

## **Welcome**

### **No Talking Allowed**

Now that the experiment has begun, we ask that you do not talk. If you have a question after we finish reading the instructions, please raise your hand and the experimenter will approach you and answer your question in private.

### **Complete Privacy**

This experiment is structured so that no one, including the experimenters or the other participants, will ever know the personal decision or money earnings of anyone in the experiment. This is accomplished by a procedure in which you collect your earnings, contained in a sealed envelope, from a numbered mailbox that only you have the key for. Your privacy is guaranteed because neither your name nor your student ID number will be entered in the computer that records your decisions in the experiment. The only identifying information that will be used is the number on the mailbox key that has been given to you. You will collect your money payoffs with privacy by using the key, which opens a mailbox located in a room adjacent to this room. The key and mailbox are labeled with the same number. You are the only person who knows your key and mailbox number.

### **Multiple Rounds**

This experiment consists of a SEQUENCE of decision rounds. In each round, you will face the same decision task. The decision task in each round is described below. You will not be told in advance the number of decision rounds.

### **Random Matching and Anonymity**

Each person will be randomly matched with 3 other people to form a group. Thus, each group will contain 4 individuals. **YOU WILL REMAIN IN THIS GROUP FOR THE REST OF THIS EXPERIMENT.** In each group, 3 individuals will be randomly assigned the role of Type X decision makers. The remaining group member will be assigned the role of Type Y decision maker. **YOUR TYPE - X OR Y – WILL REMAIN THE SAME FOR THE REST OF THE EXPERIMENT.** Thus, if you are assigned the role of Type X decision maker at the beginning of the experiment, you will be a Type X decision maker in all decision rounds.

For record keeping purposes, the computer will randomly assign each individual in a group an ID letter. The Type Y decision maker will be assigned the ID letter Y. The Type X decision makers will be randomly assigned an ID letter of A, B or C. You are the only person who will know your ID letter.

**YOU WILL HAVE THE SAME ID FOR THE REST OF THIS EXPERIMENT.** For example, if you are assigned to be individual A in your group, your ID will be A in all decision rounds.

### **Cash Payoffs**

Your earnings in this experiment are expressed in EXPERIMENTAL CURRENCY UNITS, which we will refer to as ECUs. At the conclusion of the experiment you will be paid in U.S. dollars using a conversion rate of \$1 for every 10 ECUs of earnings from the experiment.

### **Starting Balances**

Each individual begins EACH ROUND with an endowment of 10 tokens worth 1 ECU each, yielding an Individual Fund of 10 ECUs. Each four person group begins EACH ROUND with a Group Fund of 0 ECUs.

### **DECISION TASK IN EACH ROUND**

#### **Sequential Decisions for Type X and Y**

The three Type X persons in a group make their decisions first. After the Type X persons make their decisions, the Type Y person in a group makes his/her decision, after being shown the decisions of each of the anonymous Type X persons in his/her group. The Type X persons will only be identified by their ID letters.

#### **Decision Task for the 3 Type X Decision Makers in a Group**

Each Type X person will decide independently and privately whether or not to move any of his/her tokens from his/her own Individual Fund into the Group Fund. Each Type X person can move up to a maximum of 10 tokens to the Group Fund. Each token that a Type X person adds to the Group Fund reduces the value of his/her Individual Fund by 1 ECU. However, each token added to the Group Fund by a Type X person increases the value of the Group Fund by 3 ECUs.

Each decision must be in whole tokens. That is, each Type X person can add 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, or 10 tokens to the Group Fund.

#### **Decision Task for the one Type Y Decision Maker in a Group**

The one Type Y person will be shown the decisions of each of the 3 anonymous Type X persons in his/her group. The Type X persons will only be identified by their ID letters and will be ordered alphabetically. The Type Y person will then decide independently and privately whether or not to move any of his/her tokens from his/her own Individual Fund to the Group Fund OR move to his/her own Individual Fund the tokens that were added to the Group Fund by the 3 Type X persons.

The Type Y person can add up to a maximum of 10 tokens to the Group Fund. As with the Type X persons, each token that the Type Y person adds to the Group Fund reduces the value of his/her own Individual Fund by 1 ECU. However, each token added to in the Group Fund by the Type Y person increases the value of the Group Fund by 3 ECUs. Each decision must be in whole tokens. That is, the Type Y person can add 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, or 10 tokens to the Group Fund.

Each token subtracted from the Group Fund by the Type Y person, increases the value of his/her Individual Fund by 1 ECU, and decreases the value of the Group Fund by 3 ECUs. Each decision must be in whole tokens. The Type Y person can subtract from the Group Fund an amount between 0 and the total number of tokens placed in the Group Fund by the 3 anonymous Type X persons. That is, the Type Y person can subtract 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 ..... up to a total limit of tokens that would reduce the number of tokens in the Group Fund to 0, and the value of the Group Fund to 0 ECUs.

After all individuals have made their decisions for the round, the computer will tabulate the results. You will be informed of the total number of tokens in the Group Fund and your total earnings for the round. You will also be informed of the allocation decisions of each member of the group. THE GROUP MEMBERS WILL ONLY BE IDENTIFIED BY THEIR IDs, WHICH WILL REMAIN THE SAME IN EACH ROUND. The group members will be ordered alphabetically by their IDs.

### **Earnings**

*Earnings in EACH round:* After all persons in the group make their decisions, the Group Fund will be divided equally among all individuals in the group. For each individual in the group, those earnings will be combined with the amount that the individual has remaining in his/her own Individual Fund.

*Thus, a person's earnings in a round will equal the ending value of tokens (in ECUs) in his/her own Individual Fund plus one-fourth of the ending value of tokens in the Group Fund (in ECUs).*

**Three examples** illustrate how the tokens moved to the Group Fund are related to the values of the Individual and Group Funds.

- If a Type X or Type Y person adds 0 tokens to the Group Fund, that reduces the value of his/her Individual Fund by 0 ECUs and adds 0 ECUs to the value of the Group Fund.
- If a Type X or Type Y person adds 5 tokens to the Group Fund, that reduces the value of his/her Individual Fund by 5 ECUs and adds 15 ECUs to the value of the Group Fund.
- If a Type X or Type Y person adds 10 tokens to the Group Fund, that reduces the value of his/her Individual Fund by 10 ECUs and adds 30 ECUs to the value of the Group Fund.

**Three additional examples** illustrate how the range of choices available to the 1 Type Y person are affected by the decisions made by the 3 Type X persons.

- For illustration purposes only, suppose the 3 Type X persons in a group add zero tokens to the Group Fund. In this particular case, the Type Y person could add up to 10 tokens to the Group fund, but there would be no tokens for the Type Y person to subtract from the Group Fund. Each token that Type Y adds to the Group Fund increases the value of the Group Fund by 3 ECUs and decreases the value of his/her Individual Fund by 1 ECU.
- For illustration purposes only, suppose the 3 Type X persons in a group add 15 tokens to the Group Fund, which increases the value of the Group Fund by 45 ECUs. In this particular case, the Type Y person could either add up to 10 tokens to the Group fund or could subtract any whole token amount between 0 tokens and 15 tokens from the Group Fund. Each token that Type Y adds to the Group Fund increases the value of the Group Fund by 3 ECUs and decreases the value of his/her Individual Fund by 1 ECU. Each token that Type Y subtracts from the Group Fund reduces the value of the Group Fund by 3 ECUs and increases the value of his/her Individual Fund by 1 ECU.
- For illustration purposes only, suppose the 3 Type X persons in a group add 30 tokens to the Group Fund, which increases the value of the Group Fund by 90 ECUs. In this particular case, the Type Y person could either add up to 10 tokens to the Group Fund or could subtract any whole token amount between 0 tokens and 30 tokens from the Group

Fund. Each token that Type Y adds to the Group Fund increases the value of the Group Fund by 3 ECUs and decreases the value of his/her Individual Fund by 1 ECU. Each token that Type Y subtracts from the Group Fund reduces the value of the Group Fund by 3 ECUs and increases the value of his/her Individual Fund by 1 ECU.

At the end of each round, you will receive information on all group members' decisions, as well as your earnings for that round. After reviewing the results page, you will be shown a "history" screen that displays a summary of past decisions of all group members and your earnings for each completed decision round.

While making your decision in each round, you will also be able to review the history screen and the instructions for the experiment. To see the history screen, click the "History of Decisions and Results" button. To review the instructions, click the "Instructions" button. After reviewing the history screen or the instructions, click the "Return to Decision" button to proceed.

*TOTAL Earnings:* Total Earnings for the experiment will be the sum of the earnings in all rounds of the experiment. Recall, at the conclusion of the experiment you will be paid in U.S. dollars using a conversion rate of \$1 for every 10 ECUs of earnings from the experiment.

After you are sure that you understand these instructions, **click on** the Finished Reading Instructions box in the upper left corner of your monitor screen to signal that you are ready to make your decisions.