Experimental Instructions for "Learning from unknown information sources"

Instructions for Sessions 3-11

[Narrated by experimenter]

Welcome to our study on decision making. We guarantee that the instructions of the study will be implemented truthfully and completely. Please listen to the instructions carefully so that you understand the tasks when you make decisions. The script of the instructions on your desk is for your later reference.

General instructions and Part 1

[Start video. URL: https://youtu.be/9W2vWzBl2pg]

Before the instructions begin, please make sure to put your phone to silent mode. Electronic devices other than the calculator on your desk are not allowed during the study. Also, please do not communicate with others during the study. At any time, if you have questions, please raise your hand. After the study, please do not discuss the tasks in the study with anyone.

The experiment will last around 100 minutes. Each participant is guaranteed to receive a participation fee. In addition, if you complete the study fully, you will receive a completion fee and some bonus. The amount of bonus will depend on your decisions in this study. You must be willing to receive your payment for this study by cash at the end of the study today.

To make sure that you understand the instructions fully and correctly, you will need to answer some comprehension questions at various points during the study. You will not be eligible for any bonus if you make too many mistakes in your answers to the comprehension questions.

We guarantee that all the answers you provide will be kept confidential and used for research purposes only.

The study has 29 horse races. In each race, there are two horses competing against each other. One is a Red horse, the other is a Blue horse. In each race, one horse will be the winner and the other will be the loser.

For each race, I will tell you the chances that each horse wins. For example, I may say the following. "This is a 70-30 race." What is a "70-30 race"? A "70-30 race" is a horse race where Red horse has 70% chance of winning and Blue horse has 30% chance. In other words, if a "70-30 race" is run 100 times, then Red horse will win around 70 times and Blue horse will win around 30 times. Also, please note that the outcomes of difference horse races are not related to each other. So whoever wins in race No.1 has nothing to do with the outcome of race No.2.

For each horse in each race, I will ask you to make multiple choices between 2 options.

If you choose Option A, you will receive a bonus of $20 if this horse wins this race, but you will not receive any bonus if this horse loses.

If you choose Option B, you will receive a fixed amount of dollars as your bonus regardless of the outcome of this race.

Among all the decisions that you make during the study, one decision will be randomly selected, and your choice in that decision will determine your bonus. Let me show you how the user interface looks like.

[Pause video. Experimenter open a demo page for the multiple price lists.]

[Narrated by experimenter]

Now as you can see, on the top of the screen, we have the number of the race and the description of the winning chances. You are asked to make decisions regarding the Red horse in this race in the multiple choice table below.

There are 19 rows in the table. The left-hand side of all the rows are the same. It says I prefer to receive $20 if the Red horse wins and $0 if it loses. On the right-hand side, the fixed amounts of payments range from $1 to $19. You need to indicate left or right by clicking on the radio buttons for each row.

Now, suppose I prefer receiving $20 if Red horse wins to receiving $3 for sure. Then I click left in the 3rd row. [Click left in the 3rd row.] After I click it, all the other rows will be auto-filled. This auto-fill function is to save you some time. If I prefer the left-hand side to $3, I probably also prefer that to $2 and $1. But this auto-filled answer is probably premature, because I may also prefer the left-hand side to $4, $5, etc. So you should keep on clicking. [Click left in the 5th row.] Because the table is long and the rows at the bottom are out of the screen, please don't forget to scroll down to see if those choices reflect your true preferences. [Click left in the 16th row.] You can also go back to change your answers if you change your mind. [Click right in the 5th row.] Once you make sure that the answer in each row reflects your true preference, you can click Next. [Click Next.]

This is just for the decisions regarding the Red horse in this race. For the Blue horse, the procedure is the same. After you click next, [Click Next] you make decision for the Blue horse. Once you are satisfied with the answers, you click Next to move on to the next race. You have to wait till everyone is ready before you see the next race.

Is everything clear?

[Experimenter answers participants' questions, if any. Resume video.]

Remember that there are 29 races and 2 horses for each race. So there are 58 horses in total. And for each horse, you make 19 decisions in the multiple choice table. I prepared two bags of envelopes. The white envelopes correspond to the 58 horses and the brown envelopes correspond to the 19 decisions. Each one of you will now draw one envelope from each bag. Your two envelopes will determine which decision for which horse will count for your bonus. You are not allowed to open the envelopes. At the end of the study, I will open the envelopes and pay you accordingly.

I prepared the envelopes such that each decision you make is equally likely to count for bonus. Hence you should make every decision carefully.

[Pause video.]

[Narrated by experimenter]

For example, if inside your white envelope it says "18" and inside your brown envelope it says "9", then it means that your decision in the 9th row of the multiple choice table for the 18th horse will count for your bonus.

Is everything clear?

[Experimenter answers participants' questions, if any. Participants draw envelopes and put them on top of their stations.]

[Resume video.]

Just in case you're curious, we are not running horse races in the lab. Instead, to determine which horse wins in each race, I simulate the horse race by randomly drawing a card. I prepared a deck of 10 cards for each race. The cards are numbered from 1 to 10, one card for each number. For example, in a 70-30 race, Red horse will win if the card I draw is between 1 and 7, and Blue horse will win if the card is between 8 and 10. I will be drawing cards before you answer the questions in each race and you are welcome to inspect the cards after the experiment.

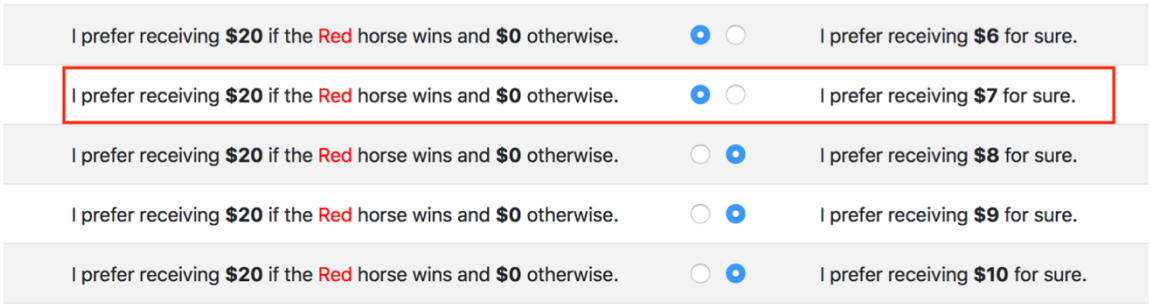
Here are the things to keep in mind. In each race, a Red horse and a Blue horse compete against each other in a horse race. For each horse, you make 19 choices. One option is to receive $20 bonus only if this horse wins the race. The other option is to receive a fixed amount regardless of the outcome of the race. One random decision will count for your bonus. Outcomes of different races are not related.

Now, please answer the comprehension question. You will not be eligible for bonus if you make too many mistakes.

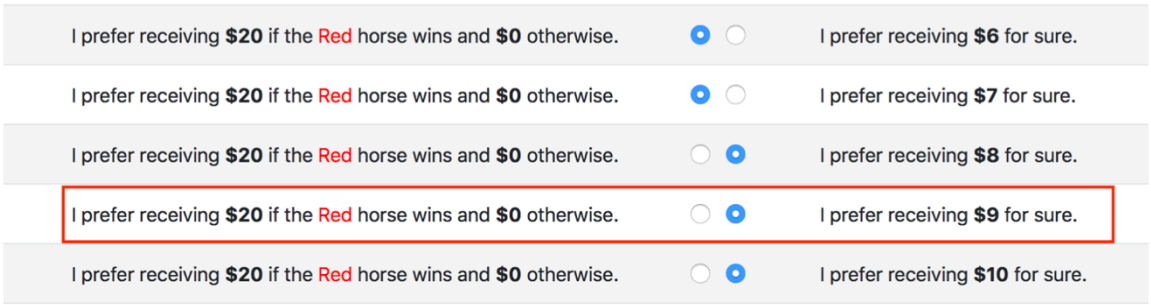
[Stop video.]

[Comprehension questions]

1. In each race one horse will win and the other will lose. (True/False)
2. Only one of your decisions for one horse will count for bonus payment. (True/False)
3. The outcome of one race is NOT related to the outcome of another race. (True/False)
4. In a 60-40 race the Blue horse has 40% chance of winning. (True/False)



5. Sam's decisions are shown in the picture above. Suppose the decision in the red rectangle is the decision that counts for his bonus. If the Red horse **wins** this race. How much bonus will Sam receive?
6. In the same picture above. If the Red horse **loses** this race. How much bonus will Sam receive?



7. Now suppose the decision that counts for Sam's bonus is the one corresponding to $9 as in second picture. If the Red horse **wins** this race. How much bonus will Sam receive?
8. Still consider the second picture. If the Red horse **loses** this race. How much bonus will Sam receive?

[Example of a round]

[On Screen 1]

This is a 50-50 race.

Please make your decisions regarding the Red horse.

[On Screen 2]

This is a 50-50 race.

Please make your decisions regarding the Blue horse.

Part 2

[Start video. URL: https://youtu.be/gcJmTaeyPyI]

In this part, you will know for sure the chances of winning of each race. Moreover, an Analyst will examine the outcome of the race and make a report to you on which horse won. Analysts differ in their "levels". The higher is an analyst's "level", the more accurate is his/her report. Let me give you an example. You may see the following. "This is a 50-50 horse race. A Level-70 analyst will make a report to you."

Now, what does the level of an analyst exactly mean? Let me explain to you using an example. A Level-70 analyst makes correct report 70% of the times and makes incorrect report 30% of the times. This means that out of 100 races where Red horse wins, Level-70 analyst will say "Red horse won" around 70 times, but say "Blue horse won" around 30 times. Similarly, out of 100 races where Blue horse wins, Level-70 analyst will say "Blue horse won" around 70 times, but say "Red horse won" around 30 times. By analogy, a Level-50 analyst is equally likely to be correct and incorrect. Any analyst with level lower than 50 is more likely to be incorrect than correct.

In this part, to determine the outcome of the race and the analyst's report, I will use two decks of cards for each race. Each deck is numbered from 1 to 10. A random draw from the 1st deck determines which horse wins the race. Then, a random draw from the 2nd deck determines whether the report is correct or not. In case you are curious about the details, you can read them in the printed instructions.

Now, please answer the comprehension question. You will not be eligible for bonus if you make too many mistakes。

[Stop video.]

[Additional details on the printed instructions. Not narrated.]

Details of card draws:

Let's suppose this is a 50-50 horse race and a Level-70 analyst is making the report. if the random draw from the 1st deck of cards is between 1-5, then the Red horse wins the race. If the random draw from the 1st deck of cards is between 6-10, then Blue horse wins the race.

If the card drawn from the 2nd deck of cards is between 1-7, then the Level-70 analyst will make a correct report; if this card is between 8-10, the analyst will make an incorrect report.

[Comprehension questions]

1. If a Red horse **wins** a race. What's the chance that a **Level-70** analyst reports "Red horse won."
2. If a Blue horse **wins** a race. What's the chance that a **Level-70** analyst reports "Red horse won."
3. No matter which horse wins a **Level-50** analyst is equally likely to report "Red horse won" and "Blue horse won". (True/False)

[Example of a round]

[On Screen 1]

This is a 50-50 race.

A **Level-70** analyst will make a report to you.

Please listen to the report and then make your decisions regarding the Red horse.

[Experimenter draws the cards and announces "Red horse won" or "Blue horse won".]

[On Screen 2]

This is a 50-50 race.

A **Level-70** analyst has made a report to you.

Please make your decisions regarding the Blue horse.

Part 3

[Play video. URL: https://youtu.be/L-ftfpdXBsg]

In this part, you will know the two horses' chances of winning for sure. But you are not sure which analyst will make a report to you. For example, you may see the following. "This is a 50-50 horse race." "An analyst will make a report to you." "There is 50% chance that it is a Level-50 analyst, otherwise it is a Level-90 one."

What this means is that if you come to this race 100 times, then around 50 times you will receive a report from a Level-50 analyst and in the rest of times you will receive a report from a Level-90 analyst.

In this part, to determine the outcome of the race, the level of the analyst, and the analyst's report, I will use three decks of cards for each race. Each deck is numbered from 1 to 10. A random draw from the 1st deck determines which analyst examines the race and reports to you. A random draw from the 2nd deck determines which horse wins the race. A random draw from the 3rd deck determines whether the report is correct or not. In case you are curious about the details, you can read them in the printed instructions.

Now, please answer the comprehension question. You will not be eligible for bonus if you make too many mistakes.

[Stop video.]

[Additional details on the printed instructions. Not narrated.]

Details of card draws:

In the example on the previous slide, if the random draw from the 1st deck of cards is between 1-5, the Level-50 analyst will make a report to you; if this card is between 6-10, the Level-90 analyst will make a report.

If the card drawn from the 2nd deck of cards is between 1-5, then the Red horse wins the race. If the random draw from the 1st deck of cards is between 6-10, then Blue horse wins the race.

Now, suppose it's the Level-50 analyst who reports to you. Then if the card drawn from the 3rd deck of cards is between 1-5, then the report will be correct. If the 3rd card is between 6-10, then the report will be incorrect.

Suppose instead it's the Level-90 analyst who reports to you. Then if the card drawn from the 3rd deck of cards is between 1-9, then the report will be correct. If the 3rd card is 10, then the report will be incorrect.

[Comprehension question]

If a Red horse **wins** a race a **Level-30** analyst is more likely to report "Blue horse won" than "Red horse won." (True/False)

[Example of a compound round]

[On Screen 1]

This is a 50-50 race.

An analyst will make a report to you.

There is **50%** chance that this is a **Level-50** analyst otherwise this is a **Level-90** analyst. Please listen to the report and then make your decisions regarding the Red horse.

[Experimenter draws the cards and announces "Red horse won" or "Blue horse won".]

[On Screen 2]

This is a 50-50 race.

An analyst has made a report to you.

There is **50%** chance that this is a **Level-50** analyst, otherwise this is a **Level-90** analyst.

Please make your decisions regarding the Blue horse.

[Example of an ambiguous round]

[On Screen 1]

This is a 50-50 race.

An analyst will make a report to you.

There is **?%** chance that this is a **Level-50** analyst otherwise this is a **Level-90** analyst. **"?"** can be any number between 0 and 100.

Please listen to the report and then make your decisions regarding the Red horse.

[If the round is the first ambiguous round in this Part, experimenter says "The numbers represented by the question marks are printed on a paper in my folder."]

[Experimenter draws the cards and announces "Red horse won" or "Blue horse won".]

[On Screen 2]

This is a 50-50 race.

An analyst has made a report to you.

There is **?%** chance that this is a **Level-50** analyst otherwise this is a **Level-90** analyst. **"?"** can be any number between 0 and 100.

Please make your decisions regarding the Blue horse.

Part 4

[Start video. URL: https://youtu.be/D8v4mKAfggc]

In this part, you are not sure what are the two horses' chances of winning. For example, I may say the following. "This is either a 30-70 race or a 90-10 race."

I may also tell you how likely the two possibilities are. For example, you may see the following. It says that there is a 50% chance that this is a 30-70 race, otherwise this is a 90-10 race. This means that if this race is to happen 100 times, then around 50 times it is a 30-70 race and around 50 times it's a 90-10 race.

Remember in Part I, I simulate the horse race using a deck of cards. In this part, I will use two decks of cards for each race. Both decks are numbered from 1 to 10. A random draw from the 1st deck determines which race is this race. For example, is it a 30-70 race or a 90-10 race. Then, having known which race it is, a random draw from the 2nd deck determines which horse wins the race. In case you are curious about the details, you can read them in the printed instructions.

Now, please answer the comprehension question. You will not be eligible for bonus if you make too many mistakes.

[Stop video.]

[Additional details on the printed instructions. Not narrated.]

Details of card draws:

Suppose the two possible horse races are a 30-70 race and a 90-10 race and each of the two races has 50% chance. Then if the random draw from the 1st deck of cards is between 1-5, then this is a 30-70 race. If the random draw from the 1st deck of cards is between 6-10, then this is a 90-10 race.

Now, suppose the race is a 30-70 race. Then I will draw a card from the second deck of cards. If this card is between 1-3, Red horse will win; if this card is between 4-10, Blue horse will win.

Suppose instead that the race is a 90-10 race. Then I will draw a card from the second deck of cards. If this card is between 1-9, Red horse will win; if this card is 10, Blue horse will win.

[Comprehension questions.]

In each race one horse will win and the other will lose. (True/False)

[Example of a compound round]

[On Screen 1]

This is either a 30-70 race or a 90-10 race.

There is **50%** chance that this is a 30-70 race otherwise this is a 90-10 race.

Please make your decisions regarding the Red horse.

[On Screen 2]

This is either a 30-70 race or a 90-10 race.

There is **50%** chance that this is a 30-70 race otherwise this is a 90-10 race.

Please make your decisions regarding the Blue horse.

[Example of an ambiguous round]

[On Screen 1]

This is either a 50-50 race or a 90-10 race.

There is **?%** chance that this is a 50-50 race otherwise this is a 90-10 race. **"?"** can be any number between 0 and 100.

Please make your decisions regarding the Red horse.

[If the round is the first ambiguous round in this Part, experimenter says "The numbers represented by the question marks are printed on a paper in my folder."]

[On Screen 2]

This is either a 50-50 race or a 90-10 race.

There is **?%** chance that this is a 50-50 race otherwise this is a 90-10 race. **"?"** can be any number between 0 and 100.

Please make your decisions regarding the Blue horse.

Part 5

[Play video. URL: https://youtu.be/yl1_NlHN2bQ]

In this part, you are not sure what are the two horses' chances of winning. But you know for sure what's the level of the analyst. For example, you may see the following. "This is either a 50-50 race or a 90-10 race." "There is 50% chance that it's a 50-50 race, otherwise it's a 90-10 race." "A Level-70 analyst will examine the outcome of the race and make a report to you."

In this part, to determine the odds of the race, the outcome of the race and the analyst's report, I will use three decks of cards for each race. Each deck is numbered from 1 to 10. A random draw from the 1st deck determines which race is this race. For example, is it a 50-50 race or a 90-10 race. A random draw from the 2nd deck determines which horse wins the race. A random draw from the 3rd deck determines whether the report is correct or not. In case you are curious about the details, you can read them in the printed instructions.

[Stop video.]

[Additional details on the printed instructions. Not narrated.]

Details of card draws:

In the example on the previous slide, if the random draw from the 1st deck of cards is between 1-5, then it is a 50-50 race. If this card is between 6-10, then it is a 90-10 race.

Suppose it is the 50-50 race. Then if the card drawn from the 2nd deck of cards is between 1-5, then Red horse wins the race. If this card is between 6-10, then Blue horse wins the race.

Now, suppose it is the 90-10 race. Then if the card drawn from the 2nd deck of cards is between 1-9, then Red horse wins the race. If this card is 10, then Blue horse wins the race.

If the card drawn from the 3rd deck of cards is between 1-7, then the report will be correct. If the 3rd card is between 8-10, then the report will be incorrect.

[Example of a compound round]

[On Screen 1]

This is either a 10-90 race or a 90-10 race.

There is **50%** chance that this is a 10-90 race otherwise this is a 90-10 race.

A **Level-70** analyst will make a report to you.

Please listen to the report and then make your decisions regarding the Red horse.

[Experimenter draws the cards and announces "Red horse won" or "Blue horse won".]

[On Screen 2]

This is either a 10-90 race or a 90-10 race.

There is **50%** chance that this is a 10-90 race otherwise this is a 90-10 race.

A **Level-70** analyst has made a report to you.

Please make your decisions regarding the Blue horse.

[Example of an ambiguous round]

[On Screen 1]

This is either a 50-50 race or a 90-10 race.

There is **?%** chance that this is a 50-50 race otherwise this is a 90-10 race.

"?" can be any number between 0 and 100.

A **Level-50** analyst will make a report to you.

Please listen to the report and then make your decisions regarding the Red horse.

[If the round is the first ambiguous round in this Part, experimenter says "The numbers represented by the question marks are printed on a paper in my folder."]

[Experimenter draws the cards and announces "Red horse won" or "Blue horse won".]

[On Screen 2]

This is either a 50-50 race or a 90-10 race.

There is **?%** chance that this is a 50-50 race otherwise this is a 90-10 race.

"?" can be any number between 0 and 100.

A **Level-50** analyst has made a report to you.

Please make your decisions regarding the Blue horse.

Exit survey

1. What is your gender?
   a) Male
   b) Female
   c) Others
   d) I prefer not to answer
2. What is your age?
   a) _____
   b) I prefer not to answer
3. How many economics and psychology experiments have you participated in?
   a) 0
   b) 1
   c) 2
   d) 3
   e) More than 3
4. Are you familiar with Bayes' theorem (alternatively Bayes' rule or Bayes' law) in probability theory?
   a) Very familiar
   b) Somewhat familiar
   c) Not familiar
5. Are you currently a student?
   a) Yes
   b) No

If your answer to Question 4 is yes,

6. What year are you in?
   a) Freshman
   b) Sophomore
   c) Junior
   d) Senior or above
   e) Master student
   f) PhD student
7. What are your majors? (If applicable)

_____

If your answer to Question 4 is no,

8. What's your highest level of education?
   a) High school diploma
   b) Bachelor's degree
   c) Postgraduate degree

9. What were your majors in college (and graduate school)? (If applicable)

_____

10. If you have comments, suggestions or questions about the experiment, please write below. Thank you!

Instructions for Sessions 1 and 2

URL for instructional video: https://youtu.be/oAEfbx1TAl4

[Narrated by experimenter]

Welcome to our study on decision making. We guarantee that the instructions of the study will be implemented truthfully and completely. Please listen to the instructions carefully so that you understand the tasks when you make decisions. The script of the instructions on your desk is for your later reference.

General instructions and Part 1

[Start video.]

Before the instructions begin, please make sure to put your phone to silent mode. Electronic devices other than the calculator on your desk are not allowed during the study. Also, please do not communicate with others during the study. At any time, if you have questions, please raise your hand. After the study, please do not discuss the tasks in the study with anyone.

The experiment will last around 100 minutes. Each participant is guaranteed to receive a participation fee. In addition, if you complete the study fully, you will receive a completion fee and some bonus. The amount of bonus will depend on your decisions in this study. You must be willing to receive your payment for this study by cash at the end of the study today.

To make sure that you understand the instructions fully and correctly, you will need to answer some comprehension questions at various points during the study. You will not be eligible for any bonus if you make more than 2 mistakes in your answers to the comprehension questions.

We guarantee that all the answers you provide will be kept confidential and used for research purposes only.

The study consists of 29 rounds. Each round involves two assets, so there are 58 assets in total. You will own exactly one of the 58 assets. Which asset you own depends on the envelope you will draw. I prepared 58 envelopes, one envelope for each asset. Each one of you will draw an envelope. You are not allowed to open the envelope. At the end of the study, I will open the envelopes and the asset written inside your envelope will be the asset you own.

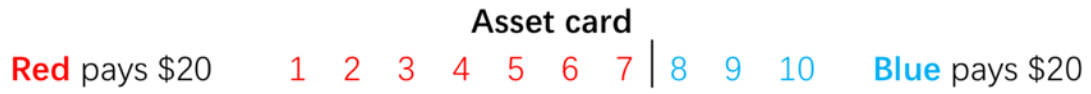
You can either keep the asset you own or sell your asset at a given price, which I will call the “selling price”. Your selling price depends on the next envelope you will draw. I prepared 40 envelopes with amounts ranging from $0 to $20. Each one of you will draw an envelope. At the end of the experiment, I will open the envelopes and the amount written in your envelope will be your selling price.

[Participants draw envelopes and put them on top of their stations.]

Your decision of keeping or selling the asset you own will determine the bonus you will receive from this study. If you keep the asset you own, your bonus will be equal to the value of that asset. If you sell your asset, your bonus will equal the “selling price”.

Now, let me tell you how the values of the assets are determined. As I mentioned before, each round involves two assets. One asset will be called the Red asset and the other will be called the Blue asset. One of these two assets will be worth $20 and the other will be worth $0. Which one is which in each round will depend on the number on the "asset card", which is a card that I will randomly draw from a deck of cards. There are 10 cards in each deck. The cards are numbered from 1 to 10, one card for each number. In each round, before the questions, you will see a picture describing how the number on the asset card determines the values of the assets.

Let me give you an example. You may see the following picture.



This picture indicates that if the number on the asset card is between 1 and 7, then the Red asset is worth $20 and the Blue asset is worth $0. If the number on the asset card is between 8 and 10, then the Blue asset is worth $20 and the Red asset is worth $0. Also note that the values of assets of one round are not correlated to those of another round. I will not reveal the asset card to you before you answer the questions, but I will publicly reveal all asset cards at the end of the experiment.

For each asset, you will be asked to indicate whether you want to sell the asset at the selling price if this asset turns out to be the asset that you own.

More specifically, in the first question in each round, you will be asked to fill out the following sentences. "1. Suppose I own the Red asset in this round. Then I'm willing to sell this asset at the selling price so long as the selling price is at least $_____. If the selling price is lower than this amount, then I prefer to keep this asset."

The second question is very similar to the first question, except that the Red asset is replaced by the Blue asset.

If you are indifferent between keeping an asset and selling it for $x, then it is in your best interest to answer x in the corresponding question. Let me explain why this is the case.

Let's assume that it turns out that you own a Red asset, and you are indifferent between keeping this Red asset and selling it for $12. Then, if you write down $12, you will always receive your preferred option between this Red asset and the selling price. Suppose your selling price turns out to be $13. Then we know that you prefer to sell the Red asset for $13 rather than keep it, so you will receive $13 as your bonus. Suppose instead, your selling price turns out to be $11. Then we know that you prefer to keep the Red asset, so you will keep the Red asset and your bonus will be its value. Over-stating or under-stating your answer will make you worse off because it decreases your chance of getting your preferred option. Another simply rule to keep in mind is the following. If the asset is very attractive to you, you should answer a high number so that you are more likely to keep the asset; if the asset is not very attractive, you should answer a low number so that you are more likely sell your asset for some money.

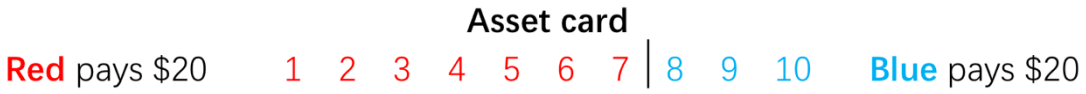
Now, please answer the comprehension question. You may refer to the script of instructions on your desk when you answer the questions.

[Stop video.]

[Experimenter says "If you have any question, please raise your hand."]

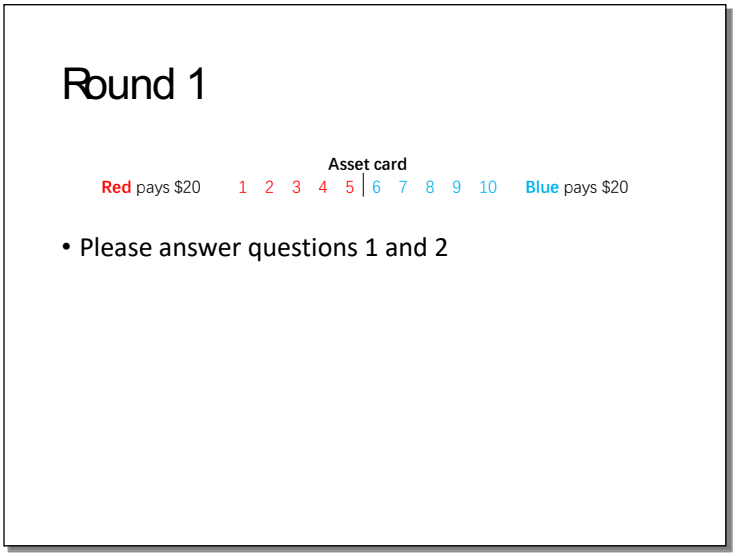
[Comprehension questions]

1. I own one of the 58 assets. The first/white envelope that I drew determines which asset it is.
   a) True
   b) False
2. My selling price is determined by the value written in the second/brown envelope that I drew.
   a) True
   b) False
3. In each deck of cards from which the asset card is drawn, there are ten cards. They are numbered from 1 to 10, one card for each number.
   a) True
   b) False
4. Suppose the picture below describes how the asset card determines the values of the assets. If the asset card is between 1 and 7, what are the values of the assets?



   a) The Red asset is worth $20 and the Blue asset is worth $0.
   b) The Red asset is worth $0 and the Blue asset is worth $20.
5. The values of assets of different rounds are not correlated.
   a) True
   b) False
6. Consider the following hypothetical scenario. Regarding the asset he owns, Bob answers "I'm willing to sell this asset at the selling price so long as the selling price is at least $8.5. If the selling price is lower than this amount, then I prefer to keep this asset." Bob's selling price turns out to be $14. The asset he owns turns out to be worth $20. How much bonus will Bob receive? (Assume that Bob answers all the comprehension questions correctly.)
   a) $0
   b) $8.5
   c) $14
   d) $20
7. Consider the following hypothetical scenario. Regarding the asset she owns, Anne answers "I'm willing to sell this asset at the selling price so long as the selling price is at least $15. If the selling price is lower than this amount, then I prefer to keep this asset." Anne's selling price turns out to be $10.4. The asset she owns turns out to be worth $0. How much bonus will Anne receive? (Assume that Anne answers all the comprehension questions correctly.)
   a) $0
   b) $10.4
   c) $15
   d) $20

[Example of a round]



Part 4

[Start video.]

In this part, it will be uncertain how the asset card determines the values of the assets. For example, you may see the following picture.

		Asset card	
Scenario O	**Red** pays $20	1 2 3 4 5 | 6 7 8 9 10	**Blue** pays $20
Scenario E	**Red** pays $20	1 2 3 4 5 6 7 8 9 | 10	**Blue** pays $20

There are two scenarios. In the first scenario, which I will call Scenario O, the Red asset is worth $20 if the asset card is between 1 and 5, and the Blue asset is worth $20 if the asset card is between 6 and 10. In the second scenario, which I will call Scenario E, the values of the assets depend on whether the asset card is smaller than 10 or equal to 10. Which scenario is the true scenario depends on the scenario card, which is randomly drawn from a deck of eight cards. If the number on the scenario card is an odd number, Scenario O will become the true scenario. If the number on the scenario card is an even number, Scenario E will become the true scenario. Note that the draws of cards are not correlated across rounds. Neither the asset card nor the scenario card will be revealed to you before you answer the questions, but you are free to inspect them after the experiment.

[Stop video.]

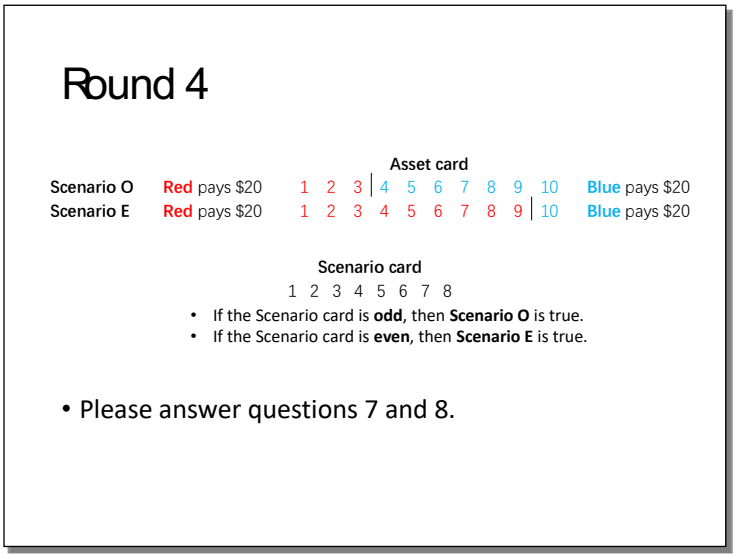
[Experimenter says "If you have any question, please raise your hand."]

[Comprehension questions]

		Asset card	
Scenario O	**Red** pays $20	1 2 3 | 4 5 6 7 8 9 10	**Blue** pays $20
Scenario E	**Red** pays $20	1 2 3 4 5 6 7 8 9 | 10	**Blue** pays $20

8. In the example described in the picture above, suppose the scenario card has an odd number on it and the asset card is 8, what will be the values of the Red asset and the Blue asset, respectively?
   a) $20; $0
   b) $0; $20
9. In the example described in the picture above, suppose the scenario card has an even number on it and the asset card is 8, what will be the values of the Red asset and the Blue asset, respectively?
   a) $20; $0
   b) $0; $20

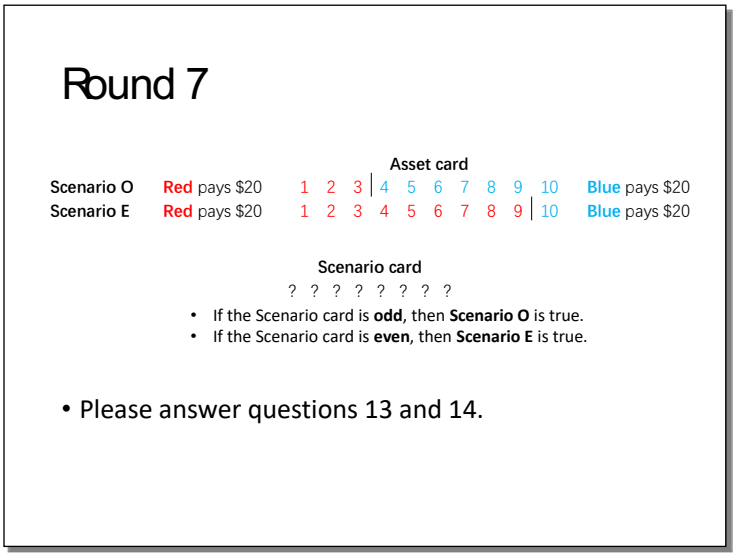
[Example of a compound round]



[Narrated by experimenter]

I will draw the scenario card from a deck of eight cards. The cards are numbered from 1 to 8, one card for each number.

[Example of an ambiguous round]



[Narrated by experimenter]

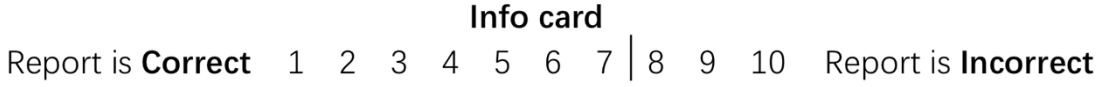
I will randomly draw the scenario card from a deck of eight cards. This deck of cards is constructed according to some rule. Its composition can range from all cards being odd to all cards being even.

Part 2

[Start video.]

In this part, similar to Part 1, a randomly drawn asset card will determine the values of the assets in each round. What's new is that before you answer the questions in each round, an "Analyst" will make a report on the values of the assets. However, the analyst is not always right. Whether the Analyst's report is correct depends on the "info card", which is a card that I will draw randomly from a second deck of cards. Similar to the deck of cards from which I draw the asset card, there are 10 cards in this deck. The cards are numbered from 1 to 10, one card for each number. In each round, you will see a picture describing how the info card determines the correctness of the Analyst's report.

Let me give you an example. You may see the following picture.



This picture indicates that if the info card is between 1 and 7, then the Analyst will make a correct report; if the info card is between 8 and 10, then the Analyst will make an incorrect report. I will publicly announce the report of the Analyst, but I will not reveal whether the report is correct until the end of the experiment. Also note that since the random draws of info cards across rounds are independent, the Analyst's correctness is not correlated across rounds.

[Stop video.]

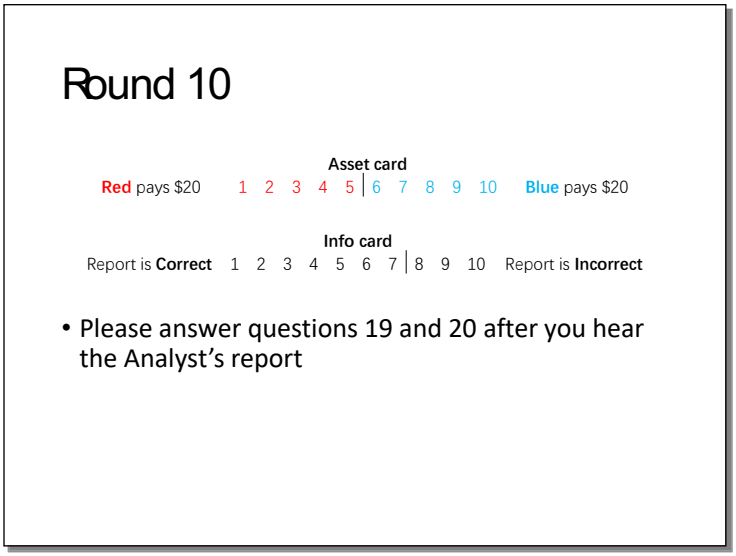
[Experimenter says "If you have any question, please raise your hand."]

[Comprehension questions]

Info card
Report is Correct 1 2 3 4 5 6 7 | 8 9 10 Report is Incorrect

10. Suppose the Red asset is worth $20 and the Blue asset is worth $0. The Analyst's correctness is described in the picture above. If the info card is between 1 and 7, what will be the Analyst's report?
    a) "The Red asset is worth $20 and the Blue asset is worth $0."
    b) "The Red asset is worth $0 and the Blue asset is worth $20."
11. Suppose the Red asset is worth $0 and the Blue asset is worth $20. The Analyst's correctness is described in the picture above. If the info card is between 8 and 10, what will be the Analyst's report?
    a) "The Red asset is worth $20 and the Blue asset is worth $0."
    b) "The Red asset is worth $0 and the Blue asset is worth $20."
12. The correctness of the Analyst across rounds is not correlated.
    a) True
    b) False

[Example of a round]



Part 3

[Start video.]

In this part, it will be uncertain how the info card determines the correctness of the Analyst's report. For example, you may see the following picture.

		Info card	
Scenario O	Report is **Correct**	1 2 3 4 5 | 6 7 8 9 10	Report is **Incorrect**
Scenario E	Report is **Correct**	1 2 3 4 5 6 7 8 9 | 10	Report is **Incorrect**

There are two scenarios. In Scenario O, the Analyst makes a correct report if the info card is between 1 and 5, and he makes an incorrect report otherwise. In Scenario E, the Report is the Correct if the info card is between 1 and 9, and the report is incorrect otherwise. Which scenario is the true scenario depends on the scenario card, which is randomly drawn from a deck of eight cards. If the number on the scenario card is odd, Scenario O will become the true scenario. If the number on the scenario card is even, Scenario E will become the true scenario. Note that the draws of cards are not correlated across rounds. I will announce the report of the Analyst before you answer the questions, but I will not reveal any card before the end of the experiment.

[Stop video.]

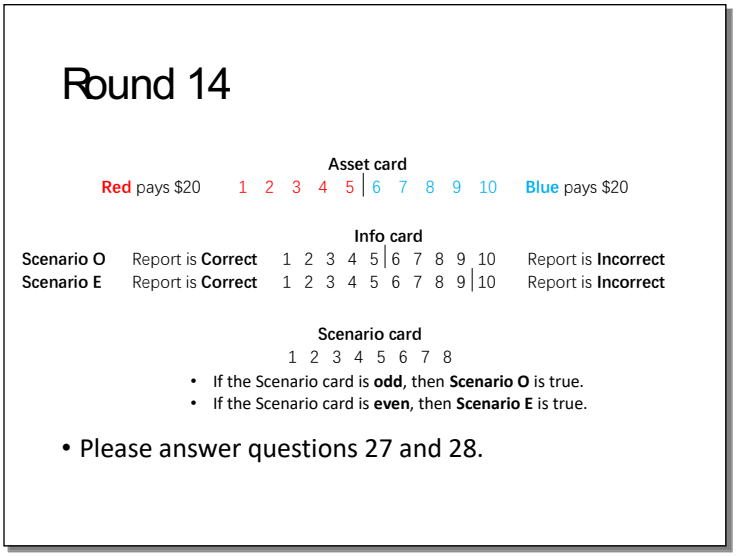
[Experimenter says "If you have any question, please raise your hand."]

[Comprehension questions]

		Info card	
Scenario O	Report is **Correct**	1 2 3 4 5 | 6 7 8 9 10	Report is **Incorrect**
Scenario E	Report is **Correct**	1 2 3 4 5 6 7 8 9 | 10	Report is **Incorrect**

13. In the example described in the picture above, If the scenario card has an odd number on it, the info card is 6, and the Red asset is worth $20, what will be the Analyst's report?
    a) "The Red asset is worth $20 and the Blue asset is worth $0."
    b) "The Red asset is worth $0 and the Blue asset is worth $20."
14. In the example described in the picture above, If the scenario card has an even number on it, the info card is 6, and the Red asset is worth $0, what will be the Analyst's report?
    a) "The Red asset is worth $20 and the Blue asset is worth $0."
    b) "The Red asset is worth $0 and the Blue asset is worth $20."
15. The draws of cards are not correlated across rounds.
    a) True
    b) False

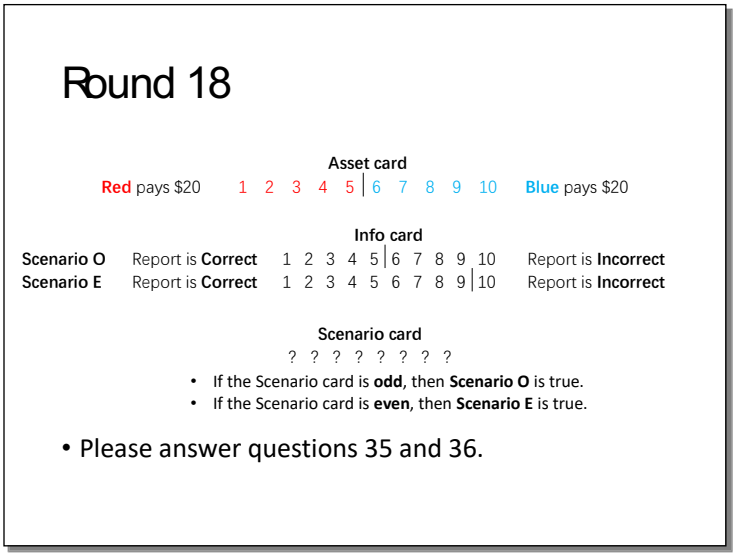
[Example of a compound round]



[Narrated by experimenter]

I will randomly draw the scenario card from a deck of eight cards. The cards are numbered from 1 to 8, one card for each number.

[Example of an ambiguous round]



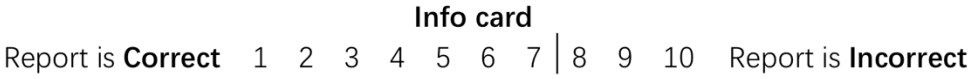
[Narrated by experimenter]

I will randomly draw the scenario card from a deck of eight cards. This deck of cards is constructed according to some rule. Its composition can range from all cards being odd to all cards being even.

Part 5

[Start video.]

In this part, it will be uncertain how the asset card determines the values of the assets. For example, you may see the following picture describing the two scenarios.

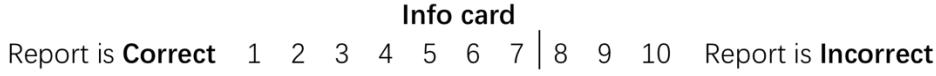


Which scenario is the true scenario depends on the scenario card, which is randomly drawn from a deck of eight cards. If the number on the scenario card is odd, Scenario O will become the true scenario. If the number on the scenario card is even, Scenario E will become the true scenario. Before you answer the questions, an Analyst will make a report on the values of the assets. The correctness of the Analyst's report will depend on the info card. There will not be multiple scenarios for how the info card determines the correctness of the report. Note that the draws of cards are not correlated across rounds. I will announce the report of the Analyst before you answer the questions, but I will not reveal any card before the end of the experiment.

[Stop video.]

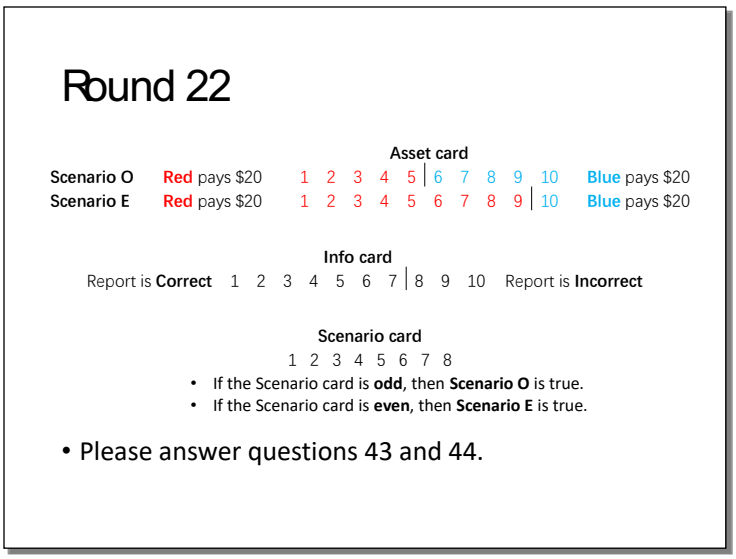
[Experimenter says "If you have any question, please raise your hand."]

[Comprehension questions]



16. In the example described in the picture above, if the scenario card has an odd number on it, the asset card is 5, and the info card is between 1 and 7, what will be the Analyst's report?
    a) "The Red asset is worth $20 and the Blue asset is worth $0."
    b) "The Red asset is worth $0 and the Blue asset is worth $20."
17. In the example described in the picture above, if the scenario card has an even number on it, the asset card is 7, and the info card is between 8 and 10, what will be the Analyst's report?
    a) "The Red asset is worth $20 and the Blue asset is worth $0."
    b) "The Red asset is worth $0 and the Blue asset is worth $20."
18. The draws of cards are not correlated across rounds.
    a) True
    b) False

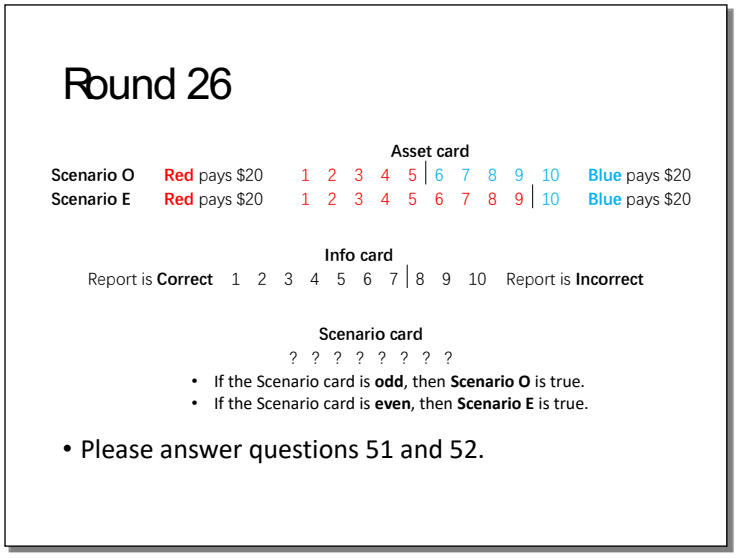
[Example of a compound round]



[Narrated by experimenter]

I will randomly draw the scenario card from a deck of eight cards. The cards are numbered from 1 to 8, one card for each number.

[Example of an ambiguous round]



[Narrated by experimenter]

I will randomly draw the scenario card from a deck of eight cards. This deck of cards is constructed according to some rule. Its composition can range from all cards being odd to all cards being even.

Exit survey

1. What is your gender?
   a) Male
   b) Female

c) Others
d) I prefer not to answer

2. What is your age?
   a) _____
   b) I prefer not to answer
3. How many economics and psychology experiments have you participated in?
   a) 0
   b) 1
   c) 2
   d) 3
   e) More than 3
4. Are you familiar with Bayes' theorem (alternatively Bayes' rule or Bayes' law) in probability theory?
   a) Very familiar
   b) Somewhat familiar
   c) Not familiar
5. Are you currently a student?
   a) Yes
   b) No

If your answer to Question 4 is yes,

6. What year are you in?
   a) Freshman
   b) Sophomore
   c) Junior
   d) Senior or above
   e) Master student
   f) PhD student
7. What are your majors? (If applicable)

_____

If your answer to Question 4 is no,

8. What's your highest level of education?
   a) High school diploma
   b) Bachelor's degree
   c) Postgraduate degree
9. What were your majors in college (and graduate school)? (If applicable)

_____

10. If you have comments, suggestions or questions about the experiment, please write below. Thank you!