Sight Unseen

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Keywords: Visually-Impaired, Functional and Symbolic Values, Garment Prototypes

Contextual Review and Concept: For a consumer group that is 1.3 million strong (National Federation of the Blind, 2017), surprisingly visually-impaired (VI) people's clothing needs and wants have remained largely ignored by designers. Addressing the needs and wants of VI people not only increases their social participation thereby reducing incidences of isolation (Kabel, McBee-Black & Dimka, 2016), but, ultimately could increase their independence and overall quality of life. The objective of this study was to develop a garment prototype for visually-impaired (VI) women. The two research questions were: how do different senses other than sight assist participants in distinguishing clothing components, and how are clothing components experiences by participants related to functional and symbolic values as defined by Rosenblad-Wallin (1985)? According to Rosenblad-Wallin's framework, a good product includes both functional and symbolic values (1985). Applying a user-centered design process, the researcher conducted focus groups to collect qualitative data that provided different perspectives on the symbolic and functional values associated with VI women's clothing needs and wants (Roller & Lavrakas, 2015; Rosenblad-Wallin, 1985).

Process, Technique, and Execution: Six women participated in the study. They were all part of a support group for the blind established by a religious organization in a small mid-western city. The women were mainly Caucasian, one African-American woman and one Native-American woman, all aged between 35 and 74 years of age, and all who identified with being blind, legally blind or visually impaired. The study involved four stages: 1) two focus groups conducted with VI women to determine the context of use, and the symbolic and functional values of clothing that were important to them; 2) garment prototype was developed by the designer that addressed the data collected; 3) garment prototype was presented to VI participants and evaluated by them; and 4) VI participants assessed if garment prototype fulfilled requirements. The same six women participated in all six stages of the study.

Key Findings and Garment Development: For the VI people in this study, the functional values of mobility, utility, and donning and doffing and the symbolic value of tactile sense were important factors to consider in design. Mobility encapsulated the safety and comfort of the VI user during movement. According to Ashdown (2011), the designer should consider the interaction of the clothing with the user in all the positions she or he assumed during wear. For that reason, a collared wrap-around cape was designed that allowed for a relaxed, easily adjustable fit and full rotation and use of arms when worn. Utility, in the form of storage was addressed through the construction of two large, removable and adjustable accordion pockets placed along the belt to allow for storage of the VI participants' assistive technologies (e.g. phone, readers etc.). Recognition, another component of utility was addressed through the use of

the fabric composite of the collared wrap-around cape that served as color-identifiers that would help VI users easily recognize garment through tactile sensing (Change & Lee, 2015). Donning and doffing of clothing can be a considerable challenge for VI users but can be alleviated if consideration is given to: 1) the specific fastener used; and 2) the length and location of the fastening system's opening (Watkins, 1995). The designer applied a wrap-around system of fastening with an attached belt for easy donning and doffing. In addition, for people with VI, tactile sensing assists them in experiencing product aesthetics (Burton, Beser, Neylan, & Hurst, 2012). Therefore, material aesthetics are of particular importance when designing the *Sight Unseen* garment. A key element of material aesthetics that was considered was texture. VI users appreciate fabrics that are composed of dissimilar textures because they create new tactile aesthetics for users (Williams, Neylan, & Hurst 2013). Consequently, *Sight Unseen* was constructed using a bottom-weight fabric composed of a white mesh fused with a black laser cut neoprene overlay in an abstract floral design. This duality created contrasting surface textures. The fabric composite was 86% polyester and 4% spandex. The attached belt and accordion pockets were constructed from black 100% polyester fabric. Symbolic values were also addressed in the design development through the garment's styling. The wrap-around style of the cape is held in place with a belt affixed to the center back waist. Large accordion pockets are slipped on and off on to this belt to allow for storage and additional styling. Flat pattern techniques using missy size 8 blocks were used to develop the wrap-around cape, belt and accordion pockets.

Upon evaluation by VI participants, *Sight Unseen* was valued for its easy fit and use of fabric texture that represented two different colors. Critiques centered on the length of sleeve panels, lack of garment reversibility, pocket size, and fasteners in the center front of the garment. Suggestions were made for shorter sleeve panels, larger-sized accordion pockets, full reversibility of the garment, and the addition of fasteners along the cape's center front opening.

Design Contribution and Innovation: *Sight Unseen* helps draw attention to some of the clothing wants and needs of VI women, and the availability of suitable materials in the mainstream market to create viable garment solutions to address their wants and needs. This garment prototype is the first work in my design scholarship that focuses on developing apparel design solutions for special needs populations. The work contributes to the field of apparel and textiles by bringing a unique garment solution for VI women to the forefront.

Date completed: 6/30/2017 Measurements: Female medium (size 6-8)

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