

## Introduction

- Retrieved Context Theory: Temporal order information is automatically encoded **and** automatically retrieved
- This automatically encoded temporal information guides *intentional* retrieval
  - Temporal contiguity effect: Retrieving one item tends to cue retrieval of other items studied nearby in time (Kahana, 1996)
    - Even when encoding is incidental (Healey, 2018; Mundorf et al., 2021)
- Does temporal order information also automatically guide *implicit* retrieval?
  - Associative repetition priming: Repeating one item tends to cue faster responses to other items studied nearby in time (McKoon & Ratcliff, 1979; 1986)
    - At least for items explicitly studied as a pair (CUE-TARGET)

### Prediction 1:

There will be a temporal contiguity effect in recall even when encoding is incidental

### Prediction 2:

Associative repetition priming will occur even for items not studied as a pair

### Prediction 3:

Associative repetition priming will be affected by the distance between items during initial study

## Design

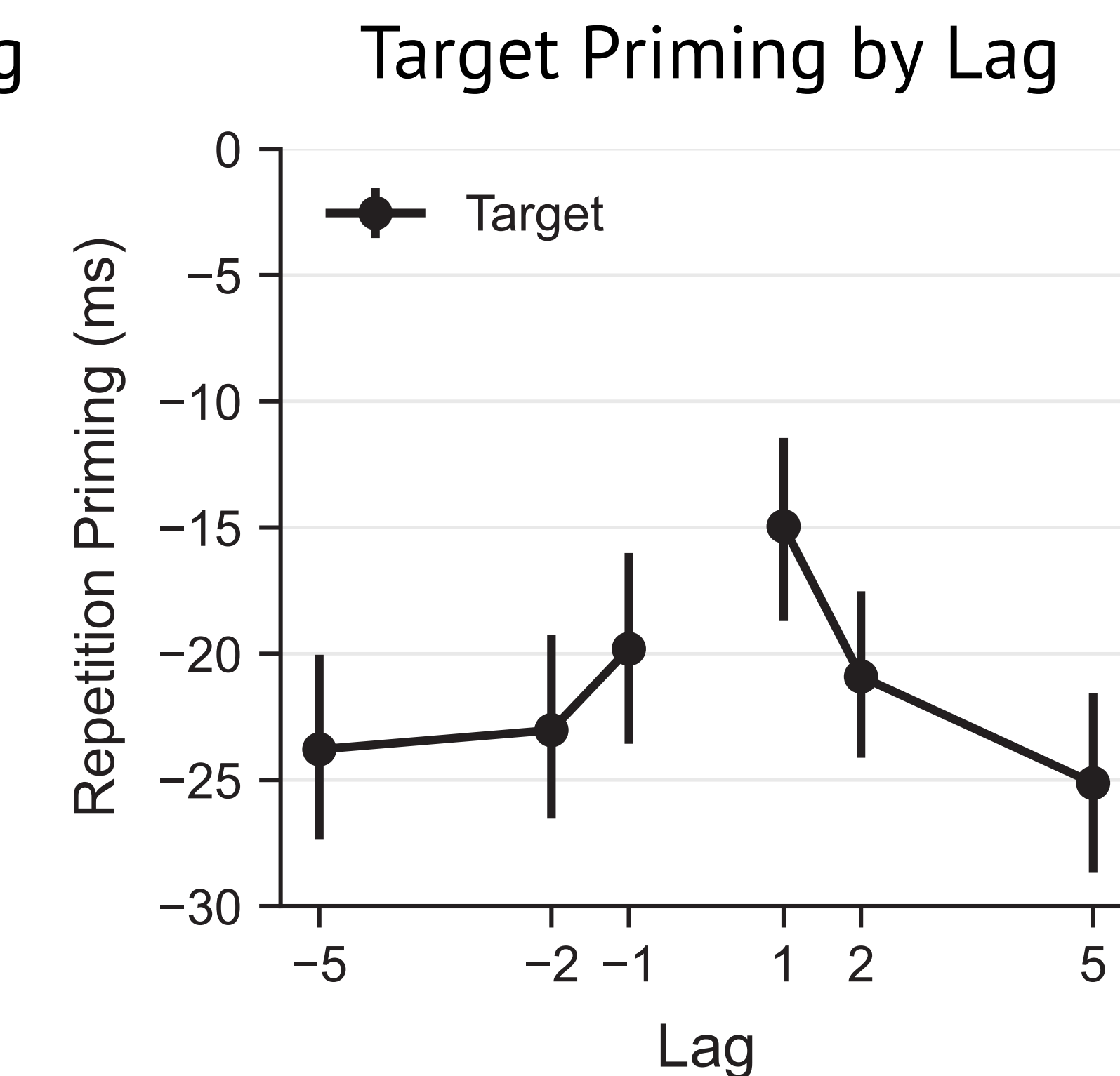
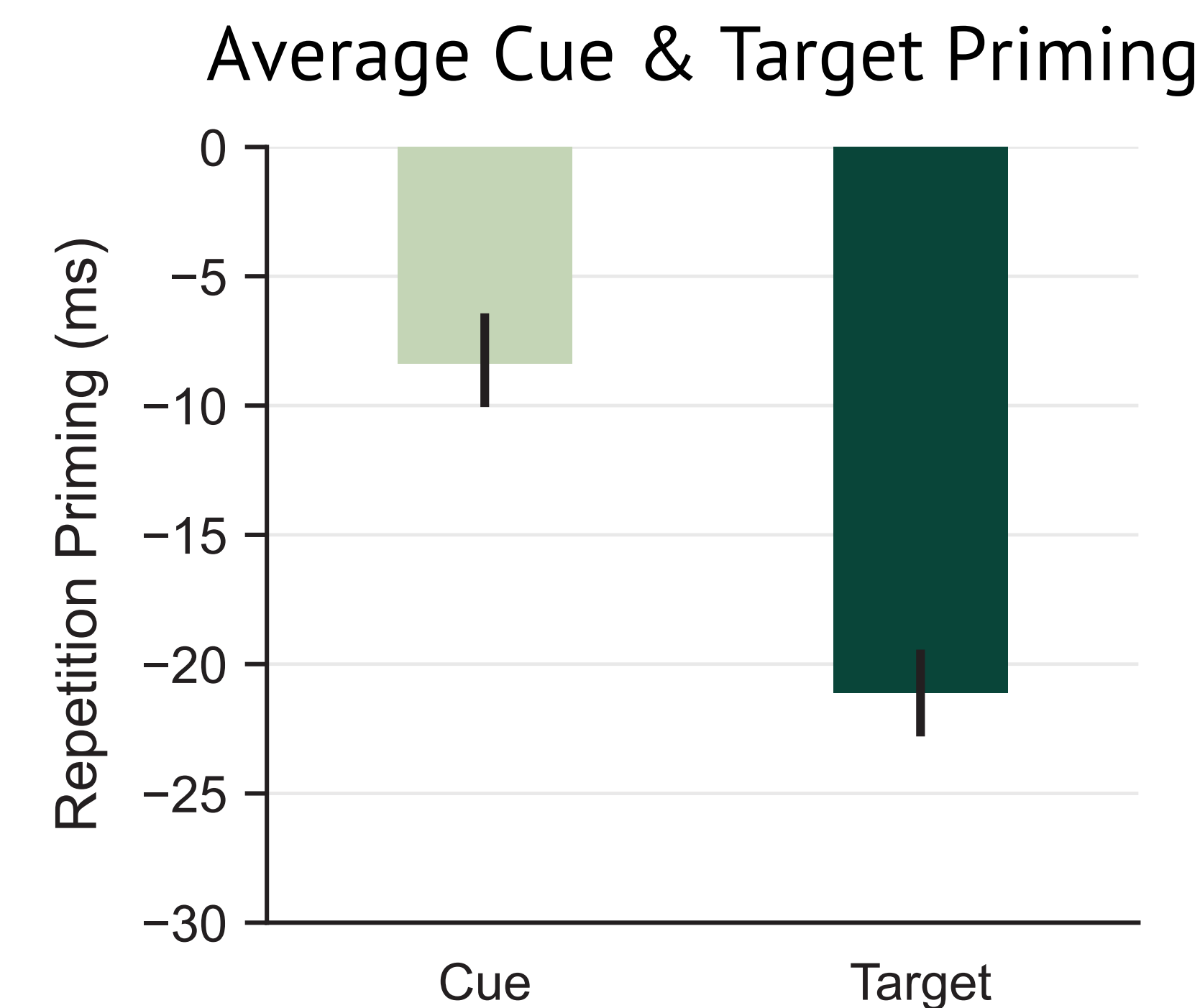
- Subjects ( $N = 603$ ) each read 505 words aloud
  - 385 presented once; 60 presented twice (30 cues & 30 targets)
  - Surprise final free recall test
- Varied distance between the cue and target on their first presentation
  - Initial TARGET – CUE lag = -5, -2, -1, +1, +2, or +5

Serial Position	1	2	3	4	5	6	7	8	9	10	11	12
<b>Trial 1</b>	CUE	TARGET	X	X	X	X	X	X	X	X	CUE	TARGET
	Lag <sub>TARGET – CUE</sub> = +1											
<b>Trial 2</b>	TARGET	X	X	X	X	CUE	X	X	X	CUE	TARGET	
	Lag <sub>TARGET – CUE</sub> = -5											

## Results

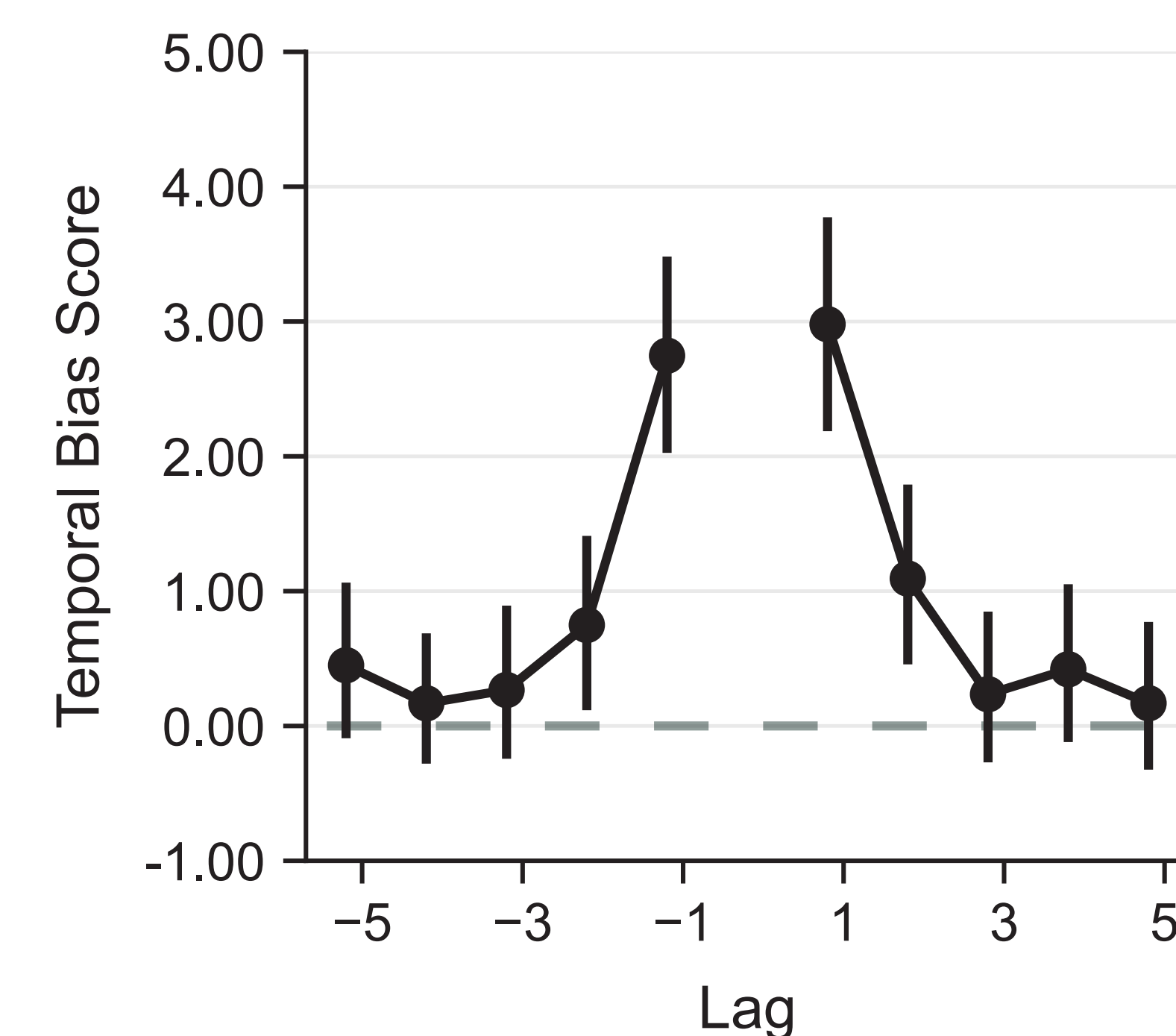
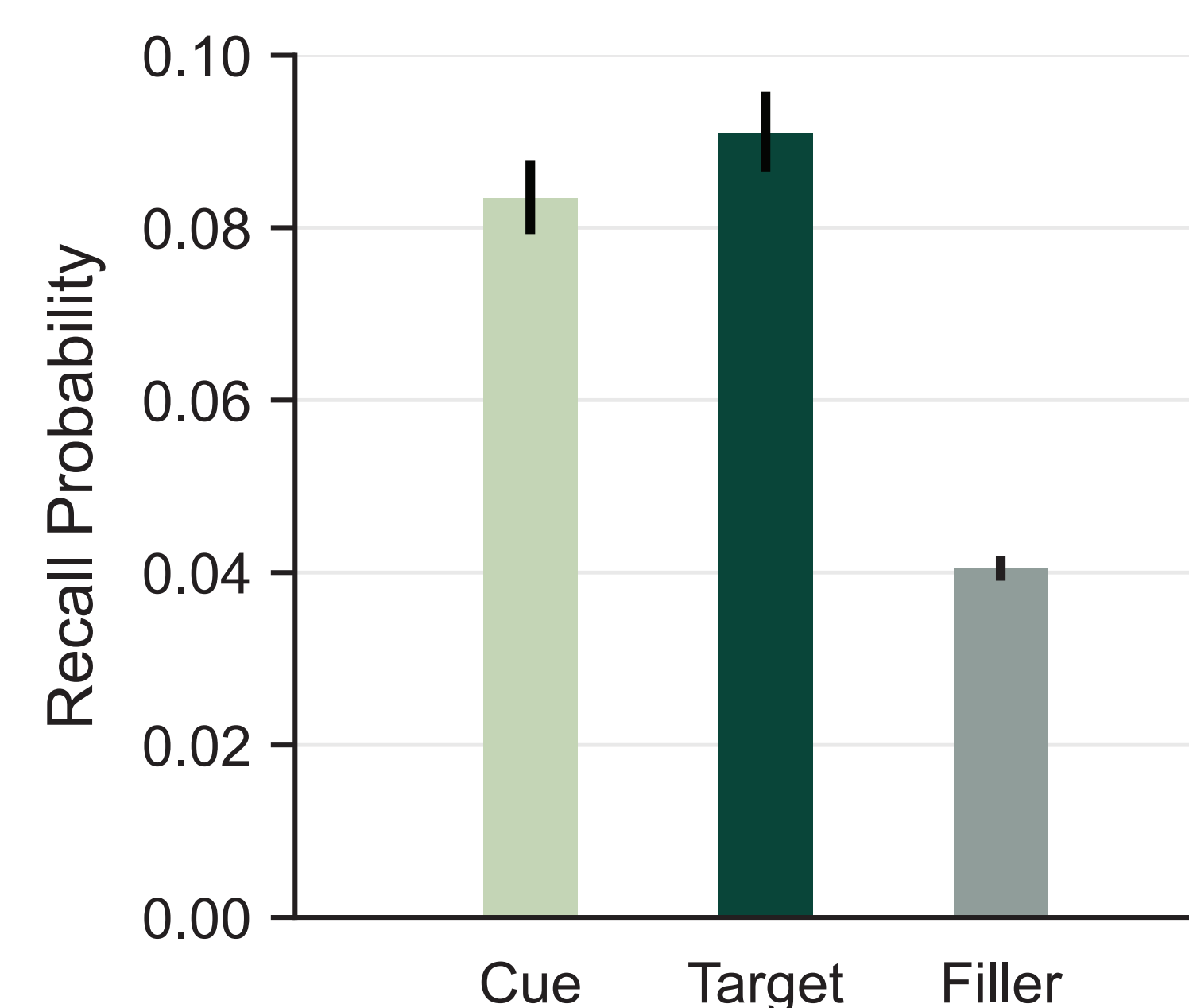
Error bars represent bootstrapped 95% CI

### Repetition Priming



- Associative repetition priming at all initial lags
- Reduced priming at initial lag = +1

### Surprise Free Recall



- Clear temporal contiguity effect in free recall following incidental encoding

## Conclusions

Temporal order information influenced both intentional and implicit retrieval

- Results support Retrieved Context Theory's core assumption that temporal information is automatically encoded **and** automatically retrieved
  - Reading one item cued other items experienced nearby in time
- But repetition priming was *reduced* when the cue and target were immediate neighbors (lag = +1)
  - Near-lag repetitions may trigger an additional time-consuming process