

# Supplementary Materials: Communication, Expectations and Trust: an Experiment with Three Media\*

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## 1. Experimental Instructions

### 1.1. Part 1 Instructions (ALL)

#### Introduction

Welcome to the experiment. This is an experiment funded by a research foundation to study decision making. For showing up on time, you will be paid a \$5 show-up fee. You may receive additional earnings based on your and others decisions. All payoffs will be in “computer dollars”.

This experiment is composed of several parts. At the end of the experiment, the computer will randomly pick a part for which you will get paid for. We will pay you in cash an amount equal to \$1.00 for every computer dollar that you earn.

Today’s session will take about an hour and a half. Please do not communicate with other participants during the experiment.

Click CONTINUE when you are ready to go on.

#### Decisions and payoffs

In this part of the experiment, you will be randomly matched with another person. You and the person you are matched with will receive an endowment of 10 computer dollars each. One of you will be randomly assigned as Person A and the other will be assigned as Person B. Person A will have the opportunity to send some, all or none of their endowment to B. Each computer dollar sent to B will be tripled. B will then decide how much money to send back to A. B can send back some, all or none of what they received from A.

Click CONTINUE when you are ready to go on.

#### Examples

To help you determine the potential payoff you and the other person you are matched with can make, you will have access to the Calculator on the left at all times. This allows you to explore hypothetical situations before actually making decisions.

Let’s try it now.

#### EXAMPLE 1:

A decides to send 6 computer dollars, B sends back 4 computer dollars

A’s payoff = 8 computer dollars = 10 computer dollars endowment – 6 computer dollars sent to B + 4 computer dollars sent back by B

B’s payoff = 24 computer dollars = 10 computer dollars endowment + 3\*(6 computer dollars sent by A) – 4 computer dollars sent back to A

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**EXAMPLE 2:**

A sends 3 computer dollars, B sends back 8 computer dollars

A's payoff = 15 computer dollars = 10 computer dollars endowment – 3 computer dollars sent to B + 8 computer dollars sent back by B

B's payoff = 11 computer dollars = 10 computer dollars endowment + 3\*(3 computer dollars sent by A) – 8 computer dollars sent back to A

Feel free to experiment with the calculator now. Enter any number between 0 and 10 under "How much A sends to B" and any number between 0 and the amount received from A under "How much B sends to A" to explore how the earnings change. Feel to experiment as many times as you like.

ARE THERE ANY QUESTIONS?

Click NEXT when you're done.

**Entering Decisions for A**

Your computer screen will display your type (A or B) and your ID number. Your type and ID number will be the same for the entire experiment.

If you are assigned as Person A, you will decide how much of your endowment to send to Person B.

While Person A is making their decision, Person B will be asked how much they expect A to send to them. Person B will receive a \$1 bonus if their expectation exactly matches A's decision and the bonus will decrease as B's expectation gets further away from A's decision. The lowest value for the bonus is \$0.

Please practice entering A's decision in the top left box and B's expectation in the bottom left box now. This is for practice and it will not affect your payoff in the actual experiment.

ARE THERE ANY QUESTIONS?

**Entering Decisions for B**

After Person A has made their decision, if you are assigned as Person B, you will be informed how much you received from A and you will decide how much of that amount you would like to send back.

While Person B is making their decision, Person A will be asked how much they expect B to send back to them. Person A will receive a \$1 bonus if their expectation exactly matches B's decision and the bonus will decrease as A's expectation gets further away from B's decision. The lowest value for the bonus is \$0.

Please practice entering B's decision in the top left box and A's expectation in the bottom left box now. This is for practice, and it will not affect your payoff in the actual experiment.

ARE THERE ANY QUESTIONS?

Click CONTINUE when you are ready for a review.

*1.2. Review Questions*

Use the calculator on the left to answer the following questions.

Suppose Person A sent 7 computer dollars and Person B sent back 11 computer dollars. What is:

1. Person A's payoff:
2. Person B's payoff:

Once the experimenter has checked your work, press NEXT.

Results will not be shown until the end of the experiment. At the end of the experiment, you will be informed of your decision, the decision of the person you were matched with, and your payoff.

ARE THERE ANY QUESTIONS?

Click CONTINUE when you are ready to go on.

### *1.3. Part 2 Instructions (FTF)*

In this part of the experiment, you will participate in the same experiment as before, with a different person. In some previous experiments, participants found it beneficial to communicate with each other. We will now give you an opportunity to communicate in person. After the communication time is over, you will participate in the same experiment as before, with one of the people you just communicated with.

You will have an opportunity to communicate in groups of four people. You will be facing the other people in your group. The people in your discussion group are picked at random from all of the experiment participants and do not necessarily include the person that you were matched with in Part 1 of the experiment. Your discussion group does include the person you will be matched with in Part 2.

The experimenter will direct you to your discussion group now. Please do not start communication until the experimenter says so.

ARE THERE ANY QUESTIONS?

Has everyone joined the group now? You will now be given 10 minutes to communicate with the people in your group.

Please start communication now.

[PAUSE]

The communication time is now over. Please stop talking and return to your computer terminals.

You will now participate in the same experiment as before, with one of the people you just communicated with.

ARE THERE ANY QUESTIONS?

### *1.4. Part 2 Instructions (FB)*

In this part of the experiment, you will participate in the same experiment as before, with a different person. In some previous experiments, participants found it beneficial to communicate with each other. We will now give you an opportunity to communicate through a Facebook group. After the communication time is over, you will participate in the same experiment as before, with one of the people you just communicated with.

In your screens please enter your email address that is connected to your Facebook account. When you're done entering your email address, please press OK.

Please give the experimenter a few minutes to invite your email addresses to a Facebook group. The experiment will invite you to join a Facebook group. In the email address that you have provided us earlier, you will find a message from Facebook inviting you to a group. You will have an opportunity to communicate in groups of four people. The people in your discussion group are picked at random from all of the experiment participants and do not necessarily include the person that you were matched with in Part 1 of the experiment. Your discussion group does include the person you will be matched with in Part 2. Prior to starting communication, we will give you a few minutes to log in to your Facebook account and join the group. Please do not start communication until the experimenter says so.

ARE THERE ANY QUESTIONS?

Please raise your hand if you cannot find the invitation in your email, or if you need help joining the Facebook group. On the next page, you will find step-by- step instructions on how to join the group, communicate with the other people in your group, and delete your Facebook account.

[PAUSE]

Has everyone joined the group now? You will now be given 10 minutes to communicate with the people in the group via Facebook posts.

Please start communication now.

[PAUSE]

The communication time is now over. Please log off your Facebook accounts and close the web browser. The experimenter will remove you from the discussion group momentarily.

You will now participate in the same experiment as before, with one of the people you just communicated with.

ARE THERE ANY QUESTIONS?

#### *1.5. Part 2 Instructions (C)*

In this part of the experiment, you will participate in the same experiment as before, with a different person. In some previous experiments, participants found it beneficial to communicate with each other. We will now give you an opportunity to communicate via computer. After the communication time is over, you will participate in the same experiment as before, with one of the people you just communicated with.

You will have an opportunity to communicate in groups of four people. You will be communicating by sending and receiving text messages to and from the other people in your group. The people in your discussion group are picked at random from all of the experiment participants and do not necessarily include the person you were matched with in Part 1 of the experiment. Your discussion group does include the person you will be matched with in Part 2.

In your screens, you will see a chat box where you can type messages to people in your group. Please do not start communication until the experimenter says so.

ARE THERE ANY QUESTIONS?

You will now be given 10 minutes to communicate with the people in your group via text messages.

Please start communication now.

[PAUSE]

The communication time is now over.

You will now participate in the same experiment as before, with one of the people you just communicated with.

ARE THERE ANY QUESTIONS?

#### *1.6. Part 2 Instructions (NC)*

In this part of the experiment, you will participate in the same experiment as before, with a different person. The person you will be matched with is picked at random from all of the experiment participants and is not necessarily the person that you were matched with in the first part of the experiment.

We will need a few minutes to set up your new matches. During this time you may use the web browser to surf the net or check your email or Facebook account if you want. Please do not close the z-Leaf program if you decide go to the web browser.

ARE THERE ANY QUESTIONS?

[PAUSE]

The setup time is now over. Please close the web browsers. You will now participate in the same experiment as before, with a different person. ARE THERE ANY QUESTIONS?

## 2. Exit Questionnaire

**Feedback**

Your ID number is:

What is your gender?  
 MALE  
 FEMALE

What is your major at UH?

What type of student are you?  
 Freshman Undergraduate  
 Sophomore Undergraduate  
 Junior Undergraduate  
 Senior Undergraduate  
 Graduate  
 Other

Have you participated in an Economics Experiment before?  
 Yes  
 No

Have you participated in a Psychology Experiment before?  
 Yes  
 No

Do you have a Facebook account?  
 Yes  
 No

How often do you use it?  
 Every Day  
 Once or Twice a Week  
 Not that Often  
 Not Applicable

How many Facebook friends do you have?  
 Less than 10  
 10 to 50  
 50 to 100  
 More than 100  
 Not Applicable

### 3. Additional Tables

**Table S1.** Summary of Experimental Sessions.

<b>Session</b>	<b>Location</b>	<b>Treatment</b>	<b># Subjects</b>	<b>Average pay, \$</b>
1	UH Manoa	FB	8	17.25
2	UH Manoa	NC	8	17.00
3	UH Manoa	FB	8	16.88
4	UH Manoa	Chat	8	18.25
5	UH Manoa	FTF	8	16.75
6	UH Manoa	Chat	8	18.63
7	UH Manoa	NC	8	18.75
8	UH Manoa	FTF	8	17.13
9	UH Manoa	FB	8	14.75
10	UH Manoa	Chat	8	17.88
11	UH Manoa	FTF	8	18.63
12	UH Manoa	NC	8	13.38

**Table S2.** Estimation of amount sent before communication.

	Amount Sent, \$		Amount Sent, \$		Probability of Sending All	
	Linear regression		Tobit estimation		Logit estimation	
	(1)	(2)	(3)	(4)	(5)	(6)
expected return	0.76 (1.03)		1.47 (1.35)		1.44 (0.94)	
expect fair return		2.13* (1.17)		3.59** (1.64)		2.06** (0.96)
FTF	-1.27 (1.33)	-1.42 (1.28)	-2.11 (1.76)	-2.43 (1.69)	-1.51 (1.04)	-1.75 (1.07)
FB	-3.14** (1.41)	-3.78** (1.42)	-4.14** (1.87)	-5.23*** (1.92)	-1.53 (1.08)	-2.23* (1.24)
Chat	-0.78 (1.34)	-1.22 (1.32)	-1.34 (1.79)	-2.02 (1.77)	-0.96 (0.95)	-1.45 (1.07)
FB daily user, many friends	0.77 (1.02)	0.45 (1.01)	0.89 (1.33)	0.38 (1.31)	0.14 (0.80)	0.05 (0.84)
male	0.75 (0.98)	0.81 (0.94)	1.27 (1.28)	1.44 (1.24)	1.01 (0.75)	1.10 (0.80)
constant	5.33*** (1.86)	6.41*** (1.18)	5.32** (2.43)	7.34*** (1.57)	-2.69* (1.53)	-0.75 (0.90)
sigma			3.95*** (0.54)	3.80*** (0.52)		
(Pseudo) R-squared	0.1356	0.1919	0.0299	0.0476	0.1203	0.1632
Number of observations	46	46	46	46	46	46

Notes: \*/\*\*/\*\* indicate significance at the 10/5/1 percent level.

**Table S3.** Estimation of receiver decisions before communication.

	Amount Returned, \$		Share Returned	Probability of Fair Return		
	Linear regression		Tobit estimation	Logit estimation		
	(1)	(2)	(3)	(4)	(5)	(6)
receiver expectation		0.81*** (0.28)		0.06*** (0.01)		0.25* (0.14)
amount sent	1.45*** (0.48)	1.80*** (0.46)	-0.01 (0.02)	0.01 (0.02)	-0.21 (0.22)	-0.12 (0.23)
sent all	-0.16 (3.17)	-2.14 (2.98)	0.01 (0.16)	-0.13 (0.14)	2.26 (1.47)	1.82 (1.52)
FTF	0.79 (2.26)	0.39 (2.07)	0.03 (0.12)	0.00 (0.10)	-0.39 (0.97)	-0.53 (1.01)
FB	-1.01 (2.30)	0.50 (2.16)	-0.06 (0.12)	0.05 (0.10)	-1.45 (1.02)	-1.06 (1.07)
Chat	0.73 (2.17)	0.58 (1.99)	-0.04 (0.11)	-0.05 (0.09)	-1.02 (0.95)	-1.15 (1.02)
FB daily user, many friends	0.02 (1.74)	-0.37 (1.60)	0.01 (0.09)	-0.02 (0.07)	-0.44 (0.76)	-0.54 (0.80)
male	-0.78 (1.56)	-1.11 (1.43)	-0.06 (0.08)	-0.08 (0.07)	-0.48 (0.70)	-0.62 (0.73)
constant	1.14 (3.50)	-4.84 (3.80)	0.64*** (0.18)	0.22 (0.18)	1.37 (1.55)	-0.47 (1.89)
(Pseudo) R-squared	0.4373	0.6134	-0.1389	0.2244	0.0955	0.1493
Number of observations	46	46	46	46	46	46

Notes: Share returned is out of tripled amount sent. Fair return indicates returning twice the amount sent. \*/\*\*/\*\* indicate significance at the 10/5/1 percent level.

4. Additional Figures

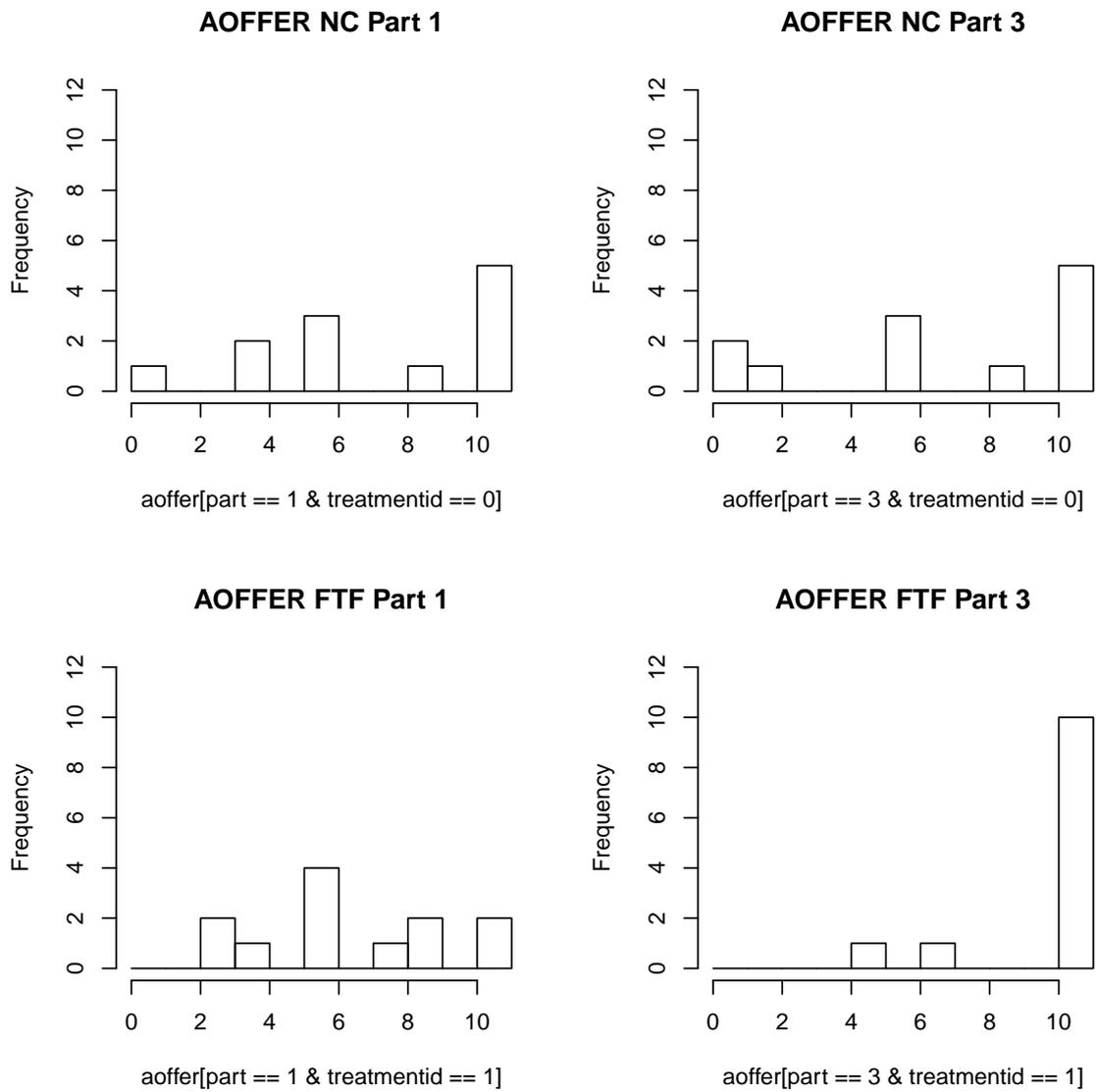
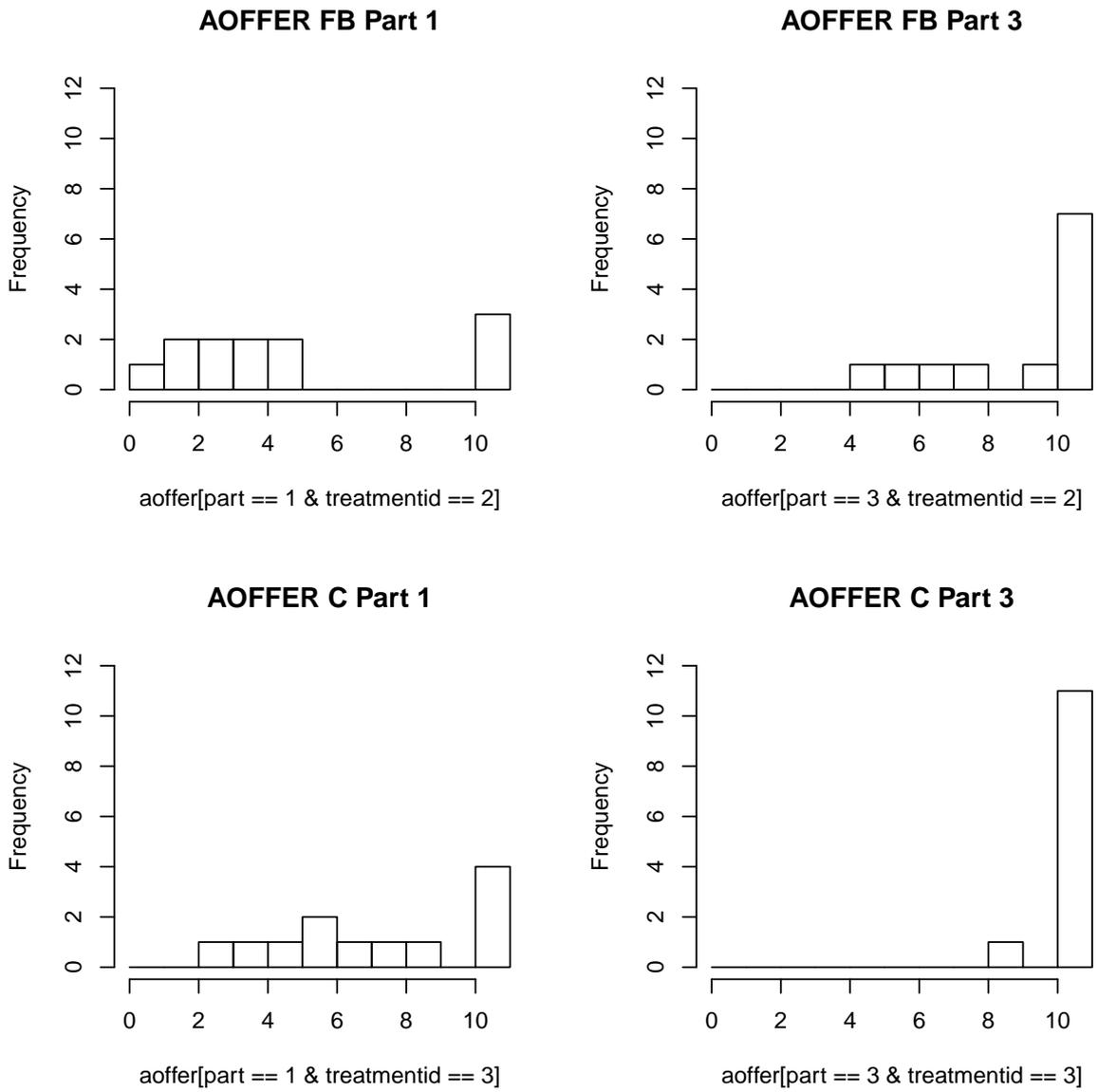
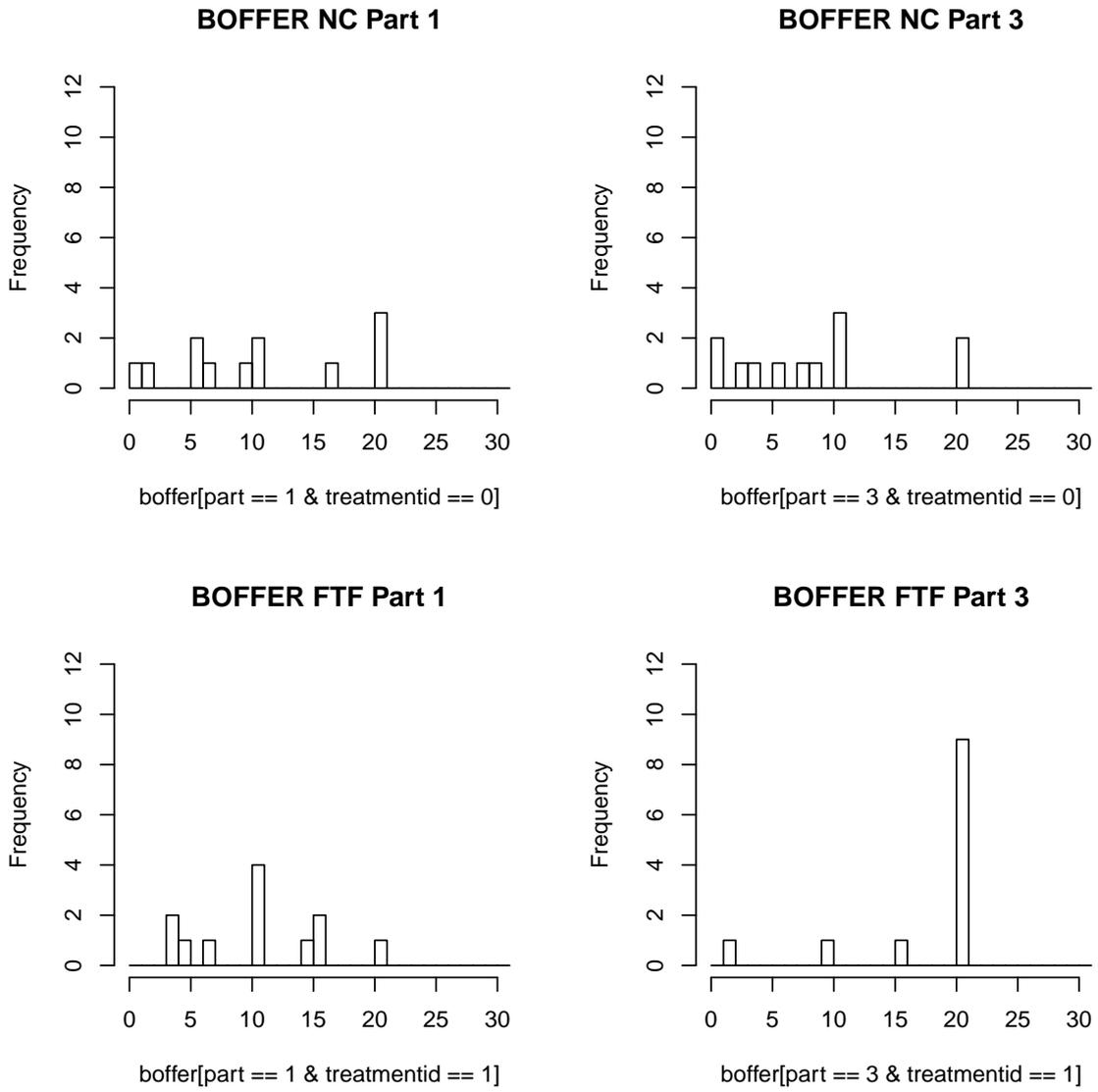


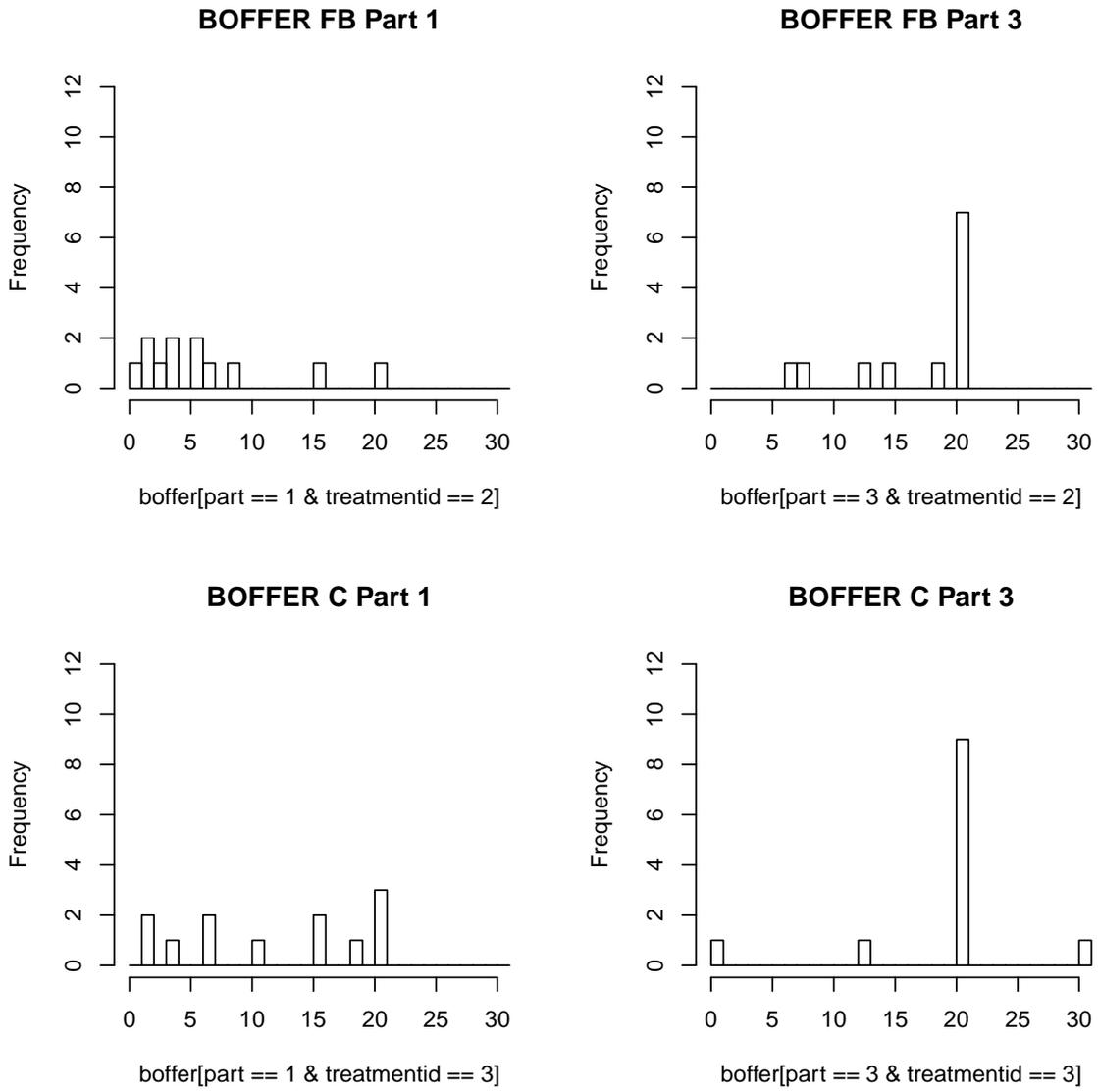
Figure S1. No Communication and Face-to-Face: Amount Sent



**Figure S2.** Facebook and Chat: Amount Sent



**Figure S3.** No Communication and Face-to-Face: Amount Returned



**Figure S4.** Facebook and Chat: Amount Returned

## 5. Classification Categories for Contents Analysis

Contents Code	Message Content
0	empty comment
<b>Social Talk</b>	
10	general/other
11	hello
12	breaking ice
13	small talk
14	good bye
15	sharing feelings
16	talk about media (calculator, comm media)
17	thank you/sorry
18	TALK ABOUT EXPERIMENTERS/experiment
19	personal info/friends
<b>Norms and goals discussion</b>	
20	general norms discussion
21	equal split /fair
22	maximize money payoff
23	max payoff and equal split
24	sharing with others, empathy
25	we win
26	most beneficial for all
<b>Strategy: Division and payoffs (What to do, how much will get)</b>	
30	call for strategy proposal
31	send 5
32	send 5 / return 10
33	send 10
34	send 10 / return 20
35	send low
36	send 10 / return 15
37	send any/return half triples
38	send any/return same amount
39	send any/return half
<b>Strategy: Implementation (How to make sure everyone follows)</b>	
40	general/other
41	swear/commit
42	do not cheat/not be greedy
43	empathy/generocity
44	trust
45	everyone needs to be on board/work together
<b>Payoff / game discussion</b>	
50	Earning money general
51	money from guessiong
52	number of people/matching
53	play with THIS discussion group
54	time to discuss
55	we are being recorded
56	what the computer shows
57	last round
<b>Personal game-related discussion</b>	
61	My/your Role
62	i/you send
63	i/you return

## 6. Sample Communication Logs

### 6.1. FTF Treatment

**Table S4.** FTF Group 4.

Group	Subject ID	Communication Log
4		All right, so I think the best way to do it is you send a full 10 and then that will bring up the most amount of money and then you have to trust ...
4		That's for type A, because they're the ones who ...
4		Yes.
4		C benefits more.
4		No, C ... it's type A since they're full 10.
4		Yeah, they get ...
4		Type B is going to get more total.
4		More, and then they can actually send more back.
4		They're going to get 30 from that and the original 10, so what they send back is 20 and then we both get the most amount of money that we can actually make because that's the most it can add up to so ...
4		Did you try ...
4		Oh, no, I had economics before so I understand it so basically we just have to be able to trust B.
4		Then you can send ...
4		You've got to trust B to send back.
4		So, yeah, okay. I'm A.
4		I'm A.
4		I'm B.
4		Yeah, okay.
4		So you guys send me the full construct and I send ...

**Table S5.** FTF Group 5.

Group	Subject ID	Communication Log
5		whether you're A or B
5		you put 10 for the first one so that way it maximizes
5		uh-huh
5		so for the first one you always put 10
5		yes
5		and for the second one you always put 20
5		do you want to practice?
5		ok
5		do you want to be A or B?
5		I think I want to be A
5		A? Ok. So I'm B and I'm gonna guess, I think you're gonna give me 10. How much are you actually gonna give me?
5		haha, like 10?
5		Ok, now you have to guess. How much do you think I'm gonna give you back?
5		If you're 10?
5		If I'm B, how much do you think I'm gonna give you back?
5		the same thing, right?
5		because now I have the 10 dollars I started with, so now I have 30 more, so I have 40 dollars in total
5		so how much do you think, of that money, how much do you think I'm gonna give back to you?
5		20?
5		good. And I'm gonna give you 20
5		do we really have 10 minutes?
5		you wanna practice?
5		ok. So what if I'm A. If I'm A, how much do you think I'm gonna give you?
5		10?
5		Ok. So I'm gonna give you 10. And I think that you are gonna give me 20
5		Ok, how much do you give me?
5		20?

## 6.2. Facebook

**Table S6.** Facebook Group 2.

Group	Subject ID	Communication Log
2	1506	Check this out. Whatever person A sends gets multiplied by 3, so there is more money being generated than actually put in. So we can take advantage of that by having person A send in the money and to keep it fair, person B will multiply that by 3 and return half of it. Win win
2	1507	agreed!!
2	1508	That's what I was thinking also.
2	1506	for example, if person A and B start of with \$10 ea, person A sends in all 10, then person B will get $3*10=30$ and person B will return 15. Then they both have 25 in the end
2	1505	Of course, if A sends all 10, who's to say B won't try to be greedy. We don't know who we're sending the money to.
2	1506	but in order for this to work, EVERYONE has to be on board. we can all benefit if we all work together, or think selfishly and get lesser results
2	1507	I agree to be in on the plan if everyone else does
2	1506	that's true, but he said that the people we are going to exchange with is in THIS group
2	1508	Person B will have \$40 if Person A sends all \$10. So the maximum pay out is \$20 for each person. If we're being fair of course.

**Table S7.** Facebook Group 3.

Group	Subject ID	Communication Log
3	1902	I was playing with the calculator a bit and noticed that If A sends 10\$, then B gets 30\$ plus the 10\$ they already had, so 40\$ total for B.
3	1904	ya so you would send 20 back to A
3	1901	so then its 20/20
3	1902	Yeah, sounds good
3	1904	Sounds good to me
3	1904	Is there anyway to payoff more?
3	1902	not without A losing money
3	1904	good idea
3	1904	Like if you all agree
3	1903	yuuup so hopefully no one is like that..haha

6.3. *Chat***Table S8.** Chat Group 1.

Group	Subject ID	Communication Log
1	8	so who wants to split it equally??
1	2	ME!
1	5	I do!
1	3	im down for splitting equally
1	2	alright awesome!
1	8	well i found that if type A gives 5 and type be then gives 11 you both get 15
1	8	
1	3	does anyone know how much equal is
1	8	*B
1	3	ok awesome
1	2	really?
1	8	if you know a greater amount equally im done
1	5	Wouldn't type b have to give 10 back?
1	8	*down for it sorry
1	8	typo
1	2	so whoever is A gives 5
1	2	whoever is B gives back 11?
1	3	what if A gave 10...
1	8	yeah...lol idk thats what i did for the 1st part lol
1	5	Then B would give back 20, right?
1	2	and B gave \$15?
1	3	yea B would give back 20
1	2	I wish we had the calculator here
1	8	i know me too lol
1	5	How about we do that then? A sends 10, and B sends 20 back
1	3	i just handwrote it out
1	5	I'm too confused to handwrite it out lol
1	3	A gives 10, B recieves 30 then equalling 40, so B sends back 20
1	8	what does that equal? 10?
1	3	then they both get 20
1	8	ohhhh but i thought you will have type A you get 0\$ if you give B all of your 0
1	8	*10
1	3	wait can B even send 20?.....
1	5	Yeah, they can since they'll have 40 total after A sends 10
1	8	so B will have 30 and then you give 20 to A...you will have 10 and A will have 20?
1	2	yupp really wish we had the calculators I think we're all confusing ourselves now lol
1	5	Yeeeeah, I'm so lost without that calculator :P
1	3	no B will have 40 cuz its 30 plus the original 10
1	8	lol wait really quickly if type A gives there money to B doesnt he.she lose it?
1	8	so then A will have )
1	3	not if B sends back 20
1	8	0
1	3	then they both get 20
1	8	OHHHHH ok i like that BEETTTEERR
1	2	I t hought that when A gives the money they completely lose it from their pay off
1	3	yea they do but B can give the money back
1	5	They do, but then if B sends back 20, they'll receive 20
1	8	smart so type A gives 10 and then B you give 20 back

**Table S9.** Chat Group 4.

<b>Group</b>	<b>Subject ID</b>	<b>Communication Log</b>
4	5	A send 10
4	3	A sends 10, b sends 20 back
4	5	b sends back 20
4	3	all agree?
4	8	send 10, return 20, everybody wins
4	2	deal
4	5	each come out with 20
4	3	kk
4	5	glad everyoe figured it out