Appendix I

This appendix provides the experimental instructions for the circle network high-information treatment. All instructions used in the experiments are available upon request.

Introduction

This is an experiment in the economics of decision-making in networks. A research foundation has provided funds for conducting this research. Your earnings will depend partly on your decisions and partly on chance.

If you follow the instructions and make careful decisions, you may earn a considerable amount of money. At this point, take a minute to write down the number of the computer you are using as appears on the top of the monitor. At the end of the experiment, you should use your computer number to claim your earnings. Details of how you will make decisions will be provided below.

In this experiment, you will participate in 15 independent and identical (of the same form) rounds each divided into six decision-turns. In each round you will be asked to predict which of two urns has been randomly chosen.

In each round, you will be assigned to a position in a three-person network. You will only be able to observe the choices of the other participants to whom you are connected in this network.

Before the first round, you will be randomly assigned to one of the network positions labeled A, B, or C. A third of the participants in the room will be designated as type-A participants, one third as type-B participants and one third as type-C participants.

Your type depends solely upon chance and will remain constant in all rounds throughout the experiment. When you are called to make your first decision you will be informed of your type on the left hand side of the dialog window (was attached to the instructions). The network is given to you in the window that appears just to the right of it and is illustrated in the scheme below (similar to Figure 1 above). A line segment between any two types represents that they are connected and the arrowhead points to the participant whose action can be observed.

Note that in the network used in this experiment, each type can observe the choices of one other type – type-A participants observe type-B, type-B observe type-C and type-C observe type-A.

A decision round

Next, we will describe in detail the process that will be repeated in all 15 rounds. Each round starts by having the computer randomly form three-person networks by selecting one participant of type-A, one of type-B and one of type-C.

The networks formed in each round depend solely upon chance and are independent of the networks formed in any of the other rounds. That is, in

any network each participant of type-A is equally likely to be chosen for that network, and similarly with participants of type-B and type-C.

In each round you will be asked to predict which of two urns, labeled R and W, has been randomly chosen. For each group, it is equally likely that urn R or urn W will be chosen. **Urn R contains 2 red balls, and 1 white ball. Urn W contains 1 red ball and 2 white balls**.

To help you determine which urn has been selected, with some chance you will be allowed to observe one ball, drawn at random, from the urn. **Each participant will observe a private draw with $1/3$ chance and will not observe a private draw with $2/3$ chance**.

Whether you observe a draw is randomly determined in each round and is independent of whether others in your group observe a draw and independent of whether you observe a draw in any of the other rounds. The result of your draw will be your private information and should not be shared with any of the other participants.

After each draw, the ball will be returned to the urn before making the next private draw. This is done by the computer.

Before you are called to make your first decision, you will be informed on the left hand side of the program dialog window whether the computer has randomly drawn a ball for you and if it is white or red.

The window will read "Your draw in this round is w" if the ball the computer has randomly drawn for you is white, "Your draw in this round is r" if the ball the computer has randomly drawn for you is red, and "Your draw in this round is N/A" if the ball the computer has not drawn a ball for you.

After everyone for whom the computer has randomly drawn a ball has seen his or her draw, each participant will be asked to input the letter of the urn, W or R, that he or she thinks is more likely to have been used.

When you are ready to make your decision, all you need to do is just use the mouse to click on the W-Button or R-Button on the lower left hand corner of the dialog window. After that, confirm your decision by clicking on the Submit button.

When everyone in your group has made a decision, you will observe the choices of the participants to whom you are connected by the network. For example, if you are a type-A participant, you will only be informed what letter the type-B participant has chosen. This information is given to you in the large window that appears at the bottom of the dialog window.

Note that each of the other participants will also observe the letters chosen by the participants to whom he or she is connected by the network. This completes the first of six decision-turns in this round.

Next, you will be called to make your second decision without observing a new draw from the urn. You will again be asked to click on the letter of the urn, W or R, that you think is more likely to have been used, and after everyone in your group has made his or her decisions, you will observe the choices in the second decision-turn of the participants to whom you are connected by the network. This process will be repeated until six decision turns are completed.

Note, again, that the urn used does not change in all decision-turns throughout a given round.

When the first round ends, the computer will inform everyone of the urn that was actually used (see attachment). After letting you observe the results of the first round, the second round will start by having the computer randomly forming new groups of participants in networks and selecting an urn for each group.

This process will be repeated until all the 15 independent and identical rounds are completed. At the end of the last round, you will be informed the experiment has ended.

Your earnings at each round are determined as follows. At the end of the round, the computer will randomly select one of the six decision-turns. Everyone whose choice in this decision-turn matches the letter of the urn that was actually used earns $2. All others earn nothing.

The turn is selected in random to insure that at every decision-turn your choice is your best guess as to what the urn is. Hence, the best way to maximize your earnings is to give your best guess about which urn is chosen.

Your final earnings in the experiment will be the sum of your earnings over the 15 rounds. The decision-turn selected in each round, the actual urn used, your choice and your payoff for the round, and your cumulative payoff, will be recorded in the large window that appears at the center of the program dialog window.

Rules

Please do not talk with anyone during the experiment. We ask everyone to remain silent until the end of the last round.

Your participation in the experiment and any information about your earnings will be kept strictly confidential. Your payments receipt and participant form are the only places in which your name and social security number are recorded.

If there are no further questions, you are ready to start. An instructor will approach your desk and activate your program.
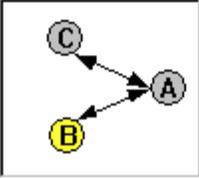
ExpClient

Server Host: `localhost`

Server Port: `7341`

Client ID: `2`

Session

Number of participants: 3

Number of rounds: 1

Number of turns per round: 6

Network

You a are type- `B` participant

Round

Round number: `1`

Your draw in this round: `N/A`

Turn

Turn number: `4`

Submit   ○ W   ○ R

Please submit your prediction for this turn

Earnings:

Round No	Turn chosen	Urn used	Earnings	

Cumulative earnings: $ `0`

History for current round:

Turn	Type A participant	Type B participant	Type C participant
1	W	W	?
2	W	W	?
3	R	R	?