Appendix: Sample Instructions (Log scoring rule)

Thank you for agreeing to participate in this experiment. This is an experiment in decision making. During the experiment we require your complete, undistracted attention and ask that you follow instructions carefully. Please turn off your cell phones. Do not open other applications on your computer, chat with other students, or engage in other distracting activities, such as reading books, doing homework, etc. You will be paid for your participation in cash, at the end of the experiment. Different participants may earn different amounts.

The instructions give you a complete description of the rules and how to use the computers. If you have any questions during the instruction period, please raise your hand and your question will be answered out loud so everyone can hear. If you have any questions after the experiment has begun, raise your hand, and an experimenter will come and assist you. [Following the instructions, there will be a practice session and a short comprehension quiz. All questions on the quiz must be answered correctly before continuing to the paid session.] At the end of the paid session, you will be paid the sum of what you have earned, plus a show-up fee of $10.00. 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 FRANCS. Your DOLLAR earnings are determined by multiplying your earnings in FRANCS by a conversion rate. For this experiment 200 Francs equal 1 DOLLAR.

Part 1

This experiment has 2 parts. The first part of the experiment will take place over a sequence of 2 matches of 5 rounds each. The computer will randomly match you with one of the other participants for the first match and you will be rematched with another subject in the second match.

[Screen 1]
You will now see the first screen. It should look something like this or this depending on your role (point). Your subject ID is indicated at the top of your screen. Please record this # on your record sheet.

[Display table on board or projector]

<table>
<thead>
<tr>
<th></th>
<th>Green</th>
<th>Red</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td>6, 2</td>
<td>3, 5</td>
</tr>
<tr>
<td>Red</td>
<td>3, 5</td>
<td>5, 3</td>
</tr>
</tbody>
</table>

This table represents a two person decision problem. In the first match you have been randomly assigned as either the ROW CHOOSER or the COLUMN CHOOSER. If you are the ROW CHOOSER, your task is to select a row, either Red or Green, and if you are the COLUMN CHOOSER, your task is to select a column, either Red or Green. The two numbers in each cell represent the Francs received, depending on BOTH of your choices—the first number is the Francs that the ROW CHOOSER receives, and the second number is the Francs the COLUMN CHOOSER receives.

[GO OVER PAYOFF MATRIX ON BOARD LINE BY LINE]

So for example, if the ROW CHOOSER chooses the Green Row and the COLUMN CHOOSER chooses the Green column, the ROW CHOOSER receives _6_ points and the COLUMN CHOOSER receives _2_ points. ETC......[go through each cell]

Above the table, it says whether you are the person choosing a Row or the person choosing the Column. Notice that Column’s choices and payoffs are highlighted in Blue and Row’s choices and payoffs are highlighted in Red.

To make your choice, click on the row or column label you want to select with the mouse. (Please click on the margins of the table, not inside the table. Show on board.) After all participants in the room have made their choices you will be told the choice of the person you are matched with and the outcome is also highlighted in the table on
your screen.

[Screen 3]

[Screen 4]

Notice that the results of the first round appear in the history screen. The history screen will keep track of all information from previous rounds and matches throughout the experiment. You are free to go back and review the results from previous matches or rounds at any time.

This continues for 5 rounds. After round 5, Match 1 is finished, and we go to Match 2. For Match 2, you are randomly reassigned to a new role (Column Chooser or Row Chooser) and reassigned a new partner. You will keep this new partner and new role for all of match 2. If you were a row chooser in match 1, you will become a column chooser in match 2. If you were a column chooser in match 1, you will become a row chooser in match 2. Match 2 then proceeds in a similar way as Match 1, ending after 5 rounds.

Please click the icon p on your screen now. Please enter your first and last name and then press submit.

<Experimenter Confirm Connections and Start Game>

Please pull out your dividers. [make sure they do!]

Are there any questions before we begin Part 1? If there are any problems or questions from this point on, raise your hand and an I will answer your question in private.

Part 2

For Part 2, we begin the first match by dividing you into 2 groups of four members each. Each of you is assigned to exactly one of these groups. You will be given a temporary Group Member Number which stays the same in all matches. (either 1, 2, 3, or 4) in the group into which you are placed.

There will be 7 matches with five rounds in each match for Part 2.
Subjects in a previous experiment several years ago performed the same decision task as you did in Part 1 in pairs, except they made choices for 10 rounds instead of just 5 rounds. The row chooser chooses Green or Red and the column chooser chooses Green or Red simultaneously, using the same payoff table as displayed in front of the room. Your task in this part of the experiment is to make predictions about how likely the players of that past experiment will choose Green in several different rounds.

For your first match we randomly select one of the 10-round matches in the experiment conducted several years ago.

We then tell you the choices of both the row and column chooser for this randomly chosen pair for their first five rounds. I want to emphasize that these are real results generated from the previous experiment in which subjects performed this decision task for monetary payoffs, exactly as you did in part 1 of this experiment. You are then asked to tell us how likely you think it is that one of the players (either row or column) chose Green on round 6. You will be paid based on the accuracy of your predictions.

Those of you in Group 1 will make predictions about the choices of the Column chooser. Those of you in Group 2 will make predictions about the choices of the Row chooser. Remember, you are predicting the choice made by the row or column chooser in round 6. In the next round, you will be making predictions about the choices rounds 7, 8, 9, and 10 of that previous experiment.

[SCREEN 1]

The first screen on your computer looks similar to this screen. [POINT TO PPT SLIDE DISPLAYED ON SCREEN IN FRONT OF ROOM] Please note that the screen exhibited up front is not necessarily exactly the same as the screen exhibited on your computers at this time. All the slides we display in front are just to illustrate.

At the top left of the screen, you see your subject ID. [POINT] Please record that on your voucher form now. You have been assigned by the computer to a group of 4
subjects, and assigned a group member number: 1, 2, 3, or 4. [point] This group assignment stays the same throughout Part 2 of the experiment. Remember, if you are in Group 1, you are making predictions about the Column chooser, and if you are in Group 2 you are making predictions about the Row chooser.

The table in the left of the screen displays the choices made by both the row and column players for their first five rounds. [point]

At this point you will have an opportunity to make your prediction about how likely it is that the Green was chosen in round 6 by the column player (if you are in group 1), or the row player (if you are in group 2).

Here is the procedure for how you will be making your predictions in each round. It is similar to the way weather predictions are made, where the prediction takes the form of “XX percent chance of rain”. At the beginning of stage 1 of each round, you will be given 100 tokens all of which you must allocate between the Green choice or the Red choice. For example, if you allocate 90 tokens to Green and 10 tokens to Red, this indicates that you believe there is a 90% chance that Green was chosen in round 6. That is, you believe Green was 9 times more likely to have been chosen than Red. If you allocate 50 tokens to Green and 50 tokens to Red, this indicates you believe that Green and Red are equally likely to have been chosen. The maximum number of tokens you may allocate to one of the choices is 90, and the minimum is 10. Once you have made your allocation decision, click the submit button.

[SCREEN 2]

Once everyone in your group has made predictions, the predictions of all members of your group for stage 1 are displayed on the right of the screen [point]. This marks the end of stage 1 of this prediction round and we move onto stage 2.

In stage 2, you are to follow the exact same instructions as you did in stage 1. You are still predicting the action of the same row or column person in round 6 and you may
change your prediction if you wish (or keep it the same, if you do not wish to change).

After this second stage of predictions, you are told the actual action chosen by your assigned column or row person. You are then paid based on either your prediction in stage 1 or your prediction in stage 2, not both. The computer flips a coin to decide which of your predictions to use. Your exact payoff depends on the accuracy of your prediction. That is, it depends on whether the chooser you are predicting chose green and your prediction about their likelihood of choosing Green.

Here is an example to explain the payoff structure. Suppose you are in group 1, and the computer decided to pay you based on your stage 2 prediction. Suppose you allocated 25 tokens to Green and 75 tokens to Red and the column chooser actually chose Green. That is, you predicted there was a 25% chance column would choose Green, and in fact he did choose green. In that case, your payoff would be:

[Show PREDICTION PAYOFF ON BOARD by finding the correct entry in matrix.]

These numbers are actually generated by the following formula. Your Prediction Payoff if Green is chosen = 100+45*log(%G), where %G is your prediction that the chooser chose Green divided by 100. That is, %G can range from .10 to .90. Your payoff if Red was chosen = 100+45*log(%R), where % your prediction that the chooser chose Red divided by 100.

For each round you are making predictions for, you start with a fixed amount of 100 Francs from which we will subtract an amount of Francs which depends on how inaccurate your prediction was. To do this, we will take the number of tokens you assigned to the action that was actually taken, Green in this case, divide it by 100, and take its natural log. We will then multiply this number (a negative one) by 45 and redeem the 100 Francs by this amount. Note that the more tokens you put on the actual action, the less negative is the natural log and thus the larger the amount subtracted from the initial 100 Francs.
You have been given a sheet that tells you what your payoff will be in the case where the actual action is Green depending on the number of tokens you place on the Green action. This is the Green line in the graph. In the graph, you will also find a red line which tells you what your payoff will be in the case where the actual action is Red.

Note that the worst you can do under this payoff scheme is to allocate only 10 tokens to the action that was actually chosen, and the best you can do is to allocate 90 tokens to the action that was actually chosen. Since your prediction in each stage is made before you know what the actual action chosen was for that round and what the randomly chosen stage for payoff is, it is important to realize that the best you can do to maximize your expected prediction payoff is to simply allocate tokens according to your actual belief about what you think your assigned pair player did. Any other prediction will decrease the expected amount you can earn as a prediction payoff. In some rounds your payoff will be negative, but these occasional negative payoffs are offset by positive payoffs in other rounds. Remember that your total payoff in the experiment equals the sum of your payoffs in all rounds and matches of both part 1 and part 2 of the experiment.

The table with columns in the bottom of your screen is the History panel and summarizes all of this important information.

[AS YOU READ THE FOLLOWING PARAGRAPH, POINT TO RELEVANT COLUMNS ON THE SCREEN IN FRONT]

COLUMN ONE indicates the round number, COLUMN TWO indicates the group member number, COLUMN THREE indicates the predictions of all members of your group, COLUMN FOUR indicates the actual action of your group’s assigned row or column person, COLUMN FIVE indicates the number of randomly chosen paid stage, and COLUMN SIX indicates the round payoff.

You will have the same group member number in all 7 matches. In each match, you
will be predicting the action of a one person in rounds 6-10 of their match from the experiment that was conducted several years ago, and that one person was matched with exactly one other person in the opposite role for all 10 rounds. After your have made predictions for match one, we move onto match 2 where another pair of the previous experiment is randomly chosen. You will follow the same instructions as in match 1. At the end of the seventh match, Part 2 of the experiment is over.

Summarizing, in each round of each match, you will be making two stages of predictions. Before making your second stage predictions, you will be shown the predictions of the other 3 members of your group. Each match has 5 such rounds of stage one and stage two predictions. There will be a total of 7 matches.

[AUTHENTICATE CLIENTS]

Please double click on the icon on your desktop that says w. When the computer prompts you for your name, type your First and Last name. Then click SUBMIT and begin the first match.

[AFTER MATCH 7, READ THE FOLLOWING NEW INSTRUCTIONS]

This completes part 2. Please make sure to record your total payoffs on your voucher including your show-up fee of $10.00. Please remain in your seat until your ID number is called and leave the dividers as they are. Do not talk or socialize with the other participants or play with the computers. We will now pay each of you in private in the next room in the order of your ID numbers. Please take all belongings with you when you leave to receive payment. You are under no obligation to reveal your earnings to the other players. Thank you for your participation.