Electronic supplementary material: sample copy of instructions

Thank you for agreeing to participate in this research experiment on group decision making. During the experiment we require your complete, undistracted attention. So we ask that you follow these instructions carefully. You may not use the computer except as specifically instructed. Do not chat with other students, or engage in activities such as using your cell phones or head phones, reading books, etc.

For your participation, you will be paid in cash, at the end of the experiment. Different participants may earn different amounts. What you earn depends partly on your decisions, partly on the decisions of others, and partly on chance. So it is important that you listen carefully, and fully understand the instructions before we begin. You will be asked some review questions after the instructions, which have to be answered correctly before we can begin the paid session.

The entire experiment will take place through computer terminals, and all interaction between you will take place through the computers. It is important that you not talk or in any way try to communicate with other participants during the experiment except according to the rules described in the instructions.

We will start with a brief instruction period in which you will be given a complete description of the experiment and will be shown how to use the computers. If you have any questions during the instruction period, raise your hand and your question will be answered out loud so everyone can hear. If any questions arise after the experiment has begun, raise your hand, and an experimenter will come and assist you privately.

You will make choices over a sequence of 40 matches. In each match, you will be randomly paired with another participant. You will make a series of decisions and receive a payoff that will depend on your decisions in that match and on the decisions of the participant you are paired with. We will explain exactly how these payoffs are computed in a minute.

At the end of the session, you will be paid the sum of what you have earned in all matches, plus the show-up fee of $10. Everyone will be paid in private and you are under no obligation to tell others how much you earned. Your earnings during the experiment are denominated in points. At the end of the experiment you will be paid $1.00 for every 200 points you have earned.

The experiment has 4 parts. Here is how each match in part 1 goes. First, the computer randomly matches you into pairs. Since there are 10 participants in today’s session, this will result in 5 matched pairs. You are not told the identity of the participant you are matched with. Your payoff depends only on your decision and the decision of the one participant you are matched with. What happens in the other pairs has no effect on your payoff and vice versa. Your decisions are not revealed to participants in the other pairs.

Next, the computer randomly assigns a role to each member of a pair: one will have the “red” role and the other will have the “blue” role. The computer will show you two Boxes. Each Box contains red and blue balls. Box 1 contains 2 red balls and 1 blue ball while Box 2 contains 2 blue balls and 1 red ball. The computer randomly chooses one of these boxes for your pair. In each match, there is a 50% chance the computer selects Box 1 and a 50% chance the computer selects Box 2. This random selection of boxes is done separately and independently for each pair and each match. Neither you nor the participant you are paired with is told which Box has been selected for your pair until the end of the match. The computer next shuffles the balls in the selected Box and hides the colors of the balls on your computer screen so you cannot tell which Box it is.

You will then have an opportunity to pay a cost and observe the color of one ball in the box. Or, you may choose to not pay the cost and not observe a ball. To draw a ball, you simply click on one of the balls in the Box and its color will be revealed. The other participant is given the same opportunity. The Box number (1 or 2) is the same for them, but the computer shuffles the balls in the box on their screen independently of how it shuffled the balls on your screen. That is to say, all of these draws are done WITH replacement. If you both decide to draw a ball, then it is as if you drew one ball, then put it back in the box, the computer reshuffled the contents of the box for the other participant, who then drew their ball, and put it back in the box. The color of all balls that are drawn are shown to BOTH participants, but
you only pay a cost for the balls that YOU draw. The cost to draw a ball for the participant in the red role is 3 points. The cost to draw a ball for the participant in the blue role is 3 points.

Suppose you and/or the other participant decided to draw a ball. Once both participants have observed the color of the ball (or balls), we move to a second round of ball drawing. The Box stays the same, but the balls in the box are reshuffled, again independently for you and the other participant. You and the other participant will each then have another opportunity to pay a cost to draw another ball. Remember, all these draws are independent and with replacement. This means that no matter how many balls you and the other participant draw, you will never know for sure which Box it is. For example, suppose you had chosen to draw a ball in both round 1 and round 2. If both balls you drew were red, you might be tempted to think that the Box is for sure Box 1 since Box 2 has only one red ball, but this is logically incorrect. It could have been Box 2 and you just happened to pick the same ball in both rounds. The same logic applies if both you and the other participant draw two balls of the same color (in the same round or in different rounds).

This ball drawing process continues round after round until there is a round when neither of you decides to draw a ball. If you do not draw a ball but the other participant does, then your pair moves to the next round and BOTH of you have the opportunity to keep drawing balls. However, if there is a round when neither of you draws a ball, the match ends. Remember, balls are always drawn with replacement so every ball you or the other participant draws is placed back in the Box and the contents are reshuffled. Therefore, there are always 3 balls in the Box to draw from (2 red and 1 blue if the computer chose Box 1 or 1 red and 2 blue if the computer chose Box 2).

[SCREEN 1] - This slide summarizes the rules.

Your earnings are affected by the final outcome of how many red and blue balls were drawn in total by both you and the other participant. These outcome earnings are as follows:

- If more red balls were drawn than blue balls, then the outcome is red. The participant in the red role receives 150 points and the participant in the blue role receives 50 points.
- If more blue balls were drawn than red balls, then the outcome is blue. The participant in the red role receives 50 points and the participant in the blue role receives 150 points.
- Finally, if the same number of red and blue balls were drawn, then the outcome is also blue. The participant in the red role receives 50 points and the participant in the blue role receives 150 points. This includes the case where no balls were drawn by any participant.

From these outcome earnings, we subtract your ball drawing costs, equal to the number of balls you drew during the match times your cost of drawing each ball. Remember you only pay a cost for the balls you draw, not for the balls the other participant draws. Your payoff for the match is then your outcome earnings minus your ball drawing costs.

[SCREEN 2] - This slide shows a summary of how your Total earnings are computed in a match [explain the slide]

Note that payoffs depend only on the color of the balls drawn and are not directly affected by the Box that was randomly selected by the computer. However, while you are drawing balls, the likelihood of drawing red or blue balls depends on which Box was chosen by the computer for that match.

When all pairs have finished the match and have seen the results, we proceed to the next match. For the next match, the computer randomly reassings all participants to a new pair, a new role as red or blue, and randomly selects a box for each pair. The new assignments do not depend in any way on the past decisions of any participant including you and are done completely randomly by the computer. The assignments are independent across pairs, across participants, and across matches. This second match then follows the same rules and payoffs as the first match.

This continues for 10 matches, at which point the first part of the experiment is over and you will receive new instructions for part 2.

We will now begin the Practice session and go through 2 practice matches to familiarize you with the computer interface and the procedures. During the practice matches, please do not hit any keys until you are asked to, and when you enter information, please do exactly as asked. Remember, you are not paid for
these 2 practice matches. At the end of the second practice match you will have to answer some review
questions. Everyone must answer all the questions correctly before the experiment can begin.

[AUTHENTICATE CLIENTS]
Please double click on the icon on your desktop that says BCP. When the computer prompts you for
your name, type your First and Last name. Then click SUBMIT and wait for further instructions.

[START GAME]

[SCREEN 3]
You now see the first screen of the experiment on your computer. It should look similar to this screen.
[Point to overhead screen as you explain this]
At the top left of the screen, you see your subject ID. Please record that ID in a piece of paper.
You have been randomly matched by the computer with exactly one of the other participants. This pair
assignment will change after each match.
You have been assigned a role as red or blue, which you can see in the top part of the screen [point on
overhead]. The participant you are matched with has been assigned the opposite role (blue or red). Below
this information you can see the two possible Boxes, one with more red balls and one with more blue balls.
The number of red and blue balls in each Box is displayed on the left side [point on overhead]. Once you
have examined the content of each Box, press “OK”. When you and the participant you are matched with
have both clicked OK, the computer will randomly pick either Box 1 or Box 2 to be your pair’s box for
the match.

[SCREEN 4]
You should now see the following screen on your computer. On the left side there is a reminder that
the colors of the balls in the Box selected are reshuffled and hidden [point on overhead]. On the right
side, you can see the Box selected by the computer. Notice that neither you nor the participant you are
matched with can see the colors of the balls. Underneath the Box there is a button labeled “No draw”
[point on overhead].
Below the Box, there is a summary of the information relevant for the game [point on overhead]: The
cost of each draw for you and for the other participant; The number of red and blue balls that have been
drawn so far; And your payoff if no participant draws a ball in which case the match ends.
Remember that if your role is red, then there must be more red balls drawn than blue balls in order
for you to obtain 150 points in outcome earnings (otherwise you obtain 50 points). If your role is blue,
then there must be at least as many blue balls drawn as red balls in order for you to obtain 150 points in
outcome earnings (otherwise you obtain 50 points). Note that if there are an equal number of red and blue
balls drawn (including the case of 0 balls drawn in the match) the participant in the blue role receives 150
points in outcome earnings and the participant in the red role receives 50 points in outcome earnings.

At this time, please click on one of the hidden balls. Of course during the real experiment you could
have chosen “no draw” instead. You will then see a screen similar to this one.

[SCREEN 5]
We are now beginning round two of this practice match. The screen is similar to the previous one
with some updated information. It shows the draws that you and the other participant have made. In
this example, each of the participants drew a red ball [point to screen]. Remember, this does not imply
that the Box must be Box 1 because each ball was effectively drawn with replacement. Every time a ball
is drawn it is put back in the Box, and the contents are reshuffled before the next draw and the colors
hidden [point to screen]. This screen also says what your outcome earnings will be if you and the other
participant do not draw any more balls in the match. The screen also shows the number of draws you have
made. [point to screen]

Please click “No draw” now. Since both you and the participant in your pair chose no draw, this will
end the match. In the real experiment the match would continue to another round if either of you draws
a ball in the current round.

[SCREEN 6]
At this point, the match has ended and you should all see a screen similar to this one. On the right side, you are now shown which Box the computer selected for your pair at the beginning of the match, along with the latest position of the 3 reshuffled balls [point to screen]. On the left side, there is a summary of the information relevant in this match: the number and colors of all the balls drawn by both participants, your number of draws, the outcome of the match, and your payoff for the match, that is, your outcome earnings minus your draw costs. [point to screen]

The bottom half of your screen contains a table summarizing the results for all matches you have participated in [point to screen]. This is called your history screen. It will be filled out as the experiment proceeds. Notice that it only shows the results from your pair, not the results from any of the other pairs. [Describe the History Screen]

Here is a brief recap of the important things you will see and how they affect your payoffs.

Are there any questions? We now proceed to the second practice match. For this match you will be randomly re-matched into pairs, and the computer will randomly assign you to a red or blue role, with the other member having the opposite role.

[START next MATCH]

Please notice your new role. Then click “OK”. Then wait. The computer has now randomly assigned the Box for your pair, which stays the same for the match. Click “No Draw”.

[WAIT for them to complete match 2]

Practice match 2 is now over. Notice that if you are Blue, your payoff is 150 and if you are Red your payoff is 50, because there are the same number of red and blue balls drawn (zero, in this case).

You must now answer the review questions correctly before we begin the paid session. Once you answer all the questions correctly, click submit. After both participants in your pair have correctly answered the first round of questions, a second round of questions will appear. After both participants in your pair have correctly answered the second round of questions, a third round of questions will appear. When you have answered these, click submit and the quiz will disappear from your screen.

[WAIT for everyone to finish the Quiz]

Are there any questions before we begin with the paid session? We will now begin with the 10 paid matches of part 1. Please pull out your dividers for the paid session of the experiment. If there are any problems or questions from this point on, raise your hand and an experimenter will come and assist you.