

Designing Sustainable Fashion: Role of Psychosocial Factors of Fashion Consumption and the Challenges of Design

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Abstract

Background/Objectives: The paper presents a theoretical framework for sustainable fashion design incorporating psychosocial factors of consumption. It calls for supplementing the fashion design models which usually cover life cycle analysis with an understanding of psychosocial factors relating to consumers. The paper identifies the psychosocial factors affecting fashion consumption, examines how these factors interact and the challenges for sustainable design. Further the implications of these on sustainable design are also identified. **Methods/Statistical Analysis:** The research is mainly based on theoretical data from academic publications, and research journal articles. The research covers the concept of consumption, models of sustainable fashion design, the shift from emphasis on sustainable production to sustainable consumption and the challenges of the psychosocial factors on sustainable design. **Findings:** In the present paper, the researcher suggests that the life cycle thinking used for sustainable fashion design should be complemented with an understanding of consumer psychosocial factors to facilitate engagement and consumer attachment. A designer should be able to appreciate the interplay of a mix of psychological factors: cognitive, affective and behavioural in order to facilitate better engagement and attachment. Consumers' sociocultural factors influencing design must also be taken into consideration. The list of psychosocial factors affecting sustainable fashion design is presented in Figure 1. These factors are similar to [14 & 15]. However challenges with respect these factors are discussed in more detail. Factors discussed are psychological factors like needs/wants, meanings of consumption in relation to personal and social identity, and social factors like life style and values and the role of person – product attachment are discussed. The challenges these factors impose on sustainable fashion design are also identified. **Application/Improvements:** Sustainable fashion design needs to incorporate psychosocial aspects of consumption. These would motivate designers to discover new opportunities and consider novel designs and in turn would facilitate long term relationship between product and person.

Keywords: Psychosocial Factors Affecting Sustainable Fashion Design, Sustainable Fashion Design Challenges

1. Introduction

Sustainable fashion is no longer considered an oxymoron as the fashion industry is quietly but surely embracing change and adapting practices to reduce the environmental burden and social impacts through a set of methods emphasizing eco efficiency, eco-effectiveness, life cycle analysis or cradle to cradle techniques. However researchers consider the changes in practices as quite inadequate as they are largely

focused on use of sustainable material. The Sustainability Driven Innovation Matrix covers the innovation alternatives a company is faced with and product design is one of the paths a company can use to deliver sustainable solutions¹. The current paper suggests that sustainable fashion design models should integrate psychosocial factors for greater effectiveness. Sustainable design requires an integrated approach that takes into account how fashion is produced and also how it is consumed.

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“Sustainable development” as is well known means meeting the needs of the present generation without compromising the needs of future generations. This places a huge responsibility on industry, government and consumers to evolve cohesive ways of tackling economic, social and environmental issues with comprehensive solutions. The fashion industry has been slow to address sustainability challenges related to negative impacts on the environment or social/ethical issues. The fast-fashion business faces increased criticism due to its effect on encouraging impulsive consumption and a complete disregard for natural resources.

Despite widespread criticism about the environmental damage and social concerns a majority of fashion producers do not address issues of sustainability. There are exceptions like Marks and Spencer or H and M with its Conscious Collection, but these have yet to find mass appeal.

Sustainable fashion design is a complex effort. The paper brings out the complexity involved in meeting sustainability goals. It calls for supplementing the fashion design models which usually cover life cycle analysis with an understanding of psychosocial factors relating to consumers. The importance of design cannot be overlooked as it is known to determine 60-80% of lifecycle impacts.

There exists an opportunity to position psychosocial factors of consumption as a major driver of change in sustainable fashion design. Therefore, the aim of this research is to examine psychosocial factors that affect sustainable fashion design. This is particularly relevant as little is known of how this contributes to addressing sustainable fashion design.

Fashion designers, producers and retailers need a better understanding of consumer expectations, needs, motivations, identities and so on, to progress sustainability within the fashion industry. In light of the limited research on psychosocial factors affecting sustainable fashion design, this paper serves to fill the gap. The research pursues the following objectives:

What psychosocial factors affect fashion consumption and thereby have implications for design? How do these factors interact and what are the challenges for sustainable design?

The research study is mainly based on theoretical data from academic publications, and research journal articles. The paper consists of the following parts: the importance of designing sustainable fashion, concept of consumption, a review of a few models of sustainable design in the

fashion industry, a theoretical framework is proposed by the researcher on the psychosocial factors, the role of a few key psychosocial factors affecting sustainable fashion design and the associated challenges are discussed. Further the paper covers a discussion on the framework and factors, implications, limitations and conclusion.

2. Importance of Sustainable Fashion Design

The fashion industry and particularly the textile and clothing industry has been known for causing negative environmental impacts through the stages of raw material production, manufacturing, use and disposal. Apart from environmental issues there are social, ethical and health issues identified with the fashion industry².

Researchers have been urging the fashion industry to take proactive measures to develop sustainable products and services³⁻⁵. Fashion designers are seen as having a critical role in the design and development of sustainable new products that can lessen the impact on the environment and simultaneously focus on social and ethical concerns⁶. The design phase contributes almost 60% to 80% of life cycle impacts of a product making it an important phase and the role of the designer therefore becomes crucial. It is important therefore for fashion designers to carefully consider their design practices, adopt appropriate methods for sustainability and integrate the psychosocial factors of consumption in design for greater effectiveness.

3. The Concept of Consumption

Consumption means satisfying needs. Needs are usually defined as arising out of the physiological, psychological and social conditions of an individual's conditions, whereas wants and desires are specific ways of fulfilling needs and have a psychological or social underpinning. All activities towards meeting any of these needs could be stated as consumption.

While economists see consumption as an activity to meet a need and to gain benefits, Baudrillard⁷ regards consumption as an indication system. Therefore in addition, to having a “use value” or “exchange value”, consumer goods have a sign exchange value⁷. These signs could indicate distinction, taste and social status. Hence, consumption is considered symbolic today.

4. Models of Sustainable Fashion Design

The sustainable design models in fashion largely cover the life cycle analysis approach. However, some researchers advocate slow fashion to respond to the damaging effects of fast fashion. In addition researchers have examined the new strategies like emotionally durable design to extend the use stage of the lifecycle.

The following provides a brief overview of the contributions of the researchers.

The contributions of a few advocates of life cycle thinking in fashion^{3,6} are briefly covered here.

Besides covering the lifecycle of a garment with its key stages, the researcher³ explores design approaches for reducing the scale of consumption through service design, localism and speed and user involvement. Further the researcher³ suggests that clothing be designed based on values to create a deep sense of meaning. Five ways have been suggested to start a sustainable process in clothing and fashion: local production, never laundered clothing, products that answer deep human needs, a multiple life-cycle approach and design thinking that engages the consumer to take part in the design or realization process. These strategies have been implemented on an experimental basis with no results verified so far³.

The Fashion Design Sustainability⁶ model besides covering the lifecycle stages also suggests sustainability strategies that can be used by a fashion designer to reduce the negative environmental impacts or enhance sustainability.

The slow movement⁸ in response to the fast fashion industry has been advocated to counter the negative impacts of fast fashion.

Sustainable fashion design strategies for extending the use of garments over a longer haul have been advocated by other researchers. These include: long life guarantee and product satisfactions, product attachment and emotionally satisfying design (includes sub strategies of Customization, halfway products and modular structures and Co-creation and open source design), services, design services (includes sub strategies for services for intensive and longer utilization)⁹.

A design method called emotionally durable design to extend the use phase of products by increasing the durability of relationships between users and products has been suggested¹⁰. The study on emotionally durable design¹⁰ explores why users discard products that still work and

based on the analysis suggests strategies and tools that will help designers to explore new ways of thinking and of designing objects capable of supporting deeper and more meaningful relationships with their users.

The role of sustainable design is to go beyond aesthetics¹¹ and consider the product in terms of its production, materials, use and after-use, and also in terms of its meaning and contribution. Furthermore it must support attachment, empathy, aesthetic aging and gaining of meaning over time¹¹. The role of sustainable design therefore is becoming all encompassing.

Increasingly researchers have come to emphasize the consumption side. Some researchers believe that there is need to produce more knowledge on the human aspect of sustainable development, others advocate that there is need to develop radical ways of changing consumer patterns of consumption, and yet others call for developing new ideas and designs^{12,13}.

In the past the emphasis of sustainable design was on the production side and the results obtained were limited. Unless the consumption side is considered all attempts to sustainable fashion design is not likely to succeed. The role of the consumer and the need to engage consumers in design in order to make consumption more sustainable is found to be necessary.

A few models which emphasize the consumption side include^{3,8,10,14}. A theoretical model has been suggested¹⁴ incorporating three planks: consumption, value and person-product attachment. Based on literature review the influences on consumption behavior of aspects like needs, desires, self-identity, values, norms, lifestyle, social class, culture and many other factors have been identified¹⁴. Further the interplay of factors through a consumer survey has been extensively studied¹⁴.

5. Designing Sustainable Fashion: A Theoretical Framework Integrating Consumer Psychosocial Factors

In the present paper, the researcher suggests that the life cycle thinking used for sustainable fashion design should be complemented with an understanding of consumer psychosocial factors to facilitate engagement and consumer attachment. A designer should be able to appreciate the interplay of a mix of psychological factors:

cognitive, affective and behavioural in order to facilitate better engagement and attachment. Consumers' socio-cultural factors influencing design must also form inputs for the fashion designer. A fashion designer will have to understand the consumer's psychosocial influences to meaningfully get the consumer to shift towards responsible choice.

The theoretical framework depicting the psychosocial factors affecting sustainable fashion design is given in Figure 1. Many of these factors were identified by researchers^{14,15}.

The present researcher in the latter part of this paper briefly covers some of the factors affecting sustainable fashion design: needs/wants, meanings of consumption and identity, values and lifestyle and person product attachment.

6. Sustainable Fashion Design: Psychosocial Factors and the Challenges in Design

Of the several factors identified in the theoretical model an overview of a few has been provided. Factors discussed are psychological factors like needs/wants, meanings of

consumption in relation to personal and social identity, and social factors like life style and values and the role of person—product attachment is discussed. The challenges these factors impose on sustainable fashion design are also identified.

6.1 Needs/Wants

According to¹⁶, it is important to draw a distinction between a need and a want. Needs are essential to a body, a social order or an identity that has to be satisfied and are therefore essential. Wants, on the other hand, are defined as subjective and include elements of self-centeredness, desire, or pleasure. Wants may be considered trivial and insatiable since they do arise from necessity or nature¹⁶.

6.1.1 Challenges

Since fashion consumption may be a need or a want it has implications for the environment, society and ethics. The challenge of a fashion designer is to simultaneously satisfy the consumer and consider how to eliminate the negative impacts or ensure positive impact through appropriate design principles like cradle to cradle design.

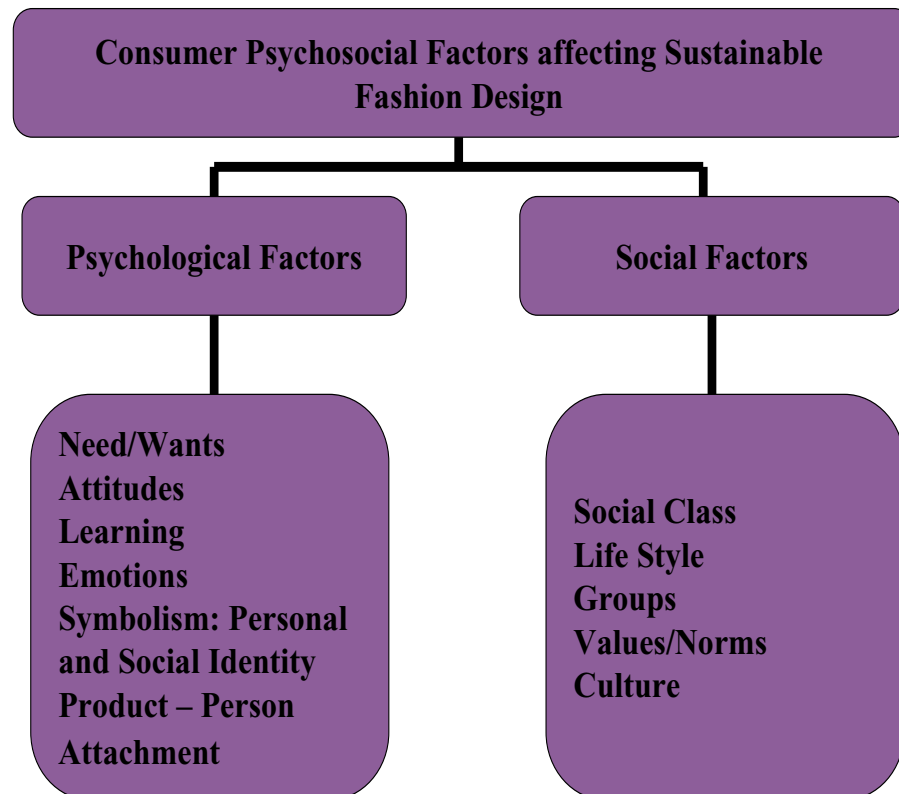


Figure 1. Sustainable fashion design and psychosocial factors.

6.2 Meanings of Consumption

Consumption has become symbolic¹⁷. Four different consumption meanings are associated with products: utilitarian meaning (perceived usefulness of a product in its ability to perform functional tasks), hedonic meaning (specific feelings the products evoke or facilitate), sacred products that are very important to people, and social meanings (products and services are seen as “media for interpersonal communication” and for statements about people’s positions and statuses in social groups)¹⁸. Consumption meanings become important to a consumer as it is used as a means of shaping his or her personal or social identity, life style, or as a means of creating cultural meaning. These aspects are discussed below.

6.2.1 Challenges

Fashion products due to their symbolic value can have strong negative impacts on the environment, society and ethics, a designer would therefore have to make an informed choice about how to convey the design value symbolically without compromising on sustainability.

6.2.1.1 Meanings of Consumption—Personal Identity

Fashion enables consumers to make statements about their identities. Goods used by consumers are recognized as useful in defining their identities and are an important driver of consumption behaviour¹⁹.

Consumers’ identities are shaped to correspond with what they think of themselves and over a period of time change to accommodate new aspects of their selves.

6.2.1.1.1 Challenges

The challenge for the designer is how to help shape personal identities without its negative fallout or design in a manner that is restorative and regenerative.

6.2.1.2 Meanings of Consumption—Social Identity

Consumers are greatly influenced by friends, family and colleagues. In addition to constructing their self-identities, people shape their collective social identities either to fit in with the social group and avoid rejection or differentiate themselves from others²⁰.

6.2.1.2.1 Challenges

The challenge for the designer is how to help shape per-

sonal or social identities without its negative fallout or design in a manner that is restorative and regenerative. Since identities undergo change the challenge is how to keep the fashion item contemporary yet meaningful to the identities desired both personally as well as socially.

6.3 Life Style, Values and Culture

Consumer lifestyle is an individual’s pattern of living. Lifestyle consists of patterns, in which people live and spend time and money¹⁸. Life style also refers to people’s activities, interests and opinions. To large extent a consumer’s choices are influenced by his or her life style. A person’s lifestyle is also never constant due to changes in the consumer environment. Life style signals a person’s social position and psychological aspirations to others. According to McCracken²¹ consumers purchase many products because they aspire to some lifestyle and products represent a bridge towards the desired lifestyle.

The concept of lifestyle also includes individuals’ values. Products carry symbolic value and enable consumer to actualize these through a certain way of acting and living.

Consumption is also influenced by culture. Culture comprises shared meanings, values, norms and rituals, traditions and customs.

6.3.1 Challenges

Life style and culture challenges for design remain similar to other factors.

6.4 Person- Product Attachment

Fast fashion characterized by quick product replacement and the need to be contemporary has its downside for the environment and society at large. Designing products for longer duration of use is recognized as a pre-requisite for a sustainable future. Some researchers advocate a strong person-product relationship as a path to sustainable design strategy such that a consumer engages in protective behaviors towards this product and hence extends product use²².

Product attachment is defined as the strength of the emotional bond a consumer experiences with a specific product²³. A consumer gets attached to a product which conveys a personal and special meaning over and above its utilitarian value.

In²³ identified seven determinants of product attachment: enjoyment, memories associated with people,

places, and events, support of self-identity, life vision, utility, reliability and market value. However their study concluded that only memories and enjoyment contribute positively to the degree of attachment.

6.4.1 Challenges

Designer challenges remains as to how to build the emotional bond and sustain the level of relationship particularly since the value of the product is temporary in nature. When the objective is to extend a product's life span, a positive emotional response in person-product relationships is also most significant.

7. Discussion

The Sustainable Fashion Design and Psychosocial factors framework identifies the factors affecting fashion consumption which a designer needs to consider. Most designers are not aware of these factors and an understanding of these could help in creating new design opportunities which can have a positive impact on the environment and social issues.

In order to extend the life of the fashion design product at the use stage a possible approach consists of understanding the importance of product-person attachment. Specific strategies have been suggested¹⁰ to extend the use of fashion products through emotionally durable design. Product person attachment could be strengthened by understanding that emotions are a prerequisite to create relationships and may perhaps be the key to long term relations with fashion products. A mix of design strategies suggested⁹ include: co-creation or product as service could contribute to building long term relationships with consumers and encourage behavioural change toward sustainable consumption. Most consumers are interested in environmental issues but rarely act accordingly. Designers have to enable the consumer to actualize his/her own values related to the environment or social and ethical aspects by offering appropriate design choices. Sustainable fashion design should be able to infuse meaning into products.

Sustainable fashion design must interconnect strongly with a person's identity: self and social. The creation of meaning is one of the most important issues a designer must consider in the context of sustainable design.

Deeper understanding of fashion consumption was offered by identifying the psycho social factors. Symbolic

and personal/social identity suggests that design, manufacturing and consumption need to be connected to each other. A study²⁴ suggested the use of principles of user interface design to decrease the redundancy and trouble some design in part in a LMS system assessed by the researcher.

All of the above have a complex effect on a consumer and makes it difficult for a designer to consider these simultaneously.

8. Implications

This study offers knowledge on psychosocial factors that affect the design of sustainable fashion.

A holistic view on sustainable design is needed which incorporates socio-psychological aspects in sustainable fashion design. A deeper understanding of people as well as the meanings of consumption offers ways to see new opportunities and consider novel ways of sustainable design. That sustainability will open a plethora of new design opportunities is evident.

In order to foster long-term person-product relationships, one must consider including those attributes in design that enable emotions and attachment as also new design strategies have to be developed and tested that extend the use stage. Emotionally durable design can help in identifying better design to evoke emotion and create attachment.

The knowledge in this article can be used to educate designers who simultaneously have to balance the goals of sustainability and consumer expectations. The courses on sustainable fashion design must contain the elements of psycho social factors affecting consumption.

9. Limitations

The overview covers the role of a few psychosocial factors and gives no pointers as to how to overcome the dilemmas faced. For example, when confronted with needs and wants which should receive importance is not clear.

Some limitations concerning this study are that empirical data is not been used to describe the phenomena.

The research relies on published literature only and is too wide in scope. However a wide research approach on the other hand can provide different dimensions to the research, and open novel views to the research area of sustainable design and consumption

10. Conclusion

The study offers an overview of the psychosocial factors affecting sustainable fashion design. It covers factors like needs/wants, meaning of consumption, self-identity and social identity, values, lifestyle, person-product attachment. Many of these factors are not known to fashion designers and the article can therefore help in creating awareness about these. The article also briefly covers why understanding consumption is important. By incorporating the psychosocial factors in design new avenues for sustainable fashion design appear possible.

11. References

1. Nerurkar O. Sustainability driven innovations matrix a conceptual framework for environmental sustainability opportunities. *International Journal of Applied Engineering Research*. 2015; 10(50):245–65.
2. Well Dressed? The Present and Future Sustainability of Clothing and Textiles in the United Kingdom. 2006. Available from: http://www.ifm.eng.cam.ac.uk/uploads/Resources/Other_Reports/UK_textiles.pdf
3. Fletcher K. Sustainable fashion and textiles: Design journeys. 1st ed. London: Earthscan; 2008.
4. Black S. Eco-Chic: A Fashion Paradox. 1st ed. London: Black Dog Publishing; 2008.
5. Hethorn J, Ulasewicz C. Sustainable Fashion: What's Next? A Conversation about Issues, Practices and Possibilities. USA: Bloomsbury Publishing; 2015.
6. Integrating sustainable strategies in the fashion design process: A conceptual model of the fashion designer in haute couture. 2016. Available from: <https://researchbank.rmit.edu.au/eserv/rmit:160826/Gwilt.pdf>
7. Baudrillard J. The consumer society: Myths and structures. London: Sage. 1998.
8. Slow fashion-the answer for a sustainable fashion industry? 2016. Available from: <http://bada.hb.se/bitstream/2320/6776/1/2010.9.15.pdf>
9. Niinimäki K, Hassi L. Emerging design strategies in sustainable production and consumption of textiles and clothing. *Journal of Cleaner Production*. 2011 Nov; 19(16):1876–83.
10. Chapman J. Design for (emotional) durability. *Design Issues*. 2009 Sep; 25(4):29–35.
11. Walker S. After taste—the power and prejudice of product appearance. *The Design Journal*. 2009 Mar; 12(1):25–39.
12. Throne-Holst H, Sto E, Strandbakken P. The role of consumption and consumers in zero emission strategies. *Journal of cleaner production*. 2007 Sep; 15(13):1328–36.
13. Tischner U, Charter M. Sustainable product design. In: Charter M, Tischner U, editors. *Sustainable Solutions: Developing Products and Services for the Future*. UK: Green leaf Publishing; 2001. p. 117–38
14. From disposable to sustainable: the complex interplay between design and consumption of textiles and clothing. 2016. Available from: <https://aaltodoc.aalto.fi/bitstream/handle/123456789/13770/isbn9789526042848.pdf>
15. Understanding factors that shape consumption. 2016. Available from: <https://lup.lub.lu.se/search/publication/1549314>
16. Encyclopedia of consumer culture. 2016. Available from: <http://www.sage-ereference.com/view/consumerculture>
17. Bauman Z, May T. Thinking Sociologically. 2nd ed. USA: Wiley Blackwell; 2001.
18. Engel JF, Blackwell RD, Miniard PW. Consumer Behavior. 8th ed. USA: Dryden Press; 1995.
19. Motivating Sustainable Consumption. Available from: http://www.sustainablelifestyles.ac.uk/sites/default/files/motivating_sc_final.pdf
20. Douglas M. The world of goods: Towards anthropology of consumption. 3rd ed. London: Routledge; 2003.
21. McCracken GD. Culture and Consumption: New approaches to the symbolic character of consumer goods and activities. 1st ed. USA: Indiana University Press; 1990.
22. Product attachment. 2016. Available from: http://www.lucs.lu.se/wp-content/uploads/2015/02/KKEG15_Littsem3_product-attachment-and-replacement.pdf
23. Schifferstein HN, Zwartkruis-Pelgrim EP. Consumer-product attachment: Measurement and design implications. *International Journal of Design*. 2008 Dec; 2(3):1–13
24. Conceptual graphic design and interaction design of learning management system a tutor. 2016. Available from: <http://www.i-scholar.in/index.php/indjst/article/view/67372>