



Examining the mechanism responsible for recognition-induced forgetting

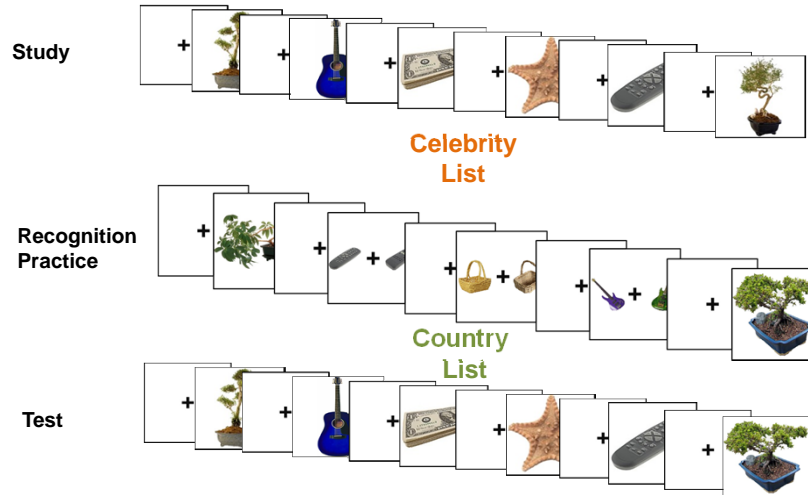
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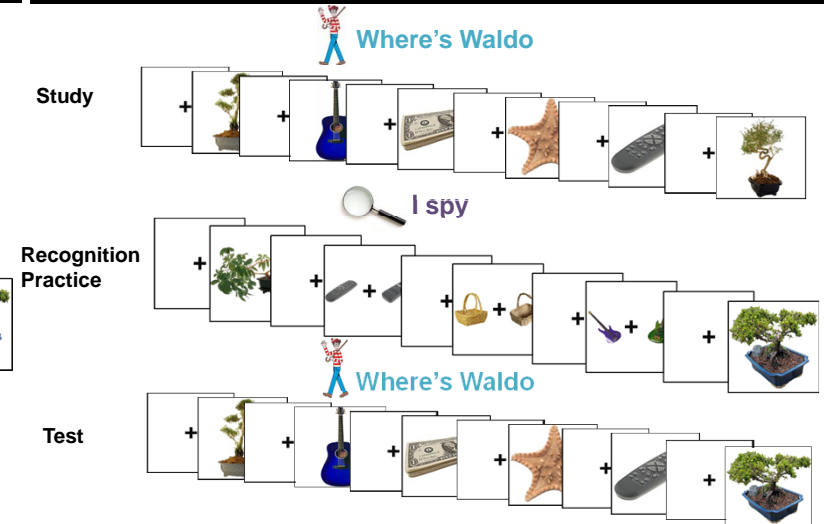
Introduction

The long-held proposed mechanism behind retrieval-induced forgetting (Anderson, Bjork, & Bjork, 1994), inhibition (Anderson, 2003), has recently been challenged with the context account (e.g., Jonker, et al., 2013). We tested this account in a new visual recognition-induced forgetting paradigm (Maxcey & Woodman, in press) by interleaving secondary objects into both the study and recognition practice phases. We compared memory for these secondary objects under normal conditions (E1) and a context reinstatement condition (E2). The context account says that if the study context is reinstated at test, the RIF effect will be abolished. We tested this claim to examine the mechanism of recognition-induced forgetting.

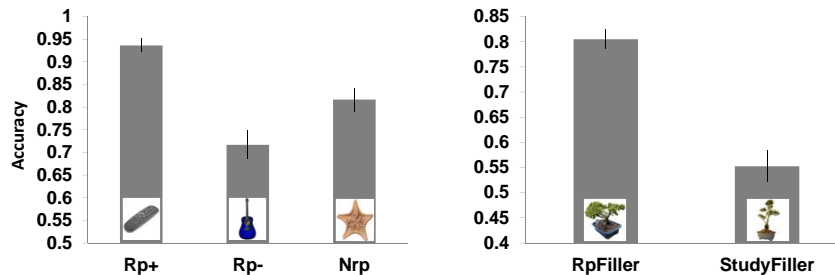
Experiment 1 Method



Experiment 2 Method

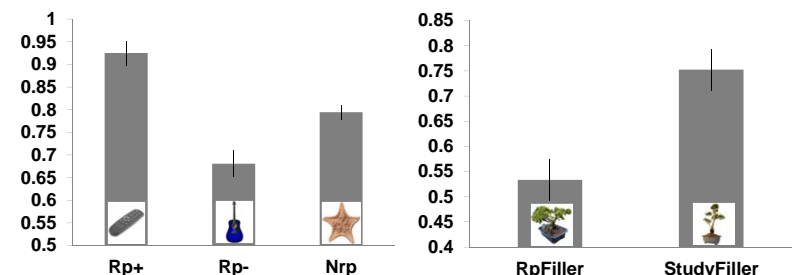


Experiment 1 Results



- Cost for non-practiced objects from practiced categories (Rp-, 72% < Nrp, 82%), $t(29)=3.07, p < .01$.
- Benefit for practiced objects from practiced categories (Rp+, 94% > Nrp, 82%), $t(29)=5.40, p < .001$.
- Better memory for filler stimuli in the recognition practice phase (80%) relative to filler stimuli in the study phase (55%), $t(29)=4.35, p < .001$.
- The error bars show the 95% within-subjects confidence intervals.

Experiment 2 Results



- Cost for non-practiced objects from practiced categories (Rp-, 68% < Nrp, 79%), $t(29)=3.73, p < .001$.
- Benefit for practiced objects from practiced categories (Rp+, 93% > Nrp, 79%), $t(29)=4.94, p < .001$.
- Better memory for filler stimuli in the study phase (75%) relative to filler stimuli in the recognition practice phase (53%), $t(29)=4.84, p < .001$.

Reprint



Conclusions

- E1 showed evidence of both the typical recognition-induced forgetting effect and significantly better memory for filler stimuli from the recognition practice phase relative to filler stimuli from the study phase. This suggested that at test, the recognition practice phase was the activated context.
- When the study phase context was reinstated at test in E2, we found that the typical recognition-induced forgetting effect persisted. We also found better memory for filler stimuli from the study phase relative to filler stimuli from the recognition practice phase. This suggested that at test, the study phase was the activated context, yet contrary to predictions made by the context account, this did not abolish the RIF effect.
- Despite our successful reinstatement of the study phase at test in E2, we failed to abolish RIF. This finding is inconsistent with the context account of retrieval-induced forgetting (Jonker et al., 2013), suggesting that this account does not explain the mechanism responsible for recognition-induced forgetting.

References

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Anderson, M. C., Bjork, R. A., & Bjork, E. L. (1994). Remembering can cause forgetting: Retrieval dynamics in long-term memory. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 20, 1063-1087.

Jonker, T. R., Seil, P., & MacLeod, C. M. (2013). Putting retrieval-induced forgetting in context: An inhibition-free, context-based account. *Psychological Review*, 120, 852-872.

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