Online Appendix

1 Experiment 1

1.1 Protocol

Person As and Person Bs were in the same room. Roles were assigned based on seat numbers, and subjects were seated randomly. Each subject's role was constant through the session. There was no communication between subjects, and each subject was paid in private at the end of the study. Each session was conducted by two experimenters. Instructions were read out loud by one of the experimenters, while participants followed the instructions on their screens. The other experimenter controlled the Z-Tree console and made payments. One of the experimenters read the following instructions while the subjects followed the details on their screens.

1.2 Replication

1.2.1 General Instructions

Welcome! Please wait for the experimenter to proceed. The study will take 60 minutes in total. You will be paid $5 for participating. You can earn up to $24.50 in addition as a result of your accuracy, your choices and the choices of others participating in this session. The study has 4 parts. Each part is independent of one another; your decisions in one part will have no bearing on your decisions or earnings in other parts. You may get additional earnings from each part. At the end of the study, all earnings across the parts will be added to the $5 participation fee. All your choices and answers will remain anonymous and confidential during and after the study. We will present instructions at the beginning of each part. Please pay close attention to these instructions. Your earnings will depend on your understanding. We will move from one part to the next when everyone is done working on a given part. So please be patient and wait for instructions when you are done with answering questions in a given part. This also means that there is no reason to rush, since you cannot finish the study earlier even if you rushed. This is a silent study, which means you are not allowed to make noises or remarks. Only raise your hand if you encounter a technical difficulty. At this point, please enter your seat number. [This number ranges from 1-20 and is used by the program to assign Person A and Person B roles to subjects, and to create random pairings between Person A and Person B's in the room.] This number is displayed in front of you on a white sticker at the left top corner of the divider. When you are done, please click OK to proceed. [page break]

1.2.2 Part 1

In Part 1 of the study, you will participate in six two-person decision problems. You will either participate as Person A or Person B, based on your seat number. Your role will be displayed on a page after the instructions. Each two-person decision problem will ask Person A's to determine a payment for themselves and a payment for a Person B in this room, who will be randomly and anonymously paired with Person A for that question. For these questions, Person B has no choice to make.

A question of this type looks like this:

Person A, please choose between the following two options:

Option 1: $5 for me, $2 for Person B Option 2: $4 for me, $4 for Person B.

Your choice will determine your earnings, as well as those of Person B's from Part 1.

As you can see from comparison between Options 1 and 2 in the example above, Person A can increase the earnings of a fellow participant by a larger amount than he/she gives up to do so. In other words, the total earnings to both parties is larger in Option 2, but the payment to the Person A is larger in Option 1 than in Option 2. Person A's choice determines his/her own earnings as well as that of another participant in the role of Person B. [page break]

Person A's will make decisions in the following 6 questions.

Part 1, Q1. Option 1: $4.50 for Person A, $1.50 for Person B. Option 2: $4.00 for Person A, $4.00 for Person B.

Part 1, Q2. Option 1: $2.50 for Person A, $0 for Person B. Option 2: $2.00 for Person A, $1.50 for Person B.

Part 1, Q3. Option 1: $4.00 for Person A, $1.00 for Person B Option 2: $3.00 for Person A, $2.00 for Person B.

Part 1, Q4. Option 1: $5.00 for Person A, $2.00 for Person B Option 2: $4.00 for Person A, $4.00 for Person B.

Part 1, Q5. Option 1: $1.00 for Person A, $4.00 for Person B Option 2: $0.50 for Person A, $6.50 for Person B.

Part 1, Q6. Option 1: $2.00 for Person A, $3.00 for Person B Option 2: $1.50 for Person A, $5.50 for Person B.

Note that the questions differ in the payments across Option 1 and Option 2 for Person A and Person B. Therefore, each question presents a different tradeoff. Each Person A may have different preferences regarding the options in each question. Everyone's choices and identities will remain anonymous and confidential during and after the study.

At the end of the study, only one question will be selected from Part 1. This selection is done randomly by the program and each question has the same chance of being selected. Therefore, you can treat each question as if it were the only question being asked in Part 1. The program will pair each Person A randomly with one Person B for the selected question. Person A's will get what they chose for themselves. Person B will get what Person A chose to give to Person B. Payments from Part 1 will be distributed confidentially at the end of the study. Person A's will not know which Person B they were matched with, and vice versa. You will be informed whether you are Person A or Person B in the next page. Person A's will make decisions while Person B's wait. Person A's, please do not rush in your decisions and consider each question carefully. We will wait for everyone to complete this part before we proceed to Part 2.

[In the following page, Person A's are presented Part 1 Q1-Q6 as shown above and asked to make choices. Person B's wait. When Person A's are done making choices, the program advances to Part 2. Neither Person A's nor Person B's see the question chosen from Part 1, or their earnings, until the end of the study.]

1.2.3 Part 2

We now proceed to Part 2. In this part, all participants will be asked to predict Person As choices in Part 1. Your earnings will depend on the accuracy of your predictions. At the end of Part 1, the program calculated and stored the percentage of Person As in this session who chose Option 1 and Option 2 for each question. The task will present you four of these questions. For each question presented, your job is to guess the percentage of Person A's in this session who chose Option 1 and Option 2 in that question (these percentages must add up to 100%). Only one prediction question from this part will be chosen at the end of the study to determine your earnings from Part 2. You will be compensated up to an additional $4.00 for your accuracy. Each question has the same chance of being chosen, so please pay attention to all questions and treat each question as if it were the only one being asked. [page break]

The accuracy earnings will be calculated as: max (0, $4.00 - 0.005*[Your estimate of % of Person As who chose Option 1 - % Person As who actually chose Option 1]^2). Clearly, this is the same as max (0, $4 - 0.005*[Your estimate of % of Person As who chose Option 2 - % Person As who actually chose Option 2]^2) since Option 1 and Option 2 percentages must add up to 100%. This means that if you guess the proportion of Person As who chose each option exactly right, you will get an additional $4. If you are off by 10% in either direction, you will get $3.50. If you are off by 15% in either direction, you will get $3. If you are off by 20% in either direction, you will get $2.00. If you are off by 25% in either direction, you will get $1.00. If you are off by more than 28% in either direction, you will not get any additional payment. Notice that the farther away from the reality your guess is, the faster your accuracy earnings drop. In sum, the more accurate you are, the more money you make. Notice that the reality may be 0% (none of the people who fit the description chose a particular option), 100% (all of the people who fit the description chose a particular option) or any % in between. To maximize your payoffs, it is important that you treat each prediction question carefully. Do not rush; the experimenter will wait for everyone to proceed to the next part. [page break]

Part 2, Q1. What percentage of Person As in this session do you think chose each of the following options? (Percentages must sum to 100. You can only enter integer values.)

___ % of Person As who chose Option 1: $4 for Person A, $1 for Person B

___ % of Person As who chose Option 2: $3 for Person A, $2 for Person B

Part 2, Q2. What percentage of Person A's in this session do you think chose each of the following options? (Percentages must sum to 100. You can only enter integer values.)

___ % of Person As who chose Option 1: $2.50 for Person A, $0 for Person B

___ % of Person As who chose Option 2: $2 for Person A, $1.50 for Person B

Part 2, Q3. What percentage of Person A's in this session do you think chose each of the following options? (Percentages must sum to 100. You can only enter integer values.)

___ % of Person As who chose Option 1: $1 for Person A, $4 for Person B

___ % of Person As who chose Option 2: $0.50 for Person A, $6.50 for Person B

Part 2, Q4. What percentage of Person A's in this session do you think chose each of the following options? (Percentages must sum to 100. You can only enter integer values.)

___ % of Person As who chose Option 1: $2 for Person A, $3 for Person B

___ % of Person As who chose Option 2: $1.50 for Person A, $5.50 for Person B

1.2.4 Part 3

Person As and Person Bs will participate in a joint decision task in Part 3. Your roles are determined by your seat number as before, so you already know whether you are Person A or Person B. The program will pair one Person A and one Person B anonymously and randomly for Part 3. This random pairing is independent of the random pairing in Part 1. First Person As will make a choice in Part 3. When this choice is communicated to Person Bs, then Person Bs will make a choice, which will be communicated back to Person A. All communication will be done confidentially. Note that in Part 3, Person A's decision influences Person B's earnings, and Person B's decision influences Person A's earnings. The experimenter will carry out the decisions of both parties to determine earnings.

Now, let's review the joint decision task everyone will be participating in:

Person A and Person B roles were randomly assigned based on seat numbers to all participants at the beginning of the study. In this decision task, there are two stages.

In Stage 1, Person A chooses between A1 and A2:

A1. \$4 for Person A, \$1 for Person B

A2. \$3 for Person A, \$2 for Person B (Give \$1 to increase Person B's payment by \$1)

After Person A makes a decision, a randomly matched Person B will see A's choice and get to make a response decision in Stage 2. Person B's response in Stage 2 determines the final payments from Part 3 for the matched pair.

Treatment 1

If Person A chose A1, then Person B is given the choice between B1 and B2 to determine final total payments from Part 3:

B1. Stay (Final earnings: \$4 for Person A, \$1 for Person B)

B2. Give \$0.50 to decrease Person A's payment by \$2.50 (Final earnings: \$1.50 for Person A, \$0.50 for Person B)

If Person A chose A2, then Person B is given the choice between B3 and B4 to determine final total payments from Part 3:

B3. Stay (Final earnings: \$3 for Person A, \$2 for Person B)

B4. Give \$0.50 to increase Person A's payment by \$2.50 (Final earnings: \$5.50 for Person A, \$1.50 for Person B)

Please review this decision task carefully and prepare to make your decisions. Think carefully about each Person's options before you make your choice. [page break]

- Person A's choice question

  [The game is repeated on Person A's screens]

  Think about this joint decision task carefully. Which option do you choose?

  A1: \$4 for me, \$1 for Person B

  A2: \$3 for me, \$2 for Person B

- Person B's choice question

  Person A matched with you for Part 3 chose (A1/A2, communicated) among

  A1: \$4 for Person A, \$1 for Person B

  A2.: \$3 for Person A, \$2 for Person B (Give \$1 to increase Person B's payment by \$1)

  Now you get to make a response decision in Stage 2. Your response in Stage 2 determines the final payments from Part 3 for you and for Person A.

Remember that Person A knew the following when he/she made a choice:

[The game is repeated on Person B's screens]

As Person B, what do you choose in response to person A's choice?

[If Person A chose A1, then Person B is given the choice between B1: Stay (Final earnings: \$4 for Person A, \$1 for Person B) and B2: Give \$0.50 to decrease Person A's payment by \$2.50 (Final earnings: \$1.50 for Person A, \$0.50 for Person B. If Person A chose A2, then Person B is given the choice between B3: Stay (Final earnings: \$3 for Person A, \$2 for Person B) and B4: Give \$0.50 to increase Person A's payment by \$2.50 (Final earnings: \$5.50 for Person A, \$1.50 for Person B.]

Treatment 2

If Person A chose A1, then Person B is given the choice between B1 and B2 to determine final total payments from Part 3:

B1. Stay (Final earnings: \$4 for Person A, \$1 for Person B)

B2. Give \$0.50 to increase Person A's payment by \$2.50 (Final earnings: \$6.50 for Person A, \$0.50 for Person B)

If Person A chose A2, then Person B is given the choice between B3 and B4 to determine final total payments from Part 3:

B3. Stay (Final earnings: \$3 for Person A, \$2 for Person B)

B4. Give \$0.50 to increase Person A's payment by \$2.50 (Final earnings: \$5.50 for Person A, \$1.50 for Person B)

Please review this decision task carefully and prepare to make your decisions. Think carefully about each Person's options before you make your choice. [page break]

- Person A's choice question

  [The game is repeated on Person A's screens]

  Think about this joint decision task carefully. Which option do you choose?

  A1. \$4 for me, \$1 for Person B

  A2. \$3 for me, \$2 for Person B

- Person B's choice question

  Person A matched with you for Part 3 chose (A1/A2, communicated) among

  A1. \$4 for Person A, \$1 for Person B

  A2. \$3 for Person A, \$2 for Person B (Give \$1 to increase Person B's payment by \$1)

  Now you get to make a response decision in Stage 2. Your response in Stage 2 determines the final payments from Part 3 for you and for Person A.

  Remember that Person A knew the following when he/she made a choice:

  [The game is repeated on Person B's screens]

  As Person B, what do you choose in response to person A's choice?

  [If Person A chose A1, then Person B is given the choice between B1: Stay (Final earnings: \$4 for Person A, \$1 for Person B) and B2: Give \$0.50 to increase Person A's payment by \$2.50 (Final earnings: \$6.50 for Person A, \$0.50 for Person B. If Person A chose A2, then Person B is given the choice between B3: Stay (Final earnings: \$3 for Person A, \$2 for Person B) and B4: Give \$0.50 to increase Person A's payment by \$2.50 (Final earnings: \$5.50 for Person A, \$1.50 for Person B.]

1.2.5 Part 4

Now, we move on to Part 4. This part of the study requires a lot of attention. The study will ask you to answer seven prediction questions about other participants' choices. You will be compensated for your accuracy in one of these prediction questions randomly selected at the end of the study. Each question has the same chance of being selected. The accuracy payment in the selected question will be calculated as before: max (0, $4.00 - 0.005*[Your % estimate - actual %]^2). This means that if you guess the percentage exactly right, you will get an additional $4. If you are off by 10% in either direction, you will get $3.50. If you are off by 20% in either direction, you will get $2.00, and so on. If you are off by more than 28% in either direction, you will not get any additional payment. Notice that the farther away from the reality your guess is, the faster your accuracy earnings drop. Next, the program will present the first 3 of these questions. We will give more detailed explanations of the remaining ones afterwards. [page break]

Part 4, Q1. In order to help you answer the prediction question below, let us remind you of the decision task in Part 3. [The game in Part 3 repeated on the screen]

What percentage of Person As chose each option (A1 or A2) in Part 3? Please think carefully and make your best prediction. Make sure that your answers add up to 100%.

___ % of Person As who chose A1

___ % of Person As who chose A2

Part 4, Q2. What percentage of Person Bs chose each option (B1 or B2) in response to A1? Please think carefully and make your best prediction. Make sure that your answers add up to 100%.

___ % of Person Bs chose B1 in response to A1

___ % of Person Bs chose B2 in response to A1

Part 4, Q3. What percentage of Person Bs chose each option (B3 or B4) in response to A2? Please think carefully and make your best prediction. Make sure that your answers add up to 100%.

___ % of Person Bs chose B3 in response to A2

___ % of Person Bs chose B4 in response to A2

Thank you, everyone answered the first three prediction questions in Part 4. Now, we want to explain the next two prediction questions in Part 4, since they will ask you to think about a subgroup of Person As. In other words, these questions will ask you to report a conditional probability. In both questions, the study asks that you only consider the subgroup of Person As who picked A2 in Part 3. We repeat the decision task here to refresh your memory [The game in Part 3 repeated on the screen].

Now, considering only the Person As who chose A2 in the decision task of Part 3, think about how these Person A's chose in the following question from Part 1 when Person B's did not have any choice to make:

Part 1 question:

Option 1. $2.50 for me, $0 for Person B

Option 2. $2 for me, $1.50 for Person B

The study asks you to predict the percentage of choices in the Part 1 question among the Person As who chose A2 in the Part 3 decision task. Remember that while Person B's could choose to respond to Person As in Part 3, they did not have a choice in Part 1. Therefore Person As who chose A2 in Part 3 may or may not have chosen similarly in Part 1. This question basically asks you what % of the Person As who have been helpful in Part 3 would be helpful in a given question in Part 1. Note

that the question from Part 1 also differs in the options that Person A faced. So, please pay close attention to all the details of the questions.

So first, you have to focus on a particular subgroup of Person As: only those who chose A2 in Part 3. Then, you need to think about how those Person As have chosen among two options in Part 1. The program will also provide, for your reference, your best guess about the % of ALL Person As who you thought picked Option 1 and Option 2. You reported this guess in Part 2. Note, however, this guess was about ALL the Person As. Now, we are asking you about a subgroup of them, who chose A2 in Part 3. So please think carefully about if and how much this subgroup of Person As differs from the general population of Person A's, and how likely they are to have chosen in a given Part 1 question. [page break]

Part 4, Q4. [The game in Part 3 repeated on the screen.] Considering only the Person As who chose A2 in Part 3, think about how they chose in the following question from Part 1 when Person B's did not have any choice to make:

Part 1 question: Option 1. \$2.50 for me, \$0 for Person B Option 2. \$2 for me, \$1.50 for Person B

You guessed, in Part 2, that <Part 2 estimate> % of all Person As would pick Option 1 and <Part 2 estimate>% of all Person As would pick Option 2 in this question. The program provides this information for your reference, you may decide not to use this information.

Now, we ask you to predict the choices of only the Person As who chose A2 in Part 3. Please be careful which option (Option 1 or 2) you think they are more/less likely to choose than the general population of Person As. Please indicate your best predictions for: ___ % choosing Option 1 in this Part1 question among Person As who chose A2 in Part 3. ___ % choosing Option 2 in this Part1 question among Person As who chose A2 in Part 3

Part 4, Q5. [The game in Part 3 repeated on the screen.] Considering only the Person As who chose A2 in Part 3, think about how they chose in the following question from Part 1 when Person Bs did not have any choice to make:

Part 1 question: Option 1. \$4 for me, \$1 for Person B Option 2. \$3 for me, \$2 for Person B

You guessed, in Part 2, that <Part 2 estimate> % of all Person As would pick Option 1 and <Part 2 estimate>% of all Person As would pick Option 2 in this question. The program provides this information for your reference, you may decide not to use this information.

Now, we ask you to predict the choices of only the Person As who chose A2 in Part 3. Please be careful which option (Option 1 or 2) you think they are more/less likely to choose than the general population of Person As. Please indicate your best predictions for: ___ % choosing Option 1 in this Part1 question among Person As who chose A2 in Part 3. ___ % choosing Option 2 in this Part1 question among Person As who chose A2 in Part 3

Thank you. You have now reached the final two questions of Part 4. These questions will ask you to predict what expectations Person As held regarding how Person Bs would respond to their choices in Part 3. Remember that in Q2 of this part, we showed you the decision task from Part 3 and asked you what % of Person Bs chose each option (B1 or B2) in response to A1? Similarly, Q3 asked you what % of Person Bs chose each option (B3 or B4) in response to A2? Now, the study will ask you how you think Person As answered these questions. The question will look like:

When the study asked Person As "What percentage of Person Bs chose each option (B1 or B2) in response to A1?" what do you think was the average of their predictions?

On average, Person As expected ___% of Person Bs to choose B1 in response to A1

On average, Person As expected ___% of Person Bs to choose B2 in response to A1

Please think carefully about what this question is asking before answering. Basically, we are asking you to predict Person As' expectations of Person B responses in the task from Part 3. [page break]

Part 4, Q6. [The game in Part 3 repeated on the screen] When we asked Person As "What percentage of Person Bs chose each option (B1 or B2) in response to A1?" what do you think was the average of their predictions in this question?

___ Average expectation of Person As regarding % of Person Bs who chose B1 in response to A1

___ Average expectation of Person As regarding % of Person Bs who chose B2 in response to A1

Part 4, Q7. [The game in Part 3 repeated on the screen] When we asked Person As "What percentage of Person B's chose each option (B3 or B4) in response to A2?" what do you think was the average of their predictions in this question?

___ Average expectation of Person As regarding % of Person Bs who chose B3 in response to A2

___ Average expectation of Person As regarding % of Person Bs who chose B4 in response to A2

1.2.6 Final Questions and Payment

Did you find any of the parts of this study confusing to the point that it interfered with the quality of your decision making? (Yes/No) [page break]

If any of the instructions were confusing, please comment below.[page break]

Thank you for your participation! Everyone is done with the study at this point. Please click OK to proceed. You will see the random question selections and your earnings from each part in the next few pages. You do not need to write down the earnings from each part. Your TOTAL payment (including the participation fee) will be displayed on the last page.

1.3 Experiment 1: Additional notes, results and comments

In summary, player As made decisions in 6 dictator games in part 1 while player Bs waited, all subjects made 4 predictions in part 2, all subjects made one decision in part 3, and all subjects made 7 predictions in part 4. The average earnings were $15.40 for players As and $14.30 for player Bs in treatment 1, and $16.87 for players As and $13.93 for player Bs in treatment 2. Table 1 in the main text reports the average beliefs elicited in part 4. Unfortunately, due to an error, the responses to questions Q4 and Q5 were not collected in treatment 2. We repeated these questions in treatments 1b and 2b. Here, we include histograms of the first-order and second-order beliefs elicited in part 4 to complement the averages reported in Table 1 of the main text. These histograms suggest that Player As' FOE and Player Bs' SOE are not only close in terms of their averages, but also in terms of their distributions.

2 Robustness treatments of Experiment 1

We ran four pairs of robustness treatments, referred to as treatments (1a, 2a), (1b, 2b), (1c, 2c) and (1d, 2d) below.

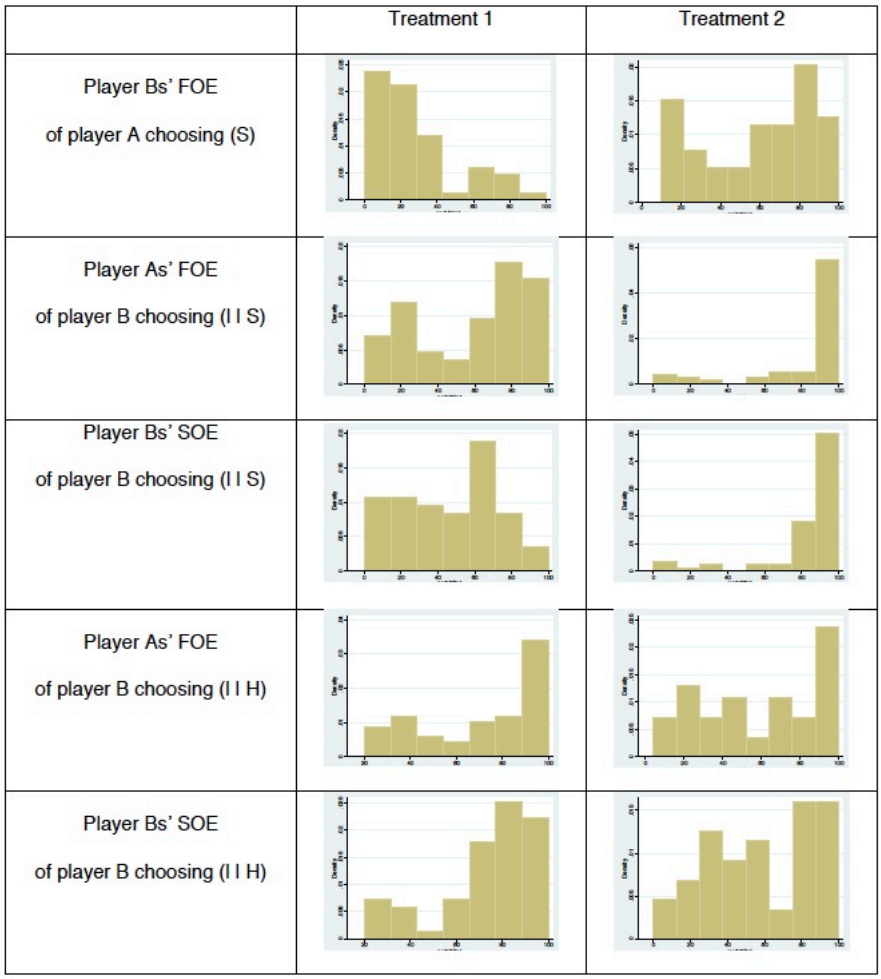


Figure 1: Distribution of reported beliefs in part 4 across treatments 1 and 2

2.1 Treatments 1a and 2a

We recruited 126 subjects who had not participated in Experiment 1 to participate in treatments 1a and 2a. The study was conducted in October 2015. The subjects were recruited for 15 minutes of participation as they walked out of an unrelated study in the lab.

2.1.1 General Instructions

This experiment only has one decision task and will not take more than 15 minutes. You will be paid $3 for your participation and may earn an additional amount ranging from $0.50 to $6.50 based on your decisions and luck. Please silence your phones and put away your belongings. During this experiment, you will be assigned to either the role of Person A or Person B. This assignment is random. Person Bs will make a choice that will impact their earnings as well as those of a randomly and anonymously matched Person A in the room. Please read the instructions on the next page carefully before proceeding.

2.1.2 Choice elicitation

You are Person [A/B].

We will ask Person Bs to make a choice in the following decision task. Person As do not have a choice.

The computer will momentarily choose between X and Y. If the computer chooses X, Person B makes a choice between options X1 and X2 to determine the payments for themselves and a Person A in the room randomly and anonymously matched with them:

X1. $1 for Person B, $4 for Person A X2. $0.50 for Person B, 1.50 for Person A

If the computer chooses Y, Person B makes a choice between options Y1 and Y2 to determine the payments for themselves and a Person A in the room randomly and anonymously matched with them:

Y1. $2 for Person B, $3 for Person A Y2. $1.50 for Person B, $5.50 for Person A

[After the subjects had the chance to read these instructions, they were informed that the computer chose Y.]

Subjects who were assigned the role of Person A were told to wait for Person Bs to make their choices. Subjects who were assigned the role of Person A were told make a choice between the following options.

Y1. $2 for me, $3 for Person A

Y2. $1.50 for me, $5.50 for Person A

2.1.3 Communications and Payment

After the subjects made a choice, they were asked to indicate their choice on the piece of paper provided to them, put it in an envelope, and wait for the experimenter to collect the envelope. The envelope contained no identifier. The experimenter collected their envelopes, and distributed them randomly to the Person As in the room. The program then asked the Person As to enter the choice of Person Bs they were matched with. In this manner, the program finalized all payments, and subjects were paid privately by the experimenter.

2.2 Treatments 1b and 2b

A total of 146 subjects completed treatments 1b and 2b in December 2014. The subjects received the link to the study and could complete the study at any time within three days of receiving the link.

Subjects were incentivized with accuracy payments that were issued in the form of an Amazon gift card emailed to their registered email address upon completion of the study. In order to guarantee attentive answers, in addition to requiring them to complete the study in one sitting, we also included a comprehension check the subjects needed to answer correctly before they could proceed to the rest of the study. If a subject failed the question, s/he would be paid only the participation fee, and not be allowed to continue the study. The subjects were informed of this rule. A total of 25 subjects (17%) failed the comprehension question.

2.2.1 General Instructions and Consent to Participate

This survey asks you to predict the choices of 258 participants who took part in an experiment conducted last month at the University of Michigan. We will describe the experiment in detail before we ask you these questions. While you may not receive any direct benefit for participating, the results of this study will contribute to research on decision making. There are no anticipated risks or discomforts from participating. The study will take 20 minutes in total. You will be paid $3 for your diligent participation in the today's study. You can earn up to $5 in addition to your base pay of $3 (a total of $8) as a result of how accurate your answers are. Therefore, make sure to read the details of the experiment carefully before answering. The more accurate your predictions are, the more money you will make. Participating in this study is completely voluntary. Even if you decide to participate now, you may change your mind and stop at any time. You may choose not to answer any survey question for any reason.

Participants who successfully complete the study will receive payment. Successful completion is determined at the sole discretion of the study author(s) using common methods to identify non-genuine responses. Examples of non-genuine responses include nonsense answers, responses completed in an extremely short or long amount of time, failure to respond to instructions provided in the survey, and/or otherwise clearly failing to offer genuine responses. Participants should complete the study in one sitting without interruptions to help ensure their response is not considered as non-genuine due to time length. Only submissions considered genuine will receive payment. If you fail the comprehension questions in the study, you will not be allowed to continue and will only get paid for partial participation ($2). Therefore, please pay close attention to all instructions and descriptions.

2.2.2 Task details

The study will ask 9 prediction questions in total. These questions will ask you to predict the % of participants in the November 2014 experiment who picked a particular option over another. Some of the questions may be about a subgroup of participants, please pay close attention. One of the 9 questions will be selected at random at the end of the survey and you will be informed of the actual proportion of choice or average expectations (depending on the question) and the accuracy payment you will receive as a result of your prediction in that question. This amount will be added to the $3 base pay and will determine your total payments.

The accuracy payment in the selected question will be calculated as: max (0, $5.00 - 0.005*[Your % estimate - actual %]^2). This means that if you guess the percentage exactly right, you will get an additional $5. If you are off by 10% in either direction, you will get $4.50. If you are off by 20% in either direction, you will get $3.00, and so on. If you are off by 32% or more in either direction, you will not get any additional payment. Notice that the farther away from the reality your guess is, the the faster your potential earnings drop.

In sum, the more accurate you are, the more money you make. Therefore, please pay close attention to the instructions on the next few pages.

[page break]

The November 2014 Experiment was conducted at University of MIchigan. In total 258 students participated in the experiment across 18 sessions. Each session had 10-20 participants, always in even numbers. Participants arrived at the lab and were randomly assigned the role of either Person A or Person B. The roles, identities and choices of all participants were kept anonymous. Participants interacted through computer clients on a shared network.

As a part of this study, Person As and Person Bs participated in a joint decision task. Each Person A was matched with a different Person B in the same session, again randomly and anonymously. Their choices were carried out to determine payments at the end of the study.

First, Person As made a choice. Each Person A's choice was communicated a randomly matched Person B in an anonymous fashion, and Person B responded.

In half the sessions, Person As and Person Bs made decisions in TASK 1 and in the other half of the sessions, they made decisions in TASK 2.

In the next page, you will see the details of these tasks. Please pay close attention to how they differ.

[page break]

In TASK 1, first, Person A chooses between A1 and A2:

A1: \$4 for Person A, \$1 for Person B (not change the allocation Person A chose)

A2: \$3 for Person A, \$2 for Person B (give \$1 from own payment to increase Person B's payment by \$1)

Then Person B makes a choice. If Person A chose A1, then Person B is given the choice between B1 and B2 to determine the final payments for both persons:

B1: \$4 for Person A, \$1 for Person B (not change the allocation Person A chose)

B2: \$1.50 for Person A, \$0.50 for Person B (give \$0.50 from own payment to decrease Person A's payment by \$2.50)

If Person A chose A2, then Person B is given the choice between B3 and B4 to determine the final payments for both persons:

B3: \$3 for Person A, \$2 for Person B (not change the allocation Person A chose)

B4: \$5.50 for Person A, \$1.50 for Person B (give \$0.50 from own payment to increase Person A's payment by \$2.50)

In TASK 2, first, Person A chooses between A1 and A2:

A1: \$4 for Person A, \$1 for Person B (not change the allocation Person A chose)

A2: \$3 for Person A, \$2 for Person B (give \$1 from own payment to increase Person B's payment by \$1)

Then Person B makes a choice. If Person A chose A1, then Person B is given the choice between B1 and B2 to determine the final payments for both persons:

B1: \$4 for Person A, \$1 for Person B (not change the allocation Person A chose)

B2: \$6.50 for Person A, \$0.50 for Person B (give \$0.50 from own payment to increase Person A's payment by \$2.50)

If Person A chose A2, then Person B is given the choice between B3 and B4 to determine the final payments for both persons:

B3: \$3 for Person A, \$2 for Person B (not change the allocation Person A chose)

B4: \$5.50 for Person A, \$1.50 for Person B (give \$0.50 from own payment to increase Person A's payment by \$2.50)

2.2.3 Comprehension Question

What is the only difference between the two tasks? (Please pay attention. Your answer will determine whether you can continue with answering the prediction questions that give additional payment as a function of your accuracy). a) If Person A is not helpful, Person B can reward Person A in Task 2 but not in Task 1, b) If Person A is not helpful, Person B can punish Person A in Task 2 but not

in Task 1, c) If Person A is not helpful, Person B can reward Person A in Task 2 but not in Task 1. These options were presented in random order to subjects. The correct answer was: If Person A is not helpful, Person B can punish Person A in Task 2 but not in Task.

2.2.4 Belief Elicitation

1. What percentage of Person As who participated in TASK 1 chose each option (A1 or A2)?
2. What percentage of Person As who participated in TASK 2 chose each option (A1 or A2)?
3. What percentage of Person Bs who participated in TASK 1 chose each option (B1 or B2) in response to A1?
4. What percentage of Person Bs who participated in TASK 2 chose each option (B1 or B2) in response to A1?
5. What percentage of Person Bs who participated in TASK 1 chose each option (B3 or B4) in response to A2?
6. What percentage of Person Bs who participated in TASK 2 chose each option (B3 or B4) in response to A2?

Thank you for your answers. Now we present another decision task (labeled here as TASK 3) from the November 2014 study. All Person As participated in Task 3, regardless of whether they participated in Task 1 or Task 2.

In TASK 3, Person As made a choice between
A1: $4 for Person A, $1 for Person B
A2: $3 for Person A, $2 for Person B

Person A's choice determined the payments for both Person A and Person B. In other words, Person Bs had no response and had to accept Person A's decision in this task. Again, Person As and Person Bs were randomly and anonymously matched and identities were not revealed.

1. What percentage of Person As chose each option (A1 or A2) in Task 3?
2. Consider ONLY the group of Person As who picked A2 in TASK 1 and think about the choices they made in TASK 3 when Person B could not respond. Among the group of Person As who picked A2 in TASK 1, what percentage chose each option in TASK 3? (Notice that this is a question that asks you to think about the Person A's who have been helpful to Person B in Task 1. What percentage were also helpful in Task 3?)
3. Consider ONLY the group of Person As who picked A2 in TASK 2 and think about the choices they made in TASK 3 when Person B could not respond. Among the group of Person As who picked A2 in TASK 2, what percentage chose each option in TASK 3? (Notice that this is a question that asks you to think about the Person As who have been helpful to Person B in Task 2. What percentage were also helpful in Task 3?)

2.2.5 Payments

One belief question was randomly chosen for each subject, and the subject's payment was displayed on his/her screen. Subjects received an Amazon gift card link via email within three days of the completion of the experiment.

2.3 Treatments 1c and 2c

A total of 175 subjects were recruited, and 166 of them successfully completed treatments 1c and 2c in May 2017. The subjects received the link to the study and could complete the study at any time within three days of receiving the link. Payments were issued in the form of an Amazon gift card emailed to their registered email address upon completion of the study. In order to guarantee attentive answers, in addition to requiring them to complete the study in one sitting, we also included open ended questions asking about the reciprocity game before they could proceed to the rest of the study. If a subject gave an incomplete answer, s/he would be paid only the participation fee, and not be allowed to continue the study. The subjects were informed of this rule. A total of 6 subjects failed to answer these questions. In addition, the instruction clarified that subjects should not attempt to take the survey multiple time. By comparing IP addresses associated with the responses, we identified 3 respondents who violated this rule, and we excluded their responses from the data.

2.3.1 General Instructions

The study will take 15 minutes in total. You will be paid $3 for your diligent participation in today's study. You can earn up to $9 in addition to your base pay of $3 (a total of $12) as a result of luck and your decisions. Therefore, make sure to read the details of the experiment carefully before answering. The more accurate your predictions are, the more money you will make.

Participating in this study is completely voluntary. Even if you decide to participate now, you may change your mind and stop at any time. To discontinue the survey, simply close your browser and cancel your appointment timeslot (you will not be paid).

Participants who successfully complete the study will receive payment. Successful completion is determined at the sole discretion of the study author(s) using common methods to identify non-genuine responses. Examples of non-genuine responses include nonsense answers, responses completed in an extremely short or long amount of time, failure to respond to instructions provided in the survey, and/or otherwise clearly failing to offer genuine responses. Participants should complete the study in one sitting without interruptions to help ensure their response is not considered as non-genuine due to time length. Only submissions considered genuine will receive payment. If you give incomplete answers to the essay questions in the study, you will only get paid for partial participation ($2). Therefore, please pay close attention to all instructions and descriptions.

This survey can only be used once per person and per household. Do not attempt to retake the survey or click the survey link again. Duplicate attempts will result in removal from the Ross Paid Pool.

Payment will be issued by the University in the form of an Amazon gift card emailed to your registered email address no later than 10 business days from participation deadline.

The University of Michigan Institutional Review Board Health Sciences and Behavioral Sciences has determined that this study is exempt from IRB oversight (HUM00055326). If you have questions about this research study, you may contact Prof. Yesim Orhun at aorhun@umich.edu

If you agree to participate in this study, check the box below and click >> to continue.

[page break]

In this study, you will act either in the role of Person A or in the role of Person B in a joint decision task. Your role will be determined randomly.

To determine payments, the experimenter will pair one Person A and one Person B anonymously and randomly after all participants completed the study. Your choices and identity will be kept confidential at all times.

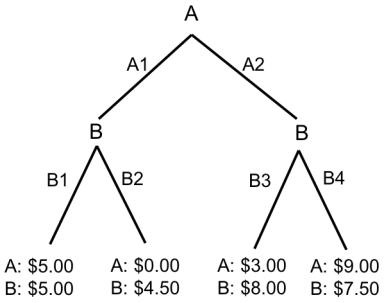
Please read the instructions on the following pages carefully before proceeding.

2.3.2 Reciprocal interaction - treatment 1c

First, let's review the joint decision task everyone will be participating in. Note that Person A's decision influences Person B's earnings and Person B's decision influences Person A's earnings.

In this decision task, there are two stages. In Stage 1, Person A chooses between two options A1 and A2.

If Person A chose A1, then in Stage 2, Person B chooses between two options B1 and B2. B1: $5 for Person A, $5 for Person B, B2: $0 for Person A, $4.50 for Person B. If Person A chose A2, then in Stage 2, Person B chooses between two options B3 and B4. B3: $3 for Person A, $8 for Person B, B4: $9 for Person A, $7.50 for Person B. This joint decision task can be summarized with the following schema:

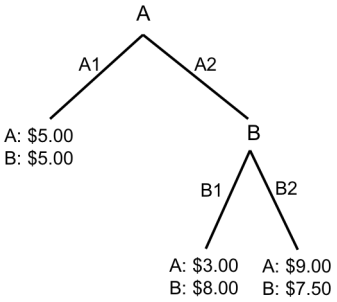


2.3.3 Reciprocal interaction - treatment 2c

First, let's review the joint decision task everyone will be participating in. Note that Person A's decision influences Person B's earnings and Person B's decision influences Person A's earnings.

In this decision task, there are two stages. In Stage 1, Person A chooses between two options A1 and A2.

If Person A chose A1, then the payments are $5 for Person A, $5 for Person B. If Person A chose A2, then in Stage 2, Person B chooses between two options B1 and B2: B1. $3 for Person A, $8 for Person B B2. $9 for Person A, $7.50 for Person B This joint decision task can be summarized with the following schema:



2.3.4 Open-ended questions

[The following questions were asked as open-ended essay questions, in order to make sure that the subjects paid attention to the game and understood the decision task.]

If you were Person B, which option would you want Person A to choose?

What are the tradeoffs Person A is facing?

Can you imagine a Person B choosing B1 if Person A chooses A1? Why?
Can you imagine a Person B choosing B2 if Person A chooses A1? Why?
Can you imagine a Person B choosing B3 if Person A chooses A2? Why?
Can you imagine a Person B choosing B4 if Person A chooses A2? Why?

2.3.5 Choice elicitation

The decision task is repeated here for your convenience: [the reciprocal interaction instructions are repeated here.]

Person A - treatment 1 You are assigned to the role of PERSON A.
Which option do you prefer?
A1 (giving the choice of B1 and B2 to person B)
A2 (giving the choice of B3 and B4 to person B)

Person A - treatment 2 You are assigned to the role of PERSON A.
Which option do you prefer?
A1
A2

Person B - treatment 1 You are assigned to the role of PERSON B.
If the Person A matched with you chose A1 (giving the choice between B1 and B2 to Person B), what option do you prefer?
B1
B2
If the Person A matched with you chose A2 (giving the choice between B3 and B4 to Person B), what option do you prefer?
B3
B4

Person B - treatment 2 You are assigned to the role of PERSON B.
If the Person A matched with you chose A2 (giving the choice between B1 and B2 to Person B), what option do you prefer?
B1
B2

2.3.6 Communication and Payments

The study informed the subjects "Thank you for your participation. You will be anonymously and randomly matched with another participant in the opposite role, and your payment will be communicated to you via email." Treatment 1 had 82 participants, 41 in each role. The average earnings of player As were \$5.50 and the average earnings of player Bs were \$7.40 in treatment 1. Treatment 2 had 84 participants, 41 in the role of A and 43 in the role of B. The average earnings of player As were \$6.60 and the average earnings of player Bs were \$6.80 in treatment 2.

2.4 Treatments 1d and 2d

A total of 190 subjects completed treatments 1d and 2d in May 2017. The subjects received the link to the study and could complete the study at any time within three days of receiving the link. Payments were issued in the form of an Amazon gift card emailed to their registered email address upon completion of the study. In order to guarantee attentive answers, in addition to requiring them to complete the study in one sitting, we also included open-ended questions asking about the reciprocity game before they could proceed to the rest of the study. If a subject gave an incomplete answer, s/he would only be paid the participation fee, and not be allowed to continue the study. The subjects were informed of this rule. All subjects answered these questions, and no subjects were excluded from the data.

2.4.1 General Instructions

The study will take 15 minutes in total. You will be paid $3 for your diligent participation in today's study. You can earn up to $6.50 in addition to your base pay of $3 (a total of $9.50) as a result of luck and your decisions. Therefore, make sure to read the details of the experiment carefully before answering. The more accurate your predictions are, the more money you will make.

Participating in this study is completely voluntary. Even if you decide to participate now, you may change your mind and stop at any time. To discontinue the survey, simply close your browser and cancel your appointment timeslot (you will not be paid).

Participants who successfully complete the study will receive payment. Successful completion is determined at the sole discretion of the study author(s) using common methods to identify non-genuine responses. Examples of non-genuine responses include nonsense answers, responses completed in an extremely short or long amount of time, failure to respond to instructions provided in the survey, and/or otherwise clearly failing to offer genuine responses. Participants should complete the study in one sitting without interruptions to help ensure their response is not considered as non-genuine due to time length. Only submissions considered genuine will receive payment. If you give incomplete answers to the essay questions in the study, you will only get paid for partial participation ($2). Therefore, please pay close attention to all instructions and descriptions.

This survey can only be used once per person and per household. Do not attempt to retake the survey or click the survey link again. Duplicate attempts will result in removal from the Ross Paid Pool.

Payment will be issued by the University in the form of an Amazon gift card emailed to your registered email address no later than 10 business days from participation deadline.

The University of Michigan Institutional Review Board Health Sciences and Behavioral Sciences has determined that this study is exempt from IRB oversight (HUM00055326). If you have questions about this research study, you may contact Prof. Yesim Orhun at aorhun@umich.edu

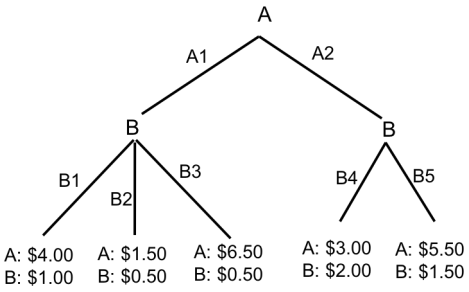
If you agree to participate in this study, check the box below and click >> to continue.

2.4.2 Reciprocal interaction - treatment 1

First, let's review the joint decision task everyone will be participating in. Note that Person A's decision influences Person B's earnings and Person B's decision influences Person A's earnings.

In this decision task, there are two stages. In Stage 1, Person A chooses between two options A1 and A2.

If Person A chose A1, then in Stage 2, Person B chooses between two options B1 and B2. B1: $4 for Person A, $1 for Person B, B2: $1.50 for Person A, $0.50 for Person B B3. $6.50 for Person A, $0.50 for Person B If Person A chose A2, then in Stage 2, Person B chooses between two options B3 and B4. B4: $3 for Person A, $2 for Person B, B5: $5.50 for Person A, $1.50 for Person B. This joint decision task can be summarized with the following schema:

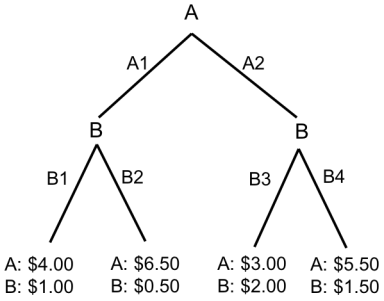


2.4.3 Reciprocal interaction - treatment 2

First, let's review the joint decision task everyone will be participating in. Note that Person A's decision influences Person B's earnings and Person B's decision influences Person A's earnings.

In this decision task, there are two stages. In Stage 1, Person A chooses between two options A1 and A2.

If Person A chose A1, then in Stage 2, Person B chooses between two options B1 and B2: B1. $4 for Person A, $1 for Person B B2. $6.50 for Person A, $0.50 for Person B If Person A chose A2, then in Stage 2, Person B chooses between two options B3 and B4: B3. $3 for Person A, $2 for Person B B4. $5.50 for Person A, $1.50 for Person B This joint decision task can be summarized with the following schema:



2.4.4 Open ended questions

[The following questions were asked as open-ended essay questions, in order to make sure that the subjects paid attention to the game and understood the decision task.]

If you were Person B, which option would you want Person A to choose?

What are the tradeoffs Person A is facing?

Can you imagine a Person B choosing B1 if Person A chooses A1? Why?

Can you imagine a Person B choosing B2 if Person A chooses A1? Why?

Can you imagine a Person B choosing B3 if Person A chooses A1? Why?

Can you imagine a Person B choosing B4 if Person A chooses A2? Why?

Can you imagine a Person B choosing B5 if Person A chooses A2? Why?

2.4.5 Choice elicitation

The decision task is repeated here for your convenience: [the reciprocal interaction instructions repeated here]

Person A - treatment 1 You are assigned to the role of PERSON A.
Which option do you prefer?
A1 (giving the choice between B1, B2, and B3 to person B)
A2 (giving the choice of B4 and B5 to person B)

Person A - treatment 2 You are assigned to the role of PERSON A.
Which option do you prefer?
A1 (giving the choice between B1 and B2 to person B)
A2 (giving the choice of B3 and B4 to person B)

Person B - treatment 1 You are assigned to the role of PERSON B.
If the Person A matched with you chose A1, what option do you prefer?
B1
B2
B3
If the Person A matched with you chose A2, what option do you prefer?
B4
B5

Person B -treatment 2 You are assigned to the role of PERSON B.
If the Person A matched with you chose A1, what option do you prefer?
B1
B2
If the Person A matched with you chose A2, what option do you prefer?
B3
B4

2.4.6 Communication and Payments

The study informed the subjects "Thank you for your participation. You will be anonymously and randomly matched with another participant in the opposite role, and your payment will be communicated to you via email." The average earnings of player As were \$4.1 and the average earnings of player Bs were \$1.5 in treatment 1. Treatment 2 had 84 participants, 41 in the role of A and 43 in the role of B. The average earnings of player As were \$4.3 and the average earnings of player Bs were \$1.2 in treatment 2.

2.4.7 Results

Treatment 1 had 96 participants, 48 in each role. Treatment 2 had 94 participants, 47 in each role. For the purposes of discussion of the results in relation to Experiment 1, consider the following relabeling of actions:

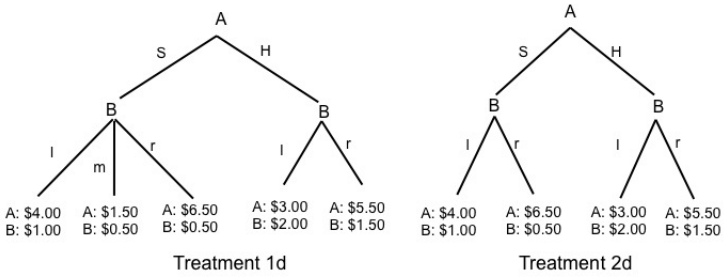


Table 2.4.7 summarizes the experimental results.

Table 1: Actions across Treatments 1d and 2d

		A choice		B choice	
	N	H	r|H	m|S	r|S
	(1)	(2)	(3)	(4)	(5)
Treatment 1d	48	28 (58%)	12 (25%)	6 (13%)	7 (15%)
Treatment 2d	47	17 (36%)	20 (43%)	·	10 (21%)
Difference (χ^2 test)		p =.03	p =.07		

Column 1 reports the number of subject pairs in the treatment. Column (2) reports the frequency of player As who chose H in the first-stage. Columns (3) reports the frequency of player Bs who chose (r) after H. Columns (4) and (5) report the frequency of player Bs' choices after S. Option m was available only in treatment 1d. The last column presents the p-values from a χ^2 test of the difference of interest between treatments.

As in Experiment 1, player As chose (H) more in treatment 1 than treatment 2 (58% vs. 36%,$\chi^2(1) = 4.68$, $p = .03$). In support of the main hypothesis that the choice of (H) will trigger a higher degree of positive reciprocity in treatment 2 than in treatment 1, only 12 of 48 (25%) player Bs rewarded (H) in treatment 1, whereas 20 of 47 (43%) player Bs rewarded (H) in treatment 2 ($\chi^2(1) = 3.28$, $p = .07$). Overall, the results replicate those of Experiment 1. However, the percentage of player As who are helpful and the percentage of Bs who reciprocate are lower across both treatments, possibly due to the fact that the subjects were not in the same room at the time they were participating in the experiment.

3 Experiment 2

3.1 Protocol

Person A's and Person B's were in the same room and roles were assigned randomly and anonymously. There was no communication between subjects and each subject was paid in private.

3.2 Replication

3.2.1 General Instructions

Please do not start until instructed to do so. In the meantime, please read these instructions carefully. This study will take 45 minutes and will require you to make choices and estimations regarding other participants. You will earn $5 for your attentive participation and up to an additional $5.50 as a result of your choices and those of others. The study has 4 parts with different instructions. In all questions, 200 tokens correspond to a $1. Your additional payment may depend on your choices and those of others in these questions. Please do not rush. Take your time and answer each question mindfully. If you finish early, you will be asked to wait while others finish the survey. You will not be permitted to use phones, laptops, etc. while you wait. If you have any questions, please note them at the end of the survey. Please do not raise your hand or talk, this is a silent study. Each question is independent of the others. Only one will be picked at the end of the study for determining payments.

You have a randomly assigned ID number at the top of this page. We will use this ID number to record your answers and will not keep any other identifying information. Your choices in this study will be carried out without compromising your identity in any way. To determine the payments, your choice in the selected question may be paired with the choice of another participant in a corresponding question, but this matching will be done randomly and anonymously. Therefore, none of the participants will be able to link your identity to your choices.

Please read instructions carefully and pay close attention to each question. Your payment may depend on your attentiveness.

[page break]

In this study, you will act either in the role of Person A or in the role of Person B in a joint decision task. Your role will be determined randomly.

To determine payments, the experimenter will pair one Person A and one Person B anonymously and randomly after all participants completed the study. Your choices and identity will be kept confidential at all times.

Please read the instructions on the following pages carefully before proceeding.

3.2.2 Part 1

In the first part of the study, you will choose between two options that may determine the additional payment of you and another participant in this room. All questions involve different tradeoffs. In most cases, you can increase the payment of a fellow participant by a larger amount than what you give up. However, the tradeoff between what you give up and what the other person gets varies across questions. For example, you may face a choice between getting 900 versus giving 100 to increase the payment of the other participant from 200 to 500.

Option 1: 900 for me, 200 for the other participant

Option 2: 800 for me, 500 for the other participant

At the end of the survey, if a question is randomly chosen from this part, the program will also randomly determine your role for the chosen question. If you are picked as the recipient, your payment will be determined by another participant's choice. If you are picked as the decision maker, then your choice in the question will determine your payment as well as that of another participant in the room. For example, let's say that the question above gets selected, and you are randomly chosen to be the decision maker. Since 200 tokens correspond to $1, if you picked Option 2, you would receive $4.00 in addition to the $5.00 for your participation ($9 total), and another participant would receive $2.50 in addition to the $5.00 for her participation ($7.50 total). If you picked Option 1, you would receive $4.50 in addition to the $5.00 for your participation ($9.50 total), and another participant would receive $1.00 in addition to the $5.00 for her participation ($6 total).

Only one question among the following can be selected to determine payments, so treat each question as if it was the only question you face. Please pay close attention to each question. They may involve increases or decreases in one or both payments. Units are in tokens. 200 tokens = $1.

[page break]

Please pick one of the two options in each question.

Part 1, Q1. Option 1: 800 tokens for me, 800 tokens for the other participant. Option 2: 700 tokens for me, 1100 tokens for the other participant.

Part 1, Q2. Option 1: 900 tokens for me, 500 tokens for the other participant. Option 2: 800 tokens for me, 800 tokens for the other participant.

Part 1, Q3. Option 1: 800 tokens for me, 200 tokens for the other participant. Option 2: 600 tokens for me, 400 tokens for the other participant.

Part 1, Q4. Option 1: 500 tokens for me, 900 tokens for the other participant. Option 2: 400 tokens for me, 1200 tokens for the other participant.

Part 1, Q5. Option 1: 500 tokens for me, 0 tokens for the other participant. Option 2: 400 tokens for me, 300 tokens for the other participant.

Part 1, Q6. Option 1: 900 tokens for me, 0 tokens for the other participant. Option 2: 800 tokens for me, 200 tokens for the other participant.

Part 1, Q7. Option 1: 400 tokens for me, 600 tokens for the other participant. Option 2: 300 tokens for me, 1100 tokens for the other participant.

Part 1, Q8. Option 1: 500 tokens for me, 900 tokens for the other participant. Option 2: 400 tokens for me, 600 tokens for the other participant.

3.2.3 Part 2

In the next part, you will be asked to estimate others' choices across different scenarios. If the question picked at the end of the study is one that required you to make such an estimate, you will be compensated up to an additional $3.00 for your accuracy. The accuracy payment for all such questions will be calculated as: max (0, $3.00 - 0.05*|Your % estimate - % reality|). This means that if you guess right, you will get an additional $3.00. If you are off by 5% in either direction, you will get $2.75. If you are off by 20% in either direction, you will get $2.00 and so on. If you are off by 60% or more, you will not get any additional payment. Your payment will be rounded up to the nearest 25 cents. In sum, the more accurate you are, the more money you make. Notice that the reality may be 0% (none of the people who fit the description chose a particular option), 100% (all of the people who fit the description chose a particular option) or any % in between. Please proceed now to the estimation exercises. To maximize your payoffs, it is important that you treat each one carefully and independently. [page break]

Part 2, Q1. What percentage of the participants chose each of the following options?
900 tokens for him/herself, 500 tokens for the other participant _____%
800 tokens for him/herself, 800 tokens for the other participant _____%
Part 2, Q2. What percentage of the participants chose each of the following options?
800 tokens for him/herself, 200 tokens for the other participant _____%
600 tokens for him/herself, 400 tokens for the other participant _____%
Part 2, Q3. What percentage of the participants chose each of the following options?
500 tokens for him/herself, 0 tokens for the other participant _____%
400 tokens for him/herself, 300 tokens for the other participant _____%
Part 2, Q4. What percentage of the participants chose each of the following options?
800 tokens for him/herself, 800 tokens for the other participant _____%
700 tokens for him/herself, 1100 tokens for the other participant _____%

3.2.4 Part 3

Thank you for your answers! Part 3 transitions to a very different setup. Please pay close attention to the instructions and question details. All of the questions in this part depend on your understanding of this setup. You will be making three joint decisions with another fellow participant. You will take decisions either as Person A or as Person B in three decision tasks that share a similar format. All decision tasks will present a choice situation where two people's decisions as well as chance play a role in determining the outcomes. Only one decision task can be selected at the end of the study, so your decisions in each task should be completely independent of one another.

At the beginning of the decision task, Person A is given 900 tokens and Person B is given 500 tokens. There are two stages that take place sequentially.

Stage 1. Person A makes a decision between keeping all 800 tokens and passing no additional tokens to Person B, or giving up 100 tokens in order to increase Person B's earnings by 300 tokens. These choices are presented below:

Keep. 900 for Person A, 500 for Person B

Give. 800 for Person A, 800 for Person B

Stage 2. Person B indicates his/her choice among the options presented in "Person B's choice set" conditional on the choice of Person A. In other words, Person B is asked to indicate his/her choice in the case that Person A chose "Keep" in Stage 1, and also in the case that Person A chose "Give" in Stage 1. At the end of the study, if a question from this part is selected, Person B's choice will be carried out conditional on the choice of the Person A s/he is randomly and anonymously matched with for that task.

Therefore, in Part 3 both Person As and Person Bs can make decisions that affect each other's earnings.

[page break]

Let us now review the options Person B can choose from in Stage 2 in response to Person A's choice in Stage 1. In Stage 2, Person B will have access to the following three choice sets:

- The "Basic Set"

  Person B has no actual choice. Regardless of what Person A chooses, Person B will go with: Stay. Not change the allocation Person A chose. As a result, Person A's choice in Stage 1 will determine earnings of Person A and Person B.

- The "Add or Stay Set"

  If Person A chooses "Give" in Stage 1, Person B chooses between

  Stay. Not change the allocation Person A chose.

  Add. Give 100 to increase Person A's payment by 300. (100 tokens are deducted from Person B's earnings and 300 tokens are added to Person A's earnings.)

  Having the Add option available to Person B does not necessarily mean that Person B is going to choose it over the Stay option. It only means that Person B can decide whether to give 100 tokens to increase Person A's earnings by 300 in response to Person A's choice of "Give" in Stage 1.

  If Person A chooses "Keep" in Stage 1, Person B will not have a further choice to make and will go with the Stay Option.

- The "Erase or Stay Set"

  If Person A chooses "Give" in Stage 1, Person B will not have a further choice to make and will go with the Stay Option.

  If Person A chooses "Keep" in Stage 1, Person B chooses between

  Stay. Not change the allocation Person A chose.

  Erase. Give 100 to decrease Person A's payment by 300. (This option is only available to Person B if Person A chooses Give. 100 tokens are deducted from Person B's earnings and 300 tokens are deducted from Person A's earnings.)

  Having the Erase option available does not necessarily mean that Person B is going to choose it over the Stay option. It only means that Person B can decide whether to give 100 tokens to decrease Person A's earnings by 300 in response to Person A's choice of "Keep" in Stage 1.

[page break]

So which choice set will Person B choose from? Neither Person A nor Person B will know for sure, but before they make their choices in each decision task, they will learn the probability with which each choice set is going to be available. The decision tasks in Part 3 will differ in the probability of Person B having access to each of these Stage 2 choice sets. In particular, in each of the three decision tasks, Person B has access to ONE of these subsets with 98% probability, while having access to each of the other two with 1% probability each.

The Stage 2 choice set that Person B has access to 98% of the time is called the dominant set. In one decision task, the dominant set will be the "Basic Set", in another decision task, the dominant set will be the "Add or Stay Set" and in yet another decision task, the dominant set will be the "Erase

or Stay Set." If The "Basic Set" is the dominant set, then 98% of the time Person B does not have a choice to make. If the "Add or Stay Set" is the dominant set, then Person B can choose between the Stay and Add options 98% of the time when Person A chooses Give. If the "Erase or Stay Set" is the dominant set, then Person B can choose between the Stay and Erase options 98% of the time when Person A chooses Default.

If a decision task from Part 3 is chosen at the end of the experiment, the experimenter will throw a pair of 10-sided dice to pick a number between 1 and 100 and carry out these probabilities. For example, if "Add or Stay Set" is the dominant set, Person B's choice between the options in the "Add or Stay Set" will be implemented if the die roll outcome is between 1 and 98, his/her choice in the "Erase or Stay Set" will be implemented if the die roll is 99 and s/he will not have a choice to make if the die roll is 100 and the "Basic Set" is implemented. The experimenter will announce each contingency before s/he rolls the die. Note that each number between 1-100 has an equal chance of coming up.

Please consider each situation carefully. Note that only one task can be chosen at the end of the experiment. So, Person Bs are not repeatedly responding to Person As. They are making independent decisions in each task. And Person As can only face one of these situations, so they are making independent decisions in task as well.

Therefore, please treat each decision as if you are making it in isolation.

[page break]

Comprehension Questions:

If the dominant set is "Erase or Stay Set," what is the probability with which Person B will get to choose between Erase and Stay options if Person A chose Keep in Stage 1?

If the dominant set is "Erase or Stay Set," what is the probability with which Person B will get to choose between Add and Stay options if Person A chose Give in Stage 1?

If Person A picks Keep and Person B has access to the "Erase or Stay Set" and chooses Erase, how many tokens does each get?

Please explain if you have any confusions about the setup. Otherwise, please write 'none' and proceed.

[page break]

[Treatments 1, 2 and 3 are presented in one of the following orders to participants: 2-1-3, 1-2-3, 3-2-1]

Treatment 1

Dominant Set: The "Erase or Stay Set"

In Stage 1, Person A first chooses between Keep and Give:

Keep. 900 for Person A, 500 for Person B

Give. 800 for Person A, 800 for Person B

In Stage 2, Person B faces the "Erase or Stay Set" with 98% probability. So, if Person A chose Keep, Person B chooses between

Stay. Not change the allocation Person A chose.

Erase. Give 100 to decrease Person A's payment by 300.

If Person A chose Give, Person B has no choice and goes with the Stay option.

With 1% probability, Person B has no choice to make in Stage 2 as s/he faces the "Basic Set". With 1% probability, Person B faces the "Add or Stay Set" and can choose between (Stay - Not change the allocation Person A chose and (Add - Give 100 to increase Person A's payment by 300), if Person A chose Give in Stage 1.

We will now ask you about your choices in all potential cases where you have a choice to make. Please remember:

1. You are Person B.

2. Person A made his/her choice after learning that dominant set in Stage 2 is the "Erase or Stay Set".

Consider that you are paired with a Person A who chose "Give" in this scenario. What do you choose if you have access to the following options?

Stay: Do not change person A's allocation

Add: Give 100 to increase Person A's payment by 300

Consider that you are paired with a Person A who chose "Keep" in this scenario. What do you choose if you have access to the following options?

Stay: Do not change person A's allocation

Erase: Give 100 to decrease Person A's payment by 300

Treatment 2

Dominant Set: The Basic Set

In Stage 1, Person A first chooses between Keep and Give:

Keep. 900 for Person A, 500 for Person B

Give. 800 for Person A, 800 for Person B

In Stage 2, Person B faces the "Basic Set" with 98% probability and goes with

Stay. Not change the allocation Person A chose.

With 1% probability, Person B faces the "Erase or Stay Set" and can choose between (Stay - Not change the allocation Person A chose) and (Erase - Give 100 to decrease Person A's payment by 300), if Person A chose Keep in Stage 1. With 1% probability, Person B faces the "Add or Stay Set" and can choose between (Stay - Not change the allocation Person A chose) and (Add - Give 100 to increase Person A's payment by 300), if Person A chose Give in Stage 1.

We will now ask you about your choices in all potential cases where you have a choice to make. Please remember:

1. You are Person B.

2. Person A made his/her choice after learning that dominant set in Stage 2 is the "Basic Set".

Consider that you are paired with a Person A who chose "Give" in this scenario. What do you choose if you have access to the following options?

Stay: Do not change person A's allocation

Add: Give 100 to increase Person A's payment by 300

Consider that you are paired with a Person A who chose "Keep" in this scenario. What do you choose if you have access to the following options?

Stay: Do not change person A's allocation

Erase: Give 100 to decrease Person A's payment by 300

Treatment 3

Dominant Set: The "Add or Stay" Set

In Stage 1, Person A first chooses between Keep and Give:

Keep. 900 for Person A, 500 for Person B

Give. 800 for Person A, 800 for Person B

In Stage 2, Person B faces the "Add or Stay Set" with 98% probability. So, if Person A chose Keep, Person B has no choice and goes with the Stay option. If Person A chose Give, Person B chooses between

Stay. Not change the allocation Person A chose.

Add. Give 100 to increase Person A's payment by 300.

With 1% probability, Person B has no choice to make in Stage 2 as s/he faces the "Basic Set". With 1% probability, Person B faces the "Erase or Stay Set" and can choose between Stay - Not change the allocation Person A chose and Erase -Give 100 to decrease Person A's payment by 300, if Person A chose Keep in Stage 1.

[Person A version]

1. You are Person A.

2. Person B will make his/her choice in Stage 2 conditional on your choice in Stage 1. Both Person A and Person B are informed of the dominant set.

What do you choose?

Keep. 900 for Person A, 500 for Person B

Give. 800 for Person A, 800 for Person B

[Person B version]

We will now ask you about your choices in all potential cases where you have a choice to make. Please remember:

1. You are Person B.

2. Person A made his/her choice after learning that dominant set in Stage 2 is the "Add or Stay Set".

Consider that you are paired with a Person A who chose "Give" in this scenario. What do you choose if you have access to the following options?

Stay: Do not change person A's allocation

Add: Give 100 to increase Person A's payment by 300

Consider that you are paired with a Person A who chose "Keep" in this scenario. What do you choose if you have access to the following options?

Stay: Do not change person A's allocation

Erase: Give 100 to decrease Person A's payment by 300

3.2.5 Part 4

You are now moving onto a new set of questions (Part 4). Please pay close attention to the instructions and question details. If a question is selected from this part, you will be compensated for your accuracy as described before. You will be asked to make estimates about the choices of different groups of Person As. Please pay close attention to the particular group of Person As you are asked about. Also, pay close attention to the decision task being described.

As before, you will be compensated up to an additional $3.00 for your accuracy in these questions, should a question from this part be chosen at the end of the study. The accuracy payment is calculated as: max (0, $3.00 - 0.05*|Your % estimate - % reality|). This means that if you guess right, you will get an additional $3.00. If you are off by 5% in either direction, you will get $2.75. If you are off by 20% in either direction, you will get $2.00 and so on. If you are off by 60% or more, you will not get any additional payment. Your payment will be rounded up to the nearest 25 cents. In sum, the more accurate you are, the more money you make. Notice that the reality may be 0% (none of the people who fit the description chose a particular option), 100% (all of the people who fit the description chose a particular option) or any % in between. Please proceed now to the estimation exercises. To maximize your payoffs, it is important that you treat each one carefully and independently. [page break]

Consider the following situation you faced in Part 3.

[The game in Treatment 1 / 2 / 3 is repeated. The questions below repeat for each treatment in the same sequence in which the subject saw the treatments in Part 3.]

[Person B question] What percentage of Person As would you estimate chose each option in this scenario?

Keep. 900 for Person A, 500 for Person B _____%

Give. 800 for Person A, 800 for Person B _____%

[Person B question] Only consider the group of Person As who chose Give in this scenario. Among these Person As, what percentage chose each of the following options presented to them in Part 1 of the study?

500 tokens for him/herself, 0 for the other participant _____%
400 tokens for him/herself, 300 for the other participant _____%

Consider the following situation you faced in Part 3.
[The game in Treatment 1 is repeated.]

[Person A question] If Person Bs have the choice, what percentage of them do you think would choose each of the following options in this scenario in response to a Person A who chose Keep in Stage 1?

Stay. Do not change person A's allocation _____%
Erase. Give 100 to decrease Person A's payment by 300 _____%

Consider the following situation you faced in Part 3.
[The game in Treatment 3 is repeated.]

[Person A question] If Person Bs have the choice, what percentage of them do you think would choose each of the following options in this scenario in response to a Person A who chose Give in Stage 1?

Stay. Do not change person A's allocation _____%
Add. Give 100 to increase Person A's payment by 300 _____%

3.2.6 Payment

At the end of the experiment, each subject was paid privately. If a question from Part 1 was chosen, subjects were paired randomly and for each pair, one subject was assigned randomly to be a recipient. The choice of the decision maker was used to determine additional earnings. If a question from Part 3 was chosen, first, experimenters matched the Person As and Person Bs in the room randomly and anonymously. Then, one experimenter rolled a pair of 10-sided dice to determine the Stage 2 choice set to be implemented. Person A's choices and Person B's contingent strategies were carried out. The die roll was public and subjects could inspect any element of this procedure, but they could not see the other participant's ID number. If a question from Part 2 or Part 4 was chosen, the experimenters figured out the real percentages of choices in the session by counting answers, wrote these percentages on the board and then determined each person's accuracy payments using an Excel sheet.

4 Robustness treatments of Experiment 2

4.1 Treatments 1a and 2a

A total of 146 subjects who had not participated in Experiment 2 were recruited for treatments 1a and 2a of Experiment 2 during October and November of 2015.

4.1.1 General Instructions

This study will take 30 minutes to complete. You will be paid $5 for your participation, and may additionally earn between $0.50 and $6.50 as a result of your decisions and luck. You will be explained exactly what is going to take place. You will make real decisions and those decisions will have real consequences for your payoff and possibly for the payoff of others. There is no deception or surprise of any kind. Please read the instructions very carefully to understand what the study is about. You will be asked comprehension questions to ensure that you have paid attention and understood the study details. When everyone is done, we will pay each participant individually. Your total earnings and your decisions in the study will remain private and anonymous.

Please enter your 3-digit ID to acknowledge that you have read and understood the instructions. Do not enter any other ID. The participant ID allows us to keep your answers private and anonymous.

4.1.2 Treatment 1

In this decision task, Person A and Person B make sequential decisions.

First, Person A chooses between two options called Stay and Gift:

Stay. $4.50 for Person A, $2.50 for Person B.

Gift. $4 for Person A, $4 for Person B.

So, Person A has the potential to help Person B. Person A can choose to give up 50 cents from his/her payment, in order to increase Person B's payment by $1.50.

Then, Person B observes Person A's choice. We will communicate this choice anonymously.

If Person A chose Stay,

With 80% chance, Person B chooses between Stay and Erase.

Stay. Not change the allocation Person A chose.

Erase. Pay 50 cents to decrease Person A's payment by $1.50.

If Person B chooses Stay, Person A gets $4.50 and Person B gets $2.50. If Person B chooses Erase, Person A gets $3 and Person B gets $2.

With 20% chance, Person B does not have a choice and Person A's choice determines both players' payments. So, 20% of the time, Person A gets $4.50 and Person B gets $2.50.

If Person A chose Gift,

With 90% chance, Person B does not have a choice and Person A's choice determines both players' payments. So, 90% of the time, Person A gets $4 and Person B gets $4.

With 10% chance, Person B chooses between Stay and Add.

Stay. Not change the allocation Person A chose.

Add. Pay 50 cents to increase Person A's payment by $1.50.

If Person B chooses Stay, Person A gets $4 and Person B gets $4. If Person B chooses Add, Person A gets $5.50 and Person B gets $3.50. In 10% of the time, Person B will have this choice.

Note that if Person A chooses Gift, most the time, Person B does not have the chance to respond and the payments of the game are entirely determined by Person A's decision. However, if Person A chooses Stay, 80% of the time Person B can respond, either by choosing Stay or by choosing Erase.

Person A and Person B are both reading the same instructions regarding this nature of the game. Therefore, Person As are aware of the chances with which Person Bs can respond, and Person Bs know that Person As know this information.

Please make sure to understand this decision task before you move on. We will ask you comprehension questions, and if you do not get the correct answers, you will spend more time going over the instructions again in more detail.

4.1.3 Treatment 2

In this decision task, Person A and Person B make sequential decisions.

First, Person A chooses between two options called Stay and Gift:

Stay. $4.50 for Person A, $2.50 for Person B Gift. $4 for Person A, $4 for Person B

So, Person A has the potential to help Person B. Person A can choose to give up 50 cents from his/her payment, in order to increase Person B's payment by $1.50.

Then, Person B observes Person A's choice. We will communicate this choice anonymously.

If Person A chose Stay,

With 90% chance, Person B does not have a choice and Person A's choice determines both players' payments. So, 90% of the time, Person A gets $4.50 and Person B gets $2.50.

With 10% chance, Person B chooses between Stay and Erase. Stay. Not change the allocation Person A chose. Erase. Pay 50 cents to decrease Person A's payment by $1.50.

If Person B chooses Stay, Person A gets $4.50 and Person B gets $2.50. If Person B chooses Erase, Person A gets $3 and Person B gets $2. In 10% of the time, Person B will have this choice.

If Person A chose Gift,

With 90% chance, Person B does not have a choice and Person A's choice determines both players' payments. So, 90% of the time, Person A gets $4 and Person B gets $4.

With 10% chance, Person B chooses between Stay and Add. Stay. Not change the allocation Person A chose. Add. Pay 50 cents to increase Person A's payment by $1.50.

If Person B chooses Stay, Person A gets $4 and Person B gets $4 If Person B chooses Add, Person A gets $5.50 and Person B gets $3.50. In 10% of the time, Person B will have this choice.

Note that regardless of what Person A chooses, most the time, Person B does not have the chance to respond. Therefore, in 90% of the cases, the payments of the game are entirely determined by Person A's decision. The chance that Person B gets to respond are very low.

Person A and Person B are both reading the same instructions regarding this nature of the game. Therefore, Person As are aware of the chances with which Person B's can respond, and Person Bs know that Person As know this information.

Please make sure to understand this decision task before you move on. We will ask you comprehension questions, and if you do not get the correct answers, you will spend more time going over the instructions again in more detail.

4.1.4 Comprehension Check

We asked the subjects questions regarding possible payoffs in the game. For example, "If Person A picks Stay, Person B chooses Stay, and Person B's choice is implemented, what are the payments to each person? (Only enter numerical characters.)" A total of 18 subjects out of 146 participants (12%) failed these comprehension checks. Their answers are not considered for the results we report; however, including them does not change our conclusions.

4.1.5 Explanation of logistics (e.g. treatment 1)

Thank you. Below is information about the exact logistics of how we will carry out this decision task.

1. We will inform you whether you will choose in the role of Person A or Person B.

2. Person As will make their choices after reviewing the interaction. They will make their choice on the computer screen and indicate this choice on a piece of paper, along with their 3-digit participation ID. This ID ensures that we can keep answers private and anonymous. There will not be any other identifying information on the paper. They will put this paper in an envelope so that their choice is not visible.

3. The experimenter will collect these envelopes from Person As, shuffle them, and distribute them randomly to Person Bs in the room. This is the way in which Person As and Person Bs will be randomly and anonymously matched with each other. With the help of the experimenter, Person Bs will enter the decision of Person A they are matched with in the computer and continue to make their choice.

4. Once Person Bs make their choices, they will indicate their choices on the paper that came out of the envelope, put the paper in the envelope so that the experimenter can collect them. The choices of Person Bs will be communicated back to Person As in the same anonymous manner. Person As will enter the responses of Person Bs in the computer.

5. The experimenter will invite a participant to roll a 10-sided die. Note that there is a 10% chance of the die coming up any number. If Person A chose Stay and the die comes up 2, 3, 4, 5, 6, 7, 8, 9, Person Bs' choice will be implemented. If Person A chose Stay and the die comes up 0 or 1, the decision of Person B will not be implemented. If Person A chose Gift and the die comes up 0, Person

Bs' choice will be implemented. If Person A chose Gift and the die comes up 1, 2, 3, 4, 5, 6, 7, 8, 9, decision of Person B will not be implemented

6. The computer will communicate the payments from Experiment 1 privately to each participant. These payments will be made in cash at the end of the study.

4.1.6 Choice elicitation (e.g., treatment 1)

[Person As made their choice]

You are Person A.

We repeat the decision task below:

First, Person A chooses between two options called Stay and Gift:

Stay. $4.50 for Person A, $2.50 for Person B.

Gift. $4 for Person A, $4 for Person B.

Then, Person B observes Person A's choice. We will communicate this choice anonymously.

If Person A chose Stay,

With 80% chance, Person B chooses between Stay and Erase.

Stay. Not change the allocation Person A chose.

Erase. Pay 50 cents to decrease Person A's payment by $1.50.

With 20% chance, Person B does not have a choice and Person A's choice determines both players' payments.

If Person A chose Gift,

With 90% chance, Person B does not have a choice and Person A's choice determines both players' payments.

With 10% chance, Person B chooses between Stay and Add.

Stay. Not change the allocation Person A chose.

Add. Pay 50 cents to increase Person A's payment by $1.50.

Please make a selection between Stay and Gift options by clicking below.

[Person Bs were reminded of the decision task, and then informed about the choice of Person A they were matched with.]

We repeat the decision task below:

First, Person A chooses between two options called Stay and Gift:

Stay. $4.50 for Person A, $2.50 for Person B Gift. $4 for Person A, $4 for Person B

Then, Person B observes Person A's choice. We will communicate this choice anonymously.

If Person A chose Stay,

With 80% chance, Person B chooses between Stay and Erase. Stay. Not change the allocation Person A chose. Erase. Pay 50 cents to decrease Person A's payment by $1.50. With 20% chance, Person B does not have a choice and Person A's choice determines both players' payments.

If Person A chose Gift,

With 90% chance, Person B does not have a choice and Person A's choice determines both players' payments.

With 10% chance, Person B chooses between Stay and Add.

Stay. Not change the allocation Person A chose.

Add. Pay 50 cents to increase Person A's payment by $1.50.

[Person B's saw either one of the following two questions, conditional on Person A's choice.]

The Person A matched with you chose the option Stay.

If the die roll comes up as 2 or larger, your choice between Stay and Erase will be implemented. Please indicate your true preferences. What would you like to choose in response to a Person A who chose Stay?

Stay. Not change the allocation Person A chose.

Erase. Pay 50 cents to decrease Person A's payment by $1.50.

The Person A matched with you chose the option Gift.

If the die roll comes up 0, your choice between Stay and Add will be implemented. Please indicate your true preferences.

What would you like to choose in response to a Person A who chose Gift?

Stay. Not change the allocation Person A chose.

Add. Pay 50 cents to increase Person A's payment by $1.50.

4.1.7 Payment and Exit Questions

After the subjects made their choices, the experimenter rolled the die to determine the contingency that would be implemented in that session. The subjects entered this die roll outcome in the program, and the program displayed their earnings and an explanation of the way in which it was determined. Before getting paid privately, the computer program asked the subjects to note anything was confusing in the study, guess the reason behind the choice of their counterpart, and indicate their gender and age.