

Pre-Analysis Plan

Shutting down social preferences in the lab: An experimenter demand approach

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1 Introduction

Social preferences pose a challenge for any lab testing of theoretical predictions that are based on unobservable vNM utilities. Depending on the theory being tested, the unobservable mapping from laboratory payoffs to vNM utilities will, at best, introduce considerable noise, and at worst, bias the results. I investigate the efficacy of a very straightforward method for reducing the influence of social preferences on decision-making in the lab: instructing subjects to behave selfishly. The question is a simple one: does maximization of one's own payoff better predict subjects' behavior in experiments when they are explicitly instructed to achieve this goal? To answer this, a first experiment will be conducted in which subjects play a one-shot prisoner's dilemma (PD) with one of three treatments: (1) social framing of actions, (2) neutral framing of actions, and (3) neutral framing of actions with explicit instructions to behave selfishly.

This document offers a brief pre-analysis plan describing the design, subject pool, and hypotheses.

2 Design

Subjects play a pen-and-paper prisoner's dilemma. There are three treatment arms:

Social: Subjects in the *Social* treatment arm play a PD with socially framed actions (Cooperate, Not Cooperate).

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Neutral: Subjects in the *Neutral* treatment arm play a PD with neutrally labeled actions (A, B).

Demand: Subjects in the *Demand* treatment arm play a PD with neutrally labeled actions (A, B) and are given the following instructions in addition to the instructions given to all participants:

“You might ask yourself how we want you to act. For the scientific value of the experiment it is important that all participants set out to maximize their own individual payoffs. Therefore, we ask you to simply focus on getting as high payoffs as possible for yourself. The other participant has been given the same instructions as you.”

Subjects in all treatment arms are randomly and anonymously matched with a participant in a different room, from the same treatment arm. They choose their action in the PD, and then state their beliefs about other participants’ actions. Lastly, they answer an exit survey (see separate instructions document).

Subjects are paid based on (1) their payoff in the game, and (2) the accuracy of their guess about other subjects’ actions.

3 Sample

The experiment will be conducted at the Stockholm School of Economics during a seminar in introductory microeconomics. As such, the (vast majority of) subjects are first-year bachelor students and will not have taken any university-level courses in economics or game theory. The aim is a sample size of roughly 250 students (the cohort has 325 students enrolled); the exact sample size will depend on attendance and willingness to participate. I foresee no reason to exclude any observations from the collected data, except in the case of incomplete participation or an explicit statement of failure to understand the game, in the exit survey.

4 Main hypotheses and tests

Hypothesis 1: Subjects facing neutral action labels and selfishness instructions will cooperate to a lower extent than those only facing neutral actions.

Hypothesis 2: Subjects facing neutral action labels will cooperate to a lower extent than those facing socially framed actions.

Hypothesis 3: Subjects’ beliefs about other participants’ cooperation will differ between treatment groups in the same way as actions, as hypothesized above.

These hypotheses will be tested using randomization inference, with 10,000 permutations of treatment indicators. For hypothesis 1 and 2, I will perform one-sided tests for difference in proportions (of cooperators). For hypothesis 3, I will perform one-sided tests for difference in mean beliefs (beliefs defined as proportion of cooperators). Planned subsample analyses are gender differences in treatment sensitivities and attempts at distinguishing between different motives (see next section).

5 Exit survey

Participants fill out an exit survey (see separate instructions document) after playing the game. The questions in the survey are mainly designed to investigate subjects' motives for choosing their action, allowing for some evaluation of the possible types of social preferences at play, and categorization of participants based on where they score relatively highly. For ease of reference, these survey items have been numbered in the uploaded document. Examples of social preferences include reciprocity (a high score on item 2), norm compliance (a high score on item 5) and altruism (a high score on item 1). Note that these types of social preferences are not mutually exclusive and, together with the rest of the items, generate some interesting (minor) hypotheses.

Wanting to do what is least blameworthy should, in all treatment arms but *Demand*, correlate positively with wanting to help the other participant, and negatively with wanting to maximize one's own payoff. However, subjects instructed to be selfish may well consider it least blameworthy to comply with experimenter demand and maximize their own payoff. The same argument holds for altruists: experimenter demand implies a tradeoff between the interests of the experimenters and the opponent. It is therefore not clear that item 5 will receive higher scores in a particular treatment, though one may expect such external pressures to be more salient with socially framed action labels. Similarly, item 1 should score highest in the *Social* treatment.

Item 3 should rate highest in the *Demand* treatment since this is where subjects experience the strongest and clearest experimenter demand. Item 3 and 4 should correlate positively, since the *Demand* group should also maximize their own payoffs to the greatest extent.

Item 6 recognizes the phenomenon of magical thinking. It is included because this type of thinking, as well as not understanding the game, are the two possible explanations for cooperation aside from social preferences. Hence, if the *Demand* treatment is effective in shutting down social preferences, a high item 6 score may be a good predictor of cooperation within this group.