Welcome! This study has multiple decision problems and will take at least xx to xx minutes to complete. At the end of the study, each decision problem is equally likely to be randomly chosen to determine your payoff. So, please treat each of them seriously.

Task 1: In this task, you will engage in 5 decision-making problems. In each decision problem, you will weigh up all information to guess the Target Value of a hypothetical asset:

**Target Value = the Value of the Asset (V)**

Your Target Value depends completely on the value of the asset (V).

You can maximize your potential payoff in each decision problem by correctly predict the value of the asset.

(Block Button: Learn more about V)

**Asset value V**

A graph of a normal distribution

Description automatically generated

In each decision problem, a hypothetical asset with a value, V, ranging from 50 to 150, will be randomly selected by the computer.

As shown in the figure, the height of each bar shows the chance of different values being selected. 100 is the average of all potential values, and it has the highest chance of being selected as V. Values closer to this **Mean Value**, 100, are more likely to be selected as V than those further away from 100.

You will not observe V, the value of the selected asset directly, but you will see four pieces of information about V. The **Mean Value**, 100, is always one of them.

(Block button: “The other three pieces of information”)

**Three signals**

A graph of a number in evaluation report

Description automatically generatedAfter V is selected, three signals about V, ranging from V-50 to V+50, will be randomly selected by the computer.

Again, the height of each bar shows the chance of each number being selected as a signal. The shape is exactly the same as the one in the Asset Value figure you have seen in the last screen. The selected value V is the average of all potential signals, and it has the highest chance of being selected as a signal.

Values closer to V are more likely to be selected as a signal than those further away from V.

(Block button: “Proceed to Decision Problems”)

Below is an example of the decision screen. In each decision problem, you will see three signals and the mean of all potential asset values (Mean Value).

(Table for stage 0)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Signal 1 | Signal 2 | Signal 3 | Mean Value |
| Information | 98 | 103 | 99 | 100 |
| Allocation of tokens |  |  |  |  |

In this example, your three signals show 98, 103 and 99. You will be given 100 tokens to allocate toward the information. The more tokens you assign to a certain piece of information, the more important you consider it is when predicting the target value:

**Target value = the Value of the Asset (V)**

To take a guess, you need to input your allocated tokens into their respective boxes.

(screenshot\* of the example \* with the guess of target value)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Signal 1 | Signal 2 | Signal 3 | Mean Value |
| Information | 98 | 103 | 99 | 100 |
| Allocation of tokens | 35 | 10 | 35 | 20 |

In this example, you have 35 tokens allocated to 98, 10 tokens to 103, 35 tokens to 99, and 20 tokens to the mean value. Your guess of the target value is calculated by adding up the weighted values of each allocation. The formula used is: (35% × 98) + (10% × 103) + (35% × 99) + (20% × 100) = 99.25.

You can adjust your allocation of the tokens until you are satisfied with your guess. Once you have optimized your allocation, click the "Next" button to complete the pricing task.

The closer your guess is to the Target Value, the higher your payoff from this decision problem will be. The payoff will be calculated accordingly to the formula below:

**500–** **(Your Assigned Price – Target Value) 2**

**You can expect to earn more by assigning a price that is closer to the Target value** because the deduction is smaller the closer your assigned price is to the Target Value (V).

At the end of the study, one decision problem will be randomly selected for calculating your earnings in this study. Each decision problem is equally likely to be selected. The feedback screen will show (your allocation of tokens,) your guess of the Target value, the value of the asset (V), the peer price and your target value in that decision problem.

In this example, suppose V is 105.

Your earnings are 500 – (99.25– 105)2 =466.9375 points

**Programmed Warning if not between 0 and 100 or not sum up to 100:**

The number of tokens you assign under each piece of information must be between 0 and 100, and all 100 tokens must be used.

**(BETWEEN STAGE 0 AND STAGE 1)**

You will see two sets of group culture statements, one set per screen. In each set, please choose a statement that resonates more with you. There is no “correct” answer. Your answer should depend on how you feel about different group cultures.

(next screen)

Choose a statement below that resonates more with you to have a higher chance of working with group members that resonate with your choice.

* I prefer a group culture that values individual talents and autonomy, where each member is empowered to navigate their own path.
* I prefer a group culture that prioritizes community and collective responsibility, where all members work together towards shared goals.

(next screen)

Choose a statement below that resonates more with you to have a higher chance of working with group members that resonate with your choice.

* I prefer a group culture that prioritizes careful planning and risk management to achieve our group’s goals.
* I prefer a group culture that values taking risks and embracing the unknown to achieve our group’s goals.

(grouping page, ask subjects to wait for 10? Minutes, if can’t be grouped, we will just record the Stage 0 data and direct them to the cultural and demographic questionnaires and pay them.)

**(STAGE 1)**

Task 2: In this task, you will engage in 10 decision-making problems in a group of three. In each decision problem, each group member will weigh up all information to guess the Target Value of a hypothetical asset:

**Target Value = 50% of the Value of the Asset (V) + 50% of the Peer Price**

Your Target Value depends half on the value of the asset (V) and half on your “peer price.”

You can maximize your potential payoff in each round by correctly predicting the value of the asset (V) and the peer price and valuing them equally.

(Block Button: Learn more about V)

(Programing instructions: Please repeat exactly the same instructions for V and signals as in Stage 0)

**Asset value V**

A graph of a normal distribution

Description automatically generated

In each decision problem, a hypothetical asset with a value, V, ranging from 50 to 150, will be randomly selected by the computer.

As shown in the figure, the height of each bar shows the chance of different values being selected. 100 is the average of all potential values, and it has the highest chance of being selected as V. Values closer to this **Mean Value**, 100, are more likely to be selected as V than those further away from 100.

You will not observe V, the value of the selected asset directly, but you will see four pieces of information about V. The **Mean Value**, 100, is always one of them.

(Block button: “The other three pieces of information”)

**Three signals**

A graph of a number in evaluation report

Description automatically generatedAfter V is selected, three signals about V, ranging from V-50 to V+50, will be randomly selected by the computer.

Again, the height of each bar shows the chance of each number being selected as a signal. The shape is exactly the same as the one in the Asset Value figure you have seen in the last screen. The selected value V is the average of all potential signals, and it has the highest chance of being selected as a signal.

Values closer to V are more likely to be selected as a signal than those further away from V.

(Block button: “Proceed to Decision Problems”)

**\*\*\* Vary by condition\*\*\***

Below is an example of the decision screen. In each decision problem, {you will see three signals and the mean of all potential asset values (Mean Value)/each signal belongs to a group member with a {hidden/specified~~/ hidden or specified~~} preference for group culture indicated below. Members share the same information. ~~You will be regrouped in each decision problem~~, and your member number will also be randomized across decision problems.}

Table for signals without ownership

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Signal 1 | Signal 2 | Signal 3 | Mean Value |
| Information | 98 | 103 | 99 | 100 |
| Allocation of tokens |  |  |  |  |

Table for with ownership but hidden preference

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Member 1 | Member 2 (me) | Member 3 | Mean Value |
| Information | 98 | 103 | 99 | 100 |
| Allocation of tokens |  |  |  |  |

(Table for with ownership & specified preference)

* I prefer a group culture that values individual talents and autonomy, where each member is empowered to navigate their own path.
* I prefer a group culture that prioritizes community and collective responsibility, where all members work together towards shared goals.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Member 1 | Member 2 (me) | Member 3 | Mean Value |
|  |  |  |  |  |
| Information | 98 | 103 | 99 | 100 |
| Allocation of tokens | 35 | 10 | 35 | 20 |

In this example, { your three signals show xxx, xxx and xxx./ your signal shows xxx, the signals of your two group members show xxx and xxx./ your signal shows xxx, the signals of your two group members show xxx and xxx, and the other group members prefer a group culture that values…… } {Each group member/You} will be given 100 tokens to allocate toward the information. **\*\*\* END Vary by condition\*\*\***

The more tokens you assign to a certain piece of information, the more important you consider it is when predicting the target value:

**Target value = 50% of the Value of the Asset (V) + 50% of the Peer Price**

(Programmed as a note at the bottom of the screen in Stage 1: The value (V) of the asset is randomly selected and may vary for each decision problem. The "peer price" is calculated as the average of your two group members' guesses of their own target values.)

To take a guess, you need to input your allocated tokens into their respective boxes.

In this example, you have 35 tokens allocated to 98, 0 tokens to 103, 35 tokens to 99, and 30 tokens to the mean value. Your guess of the target value is calculated by adding up the weighted values of each allocation. The formula used is: (35% × 98) + (0% × 103) + (35% × 99) + (30% × 100) = 98.95.

You can adjust your allocation of the tokens until you are satisfied with your guess. Once you have optimized your allocation, click the "Next" button to complete the pricing task.

The closer your guess is to the Target Value, the higher your payoff from this decision problem will be. The payoff will be calculated accordingly to the formula below:

**500– (Your Assigned Price – Target Value) 2**

**You can expect to earn more by assigning a price that is closer to the Target value** because the deduction is smaller the closer your assigned price is to the Target Value (50% V + 50% Peer Price).

At the end of the study, one decision problem will be randomly selected for calculating your earnings in this study. Each decision problem is equally likely to be selected. The feedback screen will show (your allocation of tokens,) your guess of the Target value, the value of the asset (V), the peer price and your target value in that decision problem.

In this example, suppose V is 105 and the Peer Price is 103. Your target price will be (50% × 105) + (50% × 103) = 104.

Your earnings are 500 – (98.95– 104)2 =474.4975 points

**Programmed Warning if not between 0 and 100 or not sum up to 100:**

The number of tokens you assign under each piece of information must be between 0 and 100, and all 100 tokens must be used.

**(Bonus only shown to participants who completed Task 2 – those grouped successfully)**

**Bonus Task**

There are 5 decision problems in this task. In each decision problem, you will see signals and the mean value from one of the decision problems in your previous task. Your goal is to guess the average number of tokens that the other two group members allocated under each piece of information.

One of the decision problem will be randomly selected for calculating your bonus from this task. The closer your guess is to the **average tokens allocated by your group members**, the higher your bonus will be. The bonus will be calculated accordingly to the formula below:

**Bonus = 1000– (the sum of squared difference between the average allocated tokens and your guess across all four pieces of information)/4**

**You can expect to earn more by assigning tokens in a manner that is closer to your group members’** because the deduction is smaller the closer your guess is to the actual average allocated tokens to each piece of information.

The more tokens other players assign to a piece of information, the more important they consider it is in determining the target value. The number of tokens other players assigned is between 0 and 100, and all 100 tokens are used.



**\*\*\* Vary by condition\*\*\***

Below is an example of the decision screen. In each decision problem, {you will see three signals and the mean of all potential asset values (Mean Value)/each signal belongs to a group member with a {hidden/specified~~/ hidden or specified~~} preference for group culture indicated below. Members share the same information. ~~You will be regrouped in each decision problem~~, and everyone’s member number remains the same as in the previous task.}

Table for signals without ownership

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Signal 1 | Signal 2 | Signal 3 | Mean Value |
| Information | 98 | 103 | 99 | 100 |
| Average tokens allocated by others | 35 | 10 | 35 | 20 |

Table for with ownership but hidden preference

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Member 1 | Member 2 (me) | Member 3 | Mean Value |
| Information | 98 | 103 | 99 | 100 |
| Average tokens allocated by others | 35 | 10 | 35 | 20 |

(+bottom note of the target value and the two cultural preferences)

(Table for with ownership & specified preference)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Member 1 | Member 2 (me) | Member 3 | Mean Value |
|  |  |  |  |  |
| Information | 98 | 103 | 99 | 100 |
| Average tokens allocated by others | 35 | 10 | 35 | 20 |

(+bottom note of the target value and the two cultural preferences)

In this example, your guess is that your two group members allocated 35 tokens to 98, 10 tokens to 103, 35 tokens to 99, and 20 tokens to the mean value.

In this example, suppose the actual average tokens allocated by others are 0 tokens to 98, 50 tokens to 103, 50 tokens to 99, and 0 tokens to the mean value. Your bonus will be: 1000-[(0-35)2 + (50-10)2 + (50-35)2 + (0-20)2]/4 = 137.5 points.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Signal 1 | Signal 2 | Signal 3 | Mean Value |
| Information | 98 | 103 | 99 | 100 |
| Actual  average tokens allocated by others | 0 | 50 | 50 | 0 |
| Your guess | 35 | 10 | 35 | 20 |

**\*\*\* END Vary by condition\*\*\***

**(ADD EXAMPLE OF THE PAYOFF-given we sum across all four items)**

**Questionnaire 1:**

You will be presented with multiple statements. Please read each statement carefully and select how much you agree with each statement (1=strongly disagree; 7=strongly agree).

\*note: perhaps mix the order of the statements in the study to avoid continuous similar statements

I often do "my own thing”

One should live one's life independently of others

I like my privacy

I prefer to be direct and forthright when discussing with people

I am a unique individual

What happens to me is my own doing

When I succeed, it is usually because of my abilities

I enjoy being unique and different from others in many ways

It annoys me when other people perform better than I do

Competition is the law of nature

When another person does better than I do, I get tense and aroused

Without competition, it is not possible to have a good society

Winning is everything

I must do my job better than others

I enjoy working in situations involving completion with others

Some people emphasize winning; I'm not one of them

The well-being of my co-workers is important to me

If a co-worker gets a prize, I would feel proud

If a relative were in financial difficulty, I would help within my means

It is important to maintain harmony within my group

I like sharing little things with my neighbors

I feel good when I cooperate with others

My happiness depends very much on the happiness of those around me

To me, pleasure is spending time with others

I would sacrifice an activity that I enjoy very much if my family did not approve of It

I would do what would please my family, even if I detested that activity

Before taking a major trip, I consult with most members of my family and many friends

I usually sacrifice my self-interest for the benefit of my group

Children should be taught to place duty before pleasure

I hate to disagree with others in my group

We should keep our aging parents with us at home

Children should feel honored if their parents receive a distinguished award

**Questionnaire 2**