July 4th, 2023

Aaron S. Benjamin, PhD

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Dear Dr. Benjamin:

Dr. Mark Huff and I are submitting our manuscript “Judgment of Learning Reactivity Reflects Enhanced Relational Encoding on Cued-Recall but not Recognition Tests” for consideration as an original research article in the *Journal of Experimental Psychology: Learning, Memory, and Cognition*.

This study investigated whether positive reactivity observed on forward pairs (e.g., mouse – cheese) would extend to mediated pairs (e.g., lion – stripe). Unlike forward pairs which contain strong relatedness cues, mediated pairs appear unrelated at encoding yet are indirectly related via a non-presented mediated (e.g., tiger). Based on Soderstrom et al.’s (2015) cue-strengthening account, reactivity would not be expected on mediated associates, as this account requires the presence of obvious relatedness cues for reactivity to occur. However, a relational account of reactivity predicts a memory benefit on mediated associates, as based on this account, JOLs strengthen cue-target relations via relational encoding (Maxwell & Huff, 2022). Our use of mediated associates allowed us to test for reactivity using a pair type which appears unrelated yet contains an underlying cue-target relation. Overall, we show that positive reactivity extends to mediated associates with cued-recall (Experiment 1) and recognition test types (Experiments 2 and 3). Additionally, Experiments 2-4 showed that positive reactivity also extends to unrelated pairs when recognition testing is used. When cued-recall testing is used, reactivity reflects relational encoding, with related but not unrelated pairs incurring a memorial benefit. However, because JOLs also enhance familiarity cues, which are more likely to benefit recognition, unrelated pairs are only benefitted for this test type. Taken together, we propose that JOL reactivity reflects a combination of cue-strengthening and relational encoding, with the type of test ultimately determining whether strengthened cues or relational encoding influence memory.

We believe that our findings make substantive and novel contributions to the literature, particularly through our use of mediated associates and our inclusion of recognition testing, rather than relying solely upon cued-recall testing. 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 Cognition*.

Sincerely,

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