Use of Immersive Virtual Reality to validate the Frith-Happé Animations
A Qualitative Exploratory Study

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Autism has been previously linked to differences in social cognition and sensory processing. A classical measure of low-level social cognition is the Frith-Happé animations task which measures perceived animacy and “mentalizing” ability (mentalizing is the attribution of thoughts and feelings to others). We have adapted this classic psychological paradigm to Virtual Reality (VR) and evaluated its feasibility. 3D versions of the Frith-Happé animations were constructed using the software package Unity. The animations had the appearance of solid triangles of different sizes moving on a ground plane. Participants viewed these animations in our VR lab wearing a standard Head-Mounted Display. White et al.’s (2011) multiple choice scoring system was used to categorize animations based on the perceived interaction of 3D geometrical shapes. The current study aims to validate the Frith-Happé animations within a Virtual Reality (VR) context utilizing a qualitative approach to emphasize a participant’s subjective interpretation of the animation and personal experience of VR. Four themes were discovered using inductive thematic analysis. Participants’ verbal feedback indicated that the increased level of immersion available in VR helped them appreciate the animacy more. VR has thus been found to be an appropriate tool for investigating animacy and mentalizing ability in neurotypical participants. These findings are discussed primarily regarding the refinement of the existing animations and how these may be employed in future research.

Keywords: VR, Frith-Happé animations, Theory of Mind, animacy, autism