# Web Appendix

## Dictating the Risk – Experimental Evidence on Giving in Risky Environments

J. Michelle Brock     Andreas Lange     Erkut Y. Ozbay

## Experiment Instructions

*General Rules*

This is an experiment in economic decision making. If you follow the instructions carefully and make good decisions you can earn a considerable amount of money. You will be paid in private and in cash at the end of the session.

It is important that you do not talk, or in any way try to communicate, with other people during the session. If you have a question, raise your hand and a monitor will come over to where you are sitting and answer your question in private.

The experiment will consist of several independent rounds. In each, you will face a specific decision task. Tasks will be explained in detail before you have to make your decision.

In each round, you will be randomly matched with one other participant. This matching will change each round. You will not know which of the other people in the room you are matched with. Likewise, the other people in the session will not know with whom they are grouped.

In each round, you will have the opportunity to earn points. At the end of this session, one of the rounds will be randomly selected as the payment round. You will be paid in cash an amount that will be determined by the number of ECUs (**E**xperimental **C**urrency **U**nits) you earn during the randomly selected payment round.

At the beginning of the experiment, you will be assigned the role of either Person 1 or Person 2.

Those selected for the role of Person 2 will leave the room with one of the experimenters. They will be explained the decision tasks, but then wait until person 1 has made all decisions. They will later be paid in private. That is, the identity of the decision maker (person 1) will not be revealed.

Those selected as Person 1 will remain in the room and will take a seat at one of the computers. Once all of the Person 2 players have left the room, we will explain the decision rules for each of the decision tasks to the Person 1 players..

In all rounds, each Person 1 player will decide how to allocate 100 tokens between him- or herself and Person 2.
**The total number of tokens must sum up to 100.**
That is, **T**okens **K**ept (**TK**) by person 1 and **T**okens **G**iven (**TG**) to person 2 add up to 100.
$$TK + TG = 100.$$

The payoff consequences of the token allocation may differ between the Person 1 and Person 2 and from round to round. Payoff consequences will be explained to all Person 1 and Person 2 players at the beginning of each round.

In each period you should record the number of tokens allocated to you and to the other person on the record sheet.

*How earnings are determined*

At the end of today's session, one round will be randomly selected as the payment round and payments will be determined based on the ECU earnings that round. Each round has the same probability of being chosen as the payment round. Your payments will be displayed on the computer.

Record the selected round and your profit in *ECU* for that round in the space provided at the bottom of the record sheet.

You will receive **$1.00** in cash at the end of the session for every **10 *ECU*** you have earned in the payment round. This amount is recorded in the space titled earnings. In addition, you will earn a $**5** as show-up fee.

If you have any questions during the experiment, please quietly raise your hand and one of the experimenters will come to you to answer your question. It is important that you do not talk with any of the other participants.

*Instructions for the specific rounds – Person 1*

**Treatment 1**

You have been randomly assigned to be Person 1. In this round, you will decide on the number of tokens for each of you that sum to 100.
That is, Tokens kept (TK) and Tokens given (TG) add up to 100.

$$TK + TG = 100.$$

If this round is selected for payments,
You will receive                    TK ECU
Person 2 will receive                TG ECU as payoff

Please enter how many tokens you would like to allocate to Person 2 (TG). Recall, you can choose any number between 0 and 100.

**Treatment 2**

You have been randomly assigned to be Person 1. In this round, you will decide on the number of tokens for each of you that sum to 100.
That is, Tokens kept (TK) and Tokens given (TG) add up to 100.

$$TK + TG = 100.$$

If this round is selected for payments,
You will receive                    TK ECU
Person 2 will receive                TG out of 100 lottery tickets which gives him or her the chance to win 100 ECU. That is, Person 2 has a TG out of 100 chance of winning 100 ECU.

The more tokens you allocate to the Person 2, the higher are Person 2's chances to win 100ECU, but the smaller will be your own payoff.

For example, if you allocate all 100 tokens to Person 2, the Person 2 has a 100 out of 100 chance to win 100ECU, that is Person 2 wins the prize for sure, while you do not get any payoff. Alternatively, if you allocate 0 tokens to Person 2, Person 2 has no chance to win the 100ECU prize, while you get a payoff of 100ECU.

Recall, you can choose any allocation to Person 2 between 0 and 100.
Please enter how many tokens you would like to allocate to Person 2(TG):

**Treatment 3**

You have been randomly assigned to be Person 1. In this round, you will decide on the number of tokens for each of you that sum to 100. You can allocate at most 50 tokens to the other person.
That is, Tokens kept (TK) and Tokens given (TG) add up to 100.

$$TK + TG = 100.$$

If this round is selected for payments,

You will receive                              TK ECU
Person 2 will receive                         2xTG out of 100 lottery tickets which gives Person 2 the
                                              chance to win 50 ECU.
That is, Person 2 has a 2xTG out of 100 chance of winning 50 ECU.

The more tokens you allocate to the Person 2, the higher are Person 2's chances to win 50ECU, but the smaller will be your own payoff. For example, if you allocate 50 tokens to Person 2, Person 2 receives 100 lottery tickets and therefore has a 100 out of 100 chance to win 50ECU. That is, Person 2 wins the prize for sure, while you do receive 50ECU for sure. Alternatively, if you allocate 0 tokens to Person 2, Person 2 has no chance to win the 50ECU prize, while you get a payoff of 100ECU.

Recall, you can choose any allocation for the Person 2 between 0 and 50.

Please enter how many tokens you would like to allocate to Person 2 (TG):


**Treatment 4**
You have been randomly assigned to be Person 1. In this round, you will decide on the number of tokens for each of you that sum to 100.
That is, Tokens kept (TK) and Tokens given (TG) add up to 100.
$$TK + TG = 100.$$

If this round is selected for payments,
You will receive                              TK unique lottery tickets
Person 2 will receive                         TG unique lottery tickets

At the end a lottery with a prize of 100 ECU will take place where one of the unique lottery tickets wins. **Exactly one, and only one, of you will win the prize**.

Your odds of winning equal TK over 100. Correspondingly, the odds for Person 2 will equal TG over 100.  That is, the more tokens you allocate to the Person 2, the higher are Person 2's chances to win 100ECU, but the smaller are your own chances to win. For example, if you allocate all 100 tokens to Person 2, person 2 has a 100 out of 100 chance to win 100ECU, that is person 2 wins the prize for sure, while you do not get any payoff. Alternatively, if you allocate 0 tokens to Person 2, Person 2 has no chance to win the 100ECU prize, while you win for sure.

Recall, you can choose any allocation to the Person 2 between 0 and 100.
Please enter how many tokens you would like to allocate to Person 2 (TG):


**Treatment 5**
You have been randomly assigned to be Person 1. In this round, you will decide on the number of tokens for each of you that sum to 100.
That is, Tokens kept (TK) and Tokens given (TG) add up to 100.

$$TK + TG = 100.$$

If this round is selected for payments,
You will receive                  TK lottery tickets
Person 2 will receive           TG lottery tickets

At the end, for you and Person 2, lotteries will be drawn with prizes of 100 ECU. Your odds of winning equal TK over 100. The odds for Person 2 will equal TG over 100. **The draws for you and Person 2 are independent. That is, both of you could win 100 points, only one of you could win, or both of you could end up without a prize.**

That is, the more tokens you allocate to the Person 2, the higher are Person 2 chances to win 100ECU, but the smaller are your own chances to win. For example, if you allocate all 100 tokens to Person 2, Person 2 has a 100 out of 100 chance to win 100ECU, that is person 2 wins the prize for sure, while you do not get any payoff. Alternatively, if you allocate 0 tokens to Person 2, person 2 has no chance to win the 100ECU prize, while you win for sure.

Recall, you can choose any allocation to Person 2 between 0 and 100.
Please enter how many tokens you would like to allocate to Person 2 (TG):

**Treatment 6**
You have been randomly assigned to be Person 1. In this round, you will decide on the number of tokens for each of you that sum to 100.
That is, Tokens kept (TK) and Tokens given (TG) add up to 100.
$$TK + TG = 100.$$

If this round is selected for payments,
You will have a 50/50-chance to either receive
$$50+TK/2 \text{ ECU}$$
$$50-TK/2 \text{ ECU}$$

Person 2 will face a 50/50-chance to either receive
$$50+TG/2 \text{ ECU}$$
$$50-TG/2 \text{ ECU}$$

In the extreme, if you do not allocate any tokens to Person 2, Person 2's payoff is 50ECU while you face a 50/50 chance to win 100ECU or win nothing. If you allocate all 100tokens to Person 2, you will have 50ECU for sure while Person 2 faces the 50/50 gamble of winning 100ECU or nothing. Alternatively, if you allocate 0 tokens to Person 2, Person 2 has no chance to win the 100ECU prize, while you win for sure.

Recall, you can choose any allocation to Person 2 between 0 and 100.
Please enter how many tokens you would like to allocate to Person 2 (TG):

*Instructions for the specific rounds – Person 2*

**Decision 1**

You will receive a number of tokens allocated to you by Person 1. The number of tokens allocated between you and Person 1 sums to 100. That is, Tokens kept (TK) and Tokens given (TG) add up to 100.                    TK + TG = 100.

If this round is selected for payments,
Person 1 will receive                    TK ECU
You will receive                    TG ECU as payoff

Please enter how many tokens you expect to receive from Person 1 (TG). Recall, Person 1 can allocate any number of tokens between 0 and 100.

**Decision 2**

You will receive a number of tokens allocated to you by Person 1. The number of tokens allocated between you and Person 1 sums to 100. That is, Tokens kept (TK) and Tokens given (TG) add up to 100.      TK + TG = 100.

If this round is selected for payments,
Person 1 will receive                    TK ECU
You will receive                    TG out of 100 lottery tickets, which gives you the chance to win 100 ECU. That is, you have a TG out of 100 chance of winning 100 ECU.

The more tokens Person 1 allocates to you, the higher are your chances to win 100ECU, but the smaller will be Person 1's own payoff.

For example, if Person 1 allocates 100 tokens to you, then you have a 100 out of 100 chance to win 100ECU. That is you win the prize for sure, while Person 1 does not get any payoff. Alternatively, if Person 1 allocates 0 tokens to you, then you ahve no chance to win the 100ECU prize, while Person 1 gets a payoff of 100ECU.

Recall, Person 1 can choose any allocation to you between 0 and 100.
Please enter in the record sheet how many tokens you expect Person 1 (TG) to allocate to you.

**Decision 3**

You will receive a number of tokens allocated to you by Person 1. The number of tokens allocated between you and Person 1 sums to 100, but Person 1 can allocate to you at most 50 tokens. That is, Tokens kept (TK) and Tokens given (TG) add up to 100 (TK + TG = 100).

If this round is selected for payments,
Person 1 will receive                    TK ECU

You will receive                         2xTG out of 100 lottery tickets, each of which gives       you
an equal chance to win 50 ECU.

That is, you will have a 2xTG out of 100 chance of winning
50 ECU.

The more tokens Person 1 allocates to you, the higher are your chances to win 50ECU, but the
smaller will be their own payoff. For example, if Person 1 allocates 50 tokens to you, you
receive 100 lottery tickets and therefore would have a 100 out of 100 chance to win 50ECU.
That is, you win the prize for sure, while Person 1 receives 50ECU for sure. Alternatively, if
Person 1 allocates 0 tokens to you, you have no chance to win the 50ECU prize, while Person 1
gets a payoff of 100ECU.

Recall, Person 1 can choose any allocation for you between 0 and 50.

Please enter in the record sheet how many tokens you expect Person 1 to allocate to you (TG).


**Decision 4**
You will receive a number of tokens allocated to you by Person 1. The number of tokens
allocated between you and Person 1 sums to 100.  That is, Tokens kept (TK) and Tokens given
(TG) add up to 100.                    TK + TG = 100.

If this round is selected for payments,
Person 1 will receive                         TK unique lottery tickets
You will receive                              TG unique lottery tickets

At the end of the session a lottery with a prize of 100 ECU will take place where exactly one of
the unique lottery tickets wins. **One, and only one, of you will win the prize**.

Your odds of winning equal TG over 100. Correspondingly, the odds for Person 1 will equal
TK over 100.  That is, the more tokens Person 1 allocates to you, the higher are your chances to
win 100ECU, but the smaller are Person 1's own chances to win. For example, if you receive
all 100 tokens from Person 1, you have has a 100 out of 100 chance to win 100ECU, that is you
win the prize for sure, while Person 1 does not get any payoff. Alternatively, if you receive 0
tokens from Person 1, you have no chance to win the 100ECU prize, while Person 1 wins for
sure.

Recall, Person 1 can choose any allocation between 0 and 100 for you.

Please enter in the record sheet how many tokens you expect Person 1 to allocate to you (TG).

**Decision 5**
You will receive a number of tokens allocated to you by Person 1. The number of tokens allocated between you and Person 1 sums to 100. That is, Tokens kept (TK) and Tokens given (TG) add up to 100.                 TK + TG = 100.

If this round is selected for payments,
Person 1 will receive                 TK lottery tickets
You will receive                 TG lottery tickets

At the end of the session, lotteries will be drawn for you and Person 1 with prizes of 100ECU each. Your odds of winning equal TG over 100. The odds for Person 1 will equal TK over 100. **The draws for you and Person 1 are independent. That is, both of you could win 100 points, only one of you could win, or both of you could end up without a prize.**

That is, the more tokens Person 1 allocates to you, the higher are your chances to win 100ECU, but the smaller are their own chances to win. For example, if Person 1 allocates all 100 tokens to you, you have a 100 out of 100 chance to win 100ECU. That is you win the prize for sure, while Person 1 does not get any payoff. Alternatively, if you Person 1 allocates 0 tokens to you, you have no chance to win the 100ECU prize, while Person 1 wins for sure.

Recall, Person 1 can choose any allocation between 0 and 100 for you.

Please enter in the record sheet how many tokens you expect Person 1 to allocate to you (TG).

**Decision 6**
You will receive a number of tokens allocated to you by Person 1. The number of tokens allocated between you and Person 1 sums to 100. That is, Tokens kept (TK) and Tokens given (TG) add up to 100.                 TK + TG = 100.

If this round is selected for payments,
Person 1 will have a 50/50-chance to either receive
$$50+TK/2 \text{ ECU}$$
$$50-TK/2 \text{ ECU}$$

You will face an independent 50/50-chance to either receive
$$50+TG/2 \text{ ECU}$$
$$50-TG/2 \text{ ECU}$$

Note that the lotteries faced by you and Person 1 are independent. If you receive from the other person a non-zero number of tokens, you will face a lottery of winning either something more than 50ECU or something less than 50ECU. Concurrently, Person 1 would face a separate lottery of winning something more than 50ECU or something less than 50ECU. The outcome of your lottery does not impact the outcome of Person 1's lottery, and vice versa.

While the outcomes of the two lotteries are independent, Person 1's choice of token allocations determines the potential winnings of both players. If Person 1 allocates a non-zero number of Tokens to you, then each of you faces lotteries with the two potential outcomes of something greater than 50ECU and something less than 50ECU (potential outcomes are not necessarily the same between you).

In the extreme, if Person 1 allocates zero tokens to you (TG=0), then TG/2=0 and your payoff is 50ECU for sure. Person 1 would then face a 50/50 chance to win 100ECU or win nothing (50+100/2=100 and 50-100/2=0). Alternatively, if you receive all 100 tokens, Person 1 will have exactly 50ECU for sure while you face the gamble of winning 100ECU or nothing. So while the outcome of the lotteries are not connected, the potential gains from the lotteries are determined by the allocations chosen by Person 1.

Recall, Person 1 can choose any allocation between 0 and 100 for you.

Please enter in the record sheet how many tokens you expect Person 1 to allocate to you (TG).