Replication of Schilke et al. 2015
"Power decreases trust in social exchange"
PNAS, 2015, 112(42), 12950-12955.
https://www.pnas.org/content/112/42/12950

The original paper includes several studies. We randomly chose study 3. In this between-subject experiment, participants are asked to imagine being a skilled typist who has been contacted by a new potential client and are told that some, but not all, typists offer a free sample project. The experiment uses a 2 (self's power: low, high) × 2 (other's power: low, high) between-subjects experimental design, with trust as the dependent variable. We focus on the low self's power and high self's power comparison on trust. Trust is measured by whether participants are willing to invest 3 hours to work on a free sample for the client. Participants in the high self's power condition are less trusting than those in the low self's power condition.

Hypothesis to replicate and bet on: People with high structural power are less trusting than those with low structural power. Structural power is manipulated by participants imaging being a skilled typist who has either a high financial need to sell their service while getting only few jobs offered (low power) vs. a low financial need to sell their service while getting many jobs offered (high power). Trust is measured by whether or not participants choose to give a free sample (i.e., trust the client to come back with a follow-up job). It is hypothesized that participants in the high (vs. low) power condition are less willing to provide a free sample. To evaluate this hypothesis, the authors conduct a χ^2-test ($\chi^2 = 18.23$, $p < 0.001$); p. 12952.

Criteria for replication: The criteria for replication are an effect in the same direction as the original study and a p-value < 0.05 in a χ^2-test.

Power analysis: The original study had 413 participants. The standardized effect size (Cohen's d) was $d = 0.420$. To have 90% power to detect 67% of the original effect size, a sample size of $n = 536$ is required.

Sample: The original paper mentions no restrictions on who could participate. We will make sure that participants can only participate once from the same account in this specific study, and we will only recruit participants with a HIT approval rate of 95% or higher. We will also check all IP addresses via https://www.ipqualityscore.com/; and we will remove any participants where one or more of the following is true: fraud score >= 85; TOR = True; VPN = True; Bot = True; abuse velocity = high. The replication sample size is the sample size after any exclusions of participants.

Materials: We will use the same material as in the original study, kindly provided by the original authors. In particular, the experiment will be conducted using the original *Qualtrics* survey.

Procedure: We will closely follow the procedure of the original experiment. The following summary of the experimental procedure is therefore largely based on the description of study 3 in the article (pp. 12951-12952) and the section "SI Study 3" (pp. 2–3) in the Supplementary Information.

Participants will first be shown a Captcha, and will thereafter provide informed consent. After this we will include an attention check that participants will need to pass to continue to the study. This attention check is in addition to any other potential attention check(s) used in the

original study. Participants will read a vignette in which they assume the role of a typist offering services to a new potential client (who got in touch with them for the purpose of possibly using their PowerPoint services for two upcoming project presentations). Participants are given several pieces of information about themselves and the new client, specifying the relative value and availability of the resources in the typist–client exchange, which allows for manipulating structural power.

To manipulate self's (structural) power levels, the value of the resource will be varied by telling participants that their typing jobs are either desperately needed to make ends meet (low self's power) or relatively unnecessary except to pick up some extra spending money (high self's power). Additionally, the availability of the resource from alternatives will be varied by telling participants either that they get only few jobs offered because many other people offer similar typing services (low self's power) or that they get many jobs offered because a lot of people need typing services (high self's power).

Although we are not interested in the effect of other's power levels, we will also include the other's power manipulation to keep the materials consistent with the original study. The other's power is manipulated as follows: the value of the resource will be varied by telling participants either that the new client (Kevin) knows flashy PowerPoint presentations are very important in his profession (low other's power) or that Kevin mentions PowerPoint presentations are nice but that verbal presentations without PowerPoint would probably be acceptable for his purposes (high other's power). Additionally, the availability of the resource from alternatives will be varied by telling participants either that Kevin is not aware of any other typists who offer PowerPoint services (low other's power) or that Kevin knows many other typists who are available (high other's power). Similar to what the original authors did for the analysis of interest, we will aggregate the data from the other's power conditions and only compare the dependent variable between the self's power conditions.

After reading the vignette, participants will be asked to indicate whether they would offer a free sample project to Kevin (and thus trust that Kevin would come back with a follow-up job) or whether they would prefer to save time and not offer a free sample (and thus not trust Kevin). This variable assesses behavioral trust (here, either saving 3h by not providing a free sample or investing 3h to work on a free sample).

To validate that the self's power manipulation is successful, participants answer the following item after reading the vignette: "How powerful do you feel in this situation?" (1, completely powerless; 7, extremely powerful). Participants in the high self's power condition should have a higher rating on this item than participants in the low self's power condition. The conclusion about whether the study replicates or not will only be based on the main replication test (i.e., the result of the manipulation check does not affect this conclusion). The manipulation check is mainly relevant for understanding why the study failed to replicate if it should fail to replicate.

To check whether participants correctly understand the scenario and their options, the following two questions will also be asked: "If you decide to save your time, what does Kevin get? (nothing / a free PowerPoint)" and "If you decide to spend 3 hours to prepare the presentation for Kevin for free, how many options does Kevin have? (zero options / one option / two options)". These items were taken from the original study where they were assessed for additional sensitivity analyses. We will do the same for the replication. However, the conclusion about whether the study replicates or not will only be based on the main replication test including all participants.

Analysis: The analysis will be performed as in the original paper. In particular, we will test whether participants in the high self's power condition are less trusting than participants in the low self's power condition using a χ^2-test for the 2x2 contingency table.

Subject payments: We are standardizing payments across all replications so that studies have a certain show-up fee depending on the expected length of the study, with an hourly wage from the show-up fee of $8 and a minimum payment of $1 (for studies with incentive payment we use the same incentive payment as in the original study; and this payment is paid in addition to the show-up fee). If we have problems recruiting, we will increase the show-up fee.