

Climate action for (my) children (#27772)

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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 propose a novel experimental, lab-in-the-field approach to increase VCA (voluntary climate actions): we hypothesize that parents will be especially likely to engage in VCA when they are accountable to their offspring. While past work has shown the importance of observers to motivate costly cooperative behaviors, we argue that VCA will benefit specific observers, relevant to the context. Specifically, children are representatives of future generations. Furthermore, a parent has a genetic link to the future through their own child and they may wish to act as a role model to them. Therefore, we predict that a parent's own offspring has a unique power to influence VCA. We make the following predictions:

H1: Participants' VCA behavior is higher when the decision to support VCA is observed by another person, relative to no observer.

H2: Participants' VCA behavior is higher when the decision is observed by a child, relative to an adult observer.

H3: Participants' VCA behavior is higher when the observer is the participant's own child, relative to another person's child.

H4: Participants' VCA behavior is highest when the observer is the participant's own child, is smaller when the decision is observed by a stranger child and further decreases when the observer is an adult observer. VCA is lowest for the condition without an observer.

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

The dependent variable of interests is VCA behavior, measured by asking participants how many trees they want to plant, ranging from 0 to a maximum of 46 trees. The scale is implemented in 1 tree steps and one tree costs 1.5 Euro. The more trees are planted, the higher is the VCA behavior. For taking this decision, participating parents receive a windfall endowment of €69.

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

We will implement four conditions in a between-subjects design, varying observability and the type of observer.

In our baseline Control condition, DMs will make the decision in private without being observed. In the Stranger Adult condition, the DM will be observed by another adult who is a hired actor (confederate) to act as the observer. Being observed means in our setting that the observer will stand next to the DM and will document the decision of the DM on a sheet. This condition is similar to the standard procedure used in observability experiments in the lab, where a DM is observed by another adult, which helps establish a "general observability" effect (H1). In the Stranger Child condition, the observer will be an actor who is still a child (in the age range from 8 to 14 years), which helps identify whether VCA can be encouraged by having an observer from the future (beneficiary) generation (H2). Finally, in the Own Child condition, the observer will be the child of the DM, testing the prediction that the DM's own child has an additional effect on the DM's VCA behavior (H3). H4 will be tested by comparing the four conditions' relative coefficient size to one another.

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

Before starting with the actual statistical analysis, we will test whether recruited participants significantly differ between treatments. We will run non-parametric WMW tests to analyze the collected demographics between treatments (gender, age, and number of children). If any significant differences arise, we will include the respective demographic(s) as control variable(s) in later analyses (see below). We will report summary statistics (i.e., number of observations, means and standard deviations) of the demographic variables in the Supplementary Information.

Next, we will describe as summary statistics (and graphically show with bar graphs, including the 95 percent quantiles) the average VCA behavior in our different conditions. We will put these results into context of the amount of money invested (i.e. the absolute amount and percent of total monetary endowment spend, out of a maximum of €69). For all observations, we will provide the summary statistics of parents and of their children.

We will test each of our hypotheses using two different statistical approaches. First, we will use a two-tailed, two-sample WMW test to investigate the differences in the VCA contributions. Our second approach will rely on multivariate ordinary least squares (OLS) regressions that allow for the inclusion of control variables (which non-parametric tests do not accommodate). We will show a basic regression with just the treatment indicator and no control variables, followed by the same regression with the participant's and observer's demographic characteristics as control variables. For robustness, we will also repeat the second approach with Tobit regressions, using the respective lower and upper levels of VCA behavior (by definition, 0 and 46, respectively).

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

The recruitment criteria is being a parent with a child aged 8 to 14 years. We will exclude participants who do not fit our recruitment criteria. That is, if a participant is not a parent, they are not with their child (or the child refuses to take part in the experiment), or the child is not within the age range specified, we will exclude them from the collected data before analyzing the data. (Realistically, these participants will not be recruited in any case, but we

prepare this strategy in case someone “slips through.”) Finally, we will discard participants who did not answer the key question of interest (investment in trees) or leave halfway through the experiment after the key question.

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.

The target sample size is 400 parents (100 per treatment) and we aim for at least 300 parents (75 per treatment).

This ceiling (N=400) is imposed because recruiting eligible participants for this lab-in-field experiment is not without challenges, as it requires enlisting parents with a child in the pre-determined age range for all conditions in a public space. Based on our experience running lab-in-field experiments, we believe we can recruit up to 100 participants per condition that fit this description.

However, depending on the recruitment progress by the end of 2020, we may have to adjust our expectations and stop at 75 participants per treatment (to ensure we are able to stay within the time limits of the grant funding we received for this study). To be clear, we will either stop at 100 per condition if recruitment goes as planned, or at 75 per condition if we are unable to recruit sufficiently many participants in the time given.

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

We include a questionnaire in our study to evaluate what beliefs participants have about climate change in general. In addition, we include questions to elicit main demographics (age, education, relationship status, number of children etc.), as well as basic preferences (risk, time, etc.) with survey questions. Moreover, we include a about what their intentions were when they made the decision about planting trees (e.g. what motivated them). At the end of the experiment (after all outcome variables have been collected), we will also allow them to choose if they want that their name and the amount of trees they financed will be made public on our public-facing website www.baumfuerbaum.com. (This possibility will not be common knowledge; names will not be fully identifiable [only first name and initial of last name] and they will not be released until the end of the study to avoid affecting any future participants.)