Information, Beliefs and Actual Behavior in the Trust Game

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What comes to mind when you see these men?

Who would you trust?

- With your money?
- With your safety?
- With your house?

Why?

Information, Perception and Decision-making

- Bounded rationality (Simon 1955)
- Heuristics, adaptive toolbox (Gigerenzer et al. 1999)
- Social identity theory (Tajfel and Turner 1979), identity economics (Akerlof and Kranton 2000 2010)
- Attribution theory (Heider 1958)

Trust Game

- Subgame-perfect equilibrium: no transfers
- Berg, Dickhaut, and McCabe (1995) experiments with mutually anonymous opponents: substantial amount of blind trust and trustworthiness
- Variations in behavior in different cultural settings
- Few studies on beliefs and expectations (Bohnet and Zeckhauser 2004, Buchan et al. 2008)

  - Revealing the identity of players (ethnicity, gender etc.) → mixed results

  - Stereotypic attributions

  - Reputational information on past individual decisions significantly increases trust and reciprocity

Research Questions

- **Q1:** Do investors want to obtain information on their trustees prior to making decisions in an economic transaction?

- **Q2:** If yes, what type of information do investors perceive to be useful?

- **Q3:** Does the obtained information lead to an actual change in investors‘ sending behavior?

Hypotheses

H1: Trustee information will be perceived as important by investors

H2a: Only some trustee information will be considered important by investors

H2b: An investor will likely attempt to obtain information which is perceived relevant for reciprocation

H3: The obtained information will lead to an actual change in investors‘ behavior when compared to the control group

Methods: Participants

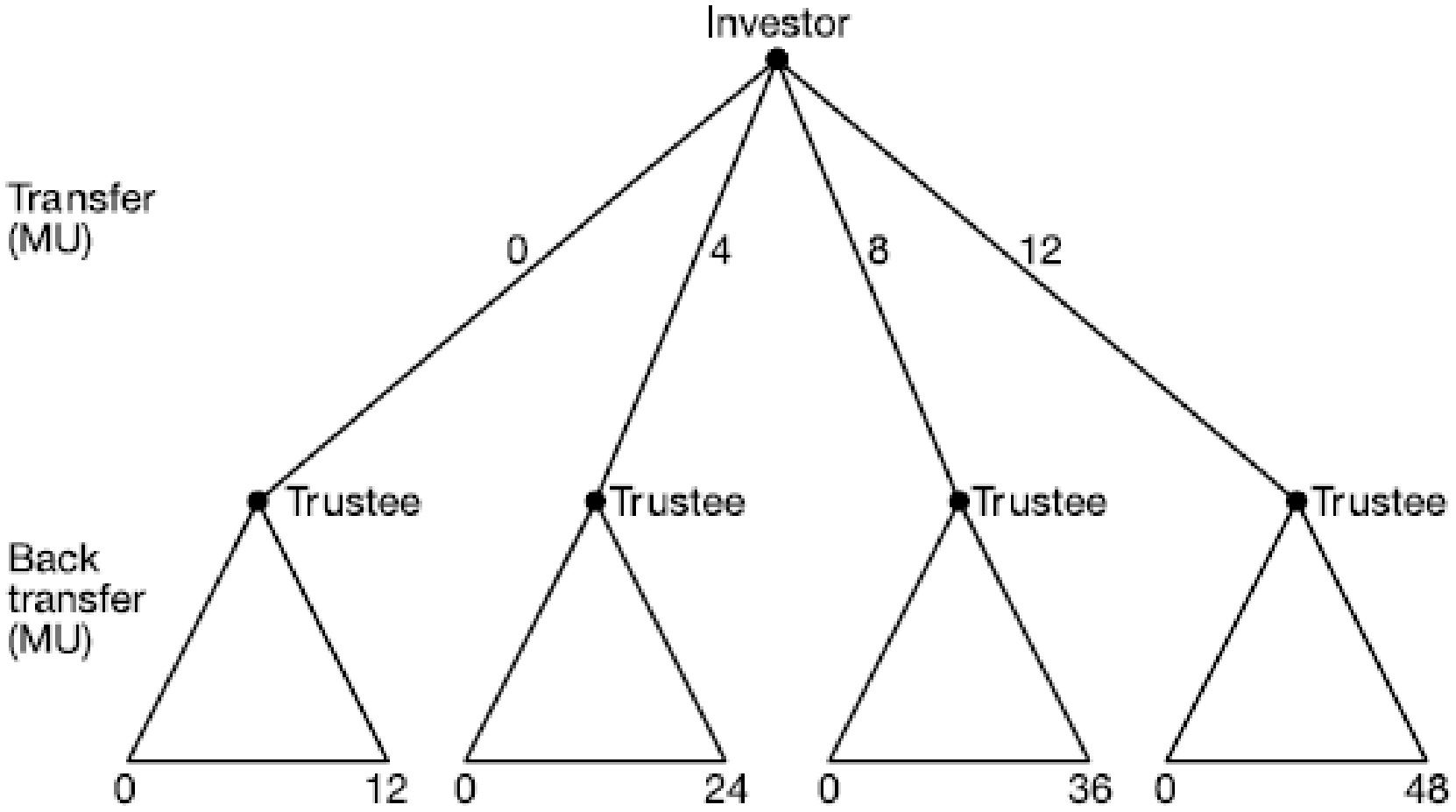
- Subject pool
  - Number of subjects = to be determined
    - Power analysis
    - Previous literature
  - Equal number of students from
    - University of North Alabama
    - Humboldt University Berlin
    - Higher School of Economics, Moscow
    - Future research examining differences

Methods: Materials

- Pre-survey (survey monkey) → categories of information
- Pre-experiment questionnaire (survey monkey) → potential subjects
- Laboratory experiment and post-experiment questionnaire (z-tree):
  - Control group
  - Treatment group
- Payment:
  - Show-up fee: $ 8 (all)
  - Endowment: $ 12 (all)
  - Purchasing money: $ 6 (treatment)

Experimental Design: Control

- Anonymous trust game
- Investor and trustee are randomly drawn and matched
- Investor and trustee are told they represent a group of three
- 15 rounds (5 sequences, 3 rounds each)
  - Without information on payoffs
  - For both investor and trustee
- Strategy method (Selten 1967) used with trustees



Trust Game

Source: adopted from Kosfeld et al. 2005

Purpose of Control Group

- Provides comparison group for treatment group
- Allows experimenter to provide investor with trustee information during the treatment study
  - Trustees will be randomly drawn from the control group and matched with the actual investors in the treatment group

Experimental Design: Treatment

- Similar to control group
  - Investor and trustee are told they represent a group of three
  - 15 rounds (5 sequences, 3 rounds each)
  - No information on payoffs
- EXCEPT
  - Investors have the opportunity to purchase information about trustees before the trust game starts
  - At the end of each sequence, investor is given one piece of information he/she purchased

Trustee Information

	Actually predicts trustworthiness?		
Perceived to predict trustworthiness?		Yes	No
	Yes	Y/Y	Y/N
	No	N/Y	N/N

- Four trait cards
  - Derived in pre-survey and from literature
- One card on trustee's previous behavior
  - Derived from literature
  - Consistently found to predict future behavior

Potential types of information on the trustee

Gender

Past behavior: trustworthi-ness

IQ

Number of siblings

Last two digits of phone number

Information Purchase

- Investor can only purchase information BEFORE the trust game has begun
  - Must rank order the cards according to willingness to pay (WTP)
  - WTP ≥ our conditional (and private) price of .50 →investor can obtain information
- The previous behavior card cannot be attained
  - So as to determine the urge to know this information
  - Focus on other variables
  - Without skewing the results

Data Analysis

- **Q1:** Is information important?
  - Frequency of information purchased
- **Q2:** What information is important?
  - Number of items purchased (Frequency: Average)
  - Order of items purchased (Frequency: Rank order of items (average))
  - Bid amount on items (Frequency: Average for each item)
- **Q3:** Does knowing this information change economic behavior from control group?
  - Trend comparison between treatment group and control group

Expected Findings (I)

- Is information important to investors?
  - Information will be important to investors ←
- Which information is important to investors?
  - Past behavior (i.e., trustworthiness score) ←
  - Y/Y (Gender) ←
  - Y/N (IQ) ←
  - N/Y (No. of siblings)
  - N/N (last 2 digits of phone number)

Expected Findings (II)

- Is there an actual change in investors‘ sending behavior?
  - Control group trend ≠ treatment group trend → not the payoffs (remember: no feedback from trustees), but information (i.e., preconceived notion of trustworthiness) has changed the behavior of investors

Thank you very much
for your attention!

Instructions for Control Group (I)

- "You have been randomly grouped with two other students at this university, from now on you will be working with and for your two other group members. Additionally, you have also been randomly selected to represent your group on a task today. Your task today will be to represent your group in a task where you will be sending and receiving amounts of money with a representative of ***another*** group. The money you acquire in this task will be split among your group members. I will now describe this task in more detail"

- ***Experimenter explains trust game to each participant.***

- "You will play 5 sequences with 3 round in each sequence. You will not meet the other group, the other representative, and you will not know the amount the other representative sends to you. Additionally, you will not learn what you have earned until the very end of all the sequences."

Instructions for Control Group (II)

- ***Additionally, experimenter will provide additional (and different) instructions for the investor and the trustee…***

- **Investor:**
- "You will have the option to send 0, 4, 8, or 12 dollars to the trustee; however, you will not be told what the other representative returns or how much you have earned until the very end of all of the sequences, at which point you will learn your overall returns."

- **Trustee:**
- "The money sent to you will be tripled; however, you will not be told how much the other representative has sent. Instead you will be asked to speculate how much of the overall pot (after tripling of any money sent) you would return to the other representative (0%, 33%, 66%, 100%) under four possible conditions: when the other representative sends you $0, $4, $8, and $12."

- **Finally**, at the beginning of each of the rounds, investors and trustees will be asked to, "estimate how much the other group's representative is likely to return/send"

Instructions for Treatment Group (I)

- **Instructions:** "You have been randomly grouped with two other students at this university, from now on you will be working with and for your two other group members. Additionally, you have also been randomly selected to represent your group on a task today. Your task today will be to represent your group in a task where you will be sending and receiving amounts of money with a representative of ***another*** group. The money you acquire in this task will be split among your group members. I will not describe this task in more detail"

- ***Experimenter explains trust game to each participant.***
- "You will play 5 sequences with 3 round in each sequence. You will not meet the other group, the other representative, and you will not know the amount the other representative sends to you. Additionally, you will not learn what you have earned until the very end of all the sequences. *However, if you are interested you can receive information about the other group's representative for a fee." [emphasis added]*

Instructions for Treatment Group (II)

[Card screen shown]

- "Please use the screen provided to list the maximum amount of money you would be willing to pay for each card of information. You must use different amounts for each card. You are not guaranteed the card and will only receive the card with the other representative's information if it exceeds the amount of money that the card is worth (this is confidential). The cards range in price from $0.10 to $5.90." [two different pots available, one with $12 for playing, $6 pot for purchasing].
- "You do not have to purchase information; you can start sending money to the other representative now. However, you will ***not*** be given another chance to purchase this information"
- ****The four trait cards are given a low enough "price" that must the participant must match or exceed in order to receive the card/information. Price for these four trait cards are worth .50, if this price is not matched or exceeded the information will not be revealed. The fifth card, the willingness to trust card, is unattainable (or $11.99); however, it is presented to determine whether participants would chose a determinant of "previous behavior".***
- ***After the investor states his maximum willingness to pay, the experimenter reveals which cards (but NOT the actual information) the investor has acquired. The experimenter also explains how much money can be sent in each round.***

Instructions for Treatment Group (III)

- **Instructions:** "You will have the option to send 0, 4, 8, or 12 dollars to the trustee; however, you will not be told what the other representative returns or how much you have earned until the very end of all of the sequences, at which point you will learn your overall returns."
- If the investor does not chose to pay for any information, the experimenter will allow the investor to proceed as in the control condition.
  - If the investor pays for information, the experimenter will reveal the most important (which information derived highest estimated price) card first.
  - ***Before the start of each round, but after the information has been revealed, investor is asked to*** "estimate how much the other group's representative is likely to return" if he/she choose to send money.
  - The investor's pay will be dependent on what the randomly chosen trustee responded in the control condition.
  - After completing the 15 rounds, investors will be asked to complete some post-test questionnaires and then will be debriefed and paid.