IDENTIFYING REAL PEOPLE AND REALISTIC AVATARS

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Introduction
Virtual Reality (VR) is an increasingly popular tool for research in Psychology. However, faces render poorly in current VR paradigms, thereby making it difficult to study face perception processes with this technology. This limitation led us to develop a realistic avatars which can be used to study face – and more generally – person perception in VR. The properties of these avatars are demonstrated here.

Study 1: Are familiar avatars identifiable?
Participants: 15 Subjects (10 females, 5 males), mean age of 33 years (SD = 9.4) participated in this study via Zoom screen-sharing.

Means Comparison
Familiar vs. Unfamiliar
Match vs. Mismatch
F(1, 19) = 5.99, p < .05, Ńp² = .24
F(1, 19) = 13.39, p < .01, Ńp² = .41
Interaction n.s.

Study 2: Are familiar avatars matched more accurately than unfamiliar ones?
Participants: 20 Subjects (16 females, 4 males), with mean age of 34 years (SD = 7.6) participated via Zoom screen-sharing.

“Same person or different people?”

Study 3: Validity of Avatar-Photo Matching
Participants: 60 Subjects (31 females, 29 males) with a mean age of 34 years (SD = 9.3) participated via Zoom screen-sharing.

Avatar Matching: 80 unfamiliar avatars (40 match, 40 mismatch) paired with a passport-style photograph in an airport setting.

KFMT & GFMT: 40 unfamiliar face photo pairs (20 match, 20 mismatch).

Study 4: The Perceptual Space of Avatars
Finally, we compared the perceptual spaces of avatars and photographs via a PCA. This analysis showed close correspondence between the similarity of avatars, and of photographs, Spearman’s rho(7078) = .59, p < 0.001.

Summary
Here we show that familiar avatars can be recognised (Study 1) and matched better than unfamiliar avatars (Study 2). In addition, matching avatars to photographs recruits similar mechanisms to those recruited for matching pairs of face photographs (Study 3). Finally, the perceptual face-space of avatars corresponds very closely to the perceptual face space of photographs (Study 4).