

Supplementary Online Material to the paper
“Intention-based Social Influence in (Non) Strategic
Sharing Experiments”

Daniela Di Cagno*

Werner Güth†

Marcello Puca‡

Patrizia Sbriglia§

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Abstract

This document contains supplementary material that remains unpublished in the printed version of the paper. It includes: (1) further details on the set of payoffs and best-responses for the uni-dimensional games; (2) additional figures comparing offers and thresholds across the experimental conditions; (3) additional tables about order effects, and individual deviations from intended and actual choices; and (4) experiment instructions.

*LUISS University.

†Max Plank Institute for Research on Collective Goods (Bonn).

‡University of Bergamo; CSEF.

§University of Campania Luigi Vanvitelli.

A Payoffs and best-responses in uni-dimensional games

For completeness, we report in Figure A.1 the set of best response outcomes for the row player and each possible combination of offer and minimum accepted threshold, with the UG in panel (a) and IG in panel (b). The outcomes obtained by players when they choose the same strategy vector are highlighted in yellow, while best responses are highlighted in green.

		Player <i>j</i>																					
		offer	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Player <i>i</i>	offer	MAO	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
	1	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	
	2	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	19.5
	3	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	18.5	19
	4	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	17.5	18	18.5
	5	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	16.5	17	17.5	18
	6	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	15.5	16	16.5	17	17.5
	7	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	14.5	15	15.5	16	16.5	17
	8	13	0	0	0	0	0	0	0	0	0	0	0	0	0	13	13.5	14	14.5	15	15.5	16	16.5
	9	12	0	0	0	0	0	0	0	0	0	0	0	0	12	12.5	13	13.5	14	14.5	15	15.5	16
	10	11	0	0	0	0	0	0	0	0	0	0	0	11	11.5	12	12.5	13	13.5	14	14.5	15	15.5
	11	10	0	0	0	0	0	0	0	0	0	10	10.5	11	11.5	12	12.5	13	13.5	14	14.5	15	15.5
	12	9	0	0	0	0	0	0	0	0	9	9.5	10	10.5	11	11.5	12	12.5	13	13.5	14	14.5	15
	13	8	0	0	0	0	0	0	0	8	8.5	9	9.5	10	10.5	11	11.5	12	12.5	13	13.5	14	14.5
	14	7	0	0	0	0	0	7	7.5	8	8.5	9	9.5	10	10.5	11	11.5	12	12.5	13	13.5	14	14.5
	15	6	0	0	0	0	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	11.5	12	12.5	13	13.5	14
	16	5	0	0	0	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	11.5	12	12.5	13	13.5
	17	4	0	0	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	11.5	12	12.5	13
	18	3	0	0	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	11.5	12
	19	2	0	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	11.5
	20	1	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11

	Symmetric outcome
	Best response

(a) *Ultimatum Game*

		Player <i>j</i>																				
		offer	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Player <i>i</i>	offer	MAO	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
	1	20	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	20
	2	19	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	19	19.5
	3	18	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	18	18.5	19
	4	17	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	17	17.5	18	18.5
	5	16	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	16	16.5	17	17.5	18
	6	15	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	15	15.5	16	16.5	17	17.5
	7	14	7	7	7	7	7	7	7	7	7	7	7	7	7	14	14.5	15	15.5	16	16.5	17
	8	13	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	13	13.5	14	14.5	15	15.5	16	16.5
	9	12	6	6	6	6	6	6	6	6	6	6	6	12	12.5	13	13.5	14	14.5	15	15.5	16
	10	11	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	11	11.5	12	12.5	13	13.5	14	14.5	15	15.5
	11	10	5	5	5	5	5	5	5	5	5	10	10.5	11	11.5	12	12.5	13	13.5	14	14.5	15
	12	9	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	9	9.5	10	10.5	11	11.5	12	12.5	13	13.5	14	14.5
	13	8	4	4	4	4	4	4	4	8	8.5	9	9.5	10	10.5	11	11.5	12	12.5	13	13.5	14
	14	7	3.5	3.5	3.5	3.5	3.5	3.5	7	7.5	8	8.5	9	9.5	10	10.5	11	11.5	12	12.5	13	13.5
	15	6	3	3	3	3	3	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	11.5	12	12.5	13
	16	5	2.5	2.5	2.5	2.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	11.5	12	12.5
	17	4	2	2	2	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	11.5	12
	18	3	1.5	1.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	11.5
	19	2	1	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11
	20	1	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5

	Symmetric outcome
	Best response

(b) *Impunity Game*

Figure A.1: This figure shows the set of all possible outcomes obtainable in the uni-dimensional condition for each combination of offer and minimum accepted offer (MAO), with the UG in panel (a) and the IG in panel (b). For each game we highlight, in green, the outcomes generated by the best responses induced by our experimental design while, in yellow, the outcomes obtained by players when they choose the same strategy vector.

B Figures

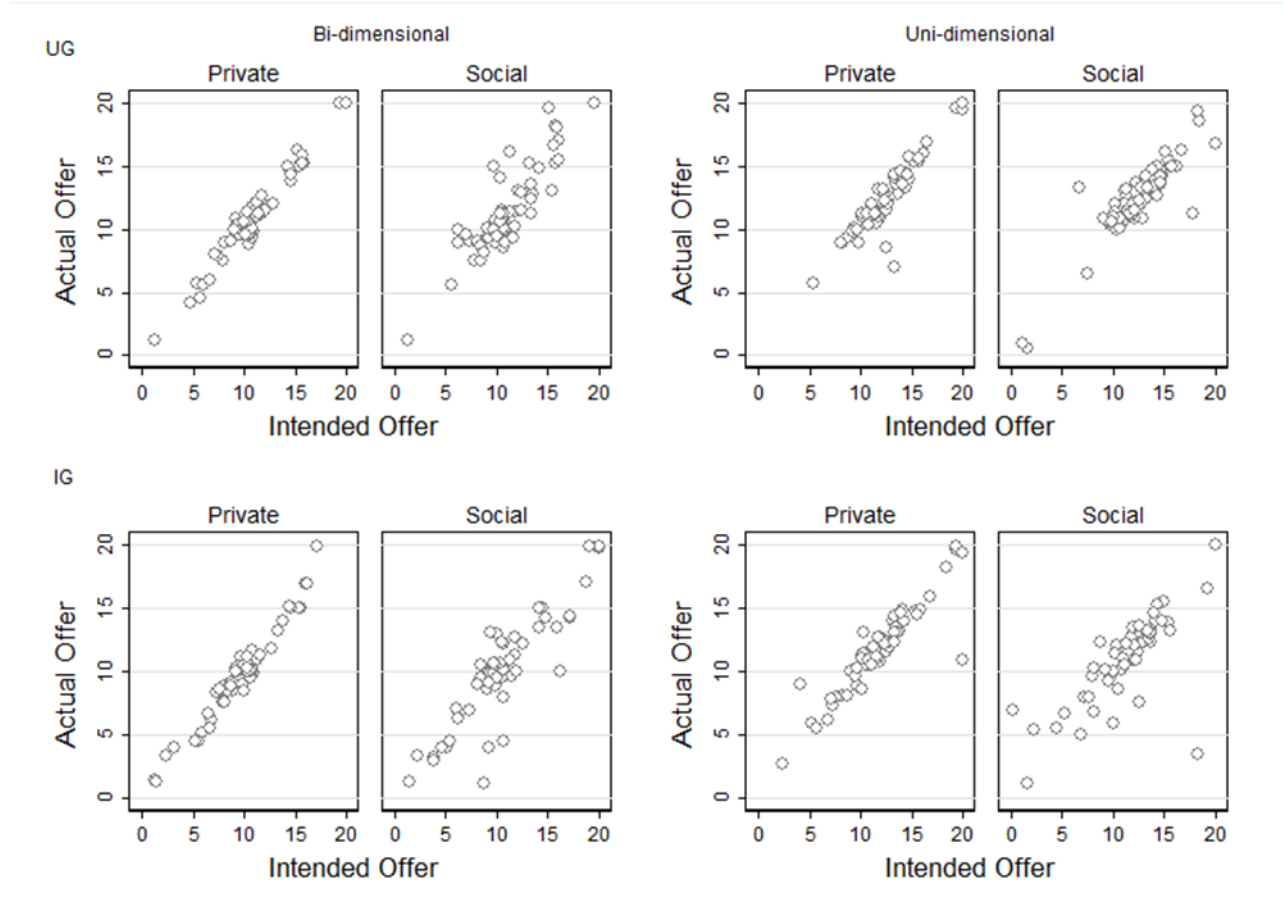


Figure B.1: Scatterplots between actual (y) and intended offer (y^0), with the private (resp. social) phase on the left (resp. right) panels. Top (resp. bottom) panels are for the UG (resp. IG). Left (resp. right) columns are for the bi-dimensional (resp. unidimensional) vector elicitation treatments

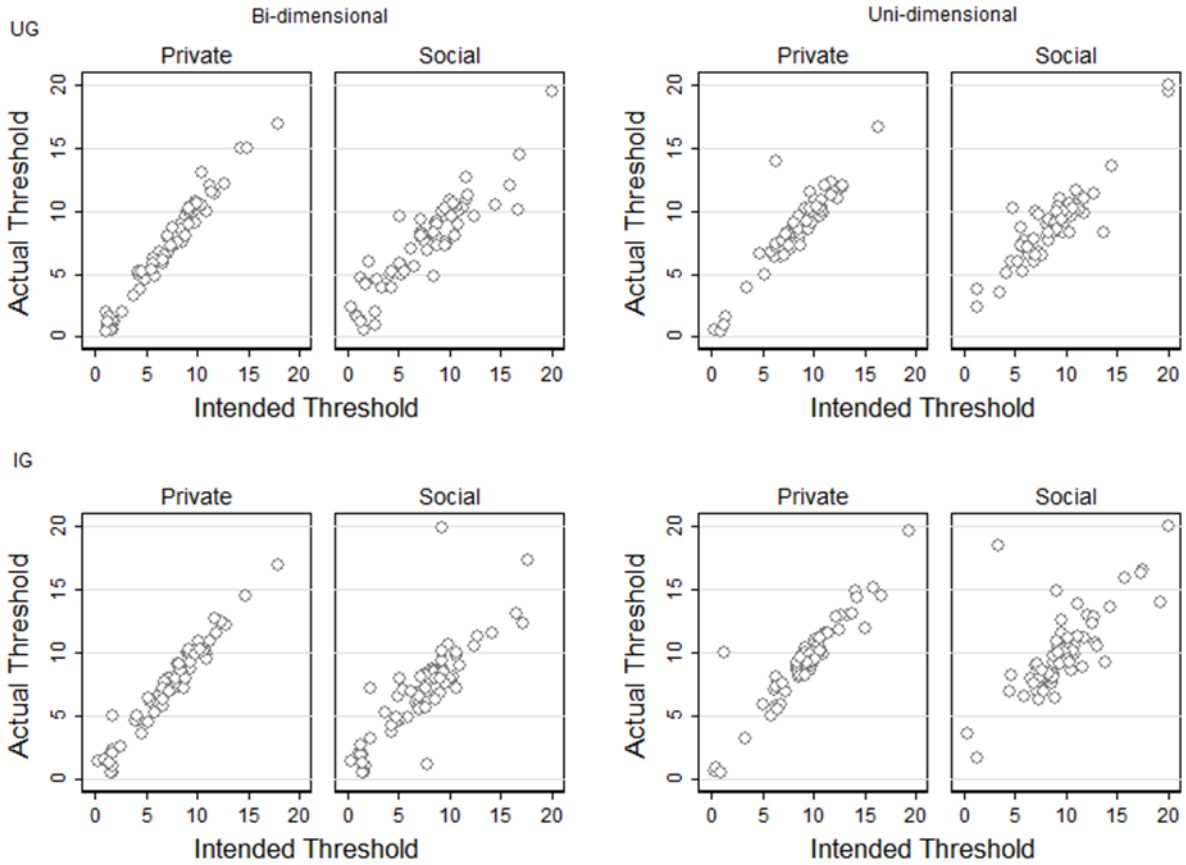


Figure B.2: Scatterplots between actual (y) and intended threshold (y^0), with the private (resp. social) phase on the left (resp. right) panels. Top (resp. bottom) panels are for the UG (resp. IG). Left (resp. right) columns are for the bi-dimensional (resp. unidimensional) vector elicitation treatments.

Figure B.1 (resp. Figure B.2) presents scatterplots between (on the vertical axis) actual and (on the horizontal axis) intended offers (resp. thresholds) with UG (resp. IG) plays on the top (resp. bottom) panel and the bi-dimensional (resp. uni-dimensional) treatment on the left (resp. right) panel. As when comparing average treatment effects, most upward (resp. downward) adjustments are observed when observing the group median in the UG (resp. IG)

phase.

We also compare the overall distribution of intentions and actions in both the bi-dimensional and uni-dimensional case, to see whether individuals self-impose uni-dimensionality. Figure B.3 (resp. Figure B.4) displays the scatterplot between, on the vertical axis, the actual (resp. intended) offer and, on the horizontal axis, the actual (resp. intended) acceptance threshold, with UG (resp. IG) plays on the top (resp. bottom) panel and the bi-dimensional (resp. uni-dimensional) treatment on the left (resp. right) panel. Figures B.3 and B.4 jointly confirm that participants do not self impose uni-dimensionality, not even at the intention stage. When individuals are given the opportunity to select bi-dimensional strategy vectors, regardless of the game, there is a noticeable positive relationship between the offers they make and their personal thresholds. This suggests that individuals who are more generous also expect more generous offers from others. An alternative explanation would be that those who choose a high acceptance threshold expect others to have a high acceptance threshold, due to a “false consensus effect” (see e.g., Engelmann and Strobel, 2000), and hence make a high offer because they do not want to risk a rejection.

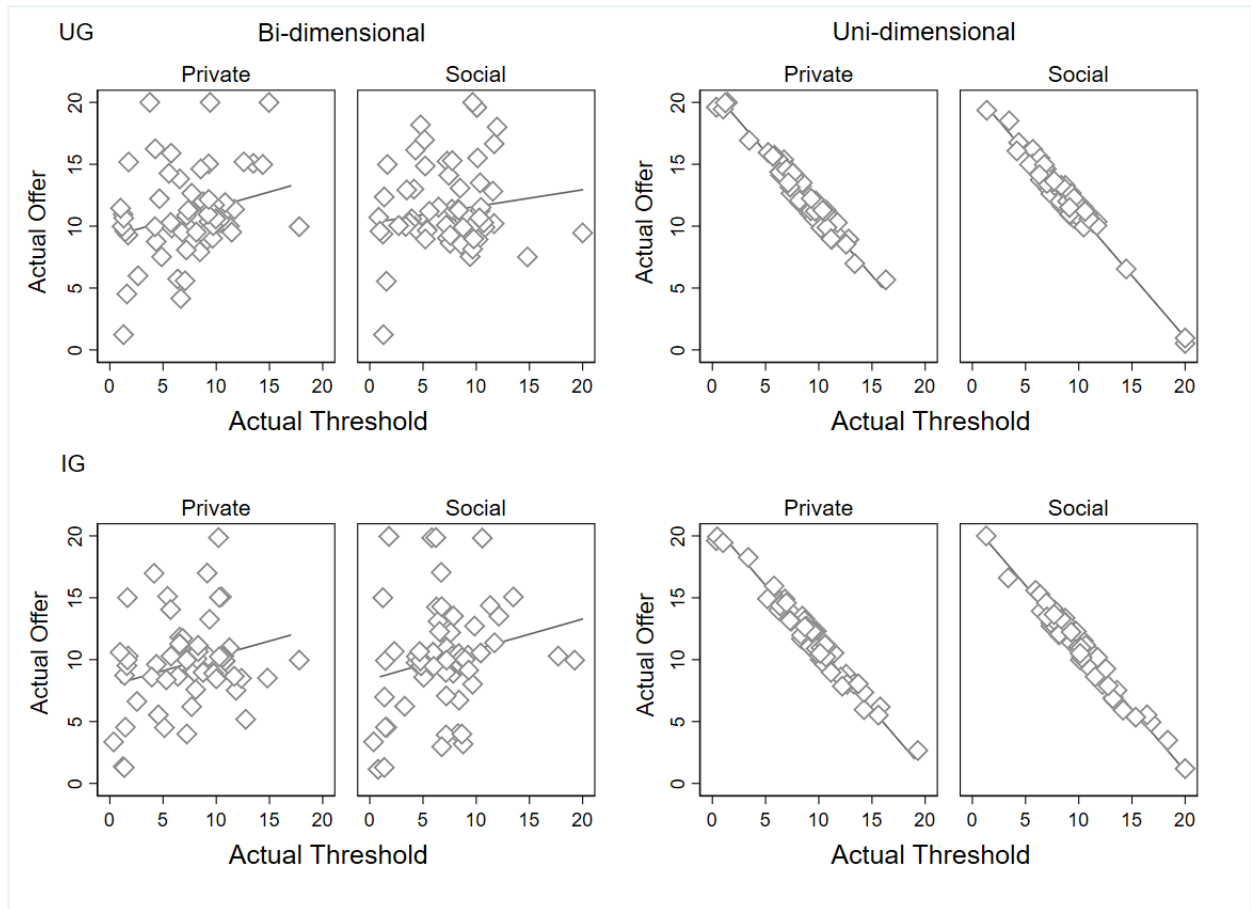


Figure B.3: Scatterplots between actual offer (y) and actual threshold (\underline{y}), with the private (resp. social) phase on the left (resp. right) panels. Top (resp. bottom) panels are for the UG (resp. IG). Left (resp. right) columns are for the bi-dimensional (resp. unidimensional) vector elicitation treatments. In each scatterplot, observations have been jittered to make overlapping diamonds visible.

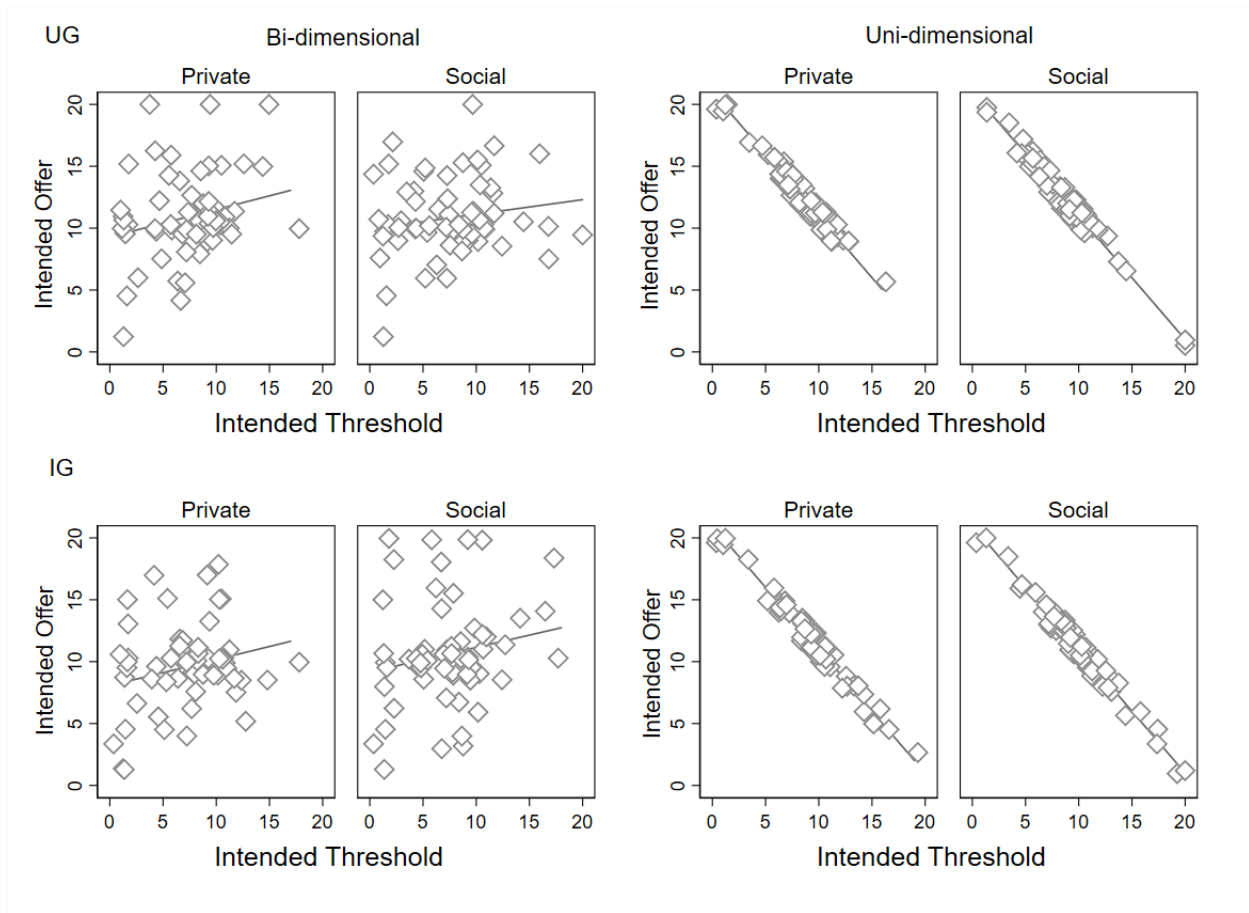


Figure B.4: Scatterplots between intended offer (y) and intended threshold (y), with the private (resp. social) phase on the left (resp. right) panels. Top (resp. bottom) panels are for the UG (resp. IG). Left (resp. right) columns are for the bi-dimensional (resp. unidimensional) vector elicitation treatments. In each scatterplot, observations have been jittered to make overlapping diamonds visible.

C Tables

Order effects To make sure that the treatment effect does not depend on the game sequence (UG then IG or vice versa), we report in Table C.1 the exact p-values of Kolmogorov-Smirnov equality-of-distribution tests for each game played and experimental condition. All

		UG			IG		
		All	Uni-dimensional	Bi-dimensional	All	Uni-dimensional	Bi-dimensional
Private Play	y	0.84	0.97	0.27	0.94	0.84	0.97
	\underline{y}	0.94	0.97	0.63	0.70	0.84	0.43
Social Play	y	0.55	0.99	0.16	0.99	1.00	0.97
	\underline{y}	0.84	0.99	0.43	0.84	1.00	0.27

Table C.1: This table reports the exact p-values of Kolmogorov-Smirnov tests for equality of distribution functions, for both offers y and thresholds \underline{y} and for each game played and experimental condition.

tests are not statistically significant, allowing us to safely consider the two game sequences as equivalent.

Individual deviations In Table C.2 we present summary statistics about deviations between: i) actual and intended individual offer ($y - y^0$) and actual and intended individual acceptance threshold ($\underline{y} - \underline{y}^0$); ii) actual and intended median offer ($y - \hat{y}^0$), and actual and intended median acceptance threshold ($\underline{y} - \underline{\hat{y}}^0$); and iii) actual individual offer and actual median offer ($y - \hat{y}$), and actual individual acceptance threshold and actual median acceptance threshold ($\underline{y} - \underline{\hat{y}}$). All deviations are presented separately by private (resp. social) plays in columns (1)-(2) (resp. (3)-(4)) and by game type, with UG (resp. IG) plays in the top (resp. bottom) row. Column (5) reports p-values of Wilcoxon matched-pairs signed-rank tests between private and social play.

Finally, we report in Table C.3 the results of OLS regressions with the differences between individual actual offer and acceptance threshold (models (1)-(2)) and intended offer and acceptance threshold (models (3)-(4)) as dependent variables. While observing group medians does not significantly affect offer-threshold gaps, all models reveal a strong and statistically significant increase in offer-threshold gaps in UG. Not surprisingly, the altruistic punishment threat, inherent to UG, triggers more generosity, both when stating intentions and when

	Private		Social		(5)
	(1)	(2)	(3)	(4)	
UG ($N = 32$)	Mean	SD	Mean	SD	p-value
$y - y^0$	-0.078	0.063	0.172	0.131	0.059
$y - \hat{y}^0$	0.117	0.145	0.117	0.203	0.383
$y - \hat{y}$	0.445	0.206	0.461	0.181	0.178
$\underline{y} - \underline{y}^0$	0.102	0.065	-0.070	0.128	0.265
$\underline{y} - \underline{\hat{y}}^0$	-0.141	0.140	0.062	0.218	0.893
$\underline{y} - \underline{\hat{y}}$	-0.125	0.248	-0.015	0.216	0.981
IG ($N = 32$)	Mean	SD	Mean	SD	p-value
$y - y^0$	-0.008	0.071	-0.406	0.196	0.082
$y - \hat{y}^0$	-0.078	0.149	-0.422	0.208	0.231
$y - \hat{y}$	-0.594	0.193	-0.688	0.219	0.707
$\underline{y} - \underline{\hat{y}}^0$	0.055	0.073	-0.047	0.225	0.123
$\underline{y} - \underline{\hat{y}}$	-0.062	0.112	0.156	0.152	0.756
$\underline{y} - \underline{\hat{y}}$	0.266	0.209	0.375	0.275	0.930

Table C.2: Summary statistics for individual differences between: i) actual and intended offer ($y - y^0$) and acceptance threshold ($\underline{y} - \underline{y}^0$); ii) actual and intended median offer ($y - \hat{y}^0$) and acceptance threshold ($\underline{y} - \underline{\hat{y}}^0$); and iii) actual and median offer ($y - \hat{y}$) and acceptance threshold ($\underline{y} - \underline{\hat{y}}$). Columns (1)-(2) (resp. (3)-(4)) report statistics by private (resp. social) plays. The top (resp. bottom) panel reports statistics of the UG (resp. IG) game phase. We report the number of observations in parentheses. Column (5) reports p-values of Wilcoxon matched-pairs signed-rank tests.

Dep. Variable	$y - \underline{y}$		$y^0 - \underline{y}^0$	
Model	(1)	(2)	(3)	(4)
Social	-0.289 (0.727)	0.672 (0.769)	-0.820 (0.775)	0.391 (0.736)
UG	1.484*** (0.289)	1.203*** (0.418)	1.242*** (0.278)	1.281*** (0.408)
Social*UG		-0.438 (0.851)		-1.281 (0.783)
Uni-dimensional	-0.547 (0.676)	-0.031 (0.844)	-0.148 (0.722)	0.156 (0.915)
Social*Uni-dimensional		-2.031* (1.066)		-1.813* (1.031)
UG*Uni-dimensional		0.453 (0.753)		0.531 (0.686)
Social*UG *Uni-dimensional		1.094 (1.185)		1.344 (1.126)
Constant	2.637*** (0.766)	2.406*** (0.829)	2.234*** (0.791)	1.930** (0.851)
Observations	128	128	128	128
R-squared	0.023	0.030	0.013	0.020

Table C.3: This table report results from multivariate OLS regressions with the differences between individual actual offer and acceptance threshold (models (1)-(2)) and intended offer and acceptance threshold (models (3)-(4)) as dependent variables. All models control for the sequence of game types, play phase and sociodemographic characteristics of the participants. Error terms are clustered at the group-session level. ***, ** and * represent 1%, 5% and 10% significance levels, respectively.

actually deciding.¹

D Experiment Instructions

*WELCOME*²

Welcome. Welcome to today’s experiment! Please follow the instructions as we guide you through the experiment you will be taking part in. Please do not touch the mouse or the keyboard unless you are instructed to do so. I will read through this script to explain the nature of today’s experiment and how to work with the software you will be using. I will be reading this script to ensure that all sessions of this experiment receive the same information, should you have any questions please raise your hand and an experimenter will come to you and answer your question privately. We ask that everyone please refrain from talking or looking at the monitors of the other participants during the experiment.

The purpose of this experiment is to study how individuals take decision in specific situations. You will receive 5 euros as a show up fee and you may earn more during the experiment. All payments will be anonymous and you will be paid in cash at the end of the experiment.

Please click “Continue” now to view the instructions of the experiment.

START OF PHASE 1 (PRIVATE PLAY)

Groups. In this experiment, you will be asked to take some decisions. At the end of the experiment one of these decisions will be selected at random and considered for your final payment.

Each of you has been randomly assigned to a group of four members with other participants

¹The average offer-threshold gaps are positive and close to 3 ECU’s both for intended and actual plays.

²Instructions (translated from Italian) for the uni-dimensional condition and IG-UG sequence, i.e., treatment 3. Text in *ITALIC* indicates the different phases of the experiment but was not read aloud by the experimenter.

in this room. The identity of the other members of your group will never be revealed by the experimenters. The software will randomly assign a color to your group. We will use this color only to identify your group and will also be kept secret. Only the members of each group will know the color of their own group.

Roles. Having formed the groups, the software will randomly and anonymously pair each of you with another member of your group, thus forming two couples in each group. Each of these couples will have a “proposer” and a “recipient”. This role will be randomly assigned by the software and may, or may not, change during the experiment. This choice, however, will be hidden during the experiment, so you will not know in which role you will be playing.

Actions. Now each of you must choose how to split a pot of 21 euros between you and your partner. Specifically, you will be required to:

1. in the proposer role, to choose the amount you are willing to offer the recipient;
2. in the recipient role, to choose the minimum amount you are willing to accept from the proposer

Input. In the middle of the screen, two vertical series of numbers represent the possible choices you can take. To make your choice, use the mouse to select:

1. on the left column, the amount you are willing to give to your partner,
2. on the right column, the amount you are willing to accept from your partner.

Be careful: the amount you will be choosing as a proposer and recipient must add up to 21. For example, if you wish to offer your opponent 8, the minimum amount you can accept must be $21-8=13$. The experiment will not continue until this condition will be met.

Please now select an amount you are willing to offer and the minimum you are willing to accept. Please note that this is an example. Please choose any quantity you like, as this choice will not affect your final and actual payoff, and then click “Continue” (see Figure D1).

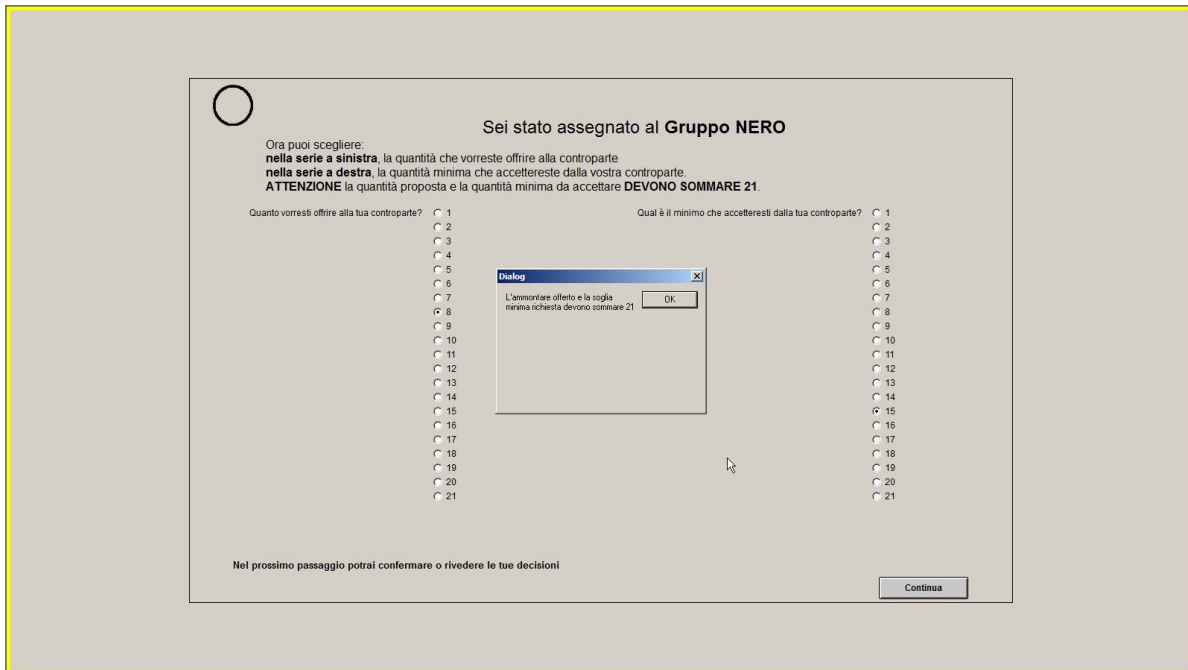


Figure D1: This figure shows the actual screen seen by participants during the instructions (in Italian) about how to choose intentions, for the uni-dimensional and IG condition. Note that the warning message alerts the participant that the offer and the threshold must add up to the pie size.

After you make your choice, we will give you the opportunity to confirm or change your decision. To confirm a decision, you will just need to click on the “OK” button. If, however, you decide to change your offer or minimum acceptance threshold, click on another number and then confirm it by clicking “OK” (see Figure D2).

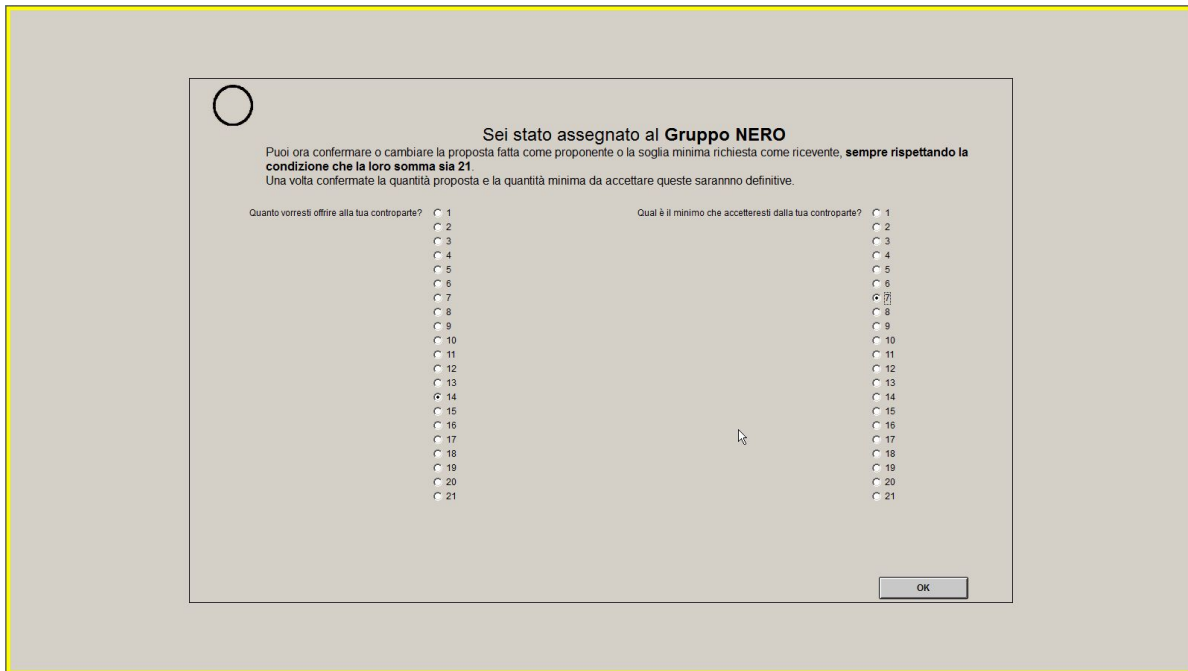


Figure D2: This figure shows the actual screen seen by participants during the instructions (in Italian) about how to make their final choices, for the uni-dimensional IG condition, and during the private phase (i.e. when median intentions are not revealed).

Payoffs. Your final payoff will depend

1. On the role assigned by the software;
2. On the decisions made by your partner;
3. On the color of a button you will see at the top left of your screen

This button will tell you in which phase of the experiment you are playing. The button can be

1. Turned off (gray) (*IMPUNITY GAME*)
2. Turned on (red) (*ULTIMATUM GAME*)

Remember: you will be assigned to a group of four participants and you will be paired with another member whose identity will never be revealed. In each phase of the experiment new pairs will be formed. This means that you may be paired to another member of your group or with the same member.

When the button is turned off/gray, if the quantity offered by the proposer is greater or equal to the minimum quantity accepted by the recipient, the amount will be split according to the recipient's decisions.

For example, if the proposer is willing to offer the recipient 10, whose acceptance threshold is 8, the pie will be split as follows:

1. 10 will go to the recipient
2. $21 - 10$ will go to the proposer

If however the proposer offers 7, which is lower than the minimum acceptance threshold of the recipient, the pie will be split as follows:

1. the proposer gets $21 - 7$
2. the recipient gets 0

When the button is turned on/red, if the quantity offered by the proposer is greater or equal than the minimum quantity accepted by the recipient, the amount will be split according to the proposer's offer, as in the previous case. If however the proposer's offer is lower than the minimum acceptance threshold of the recipient, both members of the couple earn zero.

For example, if the proposer is willing to offer 10 to the recipient, whose acceptance threshold is 8, the pie is split as follows:

1. 10 will go to the recipient

2. 21 – 10 will go to the proposer

If however the proposer offers 7, which is lower than the minimum acceptance threshold of the recipient (8), the pie is split as follows:

1. the proposer gets 0
2. the recipient gets 0

Payment. At the end of the experiment, you will see a table like the one shown on your screen. This table contains all the information about your decisions and the amount you earned for each choice. Specifically, for each phase, you will read:

1. Your offer as a proposer;
2. Your minimum acceptance threshold as a recipient;
3. The role that the software assigned you (proposer or recipient)
4. The offer and the minimum acceptance threshold of your partner;
5. The amount you received.

Remember that the amount you earn will be disclosed only at the end of the experiment.

The instruction phase is now over. You will be soon redirected to the initial screen so that you can make your decisions on which your final payment will depend. When you are ready, please click “Continue” to move on with the experiment.

START OF PHASE 2 (SOCIAL PLAY)

Warning! You will now continue the experiment with a slight modification to the rules. You will be soon paired with another member of your group to make a decision. This time, however, you will receive an additional information. Specifically, when you are required to confirm your final decision, you will see on the right of the screen (see Figure D3):

1. the median offer and the median acceptance threshold chosen by the members of your group
2. whether your offer and your acceptance threshold are above or below the median of your group.

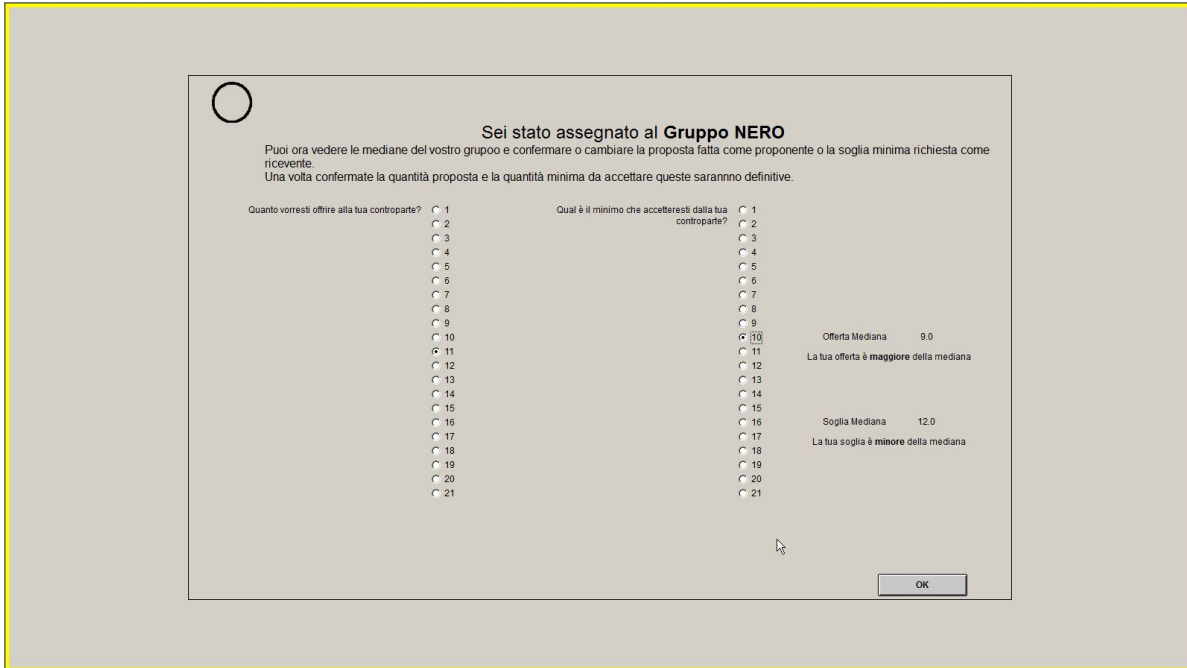


Figure D3: This figure shows the actual screen seen by participants during the instructions (in Italian) about how to make their final choice, for the uni-dimensional IG condition and during the social play (i.e. when median intentions are revealed).

As you might remember, the median is a statistic that splits the distribution of the choices of your group in two. For example, if the offers in your group are 2, 4, 8, 12, the median is 6. Please make a mock offer and select a mock acceptance threshold and click “OK”.

As you can see at the right of the screen we show you the median offer and the median acceptance threshold of your group as well as whether your decisions are above or below these values. As before, you can now confirm or change your initial decisions.

Once you are done, please click on “OK” to continue with the experiment. Please note finally that none of the other rules in the experiment will change.

The actual experiment will now start. You will soon be redirected at the initial screen and you will make new choices on which your final payment will depend. Please click “Continue” to move on with the experiment.

Thank you! The experiment is now over. Please complete the questionnaire on your screen with your personal information so that we can proceed with the payment.

References

Engelmann, D. and Strobel, M. (2000). The false consensus effect disappears if representative information and monetary incentives are given. Experimental Economics, 3:241–260.