

Fairness Perceptions and Prosocial Emotions in the Power to Take SUPPLEMENTARY MATERIAL

Ernesto Reuben

Columbia Business School, Columbia University, 3022 Broadway, New York, NY 10027, USA.

Frans van Winden

Department of Economics University of Amsterdam, Roetersstraat 11, 1018 WB Amsterdam, Netherlands.

ABSTRACT

This is the online appendix for the paper titled “Fairness Perceptions and Prosocial Emotions in the Power to Take” published in the Journal of Economic Psychology. This online appendix is divided in two. The first part contains additional descriptive statistics, figures, and data analysis. The second part contains the instructions given to the subjects and a reproduction of the screen used to elicit emotions.

Date of this version: March 2010.

A.1 Supplementary tables and figures

In table A1 we present descriptive statistics for subjects who played as a proposer in only one of the two periods.

TABLE A1 – DESCRIPTIVE STATISTICS FOR PROPOSERS WHO SWITCHED ROLES

Variable	Treatment E		Treatment No-E	
	Period 1	Period 2	Period 1	Period 2
Take rate	59.1% (22.4)	65.0% (18.8)	48.0% (24.9)	57.6% (21.0)
Destruction rate	11.9% (26.2)	17.8% (35.7)	12.0% (29.6)	11.3% (30.6)
Expected destruction rate	15.2% (30.9)	24.6% (32.9)	15.4% (33.1)	12.0% (19.6)
Frequency of destruction	26.5%	24.5%	21.7%	13.0%
Expected frequency of destruction	28.6%	51.0%	21.7%	30.4%
Observations	49	49	23	23

Note: Means and standard deviations (in parenthesis).

Figure A1 depicts, for each treatment, the distribution of take rates chosen by proposers who kept the same role for both periods. As can be seen, in both cases take rates range from 0% to 100% and the modal take rate is 50%. As mentioned in the main body of the paper, the apparent shift towards higher take rates is explained by a larger fraction of subjects who study economics in Treatment No-E.

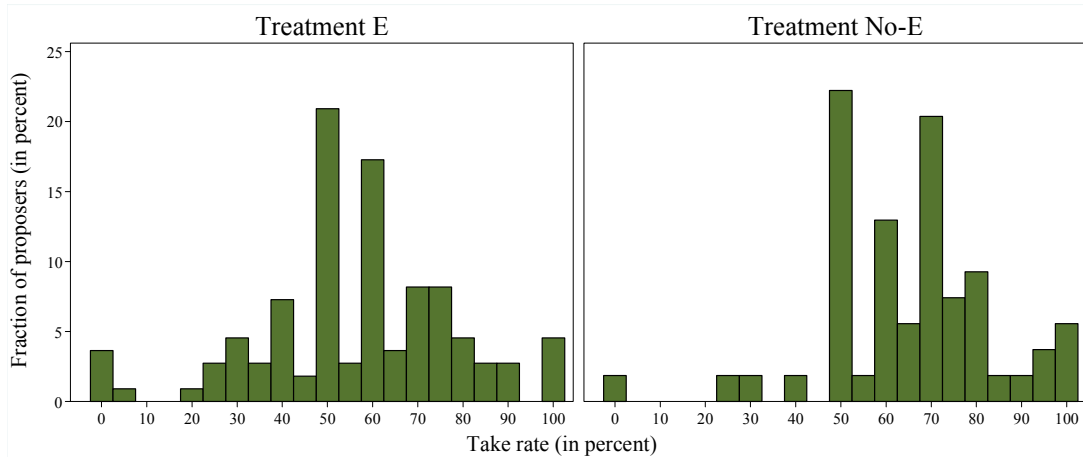


FIGURE A1 – DISTRIBUTION OF TAKE RATES

Figure A2 depicts, for each treatment, the distribution of the change in the take rate from period 1 to period 2 by proposers who kept the same role in both periods. In both cases, the modal choice is to keep the same take rate and there is a larger fraction of proposers that increase their take rate compared to the fraction of those that decrease it.

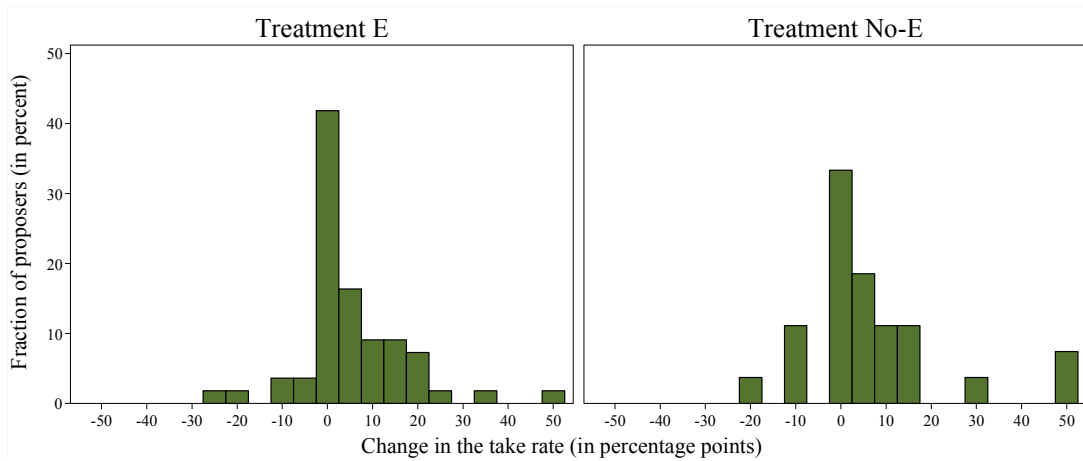


FIGURE A2 – DISTRIBUTION OF THE CHANGE IN TAKE RATES

Table A2 contains the pairwise correlation coefficients between the different emotions of proposers. We use data from both periods for proposers that kept the same role. The first period data and the data of other proposers is very similar and is available upon request. Correlation coefficients that are significant at the 5% level are set in *italics*.

TABLE A2 – CORRELATION COEFFICIENTS BETWEEN THE EMOTIONS OF PROPOSERS

Emotion	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1) admiration													
(2) anger	-0.23												
(3) contempt	-0.25	0.70											
(4) disappointment	-0.33	0.83	0.68										
(5) envy	-0.22	0.81	0.72	0.63									
(6) gratitude	0.56	-0.49	-0.34	-0.60	-0.39								
(7) guilt	0.08	-0.10	-0.16	-0.08	-0.14	-0.01							
(8) irritation	-0.28	0.79	0.63	0.79	0.58	-0.50	-0.08						
(9) joy	0.44	-0.44	-0.26	-0.46	-0.32	0.66	-0.05	-0.50					
(10) pride	0.45	-0.27	-0.15	-0.35	-0.17	0.56	-0.14	-0.22	0.55				
(11) regret	-0.18	0.25	0.31	0.32	0.30	-0.18	0.13	0.33	-0.15	-0.21			
(12) sadness	-0.14	0.57	0.26	0.61	0.30	-0.41	0.16	0.49	-0.28	-0.20	0.13		
(13) shame	-0.02	-0.02	-0.07	-0.05	-0.08	-0.05	0.76	0.00	-0.09	-0.25	0.22	0.12	
(14) surprise	0.23	0.30	0.29	0.29	0.22	0.15	-0.08	0.29	0.04	0.09	0.13	0.27	-0.13

Note: Correlation coefficients that are significant at the 5% level are in *italics*.

Table A3 contains the five factors that summarize the emotional reaction of proposers in period 2, and Table A4 contains the five factors that summarize the emotional reaction of proposers who kept their role for both periods. In both cases, the factors are calculated using principal factor analysis. Moreover, they are rotated with orthogonal varimax rotation and account for 82% of the variance.

If we compare the factors in Table 3 and in Table A3, the main difference is the emotions of gratitude and admiration. Whereas in Table 3 these emotions are an important component of the fourth factor, in Table A3 they shift their weight to the third factor. This makes the third factor representative of all positive emotions and leaves the fourth factor as being mostly surprise. If we compare the factors in Table 3 and in Table A4, the main difference is the emotions of sadness and contempt. In Table A4 these two emotions appear with higher loadings in the fifth factor compared to Table 3 (particularly contempt).

TABLE A3 – FACTORS SUMMARIZING THE EMOTIONS OF PROPOSERS IN PERIOD 2

Factor	1 st	2 nd	3 rd	4 th	5 th
Explained variance	0.32	0.13	0.19	0.09	0.08
Factor loadings					
anger	0.41	-0.03	-0.03	0.04	0.00
disappointment	0.39	-0.01	-0.10	0.08	-0.03
envy	0.48	0.01	0.15	-0.19	-0.06
sadness	0.27	0.09	0.01	0.25	0.14
irritation	0.37	-0.02	-0.05	0.05	0.11
contempt	0.46	0.04	0.05	0.04	-0.09
regret	-0.01	0.00	0.01	-0.01	0.97
shame	0.01	0.69	-0.05	-0.04	0.05
guilt	0.00	0.70	0.01	-0.02	-0.04
pride	0.12	-0.09	0.62	-0.17	0.05
joy	-0.06	0.00	0.50	-0.01	-0.01
gratitude	-0.11	0.10	0.43	0.19	0.00
admiration	-0.06	0.08	0.38	0.26	-0.05
surprise	0.00	-0.04	-0.03	0.87	-0.01

TABLE A4 – FACTORS SUMMARIZING THE EMOTIONS OF PROPOSERS WHO KEPT THEIR ROLES

Factor	1 st	2 nd	3 rd	4 th	5 th
Explained variance	0.37	0.13	0.11	0.11	0.09
Factor loadings					
anger	0.42	-0.02	0.02	0.08	-0.03
disappointment	0.41	0.05	0.06	0.06	0.06
envy	0.39	-0.02	0.12	0.07	0.10
sadness	0.39	0.14	-0.11	0.06	-0.41
irritation	0.37	-0.06	0.08	-0.06	0.06
contempt	0.26	0.00	0.28	0.04	0.45
regret	-0.01	0.07	-0.16	0.00	0.73
shame	0.02	0.67	0.01	-0.05	0.06
guilt	0.00	0.67	-0.05	0.01	0.00
pride	0.05	-0.05	0.76	-0.09	-0.10
joy	-0.22	0.14	0.42	0.13	0.07
gratitude	-0.27	-0.05	0.19	0.36	0.08
admiration	-0.07	0.15	0.14	0.59	-0.19
surprise	0.11	-0.12	-0.22	0.68	0.10

A.2 Experimental instructions

This is a translation of the instructions used in the experiment. The original instructions are written in Dutch and are available upon request.

Instructions

Welcome to this experiment on decision-making. In this experiment, you can earn money. How much you earn depends on your decisions and the decisions of other participants. In addition to your earnings, you will also receive a show-up fee of 2.50 euros.

The experiment consists of two parts, *Part I* and *Part II*. In each part, you can earn money. Note that, the two parts of the experiment are completely independent of each other. In other words, what you decide in Part I will not affect your earnings in Part II.

At the end of Part II, you will be paid privately in cash the total amount you have earned plus your show-up fee.

During the experiment, you are not allowed to communicate with other participants. If you have a question, please raise your hand. We will then come to you to answer it.

We will begin now with the instructions for Part I of the experiment. You will receive the instructions for Part II after Part I has been completed.

During the experiment, you will be asked to fill in a few questionnaires. The answers you provide in these questionnaires are completely anonymous. They will not be revealed to anyone neither during the experiment nor thereafter. Furthermore, your answers will not affect your earnings during the experiment.

If you have any questions now, please raise your hand. If you do not have any questions, please click on 'Ready'.

Instructions - Part I

In Part I of the experiment each of you will be paired to another participant. This other participant will be chosen at random from among the other participants in the experiment.

In this part of the experiment, some of you will be positioned to move first and some of you will be positioned to move second. Participants moving first will be referred to with the letter *A*, while participants moving second will be referred to with the letter *B*.

Before the experiment started each desk was assigned either an *A* or a *B*. Therefore, by randomly picking a yellow card (in the reception room), each participant was randomly assigned to a position in the experiment. The letter that you were assigned is written inside the envelope located on your desk. You will be asked to open the envelope once we finish reading the instructions. The corresponding letter will also appear on the top-right part of the computer screen.

Note that each *A* is paired with a *B*. Moreover, since the pairing is random, the identities of both participants will remain anonymous.

At the beginning of Part I, all participants (both *A* and *B*) receive *10 euros*. We will refer to this amount as the *endowment* of each participant.

Part I consists of two phases. In phase one, only *A* must make a decision. Similarly, in phase two, only *B* must make a decision. Hence, every participant makes only one decision. We will now describe the decision of each *A* and *B*.

Phase 1: A chooses a percentage

In this phase, *A* must choose a percentage and type it into the corresponding field in the computer screen. This percentage determines *how much of the endowment of B after phase two will be transferred to A*. The percentage chosen must be an integer between 0 and 100 (inclusive).

If you wish to make any calculations, you can use the calculator located on your desk.

Once you are satisfied with your decision, you have to confirm it by clicking on the button 'Ready'. Note that all decisions are final, once you have clicked on 'Ready' you cannot change your choice. Once *A* has completed phase 1, phase 2 begins.

Phase 2: B chooses a percentage

At the beginning of this phase, *B* is informed of the percentage chosen by *A*.

Then, B must also choose a percentage and type it into the corresponding field in the computer screen. This percentage determines *what percentage of B's endowment (of the 10 euros) will be destroyed*. Again, the percentage must be an integer between 0 and 100 inclusive.

Note that, the transfer from B to A will be based only on the endowment of B that is not destroyed. Again, if you wish to make any calculations, you can use the calculator located on your desk.

Once you are satisfied with your decision, you have to confirm it by clicking on the button 'Ready'. Note that all decisions are final, once you have clicked on 'Ready' you cannot change your choice. Once B has made his or her decision phase 2 ends.

Earnings

After phase 2, all participants will be informed of the amount of money they have earned. You will also be informed of the amount of money earned by the participant you are paired with.

Example of how to calculate you earnings

We will now give an example for the purpose of illustration. Remember that both A and B have an endowment of 10 euros. Suppose that in phase 1, A decides that 30% of the endowment of B will be transferred to him or her (participant A). In phase 2, B can destroy part or everything of his or her 10 euros. Suppose B decides to destroy 0% percent of his or her endowment. The transfer from B to A is then equal to 3 euros (30% of 10 euros). The earnings of B are equal to 7 euros (namely, the endowment of 10 euros minus the transfer of 3 euros). The earnings of A are equal to 13 euros (namely, the endowment of 10 euros plus the transfer of 3 euros).

Now suppose that in this example B decides to destroy 50% of his or her endowment. In this case, the transfer to A is only 1.50 euros (namely, 30% of the remaining endowment after phase 2, that is 30% of 5 euros). The earnings of A are equal to 11.50 euros (namely, the endowment of 10 euros plus the transfer of 1.5 euros). The earnings of B are equal to 3.50 euro (namely, 50% of the endowment of 10 euros minus the transfer of 1.50 euros).

In summary

In this part of the experiment, each A is randomly and anonymously paired with a B, and each participant receives an endowment of 10 euros. There are two phases. In phase 1, A decides on a percentage that indicates how much of the endowment of B after phase 2 will be transferred to A. In phase 2, B decides what percentage of his or her endowment will be destroyed.

Next, we will ask you to answer a few questions in order to familiarize you with the calculation of your earnings. If you have any questions now, please raise your hand. If you do not have any questions, please click on 'Ready'. Note that once you click on 'Ready' you will not be able to go back to the instructions.

Instructions - Part II

In Part II of the experiment, you will face a situation that is similar to Part I. Each participant will receive an *additional* 10 euros (which we will call again your endowment). Please note that Part I and Part II are independent so that earnings in Part I will not be affected by your earnings in Part II.

Two differences with respect to Part I

There are two differences between Part I and Part II. One is that your position (A or B) might not be the same, and the other is the participant you are paired with.

Again, before the experiment started, each desk was assigned either an A or a B for Part II as well as Part I. Therefore, by randomly assigning the cards; each participant was also randomly assigned to a position in Part II. The position to which you were assigned in Part II will be displayed in the computer screen. Note that, *whichever position you are assigned does not depend on the position you were assigned in Part I.*

Furthermore, in Part II, the participant you will be paired with will not be the same participant with whom you were paired in Part I of the experiment. Your new pair will be chosen at random by the computer from among the other participants. In other words, you might be paired with anyone *except* the participant with whom you were paired in Part I.

The rest of the experiment is as in Part I.

In summary

In this part of the experiment, each participant receives an endowment of 10 euros. There are two phases. In phase 1 A decides on a percentage that indicates how much of B's endowment (of Part II) after phase 2 will be transferred to A. In phase 2, B decides what percentage of his or her endowment (of Part II) will be destroyed.

If you have any questions now, please raise your hand. If you do not have any questions, please click on 'Ready'. Note that once you click on 'Ready' you will not be able to go back to the instructions.

Elicitation of emotions

Figure A3 reproduces the screen in which the emotions of proposers are elicited. The screen appears after proposers are informed what the destruction rate chosen by the responder is.

Uw positie: A

U heeft het volgende percentage gekozen: **85**

B heeft het volgende percentage gekozen: **100**

Beantwoord de volgende vraag, alstublieft.

Met welke intensiteit beleefde u de hiernaast genoemde emoties toen u het door *B gekozen percentage zag*? Door op een rondje te klikken geeft u de intensiteit van de emotie aan. Let wel, er zijn geen goede of foute antwoorden. Neem niet teveel tijd en geef uw eerste indruk van hoe u zich voelt.

Trots	Helemaal geen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Zeer intens
Afgunst	Helemaal geen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Zeer intens
Boosheid	Helemaal geen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Zeer intens
Schuld	Helemaal geen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Zeer intens
Vreugde	Helemaal geen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Zeer intens
Schaamte	Helemaal geen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Zeer intens
Irritatie	Helemaal geen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Zeer intens
Dankbaarheid	Helemaal geen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Zeer intens
Verrassing	Helemaal geen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Zeer intens
Minachting	Helemaal geen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Zeer intens
Teleurstelling	Helemaal geen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Zeer intens
Bewondering	Helemaal geen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Zeer intens
Spijt	Helemaal geen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Zeer intens
Verdriet	Helemaal geen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Zeer intens

Klaar

FIGURE A3 – SCREEN ELICITING THE EMOTIONS OF PROPOSERS