

# Intuition and cooperation reconsidered

## Appendix

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## **Content**

<b>1. Experiment 1: Prisoner’s dilemma lab experiment (Sweden) .....</b>	<b>3</b>
<b>2. Experiment 2: Public Goods game lab experiment (Sweden) .....</b>	<b>7</b>
<b>3. Experiment 3: Public goods game webpanel experiment (USA) .....</b>	<b>9</b>
<b>4. Experiment 4: Public Goods game lab experiment (Austria) .....</b>	<b>11</b>
<b>5. Experiment 5: One-shot public goods game with 6 treatments (USA and Austria) .</b>	<b>14</b>
<b>6. Experimental Instructions .....</b>	<b>24</b>

## 1. Experiment 1: Prisoner's dilemma lab experiment (Sweden)

Experiment 1 was conducted at the Stockholm School of Economics in Sweden. Subjects were students, recruited around the school area. A prisoner's dilemma experiment with real monetary stakes was included in a bigger data collection investigating the effect of time pressure on economic decision making. Subjects did the survey in a physical computer lab, with no interaction allowed between individuals.

### 1.1. Experimental design

The experimental design of Rand et al.<sup>1</sup>, had an important drawback. Almost 50% of subjects in the “time pressure group” failed to respond within the time limit of 10 seconds (48% in Study 6 and 46% in Study 7). This leads to a selection problem. In their observational studies (study 1-5) Rand et al. found a negative correlation between response time and donation to the public good (i.e., subjects that responded slower contributed less). Such a correlation implies that including only fast responders, as was done in the baseline analysis in Rand et al. (Figure 2 in their paper), will automatically increase the contribution rate in the time pressure group. So this will strongly bias the results in favor of finding that time pressure increase contributions. Also in the “time delay group” (when subjects had to wait 10 seconds before responding) there was a “non-response” problem as 19% in Study 6 and 10% in Study 7 responded before 10 seconds. But the rate of missing observations was much lower in the “time delay group”.

The baseline analysis in Rand et al. (Figure 2 in their paper), was based only on subjects who obeyed the time constraint (who answered within 10 seconds in the “time pressure group” and after 10 seconds in the “time delay group”). However, Rand et al. also collected responses on subjects who failed to obey the time constraint (i.e., who responded too slow in the “time pressure group” and too fast in the “time delay group”), but as subjects had been told that they would not be allowed to participate if they failed to respond on time these decisions had no payoff consequences (as far as we understand it from page 12 in the Supplementary Information of Rand et al.). It may thus be difficult to interpret these responses and to pool them with subjects who obeyed the time constraint. But in addition to their baseline results excluding subjects who disobeyed the time constraint, Rand et al. presented results also including these subjects (based on their responses without payoff consequences). These results were claimed to be significant, but inspecting the mean and standard deviations in the descriptive statistics tables reveals that there was no significant difference between the two groups based on an independent samples t-test (the t-value is 1.62 (p-value=0.11) for both Study 6 and Study 7. If a non-parametric Mann-Whitney test is used the p-value is still larger than 0.05 (p-value=0.09 for both study 6 and study 7). The reason for the incorrect statistical results in Rand et al. is that they carry out regression analysis controlling for the “disobeyed time constraint variable” (a dummy variable for if the subject failed to obey the time constraint); but this variable is endogenous and should thus not be controlled for. It is a function of the experimental treatments; and as a much higher fraction failed to obey the time constraint in the time pressure treatment and these subjects contributed less, including this variable will by definition increase the size of the time pressure coefficient and this coefficient no longer measure the difference in contributions between the two treatments. They also use Tobit regressions, which is also questionable for public goods games data (the

distribution of contributions in public goods games typically differs substantially from the Tobit distribution, leading to a bias in the estimated coefficients)<sup>2</sup>.

In our experimental design for Experiment 1, we wanted to overcome the selection problem in Rand et al. due to the high rate of missing responses (subjects disobeying the time constraint). We also wanted to collect responses for more than one decision to test if the time pressure effect was robust for repeated decisions. With repeated decisions we will also have some information for each subject as long as they do not fail to respond to all decisions.

To reduce the rate of missing responses we used a binary decision instead of a continuous (“slider”) question as in Rand et al. A binary decision is easier to respond to than a continuous question, and we expected this to result in substantially less missing responses (and also to make the question as easy as possible to understand). Secondly, we changed the timing of when subjects were told about that they would be making decisions under time pressure. In Rand et al. subjects first got instructions about the exact public goods game on a screen; but it was not until they reached the subsequent decision screen that they were told they had to respond within 10 seconds (we refer to this as “late information” about time pressure). Getting this information at the decision screen when the seconds were ticking down probably contributed to the high rate of missing values. We instead informed subjects on the instructions prior to the decision screen that they had to respond within 10 seconds; but the exact trade-off in the social dilemma was not revealed until the decision screen. We refer to this as “early information” about time pressure. As they were making repeated decisions this was also natural, as they would have learned about the time pressure after responding to the first question in any case.

An additional difference in design concerns the strongly worded example in the public goods question that Rand et al. included. Their public goods question ends with the sentence “Thus you personally lose money on contributing.” We were worried that this strong example and wording could introduce priming effects towards contributing less (as it can be interpreted as an encouragement not to contribute). So we did not include the example.

Subjects were randomly assigned to one of two treatments; time pressure or time-delay treatment. Treatments were identical in all aspects, except that subjects in the time pressure treatment had a maximum of 10 seconds to answer each question. A timer on the screen indicated how much time they had left to respond. If no answer was given within the time limit the next question was presented automatically and no payment was given to the subject if this question was selected for real payment. Subjects in the time-delay treatment had unlimited time to respond, but were required to wait 10 seconds before any answer could be entered.

As we wanted to test if time pressure also affected behavior in other experimental tasks than social dilemmas we also included the dictator game and questions about financial risk taking. The complete survey was divided into three blocks of 5 questions in each block. Before each block, in both treatments, an example question without time limit was presented. This example question had the same structure but different pay-offs compared to the real questions. The block containing the prisoner’s dilemma questions was fixed as the third block, preceded by questions about financial risk taking (the second block) and giving to charity (the dictator game; the first block). Although the blocks had a fixed order, the order of the questions within each block was randomized. In five rounds, subjects decided between giving SEK 150 to the other player and keeping between SEK 40 and SEK 90 for themselves. Subjects were

anonymous and informed that both players would answer the same questions. Given the structure of the game, an individual subject maximizes her own monetary payoff by keeping the money (i.e., for a monetary payoff maximizing individual it is a dominant strategy in game theoretical terms). In order to create a framing as neutral as possible, the term “prisoners’ dilemma” was not included in the instructions. The complete instructions for Experiment 1 can be found in section 6 of this Appendix

Before the experiment started, subjects were informed that 1 out of the 15 questions would be randomly assigned for real payment. In addition, all subjects received 50 SEK (approximately \$7) in a show-up fee regardless of the outcome in the experiment. The total average sum paid out to participants was 150 SEK (around \$22).

### 1.2. Results

The descriptive statistics from Experiment 1 is presented in Table 1. The cooperation rate is presented in % in all the descriptive tables. The cooperation rate is divided by 100 (i.e., the variable is distributed between 0 and 1) when used as the dependent variable in the regressions. So the OLS regression coefficients are easily comparable to the marginal effects in the logistic regressions on the first round choices. If an individual did not respond to all the five prisoner’s dilemma questions, the cooperation rate was estimated as the fraction of cooperative choices out of the prisoner’s dilemma questions answered. The cooperation rate was defined in an analogous way in the other experiments.

*Table 1: Descriptive statistics Experiment 1*

	Time pressure	Time Delay	t-test		Chi square		MW-U	
			t-value	p-value	chi-value	p-value	Z	p-value
n	84	83						
Cooperation rate [Mean (SD)]	51 (34.7)	50 (34.9)	0.33	0.740			0.299	0.765
MISSING <sup>a</sup> [n (%)]	1 (0)	6 (1)						
Cooperation First time [n (%)]	49 (59.0)	49 (59.8)			0.009	0.925		
MISSING [n (%)]	1 (1)	1 (1)						
Age [Mean (SD)]	23 (2.4)	23 (3.3)						
Female [n (%)]	33 (39.3)	23 (27.7)						

<sup>a</sup>Missing responses out of all prisoner’s dilemma questions. Each subject participated in five rounds of Prisoner’s dilemma. No subject had missing on all prisoner’s dilemma questions (and all subjects are thus included in the Mean value).

\*, \*\*: Significant at 5%-, 1%-level.

The experimental design succeeds in reducing missing observations to essentially zero, so that there is no selection problem in analyzing the data. The level of cooperation (i.e., giving money to the other participant) was close to identical in the two treatments (51 % under time pressure vs. 50% when forced to wait). Consistent with subjects understanding the general structure of the game, less cooperative decisions were made as the monetary value of the selfish option “keeping the money” increased (i.e., when the cost of cooperating was higher).

Given that the prisoner’s dilemma was played in five rounds, it is possible that as subjects get more familiar with the game they make less intuitive and more calculated responses. To investigate whether subjects were influenced by time pressure only in the first round, we also analyzed the first round of responses in separation. As shown in Table 1 no effect of time pressure was found when looking only at the first round of responses (59 % cooperation under time pressure vs. 60% cooperation when forced to wait).

We also carried out OLS regression analysis on the cooperation rate. We included a dummy variable for the experimental treatment (coded as 1=time pressure treatment). As shown in Table 2 no significant differences between treatments were found in any of the regressions. We also controlled for gender and age (model 2), but this had little effect on the results. Similarly, OLS regressions with a binary dependent variable (1=cooperation) were performed also for first round responses only and no significant relationship between treatment and cooperation was found.

*Table:2 OLS regressions for all decisions and 1<sup>st</sup> decision only Experiment 1*

	All decisions [coeff (t-value)]		1st decision only [coeff (t-value)]	
	Model 1	Model 2	Model 1	Model 2
Time pressure treatment	0.018 (0.33)	0.031 (0.58)	-0.007 (-0.09)	0.005 (0.07)
Gender (0=M, 1=F)	NA	-0.052 (-0.92)	NA	-0.033 (-0.41)
Age	NA	0.029 (3.16)**	NA	0.036 (2.75)**
n	167	166	165	164

\*, \*\*: Significant at 5%-, 1%-level.

We also performed logistic regression on first round responses, as this is a binary variable (1=cooperation). The results from the logistic regressions are presented in Table 3. The interpretation of the logistic and the OLS regression did not differ in any noteworthy way.

*Table 3 Logistic regression 1<sup>st</sup> decision only Experiment 1*

	Model 1		Model 2	
	Coeff (z-value)	Marginal effect	Coeff (z-value)	Marginal effect
Time pressure	-0.030 (-0.09)	-0.007	0.002 (0.01)	0.001
Gender (0=M, 1=F)	NA	NA	-0.136 (-0.39)	-0.033
Age	NA	NA	0.192 (2.68)**	0.046
n	165		164	

\*, \*\*: Significant at 5%-, 1%-level.

## 2. Experiment 2: Public Goods game lab experiment (Sweden)

Experiment 2 was conducted at Linköping University in Sweden. Subjects were students at the Department of Management and Engineering, recruited through email advertisement. A Public goods experiment was included in a bigger data collection investigating the effect of time pressure on economic and moral decision making (see below for the sequence of blocks). Subjects did the survey in a physical computer lab, with no interaction allowed between individuals.

### 2.1. Experimental design

The computer interface and general structure of Experiment 2 was similar to Experiment 1, but several modifications in the design were introduced. We modified the design to test if there would be an effect of time pressure after these modifications.

The Prisoner's dilemma question was rephrased as a public goods game, where subjects interacted with 3 other participants, in four public goods games involving different monetary amounts (Rand et al. also used a 4 person public goods game). Subjects decided between keeping SEK 50 and giving a larger amount between SEK 75-150 to the group. Money contributed to the group was evenly split among individuals in the group. All subjects were anonymous and informed that everyone would answer the same questions. The complete instructions for Experiment 2 can be found in section 6 of this Appendix.

To increase the level of time pressure, compared to study 1, subjects now had a maximum of 7 seconds to answer each question in the time pressure treatment. Similarly, subjects now had to wait 7 seconds before they could respond in the time–delay treatment. Moreover, to avoid a possible learning effect, the example question without a time limit included in Experiment 1 was excluded from the design. The number of questions in each block was decreased from five to four and two additional blocks including moral dilemma and fairness questions were included at the end of the survey. Two blocks containing questions related to monetary risk-taking (for gains and losses) preceded the block containing public goods questions (the sequence of blocks was: risk-taking for gains, risk taking for losses, public goods game, dictator game, moral dilemma questions, fairness questions). Block order was fixed but questions within each block were randomized.

Before the experiment started, subjects were informed that 1 out of the 16 initial questions involving monetary trade-offs would be randomly assigned for real payment. If a public goods question was picked for real payment, and the subject had not responded on time they received no payment from the question (and the decision of another individual was used to calculate the payoffs of the other three individuals in the group). All subjects received 100 SEK (around \$14) as a show-up fee. The average sum paid out in the experiment was 130 SEK (around \$19).

### 2.2. Results

The descriptive statistics from Experiment 2 is presented in Table 4. The rate of missing observations is again virtually zero.

Table 4: Descriptive statistics Experiment 2

	Time pressure	Time Delay	t-test		Chi square		MW-U	
			t-value	p-value	chi-value	p-value	Z	p-value
n	98	101						
Cooperation rate[Mean (SD)]	41 (34.9)	44 (37.7)	-0.55	0.586			-0.504	0.615
MISSING <sup>a</sup> [n (%)]	1 (0)	2 (0)						
Cooperation1st [n (%)]	41 (41.8)	36 (35.6)			0.804	0.370		
MISSING [n (%)]	0 (0)	0 (0)						
Age [Mean (SD)]	22 (2.3)	23 (3.6)						
Female [n (%)]	40 (41.2)	45 (45.0)						

<sup>a</sup>Shows missing responses out of all public goods questions. Each subject participated in four rounds of the public goods game. No individual had missing on all public goods questions (and all subjects are thus included in the Mean value).

\*, \*\*: Significant at 5%-, 1%-level

The level of cooperation (i.e., giving money to the other participant) was slightly lower in the time pressure treatment (41%) compared to the time delay treatment (44%), but the difference between treatments was not significant.

As shown in Table 5 no significant differences between treatments were found in any of the regressions either. Similar OLS regressions, but with a binary dependent variable, were performed also for first round responses only, and no significant relationship between treatment and cooperation were found.

Table 5: OLS regressions for all decisions and 1<sup>st</sup> decision only Experiment 2

	All decisions [coeff (t-value)]		1st decision only [coeff (t-value)]	
	Model 1	Model 2	Model 1	Model 2
	Time pressure treatment	-0.028 (-0.55)	-0.021 (-0.40)	0.062 (0.89)
Gender (0=M, 1=F)	NA	-0.009 (-0.18)	NA	-0.034 (-0.49)
Age	NA	0.009 (1.02)	NA	0.020 (1.75)
n	199	197	199	197

\*, \*\*: Significant at 5%-, 1%-level.

We also performed logistic regression on first round responses, as this is a binary variable. The results from the logistic regressions are presented in Table 6. The interpretation of the logistic and the OLS regression did not differ in any noteworthy way.

Table 6 Logistic regression 1<sup>st</sup> decision only Experiment 2

	Model 1		Model 2	
	Coeff (z-value)	Marginal effect	Coeff (z-value)	Marginal effect
Time pressure	0.261 (0.90)	0.062	0.298 (0.99)	0.070
Gender (0=M, 1=F)	NA	NA	-0.150 (-0.50)	-0.035
Age	NA	NA	0.086 (1.74)	0.020
n	199		197	

\*, \*\*: Significant at 5%-, 1%-level.

### 3. Experiment 3: Public goods game webpanel experiment (USA)

Experiment 3 was conducted in collaboration with Decision Research in Eugene (Oregon). Subjects were drawn from a sample of the adult US population included in the subject pool of Decision Research<sup>3</sup>. The experiment was conducted as a web survey. As in Experiment 1-2, the public goods question was included in a bigger data collection investigating the effect of time pressure on economic and moral decision making (the same blocks were included as in Experiment 2 and the sequence of the blocks was the same as in Experiment 2).

#### 3.1. Experimental design

The same computer interface and design used in Experiment 2 was used in this Experiment. The only difference between experiment 2 and 3 was that instructions in Experiment 3 were in English and stakes were smaller. In four rounds subjects decided between keeping \$2.5 and giving between \$3.75-\$7.5 to the group. Money contributed to the group was evenly split among individuals in the group. The complete instructions for Experiment 3 can be found in section 6 of this Appendix.

Before the experiment started, subjects were informed that 1 out of the 16 initial questions involving monetary trade-offs, would be randomly assigned for real payment. If a public goods question was picked for real payment, and the subject had not responded on time they received no payment from the question (and the decision of another individual was used to calculate the payoffs of the other three individuals in the group). All subjects received \$3 as a show-up fee. The average sum paid out in the experiment was \$5.53.

#### 3.2. Results

The descriptive statistics from Experiment 3 is presented in Table 7.

Table 7: Descriptive statistics Experiment 3

	Time pressure	Time Delay	t-test		Chi square		MW-U	
			t-value	p-value	chi-value	p-value	Z	p-value
n	285	298						
Cooperation rate [Mean (SD)]	44 (38.9)	45 (39.6)	-0.44	0.663			-0.533	0.594
MISSING <sup>a</sup> [n (%)]	40 (4)	0 (0)						
Cooperation 1st time [n (%)]	113 (42.2)	133 (44.6)			0.349	0.555		
MISSING [n (%)]	17 (6)	0 (0)						
Age [Mean (SD)]	43 (12.4)	44 (13.1)						
Female [n (%)]	167 (58.6)	187 (62.8)						

<sup>a</sup>Shows missing responses out of all public goods questions. Each subject participated in four rounds of the public goods game. Only one subject (this subject was in the time pressure group) had missing on all public goods questions (and all subjects, except this subject, are thus included in the Mean value).

\*, \*\*: Significant at 5%-, 1%-level.

The level of cooperation (i.e., giving money to the other participant) was once again close to identical between the two treatments (44 % under time pressure vs. 45% when forced to wait).

As shown in Table 8 no significant relationship between treatment and level of cooperation were found in any of the regression models either. Similarly, OLS regressions with a binary dependent variable (1=cooperation) were performed also for first round responses only and no

significant relationship between treatment and cooperation was found.

*Table 8 OLS regressions for all decisions and 1<sup>st</sup> decision only Experiment 3*

	All decisions [coeff (t-value)]		1st decision only [coeff (t-value)]	
	Model 1	Model 2	Model 1	Model 2
Time pressure treatment	-0.014 (-0.44)	-0.013 (-0.40)	-0.025 (-0.59)	-0.022 (-0.54)
Gender (0=M, 1=F)	NA	0.044 (1.30)	NA	0.051 (1.18)
Age	NA	-0.001 (-1.01)	NA	-0.000 (-0.14)
n	582	582	566	566

\*, \*\*: Significant at 5%-, 1%-level.

We also performed logistic regression on first round responses, as this is a binary variable. The results from the logistic regressions are presented in Table 9. The interpretation of the logistic and the OLS regression did not differ in any noteworthy way.

*Table 9 Logistic regression 1<sup>st</sup> decision only Experiment 3*

	Model 1		Model 2	
	Coeff (z-value)	Marginal effect	Coeff (z-value)	Marginal effect
Time pressure	-0.100 (-0.59)	-0.025	-0.092 (-0.54)	-0.023
Gender (0=M, 1=F)	NA	NA	0.210 (1.18)	0.051
Age	NA	NA	-0.001 (-0.14)	-0.000
n	566		566	

\*, \*\*: Significant at 5%-, 1%-level.

## 4. Experiment 4: Public Goods game lab experiment (Austria)

Experiment 4 was conducted at the University of Innsbruck in Austria. Subjects were students from all faculties, recruited by using ORSEE<sup>4</sup>. As in Experiment 1-3 the public goods experiment was included in a bigger data collection (the same blocks were included as in Experiments 2 and 3 and the sequence of the blocks was the same as in Experiments 2 and 3). Subjects did the survey in a physical computer lab, with no interaction allowed between individuals.

### 4.1. Experimental design

The general structure of the survey was similar to Experiment 2-3, but instructions were presented in German and stake sizes were similar to Experiment 2. In four rounds subjects decided between keeping €5 and giving between €7.5-15 to the group. Money contributed to the group was evenly split among individuals in the group. The complete instructions for Experiment 4 can be found in section 6 of this Appendix.

Two changes were implemented, compared to the experimental design in Experiment 2 and 3. To ensure that subjects made reflective responses in the time delay treatment we increased the time subjects had to wait before they were allowed to respond to 20 seconds. We also excluded the reminder sentence “Remember that you have a maximum of 7 seconds to answer each question” from the instructions explaining the public goods game in the time pressure treatment (from the general instructions in the beginning of the survey subjects in the time pressure group already knew that they needed to respond within 7 seconds). This was done to limit the possibility that subjects prepare a calculated strategy for how to respond before seeing the actual public goods questions (trade-offs) under time pressure.

Before the experiment started, subjects were informed that 1 out of the 16 initial questions involving monetary trade-offs, would be randomly assigned for real payment. If a public goods question was picked for real payment, and the subject had not responded on time they received no payment from the question (and the decision of another individual was used to calculate the payoffs of the other three individuals in the group). All subjects received €10 as a show-up fee. The average sum paid out to subjects in the experiment was €12.35.

### 4.2. Results

The descriptive statistics from Experiment 4 is presented in Table 10.

*Table 10: Descriptive statistics Experiment 4*

	Time pressure	Time Delay	t-test		Chi square		MW-U	
			t-value	p-value	chi-value	p-value	Z	p-value
n	160	160						
Cooperation rate [Mean (SD)]	43 (33.4)	50 (35.5)	-1.93	0.054			-1.913	0.056
MISSING <sup>a</sup> [n (%)]	5 (1)	3 (0)						
Cooperation 1st time [n (%)]	62 (40.0)	77 (48.4)			2.260	0.133		
MISSING [n (%)]	5 (3)	1 (1)						
Age [Mean (SD)]	24 (4.0)	24 (3.1)						
Female [n (%)]	79 (49.4)	75 (49.0)						

<sup>a</sup>Shows missing *responses* out of all public goods questions. Each subject participated in four rounds of the public goods game. No individual had missing on all public goods questions (and all subjects are thus included in the Mean value).

\*, \*\*: Significant at 5%-, 1%-level.

The level of cooperation (i.e., giving money to the other participant) was lower in the time pressure treatment (43 %) compared to the time delay treatment (50%). However, this difference was not significant at the 5% level.

In Experiment 4 the time each subject spent on the instruction screen for the public goods game was recorded, to test if subjects in the time pressure group spent more time on the instruction screen to prepare a calculated strategy for how to respond before seeing the actual public goods questions (trade-offs). But the difference went in the other direction. Subjects in the time pressure treatment spent significantly less time on the instructions screen (28.03 seconds versus 38.34 seconds, t-value -6.46, p-value=<0.001). This difference can possibly be explained by the additional text included in the time delay treatment; “Think carefully through your response before proceeding. It will take 20 seconds before you can answer each question.”

As shown in Table 11, the effect of time pressure was not significant in the first regression; however when we control for age and gender the effect was significant (in the opposite direction of Rand et al.). Similar OLS regressions, but with a binary dependent variable, were performed also for first round responses only. However, no significant relationship between treatment and cooperation was found (the point estimate of the time pressure coefficient was similar to the regression for “all decisions”, but the standard error was also larger).

*Table 11: OLS regressions for all decisions and 1<sup>st</sup> decision only Experiment 4*

	All decisions [coeff (t-value)]		1 <sup>st</sup> decision only [coeff (t-value)]	
	Model 1	Model 2	Model 1	Model 2
Time pressure treatment	-0.074(-1.93)	-0.078 (-1.97)*	-0.084 (-1.50)	-0.083 (-1.45)
Gender (0=M, 1=F)	NA	-0.016 (-0.40)	NA	-0.074 (-1.28)
Age	NA	0.007 (1.27)	NA	0.009 (1.05)
n	320	307	314	301

\*, \*\*: Significant at 5%-, 1%-level

We also performed logistic regression on first round responses, as this is a binary variable. The results from the logistic regressions are presented in Table 12. The interpretation of the logistic and the OLS regression did not differ in any noteworthy way.

*Table 12 Logistic regression 1<sup>st</sup> decision only Experiment 4*

	Model 1		Model 2	
	Coeff (z-value)	Marginal effect	Coeff (z-value)	Marginal effect
Time pressure	-0.343 (-1.50)	-0.084	-0.340 (-1.45)	-0.084
Gender (0=M, 1=F)	NA	NA	-0.306 (-1.29)	-0.075
Age	NA	NA	0.037 (1.05)	0.009
n	314		301	

\*, \*\*: Significant at 5%-, 1%-level

We also pooled the results of Experiments 1-4. When pooling the results, the rate of cooperation was 44% with time pressure and 47% with time delay (t-test: t-value=-1.29, p-value=0.197. MW-U test: z-value=-1.26, p-value=0.207). Including only the first round decision in the pooled data, the rate of cooperation was 44% with time pressure and 46% without time pressure (Chi-square=0.6, p-value=0.432). Regression results for the pooled results are shown in Table 13 with dummy variables for the four Experiments, the effect of time pressure was not significant in any of the regressions.

*Table 13: OLS regressions for all decisions and 1<sup>st</sup> decision Experiment 1-4 (Pooled)*

	All decisions [coeff. (t-value)]		1st decision only [coeff. (t-value)]	
	Model 1	Model 2	Model 1	Model 2
Time pressure	-0.027 (-1.31)	-0.028 (-1.33)	-0.024 (-0.84)	-0.024 (-0.86)
Gender (0=M, 1=F)	NA	0.005 (0.24)	NA	-0.010 (-0.33)
Age	NA	-0.000 (-0.11)	NA	0.001 (0.90)
Sample				
USA	REF	REF	REF	REF
AUT	0.0195 (0.76)	0.020 (0.56)	0.009 (0.24)	0.032 (0.67)
SWE(Exp1)	0.063 (1.93)	0.060 (1.46)	0.160 (3.65)**	0.185 (3.36)**
SWE(Exp2)	-0.014 (-0.47)	-0.017 (-0.42)	-0.047 (-1.16)	-0.020 (-0.39)
n	1268	1252	1244	1228

\*, \*\*: Significant at 5%-, 1%-level

We also performed logistic regression on first round responses as this is a binary variable. The results from the logistic regressions are presented in Table 14. The interpretation of the logistic and the OLS regression did not differ in any noteworthy way.

*Table 14 Logistic regression 1<sup>st</sup> decision only Experiment 1-4 (Pooled)*

	Model 1		Model 2	
	Coeff (z-value)	Marginal effect	Coeff (z-value)	Marginal effect
Time pressure	-0.097 (-0.84)	-0.024	-0.100 (-0.86)	-0.025
Gender (0=M, 1=F)	NA	NA	-0.040 (-0.33)	-0.010
Age	NA	NA	0.006 (0.90)	-0.001
Sample				
USA	REF	REF	REF	REF
AUT	0.035 (0.24)	0.009	0.129 (0.67)	0.032
SWE(Exp1)	0.646 (3.59)**	0.160	0.747 (3.31)**	0.185
SWE(Exp2)	-0.196 (-1.16)	-0.048	-0.086 (-0.40)	-0.021
n	1244		1228	

\*, \*\*: Significant at 5%-, 1%-level

## 5. Experiment 5: One-shot public goods game with 6 treatments (USA and Austria)

Experiment 5 included data collection in three different samples. i) A sample of the adult US population included in a subjects pool at Decision Research in Eugene (Oregon)<sup>3</sup>. ii) A sample of US adults with a college degree, or who were currently going to college, recruited online using Qualtrics Panels (<http://www.qualtrics.com/panels/>). iii) A sample of students at the University of Innsbruck (Austria)<sup>4</sup>. The Innsbruck data collection was conducted in a computer lab, while the other two data collections were conducted as web surveys. No subjects had participated in any of the earlier studies.

In Experiment 1-4, subjects were informed that they would be making decisions under time pressure before they reached the decision screen with the specific trade-off. In Rand et al. subjects were not informed about the time pressure until they reached the decision screen. Rand et al. also included an example in the instructions to improve comprehension. However, this example could also have a priming effect as it has quite strong wording and ends with “Thus you personally lose money on contributing”. The importance of these differences was tested in Experiment 5 in a one-shot public goods game with 6 treatments. In Experiment 1-4 subjects also made multiple rounds of social dilemma decisions, whereas Rand et al. used only one round. The design and wording of Experiment 5 were done in collaboration with David Rand.

### 5.1 Experimental design

Subjects were randomly allocated to treatments. In all six treatments subjects decided between keeping an amount (\$2 in the Decision Research sample, \$4 in the Qualtrics Panels sample, and €4 in the Innsbruck sample) and giving twice as much to the group. Treatments 1 and 2 were a replication of the Rand et al. design, but with a binary decision. We kept the binary question to minimize the fraction of missing values (subjects failing to respond on time in the time pressure group). This was done to minimize the selection problem in the Rand et al. design with a continuous question.

In treatment 1 (the time-pressure treatment) the information that the decision would be made under time pressure was not revealed on the instruction screen, but later on the decision screen. The instructions for treatment 1 and 2 also included the example used in Rand et al, adjusted to a binary question. To separate the potential effect that the example might have from the effect of revealing information about time pressure on the decision screen, we included treatments 3 and 4. Thus, treatments 3 and 4 were the same as treatments 1 and 2, but without the example. Finally, treatments 5 and 6 had the same structure as the time-pressure and time-delay treatments in Experiment 1-4. In particular, information about time pressure in treatments 5 and 6 was given on the instruction screen and the instructions did not include the example (but otherwise the instructions were the same as in treatments 1 and 2). The complete instructions for Experiment 5 can be found in section 6 of this Appendix.

In all six treatments, the decision screen was followed by a comprehension screen in which subjects answered two questions to determine whether they understood the payoff structure of the game (these questions were taken from Rand et al., but adjusted to the binary public goods

question). Subjects who did not answer both questions correct are classified as “failed comprehension” in Table 15 in line with Rand et al..

The experimental design and computer interface was identical for all samples, with one exception: The comprehension questions following the public goods question were incentivized in the Qualtrics Panels and Innsbruck samples. Subjects received \$1/€ additionally for each correct answer (this incentive was not included in the Decision Research sample as they did not want the subjects to earn more money, so that earnings would not deviate too much from participating in other Decision Research data collections). Participants who failed to respond within the time limit did not receive any monetary compensation in the Innsbruck and Qualtrics Panels data collection. In the data collection at Decision Research participants were paid \$1 if they failed to respond within the time limit. An additional show up fee of €4 was given to subjects in the Austrian sample, independent of the outcome in the experiment. A show-up fee of \$1 was given in the Qualtrics Panels data collection, and no additional show-up fee was given in the Decision Research data collection. The total average payoff for each sample was: \$3.23 (Decision Research), \$8.41 (Qualtrics Panels) and €2.29 (University of Innsbruck)

### 5.2. Results

The descriptive statistics from Experiment 5 is presented in tables 15-16. Table 15 presents the pooled results when combining the three samples. Using a binary question instead of a continuous question as in Rand et al., substantially reduces the fraction of missing responses (subjects not responding on time). The rate of missing values is 13% in treatment 1 that replicates the Rand et al. time pressure treatment, but with a binary question; compared to 48% in study 6 and 46% in Study 7 in Rand et al.. If the example is excluded from the replication of Rand et al., the rate of missing values is 9% (treatment 3). That there is still some missing values with late information about the time pressure, means that the results will be biased in favor of finding an effect of time pressure in line with Rand et al. (as if subjects who respond slower contribute less as found in Rand et al., the subjects with missing values would have been less likely to cooperate).

*Table 15: Descriptive statistics: Experiment 5 (Pooled)*

	Late info w. Ex		Late info wo. Ex		Early info wo. Ex.	
	T1:Time Pressure	T2:Time Delay	T3:Time Pressure	T4:Time Delay	T5:Time Pressure	T6:Time Delay
n	201	200	200	197	204	202
Cooperation [n (%)]	98 (56)	108 (54)	116 (63)	132 (67)	140 (72)	149 (74)
MISSING [n (%)]	26 (13)	1 (1)	17 (9)	0 (0)	10 (5)	1 (0)
Age [Mean (SD)]	38 (15.7)	37 (15.8)	36 (15.2)	36 (15.0)	36 (15.2)	37 (15.3)
Female [n (%)]	105 (53)	82 (41)	96 (48)	94 (48)	101 (50)	117 (59)
Failed comprehension [n (%)]	82 (41)	70 (35)	91 (46)	98 (50)	110 (54)	107 (53)

*Table 16: Chi- square test (Pooled)*

diff (td - tp)	Late info w. ex			Late info wo. Ex			Early info wo. Ex		
	chi2-value	p-value	diff (td - tp)	chi2-value	p-value	diff (td - tp)	chi2-value	p-value	
-0.017	0.113	0.737	0.036	0.548	0.459	0.020	0.194	0.660	

In spite of this, there was no significant effect of time pressure in the replication of the Rand et al. design in treatments 1 and 2. The rate of cooperation was 56% with time pressure and 54% when forced to wait (Chi-square=0.11, p-value=0.737). When excluding the example used in Rand et al., in treatments 3 and 4, the cooperation rate was slightly higher in the time delay treatment (63% vs. 67%), but the difference was not significant. When information about time pressure was revealed on the early instruction screen in treatments 5 and 6, 72% cooperated under time pressure while 74% cooperated when forced to wait before making a decision. This difference was not significant either. The most striking result was that including the example significantly reduced cooperation when comparing all responses in treatment 1 and 2 with all responses in treatments 3 and 4 (Chi-square=8.16, p-value=0.004), consistent with a priming effect. The level of comprehension (the fraction that failed answering both comprehension questions correctly), when replicating Rand et al. in treatments 1 and 2 was in-between the level of comprehension reported in the two data collections (study 6 and 7) in Rand et al.. Time spent on the instruction screen was recorded for each treatment. However, there were no significant differences between time pressure and time delay in any of the treatments (93.42 vs 74.99 seconds in T1 and T2, t-value 1.02, p-value=0.3066; 33.18 vs 29.61 seconds in T3 and T4, t-value 0.92, p-value=0.3591; 41.61 vs 59.06 seconds in T5 and T6, t-value -0.91, p-value=0.3651).

The regressions including dummy variables for the three samples presented in tables 17-22 show no indication that individuals cooperate more under time pressure in any of the treatments (model 1). This lack of significant result remains, also when controlling for gender and age (model 2). Both OLS and logistic regressions were run, but the results of the logistic and the OLS regressions did not differ in any noteworthy way. We also tested adding a dummy variable for “failed comprehension” as in the regressions in Rand et al.; but this had no substantive effect on the time pressure coefficient (results not shown in the Tables; in principle it can be problematic to control for the “failed comprehension” variable in estimating the treatment effect as it could be endogenous, i.e. affected by the treatments).

*Table 17: OLS Regressions - Late information WITH example (Pooled)*

	Model 1	Model 2
	Coeff (t-value)	Coeff (t-value)
Time Pressure	0.014 (0.27)	0.007 (0.14)
Gender (0=M, 1=F)	NA	-0.019 (-0.36)
Age	NA	0.003 (1.33)
Sample		
USA, Qualtrics	REF	REF
USA, Decision research	0.090 (1.35)	0.095 (1.41)
AUT, Innsbruck	0.129 (2.17)*	0.182 (2.44)*
n	374	370

\*, \*\*: Significant at 5%-, 1%-level

*Table 18 Logistic regressions - Late information WITH example (Pooled)*

	Model 1		Model 2	
	Coeff (z-value)	Marginal effect	Coeff (z-value)	Marginal effect
Time Pressure	0.057 (0.27)	0.014	0.029 (0.14)	0.007
Gender (0=M, 1=F)	NA	NA	-0.077 (-0.36)	-0.019
Age	NA	NA	0.011 (1.33)	0.003
Sample				
USA, Qualtrics	REF	REF	REF	REF
USA, Decision research	0.364 (1.33)	0.089	0.386 (1.40)	0.094
AUT, Innsbruck	0.524 (2.16)*	0,127	0.739 (2.43)*	0.178
n	374		370	

\*, \*\*: Significant at 5%-, 1%-level

*Table 19: OLS regressions - Late information WITHOUT example (Pooled)*

	Model 1	Model 2
	Coeff (t-value)	Coeff (t-value)
Time Pressure	-0.039 (-0.81)	-0.043 (-0.88)
Gender (0=M, 1=F)	NA	0.029 (0.59)
Age	NA	-0.003 (-1.30)
Sample		
USA, Qualtrics	REF	REF
USA, Decision research	0.130 (2.03)*	0.130 (2.02)
AUT, Innsbruck	0.154 (2.75)**	0.110 (1.65)
n	380	374

\*, \*\*: Significant at 5%-, 1%-level

*Table 20: Logistic regressions - Late information WITHOUT example (Pooled)*

	Model 1		Model 2	
	Coeff (z-value)	Marginal effect	Coeff (z-value)	Marginal effect
Time Pressure	-0.177 (-0.81)	-0.196	-0.196 (-0.89)	-0.044
Gender (0=M, 1=F)	NA	NA	0.130 (0.59)	0.029
Age	NA	NA	-0.011 (-1.26)	-0.002
Sample				
USA, Qualtrics	REF	REF	REF	REF
USA, Decision research	0.574 (1.96)	0.577	0.577 (1.95)	0.121
AUT, Innsbruck	0.696 (2.69)**	0.512	0.512 (1.66)	0.110
n		380		374

Table 21: OLS regressions - Early information WITHOUT example (Pooled)

	Model 1	Model 2
	Coeff (t-value)	Coeff (t-value)
Time Pressure	-0.022 (-0.49)	-0.016 (-0.35)
Gender (0=M, 1=F)	NA	-0.021 (-0.46)
Age	NA	0.002 (1.01)
Sample		
USA, Qualtrics	REF	REF
USA, Decision research	0.094 (1.64)	0.084 (1.44)
AUT, Innsbruck	0.089 (1.70)	0.120 (1.91)
n	395	388

\*, \*\*: Significant at 5%-, 1%-level

Table 22: Logistic Regressions – Early information WITHOUT example (Pooled)

	Model 1		Model 2	
	Coeff (z-value)	Marginal effect	Coeff (z-value)	Marginal effect
Time Pressure	-0.112 (-0.49)	-0.022	-0.082 (-0.35)	-0.016
Gender (0=M, 1=F)	NA	NA	-0.106 (-0.45)	-0.020
Age	NA	NA	0.009 (0.98)	0.002
Sample				
USA, Qualtrics	REF	REF	REF	REF
USA, Decision research	0.483 (1.60)	0.085	0.434 (1.41)	0.079
AUT, Innsbruck	0.454 (1.67)	0.088	0.605 (1.89)	0.110
n		395		388

\*, \*\*: Significant at 5%-, 1%-level

For completeness we also conducted the above tests separately in each sample. These results are shown in tables 23-46 below. There was no significant effect of time pressure in any of the three samples.

Table 23: Descriptive statistics: Experiment 5 (USA, Decision Research)

	Late info w. Ex		Late info wo. Ex		Early info wo. Ex.	
	T1:Time pressure	T2:Time delay	T3:Time pressure	T4:Time delay	T5:Time pressure	T6:Time delay
n	43	41	42	39	43	43
Cooperation [n (%)]	23 (61)	23 (56)	23 (62)	31 (79)	33 (77)	34 (79)
MISSING [n (%)]	5 (12)	0 (0)	5 (12)	0 (0)	0 (0)	0 (0)
Age [Mean (SD)]	45 (12.3)	41 (14.6)	44 (13.2)	42 (12.8)	42 (14.0)	45 (12.8)
Female [n (%)]	25 (58)	18 (44)	20 (48)	17 (44)	16 (37)	18 (42)
Failed comprehension [n (%)]	17 (40)	12 (30)	28 (67)	26 (67)	30 (70)	28 (65)

Table 24: Chi-square test (USA, Decision Research)

	Late info w. Ex			Late info wo. Ex			Early info wo. Ex		
	diff (td – tp)	chi2-value	p-value	diff (td – tp)	chi2-value	p-value	diff (td – tp)	chi2-value	p-value
	-0.044	0.159	0.690	0.173	2.771	0.096	0.023	0.068	0.795

*Table 25: OLS regressions – Late information WITH example (USA, Decision Research)*

	Model 1	Model 2
	Coeff (t-value)	Coeff (t-value)
Time Pressure	0.044 (0.39)	0.017 (0.15)
Gender (0=M, 1=F)	NA	0.085 (0.71)
Age	NA	0.003 (0.60)
n	79	79

\*, \*\*: Significant at 5%-, 1%-level

*Table 26 Logistic regressions – Late information WITH example (USA, Decision Research)*

	Model 1		Model 2	
	Coeff (z-value)	Marginal effect	Coeff (z-value)	Marginal effect
Time Pressure	0.182 (0.40)	0.044	0.072 (0.15)	0.018
Gender (0=M, 1=F)	NA	NA	0.350 (0.73)	0.085
Age	NA	NA	0.011 (0.61)	0.003
n		79		79

\*, \*\*: Significant at 5%-, 1%-level

*Table 27 OLS regressions – Late information WITHOUT example (USA, Decision Research)*

	Model 1	Model 2
	Coeff (t-value)	Coeff (t-value)
Time Pressure	-0.173 (-1.67)	-0.168 (-1.60)
Gender (0=M, 1=F)	NA	-0.012 (-0.11)
Age	NA	-0.003 (-0.69)
n	76	76

\*, \*\*: Significant at 5%-, 1%-level

*Table 28: Logistic regressions – Late information WITHOUT example (USA, Decision Research)*

	Model 1		Model 2	
	Coeff (z-value)	Marginal effect	Coeff (z-value)	Marginal effect
Time Pressure	-0.858 (-1.64)	-0.173	-0.839 (-1.60)	-0.169
Gender (0=M, 1=F)	NA	NA	-0.062 (-0.11)	-0.013
Age	NA	NA	-0.015 (-0.69)	-0.003
n		76		76

\*, \*\*: Significant at 5%-, 1%-level

*Table 29: OLS regressions – Early information WITHOUT example (USA, Decision Research)*

	Model 1	Model 2
	Coeff (t-value)	Coeff (t-value)
Time Pressure	-0.023 (-0.26)	-0.023 (-0.25)
Gender (0=M, 1=F)	NA	-0.029 (-0.30)
Age	NA	0.001 (0.18)
n	86	86

\*, \*\*: Significant at 5%-, 1%-level

*Table 30: Logistic regressions – Early information WITHOUT example (USA, Decision Research)*

	Model 1		Model 2	
	Coeff (z-value)	Marginal effect	Coeff (z-value)	Marginal effect
Time Pressure	-0.135 (-0.26)	-0.023	-0.132 (-0.25)	-0.023
Gender (0=M, 1=F)	NA	NA	-0.165 (-0.31)	-0.029
Age	NA	NA	0.004 (0.19)	0.001
n		86		86

\*, \*\*: Significant at 5%-, 1%-level

*Table 31: Descriptive statistic: Experiment 5 (USA, Qualtrics Panels)*

	Late info w. Ex		Late info wo. Ex		Early info wo. Ex	
	T1:Time pressure	T2:Time delay	T3:Time pressure	T4:Time delay	T5:Time pressure	T6:Time delay
n	98	99	99	101	101	102
Cooperation [n (%)]	37 (46)	51 (52)	49 (54)	62 (61)	63 (68)	70 (69)
MISSING [n (%)]	17 (17)	1 (1)	9 (9)	0 (0)	8 (8)	1 (1)
Age [Mean (SD)]	45 (14.9)	44 (15.6)	41 (15.2)	42 (15.4)	42 (15.0)	42 (15.2)
Female [n (%)]	50 (51)	39 (39)	46 (46)	53 (53)	56 (56)	58 (58)
Failed comprehension [n (%)]	53 (54)	45 (45)	43 (43)	54 (53)	58 (57)	61 (60)

*Table 32: Chi-square test (USA, Qualtrics Panels)*

	Late info w. Ex			Late info wo. Ex			Early info wo. Ex		
	diff (td – tp)	chi2-value	p-value	diff (td – tp)	chi2-value	p-value	diff (td – tp)	chi2-value	p-value
	0.064	0.718	0.397	0.070	0.942	0.332	0.016	0.055	0.815

Table 33-38 show the regressions for the data collection conducted in USA with Qualtrics Panels.

*Table 33: OLS regressions – Late information WITH example (USA, Qualtrics Panels)*

	Model 1	Model 2
	Coeff (t-value)	Coeff (t-value)
Time Pressure	-0.064 (-0.84)	-0.078 (-1.02)
Gender (0=M, 1=F)	NA	-0.000 (-0.01)
Age	NA	0.003 (1.17)
n	179	177

\*, \*\*: Significant at 5%-, 1%-level

*Table 34: Logistic regressions – Late information WITH example (USA, Qualtrics Panels)*

	Model 1		Model 2	
	Coeff (z-value)	Marginal effect	Coeff (z-value)	Marginal effect
Time Pressure	-0.255 (-0.85)	-0.064	-0.314 (-1.03)	-0.078
Gender (0=M, 1=F)	NA	NA	-0.002 (-0.01)	0.000
Age	NA	NA	0.012 (1.18)	0.003
n		179		177

\*, \*\*: Significant at 5%-, 1%-level

Table 35: OLS regressions – Late information WITHOUT example (USA, Qualtrics Panels)

	Model 1	Model 2
	Coeff (t-value)	Coeff (t-value)
Time Pressure	-0.069 (-0.97)	-0.084 (-1.15)
Gender (0=M, 1=F)	NA	0.017 (0.24)
Age	NA	-0.002 (-0.86)
n	191	186

\*, \*\*: Significant at 5%-, 1%-level

Table 36: Logistic regressions – Late information WITHOUT example (USA, Qualtrics Panels)

	Model 1		Model 2	
	Coeff (z-value)	Marginal effect	Coeff (z-value)	Marginal effect
Time Pressure	-0.285 (-0.97)	-0.069	-0.347 (-1.15)	-0.084
Gender (0=M, 1=F)	NA	NA	0.072 (0.24)	0.018
Age	NA	NA	-0.009 (-0.86)	-0.002
n	191		186	

\*, \*\*: Significant at 5%-, 1%-level

Table 37: OLS regressions – Late information WITHOUT example (USA, Qualtrics Panels)

	Model 1	Model 2
	Coeff (t-value)	Coeff (t-value)
Time Pressure	-0.016 (-0.23)	-0.001 (-0.02)
Gender (0=M, 1=F)	NA	-0.010 (-0.14)
Age	NA	0.002 (1.02)
n	194	187

\*, \*\*: Significant at 5%-, 1%-level

Table 38: Logistic regressions – Early information WITHOUT example (USA, Qualtrics Panels)

	Model 1		Model 2	
	Coeff (z-value)	Marginal effect	Coeff (z-value)	Marginal effect
Time Pressure	-0.073 (-0.23)	-0.016	-0.007 (-0.02)	-0.001
Gender (0=M, 1=F)	NA	NA	-0.045 (-0.14)	-0.010
Age	NA	NA	0.011 (1.03)	0.002
n	194		187	

\*, \*\*: Significant at 5%-, 1%-level

Table 39: Descriptive statistics: Experiment 5 (Austria, University of Innsbruck)

	Late info w. Ex		Late info wo. Ex		Early info	
	T1:Time pressure	T2:Time delay	T3:Time pressure	T4:Time delay	T5:Time pressure	T6:Time delay
n	60	60	59	57	60	57
Cooperation [n (%)]	38 (68)	34 (57)	44 (79)	39 (68)	44 (76)	45 (79)
MISSING [n (%)]	4 (7)	0 (0)	3 (5)	0 (0)	2 (3)	0 (0)
Age [Mean (SD)]	23 (3.1)	23 (3.3)	22 (3.1)	23 (3.4)	23 (3.1)	23 (5.2)
Female [n (%)]	30 (51)	25 (42)	30 (51)	24 (42)	29 (48)	41 (72)
Failed comprehension [n (%)]	12 (20)	13 (22)	20 (34)	18 (32)	22 (37)	18 (32)

*Table 40: Chi-square test (Austria, University of Innsbruck)*

Late info w. ex			Late info wo. ex			Early info wo. Ex		
diff (td - tp)	chi2-value	p-value	diff (td - tp)	chi2-value	p-value	diff (td - tp)	chi2-value	p-value
-0.112	1.541	0.215	-0.102	1.493	0.222	0.031	0.156	0.693

*Table 41: OLS regressions - Late information WITH example (Austria, University of Innsbruck)*

	Model 1	Model 2
	Coeff (t-value)	Coeff (t-value)
Time Pressure	0.112 (1.24)	0.117 (1.27)
Gender (0=M, 1=F)	NA	-0.115 (-1.25)
Age	NA	-0.009 (-0.63)
n	116	114

\*, \*\*: Significant at 5%-, 1%-level

*Table 42: Logistic regressions - Late information WITH example (Austria, University of Innsbruck)*

	Model 1		Model 2	
	Coeff (z-value)	Marginal effect	Coeff (z-value)	Marginal effect
Time Pressure	0.479 (1.24)	0.112	0.501 (1.27)	0.118
Gender (0=M, 1=F)	NA	NA	-0.492 (-1.25)	-0.116
Age	NA	NA	-0.037 (-0.61)	-0.009
n	116		114	

\*, \*\*: Significant at 5%-, 1%-level

*Table 43: OLS regressions - Late information WITHOUT example (Austria, University of Innsbruck)*

	Model 1	Model 2
	Coeff (t-value)	Coeff (t-value)
Time Pressure	0.102 (1.22)	0.105 (1.25)
Gender (0=M, 1=F)	NA	0.065 (0.77)
Age	NA	-0.009 (-0.67)
n	113	112

\*, \*\*: Significant at 5%-, 1%-level

*Table 44: Logistic regressions - Late information WITHOUT example (Austria, University of Innsbruck)*

	Model 1		Model 2	
	Coeff (z-value)	Marginal effect	Coeff (z-value)	Marginal effect
Time Pressure	0.526 (1.22)	0.102	0.562 (1.26)	0.106
Gender (0=M, 1=F)	NA	NA	0.352 (0.78)	0.066
Age	NA	NA	-0.044 (-0.65)	-0.008
n	113		112	

\*, \*\*: Significant at 5%-, 1%-level

*Table 45: OLS regressions - Early information WITHOUT example (Austria, University of Innsbruck)*

	Model 1	Model 2
	Coeff (t-value)	Coeff (t-value)
Time Pressure	-0.031 (-0.39)	-0.039 (-0.47)
Gender (0=M, 1=F)	NA	-0.032 (-0.39)
Age	NA	0.001 (0.09)
n	115	115

\*, \*\*: Significant at 5%-, 1%-level

*Table 46: Logistic regressions - Early information WITHOUT example (Austria, University of Innsbruck)*

	Model 1		Model 2	
	Coeff (z-value)	Marginal effect	Coeff (z-value)	Marginal effect
Time Pressure	-0.177 (-0.40)	-0.031	-0.221 (-0.48)	-0.039
Gender (0=M, 1=F)	NA	NA	-0.185 (-0.39)	-0.032
Age	NA	NA	0.005 (0.09)	0.001
n		115		115

\*, \*\*: Significant at 5%-, 1%-level

## 6. Experimental Instructions

### 6.1. Experiment 1: Prisoner's dilemma Lab experiment (Sweden)

#### Time Pressure Treatment

It is important that you carefully read the following instructions. The experiment consists of three parts, each part containing five questions. You will in total have to answer 15 questions. One of the 15 questions you answer will be randomly selected for actual payment. You have a maximum of 10 seconds to answer each question. If you fail to answer within 10 seconds the next question will appear automatically. Before each new part a new set of instructions will appear on the screen. It is important that you carefully read these and that you understand the instructions before you start answering the questions. For a response to be registered you must first select an item and then press 'next'.

NEW SCREEN

In this part you are randomly paired with one other participant in the experiment who answers the same question. You have an opportunity to give money to this person, and this person has an opportunity to give money to you. You are both anonymous and there will be no communication between you. Thus, you will not be able to know which choice the other person has done when you make your choice. If you choose to give money, this money will be multiplied by a factor greater than 1 and then received by the other person. Before this part starts there will be an example question

NEW SCREEN

Example:

Would you like to keep 130 SEK for yourself or give 150 SEK to the other person? The other person will face the same decision.

- Keep everything (130 SEK for me)
- Give everything (150 SEK for another person)

When you press 'next' the real questions will start and you will have 10 seconds to answer each question.

NEW SCREEN

Would you like to keep 80 SEK for yourself or give 150 SEK to the other person? The other person will face the same decision.

Time remaining: 10 Seconds

- Keep everything (80 SEK for me)
- Give everything (150 SEK for another person)

*(Note: we used SEK 40, 60, 75 and 80 as variation for how much money the subject would receive if he or she kept everything.)*

### **Time Delay Treatment**

It is important that you carefully read the following instructions. The experiment consists of three parts, each part containing five questions. You will in total have to answer 15 questions. One of the 15 questions you answer will be randomly selected for actual payment. It takes 10 seconds before you can answer each question. Before each new part a new set of instructions will appear on the screen. It is important that you carefully read these and that you understand the instructions before you start answering the questions. For a response to be registered you must first select an item and then press 'next'.

NEW SCREEN

In this part you are randomly paired with one other participant in the experiment who answers the same question. You have an opportunity to give money to this person, and this person has an opportunity to give money to you. You are both anonymous and there will be no communication between you. Thus, you will not be able to know which choice the other person has done when you make your choice. If you choose to give money, this money will be multiplied by a factor greater than 1 and then received by the other person. Before this part starts there will be an example question

NEW SCREEN

Example:

Would you like to keep 130 SEK for yourself or give 150 SEK to the other person? The other person will face the same decision.

- Keep everything (130 SEK for me)
- Give everything (150 SEK for another person)

When you press 'next' the real questions will start. Each time you press “next” you will come to a new question.

NEW SCREEN

Would you like to keep 80 SEK for yourself or give 150 SEK to the other person? The other person will face the same decision.

- Keep everything (80 SEK for me)
- Give everything (150 SEK for another person)

## *6.2. Experiment 2 and 3: Public Goods Game (Sweden and USA)*

### **Time pressure treatment**

It is important that you carefully read the following instructions. The experiment consists of six parts, each part containing four to seven questions. You will in total have to answer 24 questions.

The first four parts contain questions where you will have to make decisions regarding the allocation of money. At the end of the survey, one of your answers will be drawn at random for actual payment in addition to the \$5/100SEK you get for participating. The last two parts contain questions where you will be asked to consider described situations and assess what you believe is right and wrong.

Before each new part a new set of instructions will appear on the screen. It is important that you carefully read these and that you understand the instructions before you start answering the questions.

Try to answer as quickly as possible to the questions. In the first 4 parts, you will have a maximum of 7 seconds for each question. A counter on the screen will indicate how much time you have left. If you do not respond within 7 seconds the next question will appear automatically.

#### NEW SCREEN

In this part you are randomly assigned with three other participants in the experiment in a group of 4 persons. You will not find out who the other persons in the group are and they will not find out who you are. All four members of the group may choose to receive \$2.50 or to give a larger sum to the group. The money given to the group will be divided equally between all four members of the group. If a decision from this part will be drawn for actual payment, then everyone in the group of 4 persons will get paid based on this question.

Remember that you have a maximum of 7 seconds to answer each question. When you press 'next' the following question will appear.

Press 'next' when you are ready to start.

#### NEW SCREEN

Do you choose to take \$2.50 for yourself or give \$3.75 to the group?

Time Remaining: 7 seconds

- \$2.50 to yourself
- \$3.75 to the group

*(Note: we used 75,100, 125 and 150 SEK to the group as monetary variation Experiment 2 and \$5, \$6.25 and \$7.5 to the group as variation in Experiment 3.)*

#### **Time-delay treatment**

It is important that you carefully read the following instructions. The experiment consists of six parts, each part containing four to seven questions. You will in total have to answer 24 questions.

The first four parts contain questions where you will have to make decisions regarding the allocation of money. At the end of the survey, one of your answers will be drawn at random for actual payment in addition to the \$5/100SEK you get for participating. The last two parts contain questions where you will be asked to consider described situations and assess what you believe is right and wrong.

Before each new part a new set of instructions will appear on the screen. It is important that you carefully read these and that you understand the instructions before you start answering the questions.

Think carefully through your response before proceeding. It will take 7 seconds before you can answer each question.

#### NEW SCREEN

In this part you are randomly assigned with three other participants in the experiment in a group of 4 persons. You will not find out who the other persons in the group are and they will not find out who you are. All four members of the group may choose to receive \$2.50 or to give a larger sum to the group. The money given to the group will be divided equally between all four members of the group. If a decision from this part will be drawn for actual payment, then everyone in the group of 4 persons will get paid based on this question.

Think carefully through your response before proceeding. It will take 7 seconds before you can answer each question.

Press 'next' when you are ready to start.

#### NEW SCREEN

Do you choose to take \$2.50 for yourself or give \$3.75 to the group?

- \$2.50 to yourself
- \$3.75 to the group

*(Note: we used 75,100, 125 and 150 SEK to the group as monetary variation Experiment 2 and \$5, \$6.25 and \$7.5 to the group as variation in Experiment 3.)*

### 6.3. Experiment 4: Public Goods Game (Austria)

#### **Time pressure treatment**

It is important that you carefully read the following instructions. The experiment consists of six parts, each part containing four to seven questions. You will in total have to answer 24 questions.

The first four parts contain questions where you will have to make decisions regarding the allocation of money. At the end of the survey, one of your answers will be drawn at random for actual payment in addition to the €5 you get for participating. The last two parts contain questions where you will be asked to consider described situations and assess what you believe is right and wrong.

Before each new part a new set of instructions will appear on the screen. It is important that you carefully read these and that you understand the instructions before you start answering the questions.

Try to answer as quickly as possible to the questions. In the first 4 parts, you will have a maximum of 7 seconds for each question. A counter on the screen will indicate how much time you have left. If you do not respond within 7 seconds the next question will appear automatically.

#### NEW SCREEN “Instruction Screen”

In this part you are randomly assigned with three other participants in the experiment in a group of 4 persons. You will not find out who the other persons in the group are and they will not find out who you are. All four members of the group may choose to receive \$2.50 or to give a larger sum to the group. The money given to the group will be divided equally between all four members of the group. If a decision from this part will be drawn for actual payment, then everyone in the group of 4 persons will get paid based on this question.

Press 'next' when you are ready to start.

#### NEW SCREEN

Do you choose to take €5 for yourself or give €7.50 to the group?

Time Remaining: 7 seconds

- €5 to yourself
- €7.50 to the group

*(Note: we used €7.50, €10, €12.50 and €15 to the group as monetary variation Experiment 4)*

#### **Time-delay treatment**

It is important that you carefully read the following instructions. The experiment consists of

six parts, each part containing four to seven questions. You will in total have to answer 24 questions.

The first four parts contain questions where you will have to make decisions regarding the allocation of money. At the end of the survey, one of your answers will be drawn at random for actual payment in addition to the €5 you get for participating. The last two parts contain questions where you will be asked to consider described situations and assess what you believe is right and wrong.

Before each new part a new set of instructions will appear on the screen. It is important that you carefully read these and that you understand the instructions before you start answering the questions.

Think carefully through your response before proceeding. In the first 4 parts, it will take 20 seconds before you can answer each question.

#### NEW SCREEN “Instruction Screen”

In this part you are randomly assigned with three other participants in the experiment in a group of 4 persons. You will not find out who the other persons in the group are and they will not find out who you are. All four members of the group may choose to receive \$2.50 or to give a larger sum to the group. The money given to the group will be divided equally between all four members of the group. If a decision from this part will be drawn for actual payment, then everyone in the group of 4 persons will get paid based on this question.

Think carefully through your response before proceeding. It will take 20 seconds before you can answer each question.

Press 'next' when you are ready to start.

#### NEW SCREEN

Do you choose to take €5 for yourself or give €7.50 to the group?

- €5 to yourself
- €7.50 to the group

*(Note: we used €7.50, €10, €12.50 and €15 to the group as monetary variation Experiment 4)*

#### 6.4. Experiment 5

##### **Treatment 1(time pressure): Information timing late, WITH example**

In this task you will participate in a simple decision making Experiment. You will earn money based on your decision and the decision of others. Thus you will make decisions about real money

NEW SCREEN

You have been randomly assigned to interact with 3 other people. All of you receive this same set of instructions. You cannot participate in this Experiment more than once.

Each person in your group is given \$4 for this interaction.

You each decide whether to KEEP the \$4 for yourself, or to CONTRIBUTE it to the group.

If you CONTRIBUTE, \$8 goes into the group's common project, and is then evenly divided among the 4 group members. Thus, for every group member that chooses CONTRIBUTE, each group member receives \$2.

If everyone chooses CONTRIBUTE, everyone's money will double: each of you will earn \$8.

But if everyone else chooses CONTRIBUTE, while you KEEP the \$4, you will earn \$10, while the others will earn only \$6. That is because if you CONTRIBUTE, you only get \$2 back.

Thus you personally lose money if you CONTRIBUTE, no matter what the others choose.

NEW SCREEN

Please make your decision as quickly as possible. You must make your decision in less than 10 seconds.

Do you choose to KEEP the \$4 for yourself or CONTRIBUTE \$8 to the group?

Time Remaining: 10 seconds

KEEP the \$4 for yourself  
CONTRIBUTE \$8 to the group

NEW SCREEN

In order to make sure that you read and understood the instructions in the previous screens, we want you to answer two follow-up questions. You will receive 1 additional dollar for each correct answer.

Which choice alternative in the previous screen did earn the highest monetary payoff for the group as a whole?

KEEP the \$4 for yourself

CONTRIBUTE \$8 to the group

Which choice alternative in the previous screen did earn the highest monetary payoff for you personally?

KEEP the \$4 for yourself

CONTRIBUTE \$8 to the group

## **Treatment 2 (time-delay): Information timing late, WITH example**

In this task you will participate in a simple decision making Experiment. You will earn money based on your decision and the decision of others. Thus you will make decisions about real money

### **NEW SCREEN**

You have been randomly assigned to interact with 3 other people. All of you receive this same set of instructions. You cannot participate in this Experiment more than once.

Each person in your group is given \$4 for this interaction.

You each decide whether to **KEEP** the \$4 for yourself, or to **CONTRIBUTE** it to the group.

If you **CONTRIBUTE**, \$8 goes into the group's common project, and is then evenly divided among the 4 group members. Thus, for every group member that chooses **CONTRIBUTE**, each group member receives \$2.

If everyone chooses **CONTRIBUTE**, everyone's money will double: each of you will earn \$8.

But if everyone else chooses **CONTRIBUTE**, while you **KEEP** the \$4, you will earn \$10, while the others will earn only \$6. That is because if you **CONTRIBUTE**, you only get \$2 back.

Thus you personally lose money if you **CONTRIBUTE**, no matter what the others choose.

### **NEW SCREEN**

Please carefully consider your decision. You must wait and think for at least 20 seconds before making your decision.

Do you choose to **KEEP** the \$4 for yourself or **CONTRIBUTE** \$8 to the group?

Time Remaining: 20 seconds

**KEEP** the \$4 for yourself  
**CONTRIBUTE** \$8 to the group

### **NEW SCREEN**

In order to make sure that you read and understood the instructions in the previous screens, we want you to answer two follow-up questions. You will receive 1 additional dollar for each correct answer.

Which choice alternative in the previous screen did earn the highest monetary payoff for the group as a whole?

**KEEP** the \$4 for yourself

CONTRIBUTE \$8 to the group

Which choice alternative in the previous screen did earn the highest monetary payoff for you personally?

KEEP the \$4 for yourself

CONTRIBUTE \$8 to the group

**Treatment 3 (time pressure): Information timing late, WITHOUT example**

In this task you will participate in a simple decision making Experiment. You will earn money based on your decision and the decision of others.

NEW SCREEN

You have been randomly assigned to interact with 3 other people. All of you receive this same set of instructions. You cannot participate in this Experiment more than once.

Each person in your group is given \$4 for this interaction.

You each decide whether to KEEP the \$4 for yourself, or to CONTRIBUTE it to the group.

If you CONTRIBUTE, \$8 goes into the group's common project, and is then evenly divided among the 4 group members.

NEW SCREEN

Please make your decision as quickly as possible. You must make your decision in less than 10 seconds.

Do you choose to KEEP the \$4 for yourself or CONTRIBUTE \$8 to the group?

Time Remaining: 10 seconds

KEEP the \$4 for yourself  
CONTRIBUTE \$8 to the group

NEW SCREEN

Which choice alternative in the previous screen did earn the highest monetary payoff for the group as a whole?

KEEP the \$4 for yourself  
CONTRIBUTE \$8 to the group

Which choice alternative in the previous screen did earn the highest monetary payoff for you personally?

KEEP the \$4 for yourself  
CONTRIBUTE \$8 to the group

**Treatment 4 (time delay): Information timing late, WITHOUT example**

In this task you will participate in a simple decision making Experiment. You will earn money based on your decision and the decision of others.

NEW SCREEN

You have been randomly assigned to interact with 3 other people. All of you receive this same set of instructions. You cannot participate in this Experiment more than once.

Each person in your group is given \$4 for this interaction.

You each decide whether to KEEP the \$4 for yourself, or to CONTRIBUTE it to the group.

If you CONTRIBUTE, \$8 goes into the group's common project, and is then evenly divided among the 4 group members.

NEW SCREEN

Please carefully consider your decision. You must wait and think for at least 20 seconds before making your decision.

Do you choose to KEEP the \$4 for yourself or CONTRIBUTE \$8 to the group?

Time Remaining: 20 seconds

KEEP the \$4 for yourself  
CONTRIBUTE \$8 to the group

NEW SCREEN

Which choice alternative in the previous screen did earn the highest monetary payoff for the group as a whole?

KEEP the \$4 for yourself  
CONTRIBUTE \$8 to the group

Which choice alternative in the previous screen did earn the highest monetary payoff for you personally?

KEEP the \$4 for yourself  
CONTRIBUTE \$8 to the group

**Treatment 5 (time pressure): Information timing early, WITHOUT example**

In this task you will participate in a simple decision making Experiment. You will earn money based on your decision and the decision of others. Thus you will make decisions about real money.

NEW SCREEN

You have been randomly assigned to interact with 3 other people. All of you receive this same set of instructions. You cannot participate in this Experiment more than once.

Each person in your group is given \$4 for this interaction.

You each decide whether to KEEP the \$4 for yourself, or to CONTRIBUTE it to the group.

If you CONTRIBUTE, a larger amount (\$X) goes into the group's common project, and is then evenly divided among the 4 group members.

On the next screen, you will be told what the value of X is.

Please make your decision as quickly as possible. On the next screen, you will have to make your decision in less than 10 seconds.

NEW SCREEN

X=\$8

Do you choose to KEEP the \$4 for yourself or CONTRIBUTE \$8 to the group?

Time Remaining: 10 seconds

KEEP the \$4 for yourself  
CONTRIBUTE \$8 to the group

NEW SCREEN

In order to make sure that you read and understood the instructions in the previous screens, we want you to answer two follow-up questions. You will receive 1 additional dollar for each correct answer.

Which choice alternative in the previous screen did earn the highest monetary payoff for the group as a whole?

KEEP the \$4 for yourself  
CONTRIBUTE \$8 to the group

Which choice alternative in the previous screen did earn the highest monetary payoff for you personally?

KEEP the \$4 for yourself  
CONTRIBUTE \$8 to the group

**Treatment 6 (time-delay): Information timing early, WITHOUT example**

In this task you will participate in a simple decision making Experiment. You will earn money based on your decision and the decision of others. Thus you will make decisions about real money

NEW SCREEN

You have been randomly assigned to interact with 3 other people. All of you receive this same set of instructions. You cannot participate in this Experiment more than once.

Each person in your group is given \$4 for this interaction.

You each decide whether to KEEP the \$4 for yourself, or to CONTRIBUTE it to the group.

If you CONTRIBUTE, a larger amount (\$X) goes into the group's common project, and is then evenly divided among the 4 group members.

On the next screen, you will be told what the value of X is.

Please carefully consider your decision. On the next screen, you will have to wait and think for at least 20 seconds before making your decision.

NEW SCREEN

X=\$8

Do you choose to KEEP the \$4 for yourself or CONTRIBUTE \$8 to the group?

Time Remaining: 20 seconds

KEEP the \$4 for yourself  
CONTRIBUTE \$8 to the group

NEW SCREEN

In order to make sure that you read and understood the instructions in the previous screens, we want you to answer two follow-up questions. You will receive 1 additional dollar for each correct answer.

Which choice alternative in the previous screen did earn the highest monetary payoff for the group as a whole?

KEEP the \$4 for yourself  
CONTRIBUTE \$8 to the group

Which choice alternative in the previous screen did earn the highest monetary payoff for you personally?

KEEP the \$4 for yourself  
CONTRIBUTE \$8 to the group

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