



Tri-axis

Kim Hahn

Kent State University

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Design Statement

The purpose of this design was to create digitally printed woven textile fabric strips by exploring triaxial weaving combined with sustainable design practice, upcycling. The designer has been exploring combining traditional hand weaving craft and contemporary digital printing technology to create the unique textile woven surface design through inter-weaving parallel gradations of two or three contrasting colors to develop optical illusions of depth and volume. Through this process, the designer has created an optical pattern consisting of a three-dimensional patch-like illusion with rectangular strips. In addition, the designer has in the past, incorporated spiraling strips with widths of gradually decreasing size toward the center with a digitally printed textile pattern by digitally pre-determining each color gradient and pattern shape location. The designer also has been exploring the sustainable design practice of upcycling post-consumer used garments. This design applied the upcycled design method using women's blouses and formal dresses for the skirt.

This is the first time the designer has tried triaxial weaving, where three different strips were intertwined to create the illusion of a three-dimensional cube pattern after the weaving has completed. First, two different set of colored gradient strips were developed with Photoshop and printed on linen fabric. Yellow and pink strips were first placed vertically as a warp and the second set of color strips with yellow and blue were woven to the vertical strip in a 30 degree diagonal angle. The mix of two set of colored gradient strips were then woven from the opposite direction of the 1st 30 degree diagonal angle to create the triaxial weaving pattern. By weaving strips with different colored gradients as triaxle pattern, the designer was able to create pattern that presents an optical illusion of volume and depth with color gradients as well as a three dimensional cube pattern.

First, a flat pattern method was used to create a pattern for the top and the triaxial weaving was applied with digitally printed and hand cut linen fabric to create the surface of the top. For the skirt design, one of the women's used blouse and formal dress were deconstructed and reconstructed to create stripe patterned skirt. Draped bust design of the formal dress was used for the waistband of the current skirt design.

This design is unique and original using both digital textile printing and triaxle hand weaving techniques. Furthermore, the designer used an upcycling sustainable design practice to create the skirt to go with the woven top.

This design project was able to integrate technology, handcraft techniques, and sustainable design practice creating a sophisticated outfit. This project was created to inspire others to rethink about mass production and fast fashion that are around us to focus on the timeless of craft and sustainable design within contemporary culture. Furthermore, as the most significant trends of contemporary fashion trends are in technology and sustainability, this design project was developed to demonstrate creative and innovative ways to change how we view the current existing fashion paradigm from where consumers demand for fast, low priced, trend fashion products to a more humanistic, sustainable, and craft culture. The designer will continue to explore different handcraft techniques combined with technology and sustainable design practices in an attempt to inspire others to help shift the current fashion paradigm.

