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Eco Design and Sustainable Manufacturing in Fashion: a Case Study in the Luxury Personal Accessories Industry

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Abstract

The Fashion market is characterized by the rapidity with which a product becomes outmoded. Enterprises producing clothes, shoes, bags and other accessories generate wastes at a fast rhythm, due to the continuous change of collections. They must store notable quantities of textiles and components not longer used for production. Furthermore, the percentage of scraps of fabrics, leather and other materials, is often significant. Recycling can be applied to the Fashion sector in order to recuperate wastes and create original items, which can be particularly successful in a market where customers are increasing their sensitivity towards sustainability.

We describe the case of a prestigious Italian brand, manufacturing high luxury leather and fabric accessories where Eco Design and Recycling have been applied. A Life Cycle Assessment of a traditional product of the company is also presented to enhance the significant aspects of sustainability in Fashion.

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1. Introduction

Before mass production, people possessed far fewer clothes and accessories. Items were tailored for the wealthy, while the lower social classes made their own clothes. Garments were used and maintained for several years by repairing and remodelling. Indeed, they could be considered long life products. The birth of ready-to-wear fashion implied the standardization of sizes and a reduction in production costs that allowed consumers to buy more clothes even if they did not fit as perfectly as the ones of the dressmakers.

At the same time, globalisation of production, increased competition and consumer demand have resulted in accelerated fashion cycles, which in turn have led to a culture of “fast” and disposable fashion [1]. Developing countries have become clothing manufacturing locations of choice, while industrialised countries, due to their higher input costs (labour, capital, energy, environmental and consumer-protection compliance, etc.) have been increasingly unable to compete with the low costs offered by emerging country producers [2]. Prices have further decreased but so too has quality. In recent decades, the idea of customization in clothing and accessories has strongly developed and the demand for more personalised products has expanded. It is in this context that Fast Fashion has appeared as a tool to satisfy consumer desire for Luxury Fashion but at affordable prices, especially for the younger generation. In fact, Fast Fashion refers to low-cost clothing collections that mimic current luxury fashion trends [3]. It is by its very nature, a fast-response system that encourages disposability [4].

The idea of sustainability was first defined in 1987 in a Report of the World Commission on Environment and Development: “Sustainability means being able to satisfy current needs without compromising the possibility for future generations to satisfy their own needs” [5]. Dimensions of sustainability have been introduced through the concept of the Triple Bottom Line: Environment; Economy; Society [6].

Fast Fashion brings up ethical and environmental issues as it clearly embodies unsustainability. In particular the lack of social dimension is evident. Fashion’s fast obsolescence is highly unsustainable and it is due to a social and cultural issue coming from a continuous desire for fashionable renewal, which individuals have in order to achieve a personal affirmation and to distinguish themselves from others. Clothes and accessories people choose to wear are strongly affected by the decision and actions of others living in the same social context. The need to continuously buy new garments is fostered by mass media and business speculations.

A formerly standard turnaround time from catwalk to consumer of six months is now compressed to a matter of mere weeks by such companies as H&M and Zara, typical exponents of Fast Fashion, with heightened profits to match [7]. Fast fashion companies thrive on fast cycles: rapid prototyping, small batches, combined with large variety, more efficient transportation and delivery, and merchandise that is presented “floor ready” on hangers with price tags already attached [8]. Technology advances such as tracking sales with electronic tills and linking these data to supplier factories with flexible production schedules has now made it possible to restock a rail with popular items as demand requires; and computer-aided design interfaced with just-in-time manufacturing methods has enabled a design sketch to be turned into a finished product in as little as three weeks [9]. Fast Fashion enterprises generally employ in-house designers who work in teams. The brand is not anymore identified with a particular stylist’s name, as it is in the case of Armani, Versace, Gucci etc.. Designers remain anonymous, the name of the brand in most cases does not have a specific meaning or correspond to the owner’s surname, this is because most of these companies are multinationals and belong to several stakeholders. Production is often located in emerging countries, such as China and Turkey.

Fast Fashion products do not last long and generate a lot of wastes, also the environmental dimension of sustainability is relevant. Thinking more widely, Fashion in general, more than any other industry, embraces obsolescence as a primary goal [10], on which most profits are based, in opposition to the criteria of sustainability. Durability enjoys an easy relationship with sustainability, depending on the choice of materials. Obsolescence of fashion products instead, is mainly driven by changes in aesthetics and tied to shifting social preferences, underscoring the psycho-social nature of factors which affect the lifespan of fashion. Garments that defy obsolescence do so in informal or unintentional ways, rarely as a result of design planning or material or product qualities. Design for durability in this sector shifts away from a familiar focus on materials, products, and user-object relationships to emerging strategies of human action. While facilitated by materials, design and construction, durability is determined by an ideology of use. Clothes and accessories mainly become obsolete in psychological terms because of aesthetics, social preferences and cultural conditions [11]. Therefore, the short life cycle of
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