

# A Study on Examples of Eco Design Approach

: Focused on Taller Flora

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Design  
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Focused on  
Taller Flora

Hei Jung Chun

Professor, Dept. of Clothing Science, Seoul Women's University, Seoul, Korea

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**Abstract** This study aims to develop the 21st century eco design-based fashion products by examining Taller Flora products and presenting eco design approaches. Eco design terms were examined based on literature, and Taller Flora products were explored based on literature and websites.

The following research issues were discussed. First, eco design terms are totally handled, thus defining the eco design. Second, eco design-oriented Taller Flora products are examined to explore design approaches.

Eco design aims to conserve and heal the global environment with focus on a greater understanding of and interest in nature. As such, eco design is based on a new modern concept of aestheticism that seeks to minimize environmental damage caused by the three processes of production and distribution, use and disposal, to take social and moral responsibilities for such activities, and to avoid hurting the environment.

Taller Flora brands seek to produce products by keeping close ties with indigenous communities in various nations, and by emphasizing and embracing indigenous people's craftsmanship spirit and creativity. Indigenous people use eco-friendly materials and produce products with craftsmanship spirit, and their cooperation by linking different cooperative networks is a good model for strengthening fair trade networks. These addresses the problem of expanding design work through traditional crafting.

Therefore, the features of Taller Flora brands presented a new method to approach the eco fashion. The research findings are expected to help develop the eco design of fashion products.

**Key words** Green design, eco design, natural design, and sustainable design

## Introduction

In line with industrial capitalism, environmental pollution, political and economic system changes, and rapid development of science and technology, among other new changes, people of today are pursuing lifestyles geared toward human health and environmental protection. The ecological ethical viewpoint related to that trend is a value aimed at addressing problems of environment-humans interaction, as well as

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Corresponding author Hei Jung,Chun, e-mail: hjchun@swu.ac.kr

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problems of relationships and impacts of internationalization, specialization and globalization. These values should be reflected in modern design as well.

Such eco-friendly design trend is now a global issue and a part of international modern design competitiveness. Modern designs are being led by developed nations' experimental and diverse design activities, and industrial product designs are attempting to conduct various experimental research on the development of eco-friendly products. With the enhanced environmental requirements for EU's product standards, the production of eco-friendly products has become essential internationally, leading EU to begin to regulate the designing of products and the choice of parts in 2006. Manufacturers are required to take responsibilities for the recycling and disposal of products according to the laws pertaining to the collection of products, thus leading people to say: "EU's products standards shall determine the way of designing and manufacturing of products." (Kim, February 2006)

Although eco-friendly design development is essential for a stable society and a better future, our fashion industry has concentrated on researching and designing products associated with rapidly changing consumer psychologies and consumption patterns. On top of its long-time research and efforts for addressing environment problems, the fashion industry has yet to further design and develop eco-friendly fashion products and user-friendly and eco-friendly fashion products.

Thus, various businesses are endeavoring to expand eco-friendly design capabilities with global business mind. In 2007, International Herald Tribune reported to the effect: "Based on a report written by Cambridge University of the UK, t-shirts and sweaters today are sold cheaper than sandwiches. Fast fashion is mass producing garbage, making it the enemy of environment. Both the fashion industry and consumers should recognize the seriousness of environmental problems and deal with eco-friendly fashions in earnest." (Jeon, 2007).

However, terms regarding eco design have yet to be unified and globalized with various terms being used and their meaning not being clearly defined. To address such problems, this study seeks to define the 21st century eco design as sustainable design, and to explore an eco design approach for fashion products.

To that end, current eco design terms were examined based on literature, and Taller Flora products were explored based on literature and websites. The reason for research on this brand is because, in 2008, BRITISH FASHION COUNCIL'S INTERNATIONAL YOUNG FASHION ENTREPRENEUR AWARD screening members remarked that she has her own distinctive design philosophy (eco design) and this represents her high-profile personality and the cultural identity mentioned in the international fashion industry. Yet another reason is because Eco by Geoffrey, B.Small named her as a representative eco designer (Brown, 2010). Based on these research methodologies, this study focused on the following issues.

First, eco design terms are totally handled to define the eco design. Second, eco design-oriented Taller Flora products are examined to present a design approach. These research findings are expected to help develop the eco design of fashion products.

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## *Theoretical Background of Eco Design*

### **Background to the Creation of Eco Design**

In 1962, U.S. maritime scientist Rachel L. Carson strongly indicated, in her book titled *Silent Spring*, the seriousness of ozone layer destruction, abnormal climate associated with global warming, acid rain, and marine pollution. She raised environmental problems as a serious threat to human survival. After that, during the West-East Cold War period, environmental problems drew less attention. In the 1980s, the UN discussed the problems of environmental conservation and development and established the concept of Environmentally Sound and Sustainable Development (ESSD). As the signing of Multilateral Environmental Agreement (MEA) spread after the mid-1980s, global environmental problems no longer remained at enlightenment and publicity level, but increasingly became an international regulation (Lee, 1994).

Due to oil crisis in the early 1970s, questions were raised as to how long global natural resources would last until they were depleted, and the concept of "green" was embodied through media. This green concept required that materials for green products should help considerably reduce resource consumption and pollution, and that environmental destruction should be minimized in the three processes of production and distribution, use and disposal of products (Hopfenbeck, 1993). This green concept raised the awareness of the serious impact of environmental destruction in the 1980s, leading people to think of the whole globe as a common community and as a global village being threatened. At last, in the 1990s, the environmentally friendly and eco concept was introduced to designs (Jeon, 2004).

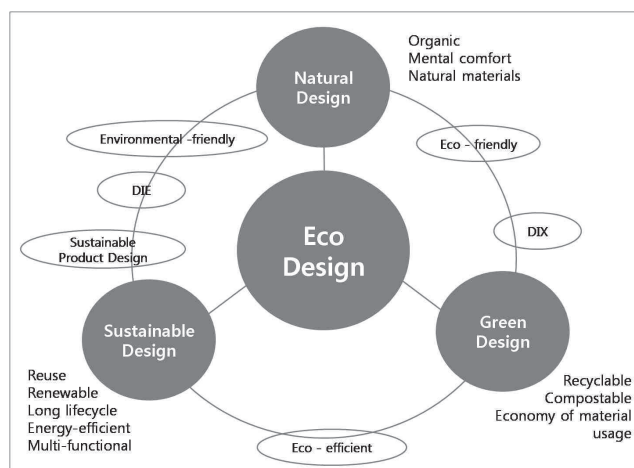
Furthermore, in 1992, "green economy" geared toward sustainable development based on respect for the environment and environmental conservation, and words like green round, an international negotiation term, came into existence. Also, international organizations-led environmental protection bodies such as National Wildlife Federation, Sierra Club, Environmental Defense Fund, and Green Peace were created, and environmental problems emerged as the humans' greatest crisis worldwide (Jeon, 1995).

The design category also saw ecological eco-friendly design methods appear that evolved around such keywords as green design, eco design, natural design and sustainable design. Papneck warned that designs are capable of creating a better world, while they may contribute to destroying the earth (Papnek, 1995). Thus, modern designers are additionally required to recognize their social and moral responsibilities from an ecological viewpoint, and to draw people's attention to a modern new concept of aestheticism that does not do harm to the environment. Eco design aimed at preventing environmental pollution is intended to promote the truly good life of humans, and to believe in modern beauty based on those true lives of modern people.

While, in capitalist society, consumers should play a part in giving aesthetic criteria and mental values to designs, eco designs should play a role in awakening consumers to environmental-protection philosophy-based designs and in leading them to live a better life in the future (Lee, & Lee, & Ha, 2004). Thus, designers are ceaselessly endeavoring to develop eco-friendly designs intended for stimulating consumer emotions and to apply such attempts to designs.

**Definition and Characteristics of Eco Design**

Design for environment involves the meaning of being ecological. This concept is seen as an eco-friendly design activity or inclination by which designs should consider environmental and ecological aspects, help hand down the wholesome human and global environments to our future generations, promote the efficient use of resources and energy, encourage the recycling and reuse of products, and preserve human and global environments through natural processes. The composition of eco design is based on green design, natural design and sustainable design(Jeon, 2004) <Figure 1>.



**Figure 1.**  
Eco Design Composition Diagram

Designers, who were conscious of the seriousness of modern environmental pollution, moved to do something against environmental pollution caused by industrial production methods, and to establish value standards and achieve green industries. This movement created the "greening" action code and started green design. Green design, which pursues the basic concept of green movement, namely, the improvement of the quality of life, is being actively put into action today in developed nations in particular(Gwon, 2001). Green design is a wise design rather than a new design. This is because green design seeks to use materials economically and safely and comply with the nature's law and nature(Jeong, 2000).

Such green design aims to reuse and reproduce materials, to extend product service life, and to promote the efficient use and diverse functions of materials. The longer product life will naturally further reduce product consumption, and the service of lending of products instead of possessing products will also reduce unnecessary consumption, helping protect the environment(Lee, & Lee, & Ha, 2004)

Eco design is considered natural design, because the design-nature interaction is the important de-

terminant of the design material, concept, result and form. Thus, eco design should essentially accompany nature. In other words, eco design is natural design, and requires a greater understanding of and interest in nature with the aim of conserving and healing the global environment(Jeon, 2004).

Such natural design concept embraces pursuits of organic farming, mental values and convenience, and the use of natural materials. A greater understanding of and interest in nature with the aim of conserving the global environment were required, and to that end, eco design came to take interest in organically farmed products that are based on naturalism-pursued natural designs. Thus, eco design seeks a balance between human society and ecology by preserving and improving the environment, by improving the quality of our life, and by pursuing the common good of the whole society(Gwon, 2001). Thus, eco design is based on a new modern concept of beauty and aestheticism that seeks to minimize environmental damage caused by the three processes of production and distribution, use and disposal, to take social and moral responsibilities for such activities, and to avoid hurting the environment. The corresponding eco design value promotes "green" and the quality of life, always uses materials economically and safely, and thus complies with the nature's law and nature itself. Also, the conservation and healing of the natural environment requires a great understanding of and interest in nature. Thus, eco design endeavors to reuse materials, to extend the service life of materials, to use materials efficiently, to resolve diverse functions, and to operate a lending system.

### ***Taller Flora's Approach to Brands***

#### **Carla Fernandez's Philosophy**

Taller Flora is both a brand name and a laboratory. The Taller Flora brand was established by Carla Fernandez. She was born in the suburb of northern Mexico adjacent to Texas, USA. In her childhood, she went shopping at nearby shopping malls and Salvation Army shops in the suburbs together with her mother, leading her to form a habit of shopping and consuming new and old products. Her father, the head of National Institute of Anthropology and History, took her on trips across Mexico, when she spent much time watching various regions' unique clothes and looking for items that could suit her clothes in her wardrobe. This childhood experience led her to work on fashion work beginning in 2005 and realize her fashion philosophy(Flora, 2012). Her design work was characterized by inspirations that she got from the tradition, homes and costumes of indigenous people as she explored diverse indigenous tribes to work together with her father. Driven by this experience, she led the way in promoting fair trade networks that seek to embrace indigenous people's craftsmanship spirit and to link cooperatives for solidifying their position and reputation or for using nature-friendly materials. Her work focused on creating new designs geared toward combining old and new, mixing simplicity and complexity, and adding forward-looking thinking to traditional elements.

One of challenging tasks for her was to promote craftsmanship spirit based on indigenous people's methods of work or craftsmen's creativity based on similar processes of work. Indigenous people's craftsmanship spirit and their cooperative work is a good model of strengthening the fair trade networks that

link different cooperatives to use nature-friendly materials. Carla Fernandez did not believe that tradition was fixed, and that fashions had short life cycles, and developed indigenous people's methods of work into advanced methodologies (Brown, 2010). She also believed that only modern designs based on this method of fashion work could defend craftsmanship spirit that was in the danger of fading gradually.

Thus, her design sought not only to make beautiful clothes, but also to address environmental problems, to improve the life quality of modern people, and to develop their families and communities.

Carla Fernandez believed that tradition not only adhered to the past but also made one think more. This viewpoint seeks to recognize the roles of craftsmen in various communities in modern society characterized accelerating globalization, and to inspire the sense of belonging and identity in their respective members, thus improving their life quality. She knew that young designers would have difficulty embracing traditional craftsmanship-based designs and would greatly resist such pursuit, but she was certain that such design method would be a new approach to fashion design. She also emphasized that such design would hugely impact communities politically and economically.

#### Taller Flora's Brand Work Process

She can be said to be the pioneer who understood the 21st century elegance based on the spirit of protecting the global environment. Based on that spirit, she pursued wearable, durable, eco-friendly and simple items for several years. She probably was economically clever and valued the environment, and yet focused on warmhearted and consumer-oriented designs. She endeavored to keep up close ties with communities of various nations in order to produce new, advanced Taller Flora models each year. Products designed by her are sold only in Mexico, the USA, the UK (London), and Japan, and they are offered at reasonable prices and in general sizes for both women and men to be able to wear. Her fashions are characterized by geometrical form <Figure 2>, by non-standardized silhouette and method of wearing



Figure 5.  
<http://blog.ounodesign.com/2010/05/22/taller-flora-by-carla-fernandez/>

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<Figure 3> and <Figure 4>, and by the use of neutral color <Figure 5> and <Figure 6>, allowing her products to be sold to both men and women, and young and old people regardless of sizes and colors. These fashion products come as she get clothes to be worn by both men and women in pursuit of the concept of eliminating unnecessary consumption.

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**Figure 6.**  
<http://lloso.blogspot.com/2009/09/taller-flora.html>



**Figure 7.**  
<http://lanoventainueve.blogspot.com/2010/07/el-diseno-es-una-forma-de-desafiar-el.html>



Figure 8.

<http://tallerflorados.blogspot.com/2010/05/22/taller-flora-by-carla-fernandez/0080901archive.html>



Figure 9.

<http://blog.ounodesign.com/2010/05/22/taller-flora-by-carla-fernandez/0080901archive.html>

For Taller Flora's product production, workshops and sale shops are operating, while production lines have moved to China from Mexico. This relocation was unavoidable because of a big difference between worker wages of Mexico and China, but still, she operates workshops in Puebla, middle central Mexico, where some 1,000 indigenous women work. She teaches indigenous women how to handle materials and embroideries in order to develop the unique Taller Flora brand products. As such, she focuses on providing people with "opportunities to get huge jobs and ideas" in a bid to adhere to her initial brand policy. Carla Fernandez still visits different indigenous tribes every other month to learn about their methods of making clothes <Figure 7>. Whenever she traveled, she took interest in the traditional methods of making clothes and patterns, thus discovering geometric squares freshly. She copied and listed the discovered patterns to be utilized.

Taller Flora prepares collections in partnerships with various cooperatives. The most important part of her work would be the selection of cooperatives and workshops. She acquired the understanding of and learned about each region's unique manufacturing techniques because she had to learn directly from craftsmen in communities to teach employees the methods of production <Figure 8>. Carla Fernandez naturally derived new designs from indigenous people's premier technologies and shapes of works, but basically based her designs on the geometric shapes grounded on the idea of Mexico's traditional costumes from the times before Spain's conquest of the country <Figure 9>.





**Figure 10.**  
Saas Brown(2010), Eco Fashion, p.50



**Figure 11.**  
[http://tallerflorados.blogspot.com/2008\\_09\\_01\\_archive.html](http://tallerflorados.blogspot.com/2008_09_01_archive.html)



**Figure 12.**  
[http://www.wearableartblog.com/my\\_weblog/2010/01/taller-flora.html](http://www.wearableartblog.com/my_weblog/2010/01/taller-flora.html)



**Figure 13.**  
<http://blog.ounodesign.com/2010/05/22/taller-flora-by-carla-fernandez/>

A museum, which possessed the materials and clothes of indigenous villages, asked Carla Fernandez to research on their clothes structures, colors and patterns with the aim of giving classes on the making of clothes. As she studied fashion design and the history of arts and took interest in the geometric structure of clothes, she came to know that in linkage with such efforts, her dream was to work together with indigenous tribes. In this process, she discovered that most structures and patterns of indigenous people's clothes consist only of squares and triangles, and realized that these were opposed to structural forms that she learned at fashion school when she was young. Ancient Mexican patterns con-

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sist of delicate pleat structures, and this method is the way of using square and triangle-pattered only clothes and folding them or connecting seams with the aim of creating diverse arrangements. This is an original assembly system and can be said to be a kind of 'cloth origami' <Figure 10>. Her design patterns and colors start with history, tradition and culture, but are expressed into a very modern, future-oriented interpretation.

### **Analysis and Evaluation of Taller Flora**

If we ask in this examination of Taller Flora whether or not fashion charity activities can change society, we could give a positive answer to that question. If fashion gives authority, albeit small, to marginal regions and people and recreate such activities into arts, then that fashion can be said to be a welfare-style eco fashion, upgraded a notch from the existing eco fashion. These efforts were able to explore unknown talent and human resources, to disclose the fading yet important handicraft work and complex detailed processes to the world and revive them, thus providing fresh ideas to the fashion markets that are fed up with existing fashions. Also, such efforts were able to highly evaluate indigenous tribes' craftsmen skills and status, thus guaranteeing their livelihoods. Through eco fashion work, she introduced traditional Mexican tribes to the world, and allowed them to participate in the production process, thus improving the region's economy. She can be said to be credited with this feat. Such eco fashion industry is not a one-way process that creates benefits only for certain society, but a two-way exchange process that creates benefits for all participants, making it an ideal business. However, the eco fashion business is not necessarily perfect economically. As discussed above, although Taller Flora designs are unique and have their own brand identity, they could not offer diverse designs, and could increase prices due to pricing associated with manual work despite efforts for rational pricing, leading to sluggish sales. Also, her eco fashion brands enable one item of clothing to diversify its displays so that consumers do not need to buy several clothes, thus reducing consumption, and eventually realizing the design philosophy of environmental protection.

Based on her experience built up since her childhood, she was able to have excellent knowledge about Mexico's various indigenous tribes, their crafting methods, and networking. This enabled her to play an intermediary's role in networking between famous fashion houses and Mexico's indigenous craftsmen. It would be better if, for her own brand products, she should develop the unique traditional geometric patterns - rather than decorations for the traditional handicraft products -, use Taller Flora's own approach and sale strategy for lowering prices, focus more on promoting the brand, and thus enhance her financial foundations and global recognition. Only in the case of special orders, it would also be necessary to adopt the make-to-order method aimed at adding details by adhering to the traditional handicraft method, and to implement a strategy aimed at penetrating niche markets targeting myriads of value-pursued consumers in modern society that highly appreciate individuals' personalities, rarity and identity.

Taller Flora design is distinctively categorized into two characteristics.

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First, Taller Flora design is an architectural design that seeks to connect the simple and straight line pattern fragments involving triangles and squares to form accurate structures. Spaces that are created when connecting panels, as well as straight line structures or simple and continuous line patterns made by pleats appear as a distinctive closed form, and each of separated figure patterns is separately formed in spaces(separable form, space separation form).

Second, Taller Flora design is a flexible design in that it does not fix clothes' forms, and the method of wearing and adjusting them. The characteristics of flexible materials, and the use of ambiguous forms and lines by sewing and composition methods enable one piece of clothing to be changed into various forms, thus presenting an open design. Rather than connecting and sewing a number of panels, a large panel(total type, space integration type) is given a minimum sewing or is changed in forms of using strings, allowing that form to remain a plane and at the same time a three-dimensional structure. Many examples of this design can be found in the Taller Flora design. As such, with diverse methods of wearing, clothing's silhouettes, namely, contour lines are also unclear, and the Taller Flora design gives the impression of multi-directional opening rather than being closed. This design can exercise diverse functionalities and efficiency. Not only in design, but also in colors and materials, Taller Flora is categorized into two types.

First, the design uses soft and warm neutral colors, emphasizes a neutral image, and allows it to suit everyone with a sense of rejection removed. This technique is much used in architectural design involving somewhat straight-line silhouettes, neutralizing strong silhouettes, and reducing the sense of formal rejection. Also, to maintain forms, the design uses fabrics that are strong to a certain extent or that have geometric patterns.

Second, the design, which uses bright and strong colors, tends to highly utilize embroideries when weaving fabrics or decorating the surface of fabrics. And, the items crafted by that design are suitable for creating decorative effects. The flexible design, which uses many bright colors, appear to show the movement of variably changing forms. For instance, in the case of sky-blue striped knits <Figure 11>, the change in patterns according to methods of wearing can be noticed at a glance due to the free and flexible design characteristics, and the unfixed methods of adjusting and wearing use flexible and elastic fabrics, allowing the clothes to naturally run down to the bottom. Many efforts were made to improve the life of people by developing designs that require a greater understanding and interest in nature. Also, she led the eco design by developing variable forms that allow the efficient use of natural materials. Calar Fernandez can be evaluated the best eco designer, because she created the Taller Flora brand by which natural materials are used in developing variable forms, thus allowing the use of flexible fashion products.

### ***Conclusion***

This study examined Taller Flora's eco design approach by defining the meaning of eco design and analyzing Taller Flora products.

Carla Fernandez produces products drawing upon proved stories and people's diverse apparels, cultures, and legacies. Taller Flora is a true eco fashion designer because her design involves the welfare-type process of using indigenous people's labor, and can prevent the unnecessary waste of fabrics by making patterns using triangles and squares.

The eco design approach is outlined as follows. First, workshops were given to indigenous women to educate them about materials and embroidery skills to be utilized in design products. This result hugely helped create jobs. Second, traditional clothing making methods and traditional patterns were arranged to develop geometric patterns, thus reducing consumption. In this way, Taller Flora's unique design approach method was developed. Third, partnerships were utilized to understand and learn about communities' special production skills, thus linking their regional cultural identity to the designing of products. Fourth, research on apparel structures, colors and patterns led to the provision of materials for clothing production classes from folk cultural institutes.

Carla Fernandez has her own sure and distinctive philosophy of design, and to the extent that this represents her high-profile personality and cultural identity mentioned in the international fashion industry, her Taller Flora is a specialty brand with the establishment of an healthy and sure identity. Also, she endeavored to improve the life of people in line with greater understanding and interest in nature, and continued with eco design by reusing materials, extending the service life of materials, making an efficient use of materials, and operating a lending system.

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