

Data Article

Title: Individual altruistic choice and attitude data from Amazon's Mechanical Turk

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Abstract

This article presents new data on individual altruistic choices and attitudes in a two-player sharing game. The decision maker in this game had to choose how much of a fixed budget to share with another anonymous Amazon Mechanical Turk user participating in the same study. With a known probability, the decision maker's choice was overwritten by one of two known default options, so that the recipient was unable to attribute those two outcomes to the decision maker with certainty. In addition to choice data, each participant's incentivized guess of average behavior is included in the dataset, along with responses to a set of survey questions asking for opinions or guesses about the recipient's preferences. Lastly, the dataset contains basic demographic information for each participant, along with detailed timing information about recruitment and each phase of the study.

Specifications Table

Subject area	<i>Economics, psychology</i>
More specific subject area	<i>Behavioral economics, experimental economics, social psychology</i>
Type of data	<i>Text file</i>
How data was acquired	<i>Human participants in an incentivized game and survey administered through Amazon's Mechanical Turk</i>
Data format	<i>Raw</i>
Experimental factors	<i>N/A</i>
Experimental features	<i>Individual choices and beliefs in a sharing game</i>
Data source location	<i>N/A</i>
Data accessibility	<i>Data is included in the online supplementary material for this article</i>
Related research article	<i>te Velde (in press) [2]; te Velde (2018) [3]</i>

Value of the Data

- These data are useful to studying how people make altruistic choices.

- Rather than simple revealed-preference data, the dataset reveals aspects of the decision makers' thought processes, such as their expectations of others' behavior in the same setting and their beliefs about the recipient's preferences and emotional reactions to potential outcomes.
- Timing and demographic data included in the dataset is of value for examining how different types of decision makers proceed through each phase of the game.
- The dataset contains observations of a large number of decision makers, allowing researchers to break down the data however desired without losing statistical power.

Data

The data contains observations from an incentivized economic experiment and survey implemented on Amazon's Mechanical Turk (MTurk) platform with 2,306 participants. The study consisted of three phases: a game, a questionnaire, and a survey. The game was played either before or after the questionnaire depending on the treatment group, and the survey came last. The game is an adapted version of the modified dictator game first implemented by Andreoni and Bernheim (2009) [1]. The dictator chooses how much of \$1.00 to share with a recipient, and with a commonly known probability this choice is overridden with one of two default allocations. The questionnaire asks the dictator to state their opinions regarding the active choice of the default allocations, which cannot be directly attributed to the dictator, versus choices very close in monetary value to one of the default options. Depending on the treatment arm, dictators are asked either about the relative moral appropriateness of these options, or which option they believe the recipient would prefer for the dictator to choose, or which option they believe would lead the recipient to be happier. The survey collected basic demographic data on gender, race, income, education, and age.

Experimental Design, Materials, and Methods

Participants were recruited with a posting on MTurk advertising a baseline payment of \$0.40. Any MTurk user located in the United States was able to participate; I additionally discarded responses from IP addresses located outside the United States or multiple responses from the same IP address. Upon accepting the task, participants were assigned to a treatment group by assigning sequential participants to sequential treatments. They were directed to a private web server hosting the experiment, which also recorded timing information as they progressed through each phase of the study. After all participants had completed the study, they were anonymously paired in order by arrival time and one partner's choice was enacted with 20% probability. Final payments were made with bonuses through MTurk, accompanied with an explanation of all results. All aspects of the setting were commonly known.

After agree to the terms laid out in the consent form, the study consisted of three phases; the game, questionnaire, and survey. Each will be described in turn:

Game: The game is adapted from the design of Andreoni and Bernheim (2009) [1]. Example instructions are included in Appendix A. This is two-player modified dictator game in which the dictator chooses how much of \$1 to share with the recipient. This choice is recorded in the “shared” field in the dataset. Then with a commonly known probability, the dictator’s choice is overridden with one of two commonly known default allocations (each with equal probability). One of these possible allocations gives the dictator 9 cents and the remaining 91 to the recipient, and in the other these two payments are reversed. The resulting allocation is communicated to the recipient, but not the dictator’s original choice or whether it was overridden.

Prior to making an allocation decision, participants also guessed the median allocation decision among other participants within their treatment group. This guess was incentivized for accuracy by paying 5 cents if the true median was within 10 cents of the guess. It is recorded in the “sharedguess” field in the dataset.

Two treatment dimensions affected the game phase of the study. First of all, the “game first” treatment (indicated with a 2 in the first digit of the four-digit code in the “treatment” field of the dataset) directed participants to play the game prior to completing the questionnaire, instead of the reverse. Second of all, the “high school pressure” treatment (indicated with a 2 in the third digit of the four-digit code in the “treatment” field of the dataset) corresponded to a probability of the dictator’s choice being overridden of 10%, versus 50% in the low pressure treatment. In the former case, the outcome the recipient sees is easier to attribute to the dictator’s active choice, so this puts more social pressure on the dictator to be generous to the recipient.

Questionnaire: An example questionnaire is included in Appendix B. The questionnaire presents the same setting as the game, but refers to hypothetical dictator Alice and recipient Bob. Additionally, the total amount Alice can share with Bob is \$10 and the two possible default allocations give 87 cents to Alice and \$9.13 to Bob, or vice versa. The first question simply asks people to state their opinion of how much they think Alice would share with Bob, and the second question is an incentivized guess of the median response to the first question within the participant’s treatment group. If the true median was within 25 cents of the participant’s guess, they were paid an additional 5 cents. These two responses are recorded in the “guess” and “metaguess” fields in the dataset, respectively.

The main questionnaire consisted of 8 questions. Each question compares two allocations, one of which is one of the two default allocations and the other is slightly larger or smaller than that default allocation. For example, the first question in the example questionnaire in Appendix B compares the outcomes in which Bob receives either 87 or 92 cents. These are very similar in monetary outcome, but the latter comes with definitive

information that Alice was actively ungenerous. A response favoring 87 cents therefore communicates that bad information is worth at least 5 cents to avoid, and is recorded with a 1 in the “badinfobad” field in the dataset. Similarly, favoring 82 cents over 87 cents indicates that bad information is worth at least 5 cents, and such a response is recorded with a 1 in the “badinfo good” field. “goodinfobad” and “goodinfo good” are defined analogously.

Questions 7-10 are the same as questions 3-6, but the monetary gap between the default and alternative allocations is larger. These correspondingly detect stronger preferences over good and bad information. For each of questions 3-10, the order of options was randomized for each participant. Also, in the dataset, responses to the last four questions are missing for 1,439 subjects due to a glitch in the experiment software that was rectified partway through the study.

Three treatment dimensions are relevant to the questionnaire. First of all, the “high social pressure” treatment arm described above applied to the description of the hypothetical game in the questionnaire as well. Secondly, the “small values” treatment (indicated with a 1 in the second digit of the 4-digit code in the “treatment” field in the dataset) compared each default allocation to an outcome either 5 cents higher or lower (in questions 3-6) or 40 cents higher or lower (in questions 7-10). In the large values treatment, on the other hand, these values are respectively 20 cents and 70 cents.

Thirdly, three types of questions were asked depending on treatment assignment in the phrasing dimension. In the “ex post happiness” treatment (indicated with a 1 in the fourth digit of the 4-digit treatment code), participants were asked “Do you think Bob would be happier after receiving a payment of” either of two possibilities. In the “ex ante preference” treatment (indicated with a 2 in the fourth digit of the treatment code), participants were instead asked “Do you think Bob would prefer for Alice to choose to share” either of two possibilities. In the “moral appropriateness” treatment (indicated with a 3 in the fourth digit of the treatment code), participants were instead asked “Do you think it's more morally appropriate for Alice to choose to share” either of two possibilities.

Survey: The survey is included in Appendix C. These responses are recorded in the fields “agebracket”, “gender”, “ethnicity”, “income”, and “educ”.

Acknowledgments

The data were collected using funds from the University of California, Berkeley, Institute of Business and Economic Research.

Declarations of interest

None.

Appendix A: Example game instructions

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Welcome!

My name is Vera te Velde, and I am a researcher at the University of California at Berkeley. This short set of questions will help us understand how you think about certain economic and social situations.

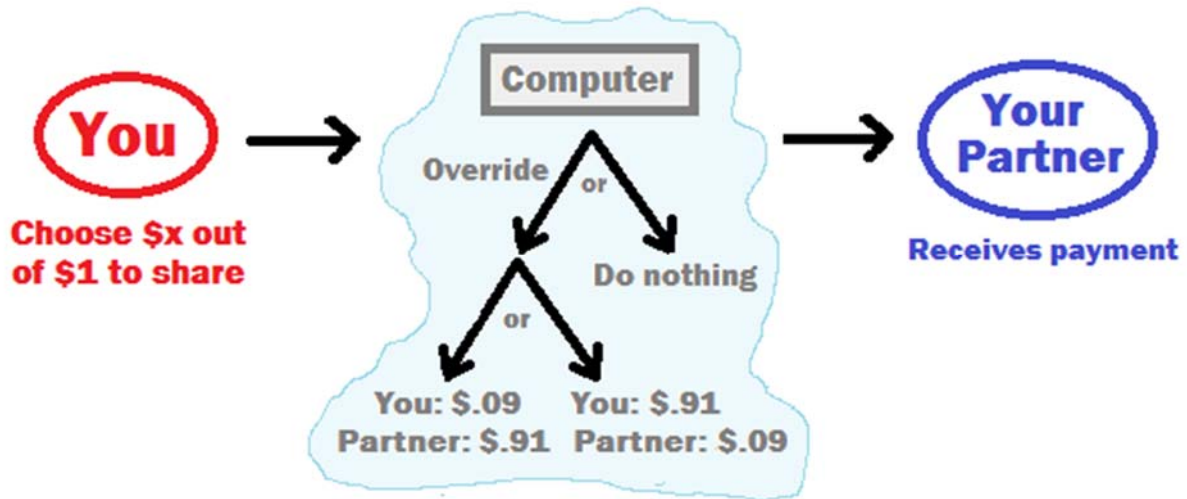
There are no right or wrong answers, but you must answer carefully and honestly in order to avoid directly contradicting yourself (for example, by saying you prefer an apple to an orange, but you'd rather have an orange than *two* apples). As long as you answer honestly, you don't need to worry about making that kind of mistake, and you will be eligible for bonus payments!

Game

First, you will have the opportunity to play a simple game for real money with a real partner. You have been matched with another MTurk user. You will both play the exact same game, shown below. Either your choice or your partner's choice will be randomly selected, and then with a 20% probability, the game will count for real money and you will be paid according to the results with an MTurk bonus payment. The results of the game will be reported to you on MTurk after both you and your partner have completed the HIT, along with your bonus payment (if applicable).

In this game, you must decide how to divide \$1 between yourself and your partner. After you decide, the computer will draw a random number, and half the time it will override your choice. If it does, half the time it will give 9 cents to you and 91 cents to your partner, and half the time it will choose to give 91 cents to you and 9 cents to your partner. Your partner will see the outcome of the game, but will *not* find out whether the computer overrode your choice.

Overall, 25% of the time the computer will share 9 cents with your partner, 25% of the time it will share 91 cents, and half the time it will share whatever amount you choose below.



1. How much would you like to share with your partner? Choose an amount between \$0 and

\$1:

2. What do you think most other people will answer to the previous question? For this question, if you guess within 10 cents of the middle answer among MTurk users who complete

this HIT, you will receive a 5 cent bonus payment!

If you have any thoughts or comments, or if you would like to share your reasoning, please do so here. We really appreciate your input!

This is a study by the University of California, Berkeley, Department of Economics. For questions, contact Vera te Velde at vtevelde@econ.berkeley.edu.

Appendix B Example questionnaire instructions

Questionnaire

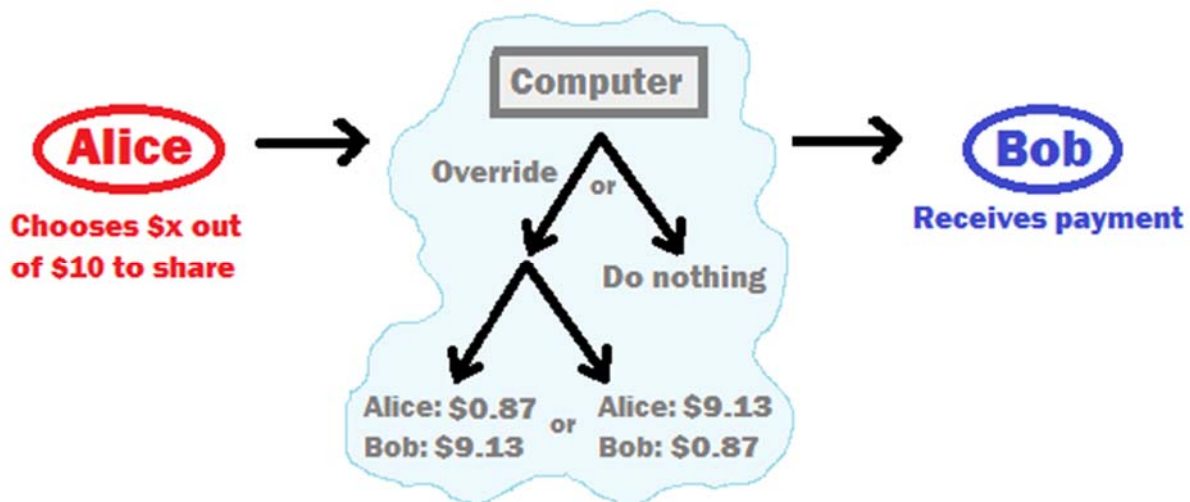
Next I will ask you a few questions about a game very similar to the one you just played. Imagine the following scenario. Two people, Alice and Bob, are playing a game through a

computer. They don't know each other and will never actually meet, and they are playing this game together just one time.

In this game, Alice must decide how to divide \$10 between herself and Bob. After she decides, half the time they each receive their money and the game ends. The other half of the time, the computer randomly decides to override Alice's choice. Half the time the computer decides to give Alice \$9.13 and Bob \$0.87, and half the time it gives Alice \$0.87 and Bob \$9.13.

Alice and Bob know the rules of the game, and Bob can see how much money he receives, *but he doesn't know whether the computer actually intervenes or what it randomly chooses.*

Overall, 25% of the time the computer shares \$0.87 with Bob, 25% of the time it shares \$9.13 with Bob, and half the time it shares whatever quantity Alice chooses.



Notice: If Alice chooses to give Bob either \$0.87 or \$9.13, Bob cannot figure out whether Alice actually chose to share that amount or whether the computer overrode her choice. If Alice chooses to give Bob any other amount, he can figure out what she chose.

The following few questions ask you to guess or express an opinion about some of the possible outcomes in this game. Imagine that Bob and Alice are average people and answer what you think they would do or think.

1. How much do you think Alice will choose to share with Bob? Enter an amount between \$0.00 and \$10.00.

2. What do you think most other people will answer to the previous question? For this question, if you guess within 25 cents of the middle answer among other MTurk users who complete this HIT, you will receive a 5 cent bonus payment!

3. Do you think Bob would be happier after receiving a payment of \$0.87 or \$0.92?

- \$0.87
- \$0.92

4. Do you think Bob would be happier after receiving a payment of \$0.87 or \$0.82?

- \$0.87
- \$0.82

5. Do you think Bob would be happier after receiving a payment of \$9.13 or \$9.18?

- \$9.13
- \$9.18

6. Do you think Bob would be happier after receiving a payment of \$9.13 or \$9.08?

- \$9.13
- \$9.08

7. Do you think Bob would be happier after receiving a payment of \$0.87 or \$1.27?

- \$0.87
- \$1.27

8. Do you think Bob would be happier after receiving a payment of \$0.87 or \$0.47?

- \$0.87
- \$0.47

9. Do you think Bob would be happier after receiving a payment of \$9.13 or \$9.53?

- \$9.13
- \$9.53

10. Do you think Bob would be happier after receiving a payment of \$9.13 or \$8.73?

- \$9.13
- \$8.73

If you have any thoughts or comments, or if you would like to share your reasoning, please do so here. We really appreciate your input!

Next

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Appendix C Survey

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Survey

Please answer the following five questions to complete the study:

What is your age bracket?

- Under 30
- 30-39
- 40-49
- 50-59
- 60 or over
- I prefer not to answer

Are you male or female?

- Female
- Male
- Other, or I prefer not to answer

What is your ethnicity?

- White
- Non-white Hispanic
- Black or African American
- Asian or Pacific Islander
- Other
- I prefer not to answer

What is your household income?

- Less than \$20,000
- \$20,000 to \$49,999
- \$50,000 to \$79,999
- \$80,000 to \$149,999
- \$150,000 or more
- I prefer not to answer

What is your highest completed education level?

- High school or less
- Some college
- Bachelor's degree
- Postgraduate degree
- I prefer not to answer

Finish

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References

- [1] Andreoni, James A. and B. Douglas Bernheim. 2009. "Social image and the 50-50 norm: A theoretical and experimental analysis of audience effects." *Econometrica* 77, 1607-1636.
- [2] te Velde, Vera L. "Beliefs-based altruism as an alternative explanation for social signaling behaviors." *Journal of Economic Behavior and Organization* (in press).
- [3] te Velde, Vera L. 2018. "Large-scale subject recruitment and selection on Amazon's Mechanical Turk". Working paper.