



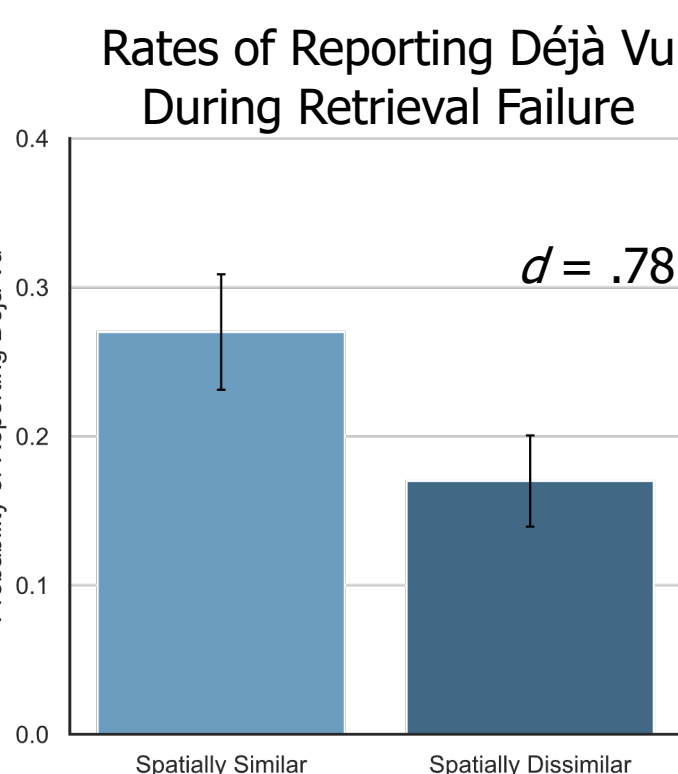
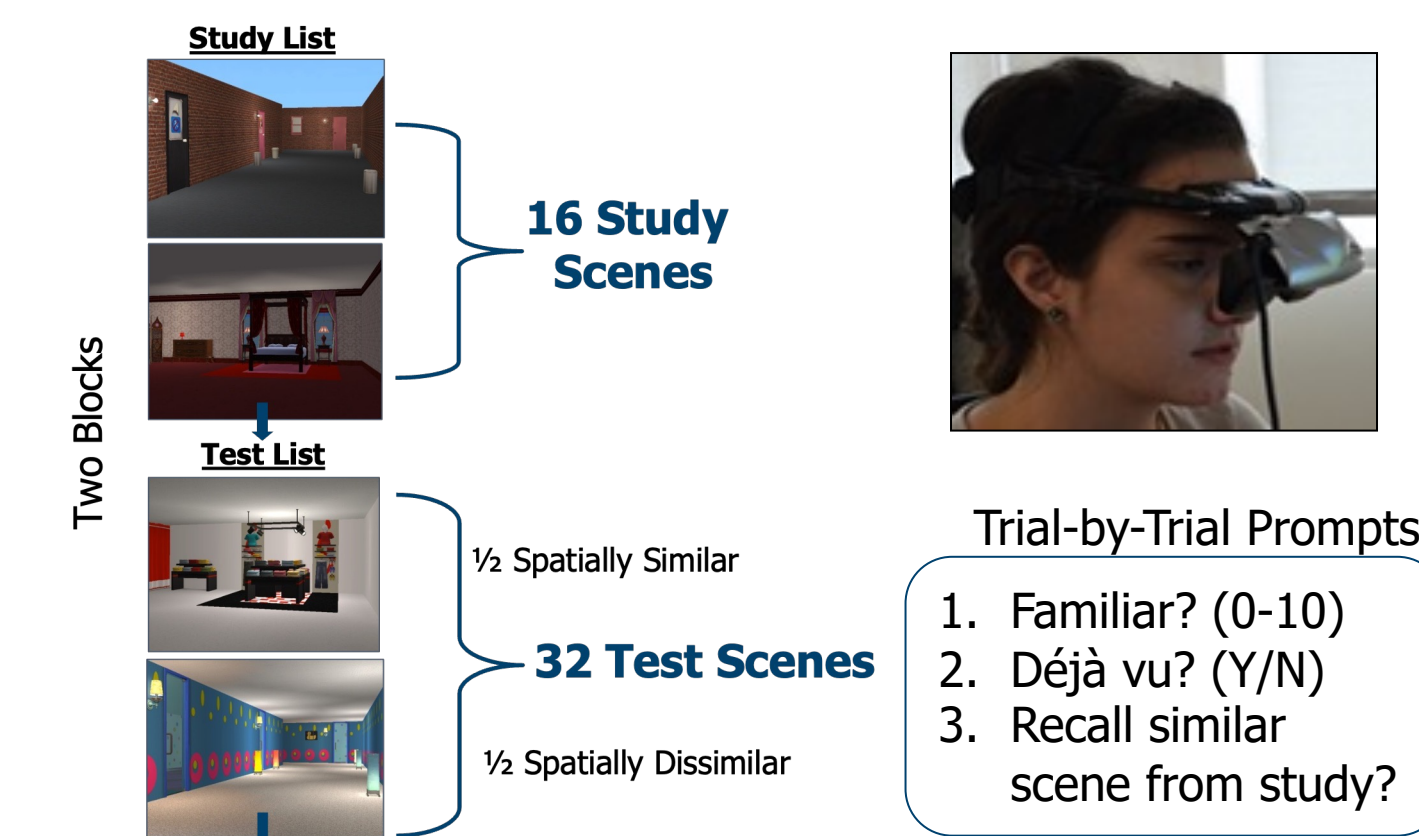
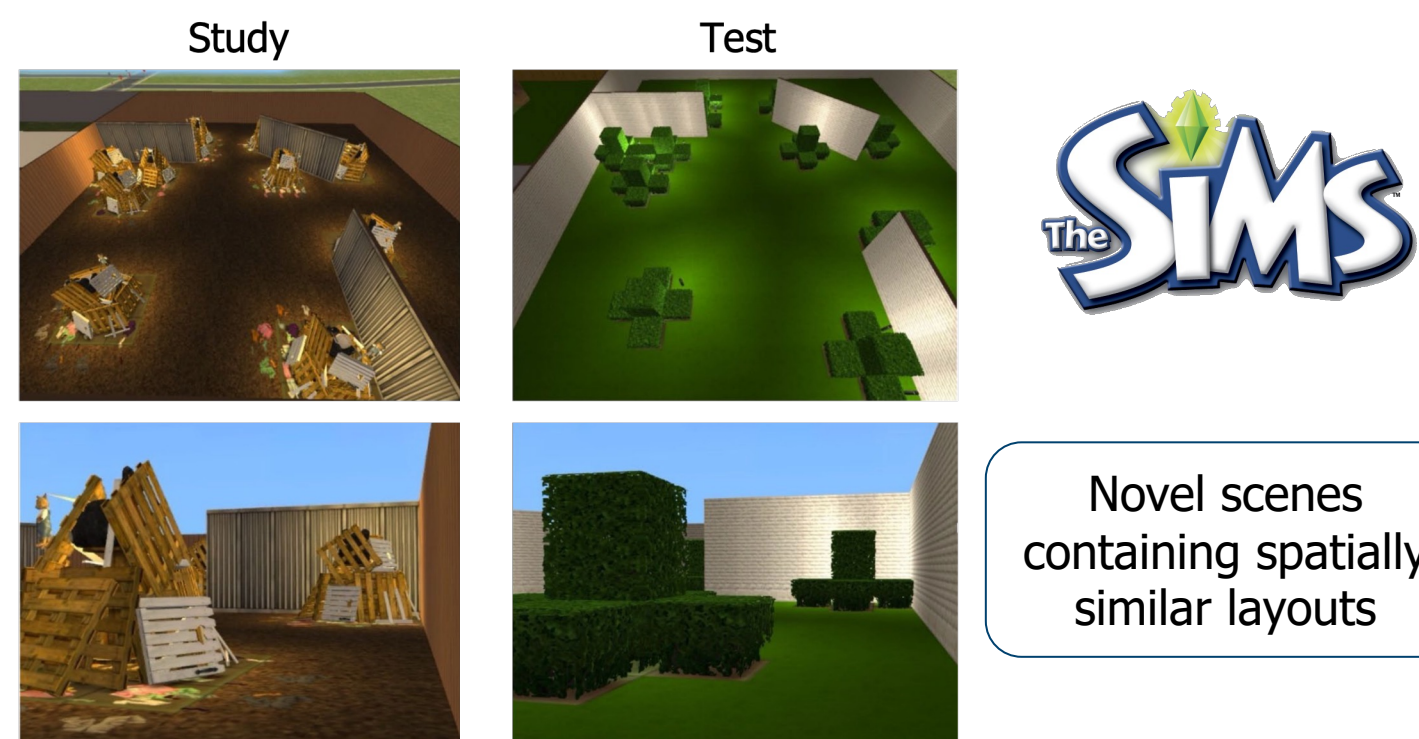
# A Virtual Reality Paradigm for Investigating Spatial Cognition and Memory Retrieval Processes



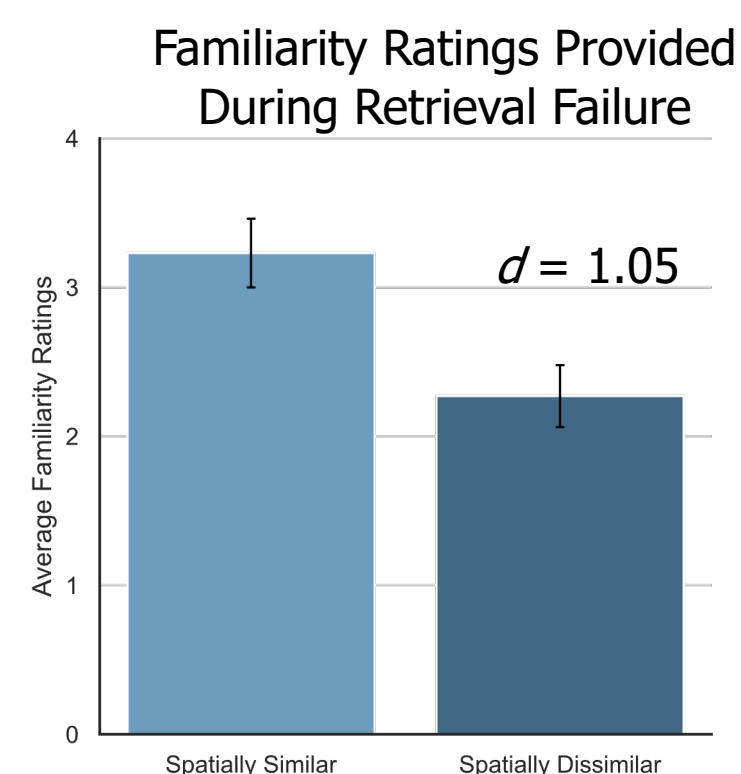
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## Background

Cleary et al. (2012) – examined how spatial similarity relates to feelings of familiarity and déjà vu.



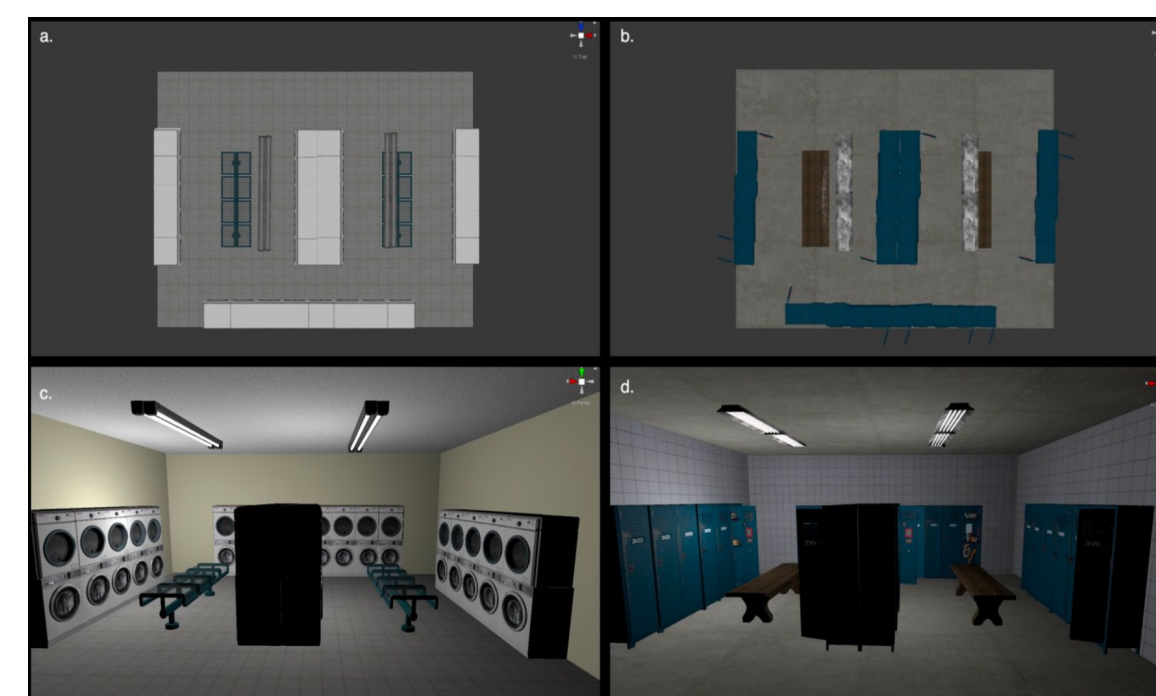
Déjà vu more likely for spatially similar scenes



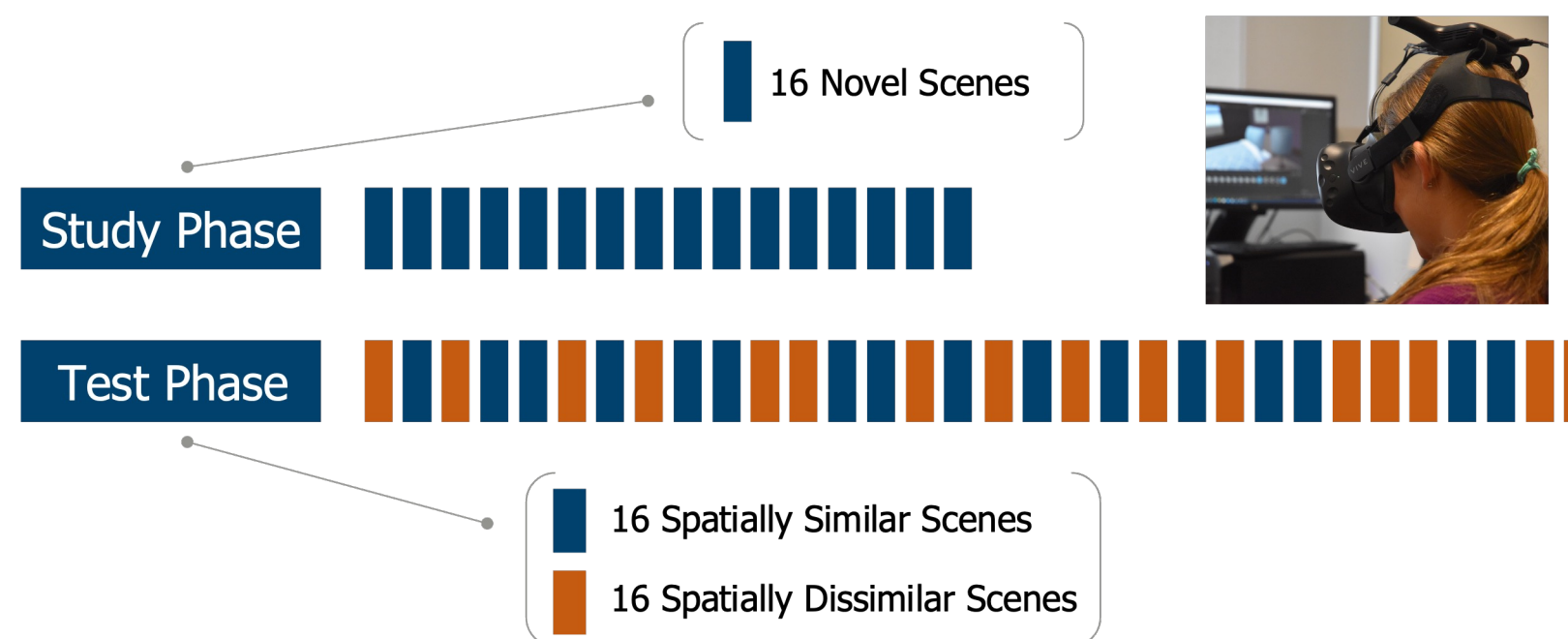
Familiarity sensations used for scene discrimination

## Present Study

1. Develop an updated stimulus set and task using modern technology.
2. Validate task across varying degrees of first-person immersion.

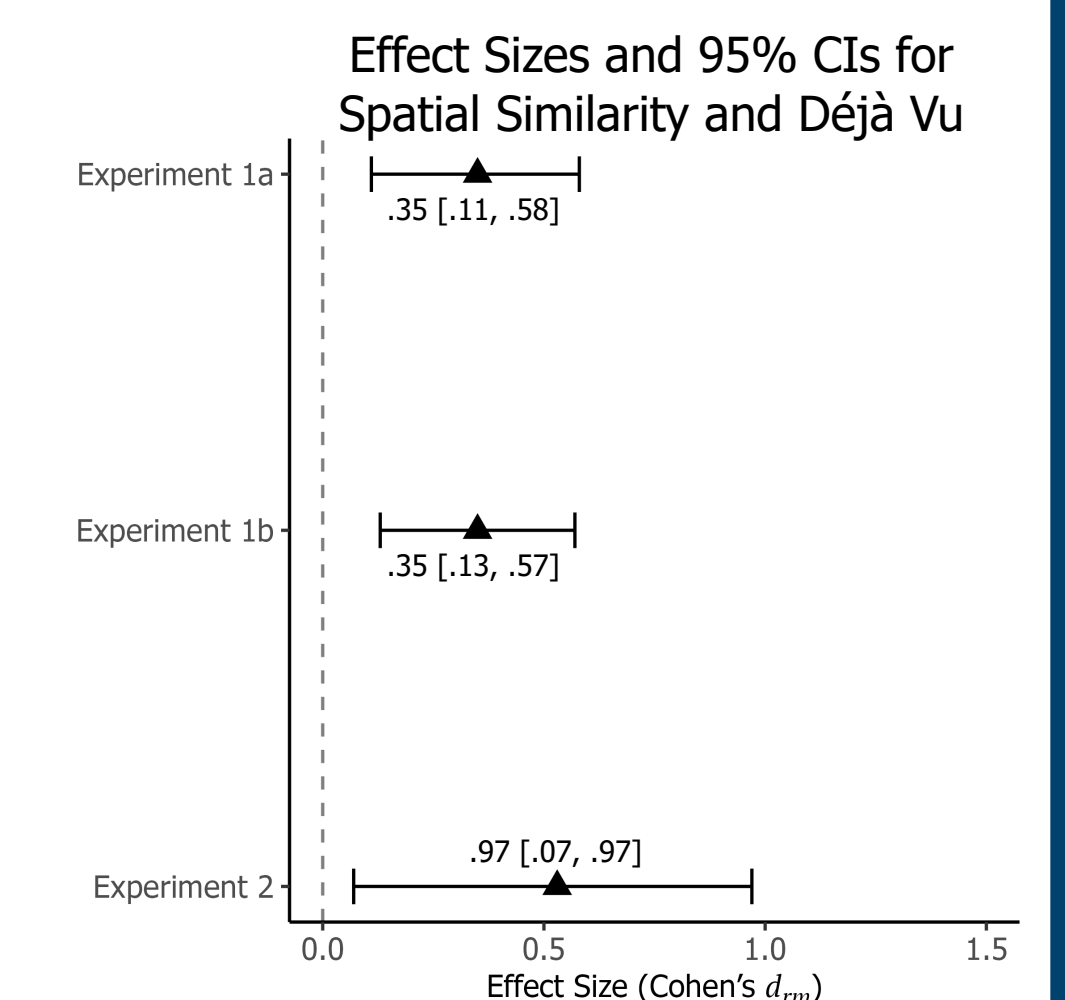
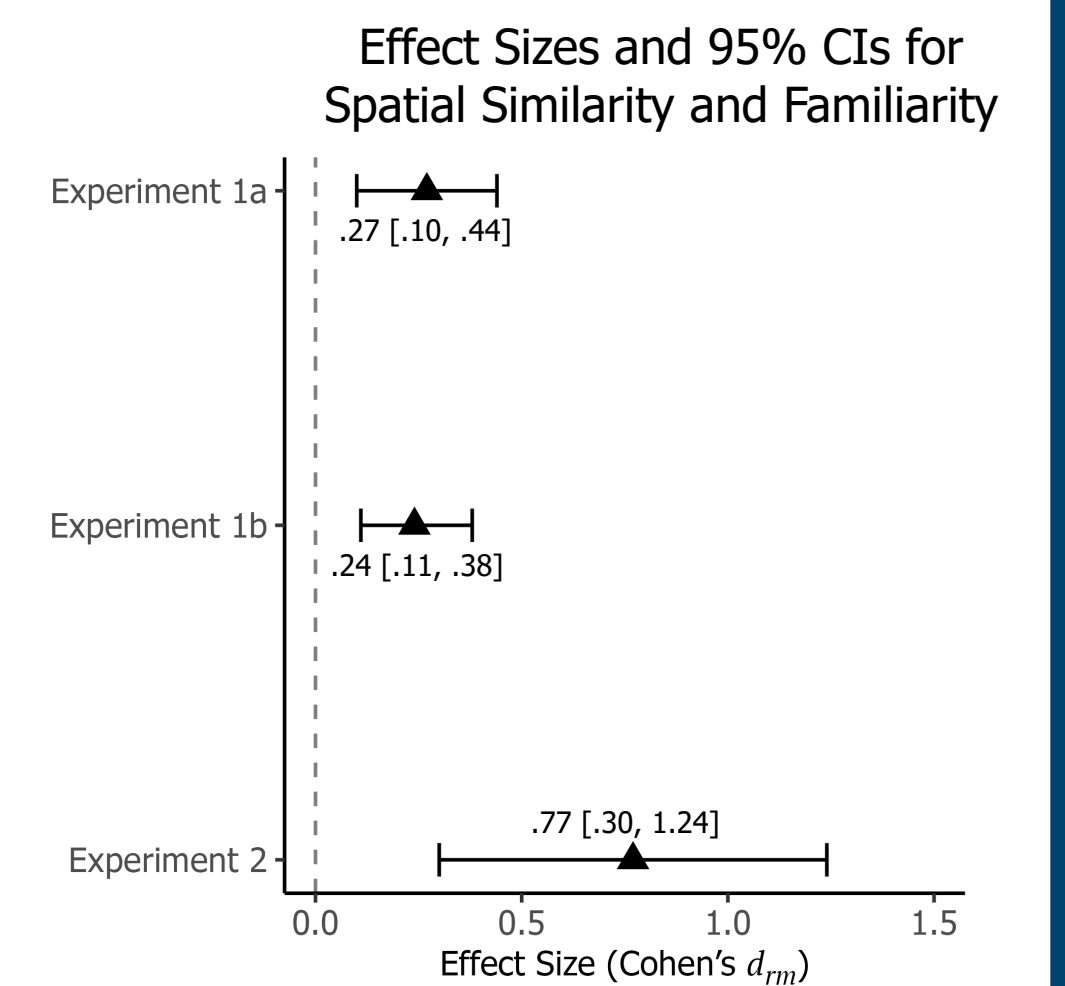
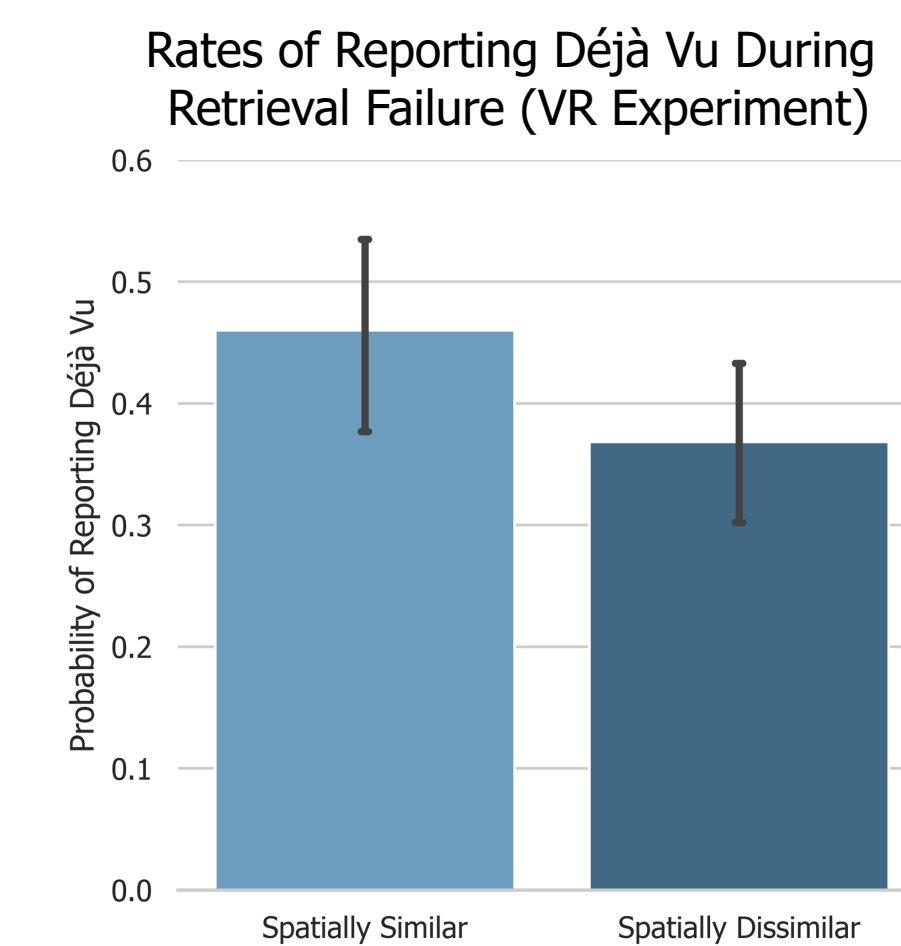
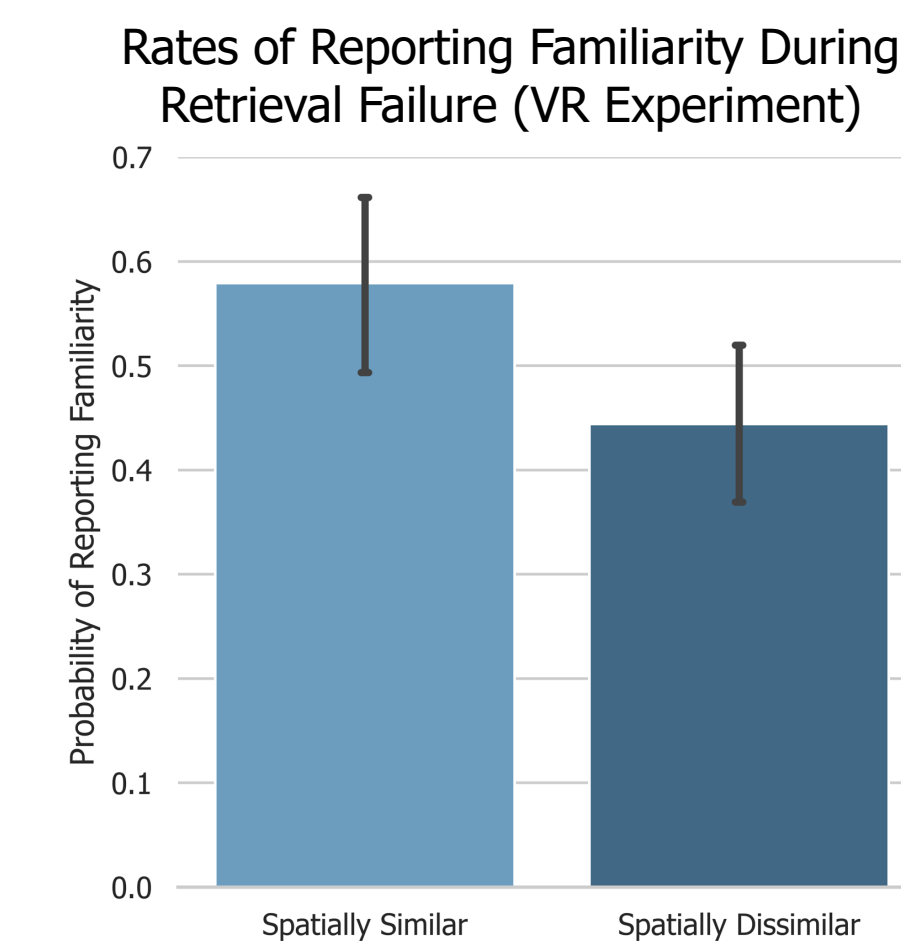
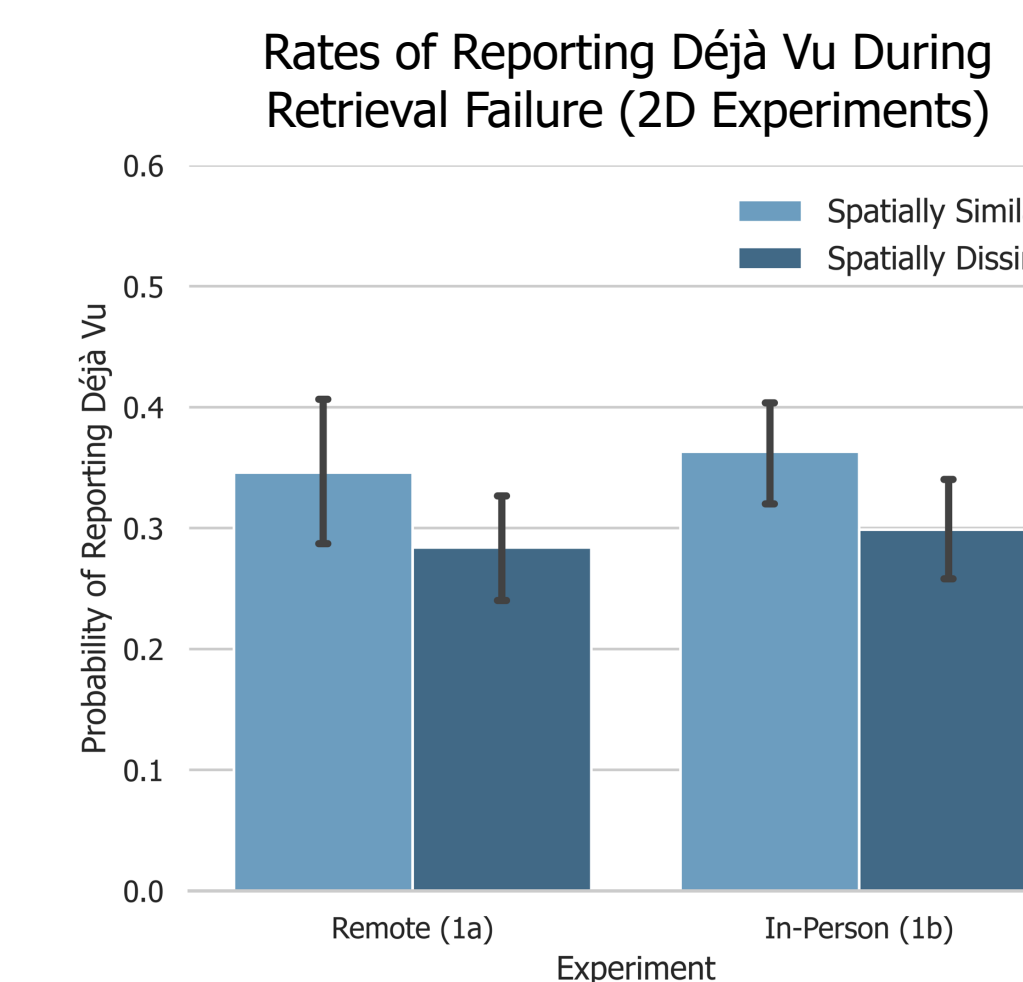
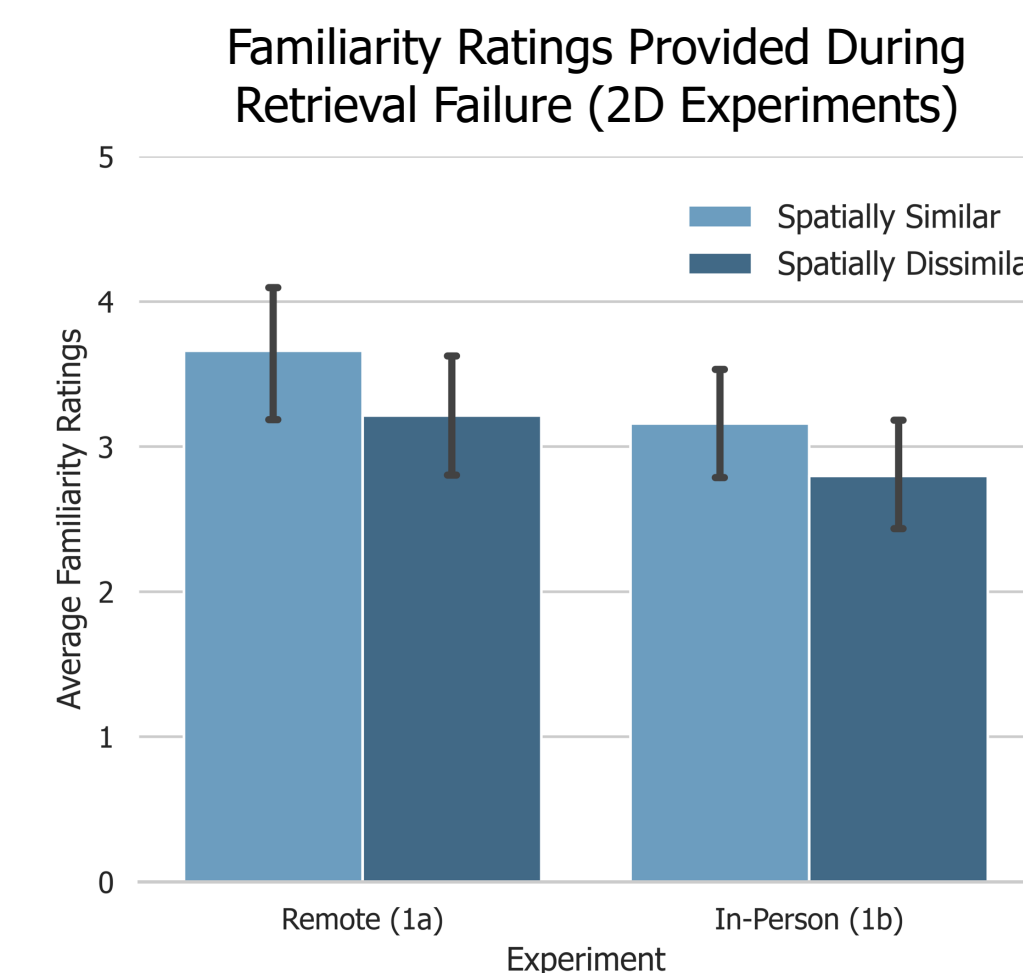


Using Unity, 64 unique pairs of spatially similar study-test environments were created.



- Experiment 1a – 2D Monitor, Fully Remote  $N = 56$ , college students
- Experiment 1b – 2D Monitor, In-Person  $N = 62$ , college students
- Experiment 2 – Virtual Reality, In-Person  $N = 20$ , college students

## Results



## Conclusions & Future Directions

- Present stimuli and paradigm are well-suited for studying spatial cognition, metacognition, and memory retrieval processes.
- Ongoing work implementing paradigm in conjunction with sEEG to examine neural circuitry of familiarity and recollection processes.

