**Electronic Supplementary Material**

**Strategic Exploitation of Higher-Status Targets Incurs Harsher Third-Party Punishment**

# Study 1 Experimental Instructions

Thank you for participating in this study!

In addition to the basic pay (i.e., $0.7) you will receive for completing this study, you may also win extra money ($0~$4) as a bonus, specifically as below:

You will participate in an interactive game with other workers. The game has three Players: Sender, Receiver, and Observer.

All participants are organized into three-player groups, and 1 out of every 20 groups will receive the amount of money as indicated in the game. That is to say, each participant has a 5% chance to win the actual bonus, which also depends on decisions of other players in the same group.

## --You are an Observer in this game--

What is your role in this interactive game? (Sender/Receiver/**Observer**)

[page break]

## --Below is how Sender and Receiver play the game--

In this game:

- Both Sender and Receiver are endowed with $1.

- The game costs both Sender and Receiver $1, and they choose whether to COOPERATE or DEFECT.

- The final payoffs of Sender and Receiver will be determined by the choices of both as below.

|  |  | Receiver | |
|---|---|---|---|
|  |  | Cooperate | Defect |
| **Sender** | Cooperate | $3  $3 | $0  $4 |
|  | Defect | $4  $0 | $1  $1 |

Please answer the following two questions, to make sure you understand this game. You MUST answer the questions correctly to proceed.

1. If a Sender chooses to defect and a Receiver chooses to cooperate, how much will the Sender earn? ($0/$1/$3/**$4**)

2. If a Sender chooses to cooperate and a Receiver chooses to cooperate, how much will the Receiver earn? ($0/$1/**$3**/$4)

[page break]

**--Below is more about how Sender and Receiver play the game--**

In this game, before Sender and Receiver's decisions about cooperation/defection, ONLY Sender has a chance to send a message to his/her partner (i.e., Receiver). The message says:

***"I think people should definitely cooperate in this game."***

IMPORTANTLY, the message may NOT necessarily bind Sender's choice. That is, Sender is free to send the message and then choose to defect.

Also, Sender can directly choose to cooperate/defect WITHOUT sending the message.

Please answer the following two questions, to make sure you understand this game. You MUST answer the questions correctly to proceed.

1. Which player can send a message to his/her partner? (**Sender**/ Receiver/ Both Sender and Receiver)

2. If Sender sends a message saying, "I think people should definitely cooperate in this game", what is his/her actual choice? (Cooperate/Defect/**Can either cooperate or defect**)

[page break]

**--Below is more about how Sender and Receiver play the game--**

The game proceeds as below:

First, Sender decides whether to (1) send the message and (2) cooperate/defect.

(1) If Sender sends the message, Receiver receives the message and then decides whether to cooperate/defect.

(2) If Sender does NOT send the message, Receiver knows that the Sender chooses NOT to send the message and then decides whether to cooperate/defect.

Receiver decides to cooperate/defect WITHOUT knowing Sender's actual choice of cooperation/defection.

Please answer the following two questions, to make sure you understand this game. You MUST answer the questions correctly to proceed.

1. If the Sender does not send the message, will the Receiver receive the message saying "I think people should definitely cooperate in this game"? (Yes/**No**/Not sure)

2. Does the Receiver know the Sender's cooperation/defection before making his/her own choice of cooperation/defection? (Yes/**No**/Not sure)

[page break]

**--Below is how Sender/Receiver roles are assigned--**

**[High Status Sender: Between-subjects]**

**According to a short survey below, Senders are assigned to participants who score HIGHER than the same-group Receivers.**

**To help you understand the survey, please also complete this survey based on your own feelings in your daily life:**

1. Others often seek my opinion because they respect me.
2. I have a good reputation among those I work with.
3. I am highly respected by others at work.
4. People look up to me because I am good at my job.
5. I am admired by others at work because I am seen as competent in my work.
6. Coworkers come to me because they trust my judgment.
7. People come to me for advice because I am good at my job.
8. In general, my position tends to be highly respected.

**As you may have seen, the survey is actually about social status, with HIGHER scores representing the possession of A GREAT DEAL of status in daily life.**

**That is to say, as compared to Receivers, Senders are those who are MORE respected and held in HIGHER esteem. Receivers usually look up the Senders and admire them.**

**Thus, Senders can send a message and strongly influence Receivers' choice of cooperation/defection. This gives Senders relatively HIGHER STATUS than Receivers.**

**[Low Status Sender: Between-subjects]**

**According to a short survey below, Senders are assigned to participants who score LOWER than the same-group Receivers.**

**To help you understand the survey, please also complete this survey based on your own feelings in your daily life:**

1. Others often seek my opinion because they respect me.
2. I have a good reputation among those I work with.
3. I am highly respected by others at work.
4. People look up to me because I am good at my job.
5. I am admired by others at work because I am seen as competent in my work.
6. Coworkers come to me because they trust my judgment.
7. People come to me for advice because I am good at my job.
8. In general, my position tends to be highly respected.

**As you may have seen, the survey is actually about social status, with HIGHER scores representing the possession of A GREAT DEAL of status in daily life.**

**That is to say, as compared to Receivers, Senders are those who are LESS respected and held in LOWER esteem. Senders usually look up to the Receivers and admire them.**

**Thus, Receivers can choose whether to cooperate/defect after knowing Senders' preference through the message. This gives Senders relatively LOWER STATUS than Receivers.**

NOW, after knowing how Sender/Receiver roles are assigned, please answer:
To what extent do you think Senders have lower or higher status than Receivers? (1 = Definitely lower to 7 = Definitely higher)
To what extent do you think Senders are less or more respected than Receivers?
(1 = Definitely less respect to 7 = Definitely more respect)
To what extent do you think Senders are less or more competent persons than Receivers?
(1 = Definitely less competent to 7 = Definitely more competent)

[page break]
**--Below is information about Observer role--**

Each pair of Sender-Receiver is matched with an Observer.

- Observer is always endowed with $3.

- Observer knows whether Sender sends the message, and both Sender and Receiver's cooperation/defection.

- Observer decides whether to use his/her endowment to reduce the payoffs of Sender or Receiver.

- If Observer decides to use some money (e.g., X cents), to reduce the payoff of Sender, X cents will be subtracted from the Observer's own endowment and 3X cents from the Sender's payoff.

- If Observer decides to use some money (e.g., X cents), to reduce the payoff of Receiver, X cents will be subtracted from the Observer's own endowment and 3X cents from the Receiver's payoff.

- Observer can reduce both Sender and Receiver's endowment. The reduction from Sender does not change the payoff of Receiver, and the reduction from Receiver does not change the payoff of Sender.

[page break]

For example, imagine the below situation:

(1) Both a Sender and a Receiver are endowed with $1, and an Observer is endowed with $3.

(2) According to the short survey, the Sender possesses higher[lower] status than the Receiver.

(3) The Sender sends a message saying "I think people should definitely cooperate in this game" and defects.

(4) The Receiver receives the message and cooperates.

(5) Then the Observer uses $0.8 to reduce the Sender's payoff, and does not pay to reduce the Receiver's payoff.

**The final payoffs would be:**

**The Sender earns $1.6. ($4 – $0.8\*3 = $1.6)**

**The Receiver earns $0.**

**The Observer earns $2.2. ($3 – $0.8 – $0= $2.2)**

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**Bullet points [appearing at the bottom of each page of choice]:**

**1. The payoffs of Sender and Receiver are determined as below:**

| | | Receiver | |
|---|---|---|---|
| | | Cooperate | Defect |
| **Sender** | Cooperate | $3 $3 | $0 $4 |
| | Defect | $4 $0 | $1 $1 |

**2. Sender can send a message saying "I think people should definitely cooperate in this game."**

**3. Senders are higher-[lower-] status persons than Receivers.**

**4. Observer can reduce Sender's and Receiver's payoff at a 1:3 ratio (i.e., using $1 to reduce $3 from Sender/Receiver).**

[page break]

Please answer the following two sets of questions, to make sure you understand this game. You MUST answer all questions correctly to proceed. You can refer to the bullet points at the bottom of each page.

1. Imagine the below situation:

A Sender does not send the message and cooperates. A Receiver does not receive the message and defects. Then an Observer uses $0.5 to reduce the Receiver's payoff.

1a. How much will the Sender earn? (**$0**/$0.8/$3.4/$4)

1b. How much will the Receiver earn? ($0/**$2.5**/$3.5/$4)

1c. How much will the Observer earn? ($1/$1.5/**$2.5**/$3)

2. Imagine the below situation:

A Sender sends the message and defects. A Receiver receives the message and defects. Then an Observer uses $0.2 to reduce the Sender's payoff, and uses $0.1 to reduce the Receiver's payoff.

1a. How much will the Sender earn? ($0/**$0.4**/$0.8/$1)

1b. How much will the Receiver earn? ($0/**$0.7**/$0.9/$1)

1c. How much will the Observer earn? (**$2.7**/$2.8/$2.9/$3)

**-- NOW the game will start and you will be an Observer—**

Please note that we do not yet know how Senders and Receivers make their decisions. However, there are eight combined possibilities in total.

On the next few pages, as an Observer, you will respond to all the eight possibilities and assume a $3 endowment for each. After the game ends, only one of your eight answers will be matched with a Sender's and a Receiver's actual choices.


**-- Please click on "NEXT" to make your Observer choices--**

**[Sample scenario 1]**

*If, in the game…*

– *Sender sends the message saying "I think people should definitely cooperate in this game" and then chooses to DEFECT*

– *Receiver receives the message and then chooses to COOPERATE*

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Please choose:

How selfish or generous do you think the Sender's reasons are in doing so?

How selfish or generous do you think the Receiver's reasons are in doing so?

As an Observer in this game, you now have a $3 bonus. Do you want to pay, to reduce the payoff of the Sender/Receiver at a 1:3 ratio (i.e., if you pay $0.1, the Sender/Receiver loses $0.3)?

If you do not want to reduce the Sender's payoff, choose 0. If yes, choose an amount you want to pay below. (15-point scale; from $0 to $1.5)

If you do not want to reduce the Receiver's payoff, choose 0. If yes, choose an amount you want to pay below. (15-point scale; from $0 to $1.5)

Imagine a DIFFERENT game you will play with the Sender. In this game, the Sender receives $10, and can choose to give any whole-dollar portion of it to you and keep the remainder. The Sender makes the choice in private without anyone else knowing his/her identity. How much do you think the Sender will give to you? (10-point scale; from $0 to $10)

*NOTE: The other players are REAL, and your decision will have a chance to determine how much bonus you and the other players actually receive. Your decision from this page will be used to calculate your bonus and the bonus of the other players.*

**[Sample scenario 2]**

*If, in the game…*

– *Sender does not send the message saying "I think people should definitely cooperate in this game" and then chooses to COOPERATE*

– *Receiver does not receive the message and then chooses to COOPERATE*

----------------------------------------

Please choose:

How selfish or generous do you think the Sender's reasons are in doing so?

How selfish or generous do you think the Receiver's reasons are in doing so?

Imagine a DIFFERENT game you will play with the Sender. In this game, the Sender receives $10, and can choose to give any portion of it to you and keep the remainder. The Sender makes the choice in private without anyone else knowing his/her identity. How much do you think the Sender will give to you? (100-point scale; from $0 to $10)

As an Observer in this game, you now have a $3 bonus. Do you want to pay, to reduce the payoff of the Sender/Receiver at a 1:3 ratio (i.e., if you pay $0.1, the Sender/Receiver loses $0.3)?

If you do not want to reduce the Sender's payoff, choose 0. If yes, choose an amount you want to pay below. (15-point scale; from $0 to $1.5)

If you do not want to reduce the Receiver's payoff, choose 0. If yes, choose an amount you want to pay below. (15-point scale; from $0 to $1.5)

*NOTE: The other players are REAL, and your decision will have a chance to determine how much bonus you and the other players actually receive. Your decision from this page will be used to calculate your bonus and the bonus of the other players.*

# Study 2 Experimental Instructions

Thank you for participating in this study!

In addition to the basic pay (i.e., $0.5) you will receive for completing this study, you may also win extra money ($0~$8) as a bonus, specifically as below:

You will participate in an interaction game with other Mturk workers. The game has three Players: Distributor, Recipient, and Observer.

All participants are organized into three-player groups, and each participant has a 5% chance to win the actual bonus, as also determined by players in the same group. In other words, one among every twenty groups will receive the amount of money as indicated in the game.

## --Below is information about Distributor role--

Each distributor assigns $10 bonus between the self and another recipient.

Each Distributor has two options:
(1) Giving $8 to the self and $2 to a Recipient
(2) Giving $5 to the self and $5 to a Recipient

Distributor could choose from:
(1) $8/$2 and (2) $5/$5 at **his/her own will, OR**
(3) **guess two online six-sided dice ONCE** to help him/her decide, one dice in RED and the other in GREEN.

The dice guessing rules are:
(a) IF a Distributor guesses BOTH the GREEN and the BLUE dice CORRECTLY (with a 1/36 chance), the Distributor should (1) give $8 to the self and $2 to the Recipient
(b) IF a Distributor guesses ANY of the two dice INCORRECTLY (with a 35/36 chance), the Distributor should (2) give $5 to the self and $5 to the Recipient

IF a Distributor chooses to guess the dice to decide between (1) $8/$2 and (2) $5/$5, the Distributor FIRST guesses the numbers in his/her head, THEN roll the two dice once, and LASTLY indicate on one question whether he/she guesses correctly.

After reading the above instructions, please answer four questions accordingly:

Are Distributors free to choose by themselves, instead of guessing the dice, if they want?
Yes (1)
No (2)
Not sure (3)
Validation: (when choosing other than Yes) Your answer is not correct. Distributors are free to choose from (1) $8/$2, or (2) $5/$5, and (3) guessing the dice.

According to the dice guessing rules, if a Distributor guesses 6 for the GREEN dice and 3 for the BLUE dice, but the dice rolling shows 3 for the GREEN dice and 6 for the BLUE dice, should the Distributor get $8 for the self and $2 for the Recipient?
Yes (1)
No (2)

Not sure  (3)
Validation: (when choosing other than No) Your answer is not correct. Distributors should gain $8 only when they guess BOTH the green and the blue six-sided dice correctly.

What is the chance to win $8 for the self if a Distributor choose to guess the dice?
1/6 ($\approx$ 16.7%)  (1)
1/9 ($\approx$ 11.1%)  (2)
1/12 ($\approx$ 8.3%)  (3)
1/36 ($\approx$ 2.8%)  (4)
Validation: (when choosing other than 1/36) Your answer is not correct. Distributors should gain $8 only when they guess both the green and the blue six-sided dice correctly (i.e., 1/36 chance).

Are Distributors required to write down the numbers that they guess before they roll the dice?
Yes  (1)
No  (2)
Not sure  (3)
Validation: (when choosing other than No) Your answer is not correct. Distributors guess the numbers in their head before rolling the dice.

**--Below you try Distributor role once as exercise--**

**How do you want to distribute $10?**
**$8 to the self and $2 to a recipient**
**$5 to the self and $5 to a recipient**
**Guess two dice**

**[If choosing "Guess two dice"]**
**What is the GREEN dice? And what is the BLUE dice?**
[Javascript of dice rolling]

**Did you guess both the dice correctly?**
YES! ---Congrats! You get $8 for yourself and $2 for a recipient
NO! ---Not bad! You get $5 for yourself and $5 for a recipient

Note: This is an exercise session, to have ALL participants experience how Distributors make choices. Your answers will NOT be used to calculate your actual bonus.

**--Below is information about Recipient role--**

After a Distributor makes a choice between (1) $8/$2 and (2) $5/$5, a Recipient receives either $2 or $5 correspondingly.

**--Below is information about Observer role--**

Each Observer receives a fixed $5.

An Observer knows the choices of the same-group Distributor. An example is shown as below:

[SCREENSHOOT]

The Observer then decides whether to use his/her own $5 to reduce the Distributor's bonus at a ratio of 1: 3.

That is to say, if an Observer decides to use X cents to reduce the Distributor's bonus, X cents are subtracted from the Observer's bonus, 3X cents are subtracted from the Distributor's bonus. But the Observer's decision does not change the Recipient's bonus.

After reading the above instructions, please answer four questions accordingly:

If a Distributor gets $8/$2 without guessing the dice. A Observer then uses $1.3 to reduce the Distributor's bonus. How much will the Distributor eventually get?
$8 (1)
$4.1 (2)
$3.1 (3)
$2 (4)
Validation: (when choosing other than $4.1) Your answer is not correct. The Distributor gets $8 − ($1.3 × 3) = $4.1.

If a Distributor gets $5/$5 after indicating to have guessed the dice incorrectly. An Observer then uses $0.1 to reduce the Distributor's bonus. How much will the Distributor eventually get?
$8 (1)
$5 (2)
$4.7 (3)
$0.3 (4)
Validation: (when choosing other than $4.1) Your answer is not correct. The Distributor gets $5 − ($0.1 × 3) = $4.7.

Please recall again: What is the chance to win $8 for the self if a Distributor chooses to guess the dice? [Attention check; correct answer as 1/36]
1/6 (≈ 16.7%) (1)
1/9 (≈ 11.1%) (2)
1/12 (≈ 8.3%) (3)
1/36 (≈ 2.8%) (4)

If a Distributor gets $8/$2 after indicating to have guessed the dice correctly. An Observer then uses $2.2 to reduce the Distributor's bonus. How much will the Distributor eventually get? [Attention check; correct answer as $1.4]
$8 (1)
$6.6 (2)
$2.4 (3)
$1.4 (4)

**--You are an Observer in this game--**

What is your role in this interaction game?
Distributor (1)
Recipient (2)
Observer (3)

Validation: (when choosing other than Observer) Your answer is not correct. You are an Observer in this game.

**[High Status Condition: Between-subjects]**

**--Below is how Distributor/Recipient roles are assigned--**

**Distributors are assigned to participants who score SUPERIORLY on the below survey, with the remaining as Recipients.**

**To help you understand the survey, please also complete this survey based on your own feelings in your daily life:**

1. Others often seek my opinion because they respect me.
2. I have a good reputation among those I work with.
3. I am highly respected by others at work.
4. People look up to me because I am good at my job.
5. I am admired by others at work because I am seen as competent in my work.
6. Coworkers come to me because they trust my judgment.
7. People come to me for advice because I am good at my job.
8. In general, my position tends to be highly respected.
9. I am rarely concerned how my status compares to others.
10. I do not consider what others think about my status.
11. I react very negatively when my status is challenged.
12. I am very sensitive to whether I feel my status is being threatened during my   interactions with others.
13. I find it important that others acknowledge my status.
14. I try hard to maintain my status in my interactions with others.
15. I find it upsetting when others do not seem to think the same of my status as I do.
16. It is important to me that others agree with me about my status.
17. I wish to have high status.
18. When I feel my status is low, I feel very bad.

**As you may have seen, the survey is actually about social status, with higher scores representing the possession of a great deal of status in daily life.**

**That is to say, Distributors are those who are HIGHLY respected and held in HIGH esteem, as compared to most others around them. People look up to the Distributors and admire them TO A GREAT EXTENT, and this makes them very HIGH-STATUS persons in their work and life.**

NOW, after knowing how Distributors roles are assigned, please write down some of your thoughts on **how the Distributors would be like as a HIGH-STATUS person.** For example, how would they usually act and interact with others?


In general, to what extent do you think the Distributors are low-status or high-status persons?

In general, to what extent do you think the Distributors have very little or a great deal of respect from others?

**[Controlled Status Condition: Between-subjects]**

**--Below is how Distributor/Recipient roles are assigned--**

**Distributors are assigned to participants who score MODERATELY on the below survey, with the remaining as Recipients.**

**To help you understand the survey, please also complete this survey based on your own feelings in your daily life:**

1. Others often seek my opinion because they respect me.
2. I have a good reputation among those I work with.
3. I am highly respected by others at work.
4. People look up to me because I am good at my job.
5. I am admired by others at work because I am seen as competent in my work.
6. Coworkers come to me because they trust my judgment.
7. People come to me for advice because I am good at my job.
8. In general, my position tends to be highly respected.
9. I am rarely concerned how my status compares to others.
10. I do not consider what others think about my status.
11. I react very negatively when my status is challenged.
12. I am very sensitive to whether I feel my status is being threatened during my   interactions
     with others.
13. I find it important that others acknowledge my status.
14. I try hard to maintain my status in my interactions with others.
15. I find it upsetting when others do not seem to think the same of my status as I do.
16. It is important to me that others agree with me about my status.
17. I wish to have high status.
18. When I feel my status is low, I feel very bad.

**As you may have seen, the survey is actually about social status, with higher scores representing the possession of a great deal of status in daily life.**

**That is to say, Distributors are those who are respected and held in esteem SIMILARLY as most other people are. People look up to the Distributors and admire them no more or less than average others, and this gives them a reasonably AVERAGE-LEVEL status in their work and life.**

NOW, after knowing how Distributors roles are assigned, please write down some of your thoughts on **how the Distributors would be like as a AVERAGE-LEVEL status person.** For example, how would they usually act and interact with others?


In general, to what extent do you think the Distributors are low-status or high-status persons?

In general, to what extent do you think the Distributors have very little or a great deal of respect from others?

Manipulations: presented in a random sequence

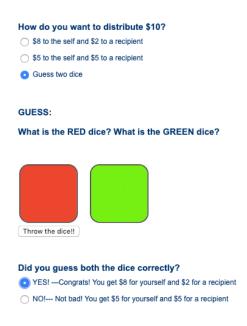- [Guess the dice + Indicate correct: Target trial]

- [Guess the dice + Indicate incorrect: Distraction trial]

- [Directly choose $8/$2: Target trial]

- [Directly choose $5/$5: Distraction trial]

**[Sample scenario 1]**

If the Distributor in your group chooses as below:



How generous or selfish do you think the Distributor's reasons are in doing so?

Do you think that the Distributor does so because he/she is more interested in helping himself/herself versus helping the recipient?

Do you think that the Distributor does so because he/she cares more about doing what is the best for the recipient versus what is the best for himself/herself?

You have a $5 bonus. How much do you want to pay, to reduce the Distributor's bonus at a 1:3 ratio (i.e., if you pay $0.1, the Distributor loses $0.3)? ($0 to $2.5)

*NOTE: The other players are REAL, and your decision will have a chance to determine how much bonus you and the other players actually receive.*

*If selected, your decision from this page will be used to calculate your bonus, and the bonus of the other players.*

# Additional Study Experimental Instructions

In addition to the payment you will receive for participating in this study, you can earn more money as a bonus, as follows:

You will participate in an interaction game with other workers. The game has three players: Player 1, Player 2, and Player 3.

## You are Player 1 (/2/3) in this game.

[page break]

Regardless of your roles, all Players should be clear about the rules below.

Specifically, in this game:

- Player 1 is endowed with 10 cents, and has a 50% chance to get another 30 cents. That is, Player 1 is endowed with either 10 cents (50% chance) or 40 cents (50% chance).

- Player 2 is always endowed with 10 cents.

- The game costs both Player 1 and Player 2 10 cents and they choose whether to COOPERATE or DEFECT.

- The final payoffs of Player 1 and Player 2 will be determined by the choices of both as below.

[page break]

If both Player 1 and Player 2 are endowed with 10 cents:

|  |  | PLAYER 2 | |
|---|---|---|---|
|  |  | Cooperate | Defect |
| PLAYER 1 | Cooperate | 30, 30 | 0, 40 |
|  | Defect | 40, 0 | 10, 10 |

If Player 1 is endowed with 40 cents, and Player 2 is endowed with 10 cents:

|  |  | PLAYER 2 | |
|---|---|---|---|
|  |  | Cooperate | Defect |
| PLAYER 1 | Cooperate | 60(=30+30), 30 | 30(=0+30), 40 |
|  | Defect | 70(=40+30), 0 | 40(=10+30), 10 |

Please answer the following six questions, to make sure you understand this game. You MUST answer all questions correctly to receive your bonus.

1.  Both Player 1 and Player 2 are endowed with 10 cents, and both choose to cooperate. How much will Player 2 earn? (10 cents/**30 cents**/40 cents)

2.  Player 1 is endowed with 40 cents and Player 2 is endowed with 10 cents, and both choose to cooperate. How much will Player 1 earn? (30 cents/40 cents/**60 cents**)

3.  Both Player 1 and Player 2 are endowed with 10 cents. Player 1 defects and Player 2 cooperates. How much will Player 2 earn? (**0 cents**/10 cents/30 cents/40 cents)

4.  Player 1 is endowed with 40 cents and Player 2 is endowed with 10 cents. Player 1 defects and Player 2 cooperates. How much will Player 1 earn? (30 cents/40 cents/60 cents/**70 cents**)

5.  Both Player 1 and Player 2 are endowed with 10 cents. Player 1 cooperates and Player 2 defects. How much will Player 2 earn? (0 cents/10 cents/30 cents/**40 cents**)

6.  Player 1 is endowed with 40 cents and Player 2 is endowed with 10 cents. Player 1 cooperates and Player 2 defects. How much will Player 1 earn? (**30 cents**/40 cents/60 cents/70 cents)

[page break]

In this game, before Player 1 and Player 2's decisions about cooperation/defection, ONLY Player 1 has a chance to send one of the below messages to his/her partner (i.e., Player 2):

a.  "It is definitely unethical to defect as Player 1."

b.  "I will definitely not defect."

IMPORTANTLY, Player 1's message may NOT necessarily bind Player 1's behavior. Player 1 can also choose NOT to send any of the two messages.

Please answer the following two questions, to make sure you understand this game. You MUST answer all questions correctly to receive your bonus.

3.  Which player can send a message to his/her partner? (**Player 1**/ Player 2/ Both Player 1 and Player 2)

4.  If Player 1 sends a message saying, "It is definitely unethical to defect as Player 1", what is his/her actual decision? (Cooperate/Defect/Can either cooperate or defect)

5.  If Player 1 sends a message saying, "I will definitely not defect", what is his/her actual decision? (Cooperate/Defect/Can either cooperate or defect)

[page break]

First, Player 1 makes a decision about message and cooperation/defection, and Player 2 makes a decision about cooperation/defection without knowing Player 1's cooperation/defection.

After Player 1 and Player 2's decisions, one half pairs of Player 1-Player 2 have a Player 3, while the other half do not.

–    If no Player 3 is included:

Player 1 and Player 2 will receive the final payoffs as determined by their respective decisions.

–    If a Player 3 is included:

Player 1 and Player 2 will receive the final payoffs, as also determined by Player 3's decisions, as follows.

•    Player 3 is always endowed with 50 cents.

•    After knowing Player 1 and Player 2's decisions, Player 3 decides whether or not to use his/her endowment to reduce the payoffs of Player 1 or Player 2.

•    If Player 3 decides to use some money (e.g., X cents), to reduce the payoff of Player 1, X cents will be subtracted from Player 3's own endowment and 3X cents from Player 1's payoff. Player 3's decision does not change Player 2's payoff.

•    If Player 3 decides to use some money (e.g., X cents), to reduce the payoff of Player 2, X cents will be subtracted from Player 3's own endowment and 3X cents from Player 2's payoff. Player 3's decision does not change Player 1's payoff.

•    Player 3 can reduce both Player 1 and Player 2's endowment.

[page break]

For example, imagine the below situation:

(6) Player 1 is endowed with 40 cents and Player 2 is endowed with 10 cents.

(7) Player 1 sends a message saying, "I will definitely not defect" and cooperates.

(8) Player 2 defects.

(9) Then Player 3 uses 5 cents to reduce Player 1's payoff, and uses 5 cents to reduce Player 2's payoff.

The final payoffs would be:

Player 1 earns 15 cents. (30 - 15)

Player 2 earns 25 cents. (40 - 15)

Please answer the following four sets of questions, to make sure you understand this game. You MUST answer all questions correctly to receive your bonus.

[page break]

1. Imagine the below situation:

Both Player 1 and Player 2 are endowed with 10 cents. Player 1 sends a message saying "It is unethical to defect" and cooperates. Player 2 defects. Then Player 3 uses 5 cents to reduce Player 2's payoff.

1a. How much will Player 1 earn? (**0 cents**/10 cents/30 cents/40 cents)

1b. How much will Player 2 earn? (0 cents/10 cents/**25 cents**/40 cents)

1c. How much will Player 3 earn? (10 cents/30 cents/35 cents/**45 cents**)

[page break]

2. Imagine the below situation:

Both Player 1 and Player 2 are endowed with 10 cents. Player 1 sends a message saying "It is unethical to defect" and defects. Player 2 cooperates. Then Player 3 uses 10 cents to reduce Player 1's payoff.

1a. How much will Player 1 earn? (0 cents/**10 cents**/30 cents/40 cents)

1b. How much will Player 2 earn? (**0 cents**/10 cents/30 cents/40 cents)

1c. How much will Player 3 earn? (10 cents/30 cents/**40 cents**/50 cents)

[page break]

6.  Imagine the below situation:

Player 1 is endowed with 40 cents and Player 2 is endowed with 10 cents. Player 1 sends a message saying "I will not defect" and defects. Player 2 cooperates. Then Player 3 uses 20 cents to reduce Player 1's payoff.

1a. How much will Player 1 earn? (0 cents/**10 cents**/30 cents/40 cents)

1b. How much will Player 2 earn? (**0 cents**/10 cents/30 cents/40 cents)

1c. How much will Player 3 earn? (10 cents/20 cents/**30 cents**/40 cents)

[page break]

7.  Imagine the below situation:

Player 1 is endowed with 40 cents and Player 2 is endowed with 10 cents. Player 1 sends no message and cooperates. Player 2 defects. Then Player 3 does not use his/her own endowment to reduce either of Player 1 or Player 2's payoff.

1a. How much will Player 1 earn? (0 cents/10 cents/**30 cents**/40 cents)

1b. How much will Player 2 earn? (0 cents/10 cents/30 cents/**40 cents**)

1c. How much will Player 3 earn? (10 cents/20 cents/40 cents/**50 cents**)

**NOW the game will start. You will be Player 1(/2/3) in this game.**

[page break]

[First sample scenario for Player 1]

*You are Player 1 in this game. You need to decide (1) whether to send a message to Player 2 and (2) whether to cooperate or defect, depending on (a) the presence of Player 3 and (b) Player 2 and your initial endowment.*

*If, in the game ……*

– *There is no Player 3*

– *You are endowed with 40 cents, and Player 2 is endowed with 10 cents*

*Please choose:*

*Do you send one of the below messages? ("It is unethical to defect"/"I will not defect"/I do not want to send a message)*

*Do you cooperate or defect? (Cooperate/Defect)*

*NOTE: The other players are REAL, and your decision will determine how much money you and the other players actually receive.*

*Once the study is over, we will use your decision from this page to calculate your bonus, and the bonus of the other players.*

[page break]

[Second sample scenario for Player 1]

*You are Player 1 in this game. You need to decide (1) whether to send a message to Player 2 and (2) whether to cooperate or defect, depending on (a) the presence of Player 3 and (b) Player 2 and your initial endowment.*

*If, in the game ……*

– *There is a Player 3*

– *You are endowed with 10 cents, and Player 2 is endowed with 10 cents*

*Please choose:*

*Do you send one of the below messages? ("It is unethical to defect"/"I will not defect"/I do not want to send a message)*

*Do you cooperate or defect? (Cooperate/Defect)*

*NOTE: The other players are REAL, and your decision will determine how much money you and the other players actually receive.*

[page break]

[First sample scenario for Player 2]

*You are Player 2 in this game. You need to decide whether to cooperate or defect, depending on (a) the presence of Player 3, (b) Player 1 and your initial endowment, and (c) Player 1's message.*

*If, in the game ……*

- *There is no Player 3*

- *Player 1 is endowed with 40 cents, and you are endowed with 10 cents*

- *Player 1 sends a message saying "It is unethical to defect".*

*Please choose:*

*Do you cooperate or defect? (Cooperate/Defect)*

*NOTE: The other players are REAL, and your decision will determine how much bonus you and the other players actually receive.*

*Once the study is over, we will use your decision from this page to calculate your bonus, and the bonus of the other players.*

[page break]

[Second sample scenario for Player 2]

*You are Player 2 in this game. You need to decide whether to cooperate or defect, depending on (a) the presence of Player 3, (b) Player 1 and your initial endowment, and (c) Player 1's message.*

*If, in the game ……*

- *There is a Player 3*

- *Player 1 is endowed with 10 cents, and you are endowed with 10 cents*

- *Player 1 does not send any message.*

*Please choose:*

*Do you cooperate or defect? (Cooperate/Defect)*

*NOTE: The other players are REAL, and your decision will determine how much bonus you and the other players actually receive.*

[page break]

[First sample scenario for Player 3]

*You are Player 3 in this game. You need to decide whether to use your 50 cents endowment to reduce Players 1 or Player 2's payoffs, depending on (a) Players 1 and 2's initial endowments, (b) Player 1's message and (c) final choice, and (d) Player 2's final choice.*

*If, in the game ......*

- *Player 1 is endowed with 40 cents, and Player 2 is endowed with 10 cents*

- *Player 1 sends a message saying "It is unethical to defect" and chooses to DEFECT*

- *Player 2 receives the message and chooses to COOPERATE*

*Please choose:*

*How much are you willing to pay, to reduce Player 1's payoff? (0, 5, 10, 15, 20, 25)*

*How much are you willing to pay, to reduce Player 2's payoff? (0, 5, 10, 15, 20, 25)*

<u>NOTE: The other players are REAL, and your decision will determine how much bonus you and the other players actually receive.</u>

<u>*Once the study is over, we will use your decision from this page to calculate your bonus, and the bonus of the other players.*</u>

[page break]

[Second sample scenario for Player 3]

*You are Player 3 in this game. You need to decide whether to use your 50 cents endowment to reduce Players 1 or Player 2's payoffs, depending on (a) Players 1 and 2's initial endowments, (b) Player 1's message and (c) final choice, and (d) Player 2's final choice.*

*If, in the game ......*

- *Player 1 is endowed with 40 cents, and Player 2 is endowed with 10 cents*

- *Player 1 does not send any message and chooses to DEFECT*

- *Player 2 does not receive any message and chooses to DEFECT*

*Please choose:*

*How much are you willing to pay, to reduce Player A's payoff? (0, 5, 10, 15, 20, 25)*

*How much are you willing to pay, to reduce Player B's payoff? (0, 5, 10, 15, 20, 25)*

*NOTE: The other players are REAL, and your decision will determine how much bonus you and the other players actually receive.*

*Once the study is over, we will use your decision from this page to calculate your bonus, and the bonus of the other players.*