Preregistration Report

Experimental Psychology Lab, 2021 – Group 08

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Study Information

Title: Exploring the mechanisms driving conformity – A replication study.

Authors: Virginia Jagusch, Sarah Neuhoff, Emily Campos Sindermann

Description: The descriptive norm effect refers to the phenomenon that individuals prefer behaving similarly to others. The question here becomes whether people still conform to to others, when they do not identify with their ideas and beliefs in general. Self-categorization theory proposes that an individual's identity is linked to their corresponding group identity. Hence, in order to ensure ingroup norm conformity, self-categorization theory proposes that people will actively avoid conforming to the norms of an outgroup. In two separate experiments, Campbell Pryor, Perfors and Howe [1] explored how subjects behaved when presented with a descriptive norm of an outgroup. Their findings suggest that the descriptive norm effect is robust against different group identities, meaning that people seem to conform to a majority irrespective of whether that majority pertains to the same ingroup. Hence, there appears to lie a more general mechanism behind the descriptive norm effect, able to overpower an ingroup vs. outgroup mentality. Within the scope of this project, we aim to replicate experiment 1 [1].

Hypotheses: The prediction of self-categorization will be tested against an alternative explanation for the descriptive norm effect.

> **H0:** People's behaviour will shift away from behaviour common amongst an outgroup.
>
> **H1:** People will simply conform to the overall descriptive norm.

Design Plan

Study type: Experiment

Blinding: Participants will not be aware of the experimental manipulations. The experiment will take place online, hence there is no direct contact between experimenter and participant. Data collection and analysis will not be performed blind to the conditions of the experiments.

Study design: The experiment is implemented in form of a 2x2 between-subjects design. A full description can be found in the separate document "Experimental Design".

Randomization: Each participants will be randomly assigned to one of the four experimental conditions.

Sampling Plan

Existing data: No data from the experiment to be preregistered here was available at the time of preregistration.

Data collection procedures: Participants will be recruited through social media and direct email contact. Participation is voluntary but will not be compensated. Every participant is allowed to take part only once. Due to time constraints, we will wait for only 10 days after having sent the initial invitations through social media and email, before closing data collection.

Sample size: The experiment we aim to replicate included N= 301 participants. For the current study, we aim to recruit as many participants as possible.

Sample size rationale: Since our pool of reachable participants is limited and we have no monetary or other incentives to offer, and since time is critical (project deadline) we cannot state a minimum number of participants to draft.

Stopping rule: We will stop data collection on midnight of the 10th day after starting the collection through announcements on social media and email.

Variables

Manipulated variables: We will manipulate whether both (ingroup and outgroup) norms (BOTH NORMS SHOWN = 1) or whether only the ingroup norm is presented to the participant (BOTH NORMS SHOWN = 0). Furthermore, we manipulate the ingroup descriptive norm into one of two possible decisions: in favour of (A) reporting the robber (INGROUP DESCRIPTIVE NORM = -1) or (B) leaving the robber alone (INGROUP DESCRIPTIVE NORM = 1).

Measured variables: We will measure the participants' responses on a Likert scale rating the certainty with which they would act a certain way.

Indices: We will not consider any indices.

Analysis Plan

Statistical models: We will compare two models each representing Bayesian versions of ordinal logistic regression, which predicts the proportions of responses on an ordinal scale while assuming that certain variables change the odds of making higher or lower responses on the scale. The variables are parameterized in terms of the natural log odds of favouring a higher response.

Transformations: We will not apply any transformations.

Inference criteria: As not specified otherwise in [1], we will assume a standard p-value of 0.05. Furthermore, we will use a Bayes Factor (BF) to assess the relative evidence for the self-categorization model and the alternative model, which will be calculated with the "Bridge Sampling" package in R. As not specified otherwise in [1], we will use the interpretation of van Doorn and colleagues [2]: A BF between 1 and 3 will be considered to be weak, a BF between 3 and 10 will be considered moderate, and a BF greater than 10 will be considered strong evidence.

Data exclusion: Participants who fail the understanding check and/or rate their attitude towards their chosen issue as neutral will be excluded from the analysis.

Missing data: Should a data set not be recorded completely, however the participant passed the understanding check and rated their attitude towards their chosen issue as not neutral, all data from that participant will be included in the analysis.

Exploratory Analysis: Due to time constraints we do not intend to perform further exploratory analysis.

References

[1] C. Pryor, A. Perfors, and P. D. Howe. "Conformity to the descriptive norms of people with opposing political or social beliefs". In: *PloS one* 14.7 (2019), e0219464.

[2] J. van Doorn, D. van den Bergh, U. Böhm, F. Dablander, K. Derks, T. Draws, A. Etz, N. J. Evans, Q. F. Gronau, J. M. Haaf, et al. "The JASP guidelines for conducting and reporting a Bayesian analysis". In: *Psychonomic Bulletin & Review* 28.3 (2021), pp. 813–826.