

Supporting Information: Eager beavers v. lazy slugs: Selection effects in experiments with social preferences.

1 Sample

The sample for this project is based on individuals who were part of a longitudinal panel study. The initial sample was drawn from a random sample of two-thirds of Rice University's entering freshman class (992 students). These subjects were contacted prior to arriving on campus in the late summer of 2016 (from July 14 – August 12, 2016). A total of 553 of the 661 contacted students completed this portion of the study. The study was carried out online.

The current project recontacted the 553 students who completed the initial study. All subjects were invited to participate in an in-lab experiment and asked to sign up for a particular time slot (see the text of the email in Section 4).

Recruitment for the laboratory experiments took place at the end of the academic semester from November 2, 2016 through November 23, 2016. This resulted in a total of 22 lab sessions with 236 subjects. Those who did not participate in the lab were then solicited to participate online from November 28, 2016 – April 28, 2017. This yielded another 285 subjects. Of those subjects participating online, over 82 percent completed the study prior to classes beginning on January 8, 2017. Only 9 subjects completed the study in March or April 2017. It is important to note that subjects were not randomly assigned to one form of participation or the other. The eager beavers were those who signed up for the in-lab experiments. The lazy slugs were those who waited until later.

2 Task Descriptions

In the current study subjects faced 5 distinct tasks: a 40-item risk instrument for which subjects were paid \$10 to complete; a third-party dictator game (used in this study); a trust game; a second third-party dictator game (used in this study); and a 19-item demographic survey. Tasks 1, 3 and 5 were presented in fixed order. The third-party dictator games had either a strong group (the subject's own college) or a minimal group and were randomly ordered at the level of the subject. As noted, subjects were given a fixed amount (\$10) for filling out a questionnaire. This was designed to serve

as money that was used in the trust game. One of the 3 incentivized tasks was randomly chosen for payment.

Subjects read the following instructions before beginning making a choice in the (strong) third-party dictator game. In this game subjects decided how to allocate a \$20 budget between someone from their college or someone from a different college. All students matriculating at Rice are randomly assigned to a residential college. They live in those colleges for their four years at Rice. College attachments are very strong.

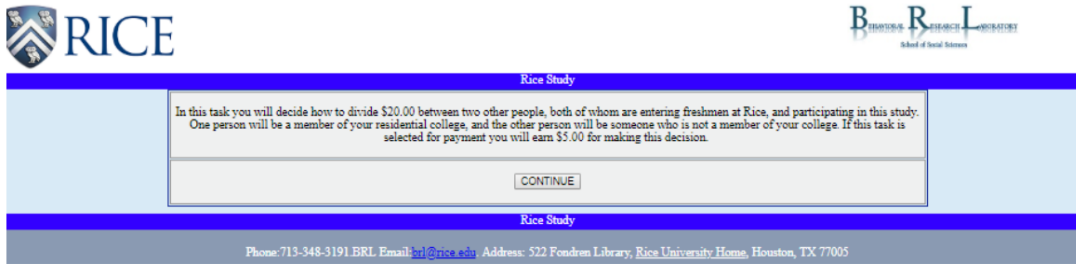


Figure 1: Instructions for (Strong) Third-Party Dictator Game

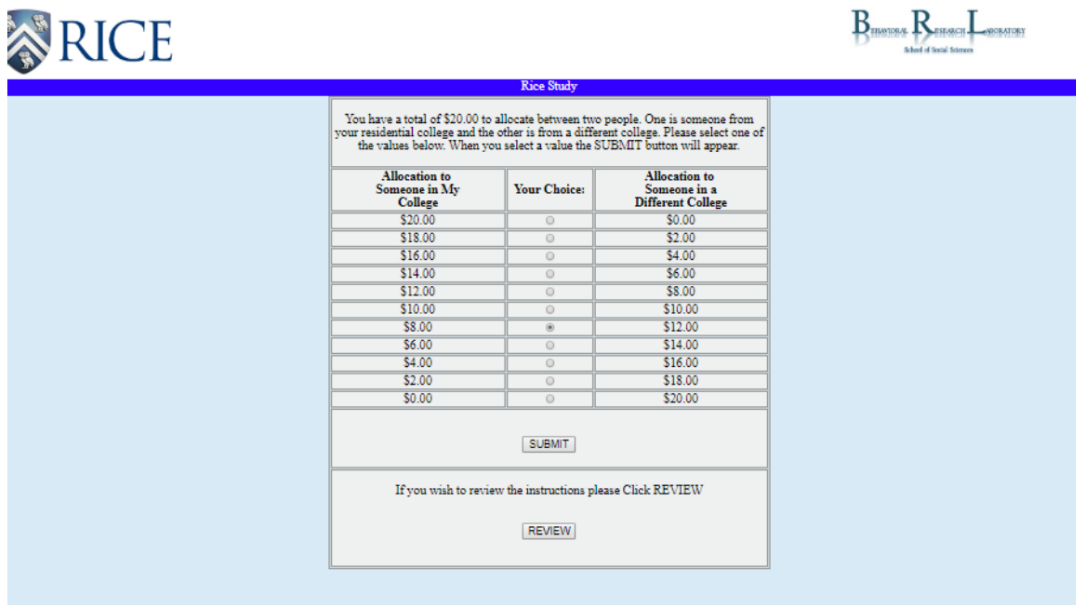


Figure 2: Decision Screen for (Strong) Third-Party Dictator Game

The (minimal) third-party dictator game was similar. Before making a choice subjects were shown a screen with dots for four seconds. asked to estimate how many dots appeared on their screen were told how they would be assigned to groups. Those instructions are reproduced here. Figure 10 notes the decision screen viewed by subjects in the minimal group condition.

Part I: Group Assignment

The screenshot shows a web interface for a study. At the top left is the Rice University logo. At the top right is the logo for the Behavioral Research Laboratory, School of Social Sciences. Below these is a blue header bar with the text "Rice Study". The main content area has a light blue background and is titled "Task 4". Inside this area is a white box with a border containing the following text: "In this task you will make a choice that affects someone from your group and someone from a different group." followed by "In a minute you will be involved in a task that determines your group. Your group is formed from the other people who have participated in this task. Your choice in the task determines one of the groups you will belong to in the experiment." At the bottom of this box is a "CONTINUE" button. Below the white box is another blue header bar with "Rice Study" and a footer bar with contact information: "Phone: 713-348-3191, BRL Email: brl@rice.edu, Address: 522 Fondren Library, Rice University Home, Houston, TX 77005".

Figure 3: Phase 2 page 1 instructions for minimal group assignment

Part I: Group Assignment

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Figure 4: Phase 2 page 2 instructions for minimal group assignment



Figure 5: Phase 2 page 3 instructions for minimal group assignment. This is the dot estimation task that they faced.

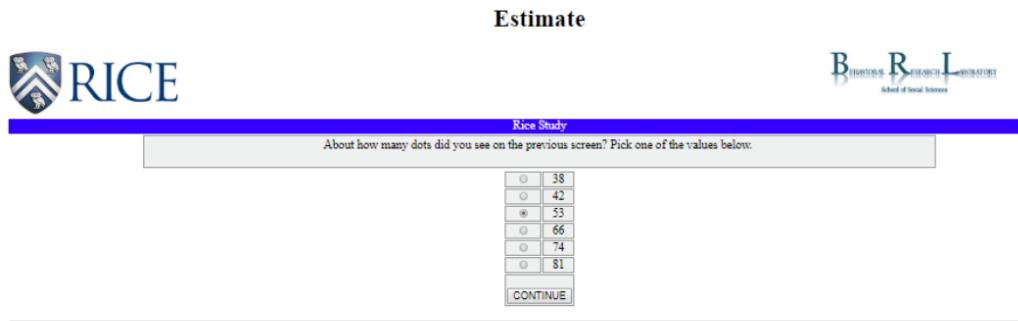


Figure 6: Phase 2 page 4 instructions for minimal group assignment. On this screen subjects guessed the number of dots from the previous page.

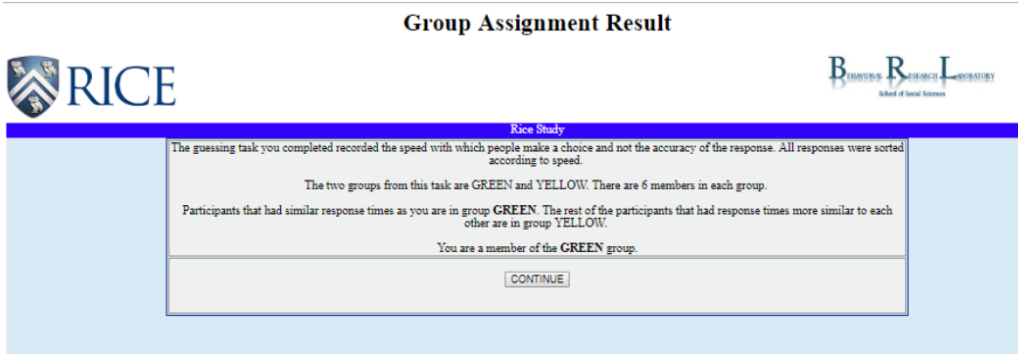


Figure 7: Phase 2 page 5 instructions for minimal group assignment. On this screen subjects were assigned to their group.

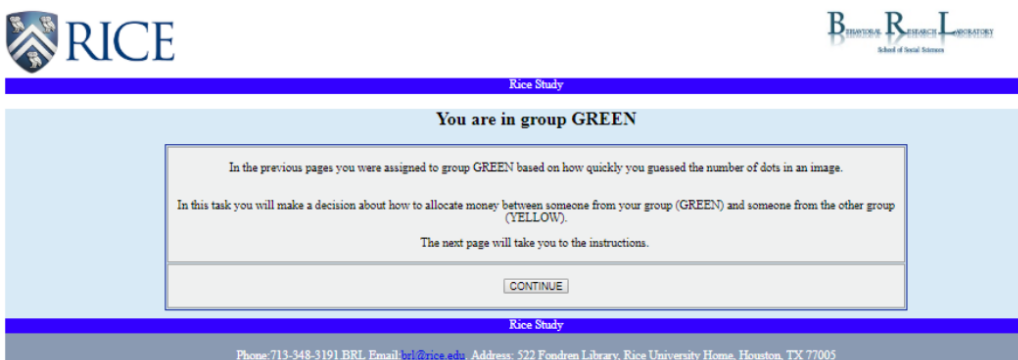


Figure 8: Phase 2 page 6 instructions for minimal group assignment

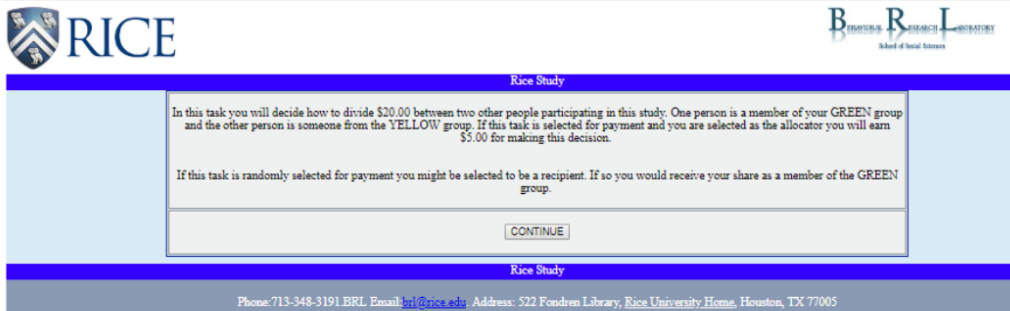


Figure 9: Phase 2 page 7 instructions for minimal group assignment

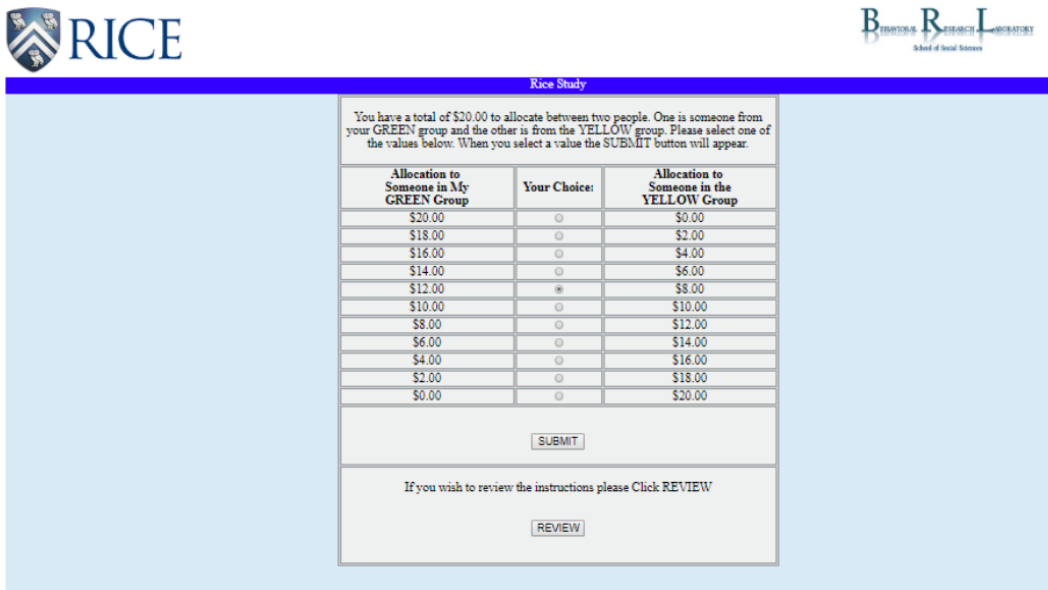


Figure 10: Decision Screen for Phase 2 Minimal Group Third-Party Dictator Game

Screen shots for the Trust Game.

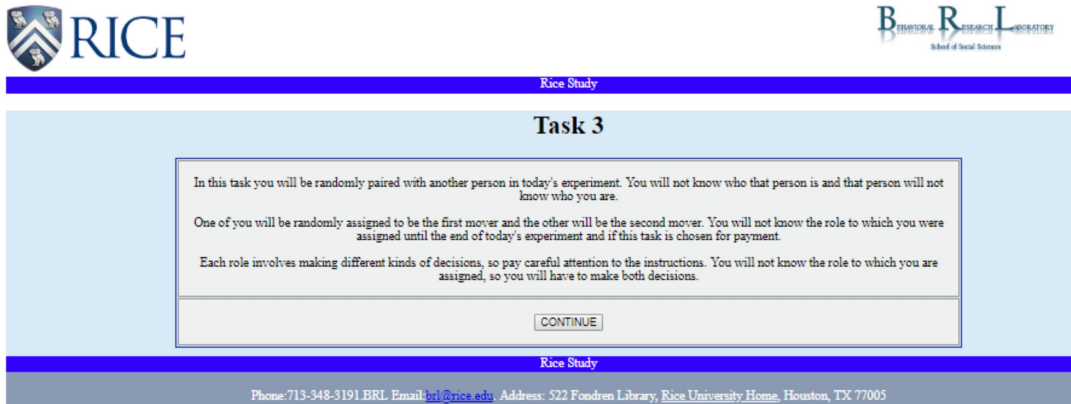


Figure 11: Introduction to the Trust Game

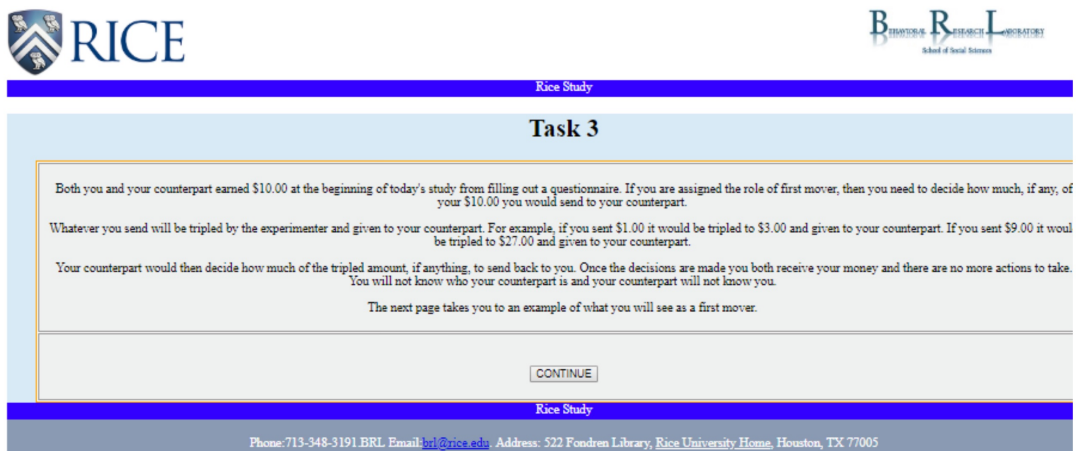




Figure 12: Trust game instructions page 2

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Task 3

As a first mover you would have to decide how much (if any) of your \$10.00 you want to send to your counterpart. In this example move the slider bar to indicate how much you would send to your counterpart. Then continue to the next page of instructions.

(Keep in mind this is only an example).


You can send up to \$10⁰⁰

Amount You Wish to Send \$: slider

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Figure 13: Trust game instructions page 3

Rice Study

Task 3

If you are assigned the role of second mover you will need to decide how much you would like to return to your counterpart. You will make that decision based on the tripled amount sent by your counterpart.

Because you do not know which role you will be assigned and because you have not been assigned a counterpart you do not know how much has been sent. Consequently you have to make a decision about how much to return for every amount that has been sent.

As you saw, a first mover can only send whole dollars. This means you have 10 decisions to make. The next page will give you a limited number of examples of what you need to decide.

The next page takes you to an example of what you will see as a second mover.

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Figure 14: Trust game instructions page 4

Task 3

As a second mover you would have to decide how much (if any) of the tripled amount you want to return to your counterpart. In this example move the different slider bars to indicate how much you would return if your counterpart sent the (tripled) amount. Remember that whatever you send back IS NOT tripled. You will see several examples. When you are ready continue to the next page of instructions.

(Keep in mind this is only an example).

Tripled Amount Sent	
You can send up to \$3	<p>Amount You Will Return \$: <input type="text" value="1"/></p> <p>slider</p> <p>Confirm</p>
You can send up to \$12	<p>Amount You Will Return \$: <input type="text" value="3"/></p> <p>slider</p> <p>Confirm</p>
You can send up to \$21	<p>Amount You Will Return \$: <input type="text" value="9"/></p> <p>slider</p> <p>Confirm</p>
You can send up to \$30	<p>Amount You Will Return \$: <input type="text" value="8"/></p> <p>slider</p> <p>Confirm</p>
<p>Continue</p>	

Figure 15: Trust game instructions page 5

Task 3

You are now finished with the instructions for this task. If you have questions, you may review the instructions.

Remember you do not know which role you will be assigned. Nor do you know who your counterpart will be. As a consequence you are going to have to make decisions as both a first mover and a second mover.

If this task is randomly chosen for payment, you will be told which role you were randomly assigned. You will be reminded of what you chose to do. You will also be told what your counterpart decide

BEGIN

REVIEW

Figure 16: Trust game instructions page 6

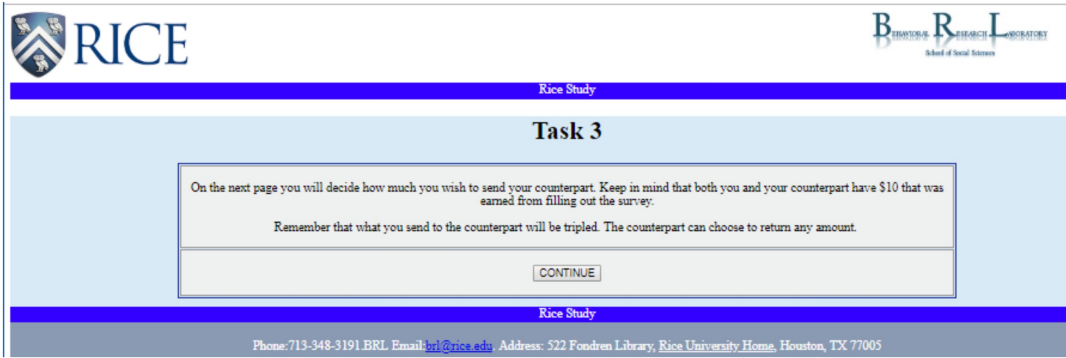


Figure 17: Trust game instructions page 7



Figure 18: Trust game decision

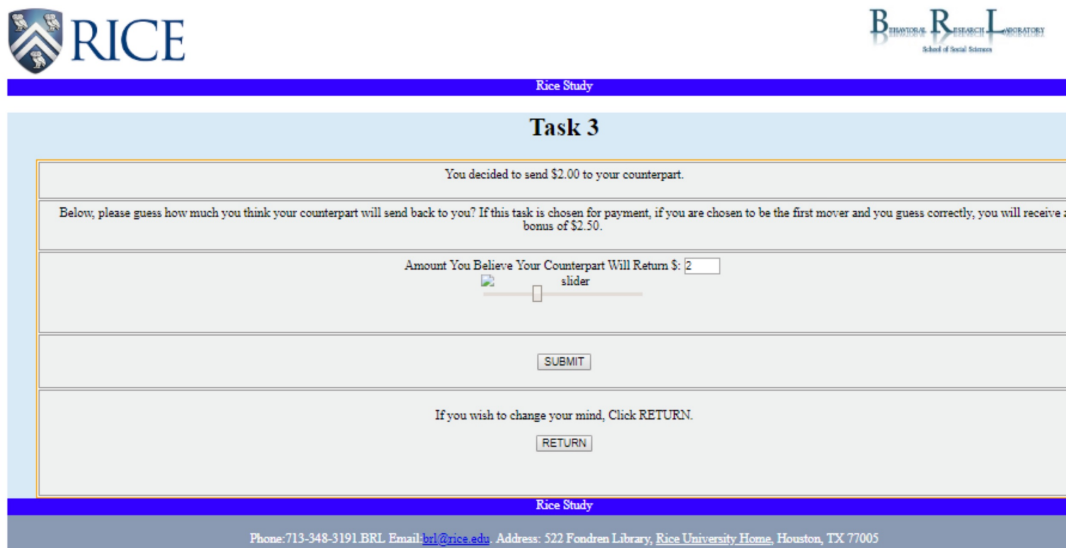


Figure 19: Trust game beliefs elicitation

Task 3

At the end of this study, if this task is picked for payment, you will be randomly matched with someone else. You will be randomly assigned to be either the first mover or the second mover. Because your role has not yet been assigned, you need to make decisions as a second mover.

On the next page you will be asked how much, if anything, you would return to your counterpart. Because you do not know how much was sent, you will have to pick a value for each possible amount that could be sent.

Keep in mind that whatever the first mover sends is tripled. The amount that you choose to return is your decision.

Figure 20: Trust game reciprocity

Task 3



Here you can choose how much you want to send to your counterpart. Move the slider bar to an amount that you would return if your counterpart sent (the tripled) amount. When you have made all of the decisions click CONTINUE to go to the next page.

Tripled Amount Sent	
You can return up to \$3	Amount You Will Return \$: <input type="text" value="1"/> slider <input type="button" value="Confirm"/>
You can return up to \$6	Amount You Will Return \$: <input type="text" value="2"/> slider <input type="button" value="Confirm"/>
You can return up to \$9	Amount You Will Return \$: <input type="text" value="3"/> slider <input type="button" value="Confirm"/>
You can return up to \$12	Amount You Will Return \$: <input type="text" value="4"/> slider <input type="button" value="Confirm"/>
You can return up to \$15	Amount You Will Return \$: <input type="text" value="5"/> slider <input type="button" value="Confirm"/>
You can return up to \$18	Amount You Will Return \$: <input type="text" value="7"/> slider <input type="button" value="Confirm"/>
You can return up to \$21	Amount You Will Return \$: <input type="text" value="3"/> slider <input type="button" value="Confirm"/>
You can return up to \$24	Amount You Will Return \$: <input type="text" value="7"/> slider <input type="button" value="Confirm"/>

Figure 21: Trust game reciprocity decision

You can return up to \$27	 <p>Amount You Will Return \$: <input type="text" value="8"/> slider</p> <p><input type="button" value="Confirm"/></p>
You can return up to \$30	 <p>Amount You Will Return \$: <input type="text" value="16"/> slider</p> <p><input type="button" value="Confirm"/></p>
<p><input type="button" value="Continue"/></p>	

Figure 22: Trust game reciprocity decision

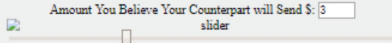
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Task 3

Now that you have completed all of your decisions, how much do you expect your counterpart will send you? If this task is chosen for payment, if you are chosen to be the second mover and you guess correctly, you will receive a bonus of \$2.50.

Your counterpart can send up to \$1000



Amount You Believe Your Counterpart will Send \$: slider



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Figure 23: Trust game reciprocity beliefs

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Task 3

You have completed this task. You will now move on to the next task.

Please click CONTINUE when you are ready.

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Figure 24: End of the Trust Game

Table 1: Sample Characteristics

	Difference		H_0 : In-lab = Online				
	Mean	SE	(a) Unadj.	(b) Wyoung	(c) Bonferroni	(d) Sidak	(e) Rwolf
Female	0.04	0.04	0.31	0.98	1.00	0.99	0.98
Ethnicity:							
Black	0.00	0.02	0.90	1.00	1.00	1.00	1.00
Asian	0.11	0.04	0.01	0.08	0.10	0.09	0.08
White	-0.11	0.04	0.01	0.17	0.20	0.19	0.17
Hispanic	-0.02	0.03	0.59	1.00	1.00	1.00	1.00
Citizen	-0.04	0.03	0.20	0.96	1.00	0.97	0.96
Political Inclination	0.02	0.08	0.77	1.00	1.00	1.00	1.00
Pre-matriculation measures							
Risk Aversion	0.03	0.14	0.86	1.00	1.00	1.00	1.00
Time Preference	-0.10	0.11	0.38	0.99	1.00	0.99	0.99
Academic achievement							
GPA in the first semester	0.06	0.04	0.18	0.94	1.00	0.96	0.94
Cumulative GPA by Fall 2021	0.03	0.04	0.37	0.99	1.00	0.99	0.99
Number of completed hours by Fall 2021	0.88	1.99	0.66	1.00	1.00	1.00	1.00
Short Form Personality Inventory							
Extraversion	0.18	0.15	0.23	0.96	1.00	0.97	0.96
Agreeableness	0.11	0.11	0.32	0.98	1.00	0.99	0.98
Conscientiousness	0.01	0.10	0.94	1.00	1.00	1.00	1.00
Emotional Stability	-0.28	0.12	0.03	0.32	0.43	0.36	0.32
Openness to New Experiences	0.08	0.09	0.36	0.99	1.00	0.99	0.99
Wealth							
Median house value	-28,195	22,522	0.21	0.96	1.00	0.97	0.96
Median household income	439	3,270	0.89	1.00	1.00	1.00	1.00

Notes: Column (a) reports the unadjusted p -value. Column (b) reports the p -value obtained by the free step-down resampling method Westfall and Young (1993). Column (c) reports the p -value obtained by the Bonferroni-Holm adjusted p -values p -value. Column (d) reports the p -value obtained by the Sidak-Holm adjusted p -values p -value. Column (e) reports the p -value obtained by the Romano Wolf p -value. Column (a) -(d) are calculated using Stata command *wyoung* (Jones, Molitor, and Reif 2019). Column (e) is calculated using Stata command *rwolf*.

3 Additional Analysis

Table 1 and 2 report p -values obtained from various multiple hypothesis testing correction techniques. Note that any technique we use yields the same ultimate result.

Table 3 details the means and p -values for the incentivized measures of social preferences. This table imposes a control for ordering effects for the dictator games. There is a difference between the lab and online subjects when the minimal group treatment is administered first. However, adjusting for multiple hypothesis testing, this difference disappears.

Figure 25 and 26 graph the average ingroup giving by the order for the dictator games and includes the 95 percent confidence interval. This figure illustrates what is detailed in Table 3. There is ingroup bias in the dictator games and the effect is true for both laboratory and online subjects. There are no differences for the trust game.

Table 2: Means for Social Preference Measures

	Difference		H_0 : In-lab = Online				
	Mean	SE	(a) Unadj.	(b) Wyoung	(c) Bonferroni	(d) Sidak	(e) Rwolf
Giving to Minimal Ingroup	0.633	0.331	0.056	0.187	0.224	0.206	0.187
Giving to Real Ingroup	0.194	0.332	0.559	0.676	1.000	0.709	0.676
Trust	0.256	0.267	0.337	0.676	1.000	0.709	0.676
Reciprocity	-1.772	1.959	0.366	0.676	1.000	0.709	0.676

Notes: Column (a) reports the unadjusted p -value. Column (b) reports the p -value obtained by the free step-down resampling method Westfall and Young (1993). Column (c) reports the p -value obtained by the Bonferroni-Holm adjusted p -values p -value. Column (d) reports the p -value obtained by the Sidak-Holm adjusted p -values p -value. Column (e) reports the p -value obtained by the the Romano Wolf p -value. Column (a) -(d) are calculated using Stata command *wyoung* (Jones, Molitor, and Reif 2019). Column (e) is calculated using Stata command *rwolf*.

Table 3

	In-lab	Online	Difference	H_0 : In-lab = Online				
				(a) Unadj.	(b) Wyoung	(c) Bonferroni	(d) Sidak	(e) Rwolf
Giving to Minimal Ingroup								
Order 1	13.712 (0.365) n=118	12.676 (0.333) n=139	1.036 (0.494)	0.037	0.187	0.223	0.203	0.186
Order 2	12.102 (0.329) n=118	11.890 (0.280) n=146	0.211 (0.429)	0.623	0.847	1.000	0.858	0.847
Giving to Real Ingroup								
Order 1	13.847 (0.364) n=118	13.353 (0.329) n=139	0.495 (0.489)	0.313	0.822	1.000	0.847	0.822
Order 2	12.576 (0.307) n=118	12.699 (0.312) n=146	-0.122 (0.444)	0.783	0.847	1.000	0.858	0.847
Trust	4.415 (0.190) n=236	4.159 (0.185) n=283	0.256 (0.267)	0.337	0.822	1.000	0.847	0.822
Reciprocity	36.193 (1.371) n=236	37.965 (1.376) n=283	-1.772 (1.959)	0.366	0.822	1.000	0.847	0.822

Notes: Standard errors in parentheses. Adjusted p -values are calculated using Stata command *wyoung* (Jones, Molitor, and Reif 2019). Order 1 = minimal first and real second; Order 2 = minimal second, real first. Column (a) reports the unadjusted p -value. Column (b) reports the p -value obtained by the free step-down resampling method Westfall and Young (1993). Column (c) reports the p -value obtained by the Bonferroni-Holm adjusted p -values p -value. Column (d) reports the p -value obtained by the Sidak-Holm adjusted p -values p -value. Column (e) reports the p -value obtained by the the Romano Wolf p -value. Column (a) -(d) are calculated using Stata command *wyoung* (Jones, Molitor, and Reif 2019). Column (e) is calculated using Stata command *rwolf*.

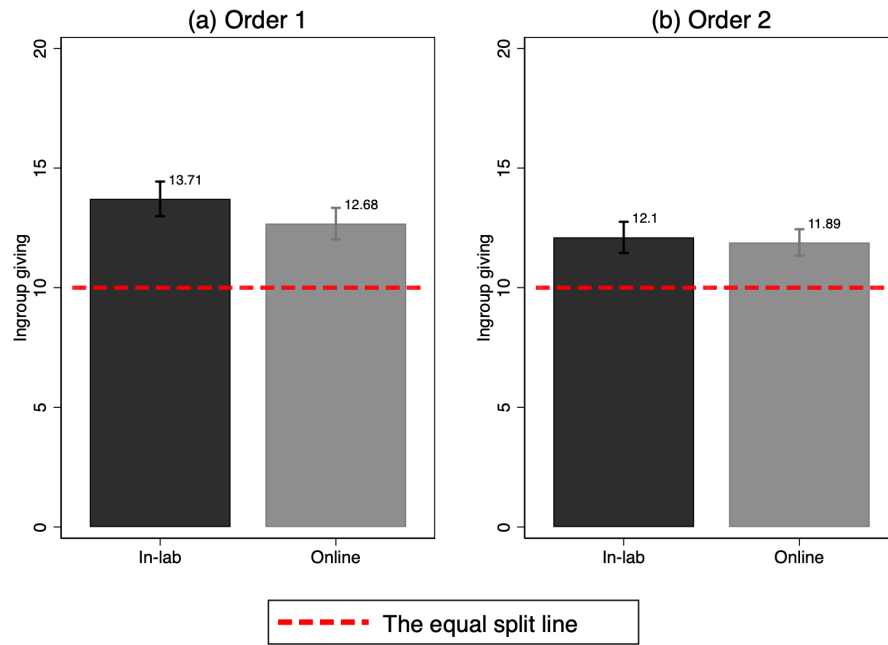


Figure 25: Giving to Minimal Group

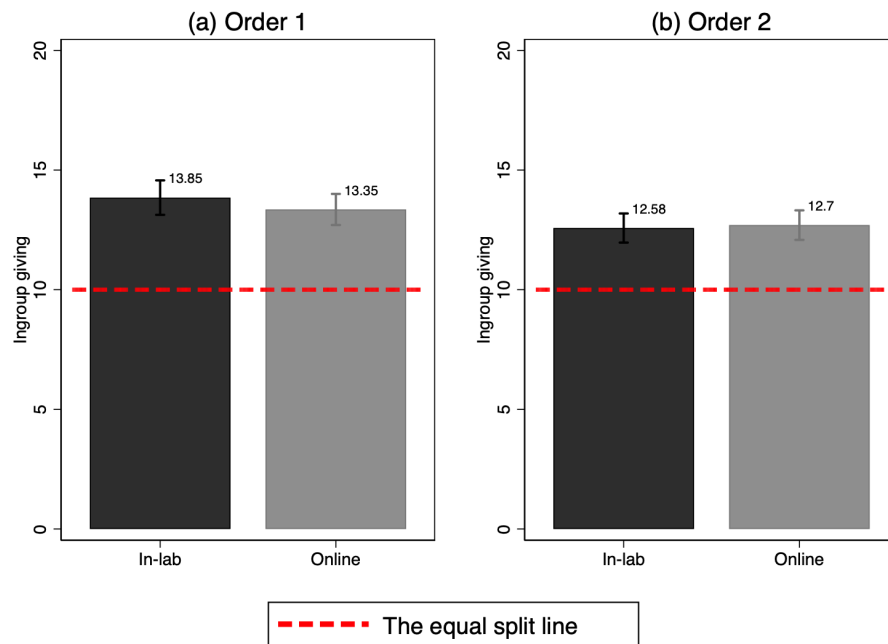


Figure 26: Giving to Real Group

4 Recruitment Emails

The following are copies of the recruitment emails sent to subjects.

Michelle Harris (notification):

The Behavioral Research Lab (BRL) invites you to participate in a decision making study. The study will last less than 60 minutes and you will be paid for your participation. You will need to come to the BRL to participate. You are eligible to participate at a time and date of your own choosing.

To see what times are available please go to: <http://brl.rice.edu/Study2020> . There you will be able to pick a time to participate.

Play games! Earn money! Help science!

This research study has been reviewed and approved by Rice University Institutional Review Board. If you have concerns regarding this study or questions regarding your rights as a study participant, please contact Stephanie Thomas, Compliance Administrator -IRB, at Rice University.
Email: irb@rice.edu or Telephone: 713-348-3586

Rick K. Wilson, Director BRL and Department of Political Science

Figure 27: Copy of email sent to subjects asking them to sign up for an in-lab experiment.

Initial Email To All Subjects

Make any last minute changes here. Once you hit the button to Send Mail this message will be sent to everyone!
Subject Line: <input type="text" value="Rice University - BRL On-Line Study"/>
(Note This line is inserted on the next page, (first name) (last name) you are invited to participate in the Rice Study 2016b!
The Behavioral Research Lab (BRL) invites you to participate in an on-line decision making study. The study will last about 15 minutes and you will be paid for your participation. Play games! Earn money! Help science!
Professor Rick K. Wilson is conducting online research with a variety of Rice students. You have been randomly selected to participate in this research. To participate go to: http://brl.rice.edu/Study2016c The study lasts about 15 minutes and you can participate in it
This research study has been reviewed and approved by Rice University Institutional Review Board. If you have concerns regarding this study or questions regarding your rights as a study participant, please contact Stephanie Thomas, Compliance Administrator -IRB, at Rice University. Email: irb@rice.edu or Telephone: 713-348-3586

Figure 28: Copy of email sent to subjects asking them to begin an online experiment.