

Experimental Instructions

Welcome to the experiment and thanks for your participation.

You have been randomly assigned to an experimental condition with 16 people in total. In other words you and 15 others will be interacting via the computer network for this entire experimental session.

The experiment is divided into two parts and each part will last approximately 30-40 minutes long. Both parts of the experiment contribute to your final earnings. The instructions for the first part of the experiment follow directly below. The instructions for the second part of the experiment will be handed out to you only after all participants have completed the first part of the experiment. It is worth your effort to read and understand these instructions well. You will be paid based on your performance in this study; the better you perform, the higher your expected earnings will be for your participation today.

Your decision.

In this part you will play 40 independent rounds. At the beginning of each round, you will receive 20 “coins”. For each round, you will have to decide how many of your 20 coins to transfer into your “personal” account, and how many coins to transfer into a “group” account.

Your earnings for the round depend on how you and the other participants decide to divide the coins you have received between the two accounts.

Group matching with noise.

For each round you will be assigned to a group of 4 people, that is, you and three other participants. In general, groups are formed by ranking each individual transfer to the group account, from the highest to the lowest. Group 1 is generally composed of those participants who transferred the most to the group account; Group 4 is generally composed of those who transferred the least to the group account. The other groups (2 and 3) are between these two extremes.

However, the sorting process is *noisy by design*; contributing more will increase a participant’s chances of being in a higher ranked group, but a high ranking is not guaranteed.

Technical note- The noisy ranking and sorting is implemented with the following process:

Step 1: Preliminary ordering.

A preliminary list is created in which transfers to the group account are ranked from highest to lowest. In case two or more individuals transfer the same amount, their relative position in the ranking will be decided randomly.

Step 2: Noisy ordering.

From every participant’s actual transfer to the group account, we obtain a *unique noisy contribution* by adding an i.i.d. (independent and identically distributed) normal variable with mean 0 and variance 3. The noisy contributions are then ranked from 1 to 16 from highest to lowest, and a final list is created.

Step 3: Group matching.

Based on the final list created at Step 2 (the list with noise), the first 4 participants on that list form Group 1, the next 4 people in the list form Group 2, the third 4 people in the list form Group 3, and the last 4 people form Group 4.

Return from personal account.

Each coin that you put into your personal account results in a simple one-to-one payoff towards your total earnings.

Return from group account.

Each coin that you put into the group account will pay you back some positive amount of money, but it depends also on how much the other group members have transferred to the group account, as described below.

The total amount of coins in your group account is equal to the sum of the transfers to the group account by each of the group members. That amount is then multiplied by 2 and distributed equally among the 4 group members. In other words, you will get a return equal to half of the group account total.

Final Earnings

Your total earnings for the first part of the experiment are equal to the sum of all your rounds' earnings. One coin is equal to 0.01 CHF. This may not appear to be very much money, but remember there are 40 rounds in this part of the experiment so these earnings build up.

Example

Here is an example of one round to demonstrate this decision context, the noisy sorting into different groups, and the different resulting payoffs. In the table below, pay attention to the following facts:

- Groups are roughly formed by ranking how much participants transferred to the group account, but this is not a perfect ranking. For example, participant #8 transferred less to the group account than participant #10, but the noisy sorting process placed him in a higher ranked group.
- Participant #7 transferred 14 of his coins to the group account. This means that he transferred 6 to his personal account. Due to noisy sorting he was ranked first, and assigned to Group 1. The other participants in Group 1 transferred a total of 64 coins to the group account. This amount is doubled and redistributed evenly back to the 4 members of the group—this is 32 for each participant. So then participant #7 earned 38 coins for this round.
- Participant #12 transferred 7 coins to the group account and transferred the remaining 13 coins to his personal account. He was sorted (with noise) into Group 3 and this group transferred 46 coins in total. This resulted in 23 coins being returned to each of the group members, and thus his total payoff is 36 coins (23 returned from the group account and the 13 he kept in his personal account).

Player ID	Group	Transfer to group account	Transfer to personal account	Total to group account	Amount returned to player	Total earnings for the round
7	1	14	6	64	32	38
6	1	13	7	64	32	39
14	1	16	4	64	32	36
4	1	8	12	64	32	44
1	2	14	6	51	25.5	31.5
3	2	20	0	51	25.5	25.5
8	2	11	9	51	25.5	34.5
11	2	19	1	51	25.5	26.5
10	3	17	3	46	23	26
12	3	7	13	46	23	36
16	3	6	14	46	23	37
5	3	16	4	46	23	27
9	4	10	10	18	9	19
2	4	1	19	18	9	28
13	4	5	15	18	9	24
15	4	2	18	18	9	27

Additional examples are provided in a separate sheet for your own reference.