

Comparing Risky Gambles

The purpose of this research study is to improve our understanding of how people make risky decisions. The questions in this computer-based survey involve comparisons between gambles with the possibility of winning money. All of the situations are hypothetical, so you won't win any real money.

There are no anticipated risks as a result of your participation in this study. We will not ask for your name as part of the study, so your responses will not be linked with your name in any way. The only benefit to you and others as a result of your participation is a greater understanding of decision processes, as explained in the debriefing materials that will be provided at the end of the session. The experiment will last about 30 minutes and you will receive half of one credit hour towards your REP requirement. If you have questions about the research, or in the extremely unlikely event of a research-related injury, please contact Dr. Mike DeKay, 224 Lazenby Hall, phone 292-1837. For questions about your rights as a participant in this study or to discuss other study-related concerns or complaints with someone who is not part of the research team, you may contact Ms. Sandra Meadows in the Office of Responsible Research Practices at 1-800-678-6251.

Your participation in this study is voluntary. Refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled. You may also discontinue participation at any time without penalty or loss of benefits to which you are otherwise entitled.

If you wish to participate in this study, please click the Next button.

This study is designed to explore the decisions that people make when the outcomes of those decisions are uncertain. Specifically, we will ask you to make choices between hypothetical monetary gambles. Although the gambles are not real, please make your decisions as if they involved real money. At the end of the study, we will also ask you a number of other questions.

The situation may be new to you, and you may not have all the information that you would like. That's okay. We'd like you to tell us what you think anyway. Please give your honest opinion—not what you think you "should" say. These are opinion questions and there are no right or wrong answers.

If you have questions at any time during the study, please ask the facilitator individually.

Imagine that you are a participant in a study on decision making involving real money and you are asked to choose between two options, each of which involves a series of **ONE HUNDRED** monetary gambles. On each gamble in option A, there is a 30% chance that you will receive \$22 and a 70% chance that you will get no money. On each gamble in option B, there is a 40% chance you will receive \$14 and a 60% chance that you will get no money.

These two options may be summarized as follows:

Option A:

30% chance on each gamble that you get \$22

70% chance on each gamble that you get no money

Option B:

40% chance on each gamble that you get \$14

60% chance on each gamble that you get no money

Your choice between options A and B applies to all **ONE HUNDRED** gambles. You may not choose option A for some gambles and option B for others. Regardless of your choice, the outcome of any particular gamble in the sequence (say the 23rd gamble) has no effect on the outcome on any other gamble in the sequence (say the 24th gamble or the 67th gamble). Each gamble is independent of the others.

1. If you had to choose one gamble to play ONE HUNDRED times, which option would you prefer? Please check one.

Strongly prefer option A	-	Moderately prefer option A	-	Neither	-	Moderately prefer option B	-	Strongly prefer option B
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. Which option would you choose to play ONE HUNDRED times? Please check one.

- ☐ Option A
- ☐ Option B

Now imagine that you are in the same situation, but the options are different. The previous options are not available, but everything else is the same as before.

The two new options are:

Option A:

25% chance on each gamble that you get \$6

75% chance on each gamble that you get no money

Option B:

20% chance on each gamble that you get \$10

80% chance on each gamble that you get no money

Your choice between options A and B applies to all **ONE HUNDRED** gambles.

3. If you had to choose one gamble to play ONE HUNDRED times, which option would you prefer? Please check one.

Strongly prefer option A	-	Moderately prefer option A	-	Neither	-	Moderately prefer option B	-	Strongly prefer option B
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. Which option would you choose to play ONE HUNDRED times? Please check one.

☐ Option A

☐ Option B

Now imagine that you are in the same situation, but the options are different. The previous options are not available, but everything else is the same as before.

The two new options are:

Option A:

15% chance on each gamble that you get \$42

85% chance on each gamble that you get no money

Option B:

30% chance on each gamble that you get \$24

70% chance on each gamble that you get no money

Your choice between options A and B applies to all **ONE HUNDRED** gambles.

5. If you had to choose one gamble to play ONE HUNDRED times, which option would you prefer? Please check one.

Strongly prefer option A	-	Moderately prefer option A	-	Neither	-	Moderately prefer option B	-	Strongly prefer option B
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. Which option would you choose to play ONE HUNDRED times? Please check one.

☐ Option A

☐ Option B

Now imagine that you are in the same situation, but the options are different. The previous options are not available, but everything else is the same as before.

The two new options are:

Option A:

2% chance on each gamble that you get \$5

98% chance on each gamble that you get no money

Option B:

1% chance on each gamble that you get \$12

99% chance on each gamble that you get no money

Your choice between options A and B applies to all **ONE HUNDRED** gambles

7. If you had to choose one gamble to play ONE HUNDRED times, which option would you prefer? Please check one.

Strongly prefer option A	-	Moderately prefer option A	-	Neither	-	Moderately prefer option B	-	Strongly prefer option B
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8. Which option would you choose to play ONE HUNDRED times? Please check one.

- ☐ Option A
- ☐ Option B

Now imagine that you are in the same situation, but the options are different. The previous options are not available, but everything else is the same as before.

The two new options are:

Option A:

50% chance on each gamble that you get \$6

50% chance on each gamble that you get no money

Option B:

25% chance on each gamble that you get \$9

75% chance on each gamble that you get no money

Your choice between options A and B applies to all **ONE HUNDRED** gambles.

9. If you had to choose one gamble to play ONE HUNDRED times, which option would you prefer? Please check one.

Strongly prefer option A	-	Moderately prefer option A	-	Neither	-	Moderately prefer option B	-	Strongly prefer option B
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10. Which option would you choose to play ONE HUNDRED times? Please check one.

- ☐ Option A
- ☐ Option B

Now imagine that you are in the same situation, but the options are different. The previous options are not available, but everything else is the same as before.

The two new options are:

Option A:

40% chance on each gamble that you get \$8

60 % chance on each gamble that you get no money

Option B:

30% chance on each gamble that you get \$7

70% chance on each gamble that you get no money

Your choice between options A and B applies to all **ONE HUNDRED** gambles.

11. If you had to choose one gamble to play ONE HUNDRED times, which option would you prefer? Please check one.

Strongly prefer option A	-	Moderately prefer option A	-	Neither	-	Moderately prefer option B	-	Strongly prefer option B
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. Which option would you choose to play ONE HUNDRED times? Please check one.

- ☐ Option A
- ☐ Option B

Now imagine that you are in the same situation, but the options are different. The previous options are not available, but everything else is the same as before.

The two new options are:

Option A:

65% chance on each gamble that you get \$15

35% chance on each gamble that you get no money

Option B:

85% chance on each gamble that you get \$12

15% chance on each gamble that you get no money

Your choice between options A and B applies to all **ONE HUNDRED** gambles.

13. If you had to choose one gamble to play ONE HUNDRED times, which option would you prefer? Please check one.

Strongly prefer option A	-	Moderately prefer option A	-	Neither	-	Moderately prefer option B	-	Strongly prefer option B
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14. Which option would you choose to play ONE HUNDRED times? Please check one.

☐ Option A

☐ Option B

Now imagine that you are in the same situation, but the options are different. The previous options are not available, but everything else is the same as before.

The two new options are:

Option A:

80% chance on each gamble that you get \$10

20% chance on each gamble that you get no money

Option B:

100% chance on each gamble that you get \$6

Your choice between options A and B applies to all **ONE HUNDRED** gambles.

15. If you had to choose one gamble to play ONE HUNDRED times, which option would you prefer? Please check one.

Strongly prefer option A	-	Moderately prefer option A	-	Neither	-	Moderately prefer option B	-	Strongly prefer option B
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16. Which option would you choose to play ONE HUNDRED times? Please check one.

- ☐ Option A
- ☐ Option B

Now imagine that you are in the same situation, but the options are different. The previous options are not available, but everything else is the same as before.

The two new options are:

Option A:

4% chance on each gamble that you get \$65

96% chance on each gamble that you get no money

Option B:

8% chance on each gamble that you get \$35

92% chance on each gamble that you get no money

Your choice between options A and B applies to all **ONE HUNDRED** gambles.

17. If you had to choose one gamble to play ONE HUNDRED times, which option would you prefer? Please check one.

Strongly prefer option A	-	Moderately prefer option A	-	Neither	-	Moderately prefer option B	-	Strongly prefer option B
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

18. Which option would you choose to play ONE HUNDRED times? Please check one.

- ☐ Option A
- ☐ Option B

Now imagine that you are in the same situation, but the options are different. The previous options are not available, but everything else is the same as before.

The two new options are:

Option A:

45% chance on each gamble that you get \$12

55% chance on each gamble that you get no money

Option B:

90% chance on each gamble that you get \$5

10% chance on each gamble that you get no money

Your choice between options A and B applies to all **ONE HUNDRED** gambles.

19. If you had to choose one gamble to play ONE HUNDRED times, which option would you prefer? Please check one.

Strongly prefer option A	-	Moderately prefer option A	-	Neither	-	Moderately prefer option B	-	Strongly prefer option B
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

20. Which option would you choose to play ONE HUNDRED times? Please check one.

- ☐ Option A
- ☐ Option B

Now imagine that you are in the same situation, but the options are different. The previous options are not available, but everything else is the same as before.

The two new options are:

Option A:

10% chance on each gamble that you get \$75

90% chance on each gamble that you get no money

Option B:

25% chance on each gamble that you get \$35

75% chance on each gamble that you get no money

Your choice between options A and B applies to all **ONE HUNDRED** gambles.

21. If you had to choose one gamble to play ONE HUNDRED times, which option would you prefer? Please check one.

Strongly prefer option A	-	Moderately prefer option A	-	Neither	-	Moderately prefer option B	-	Strongly prefer option B
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

22. Which option would you choose to play ONE HUNDRED times? Please check one.

- ☐ Option A
- ☐ Option B

23. You have just made several choices between two options. In each choice, how many times would the gamble in your chosen option be played? *Please enter a number.*

Now we would like you to answer some additional questions.

24. Imagine that we roll a fair, six-sided die 1,000 times. (That would mean that we roll one die from a pair of dice.) Out of 1,000 rolls, how many times do you think the die would come up as an even number?

25. In the BIG BUCKS LOTTERY, the chances of winning a \$10.00 prize are 1%. What is your best guess about how many people would win a \$10.00 prize if 1,000 people each buy a single ticket from BIG BUCKS?

26. In the ACME PUBLISHING SWEEPSTAKES, the chance of winning a car is 1 in 1,000. What percent of tickets of ACME PUBLISHING SWEEPSTAKES win a car?

27. If the chance of getting a disease is 10%, how many people would be expected to get the disease out of 1000?

28. If the chance of getting a disease is 20 out of 100, this would be the same as having a ____% chance of getting the disease.

29. Suppose you have a close friend who has a lump in her breast and must have a mammogram. Of 100 women like her, 10 of them actually have a malignant tumor and 90 of them do not. Of the 10 women who actually have a tumor, the mammogram indicates correctly that 9 of them have a tumor and indicates incorrectly that 1 of them does not have a tumor. Of the 90 women who do not have a tumor, the mammogram indicates correctly that 81 of them do not have a tumor and indicates incorrectly that 9 of them do have a tumor. The table below summarizes all of this information. Imagine that your friend tests positive (as if she had a tumor), what is the likelihood that she actually has a tumor?

	Tested Positive	Tested Negative	Total
Actually Has a Tumor	9	1	10
Does Not Have a Tumor	10	80	90
Total	19	81	100

(Answer: _____ out of _____)

30. A bat and a ball cost \$1.10 in total. The bat costs \$1.00 more than the ball. How much does the ball cost?

31. In a lake, there is a patch of lilypads. Every day, the patch doubles in size. If it takes 48 days for the patch to cover the entire lake, how long would it take for the patch to cover half of the lake?

32. Do you have any guesses about the specific goal of this study or about the specific hypothesis that we are testing?

If yes, please describe your guess(es) in the box below. If no, just type "no"

A large, empty rectangular box with a thin black border, intended for the user to provide their guess(es) about the study's goal or hypothesis. It occupies a significant portion of the lower half of the page.

33. When choosing between options A and B in the first part of the survey, did you ever think about which option would lead to the higher total amount of money in the "long run," if the gambles were played many times? *Please check one.*

☐ Yes

☐ No

34. When choosing between options A and B in the first part of the survey, did you ever try to choose the option with the higher "expected value"? *Please check one. If you are not sure what an expected value is, check No.*

☐ Yes

☐ No

35. Some people prefer to avoid risks (we call these people "risk averse"). Other people seek out risks and may actually enjoy them (we call these people "risk seeking"). To what extent are you risk averse or risk seeking? *Please check one.*

Very
risk
averse

-

Moderately
risk averse

-

Neither

-

Moderately
risk
seeking

-

Very
risk
seeking

☐
☐
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Finally, we would like you to answer a few questions about yourself. This information will be very useful in helping us describe the types of people who participated in our study.

36. To what extent are you politically liberal or politically conservative? *Please check one.*

Very liberal	-	Moderately liberal	-	Neither	-	Moderately conservative	-	Very conservative
<input type="radio"/>		<input type="radio"/>		<input type="radio"/>		<input type="radio"/>		<input type="radio"/>

37. How important is religion in your daily life? *Please check one.*

Not at all important	-	Moderately important	-	Very important
<input type="radio"/>		<input type="radio"/>		<input type="radio"/>

38. What is your sex? *Please check one.*

- ☐ Male
- ☐ Female

39. What is your age in years?

40. Are you Hispanic or Latino? *Please check one.*

- ☐ Yes
- ☐ No

41. How would you describe your race? *Please check all that apply.*

- ☐ American Indian or Alaska Native
- ☐ Asian
- ☐ Black or African American
- ☐ Native Hawaiian or Other Pacific Islander
- ☐ White
- ☐ Other (please specify)

42. Is English your first language? *Please check one.*

☐ Yes

☐ No

Thank you for participating in this study!