Intuitions about physical scenes and objects in Virtual Reality (VR)

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Abstract

Virtual Reality (VR) presents a novel tool to study the mind by generating dynamic, immersive environments. However, the adoption of VR in cognitive science has been slow. In order to use VR as a method, we need to better understand how humans think and act in this novel, virtual environment. Here, we draw on research in intuitive physics to investigate whether people's reasoning about objects and physical scenes in VR is similar to traditional experimental settings. In Exp.1, participants made judgments on a physical scene prediction task similar to those collected using conventional methods (Battaglia et al., 2013). In Exp.2, participants preferentially explored objects that violated core principles of physics and engaged in hypothesis-testing behaviors, similar to Stahl & Feigenson (2015). These findings suggest that people bring real-world intuitions about physics into the virtual world, and that VR can be an exciting method to study human behavior.

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