

Is there a link between wealth inequality and deception? – An experimental analysis of different subject pools

If everything's the same, then there
aren't any choices! I want to wake up
in the morning and decide things!
(Lois Lowry, 1993: *The Giver*)

Abstract

This paper investigates experimentally the relationship between inequality in initial wealth and deception. Our basic design is adopted from Gneezy (2005): two players interact in a deception game. It is common knowledge that player 1 has private information about the payoffs for both players of two alternative actions. Player 1 sends a message to player 2, indicating which alternative putatively will end up in a higher payoff for player 2. The message, which can either be true or false, does not affect the payoffs of the players. Player 2 has no information about the payoffs. However, player 2 selects one of the two alternatives A or B, which is payoff-relevant for both players. We extend Gneezy (2005) by two elements. First, we systematically vary the initial wealth of the players 1 and 2 (common knowledge to both of them). Second, we do not limit ourselves to the standard population of university students but also recruit chess players that are not enrolled in any degree program. Doing so, we want to find out if our results remain robust over a non-standard subject population which is known to be experienced to some extent in strategic interactions.

Keywords

Deception; wealth inequality; experimental subjects; cheap talk; asymmetric information

JEL

- C91 Laboratory, Individual Behavior
- D01 Microeconomic Behavior: Underlying Principles
- D31 Personal Income, Wealth, and Their Distributions

1 Experimental design

1.1 Basic Design

The basic structure of the experiment is adopted from Gneezy's (2005) 2-person deception game. Two players play against each other in a one-shot experiment.¹ The identity of the players is anonymized (for both players). It is common knowledge that player 1 has private information.

Player 1 (Sender of the message)

Player 1 is fully informed about the payoffs for herself and her opponent (i.e. for both options A and B; see Table 1). Player 1 sends a message to player 2, indicating which option (A or B) results in a higher payoff for player 2. This message can be true or false. The message itself does not affect the payoffs of the players. In other words, it is cheap talk. The experiment consists of two decision situations. For both of them applies: Player 1 lies if she claims that option B leads to a higher payoff for player 2 than option A would do. Player 1 maximizes her payoffs if option B in situation 1 and option A in situation 2 were actually played. Note that for situation 1 this would be in line with a lie and for situation 2 it would be consistent with an honest message. We have not randomized the order of the situations.

Table 1 Payoffs for the players in both situations (from the perspective of player A)

Situation 1: Altruistic renunciation ^(a)				Situation 2: Costly punishment ^(a)		
Option	Player 1	Player 2		Option	Player 1	Player 2
A	9	12		A	6	15
B	10	3		B	5	5

(a) We do not communicate the labels assigned to the situations to the experimental subjects. In contrast, we stick to the neutral framings "Situation 1" and "Situation 2."

Player 2 (Receiver of the message)

Player 2 has no information about the payoffs. She only knows the (possible) messages of player 1. However, player 2 picks one of the two options A or B, which is payoff-relevant for both players (common knowledge to both players).

1.2 Treatments

We extend the basic idea of Gneezy's (2005) design to systematic variations in wealth. Altogether, we examine 3 scenarios (1 reference scenario and 2 treatment scenarios; Table 2). Each experimental subject

¹ There are several reasons to carry out the experiment as a one-shot game. Goeree and Holt (1999) point out that many games are played uniquely in reality. Dhami (2016) remarks that people face many important decisions for a limited number in life (e.g. choosing a degree program, a spouse, or whether or not to buy a house). Furthermore, many entrepreneurial decisions are made irregularly in the sense that the economic framework conditions are bound to change at all times (e.g. capital restructuring, mergers). According to Alatas et al. (2009), issues such as reputation formation and signaling can be avoided through one-shot games. It also rules out learning effects and strategic behaviors (e.g. reciprocity).

is randomly assigned to one scenario.² Player 1 and player 2 know that the initial wealth in the respective treatments is common knowledge to both players.

Table 2 Treatment conditions (wealth scenarios)

	Player 1	Player 2
Benchmark (reference scenario)	€0	€0
Treatment I	€10	€0
Treatment II	€0	€10

Short summary of the experimental design. Player 1 is entirely informed about the payoffs associated with the two options of action and has private knowledge about the payoffs. Player 1 sends player 2 a message (either true or wrong; cheap talk) about her alleged payoffs. Player 2 only knows the possible messages from player 1 and the wealth of both players. However, the choice made by player 2 determines the payoffs of both players.

1.3 Subjects, incentives, and language

Subjects. We recruit both university students as well as non-students (the latter are also members of a chess club). Students are recruited via the online learning platform “StudIP” of the Martin Luther University Halle-Wittenberg, where the link to the experiment was placed. The prerequisite to join the experiment was that individuals were enrolled as a student in a degree program at a university. The recruitment of the non-student chess players was proceeded as follows: we planned to contact the coordinators of the Saxon and the German Chess Federation with the query to place the link to the experiment on the website of the Saxon and German Chess Federation. The experiment with non-students is also carried out web-based to considerably simplify the participation of subjects with relatively high opportunity costs. However, we were not sure if this procedure was promising to succeed or not. If the number of recruited chess players is too small, we have planned to contact large clubs in and around Leipzig and Berlin (Germany). In order to join the experiment as a non-student, we required the subjects to be not enrolled in a university program whilst being a member of a chess club.

A total of 30 individuals are recruited per treatment and population (i.e. a total of 180 of each population). The number of participants was primarily determined by the research budget. In addition, we were unsure about the difficulties of recruiting non-students.

Incentives. The experimental subjects make decisions in both situations. A total of 20% of the subjects are randomly selected and paired with another subject from the same population. For each pair consisting of player 1 and player 2, we draw lots ($p = 0.5$) to determine which of the two decision situations is to be played (i.e. random lottery payment technique). The amounts depicted in the payoffs and the treatment conditions correspond to real €-values. To increase the willingness to attend the experiment, ten subjects are randomly selected and paid with €50 as a show-up fee.

² To increase the statistical power of our analysis, subjects had to respond to both situations within *one* wealth scenario (between-subjects study design). We refrain from using a within-subjects study design (each experimental subject makes decisions in *all* wealth scenarios), as the subjects may activate different emotions in the treatments.

Language. We use neutral language (i.e. loaded terms, such as “deception” are not used).