Appendix A – Experiment Screenshots

The experimental screens and data shown in this Appendix are derived from a trial run conducted with dummy participants for demonstrative purposes. These screenshots are illustrative and do not represent actual game sessions with real participants. In the actual experiments, participants received complete data and feedback for all rounds as described in the main text.

Initial Screen

Thank you for agreeing to participate in this study.

This study will take approximately 30 minutes. Through your participation, you will be able to earn points based on your responses as part of an experiment combining elements of luck, interpersonal interaction, and answering questions. At the end of the experiment, you will participate in a lottery with the other participants in this game, in which you will have a 1/5 chance of receiving a bonus payment based on the number of points earned, at a ratio of: 30 points = 1 GBP.

Please press the space bar to proceed to the next screen

Prolific ID Screen

Prolific ID

Please enter your prolific ID:

Continue

Instruction Screen (Version 1 – Jill first, exclusive environment)

In this experiment a bet will be made 30 times consecutively between two individuals, Jill and Jane. For each bet, you will have 30 seconds to guess whether the winner will be Jill or Jane. In each round, if you guessed correctly, and if you were ranked among the **20% of guessers (1)** whose guesses are the closest to the true outcomes of all the bets up to this point, you will earn 10 bonus points for this round. Otherwise, you will not win any points for this round. At the side of the screen, you will see your ranking in the game, as well as the distribution of all participant guesses between Jill and Jane for every preceding bet, in both numbers and percentages.
The outcome of each bet will be displayed immediately following the end of the countdown.
The game will begin once all participants have announced that they are ready. There may be a delay of up to 120 seconds (two minutes) until this happens.

Please press the space bar when you are ready to begin.

Instruction Screen (Version 2 – Jane first, exclusive environment)

In this experiment a bet will be made 30 times consecutively between two individuals, Jane and Jill. For each bet, you will have 30 seconds to guess whether the winner will be Jane or Jill. In each round, if you guessed correctly, and if you were ranked among the **20% of guessers (1)** whose guesses are the closest to the true outcomes of all the bets up to this point, you will earn 10 bonus points for this round. Otherwise, you will not win any points for this round. At the side of the screen, you will see your ranking in the game, as well as the distribution of all participant guesses between Jane and Jill for every preceding bet, in both numbers and percentages.
The outcome of each bet will be displayed immediately following the end of the countdown.
The game will begin once all participants have announced that they are ready. There may be a delay of up to 120 seconds (two minutes) until this happens.

Please press the space bar when you are ready to begin.

Instruction Screen (Version 3 – Jill first, inclusive environment)

In this experiment a bet will be made 30 times consecutively between two individuals, Jill and Jane. For each bet, you will have 30 seconds to guess whether the winner will be Jill or Jane. In each round, if you guessed correctly, and if you were ranked among the **80% of guessers (4)** whose guesses are the closest to the true outcomes of all the bets up to this point, you will earn 10 bonus points for this round. Otherwise, you will not win any points for this round. At the side of the screen, you will see your ranking in the game, as well as the distribution of all participant guesses between Jill and Jane for every preceding bet, in both numbers and percentages.
The outcome of each bet will be displayed immediately following the end of the countdown.
The game will begin once all participants have announced that they are ready. There may be a delay of up to 120 seconds (two minutes) until this happens.

Please press the space bar when you are ready to begin.

Instruction Screen (Version 4 – Jane first, inclusive environment)

In this experiment a bet will be made 30 times consecutively between two individuals, Jane and Jill. For each bet, you will have 30 seconds to guess whether the winner will be Jane or Jill. In each round, if you guessed correctly, and if you were ranked among the **80% of guessers (4)** whose guesses are the closest to the true outcomes of all the bets up to this point, you will earn 10 bonus points for this round. Otherwise, you will not win any points for this round. At the side of the screen, you will see your ranking in the game, as well as the distribution of all participant guesses between Jane and Jill for every preceding bet, in both numbers and percentages.
The outcome of each bet will be displayed immediately following the end of the countdown.
The game will begin once all participants have announced that they are ready. There may be a delay of up to 120 seconds (two minutes) until this happens.

Please press the space bar when you are ready to begin.

Round 1[1]

Time left to complete this page: **0:29**

In this experiment a bet will be made 30 times consecutively between two individuals, Jane and Jill. For each bet, you will have 30 seconds to guess whether the winner will be Jane or Jill. In each round, if you guessed correctly, and if you were ranked among the **80% of guessers (4)** whose guesses are the closest to the true outcomes of all the bets up to this point, you will earn 10 bonus points for this round. Otherwise, you will not win any points for this round. At the side of the screen, you will see your ranking in the game, as well as the distribution of all participant guesses between Jane and Jill for every preceding bet, in both numbers and percentages.
The outcome of each bet will be displayed immediately following the end of the countdown.

bet 1 out of 30:

○ Jane
○ Jill

Choose one of the options, then press the spacebar to proceed.

Round 1 – Results

Time left to complete this page: **0:14**

In this experiment a bet will be made 30 times consecutively between two individuals, Jane and Jill. For each bet, you will have 30 seconds to guess whether the winner will be Jane or Jill. In each round, if you guessed correctly, and if you were ranked among the **80% of guessers (4)** whose guesses are the closest to the true outcomes of all the bets up to this point, you will earn 10 bonus points for this round. Otherwise, you will not win any points for this round. At the side of the screen, you will see your ranking in the game, as well as the distribution of all participant guesses between Jane and Jill for every preceding bet, in both numbers and percentages.
The outcome of each bet will be displayed immediately following the end of the countdown.

Bet 1 out of 30

The outcome of the bet is **Jane**

You guessed **Jane**

You are ranked **1** out of 5

Therefore, you **did** earn 10 points in this round.

Press the spacebar to continue.

Bet #	Jane	Jill
1	3 (60%)	2 (40%)

[1] The following screenshots use Version 4 as an example. The differences in instructions between the versions remain consistent throughout the entire game. While not all rounds of the game are shown here, each round follows the same structure.

Round 2

Time left to complete this page: **0:08**

In this experiment a bet will be made 30 times consecutively between two individuals, Jane and Jill. For each bet, you will have 30 seconds to guess whether the winner will be Jane or Jill. In each round, if you guessed correctly, and if you were ranked among the **80% of guessers (4)** whose guesses are the closest to the true outcomes of all the bets up to this point, you will earn 10 bonus points for this round. Otherwise, you will not win any points for this round. At the side of the screen, you will see your ranking in the game, as well as the distribution of all participant guesses between Jane and Jill for every preceding bet, in both numbers and percentages.
The outcome of each bet will be displayed immediately following the end of the countdown.

Bet #	Jane	Jill
1	3 (60%)	2 (40%)

bet 2 out of 30:

- (●) Jane
- ( ) Jill

Choose one of the options, then press the spacebar to proceed.

Bet #	Jane	Jill	Outcome	Ranking	Points won in round	Total points
1	3 (60%)	2 (40%)	Jane (your guess was correct)	20% (1 out of 5)	10 points	10 points

Round 17[2]

Time left to complete this page: **0:01**

In this experiment a bet will be made 30 times consecutively between two individuals, Jane and Jill. For each bet, you will have 30 seconds to guess whether the winner will be Jane or Jill. In each round, if you guessed correctly, and if you were ranked among the **80% of guessers (4)** whose guesses are the closest to the true outcomes of all the bets up to this point, you will earn 10 bonus points for this round. Otherwise, you will not win any points for this round. At the side of the screen, you will see your ranking in the game, as well as the distribution of all participant guesses between Jane and Jill for every preceding bet, in both numbers and percentages.
The outcome of each bet will be displayed immediately following the end of the countdown.

bet 17 out of 30:

◯ Jane
◯ Jill

Choose one of the options, then press the spacebar to proceed.

Bet #	Jane	Jill	Bet #	Jane	Jill
1	3 (60%)	2 (40%)	16	0 (0%)	0 (0%)
2	4 (80%)	1 (20%)			
3	0 (0%)	0 (0%)			
4	0 (0%)	0 (0%)			
5	0 (0%)	0 (0%)			
6	0 (0%)	0 (0%)			
7	0 (0%)	0 (0%)			
8	0 (0%)	0 (0%)			
9	0 (0%)	0 (0%)			
10	0 (0%)	0 (0%)			
11	0 (0%)	0 (0%)			
12	0 (0%)	0 (0%)			
13	0 (0%)	0 (0%)			
14	0 (0%)	0 (0%)			
15	0 (0%)	0 (0%)			

Bet #	Jane	Jill	Outcome	Ranking	Points won in round	Total points
16	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
15	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
14	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
13	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
12	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
11	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
10	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
9	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
8	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
7	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
6	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
5	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
4	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
3	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
2	4 (80%)	1 (20%)	Jane (your guess was correct)	20% (1 out of 5)	10 points	20 points
1	3 (60%)	2 (40%)	Jane (your guess was correct)	20% (1 out of 5)	10 points	10 points

[2] Note that this is a screenshot for demonstrative purposes from a trial run of the experiment with five dummy participants (and no real humans playing other than the authors). Hence, the tables for this and subsequent rounds appear to contain data for only rounds 1 and 2, and only five participants. In the real experiment, participants would have been shown complete data for every single round, with a much higher number of participants. However, these screens were displayed only to participants on their personal devices, and thus screenshots were not taken as the experiment was in progress.

Round 30

Time left to complete this page: **0:22**

In this experiment a bet will be made 30 times consecutively between two individuals, Jane and Jill. For each bet, you will have 30 seconds to guess whether the winner will be Jane or Jill. In each round, if you guessed correctly, and if you were ranked among the **80% of guessers (4)** whose guesses are the closest to the true outcomes of all the bets up to this point, you will earn 10 bonus points for this round. Otherwise, you will not win any points for this round. At the side of the screen, you will see your ranking in the game, as well as the distribution of all participant guesses between Jane and Jill for every preceding bet, in both numbers and percentages.
The outcome of each bet will be displayed immediately following the end of the countdown.

bet 30 out of 30:

◯ Jane
◯ Jill

Choose one of the options, then press the spacebar to proceed.

Bet #	Jane	Jill	Bet #	Jane	Jill
1	3 (60%)	2 (40%)	16	0 (0%)	0 (0%)
2	4 (80%)	1 (20%)	17	0 (0%)	0 (0%)
3	0 (0%)	0 (0%)	18	0 (0%)	0 (0%)
4	0 (0%)	0 (0%)	19	0 (0%)	0 (0%)
5	0 (0%)	0 (0%)	20	0 (0%)	0 (0%)
6	0 (0%)	0 (0%)	21	0 (0%)	0 (0%)
7	0 (0%)	0 (0%)	22	0 (0%)	0 (0%)
8	0 (0%)	0 (0%)	23	0 (0%)	0 (0%)
9	0 (0%)	0 (0%)	24	0 (0%)	0 (0%)
10	0 (0%)	0 (0%)	25	0 (0%)	0 (0%)
11	0 (0%)	0 (0%)	26	0 (0%)	0 (0%)
12	0 (0%)	0 (0%)	27	0 (0%)	0 (0%)
13	0 (0%)	0 (0%)	28	0 (0%)	0 (0%)
14	0 (0%)	0 (0%)	29	0 (0%)	0 (0%)
15	0 (0%)	0 (0%)			

Bet #	Jane	Jill	Outcome	Ranking	Points won in round	Total points
29	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
28	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
27	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
26	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
25	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
24	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
23	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
22	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
21	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
20	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
19	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
18	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
17	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
16	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
15	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
14	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
13	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
12	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
11	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
10	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
9	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
8	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
7	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
6	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
5	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
4	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
3	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
2	4 (80%)	1 (20%)	Jane (your guess was correct)	20% (1 out of 5)	10 points	20 points
1	3 (60%)	2 (40%)	Jane (your guess was correct)	20% (1 out of 5)	10 points	10 points

Round 30 – Results

Time left to complete this page: **0:27**

In this experiment a bet will be made 30 times consecutively between two individuals, Jane and Jill. For each bet, you will have 30 seconds to guess whether the winner will be Jane or Jill. In each round, if you guessed correctly, and if you were ranked among the **80% of guessers (4)** whose guesses are the closest to the true outcomes of all the bets up to this point, you will earn 10 bonus points for this round. Otherwise, you will not win any points for this round. At the side of the screen, you will see your ranking in the game, as well as the distribution of all participant guesses between Jane and Jill for every preceding bet, in both numbers and percentages.
The outcome of each bet will be displayed immediately following the end of the countdown.

Bet 30 out of 30

The outcome of the bet is **Jane**

You guessed

You are ranked **1** out of 5

Therefore, you **did not** earn 10 points in this round.

Press the spacebar to continue.

Bet #	Jane	Jill	Bet #	Jane	Jill
1	3 (60%)	2 (40%)	16	0 (0%)	0 (0%)
2	4 (80%)	1 (20%)	17	0 (0%)	0 (0%)
3	0 (0%)	0 (0%)	18	0 (0%)	0 (0%)
4	0 (0%)	0 (0%)	19	0 (0%)	0 (0%)
5	0 (0%)	0 (0%)	20	0 (0%)	0 (0%)
6	0 (0%)	0 (0%)	21	0 (0%)	0 (0%)
7	0 (0%)	0 (0%)	22	0 (0%)	0 (0%)
8	0 (0%)	0 (0%)	23	0 (0%)	0 (0%)
9	0 (0%)	0 (0%)	24	0 (0%)	0 (0%)
10	0 (0%)	0 (0%)	25	0 (0%)	0 (0%)
11	0 (0%)	0 (0%)	26	0 (0%)	0 (0%)
12	0 (0%)	0 (0%)	27	0 (0%)	0 (0%)
13	0 (0%)	0 (0%)	28	0 (0%)	0 (0%)
14	0 (0%)	0 (0%)	29	0 (0%)	0 (0%)
15	0 (0%)	0 (0%)	30	0 (0%)	0 (0%)

Bet #	Jane	Jill	Outcome	Ranking	Points won in round	Total points
30	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
29	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
28	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
27	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
26	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
25	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
24	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
23	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
22	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
21	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
20	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
19	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
18	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
17	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
16	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
15	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
14	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
13	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
12	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
11	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
10	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
9	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
8	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
7	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
6	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
5	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
4	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
3	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
2	4 (80%)	1 (20%)	Jane (your guess was correct)	20% (1 out of 5)	10 points	20 points
1	3 (60%)	2 (40%)	Jane (your guess was correct)	20% (1 out of 5)	10 points	10 points

Final Results

Your final ranking is **1** out of **5**.

You earned points in **2** outo of 30. In total, you earned 20 points.

Please press the space bar to complete the experiment.

Bet #	Jane	Jill	תוצאה	דירוג	בונוס	סה"כ
30	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
29	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
28	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
27	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
26	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
25	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
24	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
23	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
22	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
21	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
20	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
19	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
18	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
17	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
16	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
15	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
14	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
13	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
12	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
11	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
10	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
9	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
8	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
7	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
6	0 (0%)	0 (0%)	Jane (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
5	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
4	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
3	0 (0%)	0 (0%)	Jill (your guess was incorrect)	20% (1 out of 5)	0 points	20 points
2	4 (80%)	1 (20%)	Jane (your guess was correct)	20% (1 out of 5)	10 points	20 points
1	3 (60%)	2 (40%)	Jane (your guess was correct)	20% (1 out of 5)	10 points	10 points

Completion Screen

Thank you for your participation.
A lottery will be conducted in the coming days to determine whether you are entitled to bonus payment. If you win, you will be notified and paid through Prolific. Please click the following link to complete the study and return to Prolific:
https://app.prolific.com/submissions/complete?cc=COBWQW66

Appendix B – "Coin Experiment"

1. Experiment

1.1. Experimental setting

This was, in fact, the original experiment which inspired the rest of this paper. It featured a shorter game (ten rounds only), and feedback only shown to participants at the conclusion of the game, considerably limiting both the herding effect and our ability to study the learning process. This experiment, however, was conducted in a more conventional laboratory setting, and as such provides additional validation for our paper. Moreover, the lack of feedback throughout the game, while significantly reducing both the herding and learning effects, is also likely to greatly reduce the presence of other emotional and cognitive biases that might affect our main results. Therefore, we have chosen to include the results in this appendix.

In this variant of the experiment, participants guessed the outcome of a coin toss, repeated across ten rounds. The experiment comprised two parts: Each participant engaged in two games of ten rounds. In the first game (inclusive environment), the top 90% of guessers received a reward, whereas in the second game (exclusive environment), only the top 10% of guessers received a reward. Participants were randomly assigned to either Treatment B1 (starting with the inclusive environment and then moving to the exclusive environment) or Treatment B2 (starting with the exclusive environment and then moving to the inclusive environment). All participants in a group received the same treatment. The within-participants component allowed us to expand the scope of our study and examine the effects of the transition from one environment type to another.

After each round, we displayed the previous rounds' guess distributions to the group, both in absolute numbers and percentages. However, the outcomes of the coin tosses and the final rewards were disclosed only after both games had been completed.

The experiment was conducted on Zoom, with all participants of a group present in the same session. Each participant received a unique link to join the session and was required to keep their camera active throughout. Supervisors were present to explain instructions, address questions, and ensure adherence to the protocol. Upon completion, payments were processed through Bit, a popular digital payment app in Israel.

1.2. Participants

A total of 208 participants were recruited from among the student body of the Hebrew University of Jerusalem. Participants were divided into thirteen groups of sixteen participants each, with seven groups assigned to Treatment B1 and six groups assigned to Treatment B2 (see Table B1). In terms of the structure of the experiment, our design is similar to those used by Amnon Rapoport and his associates for entry game experiments (e.g., Rapoport, Seale, & Winter, 2000), but uses includes more groups and a larger number of subjects. The participant pool was balanced in terms of gender, and all participants were required to have a proficient command of the Hebrew language. Session scheduling ensured consistency in terms of weekdays and hours to minimize potential external influences. Multiple supervisors were present throughout the sessions to provide instructions, address queries, and ensure compliance with the experiment's guidelines.

Table B1: Between-participant group distribution

Treatment	First game	Groups	Participants
B1	Inclusive	7	112
B2	Exclusive	6	96
Total		13	208

Notes: The table presents the distribution of participants into the B1 and B2 treatments. "Groups" indicates the number of groups (of sixteen participants each) assigned to the treatment, while "Participants" indicates the total number of participants assigned to each treatment.

A range of personal, demographic, and behavioral characteristics variables were collected through a personal information form filled out by participants at the end of the experiment. There were no statistical differences in these variables between the treatment groups.

2. Results

2.1. Clustering

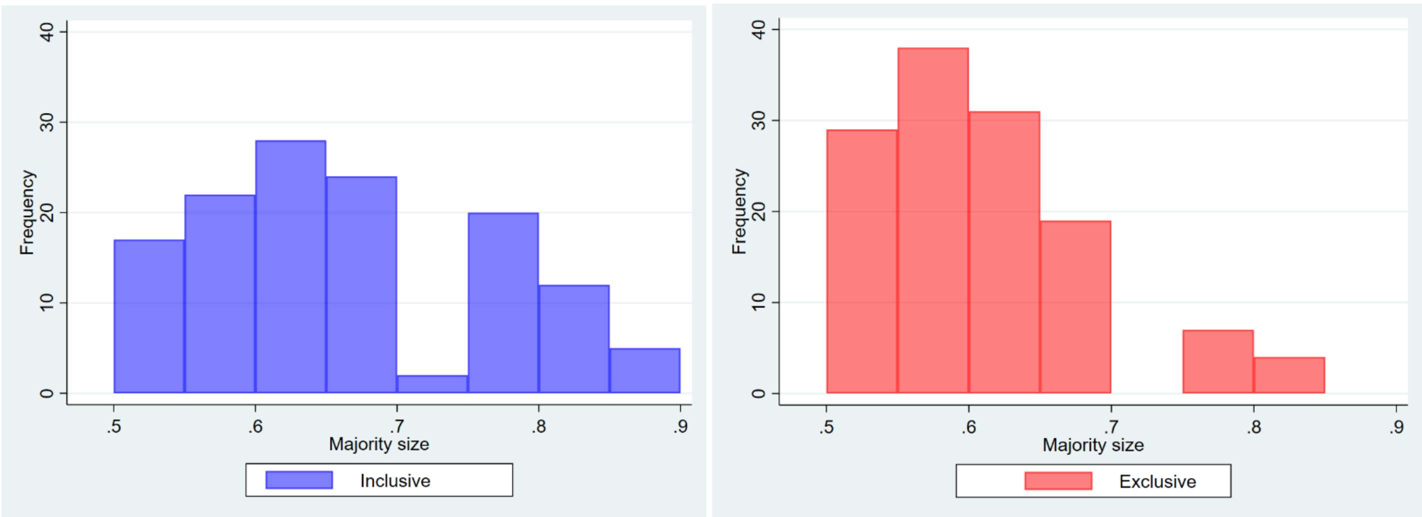
Figure B1 shows the majority size for the two treatment groups. Majority size is here defined as the portion of participants in a given group and round who selected the majority choice. The range for this distribution is between 0.5 and 1.0 choice (i.e., an even split between "heads" and "tails" would yield a majority size of 0.5, while an all "tails" or all "heads" group would both yield a majority size of 1.0). Panel 1 shows the distribution for all rounds. Panel 2 shows only the distributions for rounds in the first game played by each group (i.e., only the inclusive environment for groups assigned to Treatment B1, and only the exclusive environment for groups assigned to Treatment B2).

As expected, the majority size distribution of the inclusive environment clusters closer to 1.0, while the majority size distribution of the exclusive environment clusters closer to 0.5. Notably, however, the difference between the inclusive and exclusive environments appears to be stronger in the first game played.

A notable observation across both treatments, particularly in the inclusive environment, is a skewness towards "heads" in the distribution of choices. This skewness suggests a general preference among participants for selecting "heads" over "tails," a pattern that persists even in the first round of each game. This indicates that participants' initial choices are not entirely random, even in the absence of prior information about others' decisions.

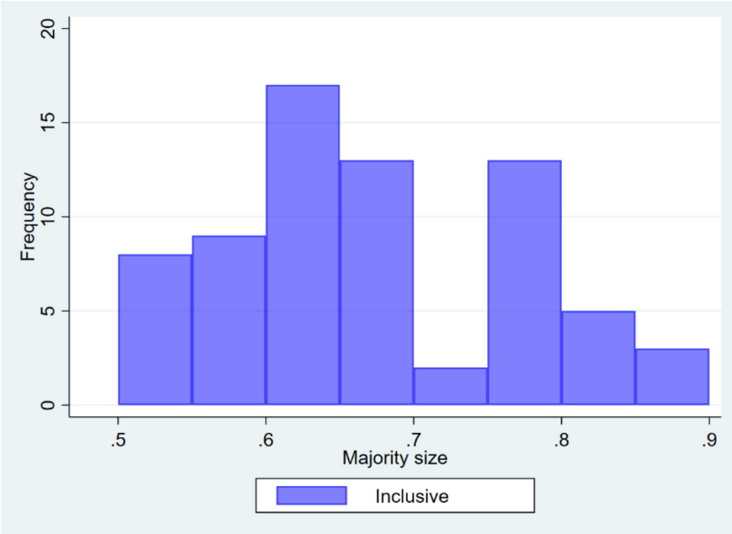
Figure B1: Majority Size

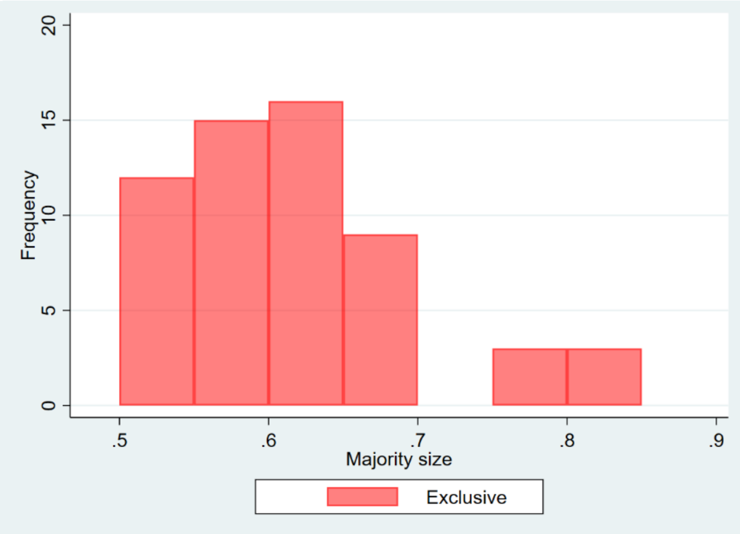
<u>Panel 1: All Rounds</u>



Note: Panel 1 shows the results for the inclusive environment (on the left, in blue) and the exclusive environment (on the right, in red). It contains 130 observations for the inclusive environment (thirteen groups, ten rounds each), and 128 observations for the exclusive environment (thirteen groups, ten rounds each, with the exception of one group that only played eight rounds due to technical difficulties).

Panel 2: First Game Played Only





Note: Panel 2 shows the results for the inclusive environment (on the left, in blue) and the exclusive environment (on the right, in red). It contains seventy observations for the inclusive environment (seven groups, ten rounds each), and 58 observations for the exclusive environment (six groups, ten rounds each, with the exception of one group that only played eight rounds due to technical difficulties).

General notes for both panels: These histograms present the frequency of majority sizes for all participants in a given round. The x axis represents the choice average (0.5 represents an even split between "heads" and "tails," while 1.0 represents a majority where all participants selected "heads" or all participants selected "tails"), grouped into brackets of 0.05. The y axis represents frequency. Blue represents the distribution for the inclusive environment, while red represents the distribution for the exclusive environment.

A T test[3] comparing the majority size in each round between the two treatment groups. shows larger majority sizes on average in the inclusive environment (65.68% compared to 59.93% in the exclusive environment. This difference is significant at the 1% level. Table B2 presents the marginal effect coefficients for clustering (i.e., whether a participant's guess in a given round matches the majority of the previous round). The dependent variable is an indicator variable which equals 1 if the participant's decision in a given round is identical to the majority decision in the previous round, and 0 if the participant's decision is identical to the minority choice in the previous round. Columns (1), (2), and (3) show the results for rounds 2-10 of all games played (two games per participant). Column (2) controls for session fixed effects (thirteen sessions of two games each), while Column (3) controls for both session fixed effects (thirteen sessions)

[3] A skewness and kurtosis test conducted on the distribution of majority sizes indicates a deviation from normal distribution at a 95% confidence level. Consequently, to accommodate the non-normality of the data, we opted for a T test instead of a Z test for our analysis. The T test is more appropriate in this context as it is less sensitive to deviations from normal distribution, especially in smaller sample sizes.

and participant fixed effects (sixteen participants per session, or 208 participants in total).

To control for any possible problems with the within-participants setup, Columns (4) and (5) use a purely between-participants setup, examining only the first game played by each participant (i.e., only the inclusive environment for B1 participants, and only the exclusive environment for B2 participants) and only the second game played by each participant (i.e., only the exclusive environment for B1 participants, and only the inclusive environment for B2 participants) respectively. Consistent with our predictions, the results show that overall, participants in the exclusive environment were 14-17% more likely to stay with the majority, with this finding being statistically significant at the 1% level. Both the coefficient and the explanatory power are higher for the smaller, first-game-only sample, where it rises to 33%. For the second-game-only sample, the coefficient is similarly positive, but not statistically significant and with a much lower explanatory power.

Columns (6) and (7) are intended to examine whether participants display a learning process throughout the course of the game. Hence, Column (6) tests the effect of the environment only for the first half of the game (rounds 2-5), and Column (7) tests for only the second half of the game (rounds 6-10). While both specifications show a positive clustering coefficient, in earlier rounds this coefficient is only 8%, and not statistically significant. In later rounds the clustering coefficient rises to 20% at a 1% significance level.

Table B2: Clustering (probit)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Rounds	2-10	2-10	2-10	2-10	2-10	2-5	6-10
Games	1&2	1&2	1&2	1 only	2 only	1&2	1&2
Inclusive dummy	0.1470*** (0.0460)	0.1437*** (0.0461)	0.1701*** (0.0482)	0.3311** (0.1647)	0.1935 (0.1608)	0.0852 (0.0698)	0.2058*** (0.0623)
Session fixed effects	No	Yes	Yes	Yes	Yes	Yes	Yes

Participant fixed effects	No	No	Yes	No	No	No	No
Number of observations	3,122	3,122	3,090	1,595	1,527	1,392	1,730
Pseudo R^2	0.0025	0.0048	0.0894	0.0139	0.0052	0.0057	0.0113

*Notes: The table presents probit marginal effect coefficients for the treatment effect on whether participants' choice belonged to the majority in that round. The dependent variable is an indicator variable for whether a participant's choice belongs to the majority in that round. Column (1) shows the basic model, Column (2) shows the model with session fixed effects, and Column (3) shows the model with both session and participant fixed effects. Column (4) shows the coefficients only for the first game of each participant (only inclusive for Treatment B1 participants, only exclusive for Treatment B2 participants), while Column (5) shows the coefficient only for the second game of each participant (only exclusive for Treatment B1 participants, only inclusive for Treatment B2 participants). Column (6) shows the results only for decisions in rounds 2-5, while Column (7) shows the results only for decisions in rounds 6-10. The inclusive dummy equals 1 if the environment played is the inclusive environment, and 0 if it is the exclusive environment. Standard errors appear in parentheses. ** and *** denote significance at the 5% and 1% levels respectively.*

2.2. Fluctuation

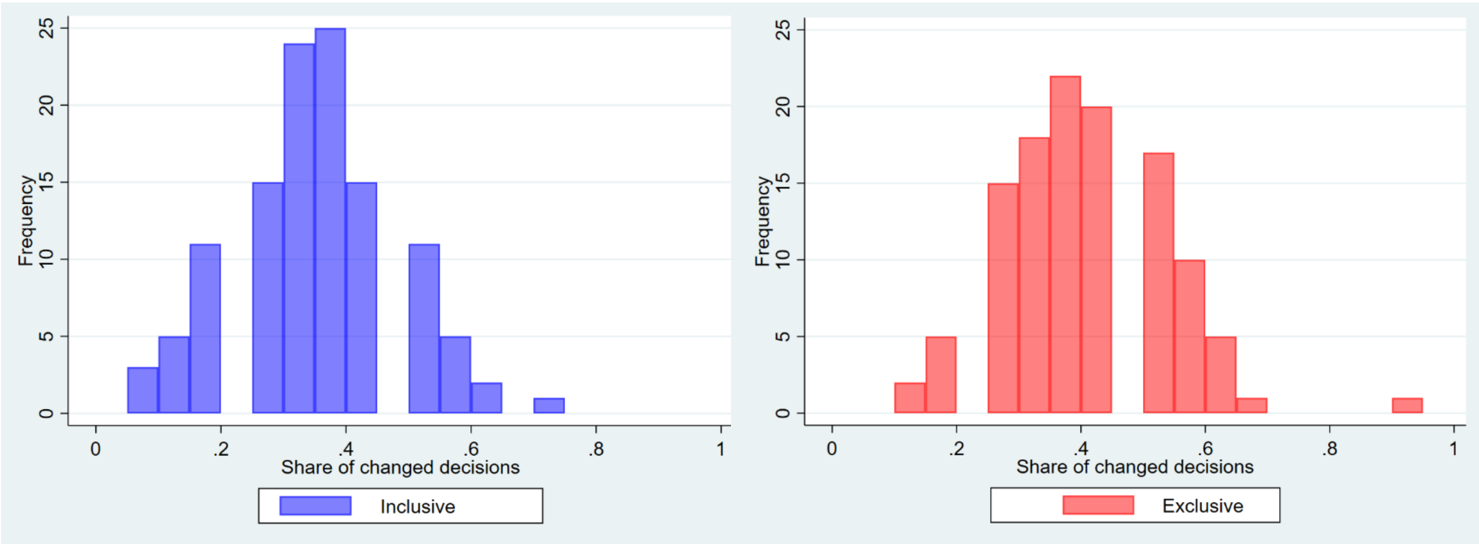
Figure B2 shows the fluctuation of decisions for each treatment. For each round of a game, the share of participants who modified their decision compared to the previous round (i.e., selected "heads" in round $t - 1$ and "tails" in round t, or vice versa)[4]. Panel 1 shows the distribution for all rounds. Panel 2 shows only the distributions for rounds in the first game played by each group (i.e., only the inclusive environment for groups assigned to Treatment B1, and only the exclusive environment for groups assigned to Treatment B2).

As per our prediction, it is evident that participants tend to change their decisions from one round to the next more frequently in the exclusive environment than in the inclusive environment. As with the majority size, however, this difference appears to be particularly strong in the first game played by participants, and is diminished in the second game.

[4] Data for the first round of each game are not included in our analysis, as no prior round data exist for reference. Therefore, our analysis encompasses rounds 2-10 of each game only.

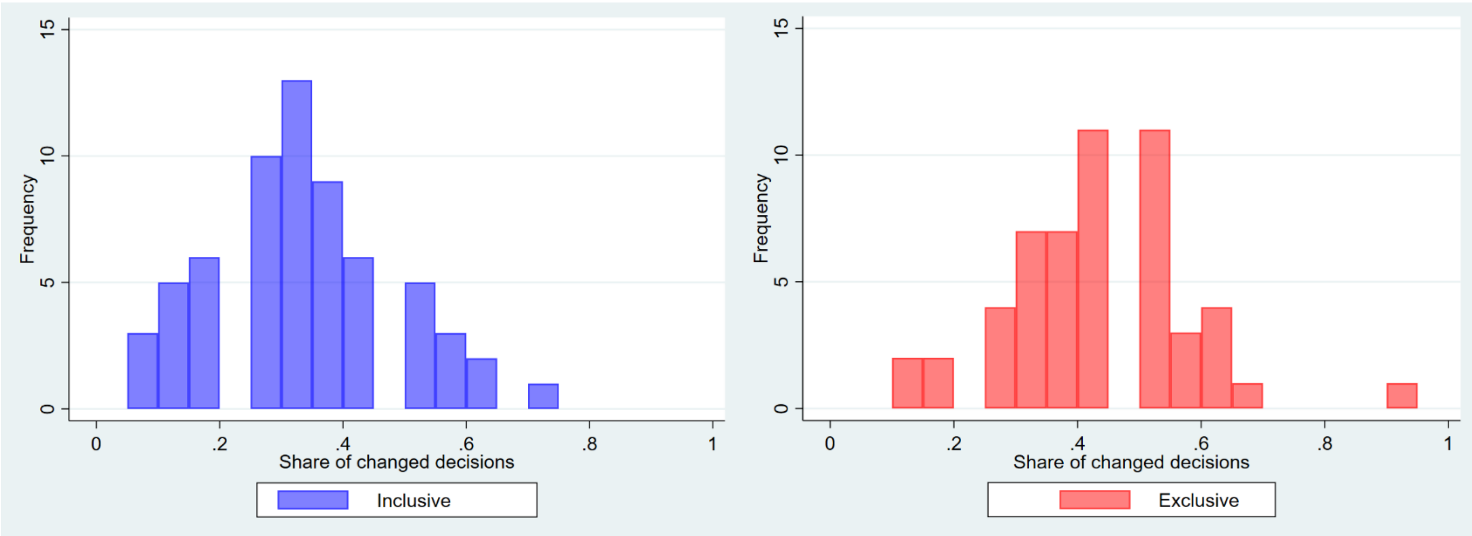
Figure B2: Changed Decisions

<u>Panel 1: All Rounds</u>



Note: Panel 1 shows the results for the inclusive environment (on the left, in blue) and the exclusive environment (on the right, in red). It contains 117 observations for the inclusive environment (thirteen groups, rounds 2-10), and 115 observations for the exclusive environment (thirteen groups, rounds 2-10, with the exception of one group that only played eight rounds due to technical difficulties).

<u>Panel 2: First Game Played Only</u>



Note: Panel 2 shows the results for the inclusive environment (on the left, in blue) and the exclusive environment (on the right, in red). It contains 63 observations for the inclusive environment (seven groups, rounds 2-10), and 52 observations for the exclusive environment (six groups, 2-10, with the exception of one group that only played eight rounds due to technical difficulties).

General notes for both panels: These histograms present the frequency of change rates for all participants in a given round. The x axis represents the share of participants in a group who changed their decision compared to the previous round, grouped into brackets of 0.05. The y axis represents frequency. Blue represents the distribution for the inclusive environment, while red represents the distribution for the exclusive environment.

A T test[5] comparing the share of participants in each round who changed their decision compared to their decision in the preceding round (either from "heads" to "tails" or from "tails" to "heads") between the two treatments revealed results consistent with our predictions. On average, 34.51% of players in the inclusive environment change their decision from one round to the next, in the exclusive environment, this number goes up to 40.03%, with this difference being statistically significant at the 1% level. Table B3 presents the marginal effect coefficients for fluctuation (i.e., participants' decision in a given round to change their guess compared to the preceding round, from "heads" in the preceding round to "tails" in the current round, or vice versa). The dependent variable is an indicator variable which equals 1 if the participant's decision changed in a given round compared to the previous round, and 0 if the decision did not change. Columns (1), (2), and (3) show the results for rounds 2-10 of all games played (two games per participant). Column (2) controls for session fixed effects (thirteen sessions of two games each), while Column (3) controls for both session fixed effects (thirteen sessions) and participant fixed effects (sixteen participants per session, or 208 participants in total). To control for any possible problems with the within-participants setup, Columns (4) and (5) use a purely between-participants setup, examining only the first game played by each participant (i.e., only the inclusive environment for B1 participants, and only the exclusive environment for B2 participants) and only the second game played by each participant (i.e., only the exclusive environment for B1 participants, and only the inclusive environment for B2 participants). Consistent with our predictions, the results show that participants in the exclusive environment were 14-17% more likely to change their decision from one round to the next, with this finding being statistically significant at the 1% level. Both the coefficient and the explanatory power are higher for the first-game-only sample, where participants were 45% more likely to fluctuate between choices. For the second-game-only sample, the coefficient is positive but not statistically significant, and with a much lower explanatory power.

Columns (6) and (7) examine whether participants display a learning process throughout the course of the game. Column (6) tests the effect of the environment only for the first half of the game (rounds 2-5), and Column (7) tests for only the second half

[5] Once again, a skewness and kurtosis test reveal that the distribution of the number of changed decisions is not normally distributed, with a confidence level of 95%. Hence, here too a T test is employed.

of the game (rounds 6-10). Unlike the majority choice shown in Table (4), in this case the coefficients differ only marginally (12% and 13% respectively). The coefficient for the later rounds indicates only a marginally stronger effect, with the difference between the two specifications not being statistically significant.

Table B3: Fluctuation (probit)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Rounds	2-10	2-10	2-10	2-10	2-10	2-5	6-10
Games	1&2	1&2	1&2	1 only	2 only	1&2	1&2
Inclusive dummy	-0.1351*** (0.0424)	-0.1357*** (0.0427)	-0.1781*** (0.04892)	-0.4583*** (0.1581)	0.1752 (0.1468)	-0.1224** (0.0591)	-0.1328** (0.0574)
Session fixed effects	No	Yes	Yes	Yes	Yes	Yes	Yes
Participant fixed effects	No	No	Yes	No	No	No	No
Number of observations	3,652	3,652	3,044	2,009	2,059	2,051	2,017
Pseudo R^2	0.0021	0.0129	0.1402	0.0210	0.0001	0.0108	0.0166

*Notes: The table presents probit marginal effect coefficients for the treatment effect on participants' choice to change their decision compared to the preceding round. The dependent variable is an indicator variable for choosing to change one's decision relative to the previous round. Column (1) shows the basic model, Column (2) shows the model with session fixed effects, and Column (3) shows the model with both session and participant fixed effects. Column (4) shows the coefficients only for the first game of each participant (only inclusive for Treatment B1 participants, only exclusive for Treatment B2 participants), while Column (5) shows the coefficient only for the second game of each participant (only exclusive for Treatment B1 participants, only inclusive for Treatment B2 participants). Column (6) shows the results only for decisions in rounds 2-5, while Column (7) shows the results only for decisions in rounds 6-10. The inclusive dummy equals 1 if the environment played is the inclusive environment, and 0 if it is the exclusive environment. Standard errors appear in parentheses. ** and *** denote significance at the 5% and 1% levels respectively.*

Appendix C – Equilibrium Analysis of the n-person Game

To begin our analysis, we devise a theoretical model to explain how inclusive environments can generate a herding equilibrium, while exclusive environments can generate an equilibrium with considerably more anti-herding behavior. We consider two games with a set N of n players (where n is an odd natural number). Each player must bet on the outcome of a lottery $[x, y; ½, ½]$. Let R be the set of players who guessed correctly ($|R| = r$ and $n – r$ guessed incorrectly). Players' payoffs in the two games are determined as follows:

For each $1 \leq k \leq n$ we define a game G_k as follows:

Exactly k players get the prize M according to the following criterion: if $r \geq k$, then k players are selected randomly (with equal probabilities) among those who guessed correctly, and the rest receive zero. If $r < k$ all players in R receive the prize as well as additional randomly selected $k – r$ players who made a wrong guess. More simply, in the game G_k, the r players who guessed correctly ranked above the $n – r$ who guessed incorrectly. Within each of these two groups, players are ranked randomly. Only the first k players in the order receive the prize M. In the proposition below we define strategy profiles to be of identical type if one can be obtained by renaming players or strategies.

Proposition:

(a) For any $k \geq \frac{n+1}{2}$ there is a unique type of pure strategy Nash equilibrium of the game G_k, which involves all players betting on the same outcome.

(b) For any $k < \frac{n+1}{2}$ there is a unique type of pure strategy Nash equilibrium, in which exactly $\frac{n+1}{2}$ players bet on one outcome, and $\frac{n-1}{2}$ players bet on the other outcome.

(c) In addition to the pure equilibria described in (a) and (b), and for every $1 \leq k \leq n$, the game G_k also has a symmetric mixed equilibrium in which all players assign equal probability to the two bets.

As demonstrated in the introduction, according to the proposition when the environment is inclusive i.e., case (a) players will coordinate in equilibrium to make the same bet. In contrast in an exclusive environment i.e., case (b) they will diverge and divide themselves between the two bets with virtually equal number of players for each bet. Indeed, choosing x and y with equal probability is also an equilibrium in the inclusive environment, but as we shall show in the proof for the proposition this equilibrium is unstable.

Proof of proposition:

We first prove (a). We start by showing that if $k \geq \frac{n+1}{2}$, there exists a Nash equilibrium where all players make the same guess. Without loss of generality, assume that all players bet on *x*. Then each player receives the prize with probability $\frac{k}{n}$. This is true regardless of whether the bet is correct or not. A deviating player will receive the prize with probability 1 if that player's guess is correct (a correct guess occurs with probability ½). Since $\frac{k}{n} > \frac{1}{2}$, the deviating player is worse off.

Consider now any other profile, and assume that the majority of players bet on *x*: $m \geq \frac{n+1}{2}$ are betting *x* and *n* - *m* are betting *y*. We will show that any player betting *y* would be better off deviating and choosing *x* instead. If *y* is correct, a player in the minority will earn the prize with probability 1. If wrong, she will earn the prize with positive probability only if $k > m$.

We assume first that $k > m$. In this case, she will earn the prize with probability $\frac{k-m}{n-m}$. Hence, the overall probability of earning the prize is $\frac{1}{2}(1 + \frac{k-m}{n-m})$ if $k > m$. Consider now a minority player who deviates from the majority. If $k > m$, then, if *x* is correct, she will earn the prize with probability 1, and if *x* is wrong, she will receive the prize with probability $\frac{k-(n-(m+1))}{m+1}$. Note that $(n-(m+1))$ is the number of players in the minority, all of whom are correct and therefore receive the prize. Hence the overall probability of receiving the prize is $\frac{1}{2}(1 + \frac{k-(n-(m+1))}{m+1})$. Since $2m > n$ and $k > m$ it follows that $\frac{k-(n-(m+1))}{m+1} > \frac{k-m}{n-m}$. Hence, if $k > m$, then every player of the minority would be better off deviating to the majority.

We next show that deviation is profitable also when $k \leq m$. Indeed, being in the minority, a player gets the prize with probability 1 if correct. If a minority player is wrong, he gets the prize with probability zero. Hence, the probability of receiving the prize is ½. By deviating to the majority, he may get the prize whether correct or not. If correct, he will get it with probability $\frac{k}{m+1}$, and if wrong, he will get it with probability

$\frac{k-(n-(m+1))}{m+1}$. Hence, the overall probability of winning is $\frac{1}{2}\left(\frac{k-(n-(m+1))}{m+1}+\frac{k}{m+1}\right)=\frac{1}{2}\left(\frac{2k-n+m+1}{m+1}\right)>\frac{1}{2}$.

We now proceed to prove (b). Since n is an odd number, any profile of strategies generates both a majority and a minority. Let *m* be the size of the majority. We shall show that unless $m=\frac{n+1}{2}$, a majority player would be better off deviating to the minority. We start by assuming that $k>n-m$. Note that this is only possible if $m>\frac{n+1}{2}$. If correct, a majority player gets the prize with probability $\frac{k}{m}$. If wrong, she gets it with probability $\frac{k-n+m}{m}$. So, the overall probability of getting the prize is $\frac{1}{2}\left(\frac{2k-n+m}{m}\right)$. If a majority player deviates to the minority, then, if correct, she will get the prize with certainty. If incorrect, she will get it with probability zero. Hence the overall probability is ½. Since $\frac{1}{2}\left(\frac{2k-n+m}{m}\right)<\frac{1}{2}$, and so a player will be made better off by deviating from the majority to the minority.

Finally, we consider the case in which $k\leq n-m$. In this case, if a majority player's guess is correct, that player gets the prize with probability $\frac{k}{m}$. If incorrect, he gets the prize with probability zero, so the overall probability of winning the prize is $\frac{1}{2}\left(\frac{k}{m}\right)$. If he deviates to the minority, then, if correct, he gets the prize with probability -$\frac{k}{n-m+1}$. If incorrect, he gets the prize with probability zero. If $m>\frac{n+1}{2}$, then $n-m+1<m$, and deviating to the minority yields a higher expected payoff. If, however, $m=\frac{n+1}{2}$, then $n-m+1=m$, and the two options are identical. Hence, the unique equilibrium must involve the smallest majority size possible, $m=\frac{n+1}{2}$.

To show (c), note that if all players bet on *x* with probability *p* and *y* with probability (1 – *p*), then for *p* = ½, their strategies will form a Nash equilibrium. Given that all other players also choose *p* = ½, each player will be indifferent about which bet to make. Meanwhile, if p ≠ ½, players have incentive to deviate. In the inclusive environment, ($k\geq\frac{n+1}{2}$) players will choose the bet that maximizes the probability of being part of the majority. In the exclusive environment ($k<\frac{n+1}{2}$) players will choose the bet that maximizes the probability of being part of the minority. Note that the symmetric equilibrium is unstable in the inclusive environment. If even a single player shifts his or her probability from ½ for both x and y to, for example, ½ + ε for x (with an arbitrarily small ε), then the best response of all other players would be to switch to choosing x with probability 1.