Dr. Laura King
Editor, *Perspectives on Psychological Science*

June 5, 2020

Dear Dr. King,

Following a positive submission proposal (PPS-20-163), we have enclosed a manuscript, “The puzzling relationship between multi-lab replications and meta-analyses of the published literature” for consideration in *Perspectives on Psychological Science.* Our article considers the merits of two methods for obtaining precise effect size estimates for psychological phenomena: large-scale multi-lab replication (MLR) and statistical meta-analysis. A recent article by Kvarven, Strømland and Johannesson, “Comparing meta-analyses and preregistered multiple-laboratory replication projects” (*NHB*, 2019) compared effect size estimates derived from meta-analyses and from pre-registered MLR projects. Their data suggest that meta-analytic effect sizes are nearly three times larger than MLR counterparts. This paper has received a lot of attention because their findings potentially undermine the value of the meta-analytic method.

We think the question that this paper asks is a deeply important one — how credible are these two methods for estimating the size of important effects? — but that the conclusion it comes to is premature. My colleagues and I discuss this central question in light of the evidence provided by Kvarven's work and by other replication efforts, arguing that both meta-analysis and MLR are informative but that the relationship between them is an important puzzle for future meta-research. Through re-analysis of the original data, we show that even under “worst-case” scenarios of publication bias, there is still a discrepancy between the two methods. We also provide evidence that heterogeneity in the meta-analyses is unlikely to fully account for the discrepancy. We conclude by discussing several potential explanations for the unexplained discrepancy in effect sizes between MLRs and meta-analyses.

Thank you for your consideration and please do not hesitate to contact us with any questions or concerns.

Best,

Molly Lewis
Carnegie Mellon University
(on behalf of all authors)