

# Confusion and Learning in the Voluntary Contributions Game – Online Appendix

Ralph-C Bayer, Elke Renner, and Rupert Sausgruber

# **1 Instructions**

## **1.1 Instructions to subjects for the Learning Condition – minimum information**

### **General Information**

You are participating in an experiment on learning behaviour

### **Money**

In the experiment you earn points, which will be converted into real money at the end of the experiment with the following exchange rate:

100 points = AUD 1.25.

Your earnings are paid in cash at the end of the experiment

### **Please note**

It is strictly forbidden to communicate with other participants during the experiment. You are not allowed to speak with other participants.

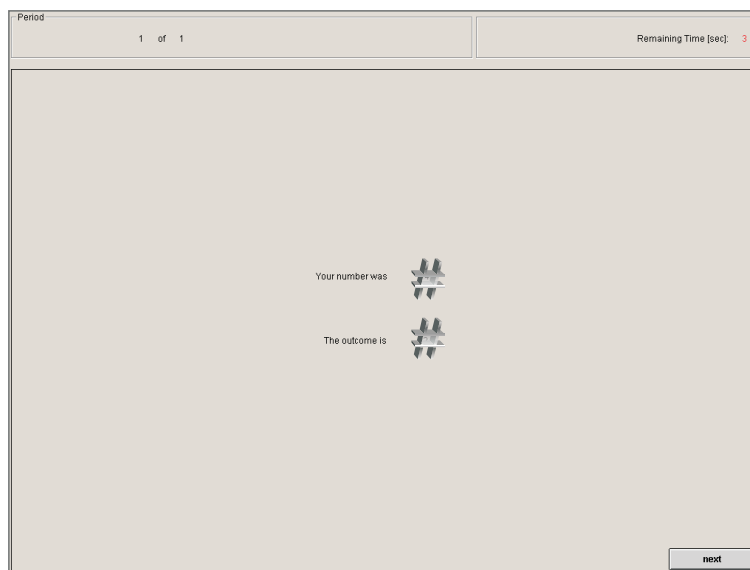
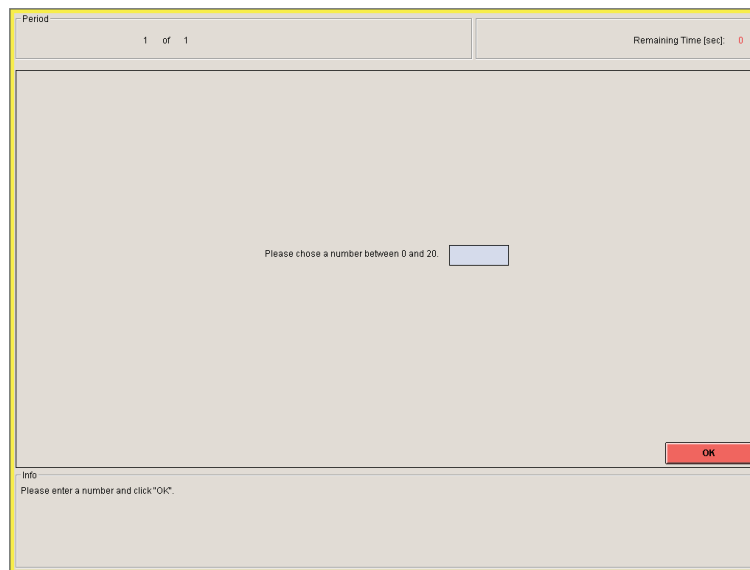
If you have questions during the experiment please raise your arm and somebody will come and help you.

### **The timing of the experiment**

The proceedings for the 20 periods are:

At the beginning of each period you see the following screen:

In every period you just have to make a single decision. You simply have to choose a number between 0 and 20. After you have entered your number and have clicked “OK” you will see the following result screen:



Here you can see your previous decision and the number of points you receive.

How is the outcome determined?

Your income depends on the number you have entered. However, other factors may influence your income. These factors may change from period to period. This means that a certain number you choose does not lead to the same outcome all the time.

Are there any further questions?

## 1.2 Instructions to subjects for the Learning Condition – limited information

### General Information

Thank you for participating in the experiment. If you read these instructions carefully and follow all rules, you can earn money. The money will be paid out to you in cash immediately after the experiment.

### Money

In the experiment you earn points, which will be converted into real money at the end of the experiment with the following exchange rate:

100 points = AUD 1.25.

Your earnings are paid in cash at the end of the experiment

### Please note

It is strictly forbidden to communicate with other participants during the experiment. You are not allowed to speak with other participants.

If you have questions during the experiment please raise your arm and somebody will come and help you.

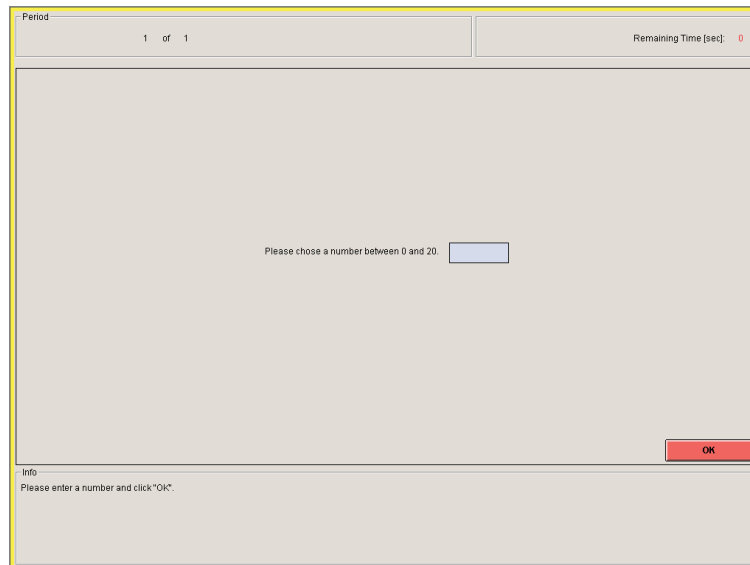
### Detail

Participants of this experiments are randomly assigned to groups of 4 members, i.e., there are three other participants forming a group together with you. The composition of groups will remain the same during the whole experiment. You will be paired with the same three other players throughout this experiment. The identity of your group members will not be revealed to you at any time. At the start of each period, each participant gets 20 points. Your task is it to decide, how many of your 20 points you want to contribute to a project or to keep for yourself.

These instructions do not explain in detail how your earnings are determined. All we can tell is that your income depends on your decisions and the decisions of the other group members. After all participants have made their contributions a new period starts, in which you decide again how many of your 20 points you want to contribute to the project. In total there will be 20 periods.

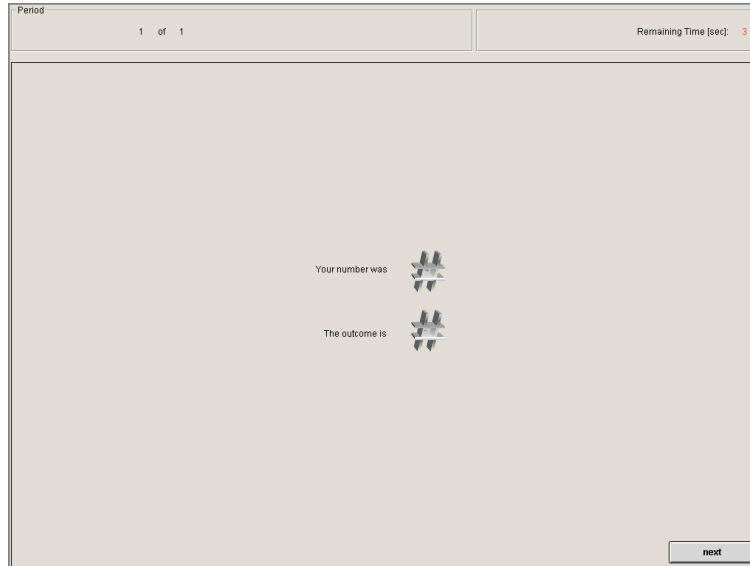
Note that others' contributions may change in each period. This means that a certain contribution you choose does not lead to the same outcome all the time.

On the next page we will show you the computer screens you will encounter. At the beginning of each period you see the following screen, where you can enter your contribution to the project:



The screenshot shows a web-based interface for a task. At the top left, it says "Period" and "1 of 1". At the top right, it says "Remaining Time [sec]: 0". The main area contains the text "Please chose a number between 0 and 20." followed by a small, empty rectangular input box. In the bottom right corner of the main area, there is a red button labeled "OK". At the bottom of the screen, there is an "Info" section with the text "Please enter a number and click 'Ok'."

At the end of each period you can see your previous decision and the number of points you received:



### 1.3 Instructions to subjects for the Standard Condition

#### Experimental Instructions

Thank you for participating in the experiment. If you read these instructions carefully and follow all rules, you can earn money. The money will be paid out to you in cash immediately after the experiment. During the experiment we shall not speak of Dollars but rather of points. Points are converted to Dollars at the following exchange rate:

$$100 \text{ Points} = \text{AUD } 1.25$$

It is forbidden to speak to other participants during the experiment. If you have any question, please ask us. We will gladly answer your questions individually. It is very important that you follow this rule. Otherwise, we shall have to exclude you from the experiment and from all payments.

Participants of this experiments are randomly assigned into groups of 4 members, i.e., there are three more persons forming a group together with you. The composition of groups will remain the same during the whole experiment, i.e. there will always be the same persons in your group. The identity of your group members will not be revealed to you at any time. At the start of each period, each participant gets 20 points. We will refer to these points as your endowment. Your task is it to decide, how many of your 20 points you want to contribute to a project or to keep for yourself.

Your income consists of two parts:

1. Points that you keep
2. Your “income from the project.” This income is calculated as follows:

Your income from the project =  $0.4 \times$  Sum of contributions of all group members to the project

The income of the other members of your group is determined in the same way, i.e. each group member receives the same income from the project. Suppose, for example, that the total contributions to the project by all members in your group sum up to 60. In this case you and every other member of your group receives  $0.4 \times 60 = 24$  points as income from the project. Suppose that you and the other 3 members of your group in total contribute only 10 points to the project. In this case every group member receives  $0.4 \times 10 = 4$  points as income from the project.

For each point that you keep for yourself you earn an income of one point. If you contribute that point to the project, instead, the sum of contributions to the project would rise by one point, and your income from the project would rise by  $0.4 \times 1 = 0.4$  points. However, the income of the other group members would also rise by 0.4 points, such that the total income of the group would rise by  $4 \times 0.4 = 1.6$  points. Your contribution to the project, therefore, raises the income of the other members of your group. On the other hand, you earn from each point that other members of your group contribute to the project. For each point that another group member contributes, you earn  $0.4 \times 1 = 0.4$  points.

You take your decision via the computer. After all participants have made their contributions a new period starts, in which you decide again how many of your 20 points you want to contribute to the project. In total there will be 20 periods.