

General Instructions

Welcome to the experiment! This is a study of decision-making behavior. It will last about two hours. Before we begin, we will read some instructions. You have the opportunity to make money in this experiment. These instructions will explain how to earn money, so please read carefully.

Complete Privacy

This experiment is structured so that no one, including the experimenters and the other participants, will ever know the decisions or earnings of anyone in the experiment. You will collect your earnings, in a sealed envelope, from a numbered mailbox that only you will have the key for. Your privacy is guaranteed because neither your name nor your student ID number will appear on any form that records your decisions or your earnings. The only identifying mark that will be used is the identification number on the mailbox key that you will select. Each numbered key opens a matching mailbox in the hallway adjacent to this room. After the experiment, you will each collect your payment from your mailbox alone and privately. You are the only person who will know your identification number.

Random Group Assignments and Anonymity

Each person will be randomly matched with 3 other people to form a 4-person group. No one will learn the identity of the people in his/her group. The composition of your group will change after a number of rounds, and you will be randomly matched in a new group of 4 people (you and 3 others). You will be notified when the groups have been rearranged. Once you are matched with a group, you will learn how many rounds you will play with this group. In total, you will play in 2 different 4-person groups. You will then make one decision on your own (with no group).

Your Payment

In each round of the experiment, you will make a decision. What you earn in each round will depend on decisions that you and the other 3 people in your group make. Your payment for this experiment will be the sum of your earnings in all rounds, plus your earnings in the final decision.

The Task

For each decision, you will choose how to divide 10 tokens between two funds: the Personal Fund and the Group Fund. You are free to contribute some of your tokens to the Personal Fund and some to the Group Fund. Alternatively, you can contribute all of them to the Personal Fund, or all of them to the Group Fund. The amount of money you and the rest of your group earn depends on the tokens you put in each fund (below we describe how). Your total earnings for each round is the sum of your earnings from the Personal Fund plus your earnings from the Group Fund.

In each round, your group will have three **Non-Stakeholders** and one **Stakeholder**. Throughout the rounds, your role will change. You will know ahead of time which role you will play in which round. The amount you earn from the Personal Fund and the Group Fund depends on your role. We will explain the roles one at a time.

The Non-Stakeholders

If you are a **Non-Stakeholder**, you will earn money as follows. We will explain how the **Stakeholder** earnings are determined in the next section.

1. *The Personal Fund:* each token you contribute to the Personal Fund will earn you \$0.02.

Example: Suppose you contribute 0 tokens to the Personal Fund. Then you would earn nothing from the Personal Fund.

Example: Suppose you contribute 5 tokens to the Personal Fund. Then you would earn \$0.10 from the Personal Fund.

Example: Suppose you contribute 10 tokens to the Personal Fund. Then you would earn \$0.20 from the Personal Fund.

2. *The Group Fund:* What you earn from the Group Fund will depend on the **total number of tokens** that you and the other 3 members of your group contribute to the Group Fund.

For **Non-Stakeholders**, the Group Fund pays a base amount of \$2.00, which is reduced by the tokens that you and the other 3 members of your group contribute to the Group Fund. For each

token contributed to the group fund, by you or any other member of the group, your earnings from the Group Fund in that round will **decrease** by \$0.05.

Example: Suppose you contribute 0 tokens to the Group Fund and 10 tokens to the Personal Fund. Suppose no one else contributes any tokens to the Group Fund. Then you would earn \$2.00 from the Group Fund and \$0.20 from the Personal Fund. The other **Non-Stakeholders** would also earn \$2.00 from the Group Fund. The **Stakeholder** would earn \$0.00 from the Group Fund.

Example: Suppose you contribute 10 tokens to the Group Fund and no one else contributes any tokens to the Group Fund. Then you would earn \$1.50 from the Group Fund and \$0.00 from the Personal Fund. The other **Non-Stakeholders** would also earn \$1.50 from the Group Fund. The **Stakeholder** would earn \$1.00 from the Group Fund.

Example: Suppose you contribute 0 tokens to the Group Fund and the rest of your group each contributes 10 tokens to the Group Fund (for a total of 30 tokens). Then you would earn \$0.50 from the Group Fund and \$0.20 from the Personal Fund. The other **Non-Stakeholders** would also earn \$0.50 from the Group Fund. The **Stakeholder** would earn \$3.00 from the Group Fund.

The Stakeholder

If you are a **Stakeholder**, you will earn money as follows.

1. *The Personal Fund:* each token you contribute to the Personal Fund will earn you \$0.02.

Example: Suppose you contribute 0 tokens to the Personal Fund. Then you would earn nothing from the Personal Fund.

Example: Suppose you contribute 5 tokens to the Personal Fund. Then you would earn \$0.10 from the Personal Fund.

Example: Suppose you contribute 10 tokens to the Personal Fund. Then you would earn \$0.20 from the Personal Fund.

2. *The Group Fund:* What you earn from the Group Fund will depend on the **total number of tokens** that you and the other 3 members of your group contribute to the Group Fund.

For **Stakeholders**, the Group Fund pays a base amount of \$0.00, which is increased by the tokens that you and the other 3 members of your group contribute to the Group Fund. For each token contributed to the group fund, by you or any other member of the group, your earnings from the Group Fund in that round will **increase** by \$0.10.

Example: Suppose you contribute 0 tokens to the Group Fund and 10 tokens to the Personal Fund. Suppose no one else contributes any tokens to the Group Fund. Then you would earn \$0.00 from the Group Fund and \$0.20 from the Personal Fund. The **Non-Stakeholders** of your group would each earn \$2.00 from the Group Fund.

Example: Suppose you contribute 10 tokens to the Group Fund and no one else contributes any tokens to the Group Fund. Then you would earn \$1.00 from the Group Fund and \$0.00 from the Personal Fund. The **Non-Stakeholders** would each earn \$1.50 from the Group Fund.

Example: Suppose you contribute 0 tokens to the Group Fund and the rest of your group each contributes 10 tokens to the Group Fund (for a total of 30). Then you would earn \$3.00 from the Group Fund and \$0.20 from the Personal Fund. The **Non-Stakeholders** would each earn \$0.50 from the Group Fund.

Let's review:

- The **Non-Stakeholders** and the **Stakeholder** each earn \$0.02 for each token they place in the Personal Fund.
- The **Non-Stakeholders** earn \$2.00 from the Group Fund if no tokens are contributed to the Group Fund. The amount they earn from the Group Fund decreases by \$0.05 for each token contributed to the Group Fund, by them or any other member of the group.
- The **Stakeholder** earns \$0.10 for each token contributed to the Group Fund, by them or any other member of the group.

Decision Panel

For each decision, you will enter your Group Fund contribution in the Decision Panel. The Decision Panel is a box at the bottom of the screen that looks like the following:

DECISION PANEL	
How many tokens would you like to put in the GROUP FUND ? (0-10) <input type="text" value="1"/>	
Your PERSONAL FUND contribution will be 10 minus your GROUP FUND contribution.	
RETURNS:	
Personal fund:	\$0.02 per token to you
Group fund:	\$0.10 per token to Stakeholder
	\$2.00 MINUS \$0.05 per token to non-Stakeholders (including YOU)
CLICK TO SUBMIT	
<input type="button" value="SUBMIT"/>	

Type the amount you want to put in the **Group Fund** in the box. This must be a number between 0 and 10. The amount that will go into your Personal Fund is 10 minus the amount you type. For example, if you type the number 0, 0 tokens will go into the Group Fund and 10 into the Personal Fund. If you type 7, 7 tokens will go into the Group Fund and 3 into the Personal Fund.

When you are satisfied with the allocation of tokens you entered, you will click the “SUBMIT” button to submit your allocation.

Contributions Table

The Contributions Table gives you information about what has happened in past rounds and what will happen in future rounds. The table will show all of the rounds you will play with your current group, and will indicate when you will be the Stakeholder. Also, after everyone has made their decisions for a round, the table will tell you what the Group Fund contributions were in that round, and what your earnings were.

The table will change slightly in different parts of the experiment. Before each part starts, you will receive specific instructions and you will see what the table will look like.

Each Round Has Two Steps

In each round, you will proceed through two screens, one after the other. The first screen is the decision screen. In the decision screen, you will make your decision and click the “SUBMIT” button when you are done. After everyone has clicked “SUBMIT”, everyone will proceed to the review screen.

The review screen will look very much like the decision screen, but you will have no decision to make. You will see information about the decisions that were made in that round and previous rounds, and you will learn how much money you earned in that round. In the Decision Panel of the review screen, you will see exactly how your earnings for that round were calculated. When you are done reviewing this information, you must click “DONE” to continue.

DECISION PANEL	
REVIEW RESULTS FROM ROUND 2 IN THE TABLE ABOVE.	
YOUR EARNINGS WERE:	
Your Personal Fund contribution (8) times \$0.02 per token	= \$0.16
PLUS:	\$2.00
PLUS: The total number of tokens in the Group Fund (23) times -\$0.05 per token	= -\$1.15
EQUALS:	TOTAL = \$1.01

CLICK WHEN DONE

The information in the Contributions Table will stay in the table through all rounds you play with the group, in both the decision and review screens

Final Decision, Questionnaire and Payment

After you have finished all of your contribution decisions, you will have one more decision to make, which is unrelated to your contribution decisions. You will learn more about this decision after the contribution decisions are completed.

Finally, you will complete a brief questionnaire. You will then receive payment anonymously and privately, and the session will be over. You will collect your payment with no one watching, and no one else will learn your earnings.

QUIZ

Case 1: Suppose out of your 10 tokens you contributed 5 tokens to the Personal Fund and 5 tokens to the Group Fund. Suppose that the other 3 members of your group together contribute a total of 20 tokens to the Group Fund. Returns for the two Funds are:

Personal Fund: \$0.02 per token to Stakeholder and Non-Stakeholders

Group Fund: \$0.10 per token to Stakeholder

 \$2.00 – (\$0.05 per token) to Non-Stakeholders

a) How many tokens in total were contributed by your group to the Group Fund? _____

Suppose you are a **Non-Stakeholder**.

b) How much do you earn from the Personal Fund? _____

c) How much do you earn from the Group Fund? _____

d) How much do you earn in total? _____

Suppose you are a **Stakeholder**.

e) How much do you earn from the Personal Fund? _____

f) How much do you earn from the Group Fund? _____

g) How much do you earn in total? _____

Case 2: Suppose out of your 10 tokens you contributed 10 tokens to the Personal Fund and 0 tokens to the Group Fund. Suppose that the other 3 members of your group together contribute a total of 9 tokens to the Group Fund. Returns for the two Funds are:

Personal Fund: \$0.02 per token to Stakeholder and Non-Stakeholders

Group Fund: \$0.10 per token to Stakeholder
 \$2.00 – (\$0.05 per token) to Non-Stakeholders

a) How many tokens in total were contributed by your group to the Group Fund? _____

Suppose you are a **Non-Stakeholder**.

b) How much do you earn from the Personal Fund? _____

c) How much do you earn from the Group Fund? _____

d) How much do you earn in total? _____

Suppose you are a **Stakeholder**.

e) How much do you earn from the Personal Fund? _____

f) How much do you earn from the Group Fund? _____

g) How much do you earn in total? _____

Instructions for the Next Set of Rounds

Public – n-ex

- You will now be randomly assigned by the computer into groups of 4 people.
- You will be with the same group for 8 rounds.
- Each member of your group will be randomly assigned a letter code that you will keep for these 8 rounds: A, B, C, or D.
- The Stakeholder position will rotate through all 4 members of the group, in alphabetical order (A, then B, then C, etc.). Each member of the group will be Stakeholder twice.
- You will always know who is currently Stakeholder, when you are going to be Stakeholder, and when each other member of your group (identified by their letter code) will be Stakeholder, because the Stakeholder position will be marked in the Contributions Table and in the status bar.
- In each round, you must decide how many of 10 tokens to put in the Personal Fund and how many in the Group Fund.
- When you have made your decision (by typing how many tokens (0 to 10) you want to put in the Group Fund), you must click “SUBMIT”.
- The Contributions Table will show, for each past round:
 - what each member (identified by letter code) has contributed to the Group Fund; that is, there will be a column in the table corresponding to each group member, and that member’s contributions for each round will be filled in after the round
 - the total number of tokens in the Group Fund
 - your earnings
- You will be able to tell what each group member contributed in each round; they will also be able to tell what you contributed in each round.
- The table will indicate in which rounds each person will be the Stakeholder by marking those rounds in each person’s column with **red**, underlined S’s (**SSSS**).

- You will see which column corresponds to you because your column will say the word **YOU** above it. Each person has **YOU** marked at the top of their own column.
- Also at the top of each table, in each round, the word **Stakeholder** will appear in red above the column of the person who is the Stakeholder in this round.
- After everyone has made their decisions for each round, you may examine the Contributions Table and the calculation of your earnings in the review screen. Click “DONE” when you are ready to move on to the next round.

When you are entering your contribution, the screen will look like this:

You are now: **MAKING YOUR CONTRIBUTION FOR ROUND 1**
Your Letter Code: D Stakeholder: A

CONTRIBUTIONS TO THE GROUP FUND

	<u>Stakeholder</u>			<u>YOU</u>		
	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<small>TOTAL TOKENS IN GROUP FUND</small>	<small>MY EARNINGS</small>
Round 1	<u>SSSS</u>					
Round 2		<u>SSSS</u>				
Round 3			<u>SSSS</u>			
Round 4				<u>SSSS</u>		
Round 5	<u>SSSS</u>					
Round 6		<u>SSSS</u>				
Round 7			<u>SSSS</u>			
Round 8				<u>SSSS</u>		

SSSS indicates that this person was/will be Stakeholder in the round indicated

DECISION PANEL

How much would you like to put in the **GROUP FUND**? (0-10)

Your **PERSONAL FUND** contribution will be 10 minus your **GROUP FUND** contribution.

RETURNS:
 Personal fund: \$0.02 per token to you
 Group fund: \$0.10 per token to Stakeholder
 \$2.00 MINUS \$0.05 per token to non-Stakeholders (including YOU)

CLICK TO SUBMIT

SUBMIT

When you are reviewing your results, the screen will look like this:

You are now: REVIEWING RESULTS FOR ROUND 2						
Your Letter Code: C Stakeholder: B						
CONTRIBUTIONS TO THE GROUP FUND						
	<u>Stakeholder</u>		<u>YOU</u>			
	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>TOTAL TOKENS IN GROUP FUND</u>	<u>MY EARNINGS</u>
Round 1	<u>4</u>	9	7	0	20	\$1.06
Round 2	1	<u>3</u>	5	10	19	\$1.15
Round 3			<u>SSSS</u>			
Round 4				<u>SSSS</u>		
Round 5	<u>SSSS</u>					
Round 6		<u>SSSS</u>				
Round 7			<u>SSSS</u>			
Round 8				<u>SSSS</u>		

SSSS indicates that this person was/will be Stakeholder in the round indicated

DECISION PANEL	
<p>REVIEW RESULTS FROM ROUND 2 IN THE TABLE ABOVE.</p> <p>YOUR EARNINGS WERE:</p> <p>Your Personal Fund contribution (5) times \$0.02 per token = \$0.10</p> <p>PLUS: = \$2.00</p> <p>PLUS: The total number of tokens in the Group Fund (19) times -\$0.05 per token = -\$0.95</p> <p>EQUALS: TOTAL = \$1.15</p>	<p>CLICK WHEN DONE</p> <div style="border: 1px solid black; width: 60px; height: 15px; background-color: red; color: white; margin: 0 auto; text-align: center; font-weight: bold;">DONE</div>

Instructions for the Next Set of Rounds

Private – n-ex

- You will now be randomly assigned by the computer into groups of 4 people.
- You will be with the same group for 8 rounds.
- All 4 members of the group will be Stakeholder twice.
- You will only know when YOU are the Stakeholder—you will not know which group member is the Stakeholder in any given round if it is not you.
- In each round, you must decide how many of 10 tokens to put in the Personal Fund and how many in the Group Fund.
- When you have made your decision (by typing how many tokens (0 to 10) you want to put in the Group Fund), you must click “SUBMIT”.
- The Contributions Table will show, for each past round:
 - what you have contributed to the Group Fund
 - a list of the Group Fund contributions of the other members of your group; these contributions will be listed in a **random order that is reshuffled** for each round
 - the total number of tokens in the Group Fund
 - your earnings
- No one will be able to track any other individual group member’s contributions.
- While there is a Stakeholder in every round and everyone will be Stakeholder twice, no one will know when any other individual group member will be Stakeholder.
- The table will indicate in which rounds you will be the Stakeholder by marking those rounds in your column with **red**, underlined S’s (**SSSS**).
- After everyone has made their decisions for each round, you may examine the Contributions Table and the calculation of your earnings in the review screen. Click “DONE” when you are ready to move on to the next round.

When you are entering your contribution, the screen will look like this:

You are now: **MAKING YOUR DECISION FOR ROUND 1**
Stakeholder: Someone Else

CONTRIBUTIONS TO THE GROUP FUND

	<u>YOU</u>	<u>OTHERS</u> <small>(Random Order)</small>	<u>TOTAL TOKENS IN GROUP FUND</u>	<u>MY EARNINGS</u>
Round 1				
Round 2	SSSS			
Round 3				
Round 4				
Round 5				
Round 6				
Round 7				
Round 8	SSSS			

SSSS indicates that you were/will be Stakeholder in the round indicated

DECISION PANEL

How many tokens would you like to put in the **GROUP FUND**? (0-10)

Your **PERSONAL FUND** contribution will be 10 minus your **GROUP FUND** contribution.

RETURNS:

Personal fund: **\$0.02 per token** to you

Group fund: **\$0.10 per token** to Stakeholder

\$2.00 MINUS \$0.05 per token to non-Stakeholders (including YOU)

CLICK TO SUBMIT

SUBMIT

When you are reviewing your results, the screen will look like this:

You are now: REVIEWING RESULTS FOR ROUND 2				
Stakeholder: Someone Else				
CONTRIBUTIONS TO THE GROUP FUND				
	<u>YOU</u>	<u>OTHERS</u> <small>(Random Order)</small>	<u>TOTAL TOKENS IN GROUP FUND</u>	<u>MY EARNINGS</u>
Round 1	10	0, 3, 1	14	\$1.30
Round 2	2	9, 5, 7	23	\$1.01
Round 3	SSSS			
Round 4				
Round 5	SSSS			
Round 6				
Round 7				
Round 8				

SSSS indicates that you were/will be Stakeholder in the round indicated

DECISION PANEL	
<p>REVIEW RESULTS FROM ROUND 2 IN THE TABLE ABOVE.</p> <p>YOUR EARNINGS WERE:</p> <p>Your Personal Fund contribution (8) times \$0.02 per token = \$0.16</p> <p>PLUS: \$2.00</p> <p>PLUS: The total number of tokens in the Group Fund (23) times -\$0.05 per token = -\$1.15</p> <p>EQUALS: TOTAL = \$1.01</p>	
CLICK WHEN DONE	<input style="background-color: red; color: white; padding: 2px 10px; border: none;" type="button" value="DONE"/>

Instructions for the Lottery Decision

In this final decision, you will make a choice between lotteries. You will be presented with ten pairs of lotteries and make a single decision. Then one of those lotteries will be chosen at random, and you will play the lottery you chose for that pair. The amount you earn from the lottery that you play will be added to the earnings for the rest of the experiment.

The ten pairs of lotteries will be presented to you in a screen like the one you see below:

You are now: **CHOOSING AT WHICH LOTTERY YOU WILL SWITCH TO B**

Row	Lottery A	Lottery B
1	1/10 chance of \$2.00, 9/10 chance of \$1.60	1/10 chance of \$3.85, 9/10 chance of \$0.10
2	2/10 chance of \$2.00, 8/10 chance of \$1.60	2/10 chance of \$3.85, 8/10 chance of \$0.10
3	3/10 chance of \$2.00, 7/10 chance of \$1.60	3/10 chance of \$3.85, 7/10 chance of \$0.10
4	4/10 chance of \$2.00, 6/10 chance of \$1.60	4/10 chance of \$3.85, 6/10 chance of \$0.10
5	5/10 chance of \$2.00, 5/10 chance of \$1.60	5/10 chance of \$3.85, 5/10 chance of \$0.10
6	6/10 chance of \$2.00, 4/10 chance of \$1.60	6/10 chance of \$3.85, 4/10 chance of \$0.10
7	7/10 chance of \$2.00, 3/10 chance of \$1.60	7/10 chance of \$3.85, 3/10 chance of \$0.10
8	8/10 chance of \$2.00, 2/10 chance of \$1.60	8/10 chance of \$3.85, 2/10 chance of \$0.10
9	9/10 chance of \$2.00, 1/10 chance of \$1.60	9/10 chance of \$3.85, 1/10 chance of \$0.10
10	10/10 chance of \$2.00, 0/10 chance of \$1.60	10/10 chance of \$3.85, 0/10 chance of \$0.10

DECISION PANEL

At which Lottery Row will you switch from Lottery A to Lottery B? (1-10)

Everyone prefers Lottery B for Row 10. This is because in Row 10, if you choose A you win \$2 for sure and if you choose B you win \$3.85 for sure. However, not everyone wants the same lotteries for Rows 1 through 9. Some people want B for all 10 lotteries, but some people will start with A for earlier rows and switch to B later. Choose the row at which you prefer to switch to B.

If you choose Row 1, you are choosing lottery B for all rows. If you choose 10, you are choosing lottery A for Rows 1 through 9 and then lottery B only for Row 10.

CLICK TO SUBMIT

Each Row offers two Lotteries: Lottery A and Lottery B. Lottery A gives you \$2 if you win, and \$1.60 if you lose. Lottery B gives you \$3.85 if you win, and \$0.10 if you lose. For each Lottery column, the prizes you can win do not change from Row to Row, but the chances you win each prize do change. In Row 1, you have a small chance (1 in 10) of winning the bigger prize for either Lottery A or Lottery B. In Row 9, you have a large chance (9 in 10) of winning the bigger prize for either Lottery. In Row 10, for either Lottery, you win the bigger prize for sure.

For each row, we want to know which lottery (Lottery A or Lottery B) you prefer. Everyone prefers Lottery B for Row 10. This is because in Row 10, if you choose A, you win \$2 for sure;

if you choose B, you win \$3.85 for sure. However, not everyone wants the same lotteries for Rows 1 through 9. Some people prefer Lottery B for all 10 Rows, but some people want A for some or all of the Rows 1 through 9. Therefore, everyone will either choose Lottery B for all Rows or change from Lottery A to Lottery B at some Row.

Note that for each Row 1 through 9, Lottery B offers more if you win, but less if you lose, as compared to Lottery A. In this sense, for Rows 1 through 9, Lottery B is riskier than Lottery A, but offers a larger possible prize.

You will make your Lottery Decision by choosing at which Row you will switch from Lottery A to Lottery B. For example, if you choose Row 1, you are choosing Lottery B for all rows. If you choose 10, you are choosing Lottery A for Rows 1 through 9 and then Lottery B for Row 10.

Once you have made your Lottery Decision, we will randomly pick which Row's decision will be played. We will ask for a volunteer subject to roll a die to pick the Row. Each Row has an equal chance of being selected, so consider your decision carefully.

Once a Row has been selected, we will ask for another volunteer subject to roll a die to determine the outcome. For example, if Row 3 was selected by the first die roll, if this second die roll is 1, 2, or 3, everyone in the room will win the larger prize for the Lottery they selected. Everyone who switched to Lottery B at Row 3 or earlier would win \$3.85, and everyone who switched to Lottery B after Row 3 would win \$2. If the second die roll is 4, 5, 6, 7, 8, 9, or 0, everyone will win the smaller prize for the lottery they selected. Everyone who switched to Lottery B at Row 3 or earlier would win \$0.10, and everyone who switched to Lottery B after Row 3 would win \$1.60.

To summarize, you will make a single choice: when (at which Row) to switch from Lottery A to Lottery B. A subject will roll a die pick a Row to play, and if you switched above that Row, you will play Lottery B; if you switched below that Row, you will play Lottery A. A subject will roll a die to determine the Lottery outcome. Your earnings will be determined by which Lottery you played (which Row was chosen and which Lottery you chose for that Row) and by whether you win or lose (according to the second die roll).

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In each round, your group will have three **Non-Stakeholders** and one **Stakeholder**. Throughout the rounds, your role may change. You will know ahead of time which role you will play in which round. The amount you earn from the Personal Fund and the Group Fund depends on your role. We will explain the roles one at a time.

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token contributed to the group fund, by you or any other member of the group, your earnings from the Group Fund in that round will **decrease** by \$0.05.

Example: Suppose you contribute 0 tokens to the Group Fund and 10 tokens to the Personal Fund. Suppose no one else contributes any tokens to the Group Fund. Then you would earn \$2.00 from the Group Fund and \$0.20 from the Personal Fund. The other **Non-Stakeholders** would also earn \$2.00 from the Group Fund. The **Stakeholder** would earn \$0.00 from the Group Fund.

Example: Suppose you contribute 10 tokens to the Group Fund and no one else contributes any tokens to the Group Fund. Then you would earn \$1.50 from the Group Fund and \$0.00 from the Personal Fund. The other **Non-Stakeholders** would also earn \$1.50 from the Group Fund. The **Stakeholder** would earn \$1.00 from the Group Fund.

Example: Suppose you contribute 0 tokens to the Group Fund and the rest of your group each contributes 10 tokens to the Group Fund (for a total of 30 tokens). Then you would earn \$0.50 from the Group Fund and \$0.20 from the Personal Fund. The other **Non-Stakeholders** would also earn \$0.50 from the Group Fund. The **Stakeholder** would earn \$3.00 from the Group Fund.

The Stakeholder

If you are a **Stakeholder**, you will earn money as follows.

1. *The Personal Fund:* each token you contribute to the Personal Fund will earn you \$0.02.

Example: Suppose you contribute 0 tokens to the Personal Fund. Then you would earn nothing from the Personal Fund.

Example: Suppose you contribute 5 tokens to the Personal Fund. Then you would earn \$0.10 from the Personal Fund.

Example: Suppose you contribute 10 tokens to the Personal Fund. Then you would earn \$0.20 from the Personal Fund.

2. *The Group Fund:* What you earn from the Group Fund will depend on the **total number of tokens** that you and the other 3 members of your group contribute to the Group Fund.

For **Stakeholders**, the Group Fund pays a base amount of \$0.00, which is increased by the tokens that you and the other 3 members of your group contribute to the Group Fund. For each token contributed to the group fund, by you or any other member of the group, your earnings from the Group Fund in that round will **increase** by \$0.10.

Example: Suppose you contribute 0 tokens to the Group Fund and 10 tokens to the Personal Fund. Suppose no one else contributes any tokens to the Group Fund. Then you would earn \$0.00 from the Group Fund and \$0.20 from the Personal Fund. The **Non-Stakeholders** of your group would each earn \$2.00 from the Group Fund.

Example: Suppose you contribute 10 tokens to the Group Fund and no one else contributes any tokens to the Group Fund. Then you would earn \$1.00 from the Group Fund and \$0.00 from the Personal Fund. The **Non-Stakeholders** would each earn \$1.50 from the Group Fund.

Example: Suppose you contribute 0 tokens to the Group Fund and the rest of your group each contributes 10 tokens to the Group Fund (for a total of 30). Then you would earn \$3.00 from the Group Fund and \$0.20 from the Personal Fund. The **Non-Stakeholders** would each earn \$0.50 from the Group Fund.

Let's review:

- The **Non-Stakeholders** and the **Stakeholder** each earn \$0.02 for each token they place in the Personal Fund.
- The **Non-Stakeholders** earn \$2.00 from the Group Fund if no tokens are contributed to the Group Fund. The amount they earn from the Group Fund decreases by \$0.05 for each token contributed to the Group Fund, by them or any other member of the group.
- The **Stakeholder** earns \$0.10 for each token contributed to the Group Fund, by them or any other member of the group.

Decision Panel

For each decision, you will enter your Group Fund contribution in the Decision Panel. The Decision Panel is a box at the bottom of the screen that looks like the following:

DECISION PANEL	
How many tokens would you like to put in the GROUP FUND? (0-10)	<input type="text" value="1"/>
Your PERSONAL FUND contribution will be 10 minus your GROUP FUND contribution.	
RETURNS:	
Personal fund:	\$0.02 per token to you
Group fund:	\$0.10 per token to Stakeholder
	\$2.00 MINUS \$0.05 per token to non-Stakeholders (including YOU)
CLICK TO SUBMIT	
<input type="button" value="SUBMIT"/>	

Type the amount you want to put in the **Group Fund** in the box. This must be a number between 0 and 10. The amount that will go into your Personal Fund is 10 minus the amount you type. For example, if you type the number 0, 0 tokens will go into the Group Fund and 10 into the Personal Fund. If you type 7, 7 tokens will go into the Group Fund and 3 into the Personal Fund.

When you are satisfied with the allocation of tokens you entered, you will click the “SUBMIT” button to submit your allocation.

Contributions Table

The Contributions Table gives you information about what has happened in past rounds and what will happen in future rounds. The table will show all of the rounds you will play with your current group, and will indicate when you will be the Stakeholder. Also, after everyone has made their decisions for a round, the table will tell you what the Group Fund contributions were in that round, and what your earnings were.

The table will change slightly in different parts of the experiment. Before each part starts, you will receive specific instructions and you will see what the table will look like.

Each Round Has Two Steps

In each round, you will proceed through two screens, one after the other. The first screen is the decision screen. In the decision screen, you will make your decision and click the “SUBMIT” button when you are done. After everyone has clicked “SUBMIT”, everyone will proceed to the review screen.

The review screen will look very much like the decision screen, but you will have no decision to make. You will see information about the decisions that were made in that round and previous rounds, and you will learn how much money you earned in that round. In the Decision Panel of the review screen, you will see exactly how your earnings for that round were calculated. When you are done reviewing this information, you must click “DONE” to continue.

DECISION PANEL	
REVIEW RESULTS FROM ROUND 2 IN THE TABLE ABOVE.	
YOUR EARNINGS WERE:	
Your Personal Fund contribution (8) times \$0.02 per token	= \$0.16
PLUS:	\$2.00
PLUS: The total number of tokens in the Group Fund (23) times -\$0.05 per token	= -\$1.15
EQUALS:	TOTAL = \$1.01

CLICK WHEN DONE

DONE

The information in the Contributions Table will stay in the table through all rounds you play with the group, in both the decision and review screens

Final Decision, Questionnaire and Payment

After you have finished all of your contribution decisions, you will have one more decision to make, which is unrelated to your contribution decisions. You will learn more about this decision after the contribution decisions are completed.

Finally, you will complete a brief questionnaire. You will then receive payment anonymously and privately, and the session will be over. You will collect your payment with no one watching, and no one else will learn your earnings.

QUIZ

Case 1: Suppose out of your 10 tokens you contributed 5 tokens to the Personal Fund and 5 tokens to the Group Fund. Suppose that the other 3 members of your group together contribute a total of 20 tokens to the Group Fund. Returns for the two Funds are:

Personal Fund: \$0.02 per token to Stakeholder and Non-Stakeholders

Group Fund: \$0.10 per token to Stakeholder

 \$2.00 – (\$0.05 per token) to Non-Stakeholders

a) How many tokens in total were contributed by your group to the Group Fund? _____

Suppose you are a **Non-Stakeholder**.

b) How much do you earn from the Personal Fund? _____

c) How much do you earn from the Group Fund? _____

d) How much do you earn in total? _____

Suppose you are a **Stakeholder**.

e) How much do you earn from the Personal Fund? _____

f) How much do you earn from the Group Fund? _____

g) How much do you earn in total? _____

Case 2: Suppose out of your 10 tokens you contributed 10 tokens to the Personal Fund and 0 tokens to the Group Fund. Suppose that the other 3 members of your group together contribute a total of 9 tokens to the Group Fund. Returns for the two Funds are:

Personal Fund: \$0.02 per token to Stakeholder and Non-Stakeholders

Group Fund: \$0.10 per token to Stakeholder

 \$2.00 – (\$0.05 per token) to Non-Stakeholders

a) How many tokens in total were contributed by your group to the Group Fund? _____

Suppose you are a **Non-Stakeholder**.

b) How much do you earn from the Personal Fund? _____

c) How much do you earn from the Group Fund? _____

d) How much do you earn in total? _____

Suppose you are a **Stakeholder**.

e) How much do you earn from the Personal Fund? _____

f) How much do you earn from the Group Fund? _____

g) How much do you earn in total? _____

Instructions for the Next Set of Rounds

U – n-ex

- You will now be randomly assigned by the computer into groups of 4 people.
- You will be with the same group for 8 rounds.
- Each member of your group will be randomly assigned a letter code that you will keep for these 8 rounds: A, B, C, or D.
- The Stakeholder position will rotate through 2 members of the group, in alphabetical order (for example, A, then B, then A, etc.). Each of these members of the group will be Stakeholder four times. The other two group members will never be Stakeholder.
- You will always know who is currently Stakeholder, whether and when you are going to be Stakeholder, and when each other member of your group (identified by their letter code) will be Stakeholder, because the Stakeholder position will be marked in the Contributions Table and in the status bar.
- In each round, you must decide how many of 10 tokens to put in the Personal Fund and how many in the Group Fund.
- When you have made your decision (by typing how many tokens (0 to 10) you want to put in the Group Fund), you must click “SUBMIT”.
- The Contributions Table will show, for each past round:
 - what each member (identified by letter code) has contributed to the Group Fund; that is, there will be a column in the table corresponding to each group member, and that member’s contributions for each round will be filled in after the round
 - the total number of tokens in the Group Fund
 - your earnings
- You will be able to tell what each group member contributed in each round; they will also be able to tell what you contributed in each round.
- The table will indicate in which rounds each person will be the Stakeholder by marking those rounds in each person’s column with **red**, underlined S’s (**SSSS**).

- You will see which column corresponds to you because your column will say the word **YOU** above it. Each person has **YOU** marked at the top of their own column.
- Also at the top of each table, in each round, the word **Stakeholder** will appear in red above the column of the person who is the Stakeholder in this round.
- After everyone has made their decisions for each round, you may examine the Contributions Table and the calculation of your earnings in the review screen. Click “DONE” when you are ready to move on to the next round.

When you are entering your contribution, the screen will look like this:

You are now: **MAKING YOUR CONTRIBUTION FOR ROUND 1**
 Your Letter Code: **C** Stakeholder: **A**

CONTRIBUTIONS TO THE GROUP FUND

	<u>YOU</u>					
	<u>Stakeholder</u>					
	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>TOTAL TOKENS IN GROUP FUND</u>	<u>MY EARNINGS</u>
Round 1	<u>SSSS</u>					
Round 2		<u>SSSS</u>				
Round 3	<u>SSSS</u>					
Round 4		<u>SSSS</u>				
Round 5	<u>SSSS</u>					
Round 6		<u>SSSS</u>				
Round 7	<u>SSSS</u>					
Round 8		<u>SSSS</u>				

SSSS indicates that this person was/will be Stakeholder in the round indicated

DECISION PANEL

How much would you like to put in the **GROUP FUND**? (0-10)

Your **PERSONAL FUND** contribution will be 10 minus your **GROUP FUND** contribution.

RETURNS:

Personal fund: \$0.02 per token to you

Group fund: \$0.10 per token to Stakeholder
 \$2.00 MINUS \$0.05 per token to non-Stakeholders (including YOU)

CLICK TO SUBMIT

SUBMIT

When you are reviewing your results, the screen will look like this:

You are now: **REVIEWING RESULTS FOR ROUND 3**
Your Letter Code: A Stakeholder: YOU

CONTRIBUTIONS TO THE GROUP FUND

	<u>YOU</u>					
	<u>Stakeholder</u>					
	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>TOTAL TOKENS IN GROUP FUND</u>	<u>MY EARNINGS</u>
Round 1	<u>4</u>	10	10	7	31	\$3.22
Round 2	2	<u>0</u>	6	4	12	\$1.56
Round 3	<u>8</u>	6	3	10	27	\$2.74
Round 4		<u>SSSS</u>				
Round 5	<u>SSSS</u>					
Round 6		<u>SSSS</u>				
Round 7	<u>SSSS</u>					
Round 8		<u>SSSS</u>				

SSSS indicates that this person was/will be Stakeholder in the round indicated

DECISION PANEL

REVIEW RESULTS FROM ROUND 3 IN THE TABLE ABOVE.

YOUR EARNINGS WERE:
 Your Personal Fund contribution (2) times \$0.02 per token = \$0.04

PLUS: The total number of tokens in the Group Fund (27) times \$0.10 per token = \$2.70

EQUALS: **TOTAL = \$2.74**

CLICK WHEN DONE

DONE

Instructions for the Next Set of Rounds

R – n-ex

- You will now be randomly assigned by the computer into groups of 4 people.
- You will be with the same group for 8 rounds.
- 2 of the 4 members of the group will each be Stakeholder four times. The other two group members will never be Stakeholder.
- You will only know when YOU are the Stakeholder—you will not know which group member is the Stakeholder in any given round if it is not you.
- In each round, you must decide how many of 10 tokens to put in the Personal Fund and how many in the Group Fund.
- When you have made your decision (by typing how many tokens (0 to 10) you want to put in the Group Fund), you must click “SUBMIT”.
- The Contributions Table will show, for each past round:
 - what you have contributed to the Group Fund
 - a list of the Group Fund contributions of the other members of your group; these contributions will be listed in a **random order that is reshuffled** for each round
 - the total number of tokens in the Group Fund
 - your earnings
- No one will be able to track any other individual group member’s contributions.
- While there is a Stakeholder in every round, no one will know when any other individual group member will be Stakeholder.
- The table will indicate in which rounds (if any) you will be the Stakeholder by marking those rounds in your column with **red**, underlined S’s (**SSSS**).
- After everyone has made their decisions for each round, you may examine the Contributions Table and the calculation of your earnings in the review screen. Click “DONE” when you are ready to move on to the next round.

When you are entering your contribution, the screen will look like this if you are one of the group members who will sometimes be Stakeholder:

You are now: **MAKING YOUR DECISION FOR ROUND 1**
Stakeholder: Someone Else

CONTRIBUTIONS TO THE GROUP FUND

	<u>YOU</u>	<u>OTHERS</u> <small>(Random Order)</small>	<u>TOTAL TOKENS IN GROUP FUND</u>	<u>MY EARNINGS</u>
Round 1				
Round 2	<u>SSSS</u>			
Round 3	<u>SSSS</u>			
Round 4				
Round 5	<u>SSSS</u>			
Round 6				
Round 7				
Round 8	<u>SSSS</u>			

SSSS indicates that you were/will be Stakeholder in the round indicated

DECISION PANEL

How many tokens would you like to put in the **GROUP FUND**? (0-10)

Your **PERSONAL FUND** contribution will be 10 minus your **GROUP FUND** contribution.

RETURNS:

Personal fund: **\$0.02 per token** to you

Group fund: **\$0.10 per token** to Stakeholder
\$2.00 MINUS \$0.05 per token to non-Stakeholders (including YOU)

CLICK TO SUBMIT

When you are entering your contribution, the screen will look like this if you are one of the group members who will never be Stakeholder:

You are now: **REVIEWING RESULTS FOR ROUND 3**
Stakeholder: Someone Else

CONTRIBUTIONS TO THE GROUP FUND

	<u>YOU</u>	<u>OTHERS</u> <small>(Random Order)</small>	<u>TOTAL TOKENS IN GROUP FUND</u>	<u>MY EARNINGS</u>
Round 1	0	2, 5, 7	14	\$1.50
Round 2	7	9, 10, 8	34	\$0.36
Round 3	0	3, 2, 1	6	\$1.90
Round 4				
Round 5				
Round 6				
Round 7				
Round 8				

SSSS indicates that you were/will be Stakeholder in the round indicated

DECISION PANEL

REVIEW RESULTS FROM ROUND 3 IN THE TABLE ABOVE.

YOUR EARNINGS WERE:

Your Personal Fund contribution (10) times \$0.02 per token	= \$0.20
PLUS:	\$2.00
PLUS: The total number of tokens in the Group Fund (6) times -\$0.05 per token	= -\$0.30
EQUALS:	TOTAL = \$1.90

CLICK WHEN DONE

DONE

When you are reviewing your results, the screen will look like this:

You are now: **REVIEWING RESULTS FOR ROUND 3**
Stakeholder: Someone Else

CONTRIBUTIONS TO THE GROUP FUND

	<u>YOU</u>	<u>OTHERS</u> (Random Order)	<u>TOTAL TOKENS IN GROUP FUND</u>	<u>MY EARNINGS</u>
Round 1	<u>5</u>	0, 2, 7	14	\$1.50
Round 2	9	10, 7, 8	34	\$0.32
Round 3	2	0, 3, 1	6	\$1.86
Round 4	<u>SSSS</u>			
Round 5				
Round 6	<u>SSSS</u>			
Round 7	<u>SSSS</u>			
Round 8				

SSSS indicates that you were/will be Stakeholder in the round indicated

DECISION PANEL

REVIEW RESULTS FROM ROUND 3 IN THE TABLE ABOVE.

YOUR EARNINGS WERE:

Your Personal Fund contribution (8) times \$0.02 per token	= \$0.16
PLUS:	\$2.00
PLUS: The total number of tokens in the Group Fund (6) times -\$0.05 per token	= -\$0.30
EQUALS:	TOTAL = \$1.86

CLICK WHEN DONE

DONE

Instructions for the Lottery Decision

In this final decision, you will make a choice between lotteries. You will be presented with ten pairs of lotteries and make a single decision. Then one of those lotteries will be chosen at random, and you will play the lottery you chose for that pair. The amount you earn from the lottery that you play will be added to the earnings for the rest of the experiment.

The ten pairs of lotteries will be presented to you in a screen like the one you see below:

You are now: CHOOSING AT WHICH LOTTERY YOU WILL SWITCH TO B

Row	Lottery A	Lottery B
1	1/10 chance of \$2.00, 9/10 chance of \$1.60	1/10 chance of \$3.85, 9/10 chance of \$0.10
2	2/10 chance of \$2.00, 8/10 chance of \$1.60	2/10 chance of \$3.85, 8/10 chance of \$0.10
3	3/10 chance of \$2.00, 7/10 chance of \$1.60	3/10 chance of \$3.85, 7/10 chance of \$0.10
4	4/10 chance of \$2.00, 6/10 chance of \$1.60	4/10 chance of \$3.85, 6/10 chance of \$0.10
5	5/10 chance of \$2.00, 5/10 chance of \$1.60	5/10 chance of \$3.85, 5/10 chance of \$0.10
6	6/10 chance of \$2.00, 4/10 chance of \$1.60	6/10 chance of \$3.85, 4/10 chance of \$0.10
7	7/10 chance of \$2.00, 3/10 chance of \$1.60	7/10 chance of \$3.85, 3/10 chance of \$0.10
8	8/10 chance of \$2.00, 2/10 chance of \$1.60	8/10 chance of \$3.85, 2/10 chance of \$0.10
9	9/10 chance of \$2.00, 1/10 chance of \$1.60	9/10 chance of \$3.85, 1/10 chance of \$0.10
10	10/10 chance of \$2.00, 0/10 chance of \$1.60	10/10 chance of \$3.85, 0/10 chance of \$0.10

DECISION PANEL

At which Lottery Row will you switch from Lottery A to Lottery B? (1-10)

Everyone prefers Lottery B for Row 10. This is because in Row 10, if you choose A you win \$2 for sure and if you choose B you win \$3.85 for sure. However, not everyone wants the same lotteries for Rows 1 through 9. Some people want B for all 10 lotteries, but some people will start with A for earlier rows and switch to B later. Choose the row at which you prefer to switch to B.

If you choose Row 1, you are choosing lottery B for all rows. If you choose 10, you are choosing lottery A for Rows 1 through 9 and then lottery B only for Row 10.

CLICK TO SUBMIT

Each Row offers two Lotteries: Lottery A and Lottery B. Lottery A gives you \$2 if you win, and \$1.60 if you lose. Lottery B gives you \$3.85 if you win, and \$0.10 if you lose. For each Lottery column, the prizes you can win do not change from Row to Row, but the chances you win each prize do change. In Row 1, you have a small chance (1 in 10) of winning the bigger prize for either Lottery A or Lottery B. In Row 9, you have a large chance (9 in 10) of winning the bigger prize for either Lottery. In Row 10, for either Lottery, you win the bigger prize for sure.

For each row, we want to know which lottery (Lottery A or Lottery B) you prefer. Everyone prefers Lottery B for Row 10. This is because in Row 10, if you choose A, you win \$2 for sure;

if you choose B, you win \$3.85 for sure. However, not everyone wants the same lotteries for Rows 1 through 9. Some people prefer Lottery B for all 10 Rows, but some people want A for some or all of the Rows 1 through 9. Therefore, everyone will either choose Lottery B for all Rows or change from Lottery A to Lottery B at some Row.

Note that for each Row 1 through 9, Lottery B offers more if you win, but less if you lose, as compared to Lottery A. In this sense, for Rows 1 through 9, Lottery B is riskier than Lottery A, but offers a larger possible prize.

You will make your Lottery Decision by choosing at which Row you will switch from Lottery A to Lottery B. For example, if you choose Row 1, you are choosing Lottery B for all rows. If you choose 10, you are choosing Lottery A for Rows 1 through 9 and then Lottery B for Row 10.

Once you have made your Lottery Decision, we will randomly pick which Row's decision will be played. We will ask for a volunteer subject to roll a die to pick the Row. Each Row has an equal chance of being selected, so consider your decision carefully.

Once a Row has been selected, we will ask for another volunteer subject to roll a die to determine the outcome. For example, if Row 3 was selected by the first die roll, if this second die roll is 1, 2, or 3, everyone in the room will win the larger prize for the Lottery they selected. Everyone who switched to Lottery B at Row 3 or earlier would win \$3.85, and everyone who switched to Lottery B after Row 3 would win \$2. If the second die roll is 4, 5, 6, 7, 8, 9, or 0, everyone will win the smaller prize for the lottery they selected. Everyone who switched to Lottery B at Row 3 or earlier would win \$0.10, and everyone who switched to Lottery B after Row 3 would win \$1.60.

To summarize, you will make a single choice: when (at which Row) to switch from Lottery A to Lottery B. A subject will roll a die pick a Row to play, and if you switched above that Row, you will play Lottery B; if you switched below that Row, you will play Lottery A. A subject will roll a die to determine the Lottery outcome. Your earnings will be determined by which Lottery you played (which Row was chosen and which Lottery you chose for that Row) and by whether you win or lose (according to the second die roll).