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Welcome to the University of Calgary Behavioural and Experimental Economics Laboratory (CBEEL)!

Your participation in this study is appreciated.

We are conducting an experiment that helps us understand how people make economic decisions.
Funds for this research have been provided by a grant.

Please pay careful attention to the instructions.
By following them carefully, you may earn considerable money that will be paid to you in cash at the end of the session.

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GENERAL INFORMATION

This experimental session will consist of 1 periods.
Each period will consist of 2 stages.

In each stage you will choose between a lottery or a guaranteed amount.

The difference between the two stages is the information available.

Read the following screens carefully.

Your earnings will depend on your decisions.

You will make better decisions the better you understand the instructions.

If you have a question, ask the experiment moderator immediately!

The next pages will describe your decision and how it affects your earnings in detail.

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THE LOTTERY

In both stages of a period you must choose between a lottery and a guaranteed amount.

The lottery works as follows:

- In each period you have a container filled with red balls and blue balls.
- There are 100 balls in the container.
- The number of red balls may be between 0 and 100 (including 0 and 100).
- The remaining balls will be blue, between 0 and 100 (including 0 and 100).
- Thus, the container may be filled with all red balls, all blue balls, or some mixture of red balls and blue balls.
- The proportion of red and blue balls is randomly generated by the computer and is unknown.
- The proportion of red and blue balls will remain constant for both stages within a period.
- However, the computer will randomly generate a new proportion every period!
- If you choose the lottery, you will receive 3 balls drawn randomly with replacement from the container.
- That is, a ball will be selected and then placed back into the container 3 times.
- For each red ball you will receive \$5 and for each blue balls you will receive \$0.

Please click on the "Next Page" button when you are ready to proceed.
Note that you will not be able to go back to previous screens.

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LOTTERY EXAMPLE

Below is an example to help you understand the lottery.

Example 1

- Suppose you have a container filled with 100 balls.
- 50 balls are red and 50 balls are blue.
- Taking draws with replacement means there are always 50 red balls and 50 blue balls.
- Thus $50/100 = 1/2$ of the time you will draw a red ball.
And, $50/100 = 1/2$ of the time you will draw a blue ball.
- Since, red balls pay \$5 and blue balls pay \$0, $1/2$ of the time you will get \$5 and $1/2$ of the time you will get \$0.
- If you draw 3 balls randomly with replacement from the container, you can expect to make
$$(3 \text{ draws}) \times (1/2 \text{ chance of getting red}) \times (\$5 \text{ per red ball}) = \$7.50$$
- That is, on average, a container with 50% red balls and 50% blue balls will pay \$7.50

Example 2

- Now, suppose you have a container filled with 100 balls.
- 75 balls are red and 25 balls are blue.
- Taking draws with replacement means there are always 75 red balls and 25 blue balls.
- Thus $75/100 = 3/4$ of the time you will draw a red ball.
And, $25/100 = 1/4$ of the time you will draw a blue ball.
- Since, red balls pay \$5 and blue balls pay \$0, $3/4$ of the time you will get \$5 and $1/4$ of the time you will get \$0.
- If you draw 3 balls randomly with replacement from the container, you can expect to make
$$(3 \text{ draws}) \times (3/4 \text{ chance of getting red}) \times (\$5 \text{ per red ball}) = \$11.25$$
- That is, on average, a container with 75% red balls and 25% blue balls will pay \$11.25.

Please click on the "Next Page" button when you are ready to proceed.
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APPENDIX – SCREEN IMAGES – NOT FOR PUBLICATION

Below are a few questions to verify your understanding of the decision task.

Remember, red balls pay \$5 and blue balls pay \$0.

1) Suppose that you have a guaranteed amount = \$4, you will need to get at least red balls to be better off with the lottery.

2) Suppose that you have a guaranteed amount = \$8, you will need to get at least red balls to be better off with the lottery.

3) Suppose that you have a guaranteed amount = \$12, you will need to get at least red balls to be better off with the lottery.

4) Suppose that 33 out of 100 balls are red, on average, you can expect out of 3 randomly drawn balls to be red.

5) Suppose that 66 out of 100 balls are red, on average, you can expect out of 3 randomly drawn balls to be red.



Done

APPENDIX – SCREEN IMAGES – NOT FOR PUBLICATION

Below are a few questions to verify your understanding of the decision task.

Remember, red balls pay \$5 and blue balls pay \$0.


1) Suppose that you have a guaranteed amount = \$4, you will need to get at least red balls to be better off with the lottery.

2) Suppose that you have a guaranteed amount = \$8, you will need to get at least red balls to be better off with the lottery.

3) Suppose that you have a guaranteed amount = \$4, you will need to get at least red balls to be better off with the lottery.

4) Suppose that 33 out of 100 balls are red, on average, you can expect randomly drawn balls to be red.

5) Suppose that 66 out of 100 balls are red, on average, you can expect out of 100 randomly drawn balls to be red.



Dialog

Since red balls pay \$5, it will take at least 1 red ball to be better off with the lottery.

(1 red ball) x (\$5 per red ball) = \$5 > \$4

OK

Done

INFORMATION

Each period you will be randomly paired with another person in the room.
You will not be informed of the identity of the person and they will not be informed of your identity.

Both of you will choose between the lottery or a guaranteed amount.
You both will draw from the same container.

Whoever chooses to play the lottery will draw 3 balls from the container.

You will each be able to see the lottery results of the other person, if they choose the lottery.

Thus, you will receive the following information at the end of stage 1:

- If neither person chose to play the lottery: no draws so no information
- If one person chose the lottery: one draw so the number of red balls out of 3
- If two persons chose the lottery: two draws so the number of red balls out of 6

Please click on the "Next Page" button when you are ready to proceed.
Note that you will not be able to go back to previous screens.

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PLAYER TYPES

In each period, you will be randomly assigned a "type".

A "type" determines the guaranteed amount you receive if you do not choose the lottery.

There are 3 "types": High, Middle, and Low.

- If you are a High type, then your guaranteed amount is \$12.
- If you are a Middle type, then your guaranteed amount is \$8.
- If you are a Low type, then your guaranteed amount is \$4.

Your "type" will stay the same during a period, (for the 1st and 2nd stages), but may vary from one period to the next.

You will be informed of your "type" at the beginning of a decision period.

You will also be informed of the "type" of the person with whom you have been randomly assigned for the period.

Please click on the "Next Page" button when you are ready to proceed.
Note that you will not be able to go back to previous screens.

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PAYMENT RULE

Your earnings for the experiment will be determined in the following way.

In each stage, if you choose the lottery, you will get \$5 for each red ball and \$0 for each blue ball.

If you choose the guaranteed amount, you will receive that amount.

Your earnings for each period are the sum of your earnings from the 1st and 2nd stages.

At the end of the experiment, 1 period will be randomly selected for payment.

You will receive your earnings for the randomly selected period.

The same period will be selected for everyone in the room.

Please click on the "Next Page" button when you are ready to proceed.
Note that you will not be able to go back to previous screens.

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SUMMARY

Below is a summary of your decision task.
Please take a moment to read the summary before moving on to the practice periods.

- The experiment will last for 1 periods. Each period has 2 decision stages.
- In each period, you are assigned a new container of 100 balls with an unknown proportion of red and blue balls.
- Each period you are also assigned a "type":
 - High = your guaranteed amount is \$12
 - Middle = your guaranteed amount is \$8
 - Low = your guaranteed amount is \$4
- In each stage of a period, you must choose between the lottery (randomly draw 3 balls) or your guaranteed amount.
- Red balls pay \$5 and blue balls pay \$0.
- You observe the outcomes of your lottery and that of the person with whom you are randomly assigned, if chosen.

• If neither person chose the lottery:	no draws so no information
• If one person chose the lottery:	one draw so the number of red balls out of 3
• If two persons chose the lottery:	two draws so the number of red balls out of 6
- At the end of the experiment, 1 period will be randomly selected for payment.
- You will receive the sum of your 1st and 2nd stage earnings for the randomly selected period.

Next will be a few practice periods.
If you have any questions, please raise your hand during the practice periods.
The experiment moderator will come to your station to answer your question.

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APPENDIX – SCREEN IMAGES – NOT FOR PUBLICATION

Period 1 out of 1
Decision Stage 1

Your Decision

You are a Middle type.

Choice A

?

?

?

Red = \$5

Blue = \$0

Choice B

\$8 Guaranteed

The Other Person's Decision

The other person is a Low type.

Choice A

?

?

?

Red = \$5

Blue = \$0

Choice B

\$4 Guaranteed

Period 1 out of 1

Stage 1 Lottery Results

Your Lottery

\$0

\$0

\$0

Your third ball is blue.

The Other Person's Lottery

?

?

?

The other person did not choose the lottery.

Done

APPENDIX – SCREEN IMAGES – NOT FOR PUBLICATION

Period 1 out of 1

Decision Stage 2

Your Decision

You are a Middle type.

Choice A

?

?

?

Red = \$5
Blue = \$0

Choice B

\$8 Guaranteed

The Other Person's Decision

The other person is a Low type.

Choice A

?

?

?

Red = \$5
Blue = \$0

Choice B

\$4 Guaranteed

0 out of the 3 balls drawn from the container were red!

Period 1 out of 1

Stage 2 Lottery Results

Your Lottery

\$0

\$0

?

Your second ball is blue.

The Other Person's Lottery

?

?

?

The other person did not choose the lottery.

PERIOD RESULTS

You were a Middle type.

The other person was a Low type.

Stage 1 Results

You chose the guaranteed amount.

The other person chose the lottery.

None of their 3 balls were red.

Stage 1 Earnings: \$8.00

Stage 2 Results

You chose the guaranteed amount.

The other person chose the lottery.

None of their 3 balls were red.

Stage 2 Earnings: \$8.00

Total Period Earnings: \$16.00

Done

Period	Your Type	Other's Type	Stage 1 Choice	Stage 1 Earnings	Stage 1 Red Balls	Out Of	Stage 2 Choice	Stage 2 Earnings	Total Earnings
1	Middle	Low	guaranteed amount	8	0	3	guaranteed amount	8	16

APPENDIX – SCREEN IMAGES – NOT FOR PUBLICATION

Period 1 was selected for payment for this session.

Your Earnings in Period 1 were: \$16.00

OK

Period	Your Type	Other's Type	Stage 1 Choice	Stage 1 Earnings	Stage 1 Red Balls	Out Of	Stage 2 Choice	Stage 2 Earnings	Total Earnings
1	Middle	Low	guaranteed amount	8	0	3	guaranteed amount	8	16

APPENDIX – SCREEN IMAGES – NOT FOR PUBLICATION

You have earned \$16.00 for this session.

Your ID number is: 2

Thank you for your participation in today's experiment.

Please sit quietly and wait for your number to be called.