November XXth, 2023

Dr. Bennett L. Schwartz, PhD

Associate Editor

*Metacognition & Learning*

Dear Dr. Schwartz:

We have submitted our revision of META-D-23-00155 “Judgment of Learning Reactivity Reflects Enhanced Relational Encoding on Cued-Recall but not Recognition Tests” for your consideration. We appreciate the thorough examination provided by yourself and our reviewers and are pleased that our manuscript was well-received by each reviewer. Below, we list our responses to each reviewer’s comments in addition to your own and cite page numbers when referring to specific changes. To facilitate review, all primary modifications to the manuscript have been made using blue-colored font. We look forward to your response and hope that our revised manuscript is now suitable for publication in *Metacognition & Learning*.

Sincerely,

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**Action Editor**

**Comment 1:** In addition to the comments of the reviewers, I will suggest that you add a brief section in the General Discussion on the implications of your study for education or for other applications.    
  
***Response:*** Thank you for this suggestion. We have expanded our discussion on educational implications on pg. 33 of the General Discussion. Specifically, we now note the potential implications of positive JOL reactivity on recognition testing within educational contexts, given that educational testing often makes use multiple-choice and true-false type questions.  
  
**Reviewer 1:**  
  
**Suggested Several Minor Grammatical Edits**

***Response:***We appreciate your attention to detail. All minor edits have been addressed in our revision.  
  
**Reviewer 2 (Major Comments):**

**Comment 1:** Materials - I appreciated the control over other characteristic of the associates selected, including the FAS. It's nice to see that level of precision in list construction. However, you might mention explicitly that the FAS for the cue-targets with mediators was 0. In fact, I think a more in depth discussion about what mediators are and how they operate might be helpful. The discussion in the paragraph leading to Experiment 1 is good, but I think also add more in the materials section. It's an odd thing to think about - the mediator pairs have a mediator associating them so maybe another example here would be helpful. I also didn't see what the association strength was from the cue to the mediator (although not presented, that factor could have influenced the salience of the route to the studied target).  It seems obvious, but I work with these norms and still had to think about it more than I should have needed to.   
  
Otherwise the method was well done and I don't have any critique of it.

***Response:*** We now explicitly state that the FAS between cue and targets was zero for mediated pairs in the Experiment 1 Materials section (pg. 11). Additionally, we expanded our description of mediated pairs in this section. We have also added an additional table to the Appendix (Table A3; pg. 46), which displays mean FAS values between cues and mediators and mediators and targets, respectively.  
  
**Comment 3:** Perhaps a discussion of how and why recognition might operate differently from cued-recall in terms of JOL reactivity generally would be helpful. The general discussion goes into more depth about this factor, but more information earlier might be helpful. The authors cite conflicting literature regarding results in recognition, but the reasons why the results might differ would be helpful, especially specifically for direct versus mediated associations.  
  
***Response:*** We agree that an earlier discussion of the potential differences underlying JOL reactivity with cued-recall and recognition testing would be helpful. We have updated the Experiment 2 Discussion on pg. 20 accordingly and now note that differences in cue types may explain the discrepancy between reactivity patterns observed on unrelated pairs for each test type.

**Comment 4:** The GD is thorough and clear and links the results to the theoretical considerations at hand. I had a couple of questions that might be addressed if a revision is requested:  
  
Is there the possibility that, due to the implicit activation of the mediator, participants were actively trying to link the mediator pairs in such a way that cue-strengthening (albeit more loosely defined) could have contributed to the results of JOL reactivity for those pairs?  
  
Could the same thing be happening with the unrelated pairs in a way that produced JOL reactivity in recognition?

***Response:*** This is an interesting question. It is certainly possible that participants attempted to link the mediated and unrelated pairs at encoding. However, we did not directly assess this, as it was beyond the scope of the present study. Future research may wish to explore this, particularly by assessing whether some mediators could potentially be guessed, which would likely facilitate relational encoding.

Regarding unrelated pairs, if participants actively engaged in relational encoding for all pair types (i.e., actively tried to link pairs at encoding), we would expect to see a memorial benefit on unrelated pairs for both test types (see Maxwell & Huff, 2022, Experiment 4 in which explicit relational encoding boosted recall of related and unrelated pair types while making JOLs only improved memory for related pairs). However, JOLs did not benefit cued-recall of unrelated pairs. Thus, the discrepancy between reactivity patterns on unrelated pairs for each test type likely reflects cued-recall and recognition testing emphasizing different cues, rather than encoding-based processes.

**Comment 5.** I wondered about whether these possibilities would have occurred due to the within-list manipulation of the pairs. If participants noticed that some pairs were related and some weren't, could that have alerted them to try to create relatedness cues between the cue and target regardless of their intended experimental use?  
  
***Response:*** This is an interesting point. Most research investigating JOL reactivity effects with cue-target word pairs has used mixed-list (i.e., within-list) manipulations of pair relatedness (e.g., Mitchum et al., 2016; Soderstrom et al. 2015; Maxwell & Huff, 2022). However, in a recent exception, Maxwell and Huff (2023) investigated the effects of list composition on JOL reactivity by manipulating relatedness within-lists and between-subjects (i.e., mixed vs. pure list presentations). Overall, no differences in reactivity patterns were detected as a function of list type, suggesting that JOL reactivity effects were not driven by a comparison process (i.e., Mitchum et al.’s *changed-goals* *hypothesi*s) or due to participants explicitly engaging in relational encoding for related pairs. However, future research will be needed to 1) test whether JOL reactivity effectsobserved on mediated pairs in mixed lists can extend to pure list contexts and 2) directly assess whether participants perceive mediated pairs as being unrelated.

Thank you for taking the time to review our manuscript.