INSTRUCTIONS

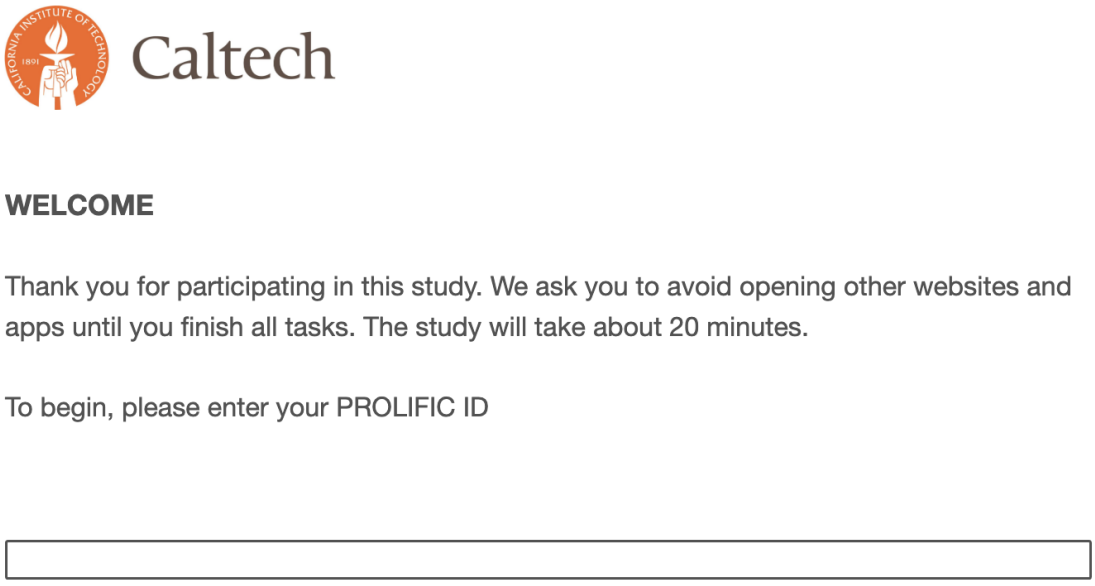
Table 1: Design

Treatment		Part 1 own beliefs 6 rounds	Part 2 others' beliefs 6 rounds
T0	elicit observe report	**own prior** **signal acc., signal** **own posterior**	**own prior** **signal acc., signal** **own posterior**
T1	elicit observe report	**own prior** **signal acc., signal** **own posterior**	**own prior** **other's prior, signal acc., signal** **other's conditional posterior**
T2	elicit observe report	**own prior** **signal acc., signal** **own posterior**	**own prior** **others' prior, signal acc.** **others' expected posterior**

Contents

1 Screenshots of Part 1, all Treatments

1.1 Instructions in Part 1, all Treatments



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STRUCTURE AND PAYMENT

The study consists of two parts with 6 rounds in each part.

You will get **$4** for completing the study. In addition, you might get a $10 bonus. One out of five participants will be selected for the bonus group. If you are selected, then one of the questions in one of the rounds will be randomly chosen for bonus payment. **Your chances of winning a $10 bonus depend on your answer in this selected question.**

We will explain later on how the bonus is calculated.

Two important things to remember:

(1) The bonus payment is designed in such a way that **your highest chance of getting the bonus is achieved when you honestly state your best assessment in every question**.

(2) Since you do not know which question will be chosen for the bonus payment, please **answer all questions as if it is the question that determines your bonus**.

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PART 1: WHAT HAPPENS IN EACH ROUND

There are 6 rounds in this part. In each round, we will ask you to evaluate different statements.

We ask you not to browse the internet or consult with anyone when answering these questions. We are truly interested in **your opinions**.

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PART 1: WHAT HAPPENS IN EACH ROUND

As an example, consider the following statement:

Slugs have four noses.

Question 1 will ask you to evaluate the chance that this statement is **TRUE**.

You will submit your guess by entering a number between 0 and 100, where 0 means the statement is FALSE for sure (0% true) and 100 means that the statement is TRUE for sure (100% true). If, say, you submit number 17, this means that you think there is a 17% chance that the statement is TRUE and 83% chance that it is FALSE.

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HOW THE BONUS PAYMENT IS DETERMINED

Say this question is chosen for a bonus payment. Then, whether you get the bonus or not depends on your submitted guess and on whether the statement is actually **TRUE**.

In short, your **chances of getting the $10 bonus are the HIGHEST if you truthfully report your best guess regarding the statement** on the screen.

I want to know more details about the bonus

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HOW THE BONUS PAYMENT IS DETERMINED

Say this question is chosen for a bonus payment. Then, whether you get the bonus or not depends on your submitted guess and on whether the statement is actually **TRUE**.

In short, your **chances of getting the $10 bonus are the HIGHEST if you truthfully report your best guess regarding the statement** on the screen.

I want to know more details about the bonus

Let's call **A** your **submitted guess, i.e., this is the chance that the statement is TRUE.** This is a number between 0 and 100.

To calculate whether you receive the bonus, the computer will randomly select a number **N** between 0 and 100 inclusive:

- if **N** is greater or equal to **A**, then you will receive $10 with **N% chance**
- if **N** is less than **A,** then you will receive $10 if the statement is **TRUE**

You can think of it like the following:
You are either going to get $10 if your guess is correct, or you will get $10 with an N% chance. So you want to report your guess such that it is the largest value for which you'd rather bet on the guess being correct rather than getting $10 with an N% chance.

If this sounds confusing, don't worry, it is simple: **reporting your best assessment truthfully** maximizes the chance of winning the bonus.

To check your understanding, please answer the following question.

Consider the following statement: "There are 50 states in the United States of America."

Say, you believe that there is an 80% chance that this statement is correct. However, you entered 62% instead of 80% when asked to evaluate this statement. If this question is selected for bonus payment, then your chances of winning the bonus of $10 are

- 62%
- 80%
- higher than if you have entered 80% instead of 62%
- lower than if you have entered 80% instead of 62%

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PART 1: WHAT HAPPENS IN EACH ROUND

Slugs have four noses.

In Question 2, we will ask you again to evaluate the chances that this statement is **TRUE**. But this time, to aid your assessment, the computer will run a test on the statement.

The test will not be perfectly accurate but it will be informative.

We will tell you the "**test reliability,**" which is how accurate the test is. The test result can be either **POSITIVE** or **NEGATIVE**. You will be told the exact chance that each test result occurs depending on whether the statement is true or false. You will observe the test results and will submit your best guess about the chances that the statement is **TRUE** given this test result.

If Question 2 is chosen for payment, then we will use the same procedure as the one used for Question 1 to determine whether you receive a bonus of $10 or not.

PART 1: WHAT HAPPENS IN EACH ROUND

Slugs have four noses.

Here is one way to think about the test.

Say, for example, that **the test reliability is 90%**. The computer knows whether the statement is true or false. The computer has a bag with 100 balls; each ball has a label POSITIVE or NEGATIVE written on it.

The composition of the bag depends on whether the statement is **TRUE** or **FALSE**:

- If the statement is **TRUE**, then there are **90 POSITIVE** balls in the bag and **10 NEGATIVE** ones.
- If the statement is **FALSE**, then there are **90 NEGATIVE** balls in the bag and **10 POSITIVE** ones.

The computer **selects one ball at random** from the bag and reveals it to you: a POSITIVE ball is more likely when the statement is **TRUE** and a NEGATIVE ball is more likely when the statement is **FALSE**.

In other words, in this example, **the test result has a 90% accuracy in indicating whether the statement is TRUE or FALSE.**

To check your understanding, please answer the following question.

Say, test reliability is 65%. It means that

- If the statement is FALSE, there is a 35% chance that the test result is NEGATIVE
- If the statement is TRUE, there is a 65% chance that the test result is NEGATIVE
- If the statement is TRUE, there is a 65% chance that the test result is POSITIVE
- If the statement is FALSE, there is a 65% chance that the test result is POSITIVE

PART 1: FINAL INSTRUCTIONS

In today's study, the test reliability will be either **90%** or **65%**.

TWO THINGS TO REMEMBER

- It is always **in your best interest to report your true assessment** given the information you receive in every question.
- **The statements and the test reliability will change from round to round**, so please pay close attention to it.

1.2 Round in Part 1, all Treatments

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PART 1, ROUND 1

Consider the following statement:

> Since the end of World War II, the average GDP growth under Republican presidents has been higher than that under Democratic presidents.

Question 1

What do you think is the chance that this statement is TRUE?

Please enter a number between 0 and 100, where 0 means the statement is FALSE for sure, 100 means the statement is TRUE for sure.

I think the chance is ☐

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PART 1, ROUND 1

Since the end of World War II, the average GDP growth under Republican presidents has been higher than that under Democratic presidents.

Question 2

We will ask you to evaluate this statement again, but this time, you will first conduct a test to aid your assessment.

You reported that you think there is a **37%** chance that this statement is **TRUE**.

The **test accuracy is 65%**, which means:

- If the statement is **TRUE**, the test result is POSITIVE in 65 out of 100 cases and NEGATIVE in the remaining 35 cases
- If the statement is **FALSE**, the test result is NEGATIVE in 65 out of 100 cases and POSITIVE in the remaining 35 cases

Conduct the Test

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PART 1, ROUND 1

Since the end of World War II, the average GDP growth under Republican presidents has been higher than that under Democratic presidents.

Question 2

We will ask you to evaluate this statement again, but this time, you will first conduct a test to aid your assessment.

You reported that you think there is a **37%** chance that this statement is **TRUE**.

The **test accuracy is 65%**, which means:

- If the statement is **TRUE**, the test result is POSITIVE in 65 out of 100 cases and NEGATIVE in the remaining 35 cases
- If the statement is **FALSE**, the test result is NEGATIVE in 65 out of 100 cases and POSITIVE in the remaining 35 case

Test is NEGATIVE

What is the chance that the statement above is **TRUE**?

I think the chance is ☐

2 Screenshots of Part 2, Treatment T1

2.1 Instructions in Part 2, Treatment T1

PART 2

There are 6 rounds in Part 2. In each round, you will observe **a new statement** and will answer two questions.

In Question 1, you will be asked to **evaluate the chances that the presented statement is TRUE**. You can report any number between 0 and 100.

If this question is chosen for a bonus payment, then we will use the same procedure as in Part 1 to determine whether you will receive a $10 bonus or not. As always, **reporting your best guess maximizes the chance that you will win the bonus**.

PART 2

A few days ago, we conducted **another study** on Prolific. This study was very similar to Part 1 which you just completed.

In Question 2, we will ask you to **guess the answers submitted by PROLIFIC participants** from this previous study. We will refer to PROLIFIC participants from the previous study as **OTHERs** for brevity.

Please proceed to see more details about Question 2.

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PART 2: MORE DETAILS ABOUT QUESTION 2

In each round, past participants (OTHERs) observed a statement (the same statement you will observe in Question 1), reported their **initial guesses** regarding the chance that the statement was correct, **conducted tests** on the statement with known accuracy, observed the **test results**, and, finally, reported their **final guesses** about the chance that the statement was correct.

Naturally, different people in the past study reported different initial guesses about the presented statement.

For Question 2, we selected one participant from this past study, the OTHER. We will tell you the **initial guess** of this OTHER, the **accuracy of the test** that he/she conducted (either **90%** or **65%**), and the **test result**.

Your task in Question 2 will be to guess the **final guess** of this OTHER after he/she observed the test result.

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PART 2: MORE DETAILS ABOUT QUESTION 2

If Question 2 is chosen for bonus payment, then your probability of receiving the $10 bonus depends on your stated guess about the OTHER's final guess and the actual final guess of the OTHER.

Reporting truthfully your best guess maximizes your chances of receiving $10.

I want to know more about the bonus payment

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PART 2: MORE DETAILS ABOUT QUESTION 2

If Question 2 is chosen for bonus payment, then your probability of receiving the $10 bonus depends on your stated guess about the OTHER's final guess and the actual final guess of the OTHER.

Reporting truthfully your best guess maximizes your chances of receiving $10.

I want to know more about the bonus payment

Let's call **A** your **submitted guess, i.e., this is the chance that you think the OTHER reported after observing the test result.** This is a number between 0 and 100.

Let's call **B** the **actual report of the OTHER** from the past study. This is also a number between 0 and 100.

To calculate whether you receive the bonus, the computer will randomly select a number **N** between 0 and 100 inclusive:

- if **N** is greater or equal to **A**, then you will receive $10 with **N% chance**
- if **N** is less than **A,** then you will receive $10 with **B% chance**

If this sounds confusing, don't worry, it is simple: **reporting your best guess about the OTHER's answer truthfully** maximizes the chance of winning the bonus.

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PART 2: SUMMARY

In each round of Part 2, you will observe a new statement.

First, you will report your **initial assessment** of the chance that this statement is **TRUE**.

Second, you will report **your guess about the final number submitted by the OTHER** from the past experiment. What do you know about this OTHER?

- You will be told the **initial guess** of the OTHER about the statement.
- The OTHER conducted a **test with known accuracy** on the statement and **observed the test result**. You will be told the test's accuracy: it will be either **90%** or **65%**. You will also be told the **test result** that the OTHER observed.
- After observing the test result, the OTHER reported the **final guess** about the chance that the statement was **TRUE**.
- Your task is to guess this final guess submitted by the OTHER.

PAY ATTENTION to the details in each round (statements, initial guess of the OTHER, test accuracy, test result) as they will change from round to round.

2.2 Round in Part 2, Treatment T1

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PART 2, ROUND 1

Consider the following statement:

Pierre is the capital city of the U.S. state of South Dakota.

Question 1

What do you think is the chance that this statement is TRUE?

Please enter a number between 0 and 100, where 0 means the statement is FALSE for sure, 100 means the statement is TRUE for sure.

I think the chance is ☐

PART 2, ROUND 1

Pierre is the capital city of the U.S. state of South Dakota.

Question 2

You reported a **3%** chance that this statement is **TRUE**.

We have asked the same question to OTHERs in the previous study and selected the OTHER who reported the **10%** initial chance that this statement is **TRUE**.

Then, this OTHER conducted a test with an accuracy of **65%** and observed the result of this test.

Test was POSITIVE

After that, the OTHER reported the final guess about the chance that the statement above is **TRUE**.

What do you think was the final guess of the OTHER?

I think the final guess of the OTHER was ☐

3 Screenshots of Part 2, Treatment T2

3.1 Instructions in Part 2, Treatment T2

PART 2

There are 6 rounds in Part 2. In each round, you will observe **a new statement** and will answer two questions.

In Question 1, you will be asked to **evaluate the chances that the presented statement is TRUE**. You can report any number between 0 and 100.

If this question is chosen for a bonus payment, then we will use the same procedure as in Part 1 to determine whether you receive a $10 bonus or not. As always, **reporting your best guess maximizes the chance that you will win the bonus.**

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PART 2

A few days ago, we conducted **another study** on Prolific. This study was very similar to Part 1 which you just completed.

In Question 2, we will ask you to **guess the answers submitted by PROLIFIC participants** from this previous study. We will refer to PROLIFIC participants from the previous study as **OTHERs** for brevity.

Please proceed to see more details about Question 2.

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PART 2: MORE DETAILS ABOUT QUESTION 2

In each round, past participants (OTHERs) observed a statement (the same statement you will observe in Question 1), reported their **initial guesses** regarding the chance that the statement was correct, **conducted tests** on the statement with known accuracy, observed the **test results**, and, finally, reported their **final guesses** about the chance that the statement was correct.

Naturally, different people in the past study reported different initial guesses about the presented statement.

For Question 2, we selected a group of participants who **all reported the SAME initial guess.** We will tell you what this guess is.

Your task in Question 2 will be to **guess the AVERAGE of the final answers submitted by this group of OTHERs who all share the same initial guess**.

As in Part 1, the accuracies of the tests that the OTHERs conducted were either **90%** or **65%**. In each round, we will tell you the test accuracy. Since the tests are informative but not perfect, this means that **for the same statement, some** OTHERs might have received a **POSITIVE** test result, while **some** received a **NEGATIVE** test result. Each OTHER received one test result.

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PART 2: MORE DETAILS ABOUT QUESTION 2

If Question 2 is chosen for bonus payment, then your probability of receiving the $10 bonus depends on your stated guess about the average of final guesses of OTHERs and the actual average of the described group of OTHERs.

Reporting truthfully your best guess maximizes your chances of receiving $10.

I want to know more about the bonus payment

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PART 2: MORE DETAILS ABOUT QUESTION 2

If Question 2 is chosen for bonus payment, then your probability of receiving the $10 bonus depends on your stated guess about the average of final guesses of OTHERs and the actual average of the described group of OTHERs.

Reporting truthfully your best guess maximizes your chances of receiving $10.

I want to know more about the bonus payment

Let's call **A** your **submitted guess, i.e., this is your assessment of the average guess submitted by the group of described OTHERs.** This is a number between 0 and 100.

Let's call **B** the **actual average final guess of this group of OTHERs**. This is also a number between 0 and 100.

To determine whether you receive a bonus, the computer randomly generates a number between 0 and 100, with each number being equally likely. Let's call this number **N**:

- if **N** is greater or equal to **A**, then you get $10 with **N% chance**
- if **N** is less than **A,** then you get $10 with **B% chance**

If this sounds confusing, don't worry, it is simple: **reporting your best guess about the average of the described group of OTHERs truthfully** maximizes the chance of winning the bonus.

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PART 2: REMINDER ABOUT WHAT AVERAGE MEANS

Say, for instance, that 80% of OTHERs reported 50 and 20% of OTHERs reported 15. Then the average guess of this group of OTHERs is

$$0.80 * 50 + 0.20 * 15 = 43$$

Let's do one more example. Say, 25% of OTHERs reported 10, 50% of OTHERs reported 60, and 25% of OTHERs reported 94. In this case, the average guess of this group of OTHERs is

$$0.25 * 10 + 0.50 * 60 + 0.25 * 94 = 56$$

To check your understanding, please answer the following question.

Suppose 30% of OTHERs reported 30 and 70% of OTHERs reported 10. Then, the average guess of this group of OTHERs is

- 10
- 13
- 16
- 19

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PART 2: SUMMARY

In each round of Part 2, you will observe a new statement.

First, you will report **your initial assessment** of the chance that this statement is **TRUE**.

Second, you will report **the average final guess of the group of OTHERs** from the past experiment. What do you know about this group of OTHERs?

- Each of them reported **the same initial guess** about the chance that the statement is **TRUE**. You will be told this initial guess.
- Each of them conducted a **test with known accuracy** on the statement and **privately observed the test result**. You will be told this test's accuracy: it will be either **90%** or **65%**.
- Each of them observed one test result. You will not observe the test results received by the OTHERs.
- After that, each OTHER reported **the final guess** about the chance that the statement was **TRUE**.
- Your task will be to guess the average of the final guesses submitted by this group of OTHERs.

PAY ATTENTION to the details in each round (statements, initial guess of OTHERs, test accuracy) as they will change from round to round.

3.2 Round in Part 2, Treatment T2

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PART 2, ROUND 1

Consider the following statement:

The astronauts aboard the International Space Station (ISS) can see the sunrise and sunset sixteen times in 24 hours.

Question 1

What do you think is the chance that this statement is TRUE?

Please enter a number between 0 and 100, where 0 means the statement is FALSE for sure, 100 means the statement is TRUE for sure.

I think the chance is ☐

PART 2, ROUND 1

The astronauts aboard the International Space Station (ISS) can see the sunrise and sunset sixteen times in 24 hours.

Question 2

You reported a **4%** chance that this statement is **TRUE**.

We have asked the same question to OTHERs in the previous study and selected **a group of OTHERs** who all reported a **20%** initial chance that this statement is **TRUE**.

Then, each OTHER conducted a test with an accuracy of **65%** and **privately** observed the test result. After that, each OTHER **reported a final guess** about the chance that the statement above is **TRUE**.

What do you think is the average final guess of this group of OTHERs?

I think the average final guess of this group of OTHERs is

4 Screenshot of the last surprise round

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Last Question:

For this last question, we will randomly select 2 participants to receive additional bonus payment given their decision below.

Recall the following statement:

Kenya National Bureau of Statistics reports that more than 90% of Kenyans own a mobile phone.

You reported that the following statement is TRUE for sure, i.e., 100% TRUE.

Consider the following bet:

- You will earn $1 if the statement is TRUE
- You will lose $10 is the statement is FALSE

If you are selected to receive payment for this question, we will give you an upfront $10. This means that if you take the bet and the statement is actually TRUE as you said, then you will earn a total of $11 ($10 + $1), but if the statement is FALSE then you will earn a total of $0 ($10 - $10). If you choose not to take the bet and you are selected to receive payment for this question, then you will receive $10.

I will take the bet

I will not take the bet

5 Screenshot of answers

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Thank you for participating in our study!

If you are curious to know which statements were true and which were false, here are the correct answers:

TRUE STATEMENTS

Rhino horn is made up of keratin - the same protein which forms the basis of our hair and nails.

According to U.S. Bureau of Labor Statistics, the current unemployment rate in the U.S. are similar for both men and women, ranging between 3% and 4%.

Pierre is the capital city of the U.S. state of South Dakota.

The astronauts aboard the International Space Station (ISS) can see the sunrise and sunset sixteen times in 24 hours.

Kenya National Bureau of Statistics reports that more than 90% of Kenyans own a mobile phone.

Botanically speaking, strawberries are not berries because their seeds are on the outside.

FALSE STATEMENTS

Elephants are the only mammals that can't jump.

The ancient city of Rome was built on three hills.

United States Census Bureau

According to the U.S. Census, in 2023, Black and African American residents comprised about 20% of the population in the United States.

Since the end of World War II, the average GDP growth under Republican presidents has been higher than that under Democratic presidents.

One cup of boiled broccoli contains more calcium than 10 dried figs.

In 2023, the United States spent more than 10% of the federal budget on foreign aid.