

Transformative Innovative Pattern Cutting and Draping

Colleen Moretz, West Virginia University, USA

Key words: Sustainability, Innovation, Patternmaking, Transformation

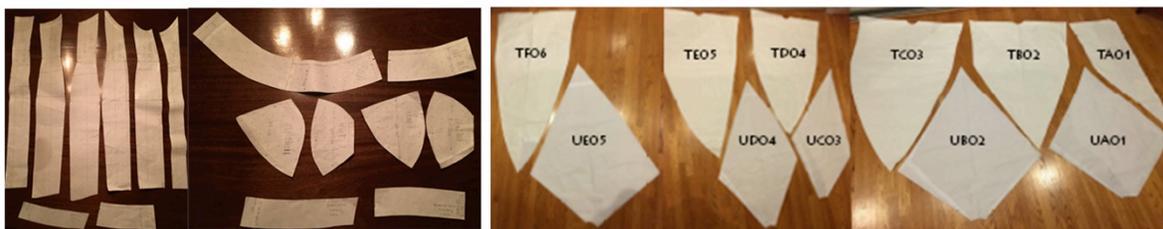
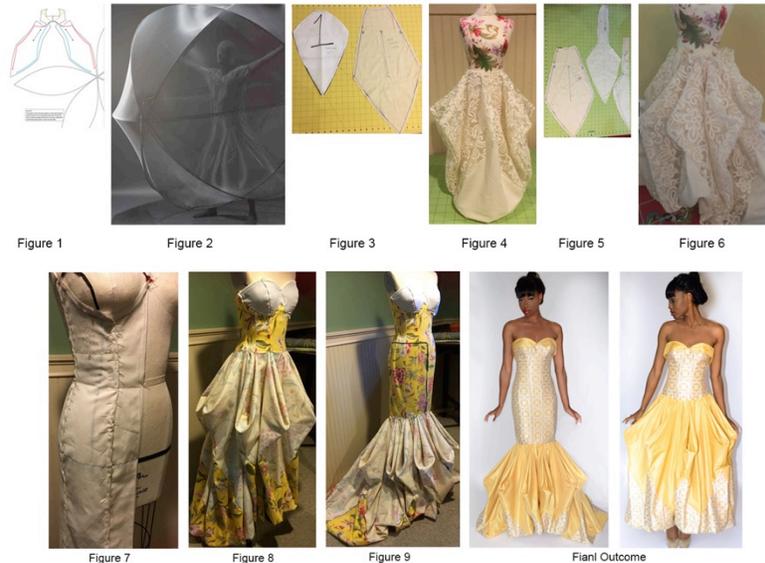
Introduction

Overconsumption has been a trend since the turn of the 21st century. This idea of buying quantity not quality has created negative influences to our environmental, economical, and societal resources. Celebrities have a powerful influence on consumers. With today's competitive social media scrutiny, celebrities are seen wearing a designer fashion only once. Dedication to social responsible actions is the primary focus for my design research, inspiration, and development. Investigating various techniques to incorporate sustainable practices into design exploration. Re-purposing post consumer waste was utilized in a previous design *Heirloom Elegance*, it was created by re-purposing heirloom textiles. (Moretz, 2013) Zero waste design experiments address the fabric waste from apparel manufacturing. The design *Transformation Inward Out* evolved from an experimental skirt that was derived from the investigation into Rickard Lindqvist *Kinetic Garment Construction Theory's* sphere concept. His methodology explores an alternative paradigm of draping and pattern cutting. The result is a kinetic construction theory that works from the body outward in contrast from the traditional method of working from the outside inward toward the body. (Lindqvist, 2015) The purpose of the final design, *Transformation Inward Out*, is to incorporate innovative design, draping, and pattern making with a sustainable focus on increasing the value of the garment by encouraging extended usage. Transformable garments have great potential to prevent and minimize waste in a product's lifecycle by encouraging consumers' natural engagement in sustainable fashion acts. (Fashion United, 2015) The *Transformation Inward Out* garment can change both in the length and silhouette and can be worn in different ways and in various contexts.

Method

- 1). An investigation and dissection of Lindqvist's sphere pattern and skirt (Figure 1&2) was conducted by executing numerous trials on a quarter-scale dress form (reducing the muslin needed). (Figure 3, 4, 5, & 6) 2). The skirt evolved into a strapless gown that featured a complex skirt drape of intersecting and pie-shaped pieces that transformed from a short skirt with flying buttress-like structures extending from the top of the skirt to a long version. 3). Draping muslin onto the full-scale form created pattern sets for the bodice and dress. (Figure 7) 4). To develop the skirt pattern, the quarter-scale pattern pieces were enlarged and draped onto the body form, adjustments were made for the skirt to transition from short in the front to long in the back, then final patterns were drafted. (Figure 8 & 9) There are twenty-seven pattern pieces. (Figure 10) 5). Once the fabric was cut, couture construction and hand sewing techniques were used to assemble the final garment. 6). To support the strapless bodice, a foam understructure was built into the bust area and channels were sewn into the lining along the princess seams to feed boning through the channels. 7). The patterned fabric of the dress and the top part of the skirt were underlined with a lightweight poly-cotton to give the desired shape to the dress and volume to the top part of the skirt. 8). The patterned bottom skirt was underlined with crinoline to create the desired volume. Horsehair was placed on the inside seam of each buttress for support. 9). The lower skirt was attached to the bottom of the dress inside out and brought out and up. 10). Then, the upper skirt was attached to a facing that

when fastened sits on the hip below the waist. The skirt can be dropped and hooked to the lower part of the dress to create the alternate look.



Results, Conclusions, and Future Study

This project resulted in a garment that reflected the research and investigation of Lindqvist 's sphere concept. The intended wearer is able to step into the garment and have free movement of the bottom of their legs. The design also addresses a sustainable concern, the design is able to transform from one look into another look, giving the wearer double the wearing options. As a designer, it is also important to create a garment that is aesthetically pleasing and also enhances the female figure of the wearer. A previous design *Knot What it Seams* is also an ensemble that transforms from one look into a different look, but adding or taking away pieces achieves the transformation. This design is self-contained, quickly donned and doffed. The set back of this garment is that the skirt is very heavy due to the weight of the added layers to give the desired shape. A future garment will be created using the same pattern, but the skirt will be constructed from a sheer fabric. This will lighten the skirt weight and the skirt will be transformed with ease. The construction will be a challenge because the skirt and the inner seams will be somewhat visible. This, like Lindqvist 's sphere project, will show the viewer the inner workings of the

skirt to better understand the pattern cutting method that works from the body outward. In keeping with his theory, this garment will show how the movements of the wearer's legs are not restricted.

References

Fashion, United. (2015, November 11). *Global fashion industry statistics-International apparel*. Retrieved March 2018, 2018, from <http://www.fashionunited.com/global-fashion-industry-statistics-international-apparel#US>

Lindqvist, R. (2016). *Kinetic Garment Construction Remarks on the foundation of pattern cutting*. London.

Locker, S. (2008). A technology-enabled sustainable fashion system. In J. H. Ulasewicz, *Sustainable Fashion: Why now? A conversation about issues, practices, and possibilities* (pp. 95-126). Fairchild Books.

Moretz, C. (2013). *Heirloom Elegance, Something Old is New*.

The Business of Fashion and McKinsey & Company. (n.d.). The State of Fashion 2018. *The Business of Fashion and McKinsey & Company*.