Salon Session:

'Critical Dialogue on Inclusive Human-Centered Apparel Scholarship in the Clothing and Textiles Discipline'

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Pixelated Bodies: Exploring the integration of user-focused virtual fashion solutions for underrepresented bodies

ABSTRACT

This salon proposal emerges from an Arts and Humanities Research Council[1] research grant Dr Kerri McBee-Black and I are writing with the aim to build an international coalition of academics, innovators, designers, advocates, and manufacturers interested and involved in the adaptive/inclusive apparel space with a particular focus in human-centered design (HCD) principals, placing people with disabilities (PWD), and their experiences getting dressed, front and center (McBee-Black, 2022).

Individuals interact with the digital world through avatars -- virtual representations of the body corpus. The researchers consider the avatar a 'pixelated body': malleable, easily adapted and altered to add or remove elements to allow for the 'presentation of the self' (Goffman 1990) to make possible a representation of 'who we wish we were' (Kealy-Morris 2023) to enable fitting

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[1] UK government-based 'UK Research Innovation' funding

into gaming and virtual ecosystems (Bentkowska-Kafel, Cashen and Gardiner, 2009). Within three-dimensional (3D) digital apparel design and production, pixelated avatars represent the human form in the same manner as the analogue, fixed mannequin does. These pixels offer the potential for easy manipulation via software tools, allowing changes to resolution, shape, and size of the avatar's silhouette. Further, this enables opportunities to edit, modify, and transform designs, offering the potential to make great strides in equality, diversity, and inclusivity of choice within fashion markets. The notion of the avatar as a pixelated representation of a lived body offers a unique intersection of fashion, technology, and HCD.

Technology and innovation are not neutral -- these are developed and advanced within competitive global markets. Currently, the mainstream 3D virtual design software such as CLO3D and Browzwear have limited, albeit ever-evolving, capacity to transform the 3D avatar into edited and modified shapes. Thus, there is restricted opportunity for apparel designers to create clothing for bodies that are not symmetrical or mainstream in their shape and size (e.g., limb difference, scoliosis, cerebral palsy, MS, MD, seated positions). We term this as a 'symmetry-centric' ideology within apparel design and are interested in investigating whether the adaptability and flexibility inherent to pixelated design environments could counter this.

The study is designed to examine the technological innovations and materials used to develop apparel virtually. The researchers recognise the speed to which AI has begun to enter all facets of life and technological regulation policy is swiftly being drawn up to ensure equity is preserved and potential biases built into machine cultures are recognised and challenged (Sunak 2023; Department for Science, Innovation and Technology 2023). This proposed project will break new ground into the study of this emerging research area and deliver impact through developing policy regarding what AI means for HCD design and inclusive apparel choice for PWD. We bring this to the salon grateful for any thoughts, critiques, and resources our peers could offer and, ultimately, the possibility some may wish to join our project.

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