

Online Appendix of “Resolving Rabin’s Paradox”

Han Bleichrodt, Jason N. Doctor, Yu Gao, Chen Li, Daniella Meeker, & Peter P.
Wakker
May, 2017

Online Appendix OA. Instructions for subjects

Welcome!

Thank you for participating in today's experiment.

The experiment starts with instructions. After these, you will be asked to answer two test questions to check your understanding of the instructions. The experiment only starts after you have correctly answered both test questions.

During the experiment, you will be asked to make choices about prospects involving risk. There are no right or wrong answers. We are only interested in your preferences.

To thank you for your participation you will receive a €10 show-up fee. At the end of the experiment, we will randomly select *two* participants in this room who will be able to play out one of his/her choices for real (all other participants will only receive the €10 show-up fee). Because you could be one of the selected participants, it is in your best interest to choose the options you like most in the experiment.

The final payment procedure is in four steps:

Step 1: *Two* of the participants are randomly selected by the number on their right hand-side panel

Step 2: Payment of the show-up fee to all participants

Step 3: For each of the selected participant(s), one of the questions is randomly selected

Step 4: For the selected question, the payment will be determined by the participant's choice in that question

If you have any question during the experiment, please raise your hand and the experimenter will come to you.

Instructions

In the experiment, you will face a series of choice questions, involving choices between two prospects. Examples of choices are presented below. Risk is generated by throwing two ten-faced dice and adding the results together. The dice can give any number between 1 and 100 and each of these numbers is equally likely. For example, the random number generated by the two dice in Figure 1 is 38. You throw the dice yourself.



Figure 1

Example I:

Figure 2 presents a choice situation you will face in the experiment. You receive €11

if the dice give a number between 1 and 50 and you have to pay €10 if the dice give a number between 51 and 100.

Would you play the following prospect?

€11	-€10
1 - 50	51 - 100

Yes, I do.

No, I don't.

Figure 2

In this question, you will be asked to specify whether you would like to play the prospect or not by clicking on *Yes, I do* or *No, I don't*.

Suppose this question is selected to be played out for real payment at the end of the experiment. In case you chose to play the prospect, you throw the dice. If the resulting number is between 1 and 50, then you will win €11 on top of your show-up fee. If it is between 51 and 100, then €10 will be *subtracted* from your show-up fee. In case you chose not to play the prospect, then you do not gain or lose any money. That means that you only receive your show-up fee.

A variation of Example I is presented in Figure 3:

If this question is selected to be played out for real, you will get an additional payment of €11 in your bank account.

Which prospect do you prefer?

Prospect A

Prospect B

Figure 3

For some questions, you are entitled to receive an additional payment in your bank account.

If this question is selected to be played out for real, then €11 will be transferred to your bank account right after the experiment, regardless of your choice. The show-up fee and what you earn from the prospect will still be paid to you by cash after the experiment.

In this situation, you will be asked to choose between two prospects. Prospect A pays €11 if the dice give a number between 1 and 55 and you lose €10 if the dice give a number between 56 and 100. Prospect B pays €0. You can choose your preferred prospect by clicking on the button next to it.

After you made your choice, a “Confirm” button will appear. Please click on it to proceed. Before you press the "Confirm" button, you can change your choice on whether or not to play the prospect as many times as you like. But once you press the "Confirm" button, you can no longer go back to change your choice.

We will now test your understanding of the instructions.

Assume you have been selected as one of the two participants who can play a question for real and that the question below was randomly selected.

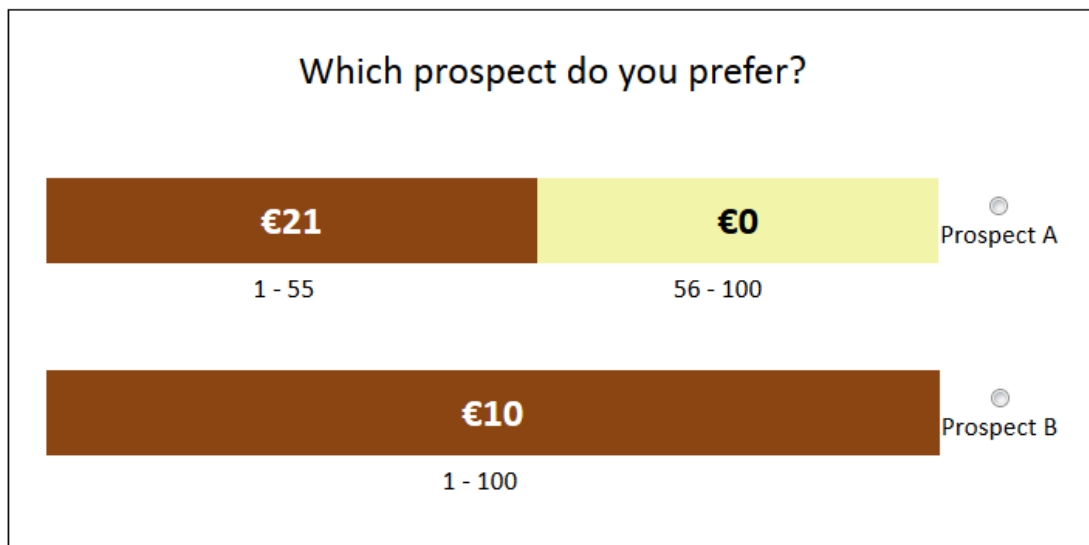


Figure 4

Please answer the following questions.

Question 1

If you chose prospect A, and the number generated by the dice is 61, then how much will you receive from this prospect?

- €10
- €21
- €1
- €0

Question 2

If you chose prospect B, then how much will you receive from this prospect?

- €21
- €0
- €10
- Depends on the generated number

Online Appendix OB. The iteration process

The iteration process to measure x_1, x_2, x_3 , and x_4 from $x_{i_p}g \sim x_{i-1_{0.5}}G$, with $p = 0.5, G = 16, g = 3, x_0 = 25$:

For each x_i , we used five choices to measure the indifference point. Subjects always chose between two prospects.

1. The initial value of x_i was determined by $x_i = x_{i-1} + 32$.
2. x_i was decreased when $x_{i_p}g$ was chosen over $x_{i-1_p}G$, and increased when $x_{i-1_p}G$ was chosen over $x_{i_p}g$.
3. The initial step was 16. The step size decrease by half in each subsequent question.
- 4.
5. The largest possible range of x_i was $x_{i-1} + 32 + 16 + 8 + 4 + 2 + 1 = x_{i-1} + 63$. It can only be reached if a subject chose $x_{i-1_p}G$ over $x_{i_p}g$ in all five choices.
6. The smallest possible range of x_i was $x_{i-1} + 32 - 16 - 8 - 4 - 2 - 1 = x_{i-1} + 1$. It can only be reached if a subject chose $x_{i_p}g$ over $x_{i-1_p}G$ in all five choices.

The indifference value was determined by the midpoint of the largest value of x_i for which $x_{i-1_{0.5}}G$ was chosen and the smallest value of x_i for which $x_{i_p}g$ was chosen.

The iteration processes to measure G, x^+ and x^- were similar to that for the x^j s. To measure G from $G_pL \sim 0$ with $p = 0.5, L = -10$, we start from $G = 32$ with the initial step of 16. The possible range of G was 1 to 63.

To measure x^+ from $G_p0 \sim x^+$ with $p = 0.5$ and G from above, we start from $x^+ = 16$ with the initial step of 8. The possible range of x^+ was 1 to 31.

To measure x^- from $0_pL \sim x^-$ with $p = 0.5, L = -10$, we start from $x^- = -7$ with the initial step of -4 . The possible range of x^- was -14 to 0.

The iteration process to measure probabilities r_1, r_2, r_3 and p starts from 50% with the initial step of 15%. The possible range was from 0.03 to 0.97.