

Using Virtual Reality to Examine Social and Spatial Cognition

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The goal of social and spatial cognition is the understanding of human behavior when humans interact with their natural social and spatial environment. In contrast to this, many studies in the field examine social and spatial cognition under controlled but artificial conditions in which participants are passive observers rather than active agents. Here we present several projects in which we use virtual reality to increase the naturalness of the experimental testing conditions, while keeping the experimental set up under high experimental control. Due to the use of virtual reality and related techniques participants are able to naturally interact with their environment (e.g. walk through spaces, high five with an avatar) while we alter the visual stimuli in real-time in response to their behavior by means of motion tracking. Using this approach we combine experimental rigor with increased ecological validity to learn about the cognitive processes actually taking place in life.