Optical illusion garments can create desired effect if chosen correctly

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Optical illusion garments have been popular for as long as people have tried to use clothing to enhance appearances, from A-line dresses that accentuate the waist to striped trousers that visually elongate an individual's stride. However, knowing what outfit is right for one's body can be challenging. New research from the University of Missouri reveals the future of fashion could lie in the use of digital avatars, which allow individuals to virtually try on clothing, revealing how effectively clothing might mask perceived flaws and draw attention to certain body parts.

The study was led by Jessica Ridgway, a former MU doctoral student, now assistant professor at Florida State University, and Jean Parsons, professor of textile and apparel management in the MU College of Human Environmental Science.

Ridgway and Parsons said they were interested in understanding women's perceptions of optical illusion dresses and whether their opinions of the dresses would be impacted by their body shapes. For the study, the researchers created unique avatars for each participant based on a 3-D body scan using TC2 Body Scanners. The women then were shown seven different optical illusion dresses fitted to their unique avatars and asked to evaluate each option.

Overall, those who had an hourglass shape were least likely to find optical illusion dresses appealing. Women with a rectangle shape were most likely to appreciate the optical illusion garments.

However, the majority of women in the study could not correctly identify their shape as hourglass, rectangle or spoon. For example, none of participants identified themselves as having a spoon shape—also called a pear shape—though researchers categorized a third of participants as having this body shape. Additionally, nine of 15 women said they had an hourglass shape while researchers only found five had that body shape.

"If a woman doesn't know her own shape, it makes it difficult for her to identify garments that will help her look her best," Parsons said. "Digital scanning tools could help consumers find clothing that works for their unique shape in the future. This technology is especially appealing for online retailers and could help online shoppers wary of buying clothing they can't first try on."

Ridgway said an issue contributing to women's confusion about body shape is the many terms retailers use to describe body shape, such as apple, V-shape, H-shape, rectangle and square.

"The inconsistency is certainly adding to confusion," Ridgway said. "It's in the best interests of consumers and retailers to use standardized descriptors, especially in light of the popularity of optical illusion garments."

Parsons said that no matter what an individual's body shape is, the No. 1 rule is play up areas one is confident about and minimize problem areas with darker colors or smaller patterns.

"For example, if you are a spoon shape, look for clothing that draws the eye away from the hips," she said.

The study, "Creating a More Ideal Self Through the Use of Clothing: An Exploratory Study of Women's Perceptions of Optical Illusion

Garments," was published in *Clothing and Textiles Research Journal*.