

Appendix 1

Figure A1 Percent of Participants Choosing the Gamble over the Certain Amount by Gamble, Study 1

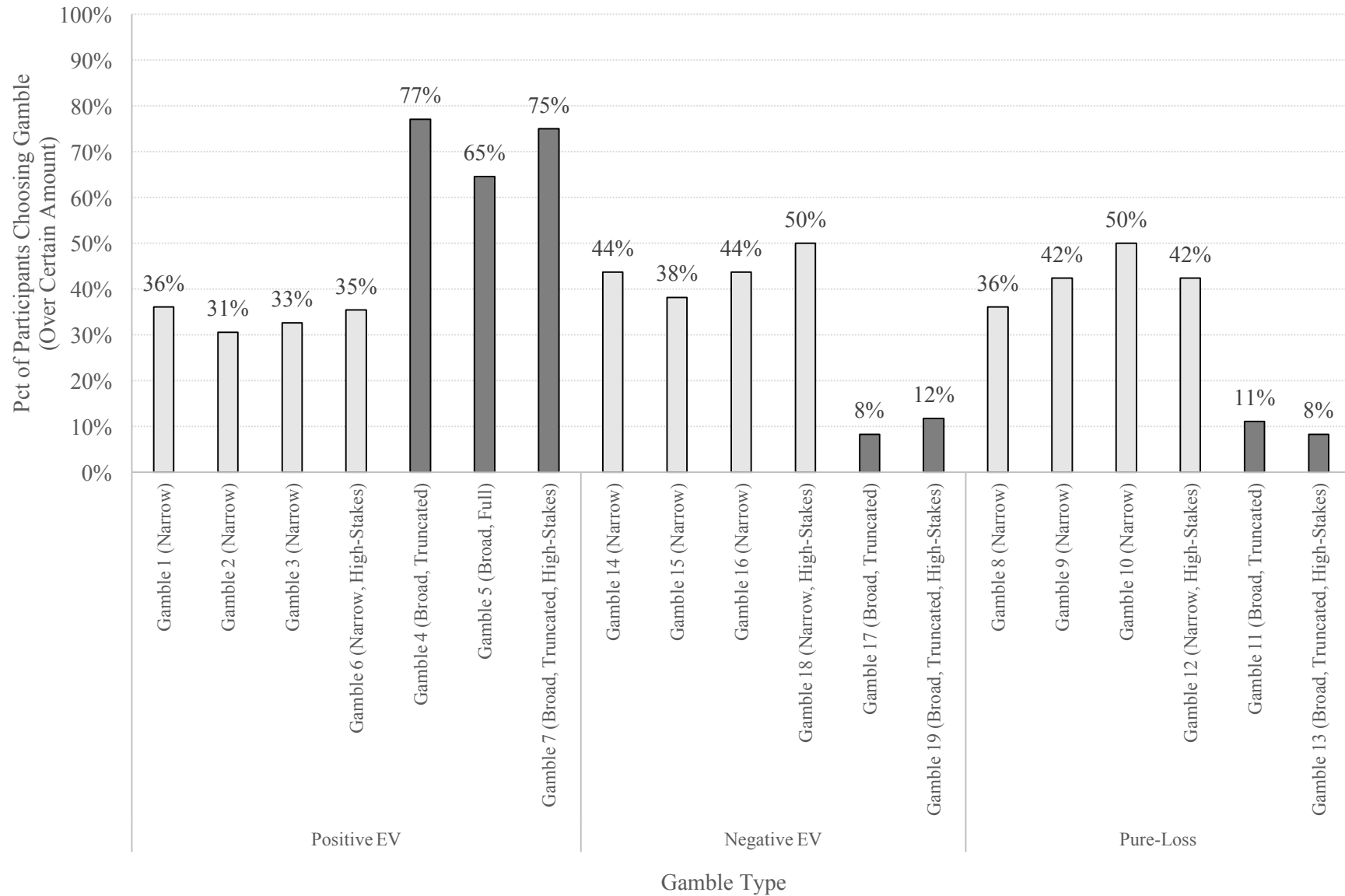
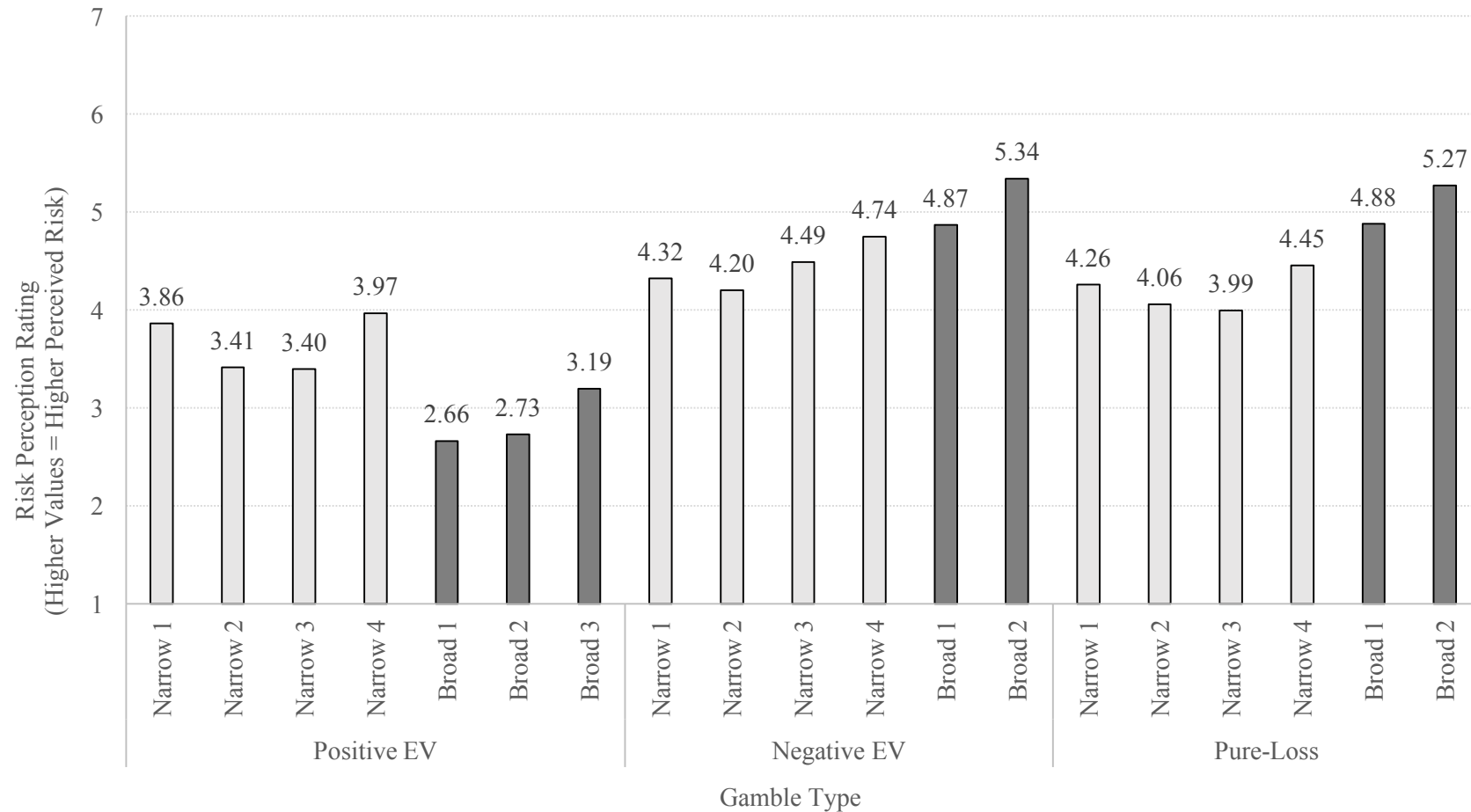
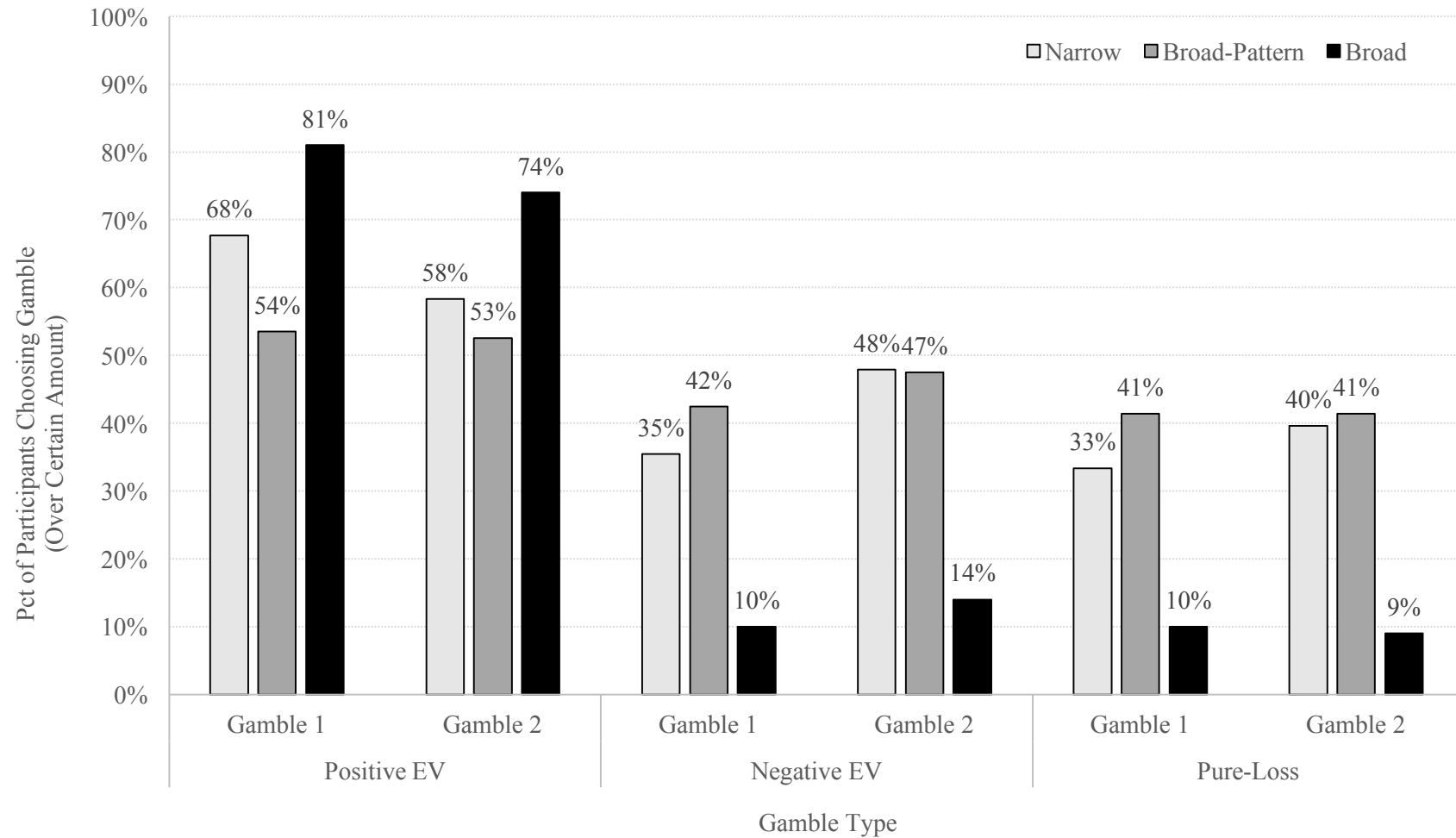


Figure A2 Average Risk Perception Rating for Each Gamble, Study 1



Notes: (1) The “Broad 3” gamble in the Positive EV gamble type is the non-truncated version of the probability distribution (showing outcomes that occur with less than a 1% chance). This gamble type is only shown for Positive EV gambles. (2) “Narrow 4” is the high-stakes version of the gamble across gamble types.

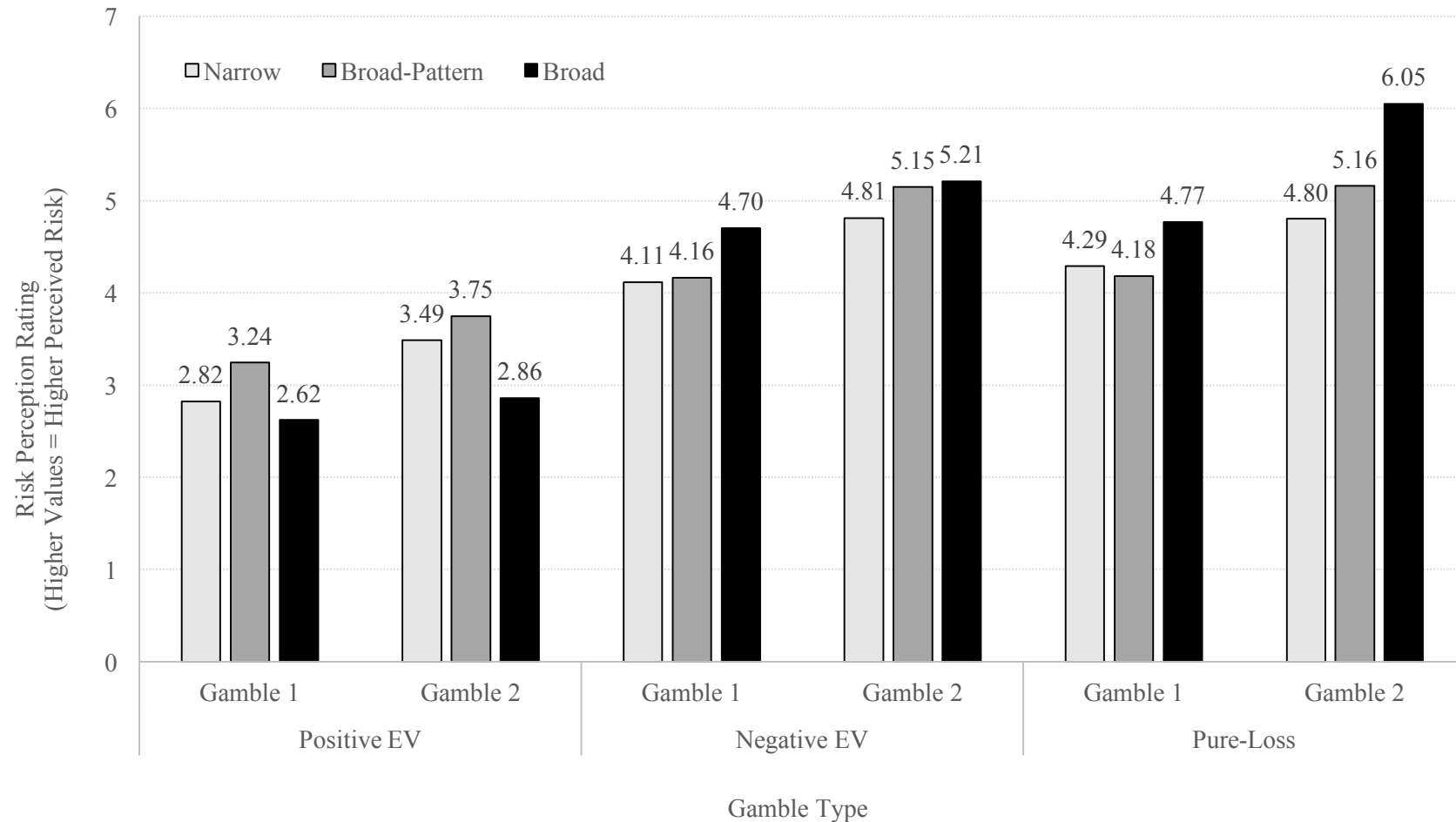
Figure A3 Percent of Participants Choosing the Gamble over the Certain Amount by Bracketing Condition, Gamble Type, and Gamble, Study 2



Notes:

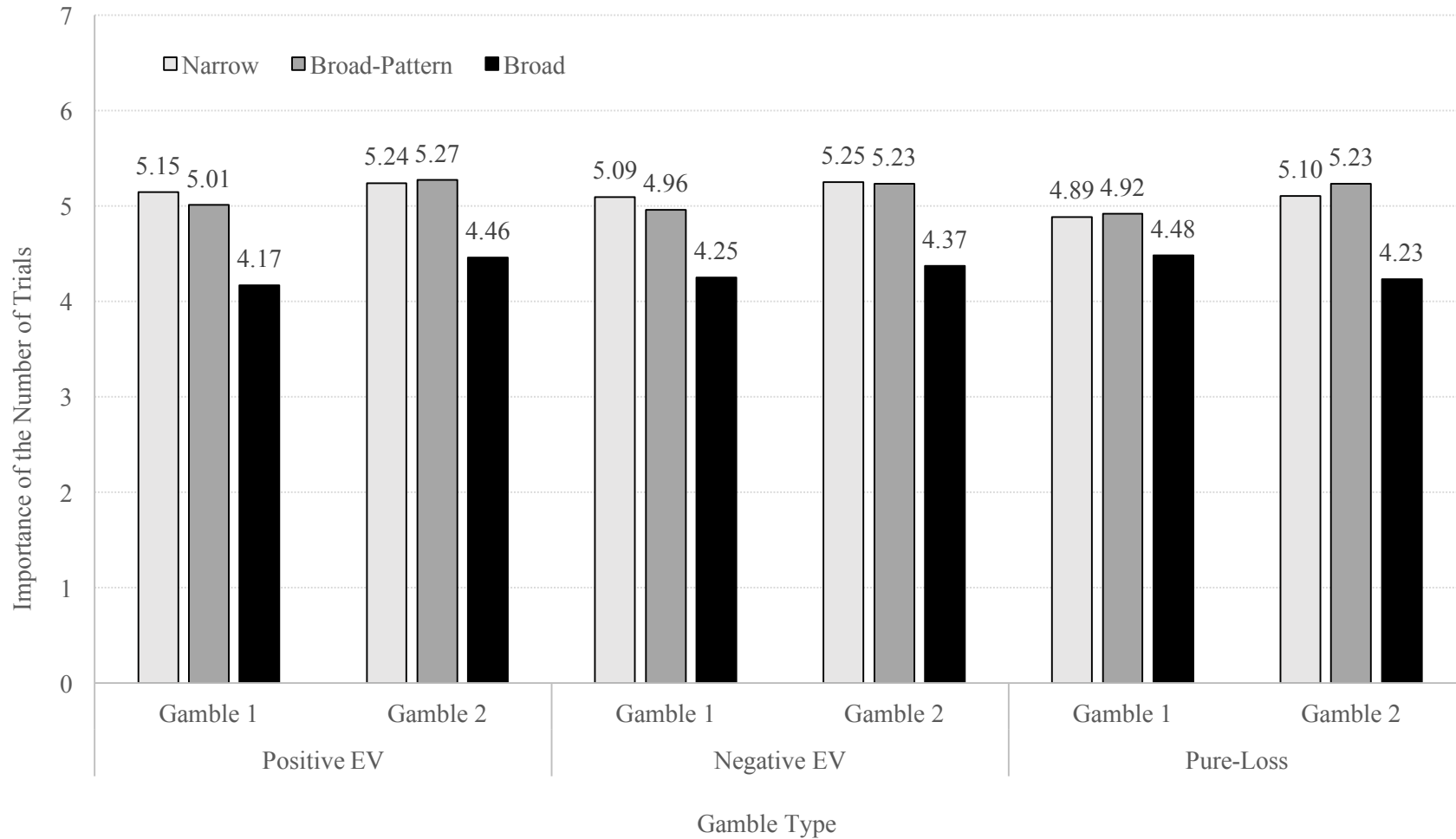
(1) The bracketing manipulations (Narrow vs. Broad vs. Broad-Pattern) are between-subjects, while the Gamble Type (Positive EV, Negative EV, and Pure-Loss) are within-subjects. (2) The gambles (gamble 1, gamble 2) are the same gamble across bracketing conditions, just how the gamble is presented changes by condition.

Figure A4 Average Risk Perception Ratings for Each Gamble, Study 2



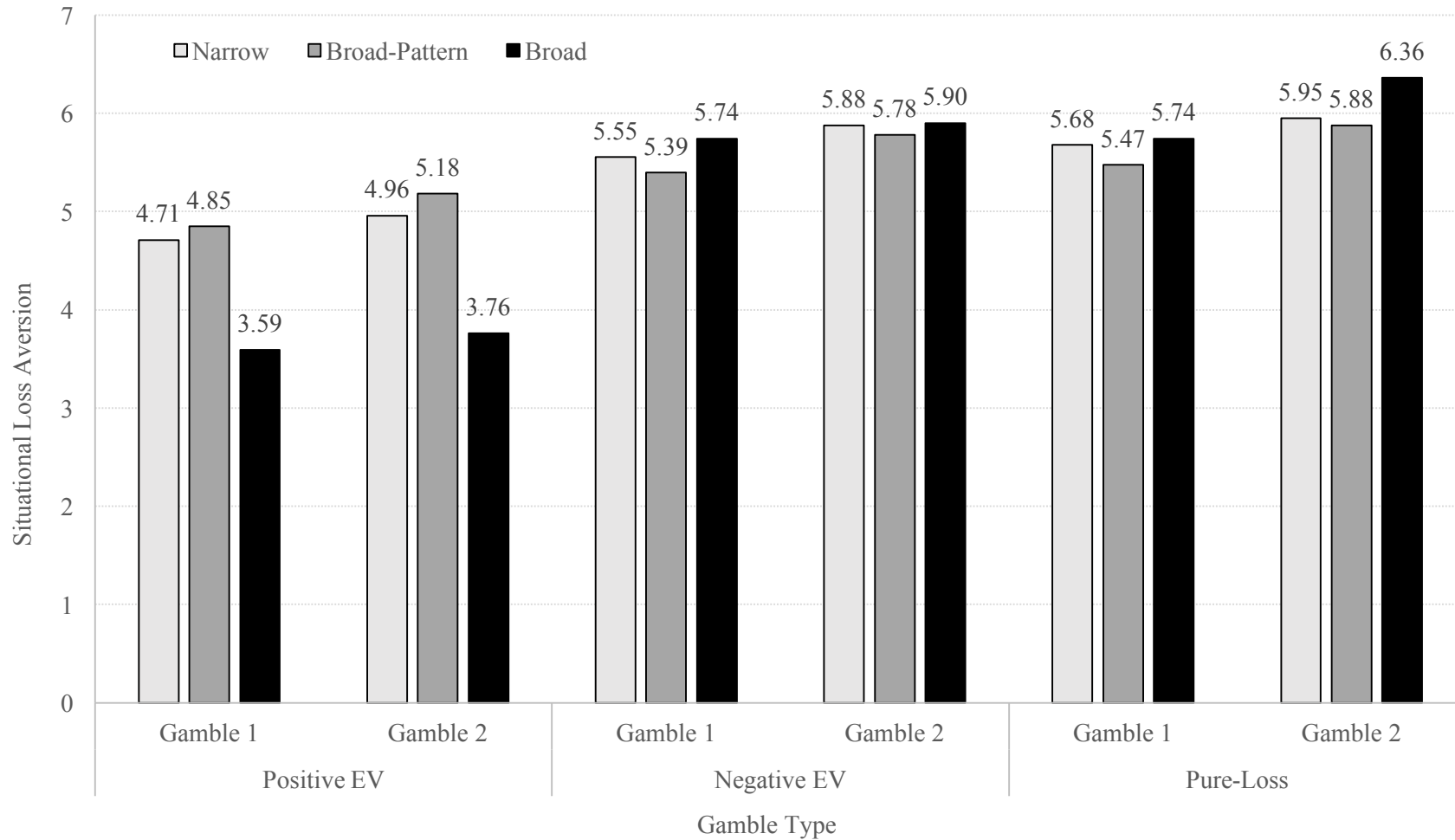
Notes: (1) The bracketing manipulations (Narrow vs. Broad vs. Broad-Pattern) are between-subjects, while the Gamble Type (Positive EV, Negative EV, and Pure-Loss) are within-subjects. (2) The gambles (gamble 1, gamble 2) are the same gamble across bracketing conditions, just how the gamble is presented changes by condition.

Figure A5 Average Importance of the Number of Trials Ratings for Each Gamble, Study 2



Notes: (1) The bracketing manipulations (Narrow vs. Broad vs. Broad-Pattern) are between-subjects, while the Gamble Type (Positive EV, Negative EV, and Pure-Loss) are within-subjects. (2) The gambles (gamble 1, gamble 2) are the same gamble across bracketing conditions, just how the gamble is presented changes by condition.

Figure A6 Average Situational Loss Aversion for Each Gamble, Study 2



Notes: (1) The bracketing manipulations (Narrow vs. Broad vs. Broad-Pattern) are between-subjects, while the Gamble Type (Positive EV, Negative EV, and Pure-Loss) are within-subjects. (2) The gambles (gamble 1, gamble 2) are the same gamble across bracketing conditions, just how the gamble is presented changes by condition.

Appendix 2

Instructions and Questions Used in Study 1

All participants saw the following gambles. Each participant was told they would be presented with 19 problems total and that they were to choose between the gamble and a certain outcome. The gambles below are in the same order as they are presented in Table 1.

1. [Positive EV, Narrow Bracket]

The gamble:

10% * Win \$0.75
90% ***** Lose \$0.01

The gamble is played 90 times.

The certain amount: \$3

2. [Positive EV, Narrow Bracket]

The gamble:

90% ***** Win \$0.10
10% * Lose \$0.50

The gamble is played 150 times.

The certain amount: \$3

3. [Positive EV, Narrow Bracket]

The gamble:

50% ***** Win \$0.25
50% ***** Lose \$0.15

The gamble is played 120 times.

The certain amount: \$3

4. [Positive EV, Broad Bracket, Truncated Distribution]

The gamble:

1%	#	Win \$12
1%	#	Win \$11
4%	#####	Win \$10
7%	#####	Win \$9
12%	#####	Win \$8
16%	#####	Win \$7
18%	#####	Win \$6
16%	#####	Win \$5
12%	#####	Win \$4
7%	#####	Win \$3
4%	#####	Win \$2
1%	#	Win \$1
1%	#	\$0

The certain amount: \$3

5. [Positive EV, Broad Bracket, Full Distribution]

The gamble:

0.00001% .		Win \$19
0.001% ..		Win \$15
1% #		Win \$12
2% ##		Win \$10.80
6% #####		Win \$9.60
12% #####		Win \$8.40
18% #####		Win \$7.20
22% #####		Win \$6
18% #####		Win \$4.80
12% #####		Win \$3.60
6% #####		Win \$2.40
2% ##		Win \$1.20
1% #		\$0
0.1% ...		Lose \$3
0.001% ..		Lose \$18

The certain amount: \$3

6. [Positive EV, Narrow Bracket, High-Stakes]

The gamble:

50% ***** Win \$2.50

50% ***** Lose \$1.50

The gamble is played 120 times.

The certain amount: \$30

7. [Positive EV, Broad Bracket, High-Stakes, Truncated Distribution]

The gamble:

1% #		Win \$120
1% #		Win \$110
4% #####		Win \$100
7% #####		Win \$90
12% #####		Win \$80
16% #####		Win \$70
18% #####		Win \$60
16% #####		Win \$50
12% #####		Win \$40
7% #####		Win \$30
4% #####		Win \$20
1% #		Win \$10
1% #		\$0

The certain amount: \$30

8. [Pure-Loss, Narrow Bracket]

The gamble:

90% ***** Lose \$0.10

10% * Lose \$0.50

The gamble is played 50 times.

The certain amount: - \$4 (Lose \$4)

9. [Pure-Loss, Narrow Bracket]

The gamble:

50% ***** Lose \$0.15

50% ***** Lose \$0.25

The gamble is played 35 times.

The certain amount: - \$4 (Lose \$4)

10. [Pure-Loss, Narrow Bracket]

The gamble:

10% * Lose \$0.75

90% ***** Lose \$0.01

The gamble is played 80 times.

The certain amount: - \$4 (Lose \$4)

11. [Pure-Loss, Broad Bracket, Truncated Distribution]

The gamble:

1%	#	Lose \$11
7%	#####	Lose \$10
7%	#####	Lose \$9
10%	#####	Lose \$8
28%	#####	Lose \$7
15%	#####	Lose \$6
12%	#####	Lose \$5
14%	#####	Lose \$4
2%	##	Lose \$3
1%	#	Lose \$2

The certain amount: -\$4 (lose \$4)

12. [Pure-Loss, Narrow Bracket, High-Stakes]

The gamble:

50% ***** Lose \$1.50

50% ***** Lose \$2.50

The gamble is played 35 times.

The certain amount: - \$40 (Lose \$40)

13. [Pure-Loss, Broad Bracket, High-Stakes, Truncated Distribution]

The gamble:

1%	#	Lose \$78
4%	####	Lose \$76
11%	#####	Lose \$74
21%	#####	Lose \$72
26%	#####	Lose \$70
21%	#####	Lose \$68
11%	#####	Lose \$66
4%	####	Lose \$64
1%	#	Lose \$62

The certain amount: -\$40 (lose \$40)

14. [Negative EV, Narrow Bracket]

The gamble:

50% ***** Win \$0.15

50% ***** Lose \$0.25

The gamble is played 80 times.

The certain amount: -\$2 (lose \$2)

15. [Negative EV, Narrow Bracket]

The gamble:

10% * Win \$0.25

90% ***** Lose \$0.10

The gamble is played 60 times.

The certain amount: -\$2 (lose \$2)

16. [Negative EV, Narrow Bracket]

The gamble:

90% * Win \$0.01

10% ***** Lose \$0.50

The gamble is played 100 times.

17. [Negative EV, Broad Bracket, Truncated Distribution]

The gamble:

2% ## Lose \$8

5% ##### Lose \$7

13% ##### Lose \$6

22% ##### Lose \$5

26% ##### Lose \$4

20% ##### Lose \$3

9% ##### Lose \$2

2% ## Lose \$1

The certain amount: -\$2 (lose \$2)

18. [Negative EV, Narrow Bracket, High-Stakes]

The gamble:

50% ***** Win \$1.50

50% ***** Lose \$2.50

The gamble is played 80 times.

The certain amount: -\$20 (lose \$20)

19. [Negative EV, Broad Bracket, High-Stakes, Truncated Distribution]

The gamble:

1%	#	Lose \$76
2%	##	Lose \$72
3%	###	Lose \$68
4%	####	Lose \$64
5%	#####	Lose \$60
6%	#####	Lose \$56
7%	#####	Lose \$52
8%	#####	Lose \$48
9%	#####	Lose \$44
10%	#####	Lose \$40
9%	#####	Lose \$36
8%	#####	Lose \$32
7%	#####	Lose \$28
6%	#####	Lose \$24
5%	#####	Lose \$20
4%	####	Lose \$26
3%	###	Lose \$12
2%	##	Lose \$8
1%	#	Lose \$4

The certain amount: -\$20 (lose \$2)

For all of the above gambles, participants were asked the following two questions (choice and risk perception, in that order) immediately upon viewing the gamble:

Choice:

Please choose one of the following:

- I prefer the gamble
- I prefer the certain amount
- I am indifferent between the gamble and the certain amount

Risk Perception (taken from Weber et al., 2006):

How risky do you believe the gamble is? Please respond using the scale below.

- Not at all Risky (1)
- Slightly Risky (2)
- Somewhat Risky (3)
- Moderately Risky (4)
- Risky (5)
- Very Risky (6)
- Extremely Risky (7)

All participants were then asked the following demographic questions at the end of the survey:

Gender:

Please indicate your sex.

- Male
- Female

Age

How old are you (in years)?

After these demographic questions, all participants were sent to a separate survey to complete the risk questions from the DEEP (Toubia et al., 2013). An example of what these questions are like is included below. The survey is an adaptive survey that adjusts questions over time to adapt to expressed risk preferences. In so doing, it can identify three variables from prospect theory (lambda, alpha, and sigma).

RiskSense Survey

Please consider the two gambles below. Which of these two gambles would you rather play?

Option A	Option B
50% Chance to Win \$100	90% Chance to Win \$40
50% Chance to Lose \$15	10% Chance to Win \$10
<input type="button" value="Choose A"/>	<input type="button" value="Choose B"/>

More Information on Prizes

Questions Completed

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Instructions and Questions Used in Study 2

Participants were randomly assigned to one of three conditions: Broad, Broad-Pattern, or Narrow. The condition determined the framing of the gambles and condition is signified in brackets after each problem (this information about condition was not presented to participants).

All participants saw the following instructions: “The following investigates risky choice behavior. In the first part of this survey, you will be presented with six problems. The problems are all the same format: you will be asked to choose between a gamble and a certain outcome. Additionally, you will be asked to respond to a few questions about the problem after you make your choice.”

1. The gamble: [Broad, Positive EV]

1%	#	Win \$12
1%	#	Win \$11
4%	####	Win \$10
7%	#####	Win \$9
12%	#####	Win \$8
16%	#####	Win \$7
18%	#####	Win \$6
16%	#####	Win \$5
12%	#####	Win \$4
7%	#####	Win \$3
4%	####	Win \$2
1%	#	Win \$1
1%	#	\$0

The certain amount: \$3

2. The gamble: [Broad, Positive EV, High-Stakes]

1%	#	Win \$120
1%	#	Win \$110
4%	####	Win \$100
7%	#####	Win \$90
12%	#####	Win \$80
16%	#####	Win \$70
18%	#####	Win \$60
16%	#####	Win \$50
12%	#####	Win \$40
7%	#####	Win \$30
4%	####	Win \$20
1%	#	Win \$10
1%	#	\$0

The certain amount: \$30

3. The gamble: [Broad, Pure-Loss]

1%	#	Lose \$11
7%	#####	Lose \$10
7%	#####	Lose \$9
10%	#####	Lose \$8
28%	#####	Lose \$7
15%	#####	Lose \$6
12%	#####	Lose \$5
14%	#####	Lose \$4
2%	##	Lose \$3
1%	#	Lose \$2

The certain amount: -\$4 (lose \$4)

4. The gamble: [Broad, Pure-Loss, High-Stakes]

1%	#	Lose \$78
4%	####	Lose \$76
11%	#####	Lose \$74
21%	#####	Lose \$72
26%	#####	Lose \$70
21%	#####	Lose \$68
11%	#####	Lose \$66
4%	####	Lose \$64
1%	#	Lose \$62

The certain amount: -\$40 (lose \$40)

5. The gamble: [Broad, Negative EV]

2%	##	Lose \$8
5%	#####	Lose \$7
13%	#####	Lose \$6
22%	#####	Lose \$5
26%	#####	Lose \$4
20%	#####	Lose \$3
9%	#####	Lose \$2
2%	##	Lose \$1

The certain amount: -\$2 (lose \$2)

6. The gamble: [Broad, Negative EV, High-Stakes]

1%	#	Lose \$76
2%	##	Lose \$72
3%	###	Lose \$68
4%	####	Lose \$64
5%	#####	Lose \$60
6%	#####	Lose \$56
7%	#####	Lose \$52
8%	#####	Lose \$48
9%	#####	Lose \$44
10%	#####	Lose \$40
9%	#####	Lose \$36
8%	#####	Lose \$32
7%	#####	Lose \$28
6%	#####	Lose \$24
5%	#####	Lose \$20
4%	####	Lose \$26
3%	###	Lose \$12
2%	##	Lose \$8
1%	#	Lose \$4

The certain amount: -\$20 (lose \$20)

7. The gamble: [Broad-Pattern, Positive EV]

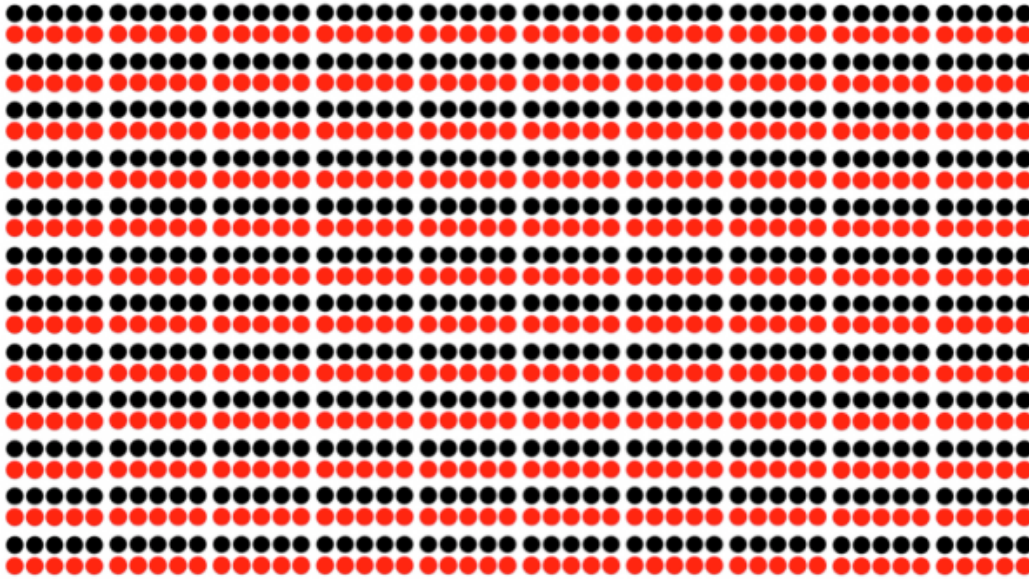
50% ***** Win \$0.25
 50% ***** Lose \$0.15



The gamble is played 120 times.
 The certain amount: \$3

8. The gamble: [Broad-Pattern, Positive EV, High-Stakes]

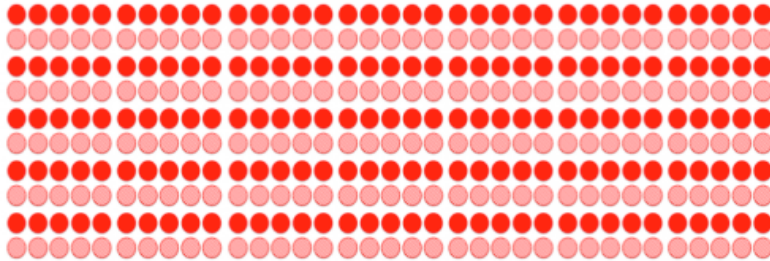
50% ***** Win \$2.50
 50% ***** Lose \$1.50



The gamble is played 120 times.
 The certain amount: \$30

9. The gamble: [Broad-Pattern, Pure-Loss]

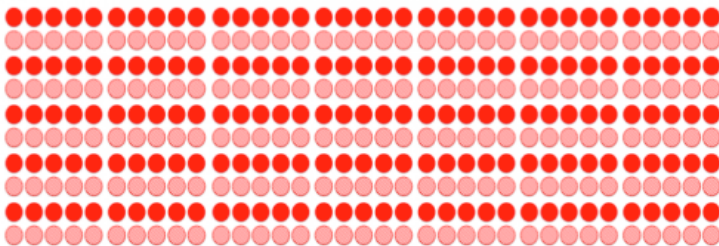
50% ***** Lose \$0.15
 50% ***** Lose \$0.25



The gamble is played 35 times.
 The certain amount: - \$4 (Lose \$4)

10. The gamble: [Broad-Pattern, Pure-Loss, High-Stakes]

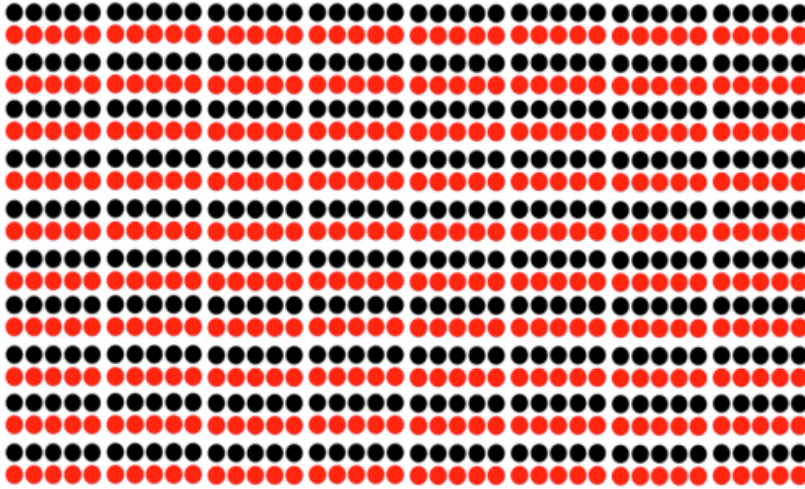
50% ***** Lose \$1.50
 50% ***** Lose \$2.50



The gamble is played 35 times.
 The certain amount: - \$40 (Lose \$40)

11. The gamble: [Broad-Pattern, Negative EV]

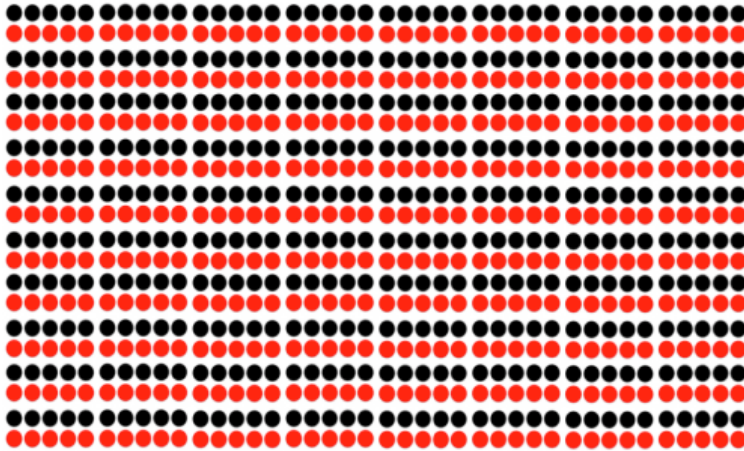
50% ***** Win \$0.15
 50% ***** Lose \$0.25



The gamble is played 80 times.
 The certain amount: -\$2 (lose \$2)

12. The gamble: [Broad-Pattern, Negative EV, High-Stakes]

50% ***** Win \$1.50
 50% ***** Lose \$2.50



The gamble is played 80 times.
 The certain amount: -\$20 (lose \$20)

13. The gamble: [Narrow, Positive EV]

50% ***** Win \$0.25
 50% ***** Lose \$0.15

The gamble is played 120 times.
 The certain amount: \$3

14. The gamble: [Narrow, Positive EV, High-Stakes]

50% ***** Win \$2.50
 50% ***** Lose \$1.50

The gamble is played 120 times.
 The certain amount: \$30

15. The gamble: [Narrow, Pure-Loss]

50% ***** Lose \$0.15

50% ***** Lose \$0.25

The gamble is played 35 times.

The certain amount: -\$4 (Lose \$4)

16. The gamble: [Narrow, Pure-Loss, High-Stakes]

50% ***** Lose \$1.50

50% ***** Lose \$2.50

The gamble is played 35 times.

The certain amount: - \$40 (Lose \$40)

17. The gamble: [Narrow, Negative EV]

50% ***** Win \$0.15

50% ***** Lose \$0.25

The gamble is played 80 times.

The certain amount: -\$2 (lose \$2)

18. The gamble [Narrow, Negative EV, High-Stakes]:

50% ***** Win \$1.50

50% ***** Lose \$2.50

The gamble is played 80 times.

The certain amount: -\$20 (lose \$20)

Directly after viewing the gamble, participants were asked to make a choice, rate perceived risk, rate situational loss aversion, and rate the importance of the number of trials (in that order):

Choice:

Please choose one of the following:

- I prefer the gamble
- I prefer the certain amount
- I am indifferent between the gamble and the certain amount

Risk Perception:

How risky do you believe the gamble is? Please respond using the scale below.

- Not at all Risky (1)
- Slightly Risky (2)
- Somewhat Risky (3)
- Moderately Risky (4)
- Risky (5)
- Very Risky (6)
- Extremely Risky (7)

Situational Loss Aversion:

How important was the chance of losing money in your decision of whether or not to take the gamble?

- Not at all Important

- Very Unimportant
- Somewhat Unimportant
- Neither Important nor Unimportant
- Somewhat Important
- Very Important
- Extremely Important

Importance of the Number of Trials:

How important was the number of trials in your decision of whether or not to take the gamble?

- Not at all Important
- Very Unimportant
- Somewhat Unimportant
- Neither Important nor Unimportant
- Somewhat Important
- Very Important
- Extremely Important

After all of the gambles, participants were asked to self-report their gender and age:

Gender:

Please indicate your sex.

- Male
- Female

Age:

How old are you (in years)?

After these demographic questions, all participants were sent to a separate survey to complete the risk questions from the DEEP (Toubia et al., 2013). An example of what these questions are like is included below:

RiskSense Survey

Please consider the two gambles below. Which of these two gambles would you rather play?

Option A	Option B
50% Chance to Win \$100	90% Chance to Win \$40
50% Chance to Lose \$15	10% Chance to Win \$10
<input type="button" value="Choose A"/>	<input type="button" value="Choose B"/>

More Information on Prizes

Questions Completed

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