Navigation: Spatial Knowledge, Individual Differences, and Neuroscience

ABSTRACT: Navigation is a central part of daily life. For some, getting around is easy, while others struggle, and certain clinical populations display wandering behaviors and extensive disorientation.

Working at the interface between immersive virtual reality and neuroimaging techniques, Chrastil’s research demonstrates how these complementary approaches can inform questions about how we acquire and use spatial knowledge. She will discuss some of her recent work as well as upcoming experiments that center on: (1) how we learn new environments, (2) the type of spatial information we learn from environments, and (3) how individuals differ in spatial abilities. The behavioral and neuroimaging studies presented in this talk inform new frameworks for understanding spatial knowledge, which could lead to novel approaches to answering major questions in navigation.

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