

Dictator Giving When Recipients Can Opt Out

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DICTATOR GIVING WHEN RECIPIENTS CAN OPT OUT

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ABSTRACT

Participants' willingness to give in the dictator game has been found to be very sensitive to extending their choice set so that they can also take from recipients. To reduce this choice-set effect, we make the game less abstract by permitting potential recipients to opt out of it. Across four treatments, we vary whether taking is permitted and whether recipients can opt out of the game. Results suggest that while the choice-set effect is replicated when recipients cannot opt out, it plays less of a role when recipients enter the game voluntarily. We rule out a competing reciprocity-based explanation for this result, and conclude that the modified opt-in dictator game may provide a less sensitive measure of other-regarding preferences.

Keywords: altruism, dictator game, distributional preferences, vulnerability, intentions

JEL Classification: C90, D91, M54, J24

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I INTRODUCTION

The dictator game is a workhorse for studying other-regarding preferences in the social sciences. But it is also established that behavior in this game is extremely sensitive to subtle changes in participants' choice environment (Brañas-Garza, 2007; Cherry et al., 2002; Hoffman et al., 1994). In particular, several studies have found that just extending the dictator's choice set so that they can also take money from the recipient has a large and robust negative effect on the frequency of giving (Bardsley, 2008; Cappelen et al., 2013; List, 2007). In this paper, we examine whether increasing the external validity of the game can provide a more stable measure of altruism that is more easily reconciled with standard distributional preference models (Bolton and Ockenfels, 2000; Fehr and Schmidt, 1999).

One reason for the volatility in giving could be that structurally, the dictator game is unlike any situation that would be encountered in the real-world, where people rarely, if ever, receive “windfall” money to be shared with someone else. This means there are no experiences or familiar norms participants can rely on. As a result, rather than revealing true altruistic preferences, the game instead captures participants' sensitivity to a perceived social norm (Guala and Mittone, 2010; List, 2007). Thus while it is very useful for measuring the impact of subtle changes in the participants' choice environment, it is less conducive to measuring and comparing stable altruistic preferences across populations.

In our modified dictator game, potential recipients first decide whether to enter the game: if they enter, it proceeds as usual; if they stay out, it ends and both players receive their initial endowments with the recipient's endowment being a third of the dictator's. This simulates an interaction where a potential recipient of help first chooses whether to ask for help post which the helper decides whether or not to help. We conjectured that giving (or “helping”) in this more realistic context would reflect players' true altruistic preferences and thus not be as affected by whether they have the opportunity to take.

To test this, we conduct an experiment in which we vary (i) whether dictators are permitted to take from recipients and (ii) whether the recipient's decision to enter the game is intentional or determined by a random device. The random-entry variation creates treatments that resemble the standard dictator game, in which recipients are entirely passive players. We call these treatments the Baseline-Give (BG) and the Baseline-Take (BT) treatments. The corresponding Opt-In Give (OG) and Opt-In Take (OT) treatments incorporate the recipient opt-in feature.

Replicating List (2007) and Bardsley (2008), we find a lower rate of giving in BT compared to BG. In the new opt-in dictator game, meanwhile, we find preliminary evidence that permitting taking has only a negligible negative effect on the rate of giving.¹ But this lack of a negative

¹We note that the proportion of money-maximizing participants, i.e., who choose the most selfish transfer, does not change as we move from the give to the take games in both the baseline and opt-in treatments. A drop

effect could also be explained by another mechanism: when recipients voluntarily enter a game where taking is permitted, they are also deliberately making themselves vulnerable to potential exploitation by dictators. Accordingly, dictators may interpret their voluntary entry as an act of trust², which triggers a positive reciprocal response from them and thus counters the negative effect on transfers of permitting taking. However, comparing transfers in OT to BT, where the only difference is the recipient’s intentional entry, we find no difference in dictators’ behavior, indicating that the mere intention to become vulnerable is insufficient to elicit a trustworthy response.

Finally, we find that while in the baseline dictator game, permitting taking has a large negative impact on what dictators think recipients expect from them, it has a much less dramatic impact in the opt-in dictator game. We conclude that when recipients voluntarily enter the dictator game, dictators’ transfers and beliefs are less susceptible to an important social cue in their choice environment, namely, their choice set.

II EXPERIMENTAL DESIGN

We implemented four dictator game treatments in a between subjects design. Participants were randomly matched in recipient-dictator pairs with initial endowments of 125 ECU (EUR 5) and 375 ECU (EUR 15) for the recipient and dictator respectively. In the Opt-in Give (OG) and Opt-in Take (OT) treatments, the recipient first decided if they wanted to enter the game. If they entered, the game proceeded as usual; if they stayed out, it ended and players received their initial endowments. These treatments only differed in the dictator’s choice set: In OG, the dictator could transfer any amount $\tau^{\text{Give}} = \{0, 25, 50, \dots, 200\}$ to the recipient; in OT, the dictator could also take some of the recipient’s endowment, i.e. the dictator could transfer any amount $\tau^{\text{Take}} = \{-75, -50, -25, \dots, 200\}$.

Two other treatments, Baseline-Give (BG) and Baseline-Take (BT), were identical to OG and OT except that rather than have the recipient decide whether or not to enter the game, this was determined by a random device, so the recipient made no deliberate choice throughout the game.

The experiment consisted of Part 1, in which recipients and dictators’ made their choices, and Part 2, in which recipients’ first and dictators’ second order beliefs (SOBs) were elicited.³

in *mean* transfers is thus observed not only in the baseline dictator game (BG) but also in the opt-in dictator game (OG).

²There is some debate about whether vulnerability alone is sufficient for trust to be expressed and reciprocated. In the investment game, [Cox et al. \(2016\)](#) and [Engler et al. \(2018\)](#) find that the trustor’s vulnerability plays a key role in eliciting a trustworthy response. But studies by [Malhotra \(2004\)](#), [Keser and Özgümüs \(2018\)](#) and [Attanasi et al. \(2023\)](#) suggest that vulnerability may not be as important. None of these studies can (nor were they designed to) isolate the effect of voluntary vulnerability by itself.

³The full instructions for both parts can be found in [Appendix B](#).

In Part 1, we employed the strategy method to collect more data: dictators were asked to make their choice conditional on the recipient entering before they knew whether the recipient had actually entered. Either Part 1 (choices) or Part 2 (beliefs) was randomly selected to be paid at the end of the experiment. Results from both parts were revealed at the end of the experiment.

The experiment was run at the Masaryk University Experimental Economics Laboratory (MUEEL) participated in Brno, Czech Republic, between December 2021 and April 2022. A total of 288 students participated in the experiment. They were recruited using *hroot* (Bock et al., 2014) and the experiment was implemented in oTree (Chen et al., 2016). The mean age of subjects was 22.59 (SD: 2.55) years and 44.44% were female. All instructions appeared on subjects’ computer screens. Sessions lasted 45 minutes and subjects earned on average 219.11 ECU (SD: 109.49), which is equivalent to approx. EUR 10 in Purchasing Power Parity terms at the time of the experiment.

III RESULTS

The distribution of transfers from dictator to recipient is presented in Figure 1, and Table 1 reports the main aggregate statistics.

The two upper panels of Figure 1 replicate the result from List (2007) and Bardsley (2008): the share of dictators transferring a positive amount to passive recipients drops from 64% in BG to 42% in BT ($p = 0.057$, Fisher’s exact test).⁴ In both treatments, we observe peaks at the payoff maximizing transfer, which is 0 in BG and -75 in BT.⁵

Comparing the two lower panels of Figure 1, we find there is still a drop, though smaller, in the share of positive transfers: 50% in OG and 43% in OT. However, the difference is not significant at any conventional level ($p = 0.366$, Fisher’s exact test). Here, once again, we observe similar peaks at the payoff-maximizing transfers in OG and OT.

Table 2 reports marginal effects from Probit regressions of whether the dictator transferred a positive amount to the recipient on a dummy for whether the participant was assigned to a treatment where taking was permitted (‘Take’ variable). The regressions confirm that the choice-set effect exists in the baseline games (Models 1 and 2) but not in the opt-in games (Models 3 and 4).⁶

⁴We note that this drop in the share of positive transfers is in line with the more recent replication of List (2007) by Cappelen et al. (2013) where the share of positive transfers drops from 74% to 34% when take options are included in the dictator’s choice set.

⁵Unlike existing studies, we do not observe prominent peaks at either the payoff-*equalizing* transfer of 125 or at zero in BT.

⁶In Table A1 in Appendix A, we report the results from a linear probability regression with the same dependent variable as in Table 2, a dummy for the take treatments, another for the opt-in treatments and an interaction term. Our results do not survive this robustness check, i.e., the coefficient of the interaction between *Take* and *Opt-in* is not significant).

FIGURE 1: DISTRIBUTION OF DICTATOR TRANSFERS BY TREATMENT

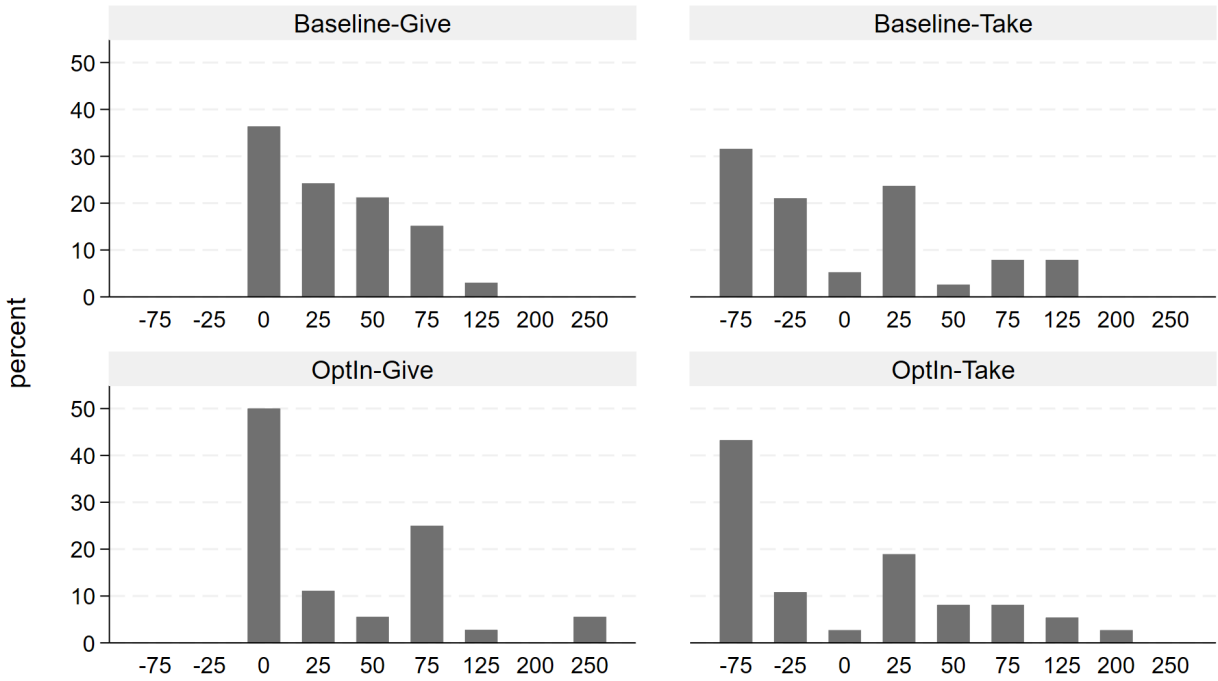


TABLE 1: AGGREGATE SUMMARY STATISTICS

Treatment	N	Share of Positive Transfers	Median Transfer	Mean Transfer	Rate of Most Selfish Transfer
Baseline Give (BG)	33	0.64	25.00	31.81	0.36
Baseline Take (BT)	38	0.42	-25.00	-5.92	0.32
Opt-In-Give (OG)	36	0.50	12.50	41.67	0.50
Opt-In-Take (OT)	37	0.43	-25.00	-8.11	0.43

Notes: Median and mean transfers are in ECU.

To test whether the recipient’s willingness to trust the dictator by entering the game in OT contributed to the lack of a negative effect of introducing take options, we compare OT to BT, where the only difference is the recipient’s intentional entry into the game. We find no evidence of a positive reciprocal response to the recipient’s trusting intention in terms of mean transfers (-5.92 in BT and -8.11 in OT, two-tailed t-test, $p = 0.89$), distribution of transfers (Mann-Whitney test, $p = 0.74$) or the frequency of positive and negative transfers (Fisher’s exact test, $p = 0.55$ and $p = 0.54$ respectively). Thus a positive response to perceived trust does not appear to drive our results.

Finally, comparing dictators’ beliefs about the transfers recipients expect from them (i.e., their SOBs), we find that while there is a large and significant drop in these SOBs between BG

TABLE 2: PROBIT REGRESSIONS: POSITIVE TRANSFER TO RECIPIENT.

	Model 1 (BG & BT)	Model 2 (BG & BT)	Model 3 (OG & OT)	Model 4 (OG & OT)
Take	-0.22* (0.12)	-0.25** (0.12)	-0.07 (0.12)	-0.07 (0.12)
Controls	No	Yes	No	Yes
Constant	0.35 (0.22)	-1.44 (1.98)	0.00 (0.21)	-2.83 (1.46)
N	71	71	73	73

Notes: We report marginal effects with standard errors in parentheses. Models 1 and 2 only include dictators in the two baseline treatments, BG and BT. Models 3 and 4 only include dictators in the two opt-in treatments, OG and OT. In all models, “Take” is a dummy that has value 1 if the dictator was in a take treatment. Models 2 and 4 include controls for the dictator’s age, gender and self-reported risk aversion. *, ** and *** denote significance at the 10%, 5% and 1% levels respectively.

and BT (24.79 in BG and -17.18 in BT, two-tailed t-test, $p < 0.001$), the drop is not significant between OG and OT (44.17 in BG and 23.89 in BT, two-tailed t-test, $p = 0.14$), indicating that permitting taking in the opt-in games also has less of an impact on what dictators think might be expected of them.

IV CONCLUSION

We find that the choice-set effect identified in [List \(2007\)](#) and [Bardsley \(2008\)](#) and replicated in [Cappelen et al. \(2013\)](#) is reduced if recipients voluntarily enter the dictator game. There is thus suggestive evidence that making the the game less abstract by giving recipients more agency in the final outcome reduces the volatility of dictator giving to social cues in their choice environment.

The negative effect of permitting taking is still present, as evidenced from the small drop, though statistically insignificant, in both the rate of giving as well as in dictators’ SOBs between OG and OT. A change in the perceived social norm and possible experimenter demand effects may therefore still play a role in the opt-in games. Their reduced influence is likely due to this game more closely resembling a real-world helping interaction where help is solicited before it is offered. We conclude that the opt-in dictator game might be more suited to comparing stable distributional preferences across samples. However, more research with a larger and more representative sample is needed to confirm these findings.

Acknowledgments

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A TABLES

TABLE A1: DIFF-IN-DIFF REGRESSION: POSITIVE TRANSFER TO RECIPIENT

	(1)	(2)
Take	-0.22***	-0.24**
	(0.07)	(0.09)
Opt-In	-0.14	-0.16
	(0.11)	(0.10)
Take x Opt-In	0.15	0.17
	(0.16)	(0.15)
Controls	No	Yes
N	144	144
R-squared	0.03	0.06

Notes: The table reports linear probability regressions where the dependent variable is a dummy that has value 1 if the dictator transferred a strictly positive amount to the recipient. “Take” is a dummy that has value 1 if the dictator was in treatment BT or OT. “Opt-in” is a dummy that has value 1 if the dictator was in treatment OG or OT. Model 2 includes controls for the dictator’s age, gender and self-reported risk aversion. *, ** and *** denote significance at the 10%, 5% and 1% levels respectively. Standard errors clustered at session level in parantheses.

B INSTRUCTIONS

Screenshots of the instructions and choice screens viewed by participants in the opt-in-take (OT) treatment are presented below. The OG treatment is identical except that the dictator's choice set excludes the possibility to take from the recipient. The baseline treatments, BT and BG, differ in that instead of having the recipient make an active choice in Part 1, information was provided about a random device determining the recipient's entry in Part 1. In all other respects, BT and BG were identical to OT and OG respectively.

General instructions

General Instructions

Welcome! This study will take approximately 60 minutes. From this point on, please do not attempt to communicate in any way with the other participants in this session. If you violate these rules, you will forgo your payment.

All instructions for this study will appear on your screen. Please raise your hand if you encounter a technical difficulty or if any part of the instructions are not clear to you, and a researcher will come to your seat to help you.

When you have finished reading the instructions or making a choice on a given screen, please don't forget to click the Next button.

Next

General Instructions

This study has 2 parts – Part 1 and Part 2.

Each part is independent of the other; your decisions in one part will have no bearing on your decisions or earnings in the other part. At the end of the study, one part will be randomly selected for payment and your earnings from the experiment will be equal to your earnings in that part. Since each part is equally likely to be selected, you should make decisions in both parts assuming they may be the one that is selected for payment.

We will present detailed instructions at the beginning of each part. Please pay close attention to these instructions, as your earnings will depend on your actions and thus on your understanding. We will move from Part 1 to Part 2 when everyone is done working on Part 1. This means that you may have to wait while others make their choices.

At the end of the experiment, we will call you one-by-one to collect your payment from the back of the lab. Note that your decisions in both parts will be strictly anonymous and cannot be linked to you in any way.

Click Next to continue to the instructions for Part 1.

Next

Part 1

You are now in Part 1. In this part, you will be randomly assigned to the role of Person A or Person B. Each Person A will be randomly and anonymously paired with another participant in this session in the role of Person B. You will not learn the identity of the participant you are matched with during or after the study, and s/he will not learn your identity either during or after the study.

All participants (regardless of role) will be endowed with **CZK 125** which is their payment for showing up for this study. Participants in the role of Person B will be endowed with an additional CZK 250 (bringing Person B's total initial endowment to **CZK 375**). Part 1 will proceed as follows.

Person A has two options, A1 and A2, explained below:

- **A1:** If this option is selected by Person A, then Person A and Person B will remain at their initial endowments. This means Person A will earn CZK 125 and Person B will earn CZK 375.
- **A2:** If this option is selected by Person A, Person B's choice will determine the earnings for both persons. This subsequent choice of Person B is explained below.

Person B's choice: If Person A chooses A2, then Person B can either:

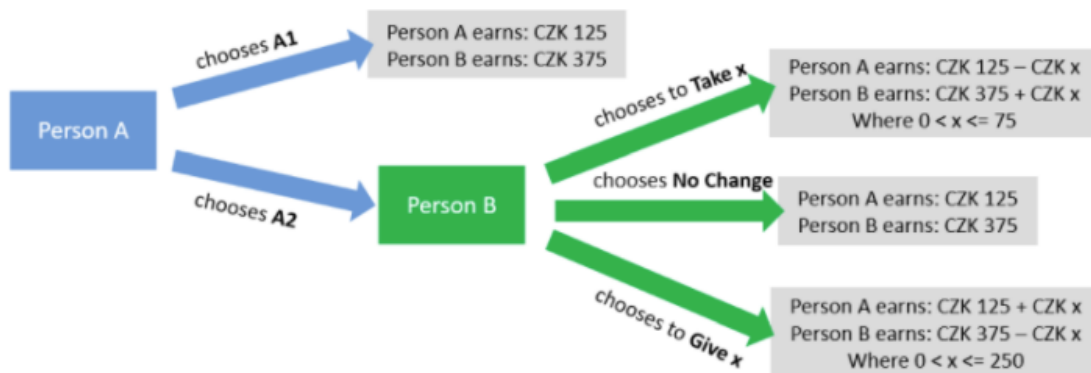
- ...**take** a part of Person A's CZK 125 show-up fee, with the maximum amount that can be taken from Person A being CZK 75.
- ...**make no change** to either of the endowments.
- ...**give** Person A part of her/his CZK 375 endowment, with the maximum amount that can be given to Person A being CZK 250.

Thus, Person B's choice (of transfer to Person A) can be anywhere from -75 to $+250$, in increments of CZK 25. Negative amounts will mean that Person B is taking that amount of Person A's endowment, zero will represent no change and positive amounts will mean that Person B is giving Person A that amount from her/his endowment.

We will ask Person B for her/his choice before Person B knows whether Person A chose A1 or A2. If Person A chooses A2, Person B's choice will be implemented. If Person A chooses A1, Person B's choice does not matter.

At the end of the study, Person A and Person B will learn about their earnings from Part 1.

The above instructions are summarized in the picture below:



Next

Recipient specific instructions

Part 1

You have been randomly assigned to the role of **Person A**.

You have been randomly and anonymously paired with another subject in the role of Person B.

You have an endowment of **CZK 125**.

Person B has CZK 125 plus an additional CZK 250, bringing her/his endowment to **CZK 375**.

Next

Part 1

Please choose one of the two options (A1 or A2) below. Your choice will be recorded after you click on the Next button.

A1: Person A and Person B remain at their initial endowments of CZK 125 (Person A) and CZK 375 (Person B).

If you select this option and Part 1 is chosen for payment at the end of this study, then you will receive CZK 125 and Person B will receive CZK 375.

A2: Person B can give Person A up to CZK 250 from her/his endowment or take up to CZK 75 from Person A .

Next

Part 2

You are now in Part 2. If this part is chosen for payment, you will earn CZK 125 for sure. You can earn up to CZK 200 more depending on the accuracy of your predictions in this part.

You will be asked for your predictions about the transfers that were made by Person Bs in Part 1. We will ask you two questions: Q1 and Q2.

If this part is chosen for payment, the computer will randomly determine whether your earnings from Q1 or Q2 are added to your payment for this part. Since each question is equally likely to be selected by the computer, you should answer each of them assuming they may be the one that is selected for payment.

Next

Part 2: Q1

In Part 1, every Person B in this session made a choice of how much to transfer to Person A. This transfer could take any value from CZK -75 to CZK +250 in multiples of CZK 25, with negative values indicating that Person B takes from Person A, 0 indicating no transfers and positive values indicating Person B gives to Person A.

We now ask you to guess the average amount transferred by the Person Bs in Part 1 of the experiment.

If this question is chosen to be paid, you can earn up to CZK 200 based on the accuracy of your prediction.

Your accuracy payment will be calculated as follows:

$\max(0, \text{CZK } 200 - 0.25 \times [\text{the difference between your estimate and the actual average transfer of all Person Bs in this session}]^2)$

This means that if you correctly guess the average transfers made in Part 1 by all Person Bs in this session, you will receive CZK 200. If you are off by CZK 10 in either direction, you will get CZK 175. If you are off by CZK 20 in either direction, you will get CZK 100, and so on. If you are off by more than CZK 28 in either direction, you will not earn any additional money from your prediction. Notice that the farther away from the reality your guess is, the faster your accuracy earnings drop. Please indicate your answer in the box provided.

What is the average amount transferred by all Person Bs in Part 1? CZK
(from -75 to +250)

Next

Part 2: Q2

In this question, we ask you to tell us how likely it is that one randomly selected Person B in this session took money from the Person A that s/he was matched with in Part 1. At the end of the experiment, we will randomly select one Person B from among all the Person Bs in this session and if this question is chosen to be paid, you can earn an additional CZK 200 based upon your answer.

You have an incentive to tell us the truth (i.e. if you believe that the randomly selected Person B took money from Person A with 5% chance, you will earn the most by stating that this chance is exactly 5%. Similarly, if you believe that the randomly selected Person B took money from Person A with 95% chance, you will earn the most by stating that this chance is exactly 95%).

Please indicate the percent chance with which you believe a randomly selected Person B took money from %
the Person A whom s/he was matched with in Part 1:

Here is why you have an incentive to tell the truth

The number you enter in this question represents the percent chance that you believe a randomly selected Person B takes from the Person A s/he was matched with. Let us call this number P. If you input P = 100, it means that you think that with 100% chance the randomly selected Person B took money from the Person A she was matched with in Part 1. If you input 0, it means that you are sure that this randomly selected Person B did not take from the Person A in Part 1.

Your reward will be determined as follows: The computer will first randomly select two numbers. Both numbers are selected from the range 0 to 100, with every number from 0 to 100 being equally likely to be selected. A reward of CZK 200 will be added to your earnings if one of the following conditions applies:

- The randomly selected Person B did take from the Person A and the P you entered is greater than at least one of the numbers selected by the computer.
- The randomly selected Person B did not take from the Person A and the P you entered is lower than at least one of the numbers selected by the computer.

This mechanism ensures that in all circumstances, the best strategy is always to give your actual estimate of the percent chance that the randomly selected Person B took from the Person A that s/he was matched with in Part 1.

Next

Questionnaire about Part 1 of this study

Please think back to Part 1 and answer the following questions as honestly as possible. Please rate the following statements based on how likely they were to be running through Person B's mind when s/he was choosing how much to transfer to you in Part 1 (where 1 = not at all likely & 5 = highly likely):

	not at all likely				highly likely
how much s/he (i.e. Person B) would earn from this study.	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>	4 <input type="radio"/>	5 <input type="radio"/>
how much you would earn from this study.	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>	4 <input type="radio"/>	5 <input type="radio"/>
the position you had put yourself in by choosing A2	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>	4 <input type="radio"/>	5 <input type="radio"/>
whether you trusted him/her	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>	4 <input type="radio"/>	5 <input type="radio"/>
how much you would expect her/him to transfer.	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>	4 <input type="radio"/>	5 <input type="radio"/>
how much the experimenters might expect her/him to transfer to you.	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>	4 <input type="radio"/>	5 <input type="radio"/>
The fact that you had CZK 250 less than s/he did.	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>	4 <input type="radio"/>	5 <input type="radio"/>

Please think back to your choice in Part 1 of this study. Please rate which thoughts were most likely to have influenced your choice in Part 1 (where 1 = not at all likely & 5 = very likely).

	not at all likely				highly likely
I cannot lose much if I choose A2	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>	4 <input type="radio"/>	5 <input type="radio"/>
I will most likely gain money if I choose A2.	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>	4 <input type="radio"/>	5 <input type="radio"/>
I would be trusting Person B if I chose A2.	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>	4 <input type="radio"/>	5 <input type="radio"/>
If I choose A2, I would be giving Person B the chance to do the right thing and send me some of her/his money.	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>	4 <input type="radio"/>	5 <input type="radio"/>
I don't care what happens either way	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>	4 <input type="radio"/>	5 <input type="radio"/>

Please rate how well you understood the instructions in Part 1 and Part 2 on scale of 1 to 5 (1 = did not understand at all & 5 = understood it fine)

	did not understand at all				understood it fine
Part 1 (choices)	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>	4 <input type="radio"/>	5 <input type="radio"/>
Part 2 (predictions)	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>	4 <input type="radio"/>	5 <input type="radio"/>

Next

Dictator specific instructions

Part 1

You have been randomly assigned to the role of **Person B**.

You have been randomly and anonymously paired with another subject in the role of Person A.

Person A has an endowment of **CZK 125**.

You have CZK 125 plus an additional CZK 250, bringing your endowment to **CZK 375**.

Next

Part 1

You are in the role of Person B. Recall that the Person A you are matched with chooses from among the following options:

- A1: Person A and Person B remain at their initial endowments of CZK 125 (Person A) and CZK 375 (Person B).
- A2: Person B can give Person A up to CZK 250 or take up to CZK 75 from Person A

For the case that Person A chose A2, please indicate your transfer choice by clicking on the line below and moving the slider that appears. Making no change means choosing 0 on the slider. Taking from Person A means choosing a negative amount on the slider. Giving to Person A means choosing a positive amount on the slider. When you move and place the slider at a given location, text will appear below the line showing you how much you and Person A will earn from this study if this part is chosen for payment. Your choice will be recorded after you click Next.



If this part is chosen for payment, **You will receive: CZK 325** (i.e. CZK 375 - 50) & **Person A will receive: CZK 175** (i.e. CZK 125 + 50)

Next

You are now in Part 1. In this part, you will be randomly assigned to the role of Person A or Person B. Each Person A will be randomly and anonymously paired with another participant in this session in the role of Person B. You will not learn the identity of the participant you are matched with during or after the study, and s/he will not learn your identity either during or after the study.

All participants (regardless of role) will be endowed with **CZK 125** which is their payment for showing up for this study. Participants in the role of Person B will be endowed with an additional CZK 250 (bringing Person B's total initial endowment to **CZK 375**). Part 1 will proceed as follows.

Person A has two options, A1 and A2, explained below:

- **A1:** If this option is selected by Person A, then Person A and Person B will remain at their initial endowments. This means Person A will earn CZK 125 and Person B will earn CZK 375.
- **A2:** If this option is selected by Person A, Person B's choice will determine the earnings for both persons. This subsequent choice of Person B is explained below.

Person B's choice: If Person A chooses A2, then Person B can either:

- ...**take** a part of Person A's CZK 125 show-up fee, with the maximum amount that can be taken from Person A being CZK 75.
- ...**make no change** to either of the endowments.
- ...**give** Person A part of her/his CZK 375 endowment, with the maximum amount that can be given to Person A being CZK 250.

Thus, Person B's choice (of transfer to Person A) can be anywhere from -75 to $+250$, in increments of CZK 25. Negative amounts will mean that Person B is taking that amount of Person A's endowment, zero will represent no change and positive amounts will mean that Person B is giving Person A that amount from

Part 2

You are now in Part 2. If this part is chosen for payment, you will earn CZK 125 for sure. You can earn up to CZK 200 more depending on the accuracy of your predictions in this part.

You will be asked to provide some guesses about the Person A you were matched with in Part 1. We will ask you two questions: Q1 and Q2.

If this part is chosen for payment, the computer will randomly determine whether your earnings from Q1 or Q2 are added to your payment for this part. Since each question is equally likely to be selected by the computer, you should answer each of them assuming they may be the one that is selected for payment.

Next

Part 2: Q1

You were a Person B in Part 1.

At this moment, Person As are being asked to provide their prediction of the average amount transferred by all Person Bs in Part 1 of this study. Their payment depends on how close their prediction is to actual average transferred by all Person Bs in this session.

We now ask you to guess the prediction of the Person A you were matched with in Part 1.

If this question is chosen to be paid, you can earn up to CZK 200 based on the accuracy of your guess.

Your accuracy payment will be calculated as follows:

$\max(0, \text{CZK } 200 - 0.25 * [\text{the difference between your estimate and the actual prediction of the Person A you were matched with}]^2)$

This means that if you correctly guess the prediction of the Person A you were matched with in Part 1, you will receive CZK 200. If you are off by CZK 10 in either direction, you will get CZK 175. If you are off by CZK 20 in either direction, you will get CZK 100, and so on. If you are off by more than CZK 28 in either direction, you will not earn any additional money from your prediction. Notice that the farther away from the reality your guess is, the faster your accuracy earnings drop. Please indicate your answer in the box provided.

Please provide your guess of the prediction made by the Person A you were matched with in Part 1:

CZK

(from -75 to +250)

Next

Part 2: Q2

You were a Person B in Part 1.

We also ask Person As to indicate with what percent chance they believe a randomly selected Person B's transfer to Person A lies between -75 and -1 in Part 1. In other words, we ask Person As to guess the percent chance with which they believe that a randomly selected Person B takes money from the Person A that s/he was matched with. Person As have a monetary incentive to provide their true estimate of this chance (i.e. if they believe the Person B took with 5% chance, they earn the most by stating that this chance is exactly 5%. Similarly, if they believe the Person B took with 95% chance, they earn the most by stating that this chance is exactly 95%).

In the box below, we now ask you to provide a guess of what the Person A you are matched with believed this chance to be:

%

If this question is chosen to be paid, and your answer is within +/- 5 percentage points of the actual answer that was given by the Person A you were matched with, you will earn CZK 200 in additional payment.

Next

Questionnaire about Part 1 of this study

Please think back to Part 1 and answer the following questions as honestly as possible. Please guess how likely it is that the Person A you were matched with in Part 1 chose A2. You can provide your guess using the slider below where 0% means you are certain she **did not** choose A2, and 100 means you are certain she **did** choose A2. Recall that for Person A, choosing A2 meant that your choice in Part 1 would be implemented.

0%

Selected percentage: %

100%



Please think back to when you were making your choice in Part 1 of this study. Please rate how much you thought about the following things when you were making your choice of what to transfer to Person A (where 1 = did not think about this at all & 5 = thought about this a lot):

	did not think about at all				thought about a lot
how much I would earn from this study.	1	2	3	4	5
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
how much Person A would earn from this study.	1	2	3	4	5
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
the position Person A had put herself in by choosing A2.	1	2	3	4	5
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
whether Person A trusted me.	1	2	3	4	5
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
how much Person A would expect me to transfer.	1	2	3	4	5
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
how much the researchers might expect me to transfer.	1	2	3	4	5
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
the fact that Person A had CZK 250 less than I did.	1	2	3	4	5
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please rate how well you understood the instructions in Part 1 and Part 2 on scale of 1 to 5 (1 = did not understand at all & 5 = understood it fine)

	did not understand at all				understood it fine
Part 1 (choices)	1	2	3	4	5
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Part 2 (predictions)	1	2	3	4	5
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Next

Demographic questionnaire common to both

Questionnaire

What is your gender?

- Male Female Other

What is the highest level of school you have completed or the highest degree you have received?

- High School
 Bachelor Degree
 Master Degree
 PhD

How old are you in years?

How do you see yourself:

Please indicate on a scale if you are generally a person who is fully prepared to take risks or do you try to avoid taking risks?

0 means: 'not at all willing to take risks'

10 means: 'very willing to take risks'

0 1 2 3 4 5 6 7 8 9 10

Next