

As Predicted PreRegistration

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Author(s)

Moritz Fischer (Ludwig-Maximilians-Universität München) - moritz.fischer@psy.lmu.de
Mathias Twardawski (Ludwig-Maximilians-Universität München) - m.twardawski@lmu.de
Mario Gollwitzer (Ludwig-Maximilians-Universität München) - mario.gollwitzer@psy.lmu.de

1) Data collection. Have any data been collected for this study already?

No, no data have been collected for this study yet.

2) Hypothesis. What's the main question being asked or hypothesis being tested in this study?

Previous research has demonstrated that people sometimes react negatively towards others who openly express moral concerns about a specific behavior ('moral rebels'). This tendency, however, was only found among those who had previously engaged in the wrongful behavior themselves. To date, negative reactions towards moral rebels have mainly been investigated with regard to the perceived likability of a moral rebel (see Monin et al., 2008; Cramwinckel et al., 2013). Our research aims at testing whether people not only perceive moral rebels as less likeable but whether or not they also employ own money to punish moral rebels.

To address this research question, we designed an experimental paradigm using a two-round ultimatum game with a bogus other player. Participants first play an ultimatum game in which they take the role of the proposer while the bogus other player is the responder. The offer of the participants in this round constitutes our first independent variable. Next, participants play another round of this ultimatum game with switched roles. The bogus other player now offers a fair split and expresses one out of two reasons for this behavior (our experimental manipulation and second independent variable): He/she either expresses that proposing an unequal split would be immoral (moral reasoning condition) or an unequal split would be economically detrimental (economic reasoning condition). As our dependent variable, we measure whether participants engage in costly punishment of the other player. Our main hypothesis is: The more unfairly participants behave in the first ultimatum game, the more severely they punish a fair player with moral reasons in comparison to fair player with economic reasons in the second ultimatum game (interaction hypothesis, see question 5).

3) Dependent variable. Describe the key dependent variable(s) specifying how they will be measured.

Costly punishment of the bogus other player in the ultimatum game is our main dependent variable. After the second round of the ultimatum game, we endow participants with extra 10 points each worth 0.05€. We ask how many of those points they want to invest in order to reduce the other players stock. For every point invested the other players stock is reduced by 4 points.

4) Conditions. How many and which conditions will participants be assigned to?

There are two conditions in this experiment. We manipulate the reasons the bogus other player provides for his/her fair split in the second round of the ultimatum game. He/she either provides moral reasons for his/her behavior (moral reasoning condition) or economic reasons for his/her behavior (economic reasoning condition).

5) Analyses. Specify exactly which analyses you will conduct to examine the main question/hypothesis.

We are planning to use multiple linear regressions to analyze our data. Because our dependent variable is truncated between 0 and 10 points, we will conduct both ordinary-least squares regression (OLS) and Tobit regression. We will enter (a) the own offer in the first ultimatum game, (b) the experimental condition, and (c) the interaction term between (a) and (b).

We expect a heavily right skewed distribution of our dependent variable. We intend to use log-transformation of our dependent variable in case the underlying assumptions for linear regression models would be otherwise violated. The endowments in both rounds of the ultimatum game are 80 points each worth 0.05€. The offer in the first round of the ultimatum game will be re-coded by subtracting 40 points from the amount the participants intends to keep for him/herself. Thus, fair offers in the first round (i.e. offers of giving exactly half of the points to the responder) will be coded as 0. Unfair offers, i.e. offers of keeping more than half of the points, will show positive values (i.e. a player offering to keep 70 points for him-/herself and giving 10 to the responder will be assigned a value of $70-40=30$). This procedure leads to a theoretically possible range of values between -40 (for offers of giving all points to the other player) and 40 (for offers of keeping all points for him-/herself), with higher positive values indicating greater unfairness.

The experimental condition will be dummy coded with 0 = “economic reasoning condition” and 1 = “moral reasoning condition”.

6) Outliers and Exclusions. Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.

We are going to exclude participants who offer 0 points to the other player in the first ultimatum game from our analyses.

Moreover, data from participants who express doubts about the existence of the other player in an open-end text format or who fail to complete the comprehension check questions for the ultimatum game instructions 3 times or more often will be critically inspected. The decision to keep or exclude this data from our analyses will be taken accordingly.

7) Sample Size. How many observations will be collected or what will determine sample size?

We plan to collect data from 300 participants. This sample size is based on a power analysis for a general linear model using the R package "pwr" (i.e. the `pwr.f2.test` function). Assuming a model with three predictors (excluding the intercept) and a small-to-medium effect size of $f^2=.05$, a sample size of 288 participants is required to achieve a power of 90% at a significance level of 5%.

We aim for a total of 300 participants to account for possible exclusions (see question 6).

8) Other. Anything else you would like to pre-register?

Besides our main dependent variable (punishment; see question 3) and our two main independent variables (own offer in the first ultimatum game and experimental condition), we assess the following variables for exploratory analyses:

HEXACO-PI-R (60-item version)

Justice Sensitivity Inventory

Moral Identity Scale

Positive Negative Affect Scale (PANAS)

Ratings of the other players personality using 16 semantic differentials (taken from Monin et al., 2008; study 2)

Willingness for future cooperation with the other player (3 self-developed items)

Demographical variables

9) Name. Give a title for this AsPredicted pre-registration

No good deed goes unpunished? Investigating punishment of moral rebels