

# Online Appendix for “Motivations for indirect reciprocity: Good deeds or good people?”

September 1, 2023

## A The Effect of Observability

For brevity, the main text presents only cursory statistics about the effect of observability in the 4-player game, as our conclusions are primarily based on the 3-player game. Here we take a closer look. Table 1 provides six probit regressions that show the effect of observability on the reciprocation rates by Observers, separated into the six possible combinations of Agent choices they could have witnessed. As expected, the Recipient selected for payment influences reciprocity only when that entails a change in outcome, i.e. in the scenarios HN, HU, and NH. (Note that NU is very likely to be disguising NN, which Observers seem to understand and therefore treat similarly).

The effect of observability is illuminated by the statistical significance (or lack thereof) of the observability coefficients in Table 1. Observability does not affect reciprocation towards HH, HU, NH, or NU. HN is favored when  $p = 0.1$ , and NN is favored when  $p = 0.9$ . However, reciprocation rates towards NN are extremely low in all cases and thus this statistical significance is most likely spurious.

## B Direct Method and Strategy Method Comparison

Observers’ behavior is broadly consistent whether elicited using the direct method or strategy methods, although limited comparison is possible. Tables 2 and 3 show these comparisons for the 3-player and 4-player games respectively. In the 3-player game, there are very few instances in which an Agent was observed when observability was low; we cannot reliably compare the two methods in these cases. Otherwise, Observers are slightly more generous towards helpful Agents (H when  $p = 0.9$ ) when reporting full strategies, but equally generous towards unobserved or

	Dependent Variable: Observer Reciprocates?					
	HH	HN	HU	NH	NN	NU
High observability?	−0.054 (0.187) [−0.0199]	−0.725*** (0.260) [−0.1897]	−0.198 (0.180) [−0.0745]	−0.248 (0.224) [−0.0839]	1.076*** (0.388) [0.1164]	−0.086 (0.285) [−0.0145]
Recipient 2 paid?	0.056 (0.093) [0.0203]	−0.730*** (0.134) [−0.1925]	−0.285*** (0.096) [−0.1081]	0.487*** (0.121) [0.1674]	0.258 (0.238) [0.0232]	0.034 (0.142) [0.0058]
High Observability × Recipient 2 paid?	0.018 (0.116) [0.0066]	0.396** (0.169) [0.1037]	0.146 (0.113) [0.0552]	0.062 (0.133) [0.0208]	−0.619** (0.254) [−0.0544]	0.124 (0.171) [0.0209]

Table 1: Probit regressions of Observer reciprocation choices on the level of observability (the 10% or 90% chance that the second choice by the Agent is observable) and on the identity of the randomly selected Recipient whose payment was implemented. Each regression restricts attention to only one of the six combinations of choices the Observer may have witnessed, i.e. the public choice to Help or Not the first Recipient, and the quasi-private choice towards the second Recipient (H, N, or Unobserved). All regressions include demographic controls. Standard errors are shown in parentheses, average marginal effects are shown in square brackets, and statistical significance is indicated at the 10% (\*), 5% (\*\*), and 1% (\*\*\*) levels.

unhelpful Agents. Our findings in the 4-player game comparison are similar. Observers are also more generous towards helpful Agents (HH when  $p = 0.9$ ) when reporting full strategies, but equally generous towards all other Agents save for those found using HN when  $p = 0.1$ . There are few instances of HN in the direct method results (6 when  $p = 0.1$  and 30 when  $p = 0.9$ ), and even fewer instances of NH (0 when  $p = 0.1$  and 12 when  $p = 0.9$ ). The cases of HN and NH with  $p = 0.9$  have reciprocation rates that are no different than their strategy method counterparts.

Observation	Observability $p\%$	Direct Method Observations	Reciprocation Rate		Difference
			<i>Direct Method</i>	<i>Strategy Method</i>	
H	10	4	0%	62%	62%**
H	90	106	50%	61%	11%*
U	10	152	27%	24%	-3%
U	90	18	39%	29%	-10%
N	10	10	0%	5%	5%
N	90	42	7%	4%	-4%

Table 2: Comparison of 3-player game Observer behavior when elicited with either the direct method or the strategy method. The number of strategy method observations is constant at 166, as each of the 166 Observers reported their response to each of the six possibilities. Significant differences are indicated at the 10% (\*), 5% (\*\*), and 1% (\*\*\*) levels.

## C Order Effects

Although all subjects played both the 4-player game and 3-player game, the order in which they participated in these games varied across experimental sessions. 72 participants were presented with the 3-player game first, and the other 94 participants with the 4-player game first. Figure 1 and Figure 2 present Observer reciprocation rates for the 3-player and 4-player games respectively, filtering on game order. Wilson score 95% confidence intervals are indicated. These Figures demonstrate that Observer behavior is consistent across games, regardless of game order.

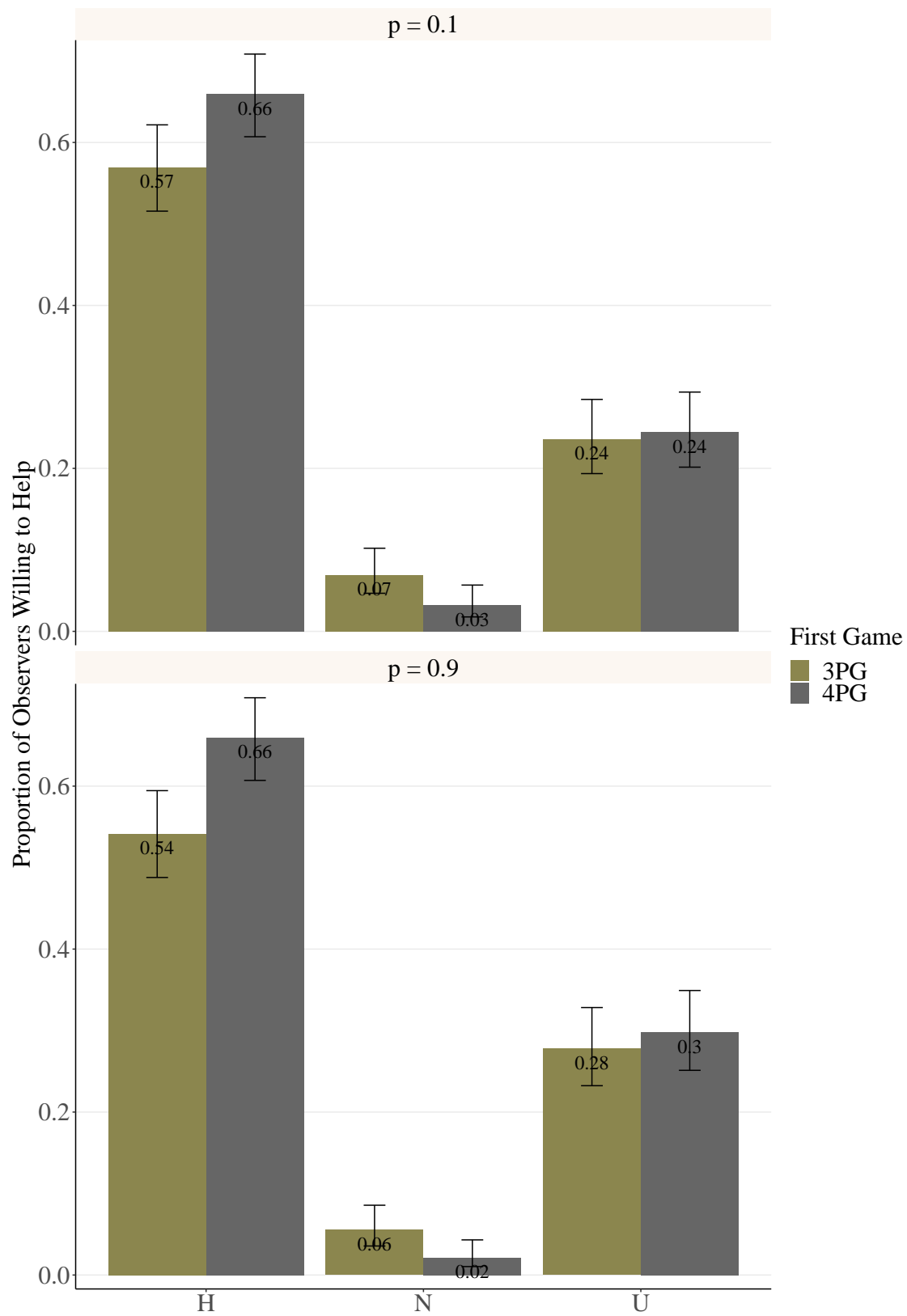


Figure 1: Game Ordering Effects (3-player game)



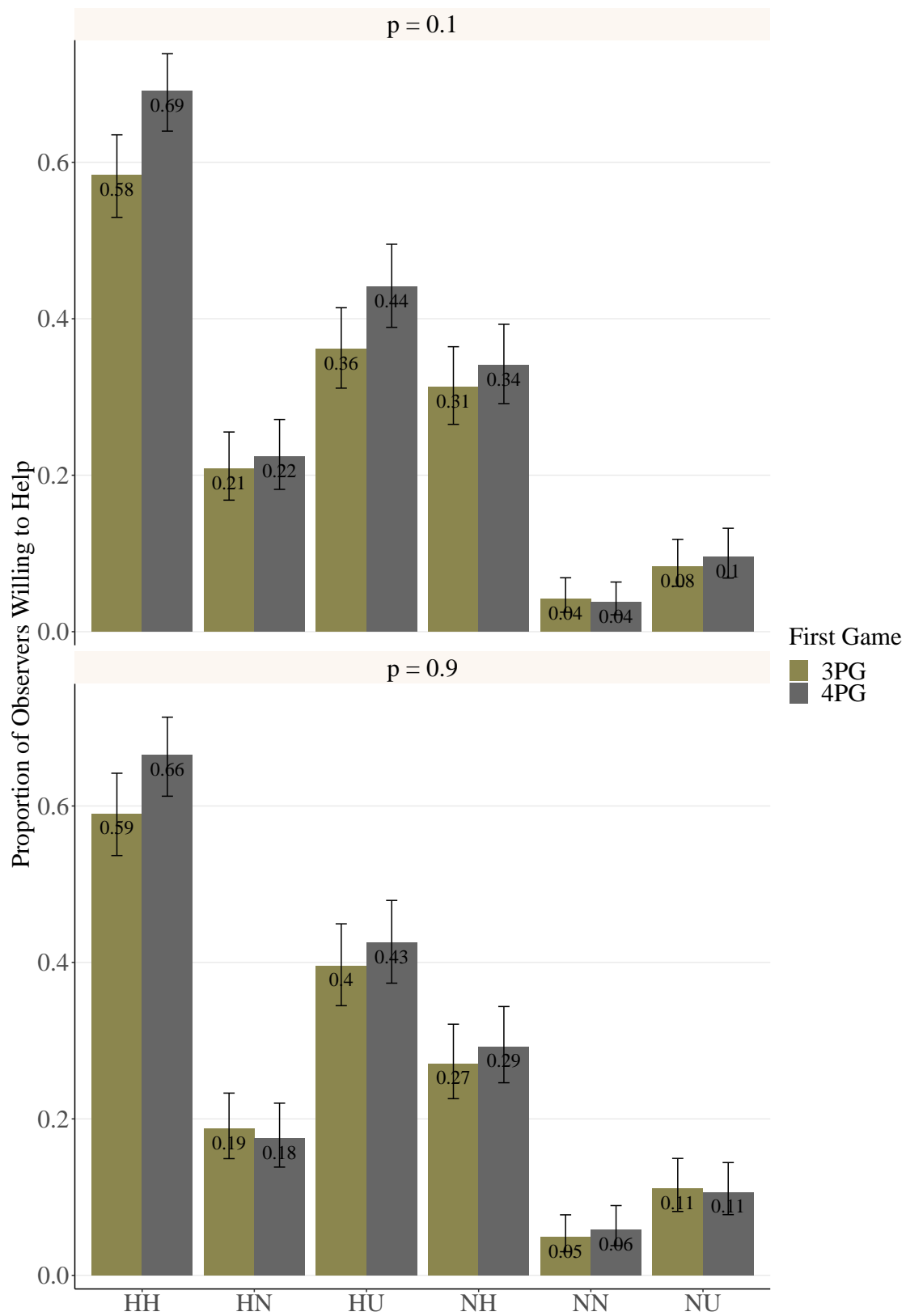


Figure 2: Game Ordering Effects (4-player game)

Observation	Observability $p\%$	Direct Method Observations	Reciprocation Rate		Difference
			<i>Direct Method</i>	<i>Strategy Method</i>	
HH	10	5	40%	64%	24%
HH	90	66	48%	63%	15%**
HN	10	6	67%	22%	-45%**
HN	90	30	27%	18%	-9%
HU	10	110	33%	41%	8%
HU	90	12	42%	41%	-1%
NH	10	0	NA	33%	NA
NH	90	12	25%	28%	3%
NN	10	6	0%	4%	4%
NN	90	39	5%	5%	0%
NU	10	39	8%	9%	1%
NU	90	7	0%	11%	11%

Table 3: Comparison of 4-player game Observer behavior when elicited with either the direct method or the strategy method. The number of strategy method observations is constant at 166, as each of the 166 Observers reported their response to each of the twelve possibilities. Significant differences are indicated at the 10% (\*), 5% (\*\*), and 1% (\*\*\*) levels.

## D Experimental Protocol

This Appendix contains the complete experimental instructions and screen shots. In repeating rounds, representative rounds for each role are shown.

1. Welcome and mini-dictator game
2. 3-player game instructions
3. 3-player game (direct method)
4. 3-player game (strategy method)
5. 4-player game instructions
6. 4-player game (direct method)
7. 4-player game (strategy method)
8. Belief elicitation

## D.1 Welcome and Mini-dictator game

### Welcome!

In today's session you will play three games. These games are unrelated: what you do in the first game will have no impact at all on what happens in the next two games.

In both games you will have the opportunity to accumulate points. These points will be converted to real money at a rate of **100 points = 1.5 AUD** at the end of the session and you will be paid before you leave today. In addition, you will receive a payment of \$10 for attending today.

Please click next to continue to Game 1.

Next

### Game 1 Instructions

In this game, you are paired with another person in this room. You and your partner will both make the same choice and ONE of your choices will be randomly selected to be implemented.

You can decide between two options:

1. You receive 200 points; your partner receives 0 points
2. You receive 100 points; your partner also receives 100 points

Which option do you choose?

- ☐ I receive 200 points; my partner receives 0 points
- ☐ My partner and I each receive 100 points

Next

## D.2 3-player game instructions

### Game 3 Instructions

The previous game is now complete. Next you will play a number of rounds of Game 3. You will be matched **anonymously** with other participants in the room and will interact with them through the computer. You will be **re-matched** with different people in every round.

In total, you will complete 12 interactions in two parts. Below is a brief outline of what is to come.

#### Part 1

Part 1 consist of 6 rounds. Every round has three players: a helper, observer, and one recipient. After learning your role, you will then make decisions that will affect how much money you and the other players will earn.

#### Part 2

In Part 2 you will continue to play the same game but in a different way - details will be explained later. There are 6 rounds and everyone will play each role 2 times.

Just as in the previous game, you will continue to have opportunities to earn points. Remember: These will be converted at the end of the session from points to AUD at a rate of **100 points = 1.5 dollars**.

Every round in every part will be *considered* for payment, and so you should make every choice carefully. But only a few rounds will be chosen randomly to determine your total payment. One round from Part 1 will be paid and one round from part 2 will be paid.

Next

## Part 1

Please read the following instructions carefully! On the next page, we will illustrate these instructions with an example. You will be asked a few questions to ensure you understand how to play the game in Part 1.

In each round of Part 1, you will be matched into a group of 3 participants and assigned one of the following roles:

Helper, Observer, or Recipient.

The **Helper** begins the round with an allowance of 300 points, which they can keep. They will decide if they are willing to spend 100 points to help Recipient. If Recipient is helped, they will receive 250 points.

The **Recipient** does not make any decisions. They begin the round with 0 points and their payoff is dependent upon the Helper's decision.

The **Observer** will watch the interaction between the Helper and Recipient. The Helper's decision might be hidden from the Observer. The probability of being observed is made known to both the Helper and Observer, and will be either 10% (1 in 10 chance) or 90% (9 in 10 chance). The Observer begins the round with an allowance of 300 points, which they can keep. The Observer may choose to reward the Helper by spending 100 points. If they choose to do so, the Helper will receive 250 points.

Next

## An Example

Imagine the Helper and Recipient are in one of ten rooms. The Helper is told that the Observer is watching the rooms on security cameras, but that only ONE room has a working camera. Because the Helper does not know which room has a working camera, they conclude there is a **10%** chance that the Observer is watching.



The Helper then decides if they are willing to help the Recipient. After (possibly) observing the Helper, the Observer finishes the round by deciding if they would like to help the Helper.

Next

## Control Questions

**1. In this game there are:**

- ☐ 2 players
- ☒ 3 players
- ☐ 4 players

**3. The observer always sees the Helper's choice:**

- ☐ True
- ☒ False

**4. The helper knows how likely it is that the observer will see his/her decisions:**

- ☒ True
- ☐ False

**5. The cost to help is \_\_\_ points; the benefit to the other person is \_\_\_ points.**

- ☐ 250; 250
- ☐ 250; 300
- ☒ 100; 250
- ☐ 100; 300

Submit

## Instructions Complete

You have completed the instructions for Part 1! When you hit the Next button, you will begin the first round of the Part 1. Remember, Part 1 consists of 6 rounds, and one of these rounds will be randomly chosen to determine your payment at the end of the session.

Next

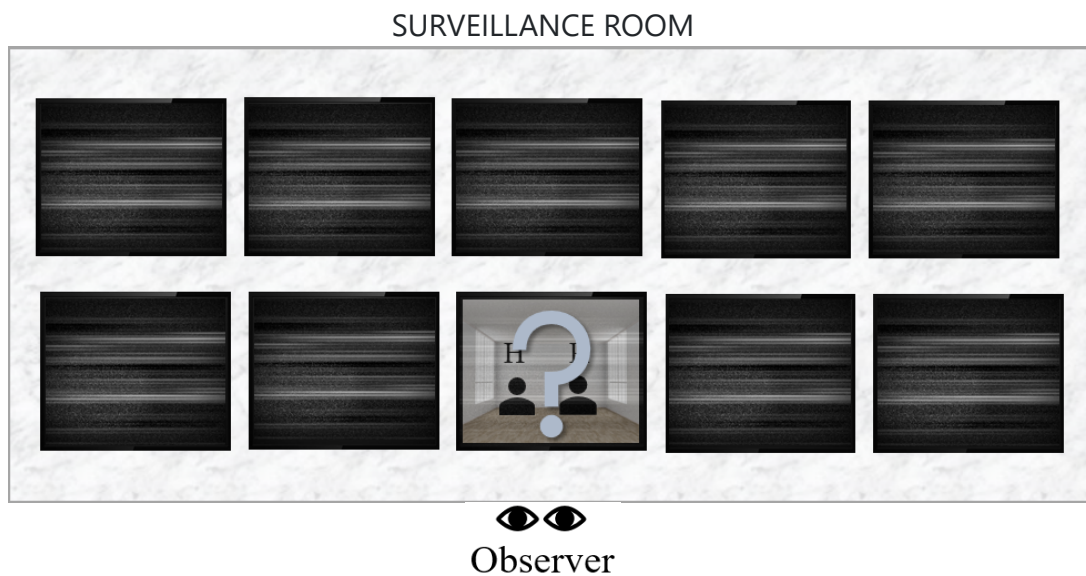
### D.3 3-player game (direct method)

#### Round 1

You have been matched with a new group of three people for this round. You are the **Helper (H)**.

The scenario for this round is as follows:

Imagine that the Helper meets the Recipient in one of ten rooms. The Helper is told the Observer is still watching, but that only one of the cameras is working. Because the Helper does not know which room has the working camera, they conclude there is a **10% chance (1 in 10)** they will be seen.



The Helper must decide if they are willing to help the Recipient. After (possibly) observing the Helper interact with the Recipient, the Observer will also have an opportunity to help the Helper.

Next

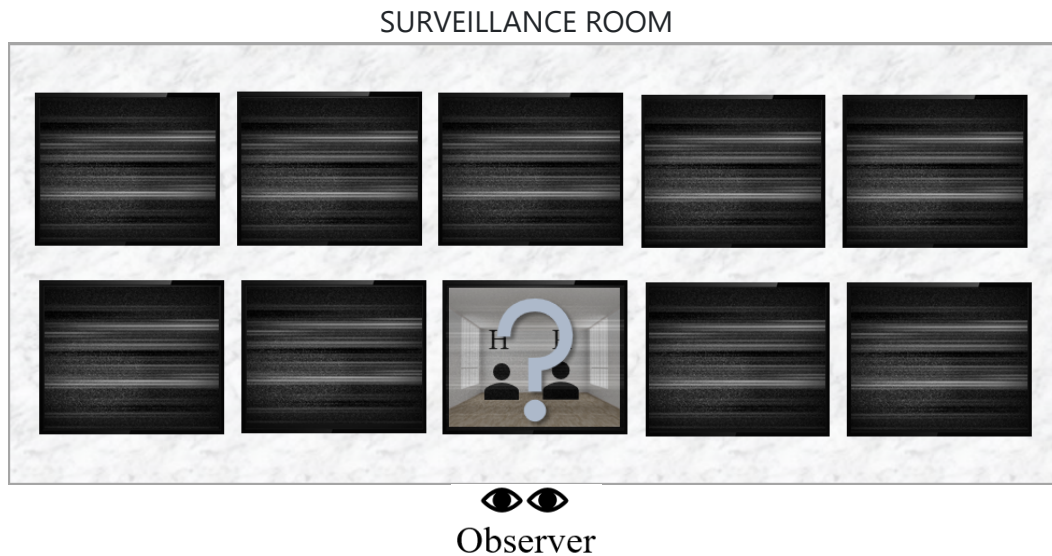


## Round 1

You are the **Helper (H)**.

Remember, you are starting with an endowment of **300 points**. You may choose to help the Recipient by spending **100 points** for them to receive **250 points**.

Would you like to help the Recipient? As shown in the diagram below, there is a **10% chance (1 out of 10)** that the Observer will be able to see your choice.



Do you want to help the Recipient (R)?

- ☐ Yes
- ☐ No

Next

## Round 1

You have been matched with a new group of three people for this round. You are the **Observer (O)**.

The scenario for this round is as follows:

Imagine that the Helper meets the Recipient in one of ten rooms. The Helper is told the Observer is still watching, but that only one of the cameras is working. Because the Helper does not know which room has the working camera, they conclude there is a **10% chance (1 in 10)** they will be seen.



The Helper must decide if they are willing to help the Recipient. After (possibly) observing the Helper interact with the Recipient, the Observer will also have an opportunity to help the Helper.

Next

## Round 1


You are the **Observer (O)**.

Remember, you are starting with an allowance of 300 points. You may choose to help the Helper by spending 100 points for them to receive 250 points.

### Observation summary:

In this round, you were UNABLE to observe whether the Helper chose to help the Recipient. The current earnings are unknown.

**Helper**  
**Unobserved**



**Current earnings:**  
**Helper: Unknown    Recipient: Unknown**

Do you want to help the Helper (H)?

☐ Yes

☐ No

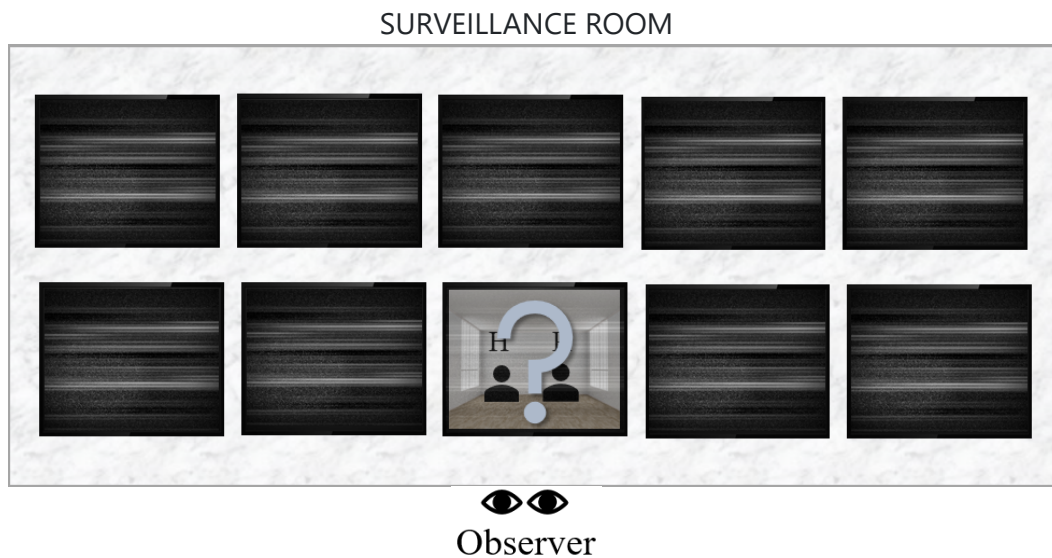
Next

## Round 1

You have been matched with a new group of three people for this round. You are the **Recipient (R)**.

The scenario for this round is as follows:

Imagine that the Helper meets the Recipient in one of ten rooms. The Helper is told the Observer is still watching, but that only one of the cameras is working. Because the Helper does not know which room has the working camera, they conclude there is a **10% chance (1 in 10)** they will be seen.



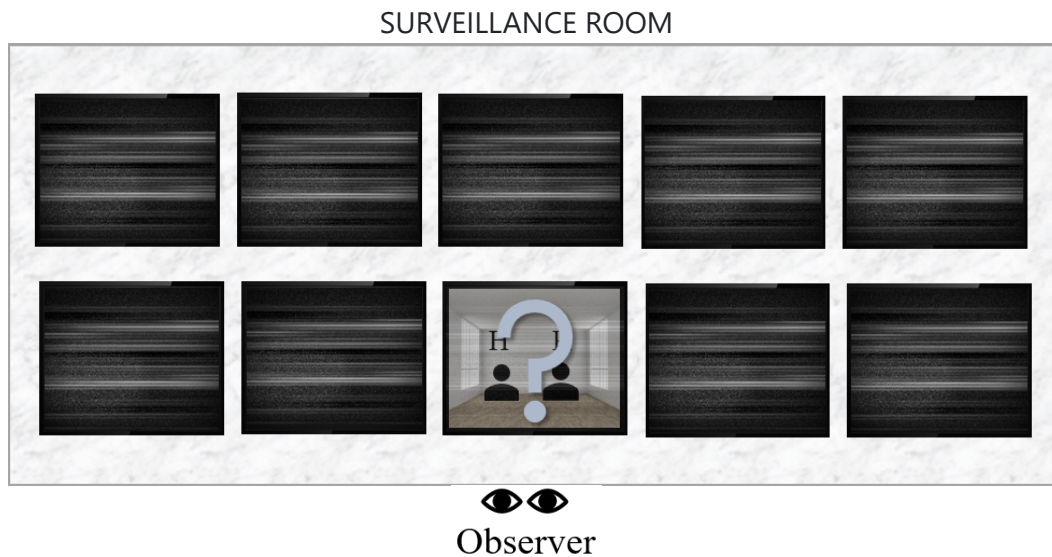
The Helper must decide if they are willing to help the Recipient. After (possibly) observing the Helper interact with the Recipient, the Observer will also have an opportunity to help the Helper.

Next

## Round 1

You are **Recipient**.

The helper is deciding whether to help you in the situation represented with the following diagram:



Next

## Results for Round 1

You decided to help the recipient.

The observer did not observe your choice.

The observer decided to help you.

In this round, you therefore earned a total of 450 points. If this round is selected for payment, this will be converted to AUD and paid to you at the end of the session.

Next

## Results for Round 1

You decided to help the Helper.

In this round, you therefore earned a total of 200 points. If this round is selected for payment, this will be converted to AUD and paid to you at the end of the session.

Next

## Results for Round 1

The Helper decided to help you in this round. Therefore, you earned a total of 250 points. If this round is selected for payment, this will be converted to AUD and paid to you at the end of the session.

Next

### D.4 3-player game (strategy method)

#### Part 2

In this second part, you will continue to play the same game as in Part 1. The difference between Part 1 and 2 is how the Observer makes their decision. Now, the Observer must indicate in which cases they are willing to help the Helper before seeing what the Helper has done.

Then, the Helper's actions are revealed, and the Observer's wishes for that scenario will be carried out.

There are 6 rounds in this part, and 1 will be randomly selected to contribute to your payment. The points you earn in that round will be added to your total. As before, your total points will be converted to real money at a rate of **100 points = 1.5 dollars**.

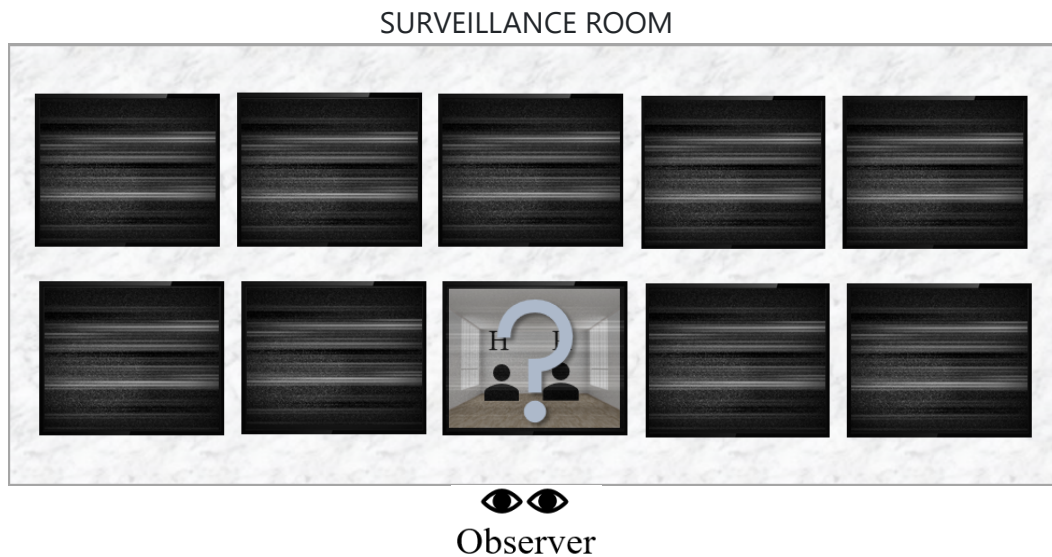
Next

## Round 4

You have been matched with a new group of three people for this round. You are the **Observer (O)**.

The scenario for this round is as follows:

Imagine that the Helper meets the Recipient in one of ten rooms. The Helper is told the Observer is still watching, but that only one of the cameras is working. Because the Helper does not know which room has the working camera, they conclude there is a **10% chance (1 in 10)** they will be seen.



The Helper must decide if they are willing to help the Recipient. After (possibly) observing the Helper interact with the Recipient, the Observer will also have an opportunity to help the Helper.

Next

## Round 4

You are the **Observer (O)**.

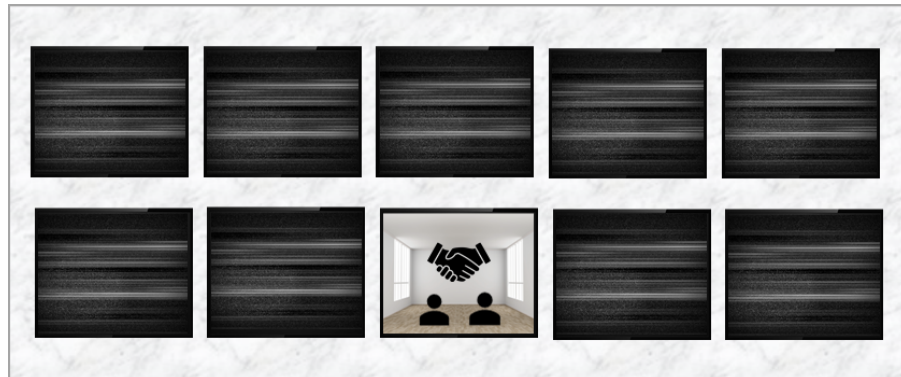
Remember, you are starting with an allowance of 300 points. You may choose to help the Helper by spending 100 points for them to receive 250 points.

As the Observer you will witness one of the following three scenarios depending on what the Helper chooses and whether you observe them. In each case, indicate what you would like to do if that scenario occurs. Then, when the scenario is revealed your wishes will be carried out.

First possibility:

You are able to observe that the Helper chose to HELP the Recipient. The current earnings are: 200 for Helper, 250 for Recipient.

Help   
Offered



Current earnings:  
Helper: 200    Recipient: 250

IF this is the situation, would you like to help the Helper?

- ☐ Yes  
☐ No

Second possibility:

You are able to observe that the Helper chose NOT to help the Recipient. The current earnings are: 300 for Helper, 0 for Recipient.



Help **X**  
Denied



Current earnings:  
Helper: 300    Recipient: 0

IF this is the situation, would you like to help the Helper?

- ☐ Yes  
☐ No

Third possibility:

You were UNABLE to observe whether the Helper chose to help the Recipient. The current earnings are unknown.

Helper  
Unobserved



Current earnings:  
Helper: Unknown    Recipient: Unknown

IF this is the situation, would you like to help the Helper?

- ☐ Yes  
☐ No

Next

## Results for Round 4

The outcome for this round will be calculated based on what the Helper chose, which recipient was randomly selected for payment, and what the Observer chose. If this round is selected for payment, you will learn the result at the end of the session and your payment will be converted to AUD.

Next

## D.5 4-player game instructions

### Game 2 Instructions

The previous game is now complete. Next you will play a number of rounds of Game 2. You will be matched **anonymously** with other participants in the room and will interact with them through the computer. You will be **re-matched** with different people in every round.

In total, you will complete 24 interactions in two parts. Below is a brief outline of what is to come.

#### Part 1

Part 1 consist of 8 rounds. Every round has four players: a helper, observer, and two recipients. After learning your role, you will then make decisions that will affect how much money you and the other players will earn.

#### Part 2

In Part 2 you will continue to play a very similar game - details will be explained later. There are 16 rounds and everyone will play each role 4 times.

Just as in the previous game, you will have opportunities to earn points, the currency for the experiment. Remember: These will be converted at the end of the session from points to AUD at a rate of **100 points = 1.5 dollars**.

Every round in every part will be *considered* for payment, and so you should make every choice carefully. But only a few rounds will be chosen randomly to determine your total payment. One round from Part 1 will be paid and two rounds from part 2 will be paid.

Next

## Part 1

Please read the following instructions carefully! You will be asked a few questions to ensure you understand how to play the game in Part 1.

In each round of Part 1, you will be matched into a group of 4 participants and assigned one of the following roles:

Helper, Observer, Recipient 1, or Recipient 2.

The **Helper** begins the round with an allowance of 300 points, which they can keep. They will decide if they are willing to spend 100 points to help Recipient 1. If Recipient 1 is helped, they will receive 250 points. The Helper has the same opportunity to help Recipient 2.

Now, although the helper decides whether they would like to help Recipient 1 and Recipient 2, *only one of the recipients will be selected for payment.*

Therefore, if the Helper tries to help both recipients, they will only spend 100 points to help the chosen recipient. If the Helper only tries to help one recipient, they will only spend 100 points if that recipient is chosen. If the Helper does not help either recipient, they will spend 0 points.

The **Recipients** do not make any decisions. They begin the round with 0 points and their payoff is dependent upon the Helper's decision and if they are selected for payment.

The **Observer** will watch the interactions between the Helper and Recipients. The Helper's first decision towards Recipient 1 will always be seen, but their second decision towards Recipient 2 might be hidden from the Observer. The probability of being observed is made known to both the Helper and Observer, and will be either 10% (1 in 10 chance) or 90% (9 in 10 chance). The Observer begins the round with an allowance of 300 points, which they can keep. The Observer may choose to reward the Helper by spending 100 points. If they choose to do so, the Helper will be paid 250 points.

Next

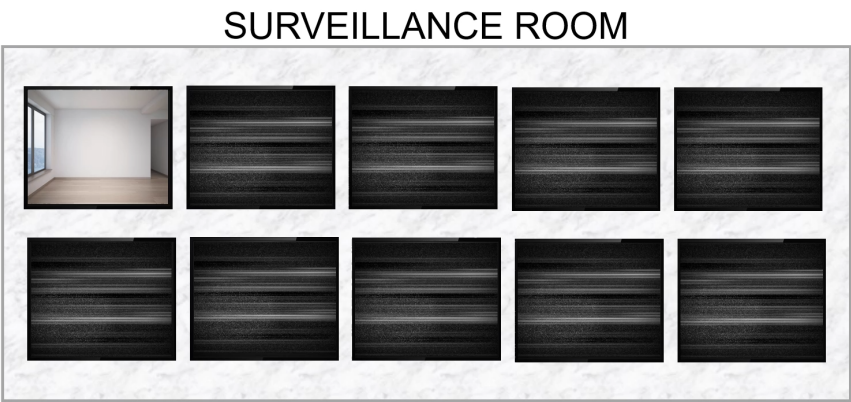
# An Example

Imagine the Helper and Recipient 1 are in a room with the observer watching ten different rooms on security cameras. The Helper knows they are are being watched. The Helper decides whether to help Recipient 1.



  
Observer

Next, the Helper meets Recipient 2 in one out of ten possible rooms. The Helper is told that the Observer is watching the security cameras, but that only ONE room has a working camera. Because the Helper does not know which room has a working camera, they conclude there is a **10%** chance that the Observer is watching. The Helper then decides whether to help Recipient 2.



Now that the helper has made their decisions, one of the Recipients is randomly selected for payment. The Helper's relevant decision is then carried out, and the Recipients and Observer are informed of who was chosen. The Observer finishes the round by deciding if they would like to help the Helper.

## Control Questions

**1. In part 1 there are:**

- ☐ 2 players
- ☐ 3 players
- ☒ 4 players

**2. If the Helper decides to help Recipient 1 and 2, both recipients will be paid:**

- ☐ True
- ☒ False

**3. The observer always sees all decisions made by the helper:**

- ☐ True
- ☒ False

**4. The helper knows how likely it is that the observer will see his/her decisions:**

- ☒ True
- ☐ False

**5. The cost to help is \_\_\_ points; the benefit to the other person is \_\_\_ points.**

- ☐ 250; 250
- ☐ 250; 300
- ☒ 100; 250
- ☐ 100; 300

Submit

## Instructions Complete

You have completed the instructions for Part 1! When you hit the Next button, you will begin the first round of the Part 1. Remember, Part 1 consists of 8 rounds, and one of these rounds will be randomly chosen to determine your payment at the end of the session.

Next

## D.6 4-player game (direct method)

### Round 1

You have been matched with a new group of four people for this round. You are the **Helper (H)**.

The scenario for this round is as follows:

Imagine the Helper and Recipient 1 are in one of ten rooms with the Observer watching the cameras in all ten rooms. The Helper knows they are being watched and must decide if they are willing to help Recipient 1.



After making their first decision, the Helper will meet Recipient 2 in one of ten rooms. The Helper is told the Observer is still watching, but that only one of the cameras is working. Because the Helper does not know which room has the working camera, they conclude there is a **10% chance** they will be seen. The Helper must decide if they are willing to help Recipient 2.

## SURVEILLANCE ROOM



### Observer

After observing the Helper interact with R1 and (possibly) R2, the Observer will also have an opportunity to help the Helper after learning which of the two recipients was randomly chosen for payment.

Next

## Round 1

You are the **Helper (H)**.

Remember, you are starting with an endowment of **300 points**. You may choose to help a recipient by spending **100 points** for them to receive **250 points**. **Only ONE** of the two recipients will be randomly selected for payment.

Would you like to help Recipient 1? As shown in the diagram below, there is a **100% chance (10 out of 10)** that the Observer will be able to see your choice.



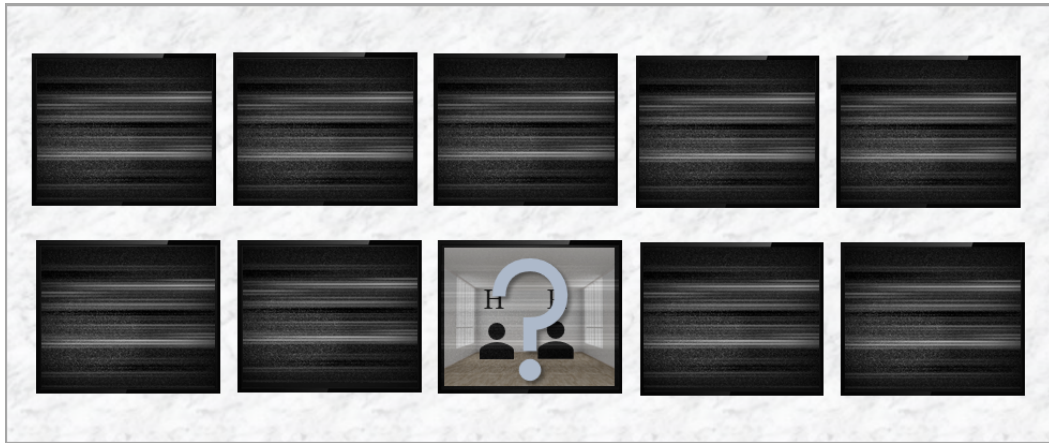
Do you want to help the first Recipient (R1)?

- ☐ Yes  
☐ No

Would you like to help Recipient 2? As shown in the diagram below, there is a **10% chance (1 out of 10)** that the Observer will be able to see your choice.



## SURVEILLANCE ROOM



Observer

Do you want to help the second Recipient (R2)?

☐ Yes

☐ No

Next


## Round 1











You are the **Observer (O)**.

Remember, you are starting with an allowance of 300 points. You may choose to help the Helper by spending 100 points for them to receive 250 points.

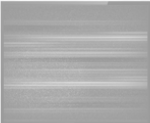
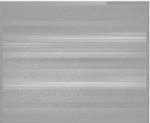
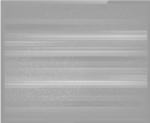

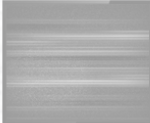
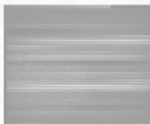
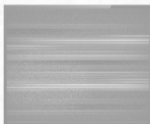

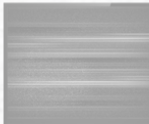
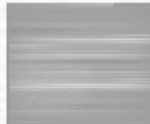
### Observation summary:

In this round, the Helper chose to help the first recipient, but you were **UNABLE** to observe whether the Helper chose to help the second recipient. Recipient 1 was chosen for payment so the current earnings are: 200 for Helper, 250 for Recipient 1, 0 for Recipient 2.

Help   
Offered

Helper  
Unobserved

R1 Selected

Current earnings: (R1 selected)

Helper: 200    Recipient 1: 250    Recipient 2: 0

Do you want to help the Helper (H)?

- ☐ Yes  
☐ No

Next

## Results for Round 1

You decided to help the first recipient.

You decided to help the second recipient.

The first recipient was the one randomly selected for payment.

The observer only observed your first choice.

The observer decided to help you.

In this round, you therefore earned a total of 450 points. If this round is selected at the end of Part 1, this will be converted to AUD and paid to you at the end of the session.

Next

## Results for Round 1

You decided to help the Helper.

In this round, you therefore earned a total of 200 points. If this round is selected at the end of Part 1, this will be converted to AUD and paid to you at the end of the session.

Next

### D.7 4-player game (strategy method)

The screenshots included in this section pertain to the strategy method of the 4PG and how it differs from the direct method. The first screenshot contains the initial instructions to the participants entering the strategy method. The screenshots that follow depict the Observer instructions and two distinct strategy method forms. The first (second) form is for when R1 (R2) is selected and observability is 90% (10%). For brevity, the equivalent forms for R1, 10% and R2, 90% are not included, but they are constructed in the same manner. Finally, the Helper and Recipient interfaces are the same as in the direct method.

## Part 2

In this second part, you will continue to play the same game as in Part 1. The difference between Part 1 and 2 is how the Observer makes their decision. Now, the Observer must indicate in which cases they are willing to help the Helper before seeing what the Helper has done.

Then, the Helper's actions are revealed, and the Observer's wishes for that scenario will be carried out.

There are 16 rounds in this part, and 2 will be randomly selected to contribute to your total payment. Remember, your total points will be converted to real money at a rate of **100 points = 1.5 AUD**.

Next

## Round 2

You have been matched with a new group of four people for this round. You are the **Observer (O)**.

The scenario for this round is as follows:

Imagine the Helper and Recipient 1 are in one of ten rooms with the observer watching the cameras of all ten rooms. The Helper knows they are being watched. The Helper must decide if they are willing to help Recipient 1.



After making their first decision, the Helper will meet Recipient 2 in one of ten rooms. The Helper is told the Observer is still watching, but that one of the cameras is broken. Because the Helper does not know which room has the broken camera, they conclude there is a **90% chance** they will be seen. The Helper must decide if they are willing to help Recipient 2.

## SURVEILLANCE ROOM



## Observer

After observing the Helper interact with R1 and (possibly) R2, the Observer will also have an opportunity to help the Helper after learning which of the two recipients was randomly chosen for payment.

Next

## Round 4

You are the **Observer (O)**.


Remember, you are starting with an allowance of 300 points. You may choose to help the Helper by spending 100 points for them to receive 250 points.

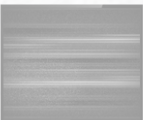
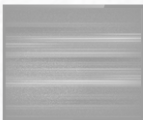

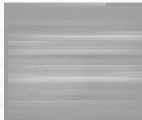
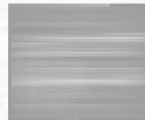
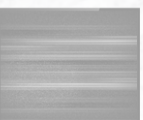
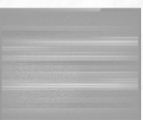
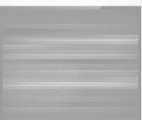
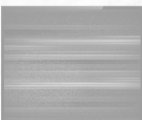
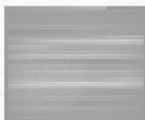










Additionally, you know **the FIRST recipient is the recipient who was selected for payment**. The payments of the Helper and the two Recipients will therefore be based on the outcome of the first choice shown in the diagrams below.

As the Observer you will witness one of the following six scenarios depending on what the Helper chooses and whether you observe them. In each case, indicate what you would like to do if that scenario occurs. Then, when the scenario is revealed your wishes will be carried out.


First possibility:

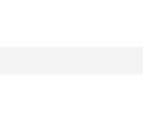
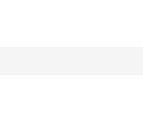
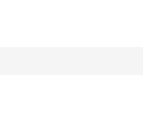
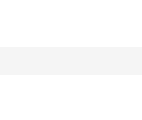
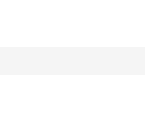
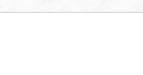
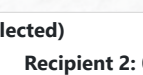
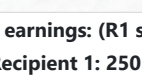

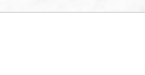
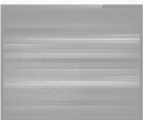
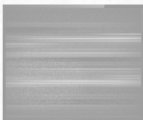

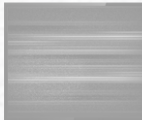
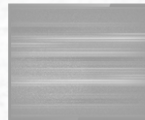
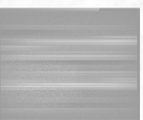
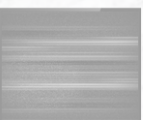
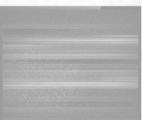
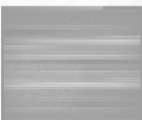
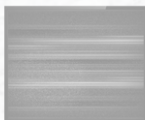
The Helper chose to help BOTH recipients. The current earnings are 200 for Helper, 250 for Recipient 1, 0 for Recipient 2.

Help   
Offered



R1 Selected

Help   
Offered



Current earnings: (R1 selected)  
Helper: 200    Recipient 1: 250    Recipient 2: 0

IF this is the situation, would you like to help the Helper?

☐ Yes  
☐ No

Second possibility:

The Helper chose to help Recipient 1 ONLY. The current earnings are 200 for Helper, 250 for Recipient 1, 0 for Recipient 2.

35

Help   
Offered



R1 Selected

Help   
Denied



Current earnings: (R1 selected)

Helper: 200    Recipient 1: 250    Recipient 2: 0

IF this is the situation, would you like to help the Helper?

- ☐ Yes  
☐ No

Third possibility:

The Helper chose to help Recipient 2 ONLY. The current earnings are 300 for Helper, 0 for Recipient 1, 0 for Recipient 2.

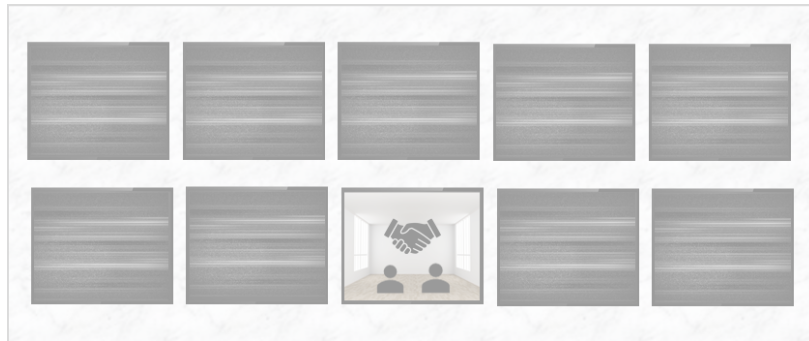
Help   
Denied



R1 Selected



Help   
Offered



Current earnings: (R1 selected)  
Helper: 300    Recipient 1: 0    Recipient 2: 0

IF this is the situation, would you like to help the Helper?

- ☐ Yes  
☐ No

Fourth possibility:

The Helper chose to help NEITHER recipient. The current earnings are 300 for Helper, 0 for Recipient 1, 0 for Recipient 2.

Help   
Denied



Help   
Denied



Current earnings: (R1 selected)  
Helper: 300    Recipient 1: 0    Recipient 2: 0

IF this is the situation, would you like to help the Helper?

- ☐ Yes  
☐ No

Fifth possibility:

The Helper chose to help Recipient 1 but you are UNABLE to observe whether the Helper chose to help Recipient 2. The current earnings are 200 for Helper, 250 for Recipient 1, 0 for Recipient 2.

**Help ✓  
Offered**

**R1 Selected**

**Helper Unobserved**

**Current earnings: (R1 selected)**  
**Helper: 200    Recipient 1: 250    Recipient 2: 0**

IF this is the situation, would you like to help the Helper?

- ☐ Yes  
☐ No

Sixth possibility:

The Helper chose NOT to help Recipient 1 but you are UNABLE to observe whether the Helper chose to help Recipient 2. The current earnings are 300 for Helper, 0 for Recipient 1, 0 for Recipient 2.

**Help ✗  
Denied**

**R1 Selected**

Helper  
Unobserved



Current earnings: (R1 selected)

Helper: 300    Recipient 1: 0    Recipient 2: 0

IF this is the situation, would you like to help the Helper?

- ☐ Yes  
☐ No

Next

## Round 6

You are the **Observer (O)**.

Remember, you are starting with an allowance of 300 points. You may choose to help the Helper by spending 100 points for them to receive 250 points.

Additionally, you know **the SECOND recipient is the recipient who was selected for payment**. The payments of the Helper and the two Recipients will therefore be based on the outcome of the second choice shown in the digrams below.

As the Observer you will witness one of the following six scenarios depending on what the Helper chooses and whether you observe them. In each case, indicate what you would like to do if that scenario occurs. Then, when the scenario is revealed your wishes will be carried out.

First possibility:

The Helper chose to help BOTH recipients. The current earnings are 200 for Helper, 0 for Recipient 1, 250 for Recipient 2.

Virtual Real Estate Marketplace

Search

Filters

Current earnings: (R2 selected)

Helper: 200 Recipient 1: 0 Recipient 2: 250

IF this is the situation, would you like to help the Helper?

- ☐ Yes
- ☐ No

Second possibility:

The Helper chose to help Recipient 1 ONLY. The current earnings are 300 for Helper, 0 for Recipient 1, 0 for Recipient 2.

Help   
Offered



Help   
Denied



R2 Selected

Current earnings: (R2 selected)

Helper: 300    Recipient 1: 0    Recipient 2: 0

IF this is the situation, would you like to help the Helper?

- ☐ Yes  
☐ No

Third possibility:

The Helper chose to help Recipient 2 ONLY. The current earnings are 200 for Helper, 0 for Recipient 1, 250 for Recipient 2.

Help   
Denied





Help   
Offered



R2 Selected

Current earnings: (R2 selected)  
Helper: 200    Recipient 1: 0    Recipient 2: 250

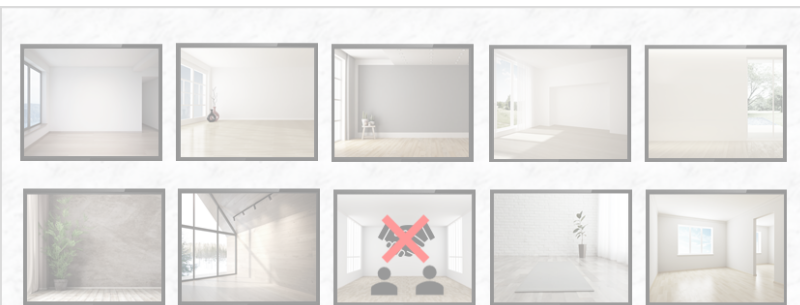
IF this is the situation, would you like to help the Helper?

- ☐ Yes  
☐ No

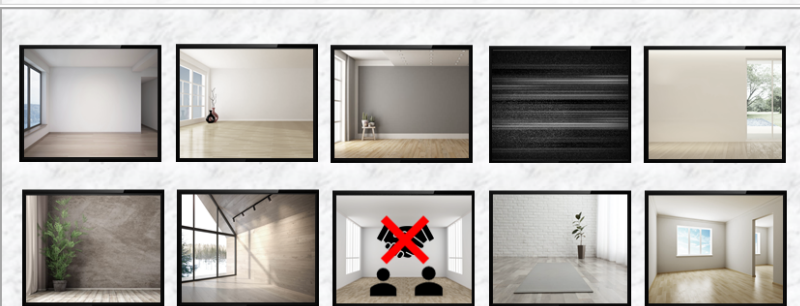
Fourth possibility:

The Helper chose to help NEITHER recipient. The current earnings are 300 for Helper, 0 for Recipient 1, 0 for Recipient 2.

Help   
Denied



Help   
Denied



R2 Selected

Current earnings: (R2 selected)  
Helper: 300    Recipient 1: 0    Recipient 2: 0

IF this is the situation, would you like to help the Helper?

- ☐ Yes  
☐ No

Fifth possibility:

The Helper chose to help Recipient 1 but you are UNABLE to observe whether the Helper chose to help Recipient 2. The current earnings are unknown.

Help   
Offered



Helper  
Unobserved



R2 Selected

Current earnings: (R2 selected)

Helper: unknown    Recipient 1: 0    Recipient 2: unknown

IF this is the situation, would you like to help the Helper?

- ☐ Yes  
☐ No

Sixth possibility:


The Helper chose NOT to help Recipient 1 but you are UNABLE to observe whether the Helper chose to help Recipient 2. The current earnings are unknown.

Help   
Denied



**Helper**

**Unobserved**



**R2 Selected**

**Current earnings: (R2 selected)**

**Helper: unknown    Recipient 1: 0    Recipient 2: unknown**

IF this is the situation, would you like to help the Helper?

☐ Yes  
☐ No

Next

## D.8 Belief elicitation

### Survey

You have now completed all three games. There is one task remaining: we would like to know how you expect other participants played the three games you just played.

For one of the questions on the next pages (chosen randomly), **you will be paid based on the accuracy of your guess**. If you're exactly correct you will receive 200 points, and the farther you are from the true number the fewer points you will earn. If you are **x** percentage points off, you will earn  $200 - x^2$  points. For example, if the true number is 57% and you guess 50%, you will receive 151 points.

Next



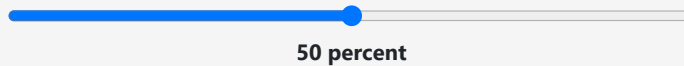
## Survey

Please fill out the survey below based on how you think other participants played in each game. Remember, you will be paid based on the accuracy of your guesses!

In Game 1, you had to choose between two options:

- Option 1: You receive 200 points; your partner receives 0 points
- Option 2: You and your partner each receive 100 points

What percentage of participants do you think chose **option 1** in this situation?



In Game 3, you made the following decision **as a Helper**:

Would you like to help the Recipient? As shown in the diagram below, there is a **10% chance (1 out of 10)** that the Observer will be able to see your choice.



What percentage of participants do you think chose to **help** the Recipient in this situation?



In Game 3, you also made the following decision **as a Helper**:

Would you like to help the Recipient? As shown in the diagram below, there is a **90% chance (9 out of 10)** that the Observer will be able to see your choice.



What percentage of participants do you think chose to **help** the Recipient in this situation?



50 percent

Submit

# Survey

Please fill out the survey below based on how you think other participants played in each game. Remember, you will be paid based on the accuracy of your guesses!

In Game 2, you made the following two decisions at the same time **as a Helper**:

Would you like to help Recipient 1? As shown in the diagram below, there is a **100% chance (10 out of 10)** that the Observer will be able to see your choice.



Would you like to help Recipient 2? As shown in the diagram below, there is a **10% chance (1 out of 10)** that the Observer will be able to see your choice.

## SURVEILLANCE ROOM



Observer

*What percentage of participants do you think chose to help BOTH Recipients in this situation?*

0 percent

*What percentage of participants do you think chose to help Recipient 1 ONLY in this situation?*

0 percent

*What percentage of participants do you think chose to help Recipient 2 ONLY in this situation?*

0 percent

*What percentage of participants do you think chose to help NEITHER Recipient in this situation?*

0 percent

**Your answers should total 100. Total: 0 percent**

In Game 2, you also made the following two decisions at the same time **as a Helper**:

Would you like to help Recipient 1? As shown in the diagram below, there is a **100% chance (10 out of 10)** that the Observer will be able to see your choice.

### SURVEILLANCE ROOM



Observer

Would you like to help Recipient 2? As shown in the diagram below, there is a **90% chance (9 out of 10)** that the Observer will be able to see your choice.

### SURVEILLANCE ROOM



Observer

What percentage of participants do you think chose to help *BOTH* Recipients in this situation?



What percentage of participants do you think chose to help Recipient 1 *ONLY* in this situation?



What percentage of participants do you think chose to help Recipient 2 *ONLY* in this situation?



*What percentage of participants do you think chose to help NEITHER Recipient in this situation?*



**Your answers should total 100. Total: 0 percent**

Submit