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| Prof Simine Vazire, Editor in Chief  Collabra: Psychology | |  |
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| date  5/07/2020 |  |  | |

Dear Prof Vazire,

Please find attached our article titled “Evaluative Conditioning without awareness: Replicable effects do not equate replicable inferences”. Given its research topic, we are submitting it to the section on Social Psychology as an Original Research Report.

In this article, we provide a reanalysis of data from a Registered Replication Report just accepted at Psychological Science. We served as second and third authors of this RRR (i.e., Moran, Hughes, Hussey, et al., 2020, “Incidental Attitude Formation via the Surveillance Task: A Registered Replication Report of Olson and Fazio [2001]”).

To provide some context, the surveillance task (Olson & Fazio, 2001) is an Evaluative Conditioning (EC) paradigm that is often cited as evidence that attitudes can be formed in the absence of a person’s awareness that stimuli had been paired. It is one of the most highly cited EC procedures and papers – the original article has over 700 citations in Google Scholar – and has served as the basis for many subsequent conceptual, theoretical, and applied developments throughout the study of attitude formation and (implicit) social cognition.

However, there was also good reason to believe that this effect was based on weak evidence: in Moran et al. (2020) we reported a meta-analysis of the published literature using Olson & Fazio’s (2001) surveillance task that suggested there was strong evidence of bias in the published literature. With this in mind, in Moran et al. (2020) we conducted a high-powered multi-site Registered Replication Report to examined the replicability of Olson & Fazio’s original 2001 study.

Our replication was ‘successful’ insofar as we found a significant effect using the original exclusion criteria. However, no evidence for an effect was found when using any of the three preregistered secondary exclusion criteria. In a brief response reported verbatim in Moran et al., the original authors (Olson and Fazio) stated that these results should be interpreted as an “unqualified replication” of their original study. We strongly disagree with this. This disagreement inspired us to conduct the reanalysis of Moran et al.’s (2020) data reported in our submitted article.

Aside from the specific question of the evidence for ‘unaware EC’, our article serves to highlight and discuss the difference between a *replicable effect* and a *replicable inference* about an underlying verbal hypothesis of interest. This distinction – which you yourself originally highlighted on [Twitter](https://twitter.com/siminevazire/status/1148149981292978178) – is of great importance to the debate on the replicability not only of *statistical* *findings* but also *substantive conclusions*.

The specific verbal hypothesis of ultimate interest here is whether attitude formation can occur in the absence of awareness of stimulus pairings. This requires that ‘aware’ participants are successfully excluded from the analysis. In our reanalysis we therefore applied a more severe test of this hypothesis by creating an exclusion criterion that prioritized sensitivity to excluding aware participants (e.g., over accuracy of categorizing participants as aware or not). This was done by simply excluding participants who failed any of the four criteria used in Moran et al. (2020). Results demonstrated a well-estimated, non-significant, and near-zero effect size (Hedges’ *g* = 0.00, 95% CI [-0.11, 0.10], *p* = .983). A Bayes Factor meta-analysis also demonstrated strong evidence for the null hypothesis (BF10 = 0.04). We use these and other results reported in the article to conclude that the original effect is both replicable *and yet* should not be interpreted as support for the underlying verbal hypothesis. In doing this we appeal to and extend recent debates on the importance of measurement (e.g., Flake and Fried, 2018) and Generalizability (e.g., Yarkoni, 2019). We think these issues will be of great interest to Collabra: Psychology’s readership.

If you choose to send our article for peer review, opt for open peer review. We acknowledge that we have read Collabra: Psychology’s Transparency and Openness policy. All our data and code are available on the OSF (osf.io/ugrjh). A preprint is available on the PsyArXiv preprint server (psyarxiv.com/4gzsp). This manuscript is not submitted to any other journal and its publication is approved by both contributing authors.

Kind regards,

Ian Hussey & Sean Hughes