The goal of the current study was to examine how individual differences in initial exploration of a large-scale novel environment influence spatial memory and navigation. We allowed participants to freely explore a large-scale, virtual environment to locate a set of objects within. We then tested their ability to navigate back to those objects as well as their ability to point to them from one another. We found that males more robustly explored the environment, which led to better performance on both the navigation and pointing tasks. The results demonstrate the importance of exploration in spatial memory, provide a new perspective on gender differences in spatial cognition, and introduce a novel methodological and analytic approach to the study of navigation and spatial memory.

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The Department of Psychology & CBS Colloquium Series

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Learning a novel environment: Gender differences in exploratory movement relate to navigation and spatial memory

Friday, October 4, 2019
2:00 p.m.
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