Procedure and Material for Experiment 2

Experimental Procedure

The general procedure of the Experiment 2 follows closely the procedure of Experiment 1 with some differences in the details.

Participants were recruited outside the Sorbonne University in Paris and invited to sign up for a session within the next three days. Four participants participated in each session. All instructions were given in French. Upon arrival, each participant was assigned to a small closed room with a computer and an instruction booklet. The instructions also contained a unique user ID that identified participants throughout the experiment. The experiment was fully computerized. Participants stayed in their room until the end of the experiment and used a computer program to work through the instructions, answer quiz questions, and indicate their decisions. All participants were informed that their computers were connected to the computers of the other participants via a network connection.

Participants started the experiment by reading the instructions on the computer screen. The instructions on the screen were identical to those contained in their instruction booklet. After reading the instructions, participants were required to answer seven quiz questions concerning either the trust or the risk game. Participants were not allowed to go on with the experiment until they had answered all questions correctly. They were allowed an unlimited number of trials and had the possibility to ask the experimenter for further guidance. No one was dismissed from the experiment on the basis of poor understanding, and all participants who started the experiment also finished it. Upon the completion of the quiz questions, participants were allowed to start the actual game.

In the trust game condition, the computer randomly assigned two participants to the role of "A-players" (trustors) and two others to the role of "B-players" (trustees). Afterwards, each participant was informed that she was paired with another participant of the opposite role. A-players decided about how many points to send to B-players (0,2,4,6 or 8 points), once for tournament incentives and once for standard incentives. The order of the two decisions was counterbalanced such that one half of the participants made their decisions first for tournament incentives and the other half for standard incentives. Then they were asked how many points they would expect to receive back if they had made a particular decision. A-players stated their expectations for each possible decision under standard and tournament incentives (not just for the decisions they actually made). B-players made their decisions using the strategy method. For each possible A-player's decisions, B-players decided how many points to send back. B-players made these decisions once for tournament incentives and once for standard incentives on the side of A-players. The order of these decisions was also counterbalanced. At the end of the experiment, participants answered a brief questionnaire with demographic information (identical to Experiment 1). After that, one of the two incentive schemes (standard or tournament) was randomly selected and payoffs calculated accordingly. Finally, all participants received their payoffs in cash, were debriefed, and dismissed.

In the risk game condition, there was only one role -- that of A-player. Participants made one decision for each of the two incentive schemes and completed a questionnaire with demographic information (identical to Experiment 1). As in the trust game, the order of the two decisions was counterbalanced such that one half of participants made their decisions first for tournament incentives and the other half for

standard incentives. Afterwards, one decision was randomly selected and participants' payoffs were calculated accordingly using a computerized random number generator. Finally, all participants received their payoffs in cash, were debriefed, and dismissed.

2. Instructions and quiz questions for participants in the trust game condition (English translation):

Today you will take part in a game in which you will interact with 3 other participants. The following instructions explain the rules of the game in detail. Please note that next to your computer you will find a sheet that contains exactly the same instructions as those shown to you know on the computer screen. You can have a look at the sheet later once the game has started in case you forgot about some points of how the game works.

Your computer is connected with 3 other computers in different rooms. In each of these rooms sits another participant who has been recruited for this study just like you. Just like you these participants are currently working through the instructions. The instructions are the same for all. Once you have finished studying the instructions all of you will be assigned to one of two roles in the game. The two roles in the game are called "A-player" and "B-player". This means that among the four of you there will be two participants in the role of A-player and two participants in the role of B-player. The role you are going to play will be determined randomly by the computer. Therefore who is playing which role is determined completely by chance and none of you have any influence on this.

Out of the 4 participants the computer will then create two pairs of players with different roles. So if you have been assigned to be an A-player you will be paired with one of the two B-players. If you have been assigned to be a B-player you will be paired with one of the two A-players. For further clarifications, please refer to the picture below:
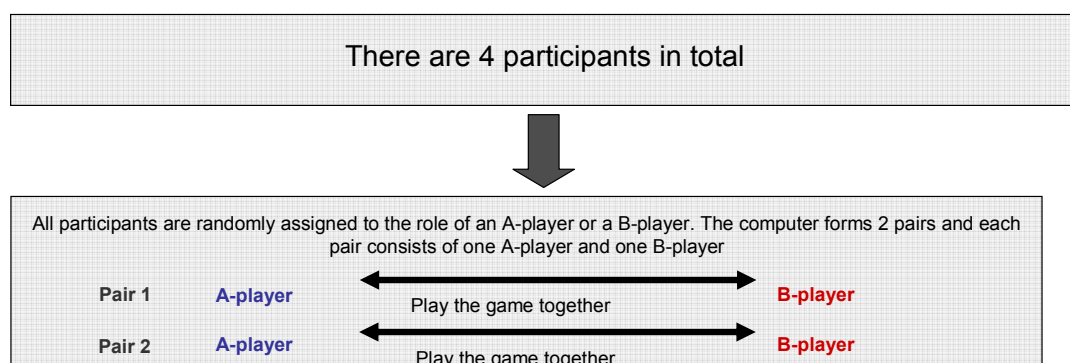
For all games you remain anonymous to the other players and they remain so to you. At no point will any of the participants know which player sits in which room.

How much money are you going to win?

You will receive a fixed sum of 4€ at the end of the experiment. In addition, you have the chance to win additional money during the game. The decisions you and the other

players make during the game will directly affect how much money you will get at the end. It is therefore important that you think about the decisions carefully. You will receive all your money in a sealed envelope. Please remember that it is completely unknown to all participants which of the six players in the game sits in which room. This means none of the other participants will be able to know who they played with and who has won how much money.

The rules of the game:
At the beginning of the game A-players and B-players each receive 8 points. The game consists of two stages.

Stage 1:
A-players make their decision

The A-player decides how many of the 8 points he wants to send to the B-player in his pair. He can choose between the following options:

Send 0 points
Send 2 points
Send 4 points
Send 6 points
Send 8 points

The points that the A-player decides to send are doubled by the computer and given to the B-player. For example, if the A-player decided to send 2 points, the B-player will receive 4 points. Or if, for example, the A-player decides to send 6 points the B-player will receive 12 points. The A-player is free to send any number of points and can also decide not to send any points at all.

B-players make their decision

We ask B-players to make their decision before they get to know how many points they have actually been sent. This will work in the following way.

The computer will ask B-players to make 4 decisions for the following 4 cases:

Case a): Imagine the A-player sends you 2 points. These are doubled to 4 points by the computer. How many of these 4 points would you like to send back (any amount between 0-4)?

Case b): Imagine the A-player sends you 4 points. These are doubled to 8 points by the computer. How many of these 8 points would you like to send back (any amount between 0-8)?

Case c): Imagine the A-player sends you 6 points. These are doubled to 12 points by the computer. How many of these 12 points would you like to send back (any amount between 0-12)?

Case d): Imagine the A-player sends you 8 points. These are doubled to 16 points by the computer. How many of these 16 points would you like to send back (any amount between 0-16)?

Please note that unlike the points sent by the A-player, the points sent back by the B-player **are not doubled**.

For example, if the B-player decides to send back 4 points, the A-player will receive exactly 4 points. Or if, for example, the B-player decides to send back 6 points, the A-player will receive exactly 6 points. The B-player is free to send back any number of points and can also decide not to send back any points at all. As the B-player does not know what decision the A-player is going to make it is important to think carefully about each of the four cases if you play the game as a B-player.

Stage 2: Once both A- and B-players have made their decisions the game is over and the decisions are played out.

For A-players the final amount of points he has at the end of the game is given by:

8 (the points given to the player initially)
− the number of points sent to the B-player
+ the number of points the B-player sent back for this case

For the B-player the final amount of points he has at the end of the game is given by:

8 (the points given to the player initially)
+ 2 * the number of points sent by the A-player
- the number of points the B-player sent back for this case

Imagine, for example, the A-player decided to send 4 points (doubled to 8) and the B-player decided to send back 6 points for this case.

The A-player will have:
8 (points he had initially) - 4 (points sent to the B-player) + 6 (points he received back) = 10 points

The B-player will have:
8 (points he had initially) + 2 * 4 (points send by the A-player which are doubled by the computer) - 6 (points he sent back) = 10 points

Below we provide additional information for the roles of A- and B-players. Please read both descriptions carefully as you do not know which role you will play in the game. You can also use these descriptions for your later reference during the game if you do not fully remember the details of the game.

The two games
As just explained if you are assigned to the role of an A-player your task is to decide how many points to send to the B-player. The B-player decides how many points to send back. We ask A-players and B-players to make their decisions twice for two slightly different games. Both games have the same rules that you have just read and

differ only by how the final amount of money A-players are going to win is determined.

First game[1]

In the first game, the computer determines the final number of points that the A-player has at the end of the game and A-players are paid 0.50€ cents for each point. For example, if the A-player has 8 points, he would receive 4€.

Second game

In the second game, the computer first calculates the final number of points that each of the two A-players in the two pairs has at the end of the game as just described. The computer then compares the final number of points of the two A-players. The A-player who has the most points at the end of the game will receive a fixed sum of 8€ and the other A-player will receive 0€. For example, if the A-player in the first pair has 6 points but the other A-player has 10 points, the first A-player will receive 0€ and the other A-player receives €8. Or if, for example, the A-player in the first pair has 10 points but the other A-player has 6 points, the A-player in the first pair would receive 8€ and the other A-player would receive 0€. If at the end of the game both A-Players have exactly the same number of points, the computer will determine randomly who wins the 8€.

In both games B-players will always receive 0.50€ for each point they have at the end.

Important: A and B-players make their decisions for both games without knowing about the decisions made by the other player. Only after all decisions are made will you know what decisions the other player has made. It is also very important to note that only one of these two games will be randomly selected and actually played out. The decision for the game that is not selected will not have any influence on the final outcomes. However, because you do not know which of the two games the computer will randomly select, you should think about each decision carefully.

The picture below shows how the whole procedure for A and B-players works:

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[1] For half of the participants the "First Game" refers to standard payoffs and the "Second Game" to tournament incentives as depicted here. For the other half this order was reversed.

All 4 participants are randomly assigned to the role of an A-player or a B-player. The computer forms 2 pairs and each pair consists of one A-player and one B-player

Pair 1   **A-player** ◄─────────────────────► **B-player**
                     Play the game together

Pair 2   **A-player** ◄─────────────────────► **B-player**
                     Play the game together

A-players and B-players make their decisions for the first and the second game without knowing about each other's decisions.

The computer randomly selects one of the two games and A-players and B-players receive a number of points according to the decisions they made in this game

First Game

A-players receive 0.50€ for each point gained

In both the first and the second game B-players always receive 0.50€ for each point they have in the end.

Second Game

At the end of the game the points each of the two A-players have are compared. The A-player with the most points receives 8€ and the other A-player receives 0€.

In both the first and the second game B-players always receive 0.50€ for each point they have in end.

Quiz questions

1. How many points do A-players receive at the beginning of the game? How many points do B-players receive?

2. Imagine the A-player decided to send 4 points to the B-player. How many points would the B-player receive?

3. Imagine the A-player decided to send 4 points to the B-player and the B-player decided to send 6 points back. How many points would the A-player have in the end? How many points would the B-player have?

4. For the first game, imagine at the end of the game the A-player had 12 points in total. How much money would he receive (excluding the 4€ which he receives for participating)?

5. For the first game, imagine at the end of the game the B-player had 12 points in total. How much money would he receive (excluding the 4€ which he receives for participating)?

6. For the second game, imagine at the end of the game the A-player in the first pair had 10 points in total and the other A-player in the second pair had 13 points in total. How much money would the A-player with the 10 points receive (excluding the 4€ which he receives for participating)? How many

points would the A-player with the 13 points receive (excluding the 4€ which he receives for participating)?

7. For the second game, imagine at the end of the game one B-player had 10 points and the other B-player in the second pair had 13 points. How much money would the B-player with the 10 points receive (excluding the 4€ which he receives for participating)? How many points would the B-player with the 13 points receive (excluding the 4€ which he receives for participating)?

3. Instructions and quiz questions for participants in the risk game condition (English translation):

In this study, you are going to take part in a game in which we ask you to make a number of decisions using the computer in front of you. Your computer is connected to the computer of another participant who takes part in the same study as you do.

At the beginning of the game you will be endowed with 8 points. You decide how many points out of these 8 you would like to "invest." You have five options: to invest 0, 2, 4, 6 or all 8 points. Depending on your decision, the program will then randomly determine how many points you will receive back. You can think of this decision as similar to playing roulette in casino in which you decide how many chips you want to bet and you then either win or loose a certain amount.

Although you do not know exactly how many points you will receive back for each of the options, just like in a game of roulette, we will let you know your chances of winning a certain number of points. On the next page you can find two tables that show the chances of receiving back a certain number of points for each of the five options. As we will explain to you below, each table refers to a slightly different game. The tables also tell you how many points you would have in total at the end of the game. For example, if you decide to invest 3 out of your 8 points and it happens that you win 5 points, you would have 10 points in the end (the 5 points which you kept plus the 5 points which you won).

As you can see, the more points you invest the more points you can get. On the other side, you are of course also taking a greater risk of losing some or all of your points.

We ask you to make your decision about how many points to invest twice for two slightly different games. Both games have the same rules that you have just read and differ only by how the final amount of money you are going to win is determined and your precise chances of receiving a certain return which are shown in the two tables.

First game[2]
In the first game, the computer determines the final number of points that you have at the end as just described. You are paid 0.50€ cents for each point. For example, if you have 8 points in total, you would receive 4€ at the end. There is no interaction with the other participant.

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[2] As in the trust game, for half of the participants the "First Game" refers to standard payoffs and the "Second Game" to tournament incentives as depicted here. For the other half this order was reversed.

Second game
In the second game, the computer first determines the final number of points that you have in the end as just described. The computer then compares this number to the final number of points of the other participant who is playing the same game at the same time as you. If at the end of the game you have more points than the other participant, you will receive a fixed sum of 8€. If you have fewer points than the other participant, you will receive 0€. For example, if you have 8 points but the other participant has 10 points, you receive 0€ and the other player receives 8€. Or if, for example, you have 10 points but the other participant only has 6 points, you would receive 8€ and the other player receives 0€. If you have exactly the same number of points, the computer will determine randomly who wins the 8€.

Important: After you make your decisions for both games, only one of these two games will be randomly selected by the computer and actually played out. The decision for the game that is not selected will not have any influence on the final outcomes. However, because you do not know which of the two games the computer will randomly select you should think about each of the two decisions carefully.

<u>Chances of winning a certain number of points for each option (First Game)</u>

Option 1) If you decide to invest 0 points, you keep the 8 points you have.

Option 2) If you decide to invest 2 points. Your chances are:

13% chance to win 0 points. You would have 6 points in the end.
10% chance to win 1 point.   You would have 7 points in the end.
54% chance to win 2 points. You would have 8 points in the end.
10% chance to win 3 points. You would have 9 points in the end.
13% chance to win 4 points. You would have 10 points in the end.

Option 3) If you decide to invest 4 points. Your chances are:
10% chance to win 0 points. You would have 4 points in the end.
7% chance to win 1 point.   You would have 5 points in the end.
7% chance to win 2 points. You would have 6 points in the end.
3% chance to win 3 points. You would have 7 points in the end.
30% chance to win 4 points. You would have 8 points in the end.
20% chance to win 5 points. You would have 9 points in the end.
13% chance to win 6 points. You would have 10 points in the end.
10% chance to win 8 points. You would have 12 points in the end.

Option 4) If you decide to invest 6 points. Your chances are:
6% chance to win 0 points. You would have 2 points in the end.
3% chance to win 1 point.   You would have 3 points in the end.
6% chance to win 3 points. You would have 5 points in the end.
10% chance to win 4 points. You would have 6 points in the end.
27% chance to win 6 points. You would have 8 points in the end.
3% chance to win 7 points. You would have 9 points in the end.
17% chance to win 8 points. You would have 10 points in the end.
13% chance to win 9 points. You would have 11 points in the end.
7% chance to win 10 points. You would have 12 points in the end.
3% chance to win 11 points. You would have 13 points in the end.
3% chance to win 12 points You would have 14 points in the end.

Option 5) If you decide to invest 8 points. Your chances are:
3% chance to win 0 points. You would have 0 points in the end.
3% chance to win 2 points. You would have 2 points in the end.
10% chance to win 4 points. You would have 4 points in the end.
3% chance to win 5 points. You would have 5 points in the end.
3% chance to win 6 points. You would have 6 points in the end.
24% chance to win 8 points You would have 8 points in the end.
3% chance to win 9 points. You would have 9 points in the end.
24% chance to win 10 points. You would have 10 points in the end.
7% chance to win 11 points. You would have 11 points in the end.
17% chance to win 12 points You would have 12 points in the end..
3% chance to win 14 points. You would have 14 points in the end.

Chances of winning a certain number of points for each option (Second Game)

Option 1) If you decide to invest 0 points, you keep the 8 points you have.

Option 2) If you decide to invest 2 points. Your chances are:
23% chance to win 0 points. You would have 6 points in the end.
20% chance to win 1 point.   You would have 7 points in the end.
24% chance to win 2 points. You would have 8 points in the end.
10% chance to win 3 points. You would have 9 points in the end.
23% chance to win 4 points. You would have 10 points in the end.

Option 3) If you decide to invest 4 points. Your chances are:
16% chance to win 0 points. You would have 4 points in the end.
3% chance to win 1 point.   You would have 5 points in the end.
3% chance to win 2 points. You would have 6 points in the end.
3% chance to win 3 points. You would have 7 points in the end.
20 chance to win 4 points. You would have 8 points in the end.
34% chance to win 5 points. You would have 9 points in the end.
7% chance to win 6 points. You would have 10 points in the end.
3% chance to win 7 points. You would have 11 points in the end.
10% chance to win 8 points. You would have 12 points in the end.

Option 4) If you decide to invest 6 points. Your chances are:
10% chance to win 0 points. You would have 2 points in the end.
7% chance to win 2 points. You would have 4 points in the end.
10% chance to win 4 points. You would have 6 points in the end.
3% chance to win 5 points. You would have 7 points in the end.
17% chance to win 6 points. You would have 8 points in the end.
7% chance to win 7 points. You would have 9 points in the end.
17% chance to win 8 points You would have 10 points in the end.
13% chance to win 9 points. You would have 11 points in the end.
10% chance to win 10 points. You would have 12 points in the end.
3% chance to win 11 points. You would have 13 points in the end.
3% chance to win 12 points You would have 14 points in the end.

Option 5) If you decide to invest 8 points. Your chances are:
7% chance to win 0 points. You would have 0 points in the end.
3% chance to win 3 points. You would have 3 points in the end.
7% chance to win 4 points. You would have 4 points in the end.
10% chance to win 6 points. You would have 6 points in the end.
10% chance to win 8 points You would have 8 points in the end.
7% chance to win 9 points. You would have 9 points in the end.
23% chance to win 10 points. You would have 10 points in the end.
10% chance to win 11 points. You would have 11 points in the end.
20% chance to win 12 points You would have 12 points in the end.
3% chance to win 14 points. You would have 14 points in the end.

Quiz Questions

1. How many points do you and the other participant in the study receive at the beginning of the game?

2. Imagine you had decided to invest 6 points. How many points could you have at the end of the game in the best case?

3. Imagine you had decided to invest 6 points. How many points could you have at the end of the game in the worst case?

4. Imagine you had decided to invest 4 points and you had won 6 points. How many points would you have at the end?

5. For the first game, imagine at the end of the game you had 12 points. How much money would you receive at the end (excluding the 4€ which you receive for participating)?

6. For the second game, imagine at the end of the game you had 12 points and the other participant had 14 points. How much money would you and the other participant receive at the end (excluding the 4€ which you receive for participating)?

7. For the second game, imagine at the end of the game you had 16 points and the other participant had 10 points. How much money would you and the other participant receive at the end (excluding the 4€ which you receive for participating)?