

Modeling Temporal Contiguity in Incidentally Encoded Memories

Abigail M. Dester, Linh T. T. Lazarus, & M. Karl Healey

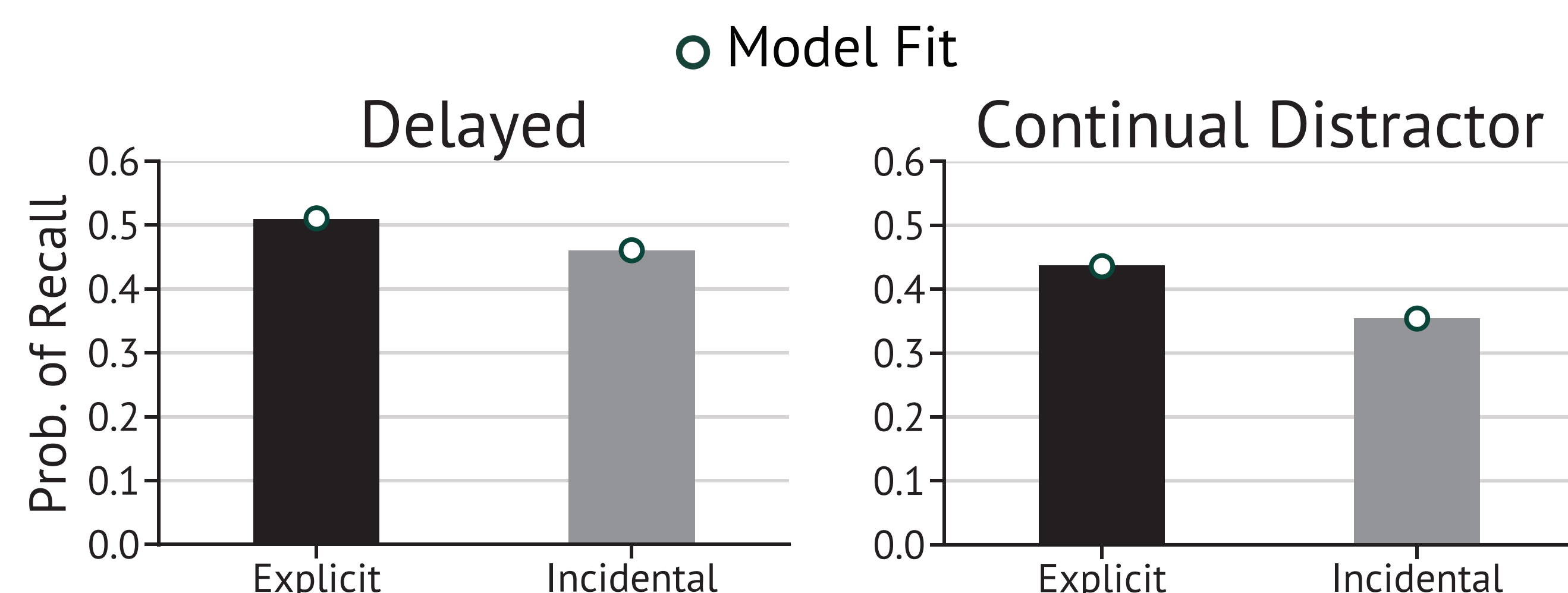
Introduction

- Temporal Contiguity Effect (TCE): recall of one event triggers recall of other events originally experienced nearby in time (Kahana, 1996)
- Retrieved Context Models attribute the TCE to *automatic* encoding of temporal information whenever new memories are formed (Healey, Long, & Kahana, 2018)
 - Predicts a TCE even when encoding is incidental
 - Predicts reducing the TCE should reduce recall
- However, data show incidental encoding:
 - Dramatically reduces the TCE (Healey, 2018; Nairne et al. 2017)
 - Only slightly reduces overall recall (Marshall & Werder, 1972)

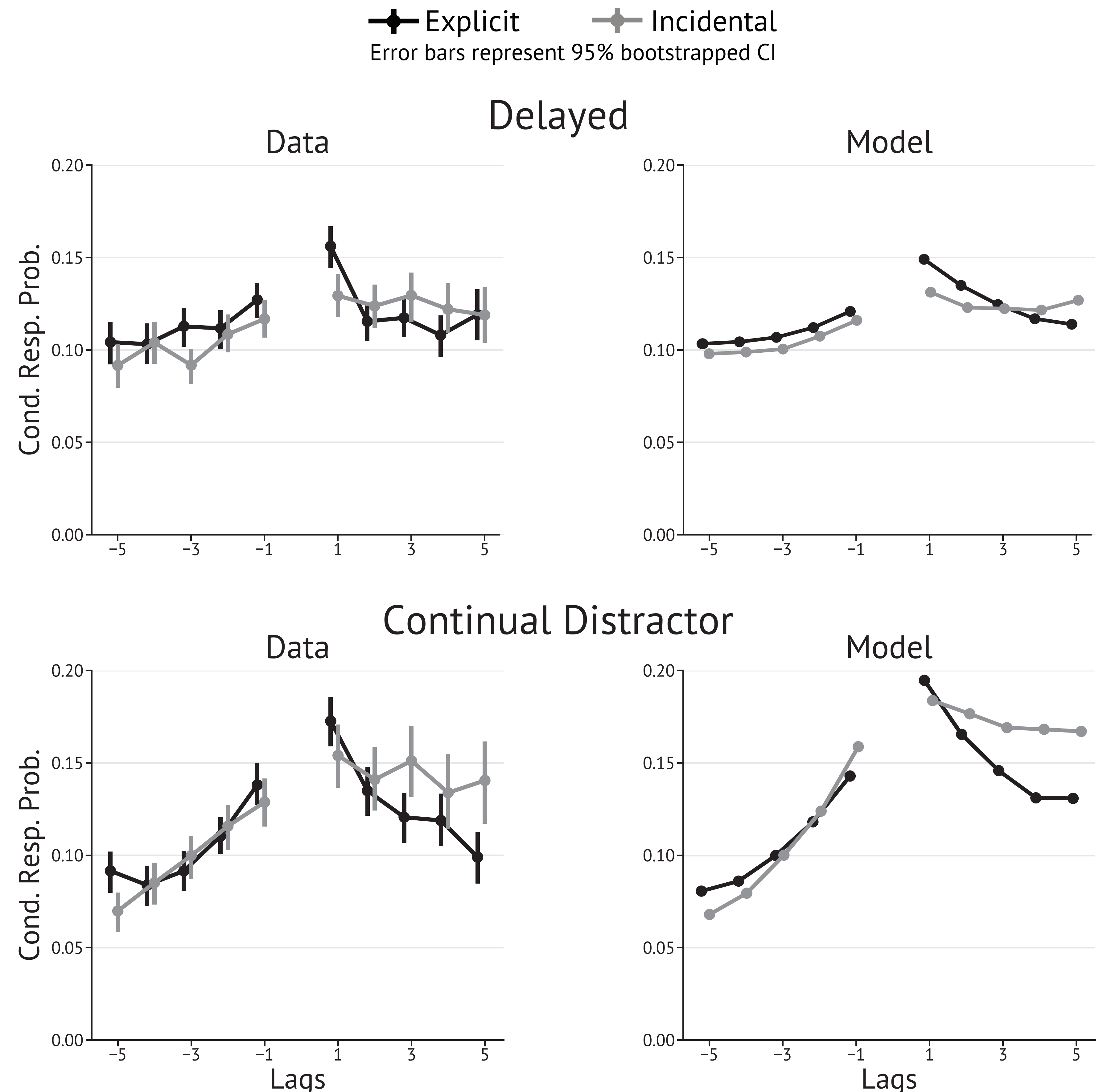
Research Question: Can the Retrieved Context Model simultaneously account for the TCE *and* overall recall in incidental encoding?

Design

- $N = 5,443$ [Amazon MTurk]
- Free recall task
 - 1 list of 12 words
 - Animacy judgment encoding task
- 2×2 Between-Subjects Design
 - Explicit vs. Incidental
 - Continual Distractor vs. Delayed Free Recall
- Retrieved Context Model fit using genetic algorithm



Results



Conclusions

- The Temporal Contiguity Effect is dramatically reduced, but not eliminated, when participants are not intentionally studying
- The Retrieved Context Model can fit the TCE *and* overall recall in incidental encoding
- Future Directions:
 - Examine mechanisms which might account for the difference in temporal contiguity between incidental and explicit encoding