October 13th, 2021

Bernhard Hommel, PhD

Institute of Psychology

Leiden University

Leiden, the Netherlands

Dear Dr. Hommel:

My colleagues and I are submitting our manuscript entitled “Item-Specific and Relational Encoding are Effective at Reducing the Illusion of Competence” to be considered for publication as an original research article in *Psychological Research*.

This paper investigates methods that can be used to increase the correspondence between judgments of learning (JOLs) and subsequent cued-recall performance. Specifically, we test whether the Item-Specific/Relational framework can be used to improve both the calibration and resolution between JOLs and cued-recall. Overall, we replicate previous research showing that JOLs are well calibrated for forward associates (e.g., credit-card), but an *illusion of competence* emerges for backward pairs (e.g., card-credit), symmetrical pairs (e.g., on-off), and unrelated pairs (e.g., artery-bronze). Additionally, we show that having participants study paired associates using either item-specific processing (i.e., focusing on the unique characteristics of each item) or relational processing (i.e., focusing on how paired items are related) reduces this metacognitive illusion relative to silent reading. Finally, our experiments assessed changes in both absolute and relative JOL accuracy as a function of these encoding strategies. To assess changes in absolute accuracy, we included calibration plots which show JOL ratings plotted against their corresponding recall accuracy. These plots allowed us to pinpoint the level of JOL rating at which the illusion of competence emerges (i.e., low vs. high JOL ratings). Next, relative accuracy was measured using Goodman-Kruskal gamma correlations. Overall, these methods revealed that illusion of competence reductions due to item-specific/relational encoding primarily reflected increased calibration rather than resolution.

We believe that our findings make a substantive empirical and methodological contribution to the literature through our inclusion of backward and symmetrical associates, our use of the Item-Specific/Relational framework, and our inclusion of calibration plots. This work is original and not under review elsewhere. All authors have approved the manuscript and agree with its submission, and we report no conflicts of interest. We look forward to hearing about the suitability of our manuscript in the *Psychological Research*.

Sincerely,

Mark J. Huff, PhD

Assistant Professor

School of Psychology

The University of Southern Mississippi

mark.huff@usm.edu

Ph: 601.266.5411

Cc:

Nicholas P. Maxwell, M.S.

School of Psychology

The University of Southern Mississippi

nicholas.maxwell@usm.edu

Ph: 601.266.5411

Emily E. Cates

School of Psychology

The University of Southern Mississippi

emily.cates@usm.edu

Ph: 601.266.5411