## Written Instructions

## Reg <br> Welcome to the Study!

This experiment is a study of group and individual investment behavior. The instructions are simple. If you follow them carefully and make good investment decisions then you may earn a considerable amount of money. If you have any questions about the instructions please raise your hand and someone will come and speak with you privately about your question.

The experiment will last about an hour. Before we continue please take a moment to fill out the survey displayed on the screen right now. When everyone is done I will proceed with the rest of the directions.

## Reg <br> The Experiment

You have been organized into groups of 4 people. Each group will consist of the same 4 persons in each period. There will be 10 periods in this session. In each period you will be required to make some decisions and what you earn from each decision will depend on what you and the other 3 people in your group decide.

Once all your decisions in the 10 periods have been made, we will randomly select one of the 10 periods as the period-that-counts. We will use the period-that-counts to determine your actual earnings. Note, since all periods are equally likely to be chosen, you should make your decision in each period as if it will be the period-that-counts.

First, we will describe the instructions for the first 5 periods.

# First 5 Periods: Two Stage Investment Decision 

## Stage 1: Investment Decision

Recall that in each period you will be assigned to the same group of 4 players. Each person in your group will be assigned a new identifier number each period, so that Player 1 in the Period 1 , may not be the same person as Player 1 in the $2^{\text {nd }}$ period.

In each period you will be choosing how to divide 5 tokens between two investment opportunities:

## THE RED INVESTMENT

Each token you invest in the RED investment will earn you a return of \$1.50.
Example: Suppose you invest 4 tokens in the RED investment, then you would earn $\$ 6.00$ ( 4 tokens multiplied by $\$ 1.50$ ) from this investment.

Example: Suppose you invest 0 tokens in the RED investment, then you would earn $\$ 0.00$ from this investment.

## THE BLUE INVESTMENT

What you earn from the BLUE investment will depend on the total number of tokens that you and the other 3 members of your group invest in the BLUE investment. The more the group invests in the BLUE investment, the more each member of the group earns.

Each token you invest in the BLUE investment will earn you and all your group members a return of $\$ 1.00$.
The process is best explained by a number of examples.
Example: Suppose that you decided to invest no tokens in the BLUE investment but that the 3 other members invest a total of 9 tokens. Then your earnings from the BLUE investment would be $\$ 9.00$ (which is 9 tokens multiplied by $\$ 1.00$ ). Everyone else in your group would also earn \$9.00.

Example: Suppose that you invest 2 tokens in the BLUE investment and that the 3 other members of your group invest a total of 9 tokens. This makes a group total of 11 tokens. Your return from the BLUE investment would be $\$ 11.00$ (which is 11 tokens multiplied by $\$ 1.00$ ). The other 3 members of the group would also get a return of $\$ 11.00$.

Example: Suppose that you invest 3 tokens in the BLUE investment and the other 3 members invest nothing. Then you, and everyone else in the group, would get a return from the BLUE investment of $\$ 3.00$ (which is 3 tokens multiplied by $\$ 1.00$ ).

## Reg

As you can see, every token invested in the BLUE investment will earn $\$ 1.00$ for every member of the group, not just the person who invests it there. It does not matter who invests tokens in the BLUE investment. Everyone will get a return from every token invested there-whether they invest tokens in the BLUE investment or not.

## YOUR TASK

Your task is to decide how many of your tokens to invest in the RED investment and how many to invest in the BLUE investment. You are free to invest some of your tokens in the RED investment and some in the BLUE investment. Alternatively, you can invest all of them into the RED investment or all of them into the BLUE investment.

## INVESTMENT EARNINGS

Once you and the other 3 members of your group have made your decisions, you will receive an Earnings Statement for that period.

Your earnings have been computed using the following simple formula:
$\overline{1^{\text {st }} \text { Stage Earnings }=(\$ 1.50) *(\text { Your investment to the RED })+(\$ 1.00) *(\text { Total group investments to the BLUE }) ~}$

For example imagine that out of 5 tokens, you invested 1 to the RED and you invested 4 to the BLUE investment, your other group members invest 2,3 , and 3 to the BLUE investment.
In this example $1^{\text {st }}$ stage earnings are computed as follows:
$1^{\text {st }}$ Stage Earnings $=(\$ 1.50) *(5-4)+(\$ 1.00) *(4+2+3+3)$
$1^{\text {st }}$ Stage Earnings $=(\$ 1.50) *(1)+(\$ 1.00) *(12)$
$1^{\text {st }}$ Stage Earnings $=\$ 1.50+\$ 12.00$
$1^{\text {st }}$ Stage Earnings $=\$ 13.50$

You must make your investment decisions without knowing what the others in your group are deciding. Do not discuss your decision with any other participant.

## Stage 2: Deduction Decision

At the beginning of Stage 2 of each decision period you will be informed about how much each group member contributed to the BLUE investment, RED investment and their initial earnings at the end of the Stage 1. Moreover, during Stage 2 you can change or leave unchanged the earnings of each of the other members of your group by assigning deduction points. The other group members can also reduce your earnings, if they so wish.

You now have to decide how many deduction points to assign to each of the other group members. You must enter a number for each of them. If you do not want to change the earnings of a particular group member, you enter 0 . If you assign deduction points, there will be a cost for each deduction point that you assign. The more deduction points you assign the higher are your costs. Each deduction point costs you $\$ 1.00$.

If you assign 0 deduction points to a certain group member, you do not change the earnings of this group member. If however, you assign 1 deduction point to a group member, you reduce that group member's earnings by $\$ 3.00$.

Example: Suppose you assign 2 deduction points to player 1. This costs you $\$ 2.00$ and reduces player 1's income by $\$ 6.00$.

Example: Suppose you assign 0 deduction points to player 1 . This costs you $\$ 0.00$ and reduces player 1 's income by $\$ 0.00$.

Example: Suppose you assign 1 deduction point to player 1, 2 deduction points to player 2, and 3 deduction points to player 3. That is a total of 6 deduction points $(6=1+2+3)$ that you assigned to other players. This costs you $\$ 6.00$ and reduces player 1's income by $\$ 3.00$, reduces player 2's income by $\$ 6.00$, reduces player 3's income by $\$ 9.00$.

Example: Suppose player 1 assigns 0 deduction point to you, player 2 assigns 1 deduction point to you, and player 3 assigns 3 deduction points to you. That means in total you were assigned 4 deduction points $(4=0+1+3)$ by the other players in your group. This will lower your payoff by $\$ 12.00$ ( 4 deduction points multiplied by $\$ 3.00$ ).

## TOTAL EARNINGS

Your total earnings from the two stages are calculated as follows:
Total Earnings at the end of the period = 1st stage Earnings- Total of Deductions you receive - Cost of Deductions you give

Please note that using this formula, your earnings at the end of the period can be negative. If this happens, we will pay you $\$ 0.00$ for this period. You cannot owe us money at the end of the session and you will always be paid your $\$ 5$ show up fee.

You must make your investment decisions without knowing what the others in your group are deciding. Do not discuss your decision with any other participant.

## How to Approach this Task

As you make investment and deduction decisions in this task, you may feel a variety of different emotions including anger, anxiety, confusion, interest, excitement, and relief.

However, for this experiment, we'd like you to please think about your decisions in this task in a way that helps you stay calm. Thus, while remaining focused on the task, please do your best to adopt a neutral, analytical, and objective attitude about the intentions of other group members and the investment and deduction decisions they are making.

For example, if you find yourself feeling angry because another group member made investment decisions you did not like, you can tell yourself that, like you, this person was just trying to do as well as he or she could. Thinking about how the other group member was "just trying to do as well as he or she could" would be likely to help you stay calm. In addition, such thoughts are focused on the task rather than on things that are unrelated to the task. For these reasons, this would be a good example of adopting a neutral, analytical, objective attitude in a way that helps you stay calm.

## Your Group

For each decision period you will be in a group of 4 people in the room today. You will be in the same group of 4 people for the duration of the whole study. However, each Period you and all your group members will be randomly assigned a new identifier number. So that Player 1 in the Period 1, may not be the same person as Player 1 in the $2^{\text {nd }}$ period.

## Your Earnings

Once all your decisions in the 10 periods have been made, we will randomly select one of the 10 periods as the period-that-counts. We will use the period-that-counts to determine your actual earnings. Note, since all periods are equally likely to be chosen, you should make all your decision in each period as if it will be the period-that-counts.

## Things to Remember

- You will be in a group of 4 people.
- The groups will remain the same every decision period, but individual identifiers will change each period.
- Tokens in the RED investment will earn you a return of $\$ 1.50$.
- Tokens in the BLUE investment will earn you and all your group members a return of $\$ 1.00$.
- In Stage 2 you can reduce the earnings of other members of your group by assigning deduction points.
- You pay $\$ 1.00$ for each deduction point.
- Each deduction point you assign to another group member will reduce their earnings by $\$ 3.00$.
- You will be paid for one randomly selected period.
- If your period earnings are negative we will pay you $\$ 0.00$ for this period but you will always earn at least $\$ 5$ for completing today's study.
- Please feel free to use the calculator, and scratch paper provided to help you with your calculations.
- Adopt a neutral, analytical, and objective attitude in order to stay calm.

Thank you.
Everyone please enter the code to take a comprehension quiz. Importantly, remember your instructions:

Please focus on the task and do your best to adopt a neutral, analytical, and objective attitude in order to stay calm.

## Reg <br> Next 5 Periods: Three Stage Decision

The last 5 periods will be almost exactly the same as the first 5 periods, except at the end of each Period we will ask you to tell us how you feel. We will take a moment now to review the instructions.

You will be in the same group of 4 players you were in during the first 5 periods. Individual identifiers will still change each Period, so that Player 1 in the 6th period may not be the same person as Player 1 in the 7th period. The first two stages of each Period are exactly the same as they were before. We will now explain Stage 3.

## Stage 3: Feelings

At the end of each Period we will ask you to tell us how you feel about this Period using a grid like the one below.


How POSITIVE do you feel about this Period?

One way to describe your feelings about the Period is in terms of how positive and how negative you feel about it, as shown in the figure. It is in the form of a grid -- a kind of map for feelings. The grid asks you two questions: Along the horizontal axis, it asks how positive you feel about this Period from "not at all'" at the left to "extremely" at the right. Along the vertical axis, it asks how negative you feel from ' not at all"' on the bottom to 'extremely' on top.

If you feel positive, but not at all negative, mark one of the four cells at the bottom edge, as highlighted below. The better you feel, the farther to the right you should go.


How POSITIVE do you feel about this Period?

On the other hand, if you feel negative but not at all positive, mark one of these four cells on the left edge as highlighted below. The worse you feel, the farther up you should go.


How POSITIVE do you feel about this Period?

If you feel neither positive nor negative, mark the cell in the bottom left. This indicates that you feel not at all positive and not at all negative.


Finally, if you feel both positive and negative, move the mouse into one of the cells in the middle. The cell you select will depend on just how positive and just how negative you feel.


The grid can be used to describe any pattern of positive and negative feelings. For example, you might feel quite a bit positive and not at all negative or somewhat negative and not at all positive. During the experiment, please place yourself in whichever cell best describes your feelings. After you've marked that cell, click OK to record your response.

## Your Earnings

Once all your decisions in the 10 periods have been made, we will randomly select one of the 10 periods as the period-that-counts. We will use the period-that-counts to determine your actual earnings. Note, since all periods are equally likely to be chosen, you should make all your decision in each period as if it will be the period-that-counts.

## Things to Remember

- You will be in a group of 4 people
- The groups will remain the same every decision period, but individual identifiers will change each period.
- This part of the study will be exactly like the first 5 periods except you will record how you feel.
- You will be paid for one randomly selected period.
- If your period earnings are negative we will pay you $\$ 0.00$ for this period but you will always earn at least $\$ 5$ for completing today's study.
- Please feel free to use the calculator, and scratch paper provided to help you with your calculations.
- Adopt a neutral, analytical, and objective attitude in order to stay calm.

> You may now begin making decisions for the next 5 periods. Importantly, remember your instructions:

## Please focus on the task and do your best to adopt a neutral, analytical, and objective attitude in order to stay calm.

## Screenshots

## Pre-Mood Rating

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Period
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1 \text { of } 10
$$

Instructions: Please read each item and mark the appropriate answer. Indicate to what extent you feel this way right now, in this moment.

| Anxious, Worried, Fearful | notatall C ( C ( C C very much |
| :---: | :---: |
| Lonely, Distant, Isolated | notatall $C \subset C \subset \subset \subset C$ very much |
| Self-Confident, Capable, Worthwhile | not at all $C \subset C \subset \subset C$, $C$ very much |
| Sad, Depressed, Down |  |
| Rejected, Put Down, Hurt | not at all $C \subset C \subset C \subset C$ very much |
| Happy, Pleased, Contented | notatall $C$ C $C \subset C \subset$ very much |
| Judged, Scrutinized, Evaluated | not at all $C \subset C \subset \subset \subset C$ very much |
| Angry, Irritated, Provoked | not at all $C \subset C \subset C \subset C$ very much |
| Affectionate, Loving, Connected To Others | not at all $C \subset C \subset \subset C$ very much |
| Embarrassed, Humiliated, Ashamed | not at all $C \subset C \subset C \subset C$ very much |
| Active, Alert, Keyed Up | not at all $C \subset C \subset \subset \subset C$ very much |



## Comprehensive Test

-Period
1 of 10

1. Imagine your other group members invest 10 tokens in the BLUE investment. If you invest 2 of your 5 tokens in the BLUE investment, what are the total number of tokens in BLUE ?
2. In the example above you invested 3 in the RED and 2 in the BLUE so what would be your payoff? 3. If you assign 2 deduction points how much would this cost you?
3. If you assign 2 deduction points how much would be deducted from the other player?
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$\square$

## Period

1 of 10

In thinking about how to approach the task, how should you respond if you feel angry when you are deciding whether to deduct tokens and how many to deduct from another group member? Select the answer below that best achieves the goal to stay calm by adopting a neutral, analytical, objective attitude.
$C$ a. Allow yourself to think about how the other group member is behaving selfishly
C b. Actively try to think positive thoughts, for example a fun activity that you're looking fonward to doing later
C c. Actively try to think neutral thoughts, for example a mental list of items to get at the grocery store
$C$ d. Actively try to think about how the other group member did not intend to insult you when making her or his investment decision

## Reg

## Comprehensive Test Answers (Wrong vs Right)

Allowing yourself to think about how the other group member is behaving selfishly would be unlikely to help you stay calm. In fact, it might make you even angrier. Since these thoughts are about negative intentions and characteristics of the other group member, this is not the best approach to adopting a neutral, analytical, objective attitude.

The best answer is:
d. Think about how the other group member did not intend to insult you when making her or his investment decision

Thinking about how the other group member did not intend to insult you when she or he made an investment decision would be likely to help you stay calm as you consider whether to deduct tokens and how many. In addition, such thoughts are focused on the task rather than on things that are unrelated to the task. Thus, of the four options you were given, thinking about how the other group member did not intend to insult you when she or he made an investment decision is the best approach to adopting a neutral, analytical, objective attitude.
$b$ is incorrect also. Thinking positive thoughts, for example about a fun activity that you're looking forward to doing later, might indeed help you stay calm. However, it is important that your thoughts remain neutral and focused on the task. Since these thoughts are about a positive activity that is unrelated to the task, this is not the best approach to adopting a neutral, analytical, objective attitude.
c is incorrect also. Thinking neutral thoughts, for example about a mental list of items to get at the grocery store, might indeed help you stay calm. However, it is important that your thoughts remain focused on the task. Since these neutral thoughts are about things that are unrelated to the task, this is not the best approach to adopting a neutral, analytical, objective attitude.


That's correct. The best answer is:
$d$. Think about how the other group member did not intend to insult you when making her or his investment decision
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$b$ is incorrect also. Thinking positive thoughts, for example about a fun activity that you're looking forward to doing later, might indeed help you stay calm. However, it is important that your thoughts remain neutral and focused on the task. Since these thoughts are about a positive activity that is unrelated to the task, this is not the best approach to adopting a neutral, analytical, objective attitude.
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Thinking about how the other group member did not intend to insult you when she or he made an investment decision would be likely to help you stay calm as you consider whether to deduct tokens and how many. In addition, such thoughts are focused on the task rather than on things that are unrelated to the task. Thus, of the four options you were given, thinking about how the other group member did not intend to insult you when she or he made an investment decision is the best approach to adopting a neutral, analytical, objective attitude.

## Period 1-5, Stage 1

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Period
\[
1 \text { of } 10
\]
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Stage 1
You are in the same group of 4 people. A new identifier number is assigned, so the Player 1 in last period may not be the same person as Player 2 in this period. You have 5.0 tokens for your Stage 1 endowment.

Tokens in the RED investment earn $\$ 1.50$ for you, and $\$ 0.00$ for all your other group members.
Tokens in the BLUE investment earn $\$ 1.00$ for you and for all your other group members.
Use the box to decide how many of your 5.0 tokens will be invested in the RED investment.
Use the box to decide how many of your 5.0 tokens will be invested in the BLUE investment.


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## Period 1-5, Stage 2



Stage 2
You can assign a deduction of $\$ 3.00$ to any other player by paying $\$ 1.00$ to assign 1 deduction point to that player. You may assign any amount of deduction points you can afford to another player (e.g. 0, 1, 2. 3...). To assign no deduction points enter 0 . Enter your deduction points in the boxes provided.

Remember: As you consider your decisions, please adopt a neutral, analytical, and objective attitude in order to stay calm

| Player | RED imvestment: | BLUE imvestment: | Stage 1 Earnings | Deduction Points |
| :---: | :---: | :---: | :---: | :---: |
| Player 1 | 5 | 0 | 18.50 |  |
| Player 2 | 0 | 5 | 11.00 |  |
| Player 3 | 2 | 3 | 14.00 | $\mid$ |
| You | 2 | 3 | 14.00 |  |
| Total |  | 11 |  |  |



## After Period 5, new instruction is distributed



## Period 6-10 Stage 1

```
Period
```

    6 of 10
    
## Stage 1

You are in the same group of 4 people. A new identifier number is assigned, so the Player 1 in last period may not be the same person as Player 2 in this period.

You have 5.0 tokens for your Stage 1 endowment

Tokens in the RED investment earn $\$ 1.50$ for you, and $\$ 0.00$ for all your other group members.
Tokens in the BLUE investment earn $\$ 1.00$ for you and for all your other group members.
Use the box to decide how many of your 5.0 tokens will be invested in the RED investment.
Use the box to decide how many of your 5.0 tokens will be invested in the BLUE investment.


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| RESULTS (Stage 1): |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| RED investment: | 0 |  |  |  |
| BLUE investment: | 5 |  |  |  |
|  | Total Tokens in BLUE investment: | 20 |  |  |
| Stage 1 Earnings | 20.00 |  |  |  |

## Period 6-10 Stage 2



Stage 2
You can assign a deduction of $\$ 3.00$ to any other player by paying $\$ 1.00$ to assign 1 deduction point to that player. You may assign any amount of deduction points you can afford to another player (e.g. 0, 1, 2. 3...). To assign no deduction points enter 0 . Enter your deduction points in the boxes provided.

Remember: As you consider your decisions, please adopt a neutral, analytical, and objective attitude in order to stay calm

| Player | RED imvestment: | BLUE imvestment: | Stage 1 Earnings | Deduction Points |
| :---: | :---: | :---: | :---: | :---: |
| Player 1 | 0 | 5 | 20.00 |  |
| Player 2 | 0 | 5 | 20.00 |  |
| You | 0 | 5 | 20.00 |  |
| Player 4 | 0 | 5 | 20.00 |  |
| Total |  | 20 |  |  |

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-Period 6 of 10

| RESULTS: |  |
| ---: | :---: | :---: |
| Stage 1 Earnings | 20.00 |
| Cost of points punishment you assigned to other players | 0.00 |
| Income reduction (assigned to you by other players) | 0.00 |
| Your final payoff this period is: | 20.00 |

$$
[20.00-0.00-0.00=20.00]
$$

| -Period |  | 10 |
| :---: | :---: | :---: |
|  |  |  |

## Below is a summary of your group's Stage 2 Earnings.

| Player | RED imvestment: | BLUE imvestment: | Stage 1 Earnings | Points Assigned | Total Reduction | Stage 2 Earnings |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Player 1 | 0 | 5 | 20.00 | 0.00 | 0.00 | 20.00 |
| Player 2 | 0 | 5 | 20.00 | 0.00 | 0.00 | 20.00 |
| You | 0 | 5 | 20.00 | 0.00 | 0.00 | 20.00 |
| Player 4 | 0 | 5 | 20.00 | 0.00 | 0.00 | 20.00 |
| Total |  | 20 |  |  |  |  |

## Period 6-10 Stage 3



## Post-Mood Rating

```
Period
10 of 10
```

Instructions: Please read each item and mark the appropriate answer. Indicate to what extent you feel this way right now, in this moment.

| Anxious, Worried, Fearful | not at all $C$ C $C$ C $C$ C very much |
| :---: | :---: |
| Lonely, Distant, Isolated | not at all $\bigcirc \subset \bigcirc \bigcirc \bigcirc$ |
| Self-Confident, Capable, Worthwhile | not at all $C$ C $C$ C $C$ very much |
| Sad, Depressed, Down | not at all $C$ C $C \bigcirc C \subset$ very much |
| Rejected, Put Down, Hurt | not at all $C$ C $C \bigcirc \bigcirc \bigcirc \bigcirc$ |
| Happy, Pleased, Contented | not at all $C \subset C \subset C C$ very much |
| Judged, Scrutinized, Evaluated | not at all $C \subset C \subset C \subset C$ very much |
| Angry, Irritated, Provoked | notatall $\mathrm{C} C \mathrm{C}$ |
| Affectionate, Loving, Connected To Others | not at all $C \subset C \subset C \subset C$ very much |
| Embarrassed, Humiliated, Ashamed <br> Active, Alert, Keyed Up |  |

## Written Instructions

## Welcome to the Study!

This experiment is a study of group and individual investment behavior. The instructions are simple. If you follow them carefully and make good investment decisions then you may earn a considerable amount of money. If you have any questions about the instructions please raise your hand and someone will come and speak with you privately about your question.

The experiment will last about an hour. Before we continue please take a moment to fill out the survey displayed on the screen right now. When everyone is done I will proceed with the rest of the directions.

## The Experiment

You have been organized into groups of 4 people. Each group will consist of the same 4 persons in each period. There will be 10 periods in this session. In each period you will be required to make some decisions and what you earn from each decision will depend on what you and the other 3 people in your group decide.

Once all your decisions in the 10 periods have been made, we will randomly select one of the 10 periods as the period-that-counts. We will use the period-that-counts to determine your actual earnings. Note, since all periods are equally likely to be chosen, you should make your decision in each period as if it will be the period-that-counts.

First, we will describe the instructions for the first 5 periods.

# First 5 Periods: Two Stage Investment Decision 

## Stage 1: Investment Decision

Recall that in each period you will be assigned to the same group of 4 players. Each person in your group will be assigned a new identifier number each period, so that Player 1 in the Period 1 , may not be the same person as Player 1 in the $2^{\text {nd }}$ period.

In each period you will be choosing how to divide 5 tokens between two investment opportunities:

## THE RED INVESTMENT

Each token you invest in the RED investment will earn you a return of \$1.50.
Example: Suppose you invest 4 tokens in the RED investment, then you would earn $\$ 6.00$ (4 tokens multiplied by $\$ 1.50$ ) from this investment.

Example: Suppose you invest 0 tokens in the RED investment, then you would earn $\$ 0.00$ from this investment.

## THE BLUE INVESTMENT

What you earn from the BLUE investment will depend on the total number of tokens that you and the other 3 members of your group invest in the BLUE investment. The more the group invests in the BLUE investment, the more each member of the group earns.

Each token you invest in the BLUE investment will earn you and all your group members a return of $\$ 1.00$.
The process is best explained by a number of examples.
Example: Suppose that you decided to invest no tokens in the BLUE investment but that the 3 other members invest a total of 9 tokens. Then your earnings from the BLUE investment would be $\$ 9.00$ (which is 9 tokens multiplied by $\$ 1.00$ ). Everyone else in your group would also earn \$9.00.

Example: Suppose that you invest 2 tokens in the BLUE investment and that the 3 other members of your group invest a total of 9 tokens. This makes a group total of 11 tokens. Your return from the BLUE investment would be $\$ 11.00$ (which is 11 tokens multiplied by $\$ 1.00$ ). The other 3 members of the group would also get a return of $\$ 11.00$.

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Example: Suppose that you invest 3 tokens in the BLUE investment and the other 3 members invest nothing. Then you, and everyone else in the group, would get a return from the BLUE investment of $\$ 3.00$ (which is 3 tokens multiplied by $\$ 1.00)$.

As you can see, every token invested in the BLUE investment will earn $\$ 1.00$ for every member of the group, not just the person who invests it there. It does not matter who invests tokens in the BLUE investment. Everyone will get a return from every token invested there-whether they invest tokens in the BLUE investment or not.

## YOUR TASK

Your task is to decide how many of your tokens to invest in the RED investment and how many to invest in the BLUE investment. You are free to invest some of your tokens in the RED investment and some in the BLUE investment. Alternatively, you can invest all of them into the RED investment or all of them into the BLUE investment.

## INVESTMENT EARNINGS

Once you and the other 3 members of your group have made your decisions, you will receive an Earnings Statement for that period.

Your earnings have been computed using the following simple formula:
$1^{\text {st }}$ Stage Earnings $=(\$ 1.50) *($ Your investment to the RED $)+(\$ 1.00) *($ Total group investments to the BLUE $)$

For example imagine that out of 5 tokens, you invested 1 to the RED and you invested 4 to the BLUE investment, your other group members invest 2,3 , and 3 to the BLUE investment.
In this example $1^{\text {st }}$ stage earnings are computed as follows:
$1^{\text {st }}$ Stage Earnings $=(\$ 1.50) *(5-4)+(\$ 1.00) *(4+2+3+3)$
$1{ }^{\text {st }}$ Stage Earnings $=(\$ 1.50) *(1)+(\$ 1.00) *(12)$
$1^{\text {st }}$ Stage Earnings $=\$ 1.50+\$ 12.00$
$1^{\text {st }}$ Stage Earnings $=\$ 13.50$

You must make your investment decisions without knowing what the others in your group are deciding. Do not discuss your decision with any other participant.

## Stage 2: Deduction Decision

At the beginning of Stage 2 of each decision period you will be informed about how much each group member contributed to the BLUE investment, RED investment and their initial earnings at the end of the Stage 1. Moreover, during Stage 2 you can change or leave unchanged the earnings of each of the other members of your group by assigning deduction points. The other group members can also reduce your earnings, if they so wish.

You now have to decide how many deduction points to assign to each of the other group members. You must enter a number for each of them. If you do not want to change the earnings of a particular group member, you enter 0 . If you assign deduction points, there will be a cost for each deduction point that you assign. The more deduction points you assign the higher are your costs. Each deduction point costs you $\$ 1.00$.

If you assign 0 deduction points to a certain group member, you do not change the earnings of this group member. If however, you assign 1 deduction point to a group member, you reduce that group member's earnings by $\$ 3.00$.

Example: Suppose you assign 2 deduction points to player 1. This costs you $\$ 2.00$ and reduces player 1's income by $\$ 6.00$.

Example: Suppose you assign 0 deduction points to player 1. This costs you $\$ 0.00$ and reduces player 1's income by $\$ 0.00$.

Example: Suppose you assign 1 deduction point to player 1, 2 deduction points to player 2, and 3 deduction points to player 3. That is a total of 6 deduction points $(6=1+2+3)$ that you assigned to other players. This costs you $\$ 6.00$ and reduces player 1's income by $\$ 3.00$, reduces player 2's income by $\$ 6.00$, reduces player 3's income by $\$ 9.00$.

Example: Suppose player 1 assigns 0 deduction point to you, player 2 assigns 1 deduction point to you, and player 3 assigns 3 deduction points to you. That means in total you were assigned 4 deduction points $(4=0+1+3)$ by the other players in your group. This will lower your payoff by $\$ 12.00$ ( 4 deduction points multiplied by $\$ 3.00$ ).

## TOTAL EARNINGS

Your total earnings from the two stages are calculated as follows:
Total Earnings at the end of the period = 1st stage Earnings- Total of Deductions you receive - Cost of Deductions you give

Please note that using this formula, your earnings at the end of the period can be negative. If this happens, we will pay you $\$ 0.00$ for this period. You cannot owe us money at the end of the session and you will always be paid your $\$ 5$ show up fee.

You must make your investment decisions without knowing what the others in your group are deciding. Do not discuss your decision with any other participant.

## How to Approach this Task

As you make investment and deduction decisions in this task, you may feel a variety of different emotions including anger, anxiety, confusion, interest, excitement, and relief.

For this experiment, we'd like you to please respond naturally with whatever thoughts and emotions occur to you spontaneously. Thus, while remaining focused on the task, please allow yourself to respond naturally to the intentions of other group members and the investment and deduction decisions they are making.

For example, it would be fine if you were to find yourself feeling angry because another group member made investment decisions you did not like. This would be a natural response in this context. In addition, the angry feeling is focused on the task rather than on things that are unrelated to the task. For these reasons, this would be a good example of responding naturally with whatever thoughts and emotions that occur to you spontaneously while remaining focused on the task.

## Your Group

For each decision period you will be in a group of 4 people in the room today. You will be in the same group of 4 people for the duration of the whole study. However, each Period you and all your group members will be randomly assigned a new identifier number. So that Player 1 in the Period 1, may not be the same person as Player 1 in the $2^{\text {nd }}$ period.

## Your Earnings

Once all your decisions in the 10 periods have been made, we will randomly select one of the 10 periods as the period-that-counts. We will use the period-that-counts to determine your actual earnings. Note, since all periods are equally likely to be chosen, you should make all your decision in each period as if it will be the period-that-counts.

## Things to Remember

- You will be in a group of 4 people.
- The groups will remain the same every decision period, but individual identifiers will change each period.
- Tokens in the RED investment will earn you a return of $\$ 1.50$.
- Tokens in the BLUE investment will earn you and all your group members a return of $\$ 1.00$.
- In Stage 2 you can reduce the earnings of other members of your group by assigning deduction points.
- You pay $\$ 1.00$ for each deduction point.
- Each deduction point you assign to another group member will reduce their earnings by $\$ 3.00$.
- You will be paid for one randomly selected period.
- If your period earnings are negative we will pay you $\$ 0.00$ for this period but you will always earn at least $\$ 5$ for completing today's study.
- Please feel free to use the calculator, and scratch paper provided to help you with your calculations.
- Respond naturally with whatever thoughts and emotions occur to you spontaneously.


## Thank you. <br> Everyone please enter the code to take a comprehension quiz. Importantly, remember your instructions:

## Please focus on the task and do your best to respond naturally with whatever thoughts and emotions occur to you spontaneously.

## Next 5 Periods: Three Stage Decision

The last 5 periods will be almost exactly the same as the first 5 periods, except at the end of each Period we will ask you to tell us how you feel. We will take a moment now to review the instructions.

You will be in the same group of 4 players you were in during the first 5 periods. Individual identifiers will still change each Period, so that Player 1 in the 6th period may not be the same person as Player 1 in the 7th period. The first two stages of each Period are exactly the same as they were before. We will now explain Stage 3.

## Stage 3: Feelings

At the end of each Period we will ask you to tell us how you feel about this Period using a grid like the one below.


How POSITIVE do you feel about this Period?

One way to describe your feelings about the Period is in terms of how positive and how negative you feel about it, as shown in the figure. It is in the form of a grid -- a kind of map for feelings. The grid asks you two questions: Along the horizontal axis, it asks how positive you feel about this Period from "not at all" at the left to "extremely" at the right. Along the vertical axis, it asks how negative you feel from "not at all" on the bottom to "extremely" on top.

## No Reg

If you feel positive, but not at all negative, mark one of the four cells at the bottom edge, as highlighted below. The better you feel, the farther to the right you should go.


How POSITIVE do you feel about this Period?

On the other hand, if you feel negative but not at all positive, mark one of these four cells on the left edge as highlighted below. The worse you feel, the farther up you should go.


## No Reg

If you feel neither positive nor negative, mark the cell in the bottom left. This indicates that you feel not at all positive and not at all negative.


Finally, if you feel both positive and negative, move the mouse into one of the cells in the middle. The cell you select will depend on just how positive and just how negative you feel.


How POSITIVE do you feel about this Period?
The grid can be used to describe any pattern of positive and negative feelings. For example, you might feel quite a bit positive and not at all negative or somewhat negative and not at all positive. During the experiment, please place yourself in whichever cell best describes your feelings. After you've marked that cell, click OK to record your response.

## Your Earnings

Once all your decisions in the 10 periods have been made, we will randomly select one of the 10 periods as the period-that-counts. We will use the period-that-counts to determine your actual earnings. Note, since all periods are equally likely to be chosen, you should make all your decision in each period as if it will be the period-that-counts.

## Things to Remember

- You will be in a group of 4 people
- The groups will remain the same every decision period, but individual identifiers will change each period.
- This part of the study will be exactly like the first 5 periods except you will record how you feel.
- You will be paid for one randomly selected period.
- If your period earnings are negative we will pay you $\$ 0.00$ for this period but you will always earn at least $\$ 5$ for completing today's study.
- Please feel free to use the calculator, and scratch paper provided to help you with your calculations.
- Respond naturally with whatever thoughts and emotions occur to you spontaneously.


## You may now begin making decisions for the next 5 periods. Importantly, remember your instructions:

## Please focus on the task and do your best to respond naturally with whatever thoughts and emotions occur to you spontaneously.

## Screenshots

## Pre-Mood Rating

Period
1 of 10

Instructions: Please read each item and mark the appropriate answer. Indicate to what extent you feel this way right now, in this moment.

| Anxious, Worried, Fearful | notatall $C \subset C \subset C \subset C$ very much |
| :---: | :---: |
| Lonely, Distant, Isolated | not at all $C \subset C \subset C \subset C$ very much |
| Self-Confident, Capable, Worthwhile | notatall $\mathrm{C} C \mathrm{C}$ |
| Sad, Depressed, Down | not at all $C \subset C \subset \subset \subset \subset$ very much |
| Rejected, Put Down, Hurt | notatall $C \subset C \subset \subset \subset \subset$ very much |
| Happy, Pleased, Contented | not at all $C \subset C \subset C C O$ very much |
| Judged, Scrutinized, Evaluated | not at all $C \subset C \subset C C O$ very much |
| Angry, Irritated, Provoked | notatall $\mathrm{C} C \mathrm{C}$ |
| Affectionate, Loving, Connected To Others | notatall $C \subset C \subset C \subset C$ very much |
| Embarrassed, Humiliated, Ashamed | not at all $C \subset C \subset C \subset C$ very much |
| Active, Alert, Keyed Up | notatall $C \subset C \subset C \subset C$ very much |

F'eriod

Please wait. The experimenter will tell you a code to enter when you are ready to proceed.


## No Reg

## Comprehensive Test

$$
\text { Period } 1 \text { of } 10
$$

1. Imagine your other group members invest 10 tokens in the BLUE investment. If you invest 2 of your 5 tokens in the BLUE investment, what are the total number of tokens in BLUE ? $\square$
2. In the example above you invested 3 in the RED and 2 in the BLUE so what would be your payoff?
3. If you assign 2 deduction points how much would this cost you?
4. If you assign 2 deduction points how much would be deducted from the other player? $\square$

Period
1 of 10

In thinking about how to approach the task, how should you respond if you feel angry when you are deciding whether to deduct tokens and how many to deduct from another group member? Select the answer below that best achieves the goal to stay calm by adopting a neutral, analytical, objective attitude.
$C$ a. Allow yourself to think about how the other group member is behaving selfishly
C b. Actively try to think positive thoughts, for example a fun activity that you're looking forward to doing later
$C$ c.Actively try to think neutral thoughts, for example a mental list of items to get at the grocery store
$C$ d. Actively try to think about how the other group member did not intend to insult you when making her or his investment decision

## No Reg

## Comprehensive Test Answers (Wrong vs Right)

allowing yourself to respond naturally. Responding naturally means letting thoughts and teelings occur spontaneously rather than actively trying to think differently. In addition, it is important that your thoughts remain focused on the task. Since these neutral thoughts are not occurring spontaneously and they are unrelated to the task, this is not the best approach to responding naturally while remaining focused on the task.

The best answer is:
d. Allow yourself to think about how the other group member is behaving selfishly .

Allowing yourself to think about how the other group member is behaving selfishly means you are responding naturally and letting yourself have whatever thoughts occur spontaneously. In addition, such thoughts are focused on the task rather than on things that are unrelated to the task. Thus, of the four options you were given, allowing yourself to think about how the other group member is behaving selfishly is the best approach to responding naturally while remaining focused on the task.
a is incorrect also. If you are actively trying to think about how the other group member did not intend to insult you when she or he made an investment decision, that means that you are not allowing yourself to respond naturally. Responding naturally means letting thoughts and feelings occur spontaneously rather than actively trying to think differently.
b is incorrect also. If you are actively trying to think positive thoughts, for example about a fun activity that you're looking forward to doing later, that means you are not allowing yourself to respond naturally. Responding naturally means letting thoughts and feelings occur spontaneously rather than actively trying to think differently. In addition, it is important that your thoughts remain focused on the task. Since these thoughts are not occurring spontaneously, they are positive, and they are unrelated to the task, this is not the best approach to responding naturally while remaining focused on the task.
d. Allow yourself to think about how the other group member is behaving selfishly.

Allowing yourself to think about how the other group member is behaving selfishly means you are responding naturally and letting yourself have whatever thoughts occur spontaneously. In addition, such thoughts are focused on the task rather than on things that are unrelated to the task. Thus, of the four options you were given, allowing yourself to think about how the other group member is behaving selfishly is the best approach to responding naturally while remaining focused on the task.
a is incorrect. If you are actively trying to think about how the other group member did not intend to insult you when she or he made an investment decision, that means that you are not allowing yourself to respond naturally. Responding naturally means letting thoughts and feelings occur spontaneously rather than actively trying to think differently.
b is incorrect also. If you are actively trying to think positive thoughts, for example about a fun activity that you're looking forward to doing later, that means you are not allowing yourself to respond naturally. Responding naturally means letting thoughts and feelings occur spontaneously rather than actively trying to think differently. In addition, it is important that your thoughts remain focused on the task. Since these thoughts are not occurring spontaneously, they are positive, and they are unrelated to the task, this is not the best approach to responding naturally while remaining focused on the task.
c is incorrect also. If you are actively trying to think neutral thoughts, for example about a mental list of items to get at the grocery store, that means you are not allowing yourself to respond naturally. Responding naturally means letting thoughts and feelings occur spontaneously rather than actively trying to think differently. In addition, it is important that your thoughts remain focused on the task. Since these neutral thoughts are not occurring spontaneously and they are unrelated to the task, this is not the best approach to responding naturally while remaining focused on the task.

## No Reg

## Period 1-5, Stage

Period

$$
1 \text { of } 10
$$

Stage 1
You are in the same group of 4 people. A new identifier number is assigned, so the Player 1 in last period may not be the same person as Player 2 in this period.

You have 5.0 tokens for your Stage 1 endowment.
Tokens in the RED investment earn $\$ 1.50$ for you, and $\$ 0.00$ for all your other group members.
Tokens in the BLUE investment earn $\$ 1.00$ for you and for all your other group members. Use the box to decide how many of your 5.0 tokens will be invested in the RED investment. Use the box to decide how many of your 5.0 tokens will be invested in the BLUE investment.


| RESULTS (Stage 1): |  |  |
| ---: | :---: | :---: |
| RED investment: | 2 |  |
| 日LUE investment: | 3 |  |
| Total Tokens in BLUE investment: | 11 |  |
| Stage 1 Earnings | 14.00 | OK |

## Period 1-5, Stage 2

| Period 1 of 10 |
| :---: |
| Remember: As you consider your decisions, please respond naturally with |
| Whatever thoughts and emotions occur to you spontaneously |
| Period |

Stage 2
You can assign a deduction of $\$ 3.00$ to any other player by paying $\$ 1.00$ to assign 1 deduction point to that player. You may assign any amount of deduction points you can afford to another player (e.g. 0, 1, 2. 3...). To assign no deduction points enter 0 . Enter your deduction points in the boxes provided.

Remember: As you consider your decisions, please respond naturally with whatever thoughts and emotions occur to you spontaneously

| Player | RED imvestment: | BLUE imvestment: | Stage 1 Earnings | Deduction Points |
| :---: | :---: | :---: | :---: | :---: |
| Player 1 | 0 | 5 | 20.00 |  |
| You | 0 | 5 | 20.00 |  |
| Player 3 | 0 | 5 | 20.00 |  |
| Player 4 | 0 | 5 | 20.00 | \| |
| Total |  | 20 |  |  |

No Reg


## No Reg <br> After Period 5, new instruction is distributed



## No Reg

## Period 6-10 Stage 1

## Stage 1

You are in the same group of 4 people. A new identifier number is assigned, so the Player 1 in last period may not be the same person as Player 2 in this period.

You have 5.0 tokens for your Stage 1 endowment

Tokens in the RED investment earn $\$ 1.50$ for you, and $\$ 0.00$ for all your other group members.
Tokens in the BLUE investment earn $\$ 1.00$ for you and for all your other group members.
Use the box to decide how many of your 5.0 tokens will be invested in the RED investment.
Use the box to decide how many of your 5.0 tokens will be invested in the BLUE investment.


6 of 10

| RESULTS (Stage 1): |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| RED investment: | 0 |  |  |  |
| BLUE investment: | 5 |  |  |  |
|  | Total Tokens in BLUE investment: | 20 |  |  |
| Stage 1 Earnings | 20.00 |  |  |  |

## Period 6-10 Stage 2



Stage 2
You can assign a deduction of $\$ 3.00$ to any other player by paying $\$ 1.00$ to assign 1 deduction point to that player. You may assign any amount of deduction points you can afford to another player (e.g. 0, 1, 2. 3...).
To assign no deduction points enter 0 . Enter your deduction points in the boxes provided.
Remember: As you consider your decisions, please respond naturally with whatever thoughts and emotions occur to you spontaneously

| Player | RED imvestment: | BLUE imvestment: | Stage 1 Earnings | Deduction Points |
| :---: | :---: | :---: | :---: | :---: |
| Player 1 | 0 | 5 | 20.00 |  |
| Player 2 | 0 | 5 | 20.00 |  |
| Player 3 | 0 | 5 | 20.00 | \| |
| You | 0 | 5 | 20.00 |  |
| Total |  | 20 |  |  |

No Reg

$$
6 \text { of } 10
$$

## RESULTS:

$$
\text { Stage } 1 \text { Earnings } \quad 20.00
$$

Cost of points punishment you assigned to other players 0.00
Income reduction (assigned to you by other players) 0.00
Your final payoff this period is: $\quad 20.00$
[20.00-0.00-0.00 $=20.00$ ]
Period 6 of 10

$$
\text { Below is a summary of your group's Stage } 2 \text { Earnings. }
$$

| Player | RED imvestment: | BLUE investment: | Stage 1 Earnings | Points Assigned | Total Reduction | Stage 2 Earnings |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Player 1 | 0 | 5 | 20.00 | 0.00 | 0.00 | 20.00 |
| Player 2 | 0 | 5 | 20.00 | 0.00 | 0.00 | 20.00 |
| You | 0 | 5 | 20.00 | 0.00 | 0.00 | 20.00 |
| Player 4 | 0 | 5 | 20.00 | 0.00 | 0.00 | 20.00 |
| Total |  |  |  |  |  |  |

## No Reg

## Period 6-10 Stage 3



## No Reg

## Post-Mood Rating

```
Period
10 of 10
```

Instructions: Please read each item and mark the appropriate answer. Indicate to what extent you feel this way right now, in this moment.

| Anxious, Worried, Fearful | not at all $\bigcirc \subset \bigcirc \bigcirc \bigcirc$ |
| :---: | :---: |
| Lonely, Distant, Isolated | not at all $\bigcirc \subset \bigcirc \bigcirc$ |
| Self-Confident, Capable, Worthwhile | not at all $C$ C $C$ C $C$ very much |
| Sad, Depressed, Down | not at all $C$ C $C$ C $C$ very much |
| Rejected, Put Down, Hurt | not at all $C$ C $C$ C $C$ very much |
| Happy, Pleased, Contented | not at all $C$ C C C C C very much |
| Judged, Scrutinized, Evaluated | not at all $C$ C $C$ C $C$ very much |
| Angry, Irritated, Provoked | not at all $C$ C $C \bigcirc \bigcirc \bigcirc$ |
| Affectionate, Loving, Connected To Others | not at all $C$ C C C C C verymuch |
| Embarrassed, Humiliated, Ashamed <br> Active, Alert, Keyed Up |  |


[^0]:    Period
    1 of 10

