RESPONSIBLY REDESIGNING

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Abstract

With the advent of fast fashion in the Indian apparel industry, the need to actively pursue end product recycling is gaining importance. The concept of closed-loop manufacturing or circularity is important for efficient use of raw material and minimum damage to the environment. It is important for designers to introduce style elements keeping Mono-Material design policy in mind, followed by efficient global take-back systems, quick and smooth segregation, and disassembling of the fashion product by both fibre and fabric manufactures. To achieve true circularity, a sustained value chain dialogue between consumers, designers, and manufactures will create transparency and confidence among all stakeholders to take the movement of responsible redesigning ahead.

Keywords: Fast fashion, Mono-Material, designers, recycling, redesigning.

Designing is an essential component of our daily lives. We use design to silently communicate to the world around us. Our choice of clothes is one such design element that is used consistently by us daily. The need for this active conversation with our surroundings requires a change of garments. The colour or pattern effectively puts forth the role or mood we wish to portray. A change in season, occasion, career choices, and personal goals sometimes reflect a complete wardrobe change. Therefore, this conversation with our environment is fast becoming an expensive and often ecologically damaging proposition. The apparel industry has to cater to the social-media savvy, actively communicating, ever-demanding Indian consumer. The Indian textile and apparel industry has anticipated an annual GDP of 11.5%, and the domestic market is estimated at US$ 75 billion in 2020-21. In this pie, apparel constitutes a 73% share of India's total textile and apparel market [1].

The average Indian is well on the way towards being a fast fashion consumer. Who will buy, use and simultaneously discard garments at an even faster rate than traditionally done in the country? Therefore, the large amounts of fashion waste generated may, unfortunately, end in landfills and sometimes in incinerators. The textile waste generated can be reduced only by increasing the active lifespan of the product or by recycling it or designing the product. The 'Action Plan for Sustainable Fashion and Textiles; Well Dressed in a Clean Environment. An initiative by the Nordic Council of Ministers launched in 2015 can be adopted [2].

Products with recycled content can be just as stylish and pleasing to look at as products made out of virgin material. Designing old garments and recycling them individually to make other products is a useful but time-consuming and slow option. The process will also not cover all the garments consumed in fast fashion. Urgent attention needs to be focused on shifting the onus of using recycled fibres or fabrics from the niche market of discerning clientele to mainstream retail outlets and designers. Many large fashion brands do not pursue this option further as they feel it leads to ineffective and wasteful logistics [2]. Therefore, what is required is to integrate elements of recyclability within the design of the product. So that retrieving the used material for quick integration into the next production cycle can be done. Houdini's Mono Air Houdi is an example of designing an infinitely recyclable fleece jacket that actively "fights plastic waste."

Some key elements to keeping mind while designing such products are:

1. Fashioning a product with easy-to-segregate design/ style elements:

Fashion designers should actively pursue the Mono-material policy for designing a garment. The Mono-Material policy requires designing a single type of raw material or a garment whose components are made from a single type of raw materials [3]. The policy also extends to fasteners and other apparel accessories. Example Adidas has unveiled recyclable mono-material trainers, launched in 2021, under the tagline, 'Made to be remade'[4]. The use of single material for manufacturing sneakers is anticipated to ease and even reduce the economic cost of recycling the product. Mono-Material designing sometimes comes with constraints on creativity and functionality. But strong commitment from the designer or brand encourages the integration of the process right at creating a mood board or fashion line, thus making the process effortless. Similarly, knowledge of printing and finishing processes and the wide assortment of chemicals used in textile manufacturing also need to be kept in mind to help facilitate recycling later.

2. Winning consumer confidence with the use of strong communication of transparent, eco-friendly, and fashionable recycling options:

Transparency about the source and method of obtaining the recycled raw material can win the consumers' con-

fidence. Companies' commitment to produce stylish garment designs from Mono-Materials to facilitate future recycling is achievable. Traceability standards such as The Recycled Claim Standard (RCS)9 and Global Recycled Standard (GRS)10 are certification systems that ensure the recycled material's genuineness [5].

For example, the sustained campaign of MUD Jeans in communicating its raw material source, detailed production process, types of dyes used, to amount of water consumed provided a never before achieved transparency in their client's mind. Thus, encouraging the customers to consciously buy and use a product that is genuinely committed to recycling.

3. Smoother collection of post-consumer waste:

Closed-loop systems of manufacturing also require established systems of getting a product back to a central recycling system or, ideally, straight to the product's manufacturer. The 'Unlimited' campaign by Arvind mills was initiated in India to collect post-consumer waste weighing 1.3 tonnes or roughly 5700 garments [6]. Campaigns for global take-back systems such as these can be further facilitated when the products are mono-material-based, thereby becoming easier to segregate and reuse.

4. Quick segregation and disassembling of the product:

Sometimes, using a single raw material may not be feasible or practical due to the specific functional end uses of the garment. Here design elements that cater to easy disassembling or segregation of raw materials can be undertaken. In India, another challenge is that fashion products also include additional surface ornamentation elements such as multiple embroidery features (sequences, bugle beads, metallic and silk threads, etc.) that may become difficult to remove from the finished fashion product.

In the ready-to-wear sector of denim production, the splitting of fasteners and other accessories from a set of jeans can help recycle the cotton-rich resource of denim, a staple in the wardrobe of most work-at-home customers of today's garment industry. The biggest challenge to smooth disassembling of a garment lies in fiber blends to give increased strength or more significant stretch to a style as current recycling technologies focus on retrieving pure fibers for recycling. Some exceptions exist, such as Renewcell, which actively works in dissolving used cotton and other cellulose-rich garments to produce Circulose® pulp (viscose) as a final step in closing the recycling loop [7]. Fashion designers can facilitate such a process by using similar natured fibers to make them either recycling or segregation friendly.

5. Designing reintegration of the recycled element into the manufacturing cycle:

There will be an initial skepticism towards the use of recycled raw materials in the designed fashion garment. However, a brand's strong message towards responsible fashion would eventually coerce the Indian consumer towards sustainable design choices. Simultaneously the challenge of maintaining economic competitiveness and quality of the recycled product vis a vis virgin material made product is essential. A shorter integration cycle can be achieved only when key design elements encouraging recycling at the end of the product life span are a part of the initial drawing board and designing process.

Redesigning the way ahead for the Fashion Industry: If the challenge of being sustainable and green is to be truly accepted by the textile and apparel industry, both sectors' responsibilities need to be shared. An important value chain dialogue needs to be initiated between the fashion and fabric industries. Fashion, home furnishing, and accessory designers can make conscious efforts to design garments keeping the key Mono-Material policy in mind. Limitations due to using similar fabrics for a garment and the difficulties of suiting the products' multiple requirements by single materials are real but not insurmountable. Recycling post-consumer waste may be difficult and pose several logistical as well as financial challenges. Still, active interaction between the textile and fashion industry would help create sustainable closed-loop recycling solutions.

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