpoints on technology. European

Avant-garde Fashion, Space Age Fashion, Techno Fashion, Modern Techno and Techno-Cyber Fashion have reflected the optimistic viewpoint showing the trust on human reason and the progress of history through science and technology. Cyber-Punk Fashion has reflected the pessimistic viewpoint showing the disbelief on human reason and the progress of history. Fusion Techno Fashion has reflected the fusion viewpoint of transcending the optimistic and pessimistic aspects on technology by harmonizing the reason and the sensibility of human being. Also, all of these technology fashion images coexist in 1990s.

The plasticity of the technology fashion images was analyzed as geometrical forms, the use of high-tech materials, futuristic colors and lights, and the mixture of various techniques. The aesthetic values of the technology fashion images are understood as the machine functionality, dynamism, creative avant-garde, utopia orientation and future orientation.

In conclusion, the distinct properties of the technology fashion images of the 20th century are to use the artifacts of technology and technology itself in fashion directly or indirectly. In the 21st century, the technology fashion images are thought as a main fashion area coexisting with other fashion images, and are expected to be the representation emphasizing the harmony of mankind and technology.

<Tab. 1> The Plasticity and Aesthetic Values of Technology Fashion Images



References & Notes

- Attali, Jacques. *Fraternités*(translated in Korean), Seoul: JoongAng M&B Publishing Co., 2001
- Baudot, Francois. *Universe of Fashion* Thierry Mugler, Universe Pub., 1998
- Braddock, Sarah E. and Marie O'Mahony. *Techno Textiles: Revolutionary Fabrics for Fashion and Design*, New York : Thames and Hudson, 1998
- Bulzone, Benny and Black. *The Color of Fashion*, New York: Stewart Tabori & Chang, 1992
- Calefato, Patrizia. "Fashion and Worldness", *Fashion Theory, The Journal of Dress, Body & Culture*, Vol.1, Issue 1, 1997
- Celan, Germano(edit.). *Art & Fashion* (D.A.P./SkiraEditore: New York) (Biennale di Firenze), 1997
- Derycke, Luc and Sandra Van Veire(edit.). *Belgian Fashion Design*, Luidon, 1999
- Handley, Susannah. *Nylon: the Story of a Fashion Revolution*, Baltimore, Maryland: the Johns Hopkins University Press , 1999
- Hamilton, "Dress as a Cultural Sub - System", *Clothing and Textiles Research Journal*, vol.6, #1, 1987
- Hong, Sungtae. *Cyborg · Cyber Culture*, Seoul: Culture Science Publishing, 1997
- Jencks, Charles. *What is Postmodernism?*(translated in Korean), Seoul: Chungnam Publishing, 1995
- Kim, Minja & Noh, Jungshim. *A study on the Avant -Garde Fashion*, Research Reports of Science for Better Living, Research Institute of Science for Better Living, Seoul National University, vol.21, 1996
- Kim, Min-Soo. *A Cultural Navigation on The 21st Century's Design*, Seoul: Sol Publishing, 1994
- Kim, Hyunsoo and Yang, Sook-Hi. *Extension of Body in the Cyborg Fashion For The Digital Era*, Proceedings, 2001 KSCT/ITAA
- Lynton, Norbert. *The Story of Modern Art*(translated in Korean), Seoul: Yekyung Publishing, 1997
- Morgado, Marcia A. *Coming to Terms with the Postmodern: Theories and Concepts of Contemporary Culture and Their Implications for Apparel Scholars*, CTRJ, vol.14, #1, 1996
- Neufeldt, Victoria and Sparks, Andrew N. *Webster's New World Dictionary*, Warner Books, 1990
- Polhemus, Ted. *Street Style*, London: Thames and Hudson, 1994
- Roach-Higgins, Mary Ellen and Eicher, Joanne. "Dress and Identity", *Social Science Aaspects of Dress*, ITAA Special Publication # 5, 1993
- Rucker, Rudy, Sirius, R.U. & Queen Mu, *Mondo 2000*, Harper Perennial, 1992
- Sparke, Penny. *An Introduction to Design and Culture in the Twentieth Century*, London : Routledge, 1995
- Tortora, Phyllis G. & Eubank, Keith. *Survey of Historic Costume*, Fairchild Publications, 1994
- Warwic, Alexabdra and Cavallaro, Dani. *Fashioning the Frame*, Berg, 1998
- Yamaguchi, Katsuhiko. *20th Century Art and Technology*(translated in Korean), Seoul: Fountain of Intelligence Publishing, 1995
- Addressing the Century 100 Years of Art & Fashion*, Hayward Gallery Publishing, 1998
- American Heritage®Dictionary*, www.yahoo.com
- Collezioni*, N.47, N.71
- Doosan Encyber*, www.yahoo.co.kr

The Britannica Concise, Yahoo.com

- 1) Hereafter, technology fashion images imply the technology images in the 20th century fashion.
- 2) We assume technology, society, culture, art and fashion are affecting each other. The assumption goes beyond the premise of the traditional materialism.
- 3) These fashion photographs were selected from related fashion books, fashion collection magazines such as *Collezioni*, and web site such as www.firstview.com.
- 4) Science and technology are the means through which inequality, inhumanity, poverty, and oppression are eliminated. (Marcia A. Morgado, 1996.)
- 5) The main concept of postmodernism is the end of history, perishment of progress, losing belief in science and technology. (Ibid.)
- 6) Utopia of humanity is the last stage of the development of utopia, which focus on recovery of humanity, fraternity. (Jacques Attali, *Fraternités* (translated in Korean), 2001.)
- 7) See Charles Jencks, *What is Postmodernism?*(translated in Korean), 1995.
- 8) Avant-garde means the new leaders in movements, esp. in the arts. (Neufeldt 1990: 40) In other words, avant-garde means innovative, experimental modern arts pursuing new aesthetic values, plasticity, expression. (Minja Kim: 1996)
- 9) In the book *Toward a New Architecture* (London : Architectural Press, 1974, p.255.), Le Corbusier said, "Geometry Denotes Order and Mankind Expresses Itself Through Order." (quoted in Penny Sparke 1995: 46.)
- 10) This is machine aesthetic. The machine implied undecorated geometric form as well as being an abstract force with a strong visual, cultural and spiritual symbolism attached to it. (Sparke, Ibid.)
- 11) Bricolage means something made or put together using whatever materials happen to be available. (American Heritage Dictionary, www.yahoo.com)
- 12) A literary or artistic work that imitates the characteristic style of an author or a work for comic effect or ridicule. (music)The practice of reworking an already established composition. (American Heritage Dictionary, www.yahoo.com) Sometimes parody can be used to pay respect. (Doosan Encyber, www.yahoo.co.kr)
Some technology fashion images use parody from science fiction movies.
- 13) In art, eclecticism means combining individual elements from a variety of sources, systems, or styles. (American Heritage Dictionary, www.yahoo.com)
- 14) This means post-organic body such as the deconstruction of the boundary between human and machine, or real and virtual reality. (Kim, Min-Soo 1994: 246-250)
- 15) Cyborg has been understood as combining an fantasy of self control and aggression against the emotional and body limitations of mortals, to bring grotesque effect. So it has been understood showing pessimistic viewpoint on technology. (Warwic 1998: 121.)
But in other side, cyborg makes electronic identity through body extension, that can perform various tasks and aesthetic experiments. So in the late 1990s, cyborg shows optimistic, fusion viewpoints on technology. (Kim, Hyunsoo 2001: 100.)
- 16) In Hinduism, the incarnation of a deity in human or animal form to counteract an evil in the world. It usually refers to 10 appearances of Vishnu, incl. an incarnation as the Buddha Gautama. (The Britannica Concise, Yahoo.com) In cyber space, avatar is a animation character which take place the user's identity, and physical body. (Doosan Encyber, yahoo.co.kr)