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## *Weaving the contemporary*

### **Actuality in the use of raw materials in the production chain of the fashion industry**

Elisabetta Cianfanelli <sup>1</sup> Renato Stasi <sup>2</sup> Margherita Tufarelli <sup>3</sup>

<sup>1</sup>*DIDA, University, Firenze, Italy, elisabetta.cianfanelli@unifi.it*

<sup>2</sup>*DIDA, University, Firenze, Italy, renato.stasi@unifi.it*

<sup>3</sup>*DIDA, University, Firenze, Italy, margherita.tufarelli@unifi.it*

#### **Abstract:**

Observing the contemporary fashion phenomena, we can notice a growing need for conscience, contamination, sharing and dissemination on the multiple aspects of environmental sustainability. This study has examined the fashion segment in the context of the development and production of new materials, including fibers and fabrics generated from agri-food waste, from the replanting of traditional crops, reuse of materials, life cycle assessment and circular economy. The aim is to define, in this path, the designer role as a promoter for new strategies and production possibilities; this seems to embody in a hypothetical consumption model based on the ease of re-use of the materials used.

**Keywords:** fashion system, environmental sustainability, new materials, communication; traceability.

#### **Introduction**

The primary purpose of this study is to analyze what exists, in terms of environmental sustainability with regard to the raw materials used, in the production chain of the fashion system; in addition it aims at identifying future research paths in this area. The research had a philological approach in order to investigate the multiple variations of the concept of environmental sustainability in the fashion sector and the implications that are expressed both in relation to production and communication of the finished or semi-finished product.

Through the evaluation of some case studies, emerge the contrast between a well-established dynamics of fast fashion and a few new realities that, often with a commercial logic of communication, structure their productions with materials and processes that are sustainable for the environment. Thus, from the analysis of the Italian production chains we can observe that the fashion system is divided into two macro areas: one aimed at fast fashion supported by globalized brands of multinational companies; and the other "slow" that interprets the Made in Italy brand product for a smaller and more demanding public (Rullani, E. 2010) (Sacco, Blessi, 2005).

Moreover, the consumer has become *prosumer* (Kotler, 1986), a hybrid figure between producer and consumer that wants to be involved and informed on both the genesis and the traceability of the product he/she buys. This phenomenon has led to an increasingly strong binding between being and buying, taking the path of critical and participatory consumption (Ritzer, Jurgenson, 2010). As Francesco Morace (2011) wrote "sustainability can be an element of differentiation and advantage of a product, but over the next 20 years being 'sustainable' will be a necessary feature that every product will have to incorporate in order to access the market" (1).

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In this scenario the figure of the designer as a "manager of creativity" takes an important role in the project and composition of materials in their first and subsequent life, as well as in the now consolidated need to generate, or in some cases support, the conscious criticism of the contemporary user in this fashion sector. The designer might have a vision about which tools can be used to orientate in this complex scenario.

### **Methods**

The issue of environmental sustainability, for some time now, is investing the fashion system. This is a vast and complex subject since the very definition of environmental sustainability has evolved from a vision centered on purely ecological aspects, to a more global meaning that also takes into account how the social and economic dimension of a sector or a supply chain impact on the territory (McArthur, 2013, 2017).

It appears easy to understand that this new approach to environmental sustainability in the fashion system, that wants to fight what for decades the market has promoted with the creation of superfluous and ever new needs, collides with the increasingly fast fashion phenomenon of the recent years (Tartaglione 2013).

Narrowing our field of investigation to companies considered significant, the aim was to carry out a critical study of the context with qualitative parameters, observing the productive and communicative behavior in synergy with an analysis of the reference literature.

The concept of environmental sustainability in the fashion world is composed by multiple realities, the one that comes closest to the common imaginary, which is more linked to the history of dressing and to eco fashion, is the use of fibers of ancient production such as hemp, jute, broom, flax, nettle and others. All fibers with low environmental impact, deriving from crops that need a limited use of water and reduced use of chemical products for both cultivation and subsequent processing these new cultures restored in Italy are often traced. In addition to this, the idea of sustainability is related to the longevity of the product and the possibility of creating a second life through the recycling of the fibers (Ricchetti, Frisa, 2011). There are therefore more aspects that can be considered cornerstones of this sector, all strongly connected to each other.

### **Findings and Discussion**

The analysis showed some trends in the reduction of chemical compounds in production processes that could be defined as techno-natural processes, oriented to the maintenance of tradition combined with the use of innovative sustainable materials such as biopolymers, including PLA and Ingeo.

This new product scenario represents a solid solution to the simplification of the textile recycling issues according to their degradability. The mechanical properties of these fibers are similar, for many characteristics, to those of the petrochemical derivation fibers, placing these materials today in a strategic and dynamic position.

Other noteworthy trends are those concerning natural-derived textile materials which, although obtained with chemical processes, provide for the re-use of substances used through modern purification systems. If over the years the presence of such fabrics consisted mainly of products derived from wood essences, now we find fabrics made with the reuse of food waste.

Among the most interesting, the one made with crabs shell, or the fabrics produced with marine algae or with citrus scraps. These fibers have strong aspects of environmental sustainability due their biodegradability and they are endowed with various intrinsic properties similar in performance with plastics, rubbers and leathers.

Moreover, we find some new interpretation of what could be a form of sustainability in the longevity of the product (Rinaldi,& Testa, 2013). The approach of some fabric manufacturing companies is now

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based on the creation of high-performance products and durability, these solutions have been developed by several manufacturers of technical apparel that strategically base the promotion of their product on the durability and maintenance. In this phase, a design centered on the needs of the client certainly becomes part of the applied strategies.

### Conclusion

The designer responsibility in the use and choice of such materials is becoming increasingly important. The designer covers a role of creativity manager who transforms an emotional idea into a product that is a synthesis between emotions and material content. The designer assumes a strategic decision-making role with systemic design skills, with the awareness of the possible reuse of these materials as well as their hypothetical degradability.

Thanks to the growing interest of consumers in a more ethical fashion, some brands are incorporating this desire for change, showing signs of a greater sensitivity, not only with regard to the choice of materials but also with respect to other values that go to the direction of social responsibility (Chan, Wong, 2012).

Sustainable fashion is a growing need especially facing the critical issues that have emerged in the fashion industry in the last decades. Hence, the term Eco-Fashion means a virtuous circle that includes all the steps: the design of a more durable product, the choice of materials, production and distribution of products, trying to achieve the minimum possible environmental impact.

The research has highlighted that Eco Fashion has a good media response, is a communicative force for a new life approach that allows ideas for a sustainable strategic design. Furthermore, the research aims to highlight that the design culture today should be able to give new value to a production waste.

The increasing presence of Eco Fashion collections on the market shows a growing awareness about these issues. This seems to be strategic and oriented towards more solutions made of transparency, traceability, certification, communication as a function of a possible recycling facilitation.

### Notes

1. *Colloquio sulla sostenibilità con Francesco Morace, di Marco Ricchetti, in Il bello e il buono. Le ragioni della moda sostenibile, a cura di Marco Ricchetti e Maria Luisa Frisa, Marsilio Editori, Venezia 2011.*

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