

Zero Waste Fashion

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Abstract: *Zero waste fashion custom dates back to the period when animal skins were drawn as a way of wrapping the body. The most traditional known piece of clothing have not created any waste in the phase of textile manufacturing. Fashion industry is one of the industries that produce a lot of waste during its growth. Fast fashion is widely common but fast fashion consumers don't realize about the development of waste in fast fashion clothes. It's time to find ways to produce a minimal or no waste when producing clothing. Zero Waste Fashion is regarded as the way to manufacture clothing with or without minimal waste. There are different methods of generation of non-waste apparel and fabric, such as tessellation, jigsaw, geo cut, multi –cloth approach, transformational reconstruction to name a few.*

Keywords: Fashion, Zero Waste, Sustainability, Eco-friendly

1. History

Zero waste fashion practice goes back to the time when people used to drape animal skins as a means to cover their bodies. Many historical clothing's did not create much waste in the garment making process. The Indian Sari, ancient Greek dresses such as himation and chiton are just a few examples. KIMONO the traditional dress of the Japanese is one of the best examples of zero waste fashion as it utilizes each and every bit of the fabric. It is usually a rectangular piece of fabric which is then divided into eight parts. One of the first no waste or less waste clothing was designed in 1919 by an Italian artist named Ernesto Michahelles also goes by the name Thayaht. He designed something called a TUTA or overalls.

2. Introduction

Fashion industry is one of those industries which produce a lot of waste during its manufacturing process. Fast fashion is very popular all over the world but the consumers of fast fashion are not aware of the waste production in the manufacturing of fast fashion garments. It's time to look for ways which produce minimal or no waste while producing garments. The way of producing garment with minimal or no waste is known as ZERO WASTE FASHION. Zero waste fashion has become a huge part in the sustainable fashion movement.

There are 2 methods to implement zero waste fashion being:-

- Pre consumer zero waste fashion
- Post consumer zero waste fashion

Pre consumer zero waste fashion refers to creating zero waste during the manufacturing process and Post consumer zero waste fashion refers to utilizing secondhand garments and extra fabrics to make new garment.

There are different methods of creating zero waste apparels and garment keeping the main rule in mind i.e. creating zero wastage.

1) Tessellation

Tessellation method consists of one motif or a shape which is arranged repeatedly along the length and width of the fabric in such a way that there is no space left between the motifs. One problem faced in tessellation method was that motifs without straight edges would leave some waste around the selvages. Few ways in which Holly McQuillan attempted to overcome this problem were to use a mathematical object called FRACTUL that requires a considerable amount of mathematical calculations resulting in random shapes to reduce or eliminate the waste. The other way to get them as close to the edge was to use small tessellations to reduce the waste.

Disadvantage of Tessellation Method is as follows:

- Before cutting is done the final appearance of the fabric with the tesselling process is uncertain.
- A lot of extra fabric might be used for tessellated shapes to follow the curve of the human body and cover it.

2) Jig-Saw Method

Jig saw method for zero waste fashion consist of creation patterns in such way that when kept together interlocks with each other creation minimum fabric waste. It is just like putting jig saw puzzle pieces together. Two factors to consider while creating garment with jigsaw method are "Fixed area" and "Width of the fabric". FIXED AREA is a specific part of the garment which would be from where the design would move outwards. WIDTH OF THE FABRIC is where the zero waste design would be implemented.

3) Geo- Cut Method

Geo cuts are used to construct a waste zero garment using geometric forms such as square, triangle, and rectangles.

4) Multiple Cloth Approach

Multiple cloth approach as described McQuillan (Pingki, Hasnine, & Rahman, January-2017) as a way 'to design two or more patterns for different fabrics at the same time'. That is in one layout, multiple styles could be combined.

5) Transformational Reconstruction*Engineering Research, Volume 8, Issue 1 .*

Transformational reconstruction is an advanced and creative method of pattern production, where three dimensional pattern pieces are shaped instead of two dimensional pattern pieces. Through this approach one might remove darts and waist lines by turning them into seam lines.

3. Conclusion

Zero wastage design approach is very relevant since fashion leads to significant quantities of waste, especially as a consequence of the fast fashion culture.

Zero waste is not fresh in several respects. Consumers have had to follow similar trends throughout history, including in times of war, where women designed new clothes from older ones. Furthermore, traditional activities like knitting and quilting can be a zero waste activity. Today's difference is that it was a mutual decision, almost like a desperate one.

In the wide spectrum of apparel, designers listen to their clients, from couture to highway and deliver more zero waste. With innovations in design experience including 3D printing continuing to evolve, we can envision the possibilities for a future zero waste. Rapid fashion has intensified customer willingness to pursue recent trends by rising clothing use, leading to an rise in textile waste.

References

- [1] Rissanen, T.; Mcquillan, H; Yield: Making fashion without making waste, London: Earthscan, 2011.
- [2] T. Rissanen, ZERO-WASTE FASHION DESIGN: a study at the intersection of cloth, fashion design and pattern cutting; Sydney: University of Technology, 2013.
- [3] Nursari, F.; Husna, F. D.; Implementing Zero Waste Fashion in Apparel Design; 6th Bandung Creative Movement International Conference in Creative Industries 2019 (6th BCM 2019); School of Creative Industries, Telkom University, Bandung, Indonesia.
- [4] Pingki, M. J., Hasnine S. Md., Rahman, I. ; An experiment to create Zero Wastage Clothing by stitching and slashing technique. International Journal of Scientific & Engineering Research, Volume 8, Issue 1, January-2017.
- [5] Saeidi, E.; Wimberley, V. Precious cut: exploring creative pattern cutting and draping for zero-waste design Precious cut: exploring creative pattern cutting and draping for zero-waste design. International Journal of Fashion Design, Technology and Education.(2017) DOI:-10.1080/17543266.2017.1389997.1
- [6] Naznin, K. N.; Barkat, R. ;Reusing Crafted Fabric and Zero Waste Fashion Approaches; International Journal of Scientific & Engineering Research Volume 9, Issue 9, September-2018

Works Cited

Pingki, M., Hasnine, S. M., & Rahman, I. (January-2017). An experiment to create Zero Waste Clothing by stitching and slashing technique. *International Journal of Scientific &*

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