SUSTAINABILITY IN FASHION THROUGH ECO-DESIGN - A NEW PHILOSOPHY AND INDUSTRIAL PRACTICE OF THE FASHION PRODUCT

MARLENA POP
INCDTP – Division: Leather and Footwear Research Institute, 93 Ion Minulescu St., Bucharest, Romania, email: pop_marlen@yahoo.ca

At a first glance, for the clothing consumer, fashion is, by definition, a term contradicting sustainability, being based on cyclical changes of aesthetics. The accountability to which today’s product design specialist is bound, in order to provide sustainable products, while observing ethical and technological rigor concerning environmental protection, can be transferred, through the product, to the consumer who becomes responsible, in his turn, for consumption of the product and all other post-consumption actions. This accountability has changed the lifestyle of consumers, which has led, in turn, to the emergence of ecological requirements relating to products in general and to fashion in particular. Thus eco-fashion emerged, an antithetical concept to fast-fashion, a specific concept of consumerist economy. Fast actions bring innovation and quick feedback, while slower ones provide stability, promoting holistic thinking and causal chains of responsibility; a combination of the two groups resulting in fashion supported by nature and culture, therefore eco-fashion. In order to promote a sustainable industry, we need a balance between fashion and durability, namely obeying eco-design principles. Therefore, the sustainability challenge is to combine fashion industry with multiple layers of other human activities, which could give rise to a user-centered and resourceful heterogeneous industry. This paper aimed to demonstrate the need to develop sustainable fashion.

Keywords: eco-design, fast-fashion, eco-fashion, sustainable aesthetics, sustainability in fashion.

INTRODUCTION

Most new clothes are bought as a result of changing trends, and not to replace old and used clothes. This finding on the European specific clothing consumption proves that it is fashion that sells the product, not sustainability. But fashion no longer means just the aesthetics of the product; it has so many components of scientific and cultural knowledge evolution adapted to the environment, that eco-design as an interdisciplinary method of making the fashion product sustainable must be carefully analyzed. Although both contribute to the well-being of people, both functionally and emotionally, fashion and clothes are two different concepts: fashion connects us with time and space, embodying our emotional needs and helping us express ourselves as individuals, and clothing and footwear fulfill our physical or functional needs, protecting us. We must be aware of these differences and develop a more flexible and intelligent design. On the one hand, we must look at fashion as a significant and magic part of our culture, and on the other hand, we must produce sustainable and beautiful clothes based on values, skills, carefully obtained materials and semi-products.

ECODESIGN

Ecologic design can be applied in all activity sectors, from energetic industry, electronic industry, constructions, and transportation to the consumer goods industry or agriculture. This preventive approach of designing any kind of product, service or installation to protect both man and the environment is compatible with sustainable development.
The purpose of eco-design is that of limiting energy and renewable non-raw materials involving a major assessment element, which takes into account a series of actions on the environment to be avoided during the entire lifecycle of the product, such as climatic change, a negative effect on biodiversity, destruction of the ozone layer, acid rain and eutrophication of surface waters.

The underlying idea of eco-design is reducing impact on the environment during the lifecycle of the product, with a constantly improved product design. In consumer goods industries in which dominant elements of the product are defined by life style and fashion, eco-design also has a well-defined cultural component integrated into the entire design approach of the ecologic product. Thus, eco-fashion is differentiated from eco-industrial design both through cultural approach and the ecologic message of the product, resorting to the accountability of the consumer.

The dialogue between consumer and product is more direct in eco-fashion or furniture, toys, cosmetics eco-design etc., because eco-design is also more easily perceived by the consumer, than in energetic, industrial or agricultural design, where it has to be clarified by labeling, law enforcement and coercion.

Based on current knowledge it is considered that eco-design paradigms are found in the synergism of sociological, engineering, economic and humanistic methods of analysis and of an eco-product. In Figures 1 and 2 the structure of activities in the development of an organic product can be seen from the perspective of the designer and of the engineer respectively.

![Figure 1. The perspective of the designer](image-url)
It is noted that within the same life cycle of the product, the technical perspective, the viewpoint of the engineer is far less comprehensive in terms of actions than the humanistic perspective, which is essentially the viewpoint of the designer. Knowing that the designer looks at the product from the consumer’s perspective, it can be concluded the designer is closer to the user’s needs than the product or environmental engineer. Therefore in the construction of a design concept for level 1 eco-products, the aesthetics is closer to the consumer, then level 2 of functionality and level 3 of culture and lifestyle (Figure 3).
Representation of these levels of approaching an eco-design concept in fashion finds its purpose due to the fact that designers need certainties and engineers need cultural diversity. Both points of view should be dominated by the holistic vision on the fashion product.

SUSTAINABLE AESTHETICS

Aesthetics has a great importance for sustainability because it is a social magnet, an outlet for ideas, a way of making connections and an agent of change and innovation in the fashion industry. Ezio Manzini suggests that aesthetics offers a course in any type of choice for a large number of individuals (according to European statistics in consumption marketing). It follows that if we make the sustainable alternative more attractive aesthetically, there will be increasingly more eco-fashion adherents to the whole value chain of fashion product. The aesthetic of an object is also connected to understanding and knowledge and is therefore very important for sustainability.

Promoting sustainable fashion at the beginning of the 1990s was done by an ad litteram transposition of the concept of durability in fashion as well, without studying the intrinsic mechanisms of the fashion system, correlated to the morphology of this field.

The “Eco chic” concept and its failure in the 1990s reminds us that sustainable aesthetics is not based on arbitrary notions related to stylization, superficial differences and random details; after all most fibers can be processed to look “pure”, “natural” or “recycled”, regardless of their actual origin. Indeed, perhaps a reflection of the fact that fibers can look identical, whether they are marketed fairly or conventionally, coloured with traditional dyes or with low salt dyes, most clothing items cannot be distinguished from any other product on the market, in terms of aesthetics – this being the very intention of some designers. This results in both positive and negative implications. The implications are positive if the product sells on its own, and not because it promotes an important issue such as sustainability, and if the product is not altered by the prejudices concerning ecologic design, such as questionable quality or high price. On the other hand, there are negative effects, if the appearance of a sustainable material is limited on purpose, in order to comply with today’s aesthetic models, only to “match” the rest of the trends.

SUITABILITY

The idea of suitability underlies sustainable usefulness of the material or the garment, reflecting an item’s degree of “matching” with the place, position, user, producer and environment. Sustainability of use of a material or a garment requires sensitivity to a series of factors which are not among the common concerns of today’s designers: detailed knowledge of material sustainability, of how products are used and why they are no longer used. Acquiring such knowledge would result in selection of materials suitable for product use and lifetime; development of design strategies such as versatility and ability to be repaired; promoting emotional ties with a product, which encourages continuous use and a general sensitivity to how materials and clothing are actually used.

Suitability is a function of the emotional presence, evolution and development of the product – it is not enough for a product to cause an emotional response from the user once, it must also develop a long time relationship between user and object, to sustain
the feeling of value and meaning of the product in question. As a serious design issue, another method is imposed: resources can be saved matching the quality of the material with the time of use, so that sustainability would be extended only when needed. For this, we must have detailed knowledge on the energy and resources necessary to manufacture and recycle materials, as well as on the product use rates.

Suitability, understood as attachment to the product, with the role of sustaining the feeling of value of the product for the consumer, also leads to structuring style and customizing products.

SUSTAINABLE FASHION

“The requirement of making our money-making systems less dependent on using resources underlies sustainability. This can be done by building a cultural paradigm with various rhythms and a general tendency of slowing down” (K. Fletcher). The Slow Food movement, founded by Carlo Petrini in 1986, can give us significant evidence regarding the fact that people are ready to pay for rare, customized and carefully-made products, which can be applied at least partially in the field of fashion. In the field of footwear, bio, natural and/or cultural products, as well as footwear as art object are gaining more and more ground, first of all because there is thus a direct response to globalized fashion, “fast-fashion”, as an alternative to survival quality.

Slow fashion is a design, production, consumption and a better life, by combining ideas on cycles of regeneration and evolution in nature with the ones related to values and traditions. The emphasis being on quality, it does not oppose the idea of speed, but is a rather different approach in which designers, distributors and consumers are more aware of the impact of the product on workers, communities and ecosystems. This awareness issues different beneficial long-term relationships between designer and worker, between worker and garment, between garment and user, producing mass garments, while keeping high standards.

The essence of slow fashion is the balance between different rates of use, obtaining slightly more expensive clothing items, reflecting materials, work and values. Therefore, we will buy less products, but of higher value, of slow consumption, thus saving important resources. The industry could reduce to half the volume of materials used without economic losses, if customers pay a higher price for a product lasting twice as much.

CONCLUSIONS

Six directions have been highlighted, which can be considered eco-design paradigms, with the following meanings:

- developing a new concept: dematerialization, widening the product’s areas of use, integrating functions, functional optimization of the product;
- selecting low-impact materials: purity, renewability, low processing energies, recyclability;
- reducing materials used: reducing mass, reducing volume;
- optimizing manufacturing technologies: alternative production techniques, reduced number of production processes, low energy consumption, reduced wastes, reduced technological materials (consumable);
optimizing the distribution system: reusable packaging, efficient transportation, logistics, efficiency;
• reducing impact on the environment upon use: low energy consumption, renewable energy sources, reduced consumable quantity, ecologic consumables, no wastes and auxiliary energy consumption;
• optimizing initial life span, reliability, durability, easy maintenance and repair, modular structure, etc.

Key-values of sustainability in fashion are:
• community, by maintaining a relationship between designer, producer and consumer;
• empathy, the ability to understand what the other feels and being aware of the fact that this understanding is part of a larger system;
• participation, through which power structures of fashion are destabilized and a more active role is taken over in production;
• ingenuity of finding ideas to reduce consumption of materials, energy and toxic chemical substances;
• specific aesthetics, integrated into the aspirations of the modern consumer, aware of the role of ecology in his life and in the life of society.

REFERENCES
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