Online Appendix to:
The Impact of Monitoring in Infinitely Repeated Games: Perfect, Public, and Private

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Online Appendix: Instructions for the perfect, public, and private monitoring treatments. Includes first the instructions that were distribted to the subjects and read aloud by the experimenter. Followed by a screen shot that was projected on a screen and a script that was read allowed by the experimenter while the screen shot was displayed.

INSTRUCTIONS

Welcome

You are about to participate in an experiment on decision-making. What you earn depends partly on your decisions, partly on the decisions of others, and partly on chance. Please turn off cell phones and similar devices now. Please do not talk or in any way try to communicate with other participants.

We will start with a brief instruction period. During the instruction period you will be given a description of the main features of the experiment. If you have any questions during this period, raise your hand and your question will be answered so everyone can hear.

General Instructions

1. In this experiment you will be repeatedly matched with a randomly selected person in the room. During each match, you will be asked to make decisions over a sequence of rounds.

2. The length of a match, that is the number of rounds in a match, is randomly determined as follows:

   After each round, there is a 90% probability that the match will continue for at least another round. Specifically, after each round, whether the match continues for another round will be determined by a random number between 1 and 100 generated by the computer. If the number is lower than or equal to 90 the match will continue for at least another round, otherwise it will end. For example, if you are in round 2, the probability that there will be a third round is 90% and if you are in round 9, the probability that there will be a tenth round is also 90%. That is, at any point in a match, the probability that the match will continue is 90%.

3. Once a match ends, you will be randomly paired with someone for a new match. You will not be able to identify who you've interacted with in previous or future matches.

4. In each round, your payoff depends on your choice, the choice of the person you are paired with, and on chance. More specifically, your payoff is determined by your choice (**A** or **B**), the choice of the person you are paired with (**A** or **B**), and a random draw (**a** or **b**). The probabilities with which **a** or **b** are drawn depend on the choice of the person you are paired.

   The payoffs depend on choice and the random draw in the following way. If you select **A** and the random draw is **a**, your payoff is 46, while if the random draw is **b** your payoff is 8. Similarly, if you select **B**, the payoffs are 54 and 16 when the random draw is **a** and **b** respectively.

   The random draw is determined as follows. If the person you are paired with chooses **A**, then the random draw is **a** with 90% probability and **b** with 10% probability. Similarly if he chooses **B**, it is **b** with 90% probability and **a** with 10% probability. The person you are paired with also gets a random draw. That random draw is determined in the same way yours is, and it determines (in combination with his choice) his payoff. The table below represents all the possible outcomes:

		Other's Choice			
Your		***A***		***B***	
Choice		**a**	**b**	**a**	**b**
A	***a***	46, *46*	8, *46*	46, *54*	8, *54*
	b	46, *8*	8, *8*	46, *16*	8, *16*
B	***a***	54, *46*	16, *46*	54, *54*	16, *54*
	b	54, *8*	16, *8*	54, *16*	16, *16*

← **Your random draw**

Other's Random Draw

   In this table, the first number of each cell represents your payoff, and the second number (in italics) is the payoff of the person you are paired with receives. The first row indicates your choice, and the second the random draw of the person you are paired with. As you can see, your payoff does not depend on the random draw the other receives. The first column indicates the choice of the person you are paired with and the second column your random draw. For instance, the cell at the bottom right of the table indicates that if you choose **B** and your random draw is **b**, your payoff is 16 and if the other chooses ***B*** and his random draw is ***b***, then his payoff is 16. The cell immediately to the left indicates that if instead you had received the random draw ***a*** (since his choice is **B** this can only happen with 10% probability), your payoff would have been 54 but his would have been the same.

5. For each combination of your choice and the other's choice, you can calculate the expected payoffs given the probabilities of the random draws. The table below gives the payoff you can expect to get from each combination of choices:

Your Choice	***Other's Choice***	
	A	***B***
A	46 x 90% + 8 x 10%, *46 x 90% + 8 x 10%*	8 x 90% + 46 x 10%, *54 x 90% + 16 x 10%*
B	54 x 90% + 16 x 10%, *8 x 90% + 46 x 10%*	16 x 90% + 54 x 10%, *16 x 90% + 54 x 10%*

   For example, when you and the other choose **A**, there is 90% probability your random draw is **a** and you make 46, but there is a 10% probability that your random draw is **b** and you make 8. Similarly, when you both choose **B**, there is a 90% probability his random draw is ***b*** and he makes 16 and there is a 10% probability that his random draw is ***a*** and he makes 54. The table below summarizes this:

Your Choice	***Other's Choice***	
	A	***B***
A	42.2, *42.2*	11.8, *50.2*
B	50.2, *11.8*	19.8, *19.8*

6. Total payoffs for each match will be the sum of payoffs obtained from each round of that match. Total payoffs for the experiment will be the sum of payoffs for all matches played.

7. The first match to end after 75 minutes of play will mark the end of the experiment. Your total payoffs will be converted to dollars at the rate of 0.0075$ for every point earned.

Are there any questions?

Now please take a look at the screen in front of the room.

Before we start, let me remind you that:

- The length of a match is randomly determined. After every round there is a

90% probability that the match will continue for another round. You will interact with the same person for the entire match.

- Every round, you will receive a random draw.
- Similarly the person you are paired with will receive a random draw.
- You will know what choice the person you are paired with made and he will know the choice you made. Neither will know what random draw the other had.
- Your payoff is determined by your choice and the random draw you receive.
- After a match is finished, you will be randomly paired with someone for a new match.

Remaining time [sec]: 21

Match: 1 **Round: 2** **Please select a row**

			The Other's Choice						
			A		B			A	B
			a	b	a	b			
Your Choice	A	a	46, 46	8, 46	46, 54	8, 54	A	42.2, 42.2	11.8, 50.2
		b	46, 8	8, 8	46, 16	8, 16			
	B	a	54, 46	16, 46	54, 54	16, 54	B	50.2, 11.8	19.8, 19.8
		b	54, 8	16, 8	54, 16	16, 16			

History for Match: 2

Show

Match	Round	Your Choice	Other's Choice	Other's Random Draw	Your Random Draw

Computer generated random number

62

is Lower than

90

The match will continue for another round.

Screen shots

This is the first screen you will observe in each round of a match. You see two payoff tables.

The first payoff table shows your payoff and the other's payoff for every combination of your choice, the other's choice and the possible random draws. The second payoff table on the right shows the expected payoffs for every combination of your choice and the other's choice given the random draw probabilities.

To make a choice, click on one of the rows. You can click on any of the payoff tables. Once a row is selected, it will change color and a red submit button will appear. Your choice will be finalized once you click on the submit button.

On the bottom half of the screen you will find the match and round number. Below that there is a history table that will allow you to look up the history of choices and random draws within the current match, as well as in previous matches you were in. To look at the history for previous matches, specify the match number in the box next to History for Match and click show. For previous matches you will also observe the random draw of the other person. This additional information about the current match will only be revealed after a match has terminated.

Once you submit your choice, you will see a similar screen where your choice, your random draw, and the other's choice is highlighted. You will not see other's random draw. Since you observe other's choice, one of these boxes will be highlighted indicating his choice. Also, for each choice, one of these columns will be highlighted indicating your random draw. Moreover, since you cannot observe the random draw of the other person, if you choose A, both of these rows will be highlighted, if you choose B, both of these rows will be highlighted.

After that you will see a screen similar to this one. Here the computer generated random number for this round is displayed. In this case, since the random number is less than 90, the match would continue for another round. In case it is larger than 90, the match would end, and you would be randomly paired with someone in the room for a new match.

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We will start with a brief instruction period. During the instruction period you will be given a description of the main features of the experiment. If you have any questions during this period, raise your hand and your question will be answered so everyone can hear.

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1. In this experiment you will be repeatedly matched with a randomly selected person in the room. During each match, you will be asked to make decisions over a sequence of rounds.

2. The length of a match, that is the number of rounds in a match, is randomly determined as follows:

   After each round, there is a 90% probability that the match will continue for at least another round. Specifically, after each round, whether the match continues for another round will be determined by a random number between 1 and 100 generated by the computer. If the number is lower than or equal to 90 the match will continue for at least another round, otherwise it will end. For example, if you are in round 2, the probability that there will be a third round is 90% and if you are in round 9, the probability that there will be a tenth round is also 90%. That is, at any point in a match, the probability that the match will continue is 90%.

3. Once a match ends, you will be randomly paired with someone for a new match. You will not be able to identify who you've interacted with in previous or future matches.

4. In each round, your payoff depends on your choice, the choice of the person you are paired with, and on chance. More specifically, your payoff is determined by your choice (**A** or **B**) and a signal about the other's choice (**a** or **b**). The signal depends on the choice of the person you are paired with and also on chance.

   The payoffs depend on choice and the signal in the following way. If you select **A** and the signal about the other's choice is **a**, your payoff is 46, while if the signal is **b** your payoff is 8. Similarly, if you select **B**, the payoffs are 54 and 16 when the signal about the other's choice is **a** and **b** respectively.

   The signal about the other's choice is determined as follows. If the person you are paired with chooses **A**, then the signal you receive is **a** with 90% probability and **b** with 10% probability. Similarly if he chooses **B**, it is **b** with 90% probability and **a** with 10% probability. The person you are paired with also receives a signal about your action. That signal is determined in the same way yours is, and it determines (in combination with his choice) his payoff. The table below represents all the possible outcomes:

		Other's Choice				
Your		***A***		***B***		
Choice		**a**	**b**	**a**	**b**	← **Signal of Other's Choice**
A	***a***	46, *46*	8, *46*	46, *54*	8, *54*	
	b	46, *8*	8, *8*	46, *16*	8, *16*	
B	***a***	54, *46*	16, *46*	54, *54*	16, *54*	
	b	54, *8*	16, *8*	54, *16*	16, *16*	

Signal Other Receives Of Your Choice

In this table, the first number of each cell represents your payoff, and the second number (in italics) is the payoff of the person you are paired with receives. The first row indicates your choice, and the second the signal the person you are paired with receives about your choice. As you can see, your payoff does not depend on the signal the other receives. The first column indicates the choice of the person you are paired with and the second column the signal you receive about his choice. For instance, the cell at the bottom right of the table indicates that if you choose **B** and receive a **b** signal, your payoff is 16 and if the other chooses ***B*** and his signal about your choice is ***b***, then his payoff is 16. The cell immediately to the left indicates that if instead you had received the ***a*** signal about the other's choice (since his actual choice is **B** this can only happen with 10% probability), your payoff would have

been 54 but his would have been the same.

5. For each combination of your choice and the other's choice, you can calculate the expected payoffs given the probabilities the signals will correspond to the choices made. The table below gives the payoff you can expect to get from each combination of choices:

Your Choice	***Other's Choice***	
	A	***B***
A	46 x 90% + 8 x 10%, *46 x 90% + 8 x 10%*	8 x 90% + 46 x 10%, *54 x 90% + 16 x 10%*
B	54 x 90% + 16 x 10%, *8 x 90% + 46 x 10%*	16 x 90% + 54 x 10%, *16 x 90% + 54 x 10%*

For example, when you and the other choose **A**, there is 90% probability you receive an **a** signal and make 46, but there is a 10% probability you receive a **b** signal and make 8. Similarly, when you both choose **B**, there is a 90% probability he receives a ***b*** signal and make 16 and there is a 10% probability he receives an ***a*** signal and make 54. The table below summarizes this:

Your Choice	***Other's Choice***	
	A	***B***
A	42.2, *42.2*	11.8, *50.2*
B	50.2, *11.8*	19.8, *19.8*

6. Total payoffs for each match will be the sum of payoffs obtained from each round of that match. Total payoffs for the experiment will be the sum of payoffs for all matches played.

7. The first match to end after 75 minutes of play will mark the end of the experiment. Your total payoffs will be converted to dollars at the rate of 0.0075$ for every point earned.

Are there any questions?

Now please take a look at the screen in front of the room.

Before we start, let me remind you that:

- The length of a match is randomly determined. After every round there is a

90% probability that the match will continue for another round. You will interact with the same person for the entire match.

- Every round, you will observe a signal about the choice of the person you're paired with. This signal corresponds to his actual choice with 90% probability, and is the opposite with 10% probability.

- Similarly the person you are paired with observes a signal about the choice you made. This signal corresponds to your actual choice with 90% probability, and is the opposite with 10% probability.

- You will know what signal the person you are paired with observed and he will know which signal of his choice you observed.

- Your payoff is determined by your choice and the signal you receive about the other's choice.

- After a match is finished, you will be randomly paired with someone for a new match.

Remaining time [sec]: 2

Match: 2 **Round: 1** **Please select a row**

			The Other's Choice						
			A		B			A	B
			a	b	a	b			
Your Choice	A	a	46, 46	8, 46	46, 54	8, 54	A	42.2, 42.2	11.8, 50.2
		b	46, 8	8, 8	46, 16	8, 16			
	B	a	54, 46	16, 46	54, 54	16, 54	B	50.2, 11.8	19.8, 19.8
		b	54, 8	16, 8	54, 16	16, 16			

History for Match: 2

Show

Match	Round	Your Choice	Other's Choice	Signal of Your Choice	Signal of Other's Choice

Computer generated random number

62

is Lower than

90

The match will continue for another round.

Screen shots

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The first payoff table shows your payoff and the other's payoff for every combination of your choice, the other's choice and the possible signals. The second payoff table on the right shows the expected payoffs for every combination of your choice and the other's choice given the signal probabilities.

To make a choice, click on one of the rows. You can click on any of the payoff tables. Once a row is selected, it will change color and a red submit button will appear. Your choice will be finalized once you click on the submit button.

On the bottom half of the screen you will find the match and round number. Below that there is a history table that will allow you to look up the history of choices and signals within the current match, as well as in previous matches you were in. To look at the history for previous matches, specify the match number in the box next to History for Match and click show. For previous matches you will also observe the other's choice. This additional information about the current match will only be revealed after a match has terminated.

Once you submit your choice, you will see a similar screen where your choice, the signal you receive about the other's choice, and the signal the other receives about your choice is highlighted. You will not see the other's actual choice. Since you cannot observe the other's choice; if you receive an "a" signal, both of these columns will be highlighted, similarly if you receive a "b" signal, both of these columns will be highlighted; both columns are highlighted since you do not know what choice the other selected. Moreover, since you also observe the signal the other person receives about your choice, if you choose A, only one of these rows will be highlighted, similarly if you choose B only one of these rows will be highlighted corresponding to the signal the other receives about your choice.

After that you will see a screen similar to this one. Here the computer generated random number for this round is displayed. In this case, since the random number is less than 90, the match would continue for another round. In case it is larger than 90, the match would end, and you would be randomly paired with someone in the room for a new match.

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		Other's Choice			
Your		***A***		***B***	
Choice		**a**	**b**	**a**	**b**
A	***a***	46, *46*	8, *46*	46, *54*	8, *54*
	b	46, *8*	8, *8*	46, *16*	8, *16*
B	***a***	54, *46*	16, *46*	54, *54*	16, *54*
	b	54, *8*	16, *8*	54, *16*	16, *16*

← **Signal of Other's Choice**

Signal Other Receives Of Your Choice

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is **B** this can only happen with 10% probability), your payoff would have been 54 but his would have been the same.

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For example, when you and the other choose **A**, there is 90% probability you receive an **a** signal and make 46, but there is a 10% probability you receive a **b** signal and make 8. Similarly, when you both choose **B**, there is a 90% probability he receives a ***b*** signal and make 16 and there is a 10% probability he receives an ***a*** signal and make 54. The table below summarizes this:

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- Similarly the person you are paired with observes a signal about the choice you made. This signal corresponds to your actual choice with 90% probability, and is the opposite with 10% probability.

- You will not know what signal the person you are paired with observes and he will not know which signal of his choice you observed.

- Your payoff is determined by your choice and the signal you receive about the other's choice.

- After a match is finished, you will be randomly paired with someone for a new match.

Remaining time [sec]: 2

Match: 2 **Round: 1** **Please select a row**

			The Other's Choice						
			A		B			A	B
			a	b	a	b			
Your Choice	A	a	46, 46	8, 46	46, 54	8, 54	A	42.2, 42.2	11.8, 50.2
		b	46, 8	8, 8	46, 16	8, 16			
	B	a	54, 46	16, 46	54, 54	16, 54	B	50.2, 11.8	19.8, 19.8
		b	54, 8	16, 8	54, 16	16, 16			

History for Match: 2

Show

Match	Round	Your Choice	Other's Choice	Signal of Your Choice	Signal of Other's Choice

Computer generated random number

62

is Lower than

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The match will continue for another round.

Screen shots

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Once you submit your choice, you will see a similar screen where your choice and the signal you receive about the other's choice is highlighted. You will not see the other's actual choice or the signal he receives about your choice. Since you cannot observe the other's choice; if you receive an "a" signal, both of these columns will be highlighted, similarly if you receive a "b" signal, both of these columns will be highlighted; both columns are highlighted since you do not know what choice the other selected. Moreover, since you cannot observe the signal the other person receives about your choice, if you choose A, both of these rows will be highlighted, if you choose B, both of these rows will be highlighted.

After that you will see a screen similar to this one. Here the computer generated random number for this round is displayed. In this case, since the random number is less than 90, the match would continue for another round. In case it is larger than 90, the match would end, and you would be randomly paired with someone in the room for a new match.