



## Background

Adaptive cognition requires deciding when stored information must be re-engaged to guide current behavior.

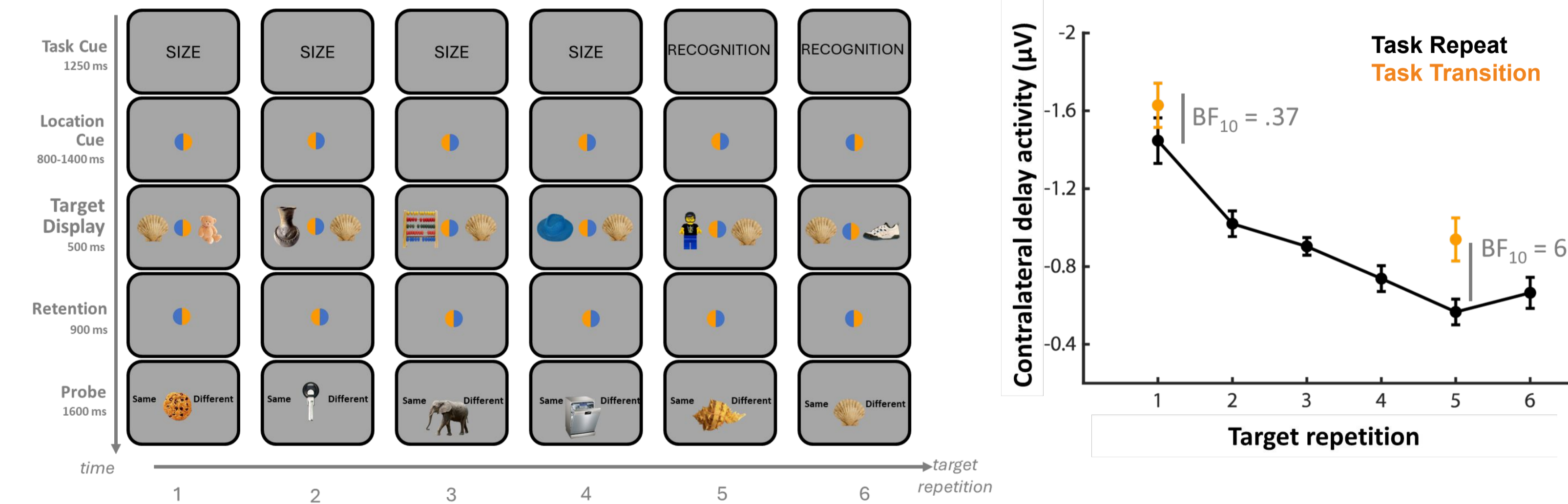
Prior work suggests that transitions in task, perceptual, and narrative structure trigger memory re-engagement, as reflected in content-specific neural reinstatement (Silva et al. 2019; Sols et al., 2017) and working memory load (Güler et al., 2026; Özdemir et al., 2024; Şentürk et al., 2024).

But some environments are consistently variable. This variability may not necessarily signal a context transition.

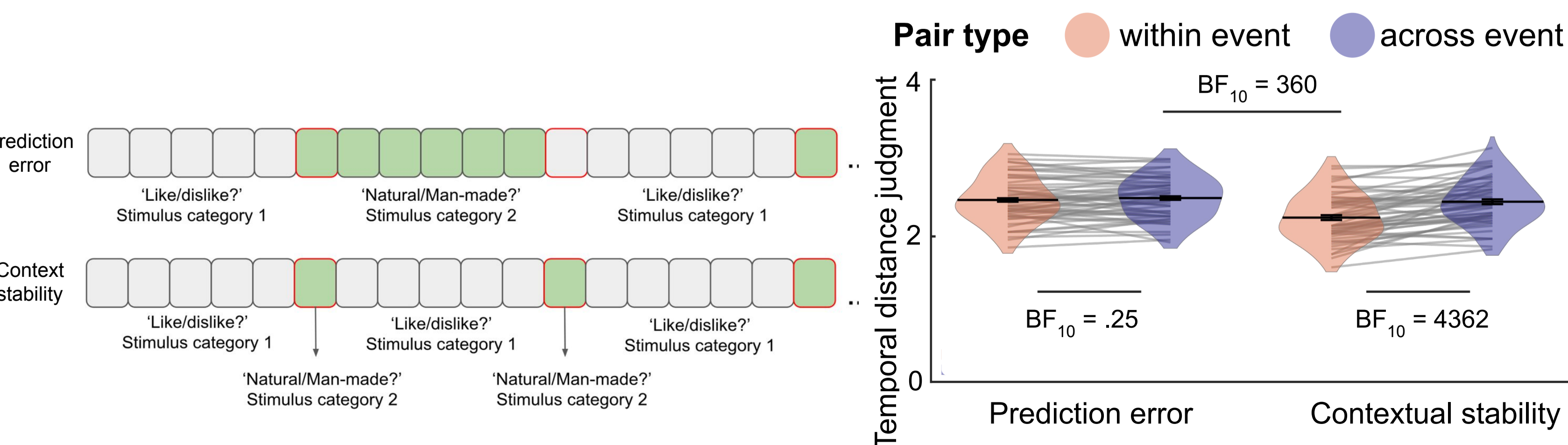
**Does memory re-engagement track change itself or transitions across stable contexts?**

## Prior work: reactivation and segmentation when stability ends

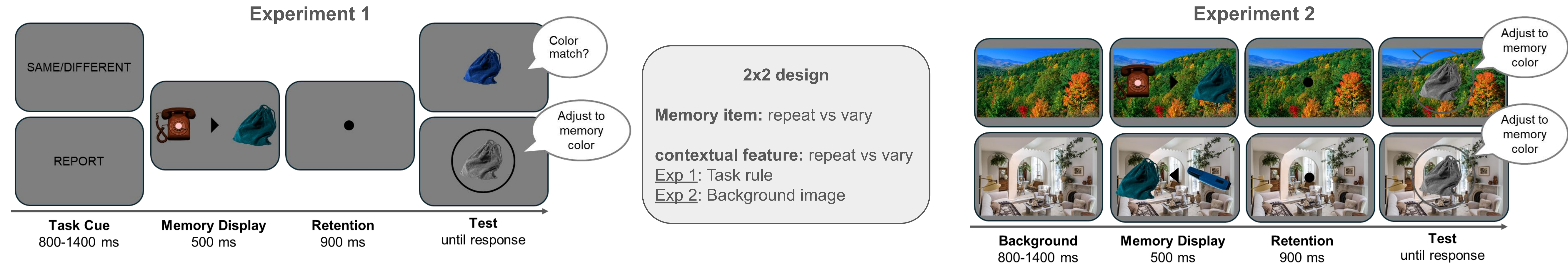
Transitions in task rule trigger memory reactivation (Şentürk et al., 2024).



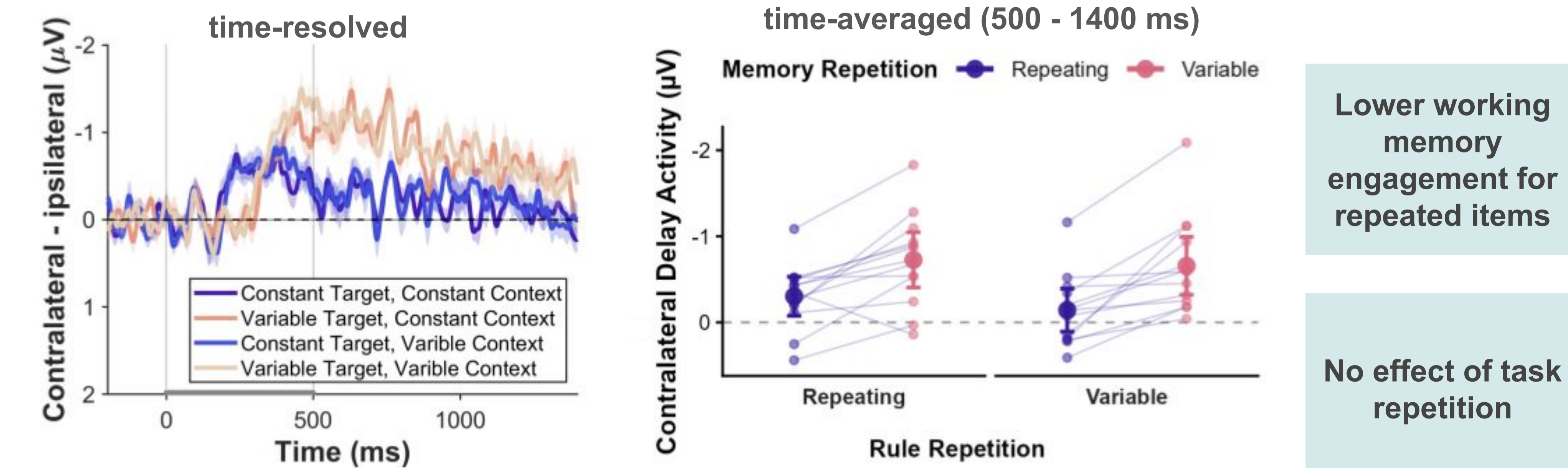
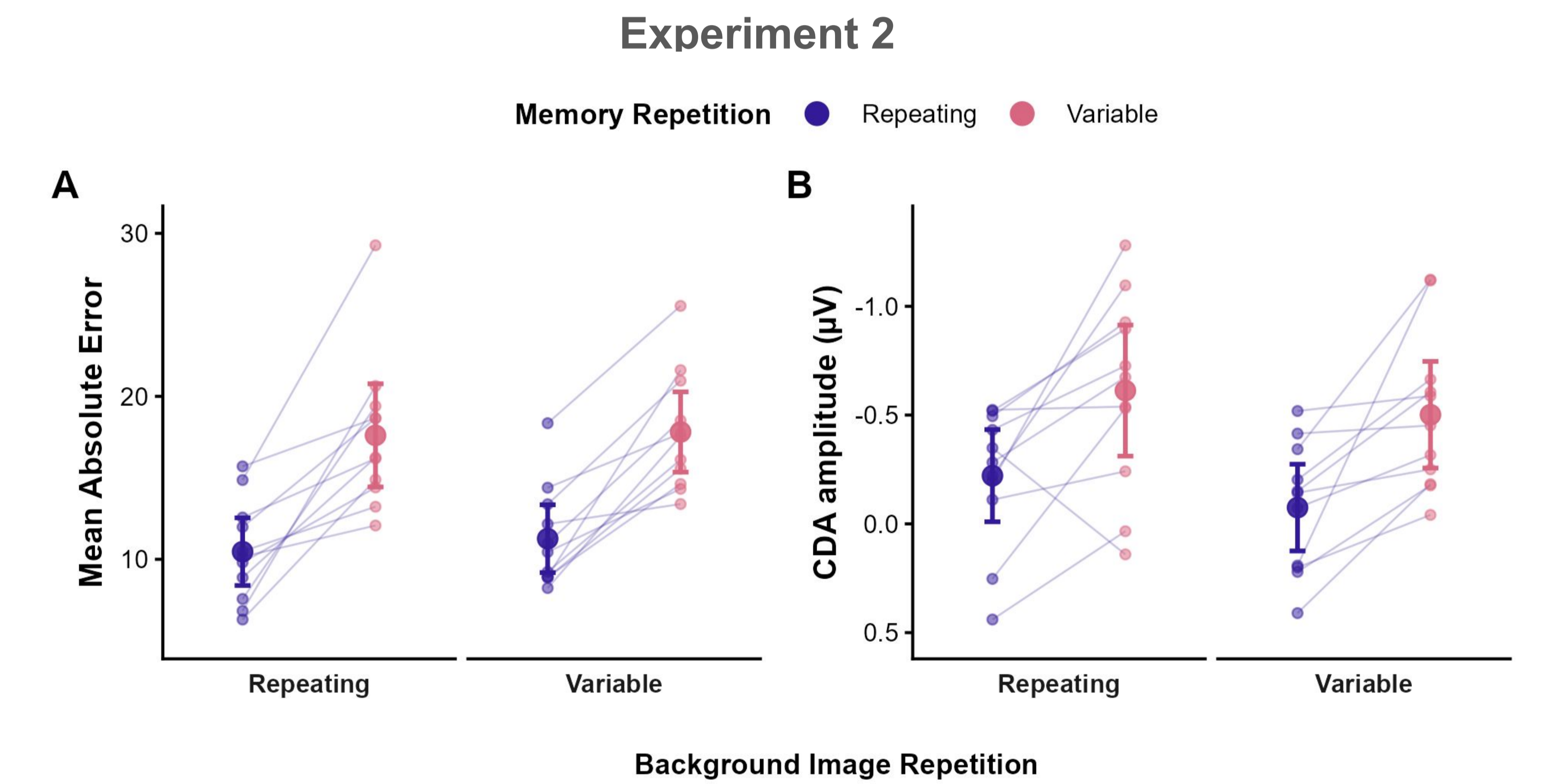
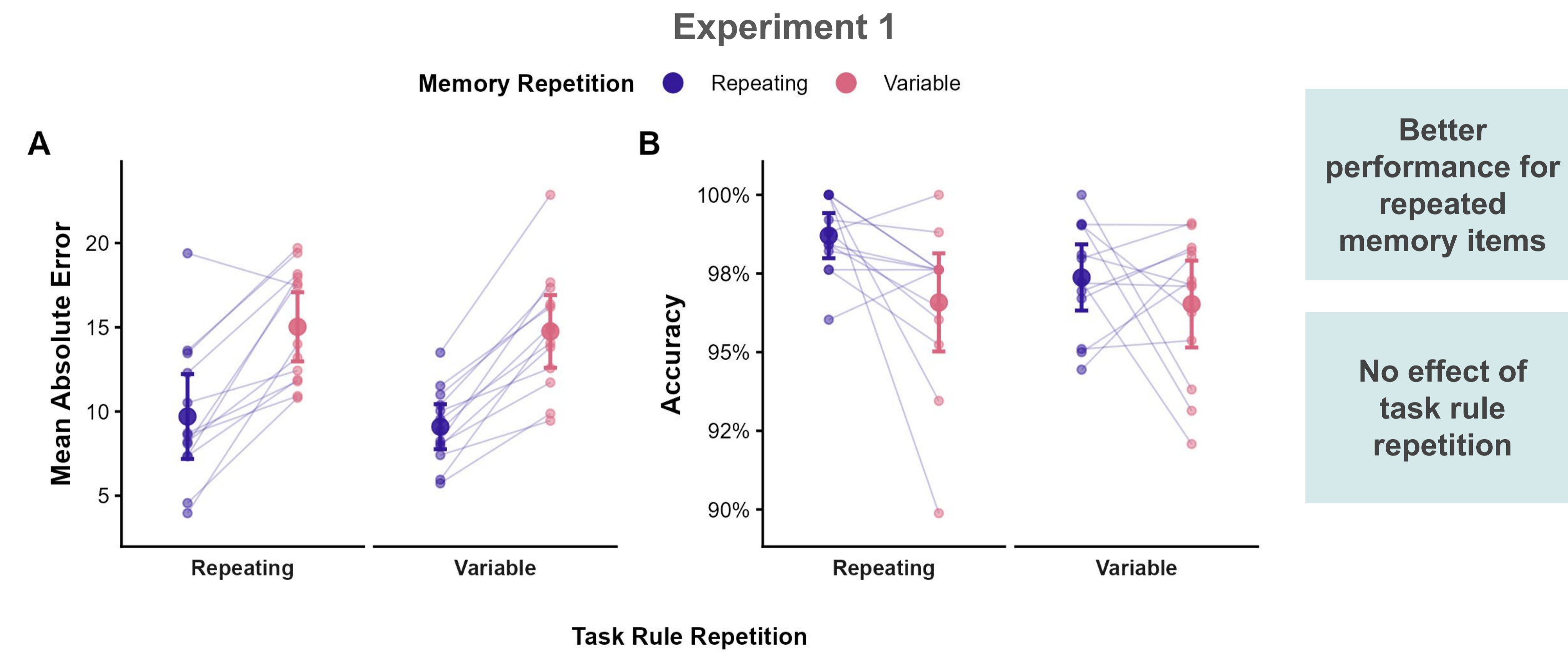
Transitions across **stable** contexts generated event segmentation; standalone deviants did not (Güler et al., 2025).



## Experimental Procedure



## Results



## Conclusions

**Change itself is not enough.**  
Consistent variability did not trigger memory re-engagement.

**Reactivation tracks violations of stable context.**  
Stored information was re-engaged when stable contexts were disrupted.

**Converges with event segmentation.**  
Brief deviations in task rule or object category weakly segment memory unless they mark stable-context transitions (Güler et al., 2025).