

Free Rider Project-Study 6, February 2018 (#8595)

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Created: 02/21/2018 08:00 AM (PT)

Public: 04/23/2018 08:43 AM (PT)

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?

Whether children will negatively evaluate, punish and avoid free riders compared to contributors when playing a first-party public goods game, and whether they will still do so even when the free rider doesn't have a direct impact on the child's outcome.

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

We ask participants which character (free-rider versus contributor) 1) did a better thing, 2) they like more, 3) they would like to punish (i.e., take a sticker away from) and 4) would like to choose as a collaborate partner. Questions 1 and 2 are coded dichotomously (0 = free rider and 1= contributor) as well as on a 4-point scale (i.e., 1= the free rider did a lot better/they like the free rider a lot more, 4= the contributor did a lot better/they like the contributor a lot more). For the main evaluation outcome we will average the two 4-point scale values into a single "evaluation" measure. Questions 3 and 4 are coded and will be analyzed dichotomous (0 = punish/collaborate with free rider and 1 = punish/collaborate with contributor).

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

Each participant will be assigned to one of two between-subject conditions: 1) Impact condition, in which the free rider makes a negative impact over the group goal, so the participant's outcome is affected. 2) No Impact condition, in which the free rider doesn't make a negative impact over the group goal and thus the participant's outcome is not affected.

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

We aim to examine whether children negatively evaluate, punish and shun free riders as compared to contributors and whether there are any effects of experimental condition. $\text{For evaluations we will fit a linear mixed effect model predicting evaluation on the 4 point scale: } \text{lmer}(\text{evaluation} \sim 1 + \text{condition} + (1|D))$. We will mean-center the evaluation outcome so that a significant intercept indicates favoritism of the contributor (as compared to the free-rider) and a significant effect of condition would indicate more positive evaluations of the contributor versus free-rider in the no-impact condition. $\text{For punishment we will fit a logistic mixed effect model predicting punishment of the free-rider: } \text{glmer}(\text{punishFreeRider} \sim 1 + \text{condition} + (1|D), \text{family}=\text{binomial})$. A significant intercept indicates more punishment of the free-rider than the cooperator; a significant negative effect of condition indicates more punishment in the impact condition. $\text{For partner choice we will fit a logistic mixed effect model predicting willingness to choose the free-rider as the collaborative partner: } \text{glmer}(\text{chooseContributor} \sim 1 + \text{condition} + (1|D), \text{family}=\text{binomial})$. A significant intercept indicates less willingness to collaborate with the free-rider than with the cooperator; a significant effect of condition would indicate more willingness to collaborate with the contributor versus free-rider in the impact condition.

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

If a substantial number of participants free ride, we may also compare the responses of children who free ride vs. who donate in the impact condition. We have no strong predictions for this comparison, but one likely possibility is that children who free ride themselves may be less likely to negatively evaluate and punish free riders compared to those who donate themselves. We'll have to exclude those who free ride in the no impact condition.

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.

We will recruit 4- to 5-year-old children, with 24 children in each condition (48 in total, increased by 50% from previous studies).

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

We will exclude children who fail our pretest questions after two rounds of feedback and those who free ride in the no impact condition. We do not exclude children who fail the check question in the end about whether they played with other kids.