

## Instructions

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*These are the instructions for treatment EL. Instructions for the other treatments were appropriately adjusted. They are available from the authors upon request.*

Thank you for agreeing to take part in this study which is funded by the University of Melbourne. Please read the following instructions carefully. A clear understanding of the instructions will help you make better decisions and increase your earnings.

The experiment consists of two stages which are explained in detail below. You will participate in each stage only once.

In the beginning of the experiment the computer will randomly match you with three other people in the room. That is, you will be part of a group of four people.

### Stage 1

In Stage 1, all group members will be given a task which will determine their earnings at the end of the stage. The task is the same for all group members. You will be presented with a number of words and your task will be to encode these words by substituting the letters of the alphabet with numbers using Table 2 on p. 4.

Example 1: You are given the word FLAT. The letters in Table 2 show that F=6, L=3, A=8, and T=19.

Once you encode a word correctly, the computer will prompt you with another word which you will be asked to encode. Once you encode that word, you will be given another word and so on. **This process will continue for 20 minutes** (1200 seconds).

All group members will be given the same words to encode in the same sequence. **For each word a participant encodes, s/he will receive 1 point.**

### Earnings at the end of stage 1

Your earnings at the end of Stage 1 are determined as follows. At the end of Stage 1 the computer will flip a 'virtual' coin **separately for each individual**. If the outcome is Heads, then the number of points the individual accumulated in Stage 1 will remain unaffected. If the outcome is Tails, the points will be reduced by 30%. In other words, the number of points accumulated in Stage 1 will be multiplied by 0.7.

Your earnings at the end of Stage 1 will depend on the number of points you have after the coin flip and the points your group members have. The person with the highest number of points will receive \$60. The players ranked second, third, and fourth will receive \$45, \$30, and \$15, respectively. If two or more individuals have the same number of points, the computer will determine randomly the ranking of the tied players. Each player will have the same probability of being ranked above the other group members with the same number of points.

Example 2: (*Note that the numbers are unrealistic on purpose.*) Assume that Players 1 and 2 have 5000 points each while Player 3 has 3000 points and Player 4 has 1000 points. The computer will randomly decide whether Player 1 or Player 2 will be ranked first. Either Player 1 or Player 2 will be ranked first with a 50% probability. Player 3 will be ranked third and Player 4 will be ranked fourth.

Example 3: In the previous example, assume that Player 3 also has 5000 points. The computer will randomly decide the ranking of Players 1, 2, and 3. Each player has a 33.3% chance of being ranked first, 33.3% chance of being ranked second, and 33.3% chance of being ranked third. Player 4 will be ranked fourth.

## Stage 2

In the beginning of Stage 2, you will be informed of the number of words each group member encoded, whether the coin landed on Heads or Tails for each group member, the number of points each group member has, and the ranking of each group member. Before actual payments for the performances in Stage 1 are made, players will be given the option to transfer part of their earnings to their group members. You can transfer any amount from \$0 to the total amount of your earnings from Stage 1. In particular, you will be prompted with a screen where you can enter the amount you wish to transfer to each participant. If you do not wish to make a transfer to a particular player, you have to enter '0' in the respective field.

Note that while each group member will have to decide how much to transfer to the other individuals in the group, not all transfers will be implemented. **For every player, the computer will randomly choose only one of the suggested transfers.** This process is explained in Example 4.

**Table 1**

		Earnings	Recipient			
			Player 1	Player 2	Player 3	Player 4
Sender	Player 1	\$60	--	\$0	\$2	\$10
	Player 2	\$45	\$0	--	\$5	\$0
	Player 3	\$30	\$0	\$10	--	\$0
	Player 4	\$15	\$0	\$5	\$5	--

Example 4: In Table 1 above, Players 1, 2, 3, and 4 are ranked 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>d</sup>, and 4<sup>th</sup>, respectively. Player 1, therefore, has \$60, Player 2 has \$45, Player 3 has \$30, and Player 4 has \$15. Suppose that Player 1 wants to send \$2 to Player 3, \$10 to Player 4 and nothing to any of the other players. Player 2 wishes to make a transfer of \$5 to Player 3. Player 3 wants to send \$10 to Player 2 and nothing to any of the other players. Finally, Player 4 wants to send \$5 to Player 2, \$5 to Player 3, and nothing to any of the other players.

Consider for example the case of Player 2. Note that Player 2 will *not* receive \$15 in total. The computer will randomly choose among Players 1, 3, and 4, and implement

that player's suggested transfer. Each of the three players has an equal probability of being chosen.

Hence, if Player 1 is chosen, Player 2 will receive \$0. If, however, Player 3 or 4 is chosen, Player 2 will receive \$10 or \$5, respectively. Note that if Player 3 is chosen Player 4 will not have to pay her suggested transfer. Player 3, on the other hand, will have to pay \$10 and, therefore, his income will be  $\$30 - \$10 = \$20$ .

At the end of stage 2 you will be notified of whether your suggested transfer(s) were implemented, the amount that was transferred to you (but not who transferred it), and what your final payoff is. You will then be paid your earnings from the experiment.

Note that all decisions will remain anonymous.

If you have any questions, please raise your hand. Otherwise, please proceed to answer the questions on the next page. The purpose of the questions is to make sure that you understand the different elements of the experiment. Any unclear points will be explained by the experimenter. Once you have answered all the questions, please raise your hand and one of the experimenters will come and check your answers.

**Table 2**

<b>Letters</b>	<b>Numbers</b>
A	8
B	12
C	14
D	10
E	9
F	6
G	24
H	22
I	7
J	5
K	11
L	3
M	18
N	1
O	21
P	16
Q	23
R	2
S	13
T	19
U	25
V	4
W	26
X	17
Y	20
Z	15

## Questions

*(Note that the numbers in the following questions are unrealistic on purpose. The questions aim to help you understand the experiment in a better way and should not be used as a guide for decision-making in the experiment.)*

1. Assume that Player 1 encodes 5000 words, Player 2 encodes 3000 words, Player 3 encodes 11000 words, and Player 4 encodes 20000. What will be the earnings of each individual at the end of Stage 1 if the coin lands on Heads for all of them?

a. Player 1: \$.....

b. Player 2: \$.....

c. Player 3: \$.....

d. Player 4: \$.....

2. Suppose that the players encode the number of words stated in the previous question. However, now assume that the coin lands on Heads for Players 2, 3, and 4, and on Tails for Player 1. Will the ranking change?

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If yes, what is the new ranking? .....

3. Would your answer to question 2 change if Player 1 had encoded 3500 words instead of 5000 words? .....

If yes, what is the ranking? .....

4. Would your answer to question 3 be different if the coin landed on Tails for both Player 1 and Player 2?

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If yes, what is the ranking? .....

5. Consider Table 1 on page 2.

a. What is the probability that Player 1 will receive a positive transfer from his group members? .....%

b. What is the probability that Player 2 will receive a positive transfer from her group members? .....%

c. What is the probability that Player 3 will receive a positive transfer from her group members? .....%

d. What is the probability that Player 4 will receive a positive transfer from his group members? .....%

6. In Table 1, suppose that for each of the players, the computer implements the suggested transfers of Player 2. (Note that this event has a low probability of happening in the experiment.) What will be the final earnings of each player?

a. Player 1: \$.....

b. Player 2: \$.....

c. Player 3: \$.....

d. Player 4: \$.....

7. If all individuals encode the same number of words, what is Player 1's chance of being ranked first at the end of the first stage? .....%