Slow design in Chinese Su Xiu embroidery for apparel: applying silk, cotton, and wool flosses to silk and cotton fabrics with physical resist dyeing techniques using natural dye

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This study was based on the concept of slow design, proposed after the slow food movement. The idea of slowing down production processes and increasing product quality and value suggests an antidote to the fast cycle of the fashion industry. Slow design supports two principals, inheriting tradition and maintaining eco-efficiency, which guided this project. Inheriting tradition is an expression that explores ways to sustain lost art and traditional heritage in our daily lives, as well as develop products that establish personal meaning for the consumer. Maintaining eco-efficiency of product production involves utilization of eco-friendly materials and sustainable approaches to aid in developing a healthier and cleaner ecosystem.

The overall goal of this design research was to celebrate and sustain the spiritual and material civilization of the Chinese culture by creating a modern artistic interpretation of Chinese traditional arts using an environmentally conscious approach that was applicable to apparel design. This research created modern surface design on a group of garments from traditional Chinese Su Xiu embroidery, physical resist techniques, and natural dyes.

This practice-based research utilized the paradigm of naturalistic inquiry to guide the stages of this project. A progressive design process was adopted in response to the unexpected events in the final artifact development. In the design exploration stage, a color library was created to provide the color story for the final artifacts. Basic Su Xiu embroidery stitches and traditional physical resist techniques were sampled with selected flosses and fabrics. Various samples were critiqued and analyzed to develop three unique techniques from characteristics of traditional Chinese Su Xiu embroidery, physical resist techniques (Zha Jiao, Feng Jiao, pole-wrapping, and Jia Xie), using natural dyeing techniques with woad and madder. Natural dye findings included using madder to overdye woad to adjust or reverse colors and that woad overpowered the effects of iron and acid premordants. The outcome resulted in a water-inspired series of three garments that showed evidence of simplified traditional techniques with reduced production time, energy, and dyeing material while encompassing elements of traditional art using a modern aesthetic. The designs and process were presented in a public exposition.

Keywords: Chinese embroidery; Slow design; Physical resist dyeing; Natural dye; Su Xiu

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Silk organza, silk charmeuse, bleached cotton and unbleached cotton were submersion dyed with fabric for both cotton and silk. All three types of fabrics except silk charmeuse had good wash. Fourth, nuno felting techniques were used to create unique textile surface and achieve the technical design purpose. Nuno felting has only 20-year history (White, 2007). It is known as laminated felt (Houghton, 2009). Using this technique, the wool fibers go through the weave of the cloth (usually silk) before the felting and shrinking process started, and entangle on the back side after several steps (White, 2007).