

# Experimental Materials

## Treatment: Loss Frame-Competition<sup>1</sup>



### Welcome!

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Thank you for participating in our study! We are academic researchers from Boston University. This study will take approximately 15–25 minutes to complete. Your participation contributes to valuable academic research. After completing the study, you will receive a completion code for payment.

### Important Guidelines

- **Engagement:** Your careful attention is essential for the success of this research. Please read all instructions carefully, engage thoroughly in the tasks, and answer questions truthfully. The study includes multiple checks to ensure participants are engaging properly. Responses that show signs of inattention may be flagged as low quality and excluded from our analysis.
- **Commitment:** We kindly ask that you complete the entire study once you begin, as some sections involve interactions with other participants. Your participation is entirely voluntary, and you may withdraw at any point without penalty. However, please note that if you leave the study before finishing, your session will end, and you may not be able to resume later.
- **Anonymity:** This study is completely anonymous. Your Prolific ID will be used only to process your payment. No one will know your decisions or performance, and you will never be personally identified.

### Compensation

The base payment for participating in the study is \$6.00. You may lose up to \$4.00 of this amount in the first section. Bonuses are available in later sections. Your final payment will depend on your performance and decisions.

### Contact

If you have any questions, you may contact us at [jiaruiw@bu.edu](mailto:jiaruiw@bu.edu)

[Next](#)

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<sup>1</sup> Other treatments follow a similar structure; the full set of experimental materials is available upon request.



# Welcome!

## Informed Consent Form

### Introduction

Please read this form carefully. The purpose of this form is to provide you with important information about taking part in a research study. If you have any questions about the research or any portion of this form, please ask us. Participation in research is voluntary, which means that it is something for which you volunteer. It is your choice to participate in the study, or not to participate. If you choose to participate now, you may change your mind and stop participating later. If you decide not to participate, that decision will not result in any penalty or loss of benefits to which you are otherwise entitled.

The person in charge of this study is Jiarui Wang (PhD student, principal investigator) and Ray Fisman (faculty advisor). Jiarui Wang can be reached at [jiaruiw@bu.edu](mailto:jiaruiw@bu.edu). Ray Fisman can be reached at [rfisman@bu.edu](mailto:rfisman@bu.edu). We will refer to these people as the "researchers" throughout this form.

### Why is this study being done?

The purpose of this study is to examine people's decision-making behavior. We are asking you to take part in this study because you are an adult residing in the United States and are registered on Prolific. Approximately 800 participants will take part in this research study on Prolific.

- ☐ **I consent to participate in this study.** By checking this box, I confirm that I have read and understood the information provided about the purpose, risks, and benefits of this study. I understand that my participation is voluntary and I agree to the use of my data as described in the study information.


Next

### What is your Prolific ID?

Please make sure your prolific ID is entered correctly. We will use it to process payment.

Verify you are not a robot

☐ I'm not a robot

  
reCAPTCHA  
[Privacy](#) - [Terms](#)

Next

# Instructions

This study consists of Competition and Survey Sections. You will receive a **base** payment of **\$6.00** for participating. You may **lose up to \$4** of this amount in the Competition Section. Bonuses are available in the Survey Section. Your final payment will depend on your performance and decisions. The entire study will take approximately 15 to 25 minutes to complete.

## COMPETITION SECTION

You will be randomly paired with another participant for an IQ Quiz Competition (Intelligence Quotient Quiz Competition). Only **one** of you will keep the initial payment of \$6. The participant with the higher score will be the **top performer** and **keep the \$6**. The one with the lower score will be the **bottom performer** and **lose \$4** from their initial payment. If both participants have the same score, one will be randomly selected to lose \$4.

In the IQ Quiz Competition, you will **earn 1 point** for each correct answer, **lose 0.25 points** for each incorrect answer, and neither earn nor lose any points for skipped questions. Once you submit an answer or skip a question, you *cannot* go back to it. The quiz consists of fifty questions, and you will have *4 minutes* to answer as many as possible.

Throughout the competition, **you will see your opponent's raw score in real time**, which shows only the number of questions they have answered correctly (without any deductions for wrong answers). You will not see your own score during the competition. Your final score and competition results will be revealed at the end of the study.

Before the competition begins, you will have the opportunity to answer *a practice question* to get familiar with the quiz format.

## SURVEY SECTION

You will answer six survey questions and complete a decision-making task, followed by a few final survey questions. Some questions offer bonuses and will be clearly marked.

*Before we proceed, let's ensure you understand the instructions clearly. Please answer the following question correctly to continue.*

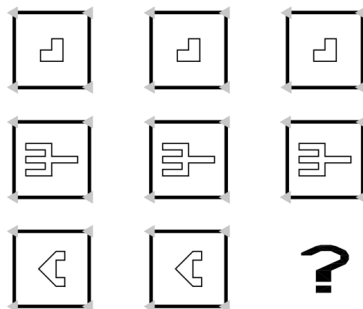
In the 4-minute IQ Quiz competition, Lucy answers 20 questions (14 correct, 6 incorrect) while Emily answers 12 questions (8 correct, 4 incorrect). Who **loses \$4** from the initial payment of \$6?

- ☐ Lucy
- ☐ Emily
- ☐ It's a tie. One of them will be randomly selected to lose \$4.

Next

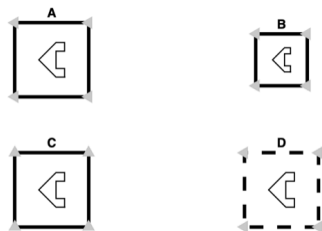
## Practice Question

A pattern with one missing piece is displayed below. Your task is to **select the correct piece** from the four available options.



Which piece is the right complement?

- ☐ A
- ☐ B
- ☐ C
- ☐ D



Next

Your answer was correct.

## IQ Quiz Competition is About to Start

### A few reminders:

1. This study is completely **anonymous**. Neither the organizers nor other participants will know your identity, and no one will know your performance or decisions.
2. To ensure high-quality research, please take the quiz in a quiet environment without distractions. **Turn off notifications or other potential interruptions before starting.**
3. During the competition, you will see your opponent's real-time *raw* score (number of correct answers) and a 4-minute timer. You will not see your own score. Competition results will be revealed at the end of the study. **Only the top performer keeps the full initial payment of \$6, while the bottom performer loses \$4.** Once you submit an answer or skip a question, you cannot go back to it. When you are ready, click 'Next' to begin matching and start the competition.

Next

### Please Wait

The system is matching you with a random participant. If matched, the quiz will start immediately. If not matched within 5 minutes, you'll receive a \$0.50 bonus as compensation.



Waiting: 4:54

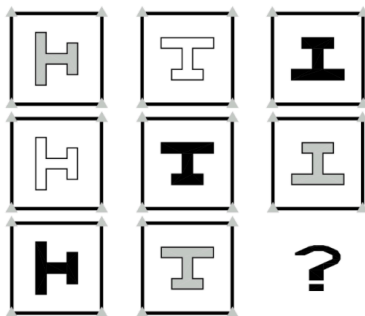
Time Left: 3:01

### IQ Quiz Competition - Question 3

Only one of you keeps the full initial payment of \$6.

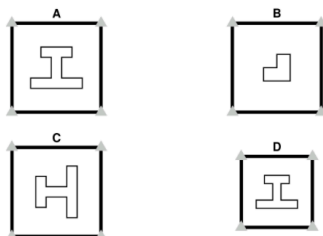
Top Performer: lose \$0 | Bottom Performer: lose \$4

Opponent's Raw Score:  2



Which piece is the correct complement?

- ☐ A
- ☐ B
- ☐ C
- ☐ D



Next

## Survey Introduction

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**The IQ Quiz Competition is complete.** You will see the results at the end of the study. As a reminder, **only the top performer will keep the full initial payment of \$6, while the bottom performer will lose \$4.**

Next, you will answer six survey questions and complete a decision-making task, followed by a few final survey questions. You can earn a bonus of up to **\$1.30** in this section, depending on your performance and decisions. Bonus-eligible questions will be clearly marked.

Please note that your responses will remain anonymous. Your honest responses are greatly appreciated. To ensure high-quality research, attention checks are included throughout the survey. Responses indicating inattention may be **excluded** from the analysis.

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Next

**On a scale from 1 (not at all enjoyable) to 7 (extremely enjoyable), how enjoyable was the IQ Quiz Competition?**

☐ 1      ☐ 2      ☐ 3      ☐ 4      ☐ 5      ☐ 6      ☐ 7

Not at all enjoyable      Extremely enjoyable

Next

Thinking back to how you felt during the IQ Quiz Competition, please indicate to what extent you were experiencing the following, on a scale from 1 (not at all) to 7 (extremely):

	1	2	3	4	5	6	7
Stress	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Excitement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Satisfaction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Embarrassment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Anxiety	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Next

On a scale from 1 (not at all likely) to 7 (extremely likely), how likely would you be to voluntarily take another 10 IQ questions, similar to the ones you just saw in the IQ quiz, with no monetary rewards?

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1	2	3	4	5	6	7
Not at all likely						Extremely likely

Next







Imagine you have another IQ quiz in front of you right now, similar to the one you just completed, but with a different set of fifty questions. You again have 4 minutes to answer as many as possible. **If you get at least 6 questions correct within the 4 minutes, you will receive a payment.** Below is a list of payment amounts. For each amount, please indicate 'Yes' if you would be willing to take the quiz for that payment, or 'No' if you would not.

\$0.20	<input type="radio"/> Yes, I would take	<input type="radio"/> No, I would not take
\$0.40	<input type="radio"/> Yes, I would take	<input type="radio"/> No, I would not take
\$0.60	<input type="radio"/> Yes, I would take	<input type="radio"/> No, I would not take
\$0.80	<input type="radio"/> Yes, I would take	<input type="radio"/> No, I would not take
\$1.00	<input type="radio"/> Yes, I would take	<input type="radio"/> No, I would not take
\$1.20	<input type="radio"/> Yes, I would take	<input type="radio"/> No, I would not take
\$1.40	<input type="radio"/> Yes, I would take	<input type="radio"/> No, I would not take
\$1.60	<input type="radio"/> Yes, I would take	<input type="radio"/> No, I would not take
\$1.80	<input type="radio"/> Yes, I would take	<input type="radio"/> No, I would not take
\$2.00	<input type="radio"/> Yes, I would take	<input type="radio"/> No, I would not take
\$2.50	<input type="radio"/> Yes, I would take	<input type="radio"/> No, I would not take
\$3.00	<input type="radio"/> Yes, I would take	<input type="radio"/> No, I would not take
\$5.00	<input type="radio"/> Yes, I would take	<input type="radio"/> No, I would not take

Next

Consider a local job market where both **immigrants** and **locals** work as day laborers. On Day 1, **immigrant workers** found **20 jobs**, while **local workers** found **40 jobs**. On Day 2, **immigrant workers** found **40 jobs**.

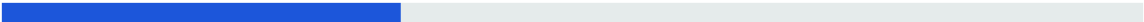
Which of the following estimates is more likely to be accurate regarding the number of jobs **local workers** found on Day 2?

<p>Day 1</p>  <p><i>Immigrant workers: 20 jobs found</i></p>	<p>Day 2</p>  <p><i>Immigrant workers: 40 jobs found</i></p>
<p>Day 1</p>  <p><i>Local workers: 40 jobs found</i></p>	<p>Day 2</p>  <p><i>Local workers: ____ jobs found</i></p>

☐ 20 jobs

☐ 80 jobs

Next



**Below are two statements. Where do your views fall on a scale from 1 to 10?**

*1 means you agree completely with the statement 1; 10 means you agree completely with the statement 2. If your views fall somewhere in between, you can choose any number in between.*

**Statement 1:** People can only become wealthy at the expense of others

**Statement 2:** Wealth can grow so there's enough for everyone



**1**



**2**



**3**



**4**



**5**



**6**



**7**



**8**



**9**




**10**

**Statement 1**

**Statement 2**

**Next**

 All payoffs are real and will be added as a bonus to your payment.

## Decision-Making Task

You are now paired with another random participant (not the person you interacted with earlier).

Each of you is given **\$0.50** and will independently decide whether to contribute it into a **shared pool** or to **keep it** for yourself. Your final payment will depend on both of your decisions, as shown below:

Other Participant's Decision	Your Decision	Other Participant's Payoff	Your Payoff
Put into pool	Put into pool	\$0.80	\$0.80
Keep the money	Keep the money	\$0.50	\$0.50
Keep the money	Put into pool	\$0.90	\$0.40
Put into pool	Keep the money	\$0.40	\$0.90


*Please answer the following question to ensure you understand the rules:*

If the other participant chooses to keep the money, and you choose to put the money into the pool, how much will you receive?

Your Answer:

- ☐ \$0.80
- ☐ \$0.90
- ☐ \$0.50
- ☐ \$0.40

Next

 All payoffs are real and will be added as a bonus to your payment.

**Please make your decision:**



Drag your \$0.50 to one of the options below.

**Put into pool**


**Keep the money**

Reminder:

Other Participant's Decision	Your Decision	Other Participant's Payoff	Your Payoff
Put into pool	Put into pool	\$0.80	\$0.80
Keep the money	Keep the money	\$0.50	\$0.50
Keep the money	Put into pool	\$0.90	\$0.40
Put into pool	Keep the money	\$0.40	\$0.90

Your final bonus from this task depends on **both** decisions. Take your time to decide. If dragging does not work, please click directly on a box to select. Once you are satisfied with your choice, press "Continue."

Continue

 If your answer is correct, you will receive a **\$0.20 bonus**.

**Approximately 800 participants are taking part in this study today. What percentage of them do you think choose to **keep the money**?**

☐ 0-10%    ☐ 11-20%    ☐ 21-30%    ☐ 31-40%    ☐ 41-50%    ☐ 51-60%    ☐ 61-70%    ☐ 71-80%    ☐ 81-90%    ☐ 91-100%


Reminder:

Other Participant's Decision	Your Decision	Other Participant's Payoff	Your Payoff
Put into pool	Put into pool	\$0.80	\$0.80
Keep the money	Keep the money	\$0.50	\$0.50
Keep the money	Put into pool	\$0.90	\$0.40
Put into pool	Keep the money	\$0.40	\$0.90

Next




## How would you split \$100 between yourself and a randomly-selected participant in this study?



The closer you drag the slider to one individual, the more money you allocate to that individual. The randomly-selected individual would never find out that it was you who sent them the money. Please drag the slider to the point where you feel satisfied with the way the money is split.




You  
\$50

How would I split the money?








A random participant  
\$50

Next

**This is not a question that needs to be answered. Instead, the goal of this question is to check whether you are reading all instructions carefully. To indicate this, please click the next button without selecting any of the options below. You must click next without making any selections in order to have your response approved.**

☐ 0   ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5   ☐ 6   ☐ 7   ☐ 8   ☐ 9   ☐ 10

Next

 If your answer is correct, you will receive a **\$0.2 bonus**.

**Do you think you were the top performer in the IQ Quiz Competition?**

☐ Yes

☐ No

Next

**Based on your experience in the IQ Quiz Competition, how well do you think you performed compared to all other participants in this study, on a scale from 0 to 10?**

The lowest value (0) indicates that you believe you performed worse than almost everyone else, and the highest value (10) indicates that you believe you performed better than nearly all other participants. For example, if you think you performed better than approximately 70% of all other participants, you should select 7. Please make your choice.

☐

**0**

☐

**1**

☐

**2**

☐

**3**

☐

**4**

☐

**5**

☐

**6**

☐

**7**

☐

**8**

☐

**9**

☐

**10**

Next





On a scale from 1 (not at all like me) to 7 (exactly like me), please indicate the extent to which the following statement describes you:

**"Competition brings the best out of me."**

☐  
**1**  
Not at all like me

☐  
**2**

☐  
**3**

☐  
**4**

☐  
**5**

☐  
**6**

☐  
**7**  
Exactly like me

Next



On a scale from 1 (not at all like me) to 7 (exactly like me), please indicate the extent to which the following statement describes you:

**"I enjoy competing against others."**

☐  
**1**  
Not at all like me

☐  
**2**

☐  
**3**

☐  
**4**

☐  
**5**

☐  
**6**

☐  
**7**  
Exactly like me

Next

**Did you understand the instructions throughout the study?**

☐ I fully understood them

☐ I understood them almost fully

☐ I only partly understood them

☐ I did not understand them

Next

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We have only a few short questions left.

**Which year were you born?**

Select your birth year 

---

**What's your gender?**

☐ Male

☐ Female

☐ Other

---

**How would you describe your race or ethnicity?**

☐ White

☐ African-American

☐ Hispanic

☐ American Indian or Alaska Native

☐ Asian

☐ Other

---

**How would you describe your educational attainment?**

☐ No high school graduation

☐ High school graduate

☐ Bachelor's degree

☐ Graduate or professional degree

---

**What's your approximate annual household income before taxes?**

☐ Below \$10,000

☐ \$10,000—\$14,999

☐ \$15,000—\$24,999

☐ \$25,000—\$34,999

☐ \$35,000—\$49,999

☐ \$50,000—\$74,999

☐ \$75,000—\$99,999

☐ \$100,000—\$149,999

☐ \$150,000—\$199,999

☐ \$200,000 or more

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**Are you employed full-time?**

☐ Yes

☐ No

---

**On economic policy matters, where do you see yourself on the left-right spectrum?**

☐ Extreme Left

☐ Leaning Left

☐ Center

☐ Leaning Right

☐ Extreme Right

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*Please answer all questions to continue.*

**Next**

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## Thank you for participating in our study!

*We would appreciate any comments or feedback about your experience. If any part of the instructions was unclear or if you ran into any issues during the study, please let us know. Your valuable feedback will help us improve our research.*

Next

## IQ Quiz Competition Results

### Final Scores

Total number of questions you attempted: 2

Your Score

**2**

Opponent's Score

**1.5**

Congratulations! You won!

Next

## Debriefing

Thank you for participating in this study. The study examined how competitive environments affect happiness and social attitudes. To preserve the validity of the research, some information was temporarily withheld:

1. Competition Information Withheld: You were not told in advance in the consent form about the competition component in the IQ quiz. This was done to prevent bias that could affect the research results.
2. Financial Loss Was Simulated: In the quiz competition, you were told that you might lose part of your payment based on your performance. **However, this deduction was only temporary. All participants will receive the full base payment regardless of performance.** Any bonuses you earned will also be added. This approach was necessary to comply with Prolific's payment policy and to preserve the integrity of the study.

This minor and non-harmful hidden information was used to prevent bias and ensure valid research results. The study followed ethical guidelines, and no harm was caused. If you do not want your data used now that you know the full purpose, email us at [jaruiw@bu.edu](mailto:jaruiw@bu.edu) with your Prolific ID.

Thank you again for your time and contribution!

Next



### Study Completed

Your responses have been recorded. You will be automatically redirected to Prolific in a few seconds. If you are not redirected automatically, please click the button below or use the

completion code: **C9ITVE0J**



Complete Study on Prolific