

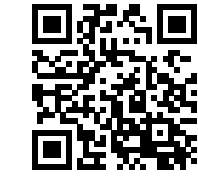


Irrelevant Information in Working Memory

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For more information about this study:



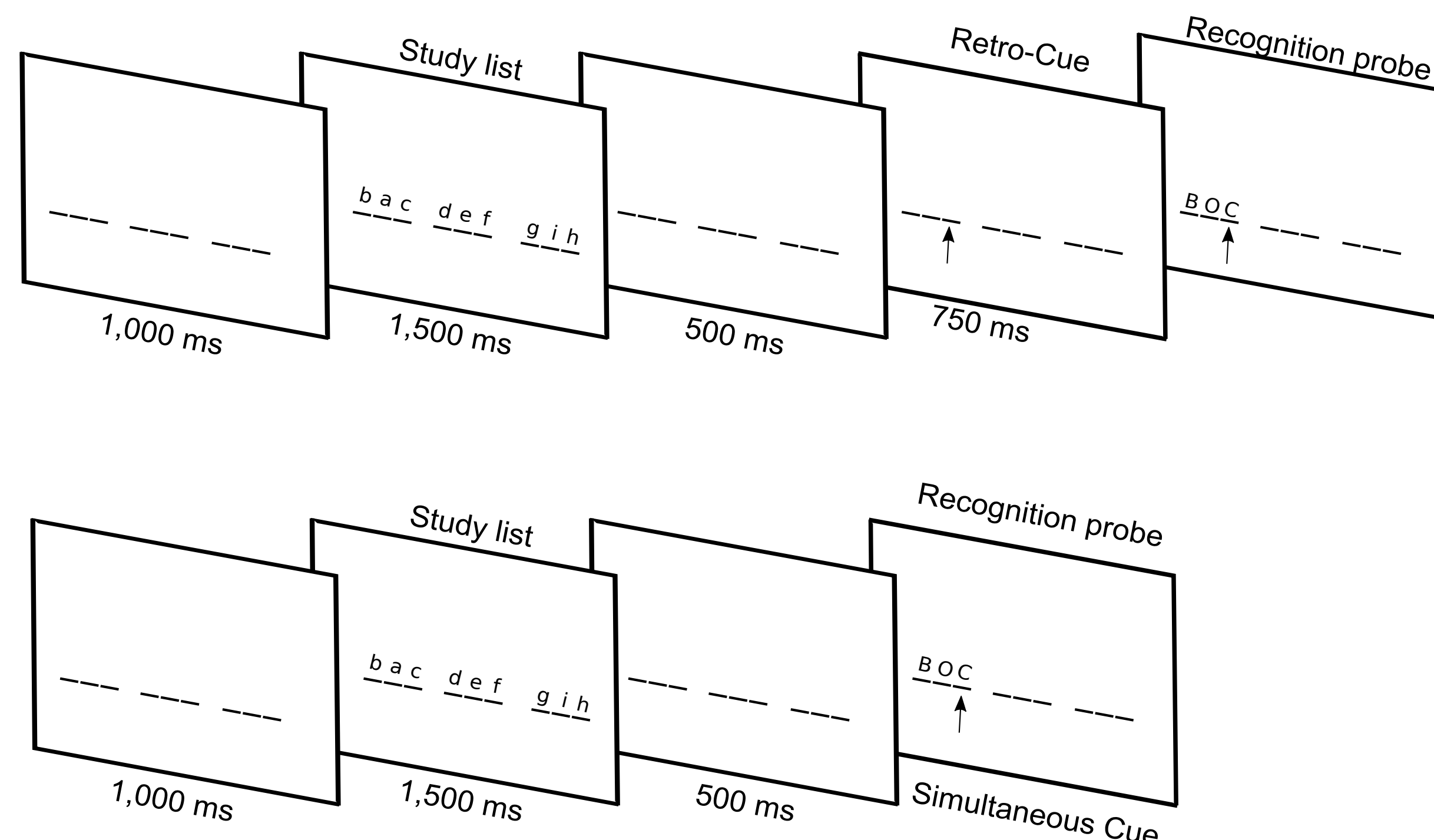
INTRODUCTION

Our ability to hold information active in working memory is limited. We need to get rid of irrelevant information.¹

How does irrelevant information influence recognition decisions?²

When can we get rid of irrelevant information in working memory?

PROCEDURE



STUDY DESIGN

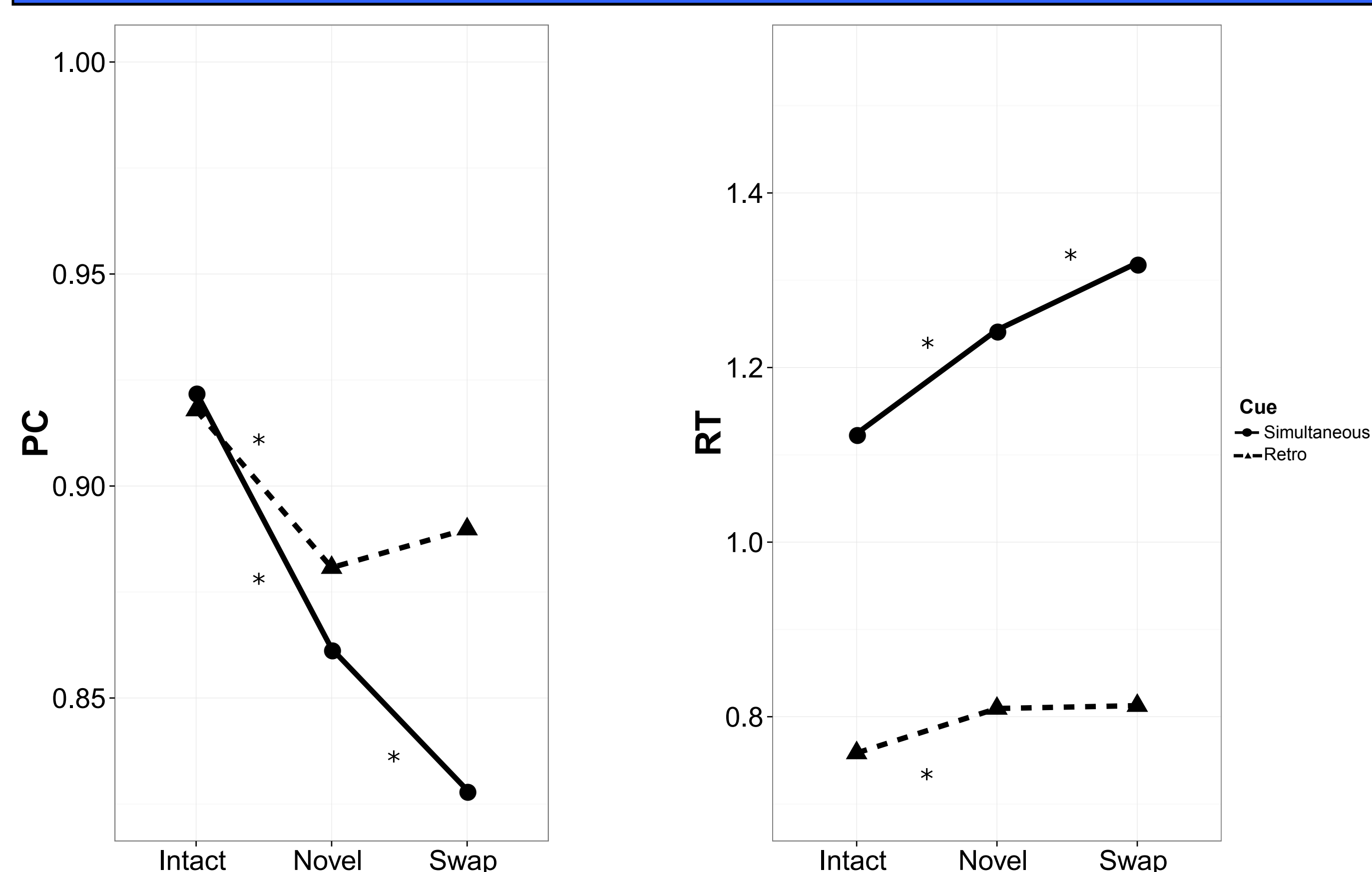
Independent Variables:
Probe: Match, Intrusion, New (50%, 25%, 25%)
Context: Intact, Swap, Novel (33%, 33%, 33%)
Cue: Simultaneous, Retro (50%, 50%)

432 Trials; 18 in the smallest cell of conditions
28 Subjects included into the analysis

PROBE NONWORD TYPES

Probe / Context	Intact	Swap	Novel
Match	BAC	GAH	KAP
Intrusion	BEC	GEH	KEP
New	BOC	GOH	KOP

RESULTS MATCHES



Relative evidence (Bayes Factor³) for an interaction of Context with Cue: 3.1 (proportion correct) and 64'121 (RT).

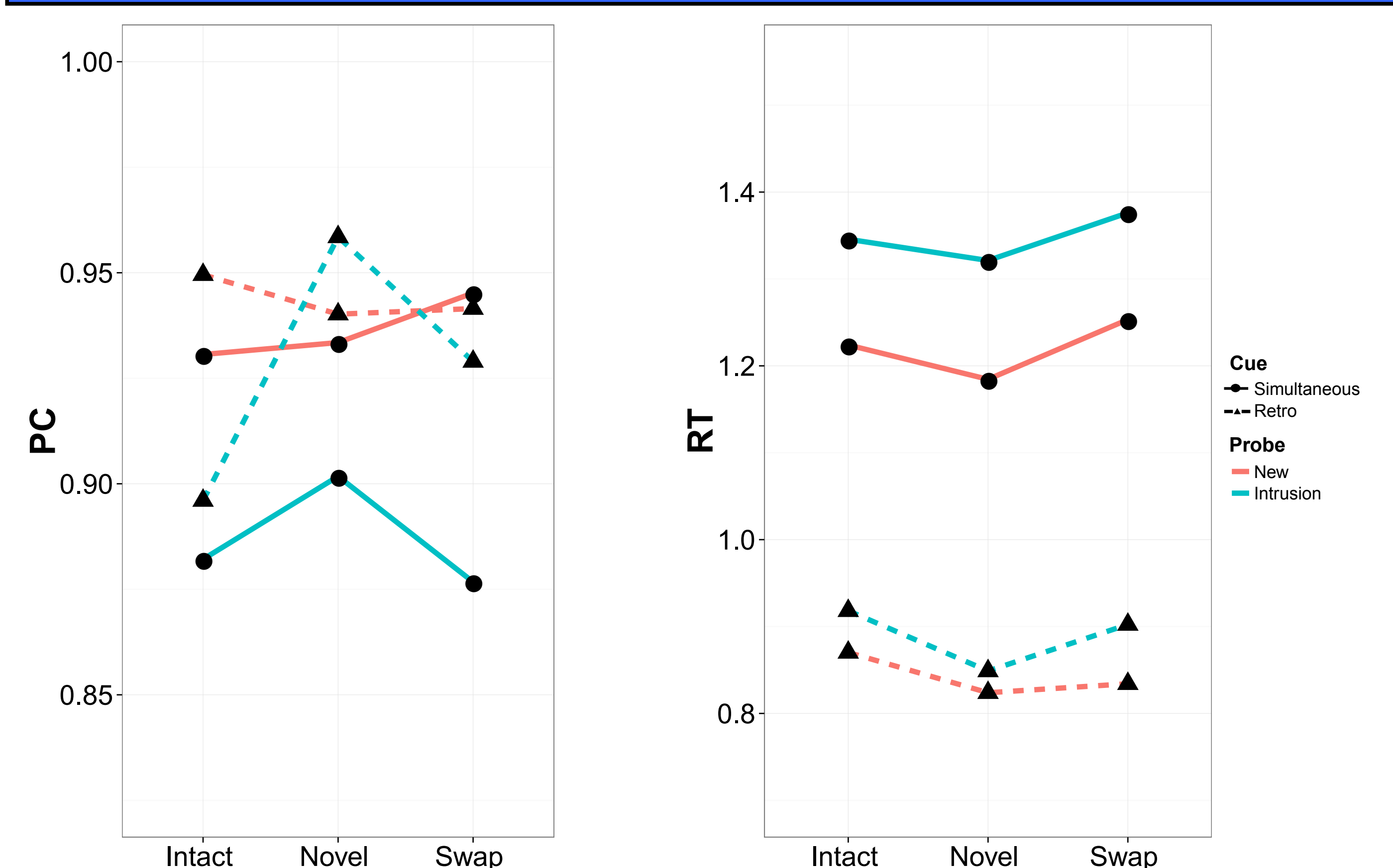
Benefit for intact context due to high similarity.

Cost for swap in comparison to novel context because recognition process gets drawn towards a to be rejected memory item.

CONCLUSION

Disappearance of costs associated with accepting a matching probe with swap context in comparison to novel context, as well as the reduction of costs linked to rejecting an intrusion probe is consistent with a deactivation of irrelevant triplets, while irrelevant letters of the triplet including the relevant letter remain activated.

RESULTS NEGATIVE PROBES



Relative evidence (Bayes Factor³) for an interaction of Probe with Cue: 1.2 (proportion correct) and 24.2 (RT).

Rejection benefit for novel context and retro-cued trials.

Costs associated with rejecting intrusion probes is reduced with presentation of retro-cue.

REFERENCES

- 1) Oberauer, K. (2001). Removing irrelevant information from working memory: A cognitive aging study with the modified Sternberg task. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 27, 948-957.
- 2) Oberauer, K. & Lange, E.B. (2009). Activation and binding in verbal working memory: A dual-process model for the recognition of nonwords. *Cognitive Psychology*, 58, 102-136.
- 3) Morey, R. D., & Rouder, J. N. (2015). BayesFactor: Computation of Bayes Factors for Common Designs. R package version 0.9.11-1.