January xxth, 2025

Jeffrey Starns, PhD

Department of Psychological and Brain Sciences

University of Massachusetts Amherst

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Dear Dr. Starns:

Dr. Mark Huff and I are submitting our manuscript “Judgments of Learning Facilitate Cued-Recall of Single and Double Semantically Mediated Word Pairs” for consideration as an original research article in the *Journal of Experimental Psychology: Learning, Memory, & Cognition*.

Judgments of learning (JOLs) have been repeatedly shown to improve memory for related but not unrelated word pairs (i.e., JOL reactivity). Based on a cue-strengthening account (Soderstrom et al., 2015), this is because JOLs strengthen intrinsic cues which benefit recall. However, Maxwell and Huff (2024) recently found that JOLs also improve cued-recall of semantically mediated pairs (e.g.*, lion – stripes*), which lack strong relatedness cues but are indirectly linked through a non-presented mediator (e.g., *tiger*). Based on the cue-strengthening account, reactivity should not occur on mediated pairs due to their lack of relatedness cues. As such, Maxwell and Huff proposed that JOLs also encourage relational encoding, which benefits memory whenever pairs contain an underlying relation. We replicate Maxwell and Huff’s findings on mediated pairs (Experiment 1A) while also demonstrating that JOL reactivity extends to backward mediated pairs (e.g., *stripes* – *tiger*; Experiment 1B) and double-mediated pairs in which the cue and target are mediated through two concepts (e.g., *lion* – *flag*, which in which the cue and target are mediated through *tiger* and *stripes*; Experiments 2A/2B). Taken together, our findings support a relational encoding account of JOL reactivity. We propose that the additional relational encoding of JOLs strengthens activation of the non-presented mediator(s) via spreading activation, which in turn facilitates cued-recall of the mediated target.

We believe that our findings make substantive and novel contributions to the literature, particularly through our inclusion of multiple semantically mediated word pair types. This work is original and not under review elsewhere, and we disclose no conflicts of interest. We look forward to hearing about the suitability of our manuscript in the *Journal of Experimental Psychology: Learning, Memory, and Cognitoin*.

Sincerely,

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