Between Reality and Fiction: Self-Representation as an Avatar and Its Effects on Self-Presence

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Abstract : A self-confident appearance is a basic prerequisite for success in the world of work 4.0. Within a few seconds, people convey a first impression that usually lasts. Artificial intelligence is making it increasingly important how our virtual selves appear and communicate (nonverbally) in digital worlds such as the metaverse. In addition to the modified creation of an avatar, the field of photogrammetry is developing fast, creating exact likenesses of ourselves in virtual environments. Given the importance of self-representation in virtual space for future collaborations, it is important to investigate the impact of phenotype in virtual worlds and how an avatar type can profitably be used situationally. We analyzed the effect of self-similar versus desirable self-presentation as an avatar on one's self-awareness, considering various theoretical constructs in the area of self-awareness and stress stimuli. The avatars were arbitrarily created on the one hand and scanned on the other hand with the help of a lidar sensor, the state-of-the-art photogrammetry method. All subjects were exposed to the established Trier Social Stress Test. The results showed that especially insecure people prefer to create rather than be scanned when confronted with a stressful work situation. (1) If they are in a casual work environment and a relaxed situation, they prefer a 3D photorealistic avatar that reflects them in detail. (2) Confident people will give their avatar their true appearance in any situation, while insecure people would only do so for honesty and authenticity. (3) Thus, the choice of avatar type has considerable impact on self-confidence in different situations.

Keywords : avatar, virtual identity, self-presentation, metaverse, virtual reality, self-awareness
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