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Article in *Journal of Economic Psychology* · August 2019

DOI: 10.1016/j.joep.2019.102199

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Replications in Economic Psychology and Behavioral Economics

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It is self-evident that empirical research rests crucially on the replicability of its findings (e.g., Gloye, Craig, & Carp, 1957; Rosnow & Rosenthal, 1989; Smith, 1970; Sterling, 1959). By replicability, we mean that researchers who repeat a study with new participants (or with the same participants on a new occasion) can obtain similar results as long as the repetition captures the critical features of the original study (see Asendorpf et al., 2013). If different researchers employing the same or comparable methods can show the same effect using different samples, we can consider this effect robust and credible. Despite their relevance for scientific progress, replication studies have been grossly undervalued by the scientific community for decades, mainly because they were considered less informative and less valuable for scientific progress (Neulieb & Crandall, 1993; Koole & Lakens, 2012; Walster & Cleary, 1970). While a many studies calling for more replication studies (as well as articles showing that these calls remained largely unanswered) originated in psychology, researchers have recognized very early that similar problems occur in most empirical disciplines (Sterling, 1959).

A recent large-scale attempt to replicate findings in psychology (Open Science Collaboration, 2015) corroborated the concerns about the lack of replication studies. The same was true, albeit to a lesser extent, in experimental economics (Camerer et al., 2016) and social sciences (Camerer et al., 2018). These studies also served as a wake-up call, sparking necessary debates about how to improve scientific process and, in particular, the value of replication studies. Since then, we have witnessed a wide range of activities aiming to improve replicability in economic psychology and experimental economics including, but not limited to, special sections for replication studies in leading journals (Cowan, 2018; Kawakami, 2015). In this special issue, we aim to contribute to ongoing efforts to test the replicability of important findings in economic psychology and behavioral economics.

All the papers we include in our special issue are empirical contributions with the majority focusing on the replicability of specific – and often highly cited – findings reported

in influential journals of our respective fields. In terms of the classification of replication studies introduced by Hüffmeier, Mazei, and Schultze (2016), most of the replication studies were close replications, that is, authors different than the original authors tested with the same (or reasonably similar) methods whether the originally reported findings could be replicated. The respective papers cover a broad range of topics from economic psychology and behavioral economics, namely the priming of risk preferences (Alempaki, Starmer, & Tufano, this issue), ego depletion (Alós-Ferrer, Ritschel, García-Segerra, & Achtziger, this issue), effects of attractiveness and trustworthiness in peer-to-peer markets (Jaeger, Slegers, Evans, Stel, & Beest, this issue), the second mover advantage in negotiations (Jiang & Ma, this issue), the effects of dynamic social norms on sustainable behavior (Loschelder, Siepelmeyer, Fischer, & Rubel, this issue), tax aversion (Olsen, Kogler, Brandt, Deszö, & Kirchler, this issue), mindless overearning (Riedel & Stüber, this issue), the effects of disclosures of conflicting interests in advice taking (Sah, this issue), and a test of a set of interventions against cheating (Schild, Heck, Ścigala, & Zettler, this issue).

Our special issue also contains an instance of a conceptual replication that aims to speak to the generalizability of the phenomenon of interest. In this paper, Jouxte (this issue) investigated whether findings concerning voluntary contribution mechanisms would replicate when investments concern time rather than money. We further included one case of a direct replication, in which Shah, Mullainathan, and Shafor (this issue) tested the robustness of their own previously reported findings in a high-powered replication study using the same study materials. Finally, one contribution is empirical in nature but classifies as meta-scientific. In this paper, Forsell et al. (this issue) report the results of a prediction market for the Many Labs 2 project (Klein et al., 2018).

The findings of the eleven replication studies included in this special issue are mixed – as should be expected when running a number of different replications. Four of them found evidence consistent with the original studies. Four others did not find evidence of the original

effects and report null findings, accordingly. The remaining three studies report mixed findings, that is, some but not all of the originally-reported effects replicated, and, in some cases, effect sizes were significant, albeit substantially smaller than in the original studies. A pessimistic interpretation is that only four out of the eleven studies (36%) fully replicated the original findings whereas the optimistic interpretation is that replication was at least partially successful in seven out of eleven cases (64%). As such, irrespective of how we look at the results, they fall in the range we would expect based on the large-scale replication attempts we referred to earlier in this editorial (Camerer et al., 2016, 2018; Open Science Collaboration, 2015). Note, however, that the effects the authors chose to investigate in their replication studies do not constitute a representative sample of the research in our fields. Therefore, we advise against drawing strong conclusions from the mere rate of replicated effects and instead suggest focusing on the individual replication studies instead.

We were particularly happy that almost half (five out of eleven) of the replication studies of our special issue were preregistered prior to data collection. Preregistration means that the authors state all critical aspects of their planned study prior to data collection with a time-stamp in an online repository.¹ This includes hypotheses, study design, experimental procedure, measured or manipulated variables, planned sample size, stopping rules for data collection, criteria for data exclusion, planned analyses, and inference criteria. Preregistration reduces researcher degrees of freedom when analyzing data, prevents the majority of questionable research practices and, therefore, contributes greatly to the credibility of the obtained results. As such, we strongly recommend other researchers to consider using preregistration in their future work.

One aspect that distinguishes our special issue from previous issues of the *Journal of Economic Psychology* is that we also invited registered reports of replication studies.

¹ The interested reader may consult van't Veer & Giner-Sorolla (2016), for a description and template. While the template originates in social psychology, it can easily be adapted for other disciplines studying human behavior.

Registered reports combine the preregistration of hypotheses, methods, and analyses with scientific peer-review. The authors submit a manuscript consisting of the theory section including hypotheses (if any), the method section describing the procedure of the planned study as well as all conditions and measures along with their operationalization, and a section outlining the planned analyses and inference criteria. This draft is then subjected to peer-review. If the reviewers suggest an ‘in-principle-acceptance’ (usually after some revision), the authors have the opportunity to carry out the study as planned. Given the authors carried out the study as planned and interpreted the data appropriately, the manuscript is accepted for publication (if necessary, after another round of peer-review). Registered reports are an elegant means to prevent a number of questionable research practices such as selective reporting or formulating hypotheses a posteriori. In addition, a recent study illustrates that registered reports may also reduce publication bias substantially because after an ‘in-principle-accept’ the hurdle to reject a paper because of non-significant results is considerable higher than with regular submissions (Allen & Mehler, 2019). Although the idea of registered reports has been around for quite some time (Walster & Cleary, 1970), academic journals have only recently begun making use of them (e.g., Chambers, Feredoes, Muthukumaraswamy, & Etchells, 2014).

On a final note, based on our experience during the time as guest editors of the *Journal of Economic Psychology*, we feel that well-performed replication studies are greatly appreciated. Therefore, we close this editorial with an appeal to our colleagues to engage in replication studies more frequently so that we can contribute collectively to reproducible and credible science.

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