

Practices and possibilities of sustainable fashion

■ KALPANA MUNJAL AND RADHA KASHYAP

Received: 10.03.2014; Accepted: 18.05.2014

See end of the paper for authors' affiliations

Correspondence to :

KALPANA MUNJAL
Department of Home Science, The
IIS University, JAIPUR
(RAJASTHAN) INDIA
Email: kalpana.meets@gmail.com

■ **ABSTRACT** : Sustainable fashion is an endeavour that draws together sustainable development and fashion. The world undergoes one of the worst economic crises ever, which affects all industries including fashion and luxury. Textile industry has a heavy impact on the environment as the current practices are unsustainable and companies, environmentalists and consumers are looking at strategies for reducing the textile carbon footprint. This paper contributes to current knowledge of sustainability in textile and clothing production and consumption. There are several options for informing the end user about the global impact of textile production as sustainability and sustainable fashion. This paper explores the problem of wasteful fashion consumption in light of the current need for individuals to develop a sustainable way of living.

■ **KEY WORDS**: Sustainability, Sustainable fashion, Environmental impact, Overconsumption, Ecology

■ **HOW TO CITE THIS PAPER** : Munjal, Kalpana and Kashyap, Radha (2014). Practices and possibilities of sustainable fashion. *Asian J. Home Sci.*, 9 (1) : 305-307.

With regards to textile processing sustain means “to maintain” or “to uphold”. Sustainability also means establishing those principles and practices which help to maintain the equilibrium of nature. In other words to avoid irreversible damage to the earth’s natural resources. A sustainable product is one that is manufactured in such a way that it has the lowest possible adverse effect on the environment. A sustainable product is one that is manufactured in a way that respects the social elements of fair trade and human rights of the people involved in the whole of the manufacturing chain (Jain and Easton, 2010).

With the increasing consumption of manufacturing goods all over the world, product manufacturing systems have come under intense scrutiny with regard to their impact on the environment problems such as global warming due to increasing atmospheric carbon dioxide levels from the burning of fossil fuels, natural resources depletion, toxic waste disposal and increasing air, water and soil pollution from both agriculture and industry.

Fashion is a process, which is expressed and worn by people as a material objects and has a direct link to the environment. The concept of fashion is one of the changes and the process of change generally produces waste. Thus,

fashion is ripe for sustainable action on all fronts.

Yesterday’s textiles are tomorrow’s toxins. Apparel manufacturers use bleaching, dyeing and printing processes that place clothing fabrication on a far with petro-chemical production. Clothing takes decades to decompose, all the while reaching deadly chemicals and harmful gases into the soil around it.

The growing movement to produce sustainable textiles advocates environmentalism, economics and social responsibility. A holistic, cradle to grave approach is emerging, which considers the impact of textiles entire life cycles.

There are two approaches to sustainability:

- Increasing the efficiencies of the system to reduce inputs and unwanted products.
- Decreasing the amount or flow of materials and garments in the system to reduce waste (Well Dressed, 2005).

The practices and possibilities of sustainable fashion are as follows:

Textile supply chain and sustainability:

The impact on environment has received the most attention with regard to the development of sustainable fibre

producing practices. In order to move to greater sustainability, companies and customers are searching for fabrics and apparel that are based on eco-friendly fibres. These fibres may be natural or synthetic but must have reduced environmental impact in their production and processing compared to conventional fibres.

Synthetic textiles are known to create harmful emissions, and they actively discourage the use of chemical processing to finish the fabric. Though the quality of synthetic fibres has improved but they are often viewed as less desirable than natural fibres. Bamboo, corn and soya are being developed as renewable resources for use as raw materials for new synthetic fibres. Often natural fibres are preferred by high end designers and are thought to be a more sustainable choice as they are renewable and biodegradable. Organic cotton is highly desired but cannot be produced in quantities needed to meet the demand. Flax, wool and silk place fewer demands on the environment than cotton but require more labour intensive processing with improved finishing technology. Hemp, ramie and jute are being reconsidered for apparel particularly for use in blends with cotton, linen or synthetics. These fibres are both environmentally friendly and low cost.

Recently, with the increase in consumer interest and the establishment of third-party certification systems, a greater focus has been given by the textile industry to the production of sustainable fibres and new alternatives have been investigated as- tencel, recycled polyester, bamboo, spider silk etc.

The processes of adding colour to and finishing a textile have been a concern with respect to environment. These processes account for the second highest use of water and energy behind fibre production. Newer methods of dyeing and finishing use less water and less energy is being utilized.

Though the careful selection of dyes and chemicals and through accurate and reliable information provided by reputable suppliers enables processors to match their customers restricted substance list (RSL) criteria. Processors often ask their dye and chemical suppliers for ecological safe dyes with various terms used like green dyes, low impact dye, organic dyes, eco dyes, natural dyes etc. Morphotex is a leading example of a colourful textile made without using any dye or pigment at all.

Overconsumption and sustainability:

Historically, most people owned few garments; clothing was treated as an investment and was maintained or remade as long as there was useful life left in the textiles. By the end of 20th century, fashion changed regularly with season. Currently, ready to wear garments are inexpensive, widely available and consumers purchase well beyond their needs. The pattern of overconsumption has a negative impact on our environment and on the quality of life. The business can

become more sustainable by reducing, reusing and recycling their resources.

Pattern of overconsumption cannot be sustained. It has a great negative impact on our environment and on the quality of life for both those involved in the process of making clothing and those consuming fashion.

Today fashion changes regularly with the season and in some cases every few weeks. Currently, ready to wear garments are inexpensive and widely available and consumers can purchase well beyond what they need. The focus on conscientious production and purchasing has magnified early in the twenty-first century as a result of concerns about global warming, social justice, a worldwide economic crisis, and a growing need to find personal fulfilment. There has been unrealistic pressure on designers, producers and consumers to make fashion faster and cheaper under a constant demand for new ideas and innovations (Fletcher, 2007).

Slow fashion is a counter trend to the unsustainable nature of fast fashion and the exhaustion of constantly pursuing the next trend. Slow fashion embraces knowing where materials are sourced and how they are made; knowing that workers are fairly paid and protected from human rights violations; knowing that the clothing is of high quality; and knowing that the care and disposal of the garment are environmentally friendly (Fletcher, 2008).

The early twenty first century is an era of overabundance; well designed clothes are available at all price levels, including mass merchandise chains such as Target, H and M and Zara. New styles are presented so frequently that the industry has labelled this sector fast fashion. In an era of fast disposable fashion, designers must consider the problem of post consumer waste. Consumers themselves have a growing awareness of practices that lead to sustainable living. The interest in and potential for sustainability in the production and consumption of textiles and apparel products is unique to our times.

Designing and construction:

Designing garments can also reduce environmental impact on the amount of scrap fabric that is generated during cutting. Cutting waste is estimated at 10 to 20 per cent. By combining design sketching with pattern making it can create fit with less waste. Starting with the fabric rather than a sketch is one way to inspire innovative pattern shape (Rissanen, 2009).

Garments that are wrapped or draped support conservation of resources. Knitting a garment forms individual shape, create no waste in comparison with a cut and sewn garment from either knit or woven fabric (Rissanen, 2009). Minimal seam allowances are common in mass produced garments because they reduce costs and streamline production sewing. However, more generous seam

allowances and hem may allow for a greater range of alternative as an individual body changes or a garment is fitted to a second owner, ultimately a choice that can conserve economic and environmental resources.

Developing a design in which all the components can be recycled or made from recycled material is an environmentally friendly decision. Material from discarded garments can be used to make new apparel. Selecting buttons made from vegetables very instead of plastic is an environmentally friendly choice. Unnecessary dry cleaning and selection of packaging, labels and hang tags can contribute towards sustainability.

Hence, for ecologically sustainable fashion should aim for 100 per cent of fabric usage to eliminate fashion waste, pattern making and fashion design should interact more closely. In zero fabric waste garments, rectangular pattern shapes dominate. Fully fashion method as an integral knitting eliminates sewing from the process.

Table 1 illustrates opportunities for sustainable choice at each stage in fashion system:

Table 1: Sustainable choice at each stage in fashion system	
Material	Innovative fibre/ fabric technology
Consumer use	Fewer garments
	Extended textiles
	Smart textiles/garments
	Wearable technology
Garment design and production	Mode to order
	Mass customization
	Body scanning
	Seamless knitting
	Digital textile printing
	RIFD

Technology plays a big role in developing the innovative materials with added benefits that extend the life span of the material and the apparel products designed with it. Technology can facilitate consumer involvement in clothing design, use and disposable methods that decrease the amount and flow of apparel garments in our fashion system. It can help us manage and reduce our excess inventory by improving apparel fit, design, production and distribution to make the right amount of the right product and deliver it to the right customer. Wearable technology and smart fabrics connect consumers with technology to add personal needs such as biological monitoring, adjustments to temperature, moisture and activity, sound and continuous communication anywhere at any time. Smart technologies can add sensing and communication functions to fashion to extend a products life span, add meaning and sustain life itself by monitoring biological health.

Smart fabrics, seamless knitting, digital textile printing, wearable technology, made to order clothing, fibre to fibre recycling. These technologies enabled apparel application evoke a future of design and product development that is rich with possibilities for developing sustainable solutions.

Conclusion:

Designers and product developers need to be aware of environmental effects in the processing of textiles and should consider the impact of their decision on the environment. The industry needs to critically examine its present practices.

They must model best practices and contribute to the mission of sustainable fashion. Time has come to rethink the processes, to generate new ideas, to produce garments with a sense of ethics, using organic or renewable resources and manufacture them in humane condition that together sustain the planet and people that design, produce, retail and purchase.

Authors' affiliations:

RADHA KASHYAP, Fashion and Textile Technology, The IIS University, JAIPUR (RAJASTHAN) INDIA
Email: radhakashyap07@gmail.com

REFERENCES

Bye, Elizabeth (2010). *Fashion design*. Oxford International Publisher Ltd. NEW YORK, U.S.A.

Hethorn, J. and **Ulasewicz, C.** (2008). *Sustainable fashion why now?* Fairchild Books Inc, NEW YORK, U.S.A.

Joy, A., Sherry, F.J., Venkatesh, A., Wang, J., Chan, R. (2012). *Fast fashion, sustainability and the ethical appeal of luxury brands*, Thesis, CANADA.

Kountiou, C. (2011). *Thinking out of the box for sustainable fashion design, Symposium-panel on environment and sustainability*, Hong Kong.

Neilson, D. S. (2012). *Implementation of supply chain sustainability in the fashion industry*, Thesis, SWEDEN.

Pasricha, A. (2010). *Exploration of meaning of sustainability in textile and apparel discipline and prospects for curriculum enhancement*, Thesis, AMES, IOWA.

Quinn, Bradley (2010). *Textile futures: Fashion design and technology* Oxford International Publisher Ltd; NEW YORK, U.S.A.

Rissanen, T. (2009). *Creating fashion without the creation of fabric waste*, In: Hethorn, J. and Ulasewicz, C. (Eds). *Sustainable fashion: Why now? A conversation about issues, practices and possibilities*; 184-206. Fairchild books, NEW YORK, U.S.A.

Well Dressed (2005). *The present and future sustainability of clothing and textile in the United Kingdom*, Cambridge, U.K., University of Cambridge, CAMBRIDGE, UNITED KINGDOM

