Low Replicability and Trust in Psychology - Study 2 (#6703)

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1) Have any data been collected for this study already?
No, no data have been collected for this study yet.

2) What's the main question being asked or hypothesis being tested in this study?
We investigate whether manipulating the perceived replication rate of psychological science influences institutional trust in the psychological science community and the perceived value of psychological science. We manipulate the replication rate of psychological science as low (39%), medium (61%) and high (83%). Our main hypothesis is that we expect higher institutional trust in the psychological science community when participants are told that the replication rate is high (83%), than when they are told that it is low (39%). We expect the same effect of replication rate on perceived value of psychological science, meaning a higher perceived value if participants were informed that the replication rate is high (83%) than when they are told that it is low (39%). We exploratorily assign participants to a medium condition (61%) to explore whether this medium condition differs from the low, the high, or both other conditions in terms of institutional trust and perceived value of psychological science.

3) Describe the key dependent variable(s) specifying how they will be measured.
Institutional trust in the scientific community will be measured by averaging five items adapted from Nisbet, Cooper, & Garrett (2015). The items are:
1. I have very little confidence in the psychological science community.*
2. Items 2 - 5 have been removed to avoid potential copyright infringement.
3.
4.
5.

* Item is reverse coded.
The perceived value of psychological science will be measured by averaging four items adapted from Broomell, S. B., & Kane, P. B. (2017, Experiment 2). The items are:
1.) Please rate the overall quality of research produced by psychological science.
2.) Items 2 - 4 have been removed to avoid potential copyright infringement.
3.)
4.)

4) How many and which conditions will participants be assigned to?
Participants will be randomly assigned to one of three conditions. Participants will receive a description of the Open Science Collaboration (2015) study, indicating that the replication rate found in the study was low (39%) in one condition, while the description in the second condition will indicate that the replication rate was medium (61%). In the third condition, the description will indicate that the replication rate was high (83%).

5) Specify exactly which analyses you will conduct to examine the main question/hypothesis.
Our main analysis will be a t-test for independent samples comparing the two groups (low replication rate vs. high replication rate). We will thus examine the effect of the manipulated replication rate (low vs. high) on averaged institutional trust and perceived value of psychological science. For both t-test, one-tailed p-values will be calculated to assess the statistical significance (significance level of .05).

Exploratorily, we will conduct two one-way analyses of variance to test whether there are any differences between the three groups related to averaged institutional trust and/or perceived value of psychological science. We will also conduct t-tests to investigate whether averaged institutional trust and perceived value of psychological science are higher in the medium condition than in the low condition and lower in the medium condition than in the high condition. Again, one-tailed p-values will be calculated to assess the statistical significance (significance level of .05).
All further analysis will be exploratory.

6) Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.
We administer a manipulation check by asking people to indicate their agreement with the item: “Psychological research is replicable.” We expect the highest agreement with this item in the high replicability condition and the lowest agreement in the low replicability condition. However, we will not exclude participants if they fail the manipulation check nor for any other reason.

7) How many observations will be collected or what will determine sample size? No need to justify decision, but be precise about exactly how the number will be determined.
264 MTurkers will be paid to participate in the study. If by chance we collect more (as can happen in online studies), we will analyze data of all participants who finished the study.

8) Anything else you would like to pre-register? (e.g., secondary analyses, variables collected for exploratory purposes, unusual analyses planned?)

We administer three items to measure beliefs about science “trust vs. debate“ (Rabinovic & Morton, 2012), two items to measure internal vs. external error attribution style and finally two subscales of the error orientation questionnaire (Rybowiak, Garst, Frese, & Batinic, 1999), namely “learning from errors” and “error communication”. For each construct, we aim to investigate whether it moderates the relationship between our manipulation and the dependent variables.

We collect additional demographic data (race, gender, age, native speaker).

I collaborate on this project with names removed to ensure blind peer review