

Supplementary Information for:

The strategy method risks conflating confusion with a social preference for conditional cooperation in public goods games

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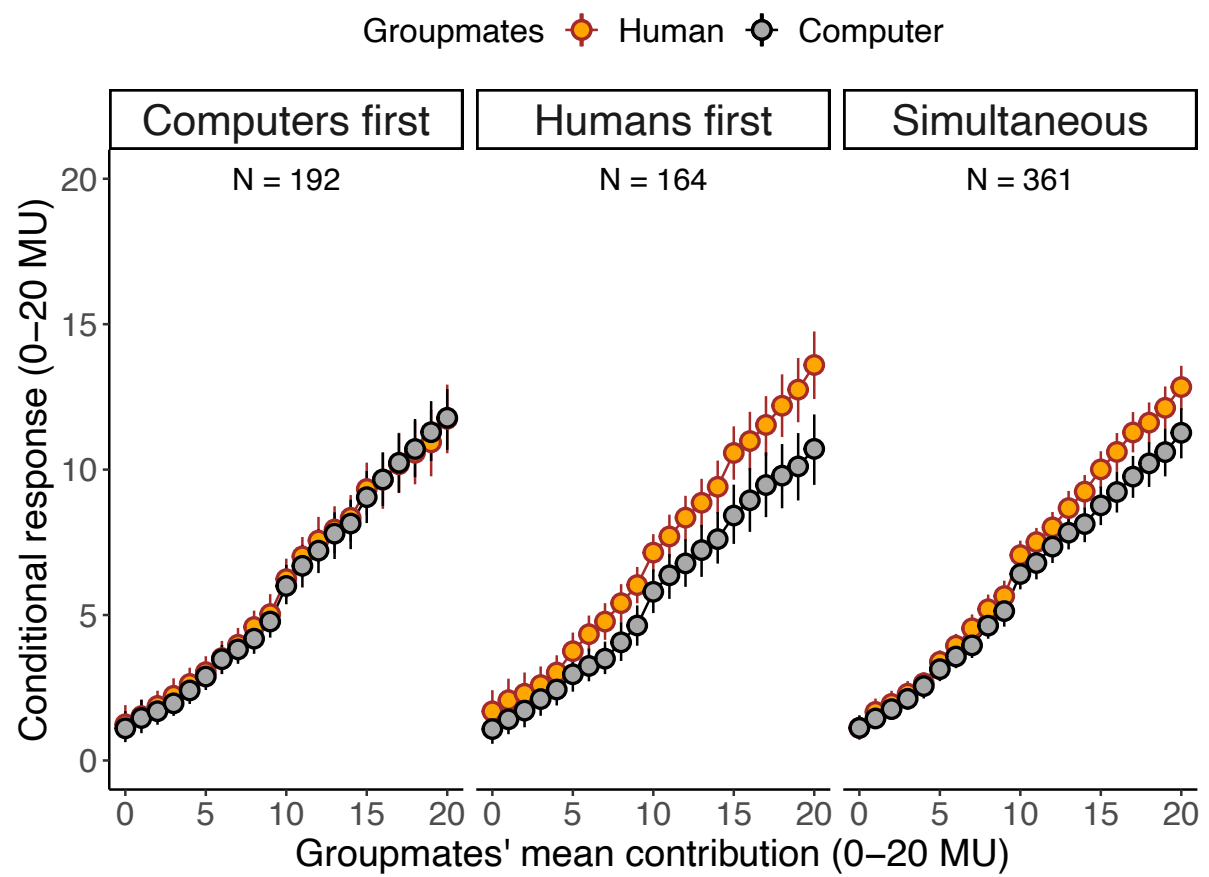
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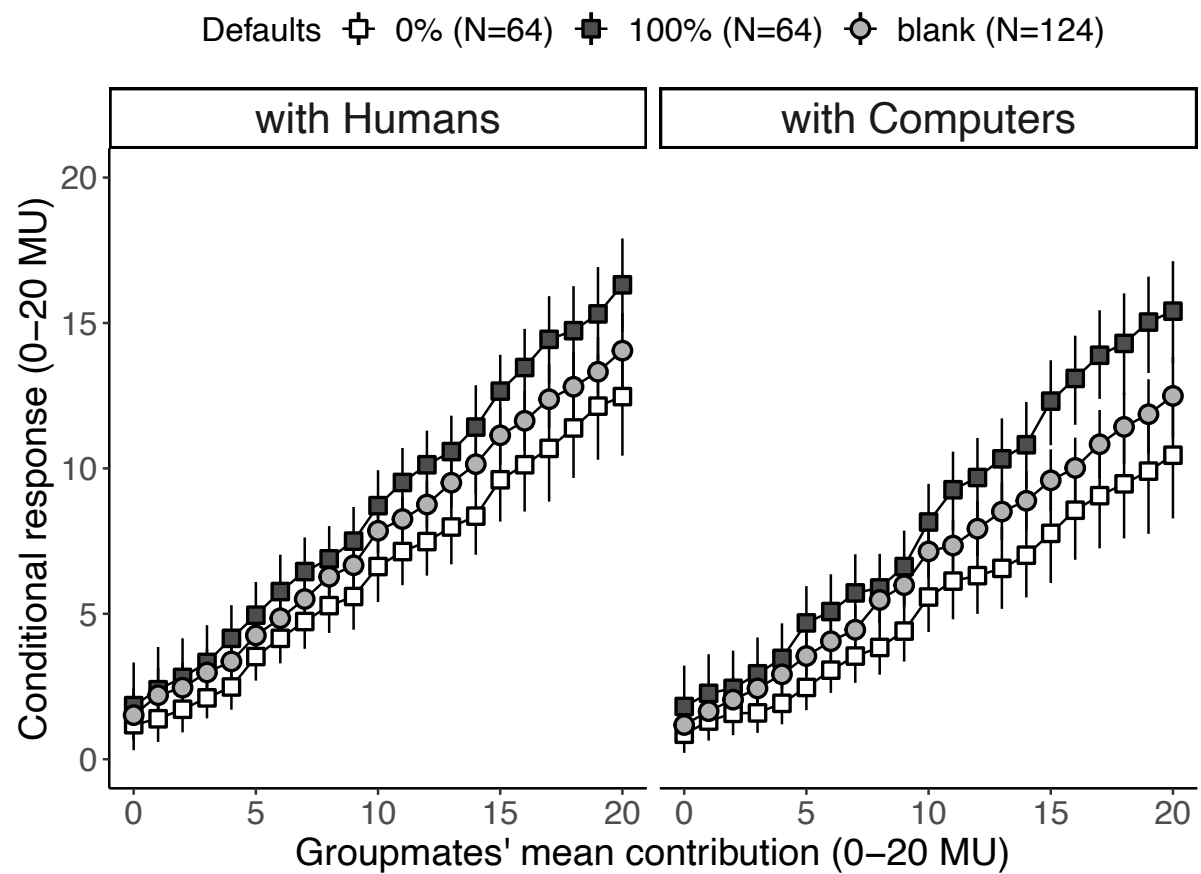
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Supplementary Figures S1 & S2

Supplementary Methods: Experiment instructions in English.



Supplementary Figure S1: the effect of sequence order.



Supplementary Figure S2: The role of defaults.

Supplementary Methods: Experiment instructions in English.

Stage 1 screen 1 – general instructions about the public good game decision

You are now taking part in an economic experiment, which has been financed purely for academic research purposes.

If you read the following instructions carefully, you can, depending on your decisions, earn a reasonable amount of money.

It is therefore very important that you read these instructions with care.

The instructions, which we have distributed to you, are solely for your private information.

You are not allowed to communicate during the experiment.

If you have any questions, please ask us. Violation of this rule will lead to your exclusion from the experiment and all payments.

If you have questions, please raise your hand. A member of the experimenter team will come to you and answer them in private.

During the experiment we shall not speak of CHF but rather of MU (Monetary Units).

During the experiment your entire earnings will be calculated in MU.

At the end of the experiment the total amount of MU you have earned will be converted to CHF at the following rate:

1 MU = 0.05 CHF, so 20 MU = 1 CHF and 100 MU = 5 CHF. [Exchange rate was 0.04 in Study 1]

At the end of the experiment your entire earnings from the experiment will be immediately paid to you in cash.

We describe the experimental process below.

Stage 1 screen 2

The decision situation

You will learn how the experiment will be conducted later. We first introduce you to the basic decision situation. You will find control questions at the end of the instructions that help you to understand the decision situation.

You will be in a group consisting of **4 people**. Each group member has to decide on the allocation of 20 MU. You can put these 20 MU into your **private account** or you can invest them **fully or partially** into a project. Each point you do not invest into the project, will automatically remain in your private account.

Your income from the private account:

You will earn one MU for each MU that you put into your private account.

For example, if you put 20 MU into your private account (and therefore do not invest into the project) your income will amount to exactly 20 MU out of your private account.

If you put 6 MU into your private account, your income from this account will be 6 MU.

No one except you earns something from your private account.

Stage 1 screen 3

Your income from the project:

Each member of the group will also benefit from the amount you invest in the project.

On the other hand, you will also gain from the other group members' investments.

The income for each group member will be determined as follows:

$$\textit{Income from the project} = \textit{sum of all contributions} \times 0.4$$

If, for example, the sum of all contributions to the project is 60 MU, then you and the other members of your group each earn $60 \times 0.4 = 24$ MU out of the project.

If four members of the group contribute a total of 10 MU to the project, you and the other members of your group each earn $10 \times 0.4 = 4$ MU.

Total income:

Your total income is the sum of your income from your private account and that from the project:

$$\begin{aligned} &\textit{Income from your private account} (= 20 - \textit{contribution to the project}) \\ &+ \textit{Income from the project} (= 0.4 \times \textit{sum of all contributions to the project}) \\ &= \textit{Your Total Income} \end{aligned}$$

We then presented the same four hypothetical scenarios and corresponding 10 control questions as used in Fischbacher & Gächter 2010. Participants could use a calculator and there was a copy of the instructions detailing how payoffs are calculated in a help box at the bottom of each screen.

In Study 1, if a participant answered a question incorrectly, they were asked to try again. Then, regardless of if they were correct or not, we showed all participants the correct answer to that question. In Studies 2 and 3, we only let them try one time before showing them the correct answers to reduce the time spent on instructions.

Stage 1 screen 4

Please answer the following four control questions. They will help you to gain an understanding of the calculation of your income, which varies with your decision about how to distribute your 20 MU.

There is a calculator available.

To access the calculator, click on the image in the bottom right of your screen.

Please enter your answers into the spaces provided and press Continue when done.

Question 1: Each group member has an endowment of 20 MU. Nobody (including yourself) contributes any MU to the project.

What is *your* total income (in MU)? [answer box, correct answer is 20]

What is the total income of each of the *other* group members? [answer box, correct answer is 20]

Stage 1 screen 5

Here is the second question.

Question 2: Each group member has an endowment of 20 MU. You invest 20 MU in the project. Each of the other three members of the group also contributes 20 MU to the project.

What is *your* total income (in MU)? [answer box, correct answer is 32]

What is the total income of each of the *other* group members? [answer box, correct answer is 32]

Stage 1 screen 6

Here is the third question.

Question 3: Each group member has an endowment of 20 MU. The other three group members contribute a total of 30 MU to the project.

What is *your* total income (in MU), if you - in addition to the 30 MU - invest 0 MU into the project? [answer box, correct answer is 32]

What is *your* total income (in MU), if you - in addition to the 30 MU - invest 10 MU into the project? [answer box, correct answer is 26]

What is *your* total income (in MU), if you - in addition to the 30 MU - invest 15 MU into the project? [answer box, correct answer is 23]

Stage 1 screen 7

Here is the final question.

Question 4: Each group member has an endowment of 20 MU. Assume that you invest 8 MU to the project.

What is *your* total income (in MU) if the other group members together - in addition to your 8 MU - contribute another 7 MU in total to the project? [answer box, correct answer is 18]

What is *your* total income (in MU) if the other group members together - in addition to your 8 MU - contribute another 12 MU in total to the project? [answer box, correct answer is 20]

What is *your* total income (in MU) if the other group members together - in addition to your 8 MU - contribute another 22 MU in total to the project? [answer box, correct answer is 24]

STRATEGY METHOD STAGE

Example instructions taken from study 1 – with sequential presentation: humans then computers

Strategy method - Screen 1

You will now take this decision for a special case. Rather than simply making an unconditional contribution, **you will ALSO make a list of contributions** conditioned by the contribution of the partners.

Your task consists of indicating the number of MU you want to invest in the project **based upon each possible average contribution from the other members of the group** (rounded to the nearest whole number).

You can vary your contribution according to the contributions of other members of the group.

A member of your group will then be selected to implement their **conditional contribution**, while the other 3 members of the group will implement their **non-conditional contribution**. Thus, for one of the members of the group, their earnings will be calculated according to the average contribution of the other 3 members of the group, as well as the amount of their own conditional contribution corresponding to this average amount.

On the other hand, for the other 3 members of the group, their respective earnings will be calculated using their **non-conditional** contribution.

We will not disclose your earnings to you now, but you will receive the corresponding amount the end of the experiment. After the experiment, only the experimenter will be aware of your conditional and non-conditional contributions, and your decisions will remain anonymous.

To clarify, your table of conditional contributions will have absolutely no future consequences after this decision-making round.

BUTTON TO CONTINUE [I understand]

Strategy method - Screen 2

You must make two decisions.

The first decision is to play *unconditionally* with the members of your group.

You will not know what they will do with their decision. There is a 75% chance that this will be your real contribution the end of the round.

However, there is a 25% chance that your real contribution will be determined from your second decision, as follows.

For the second decision, you have the possibility to condition your contribution, in the table of contributions, in relation to what the members of your group would decide.

Enter the amount you want to contribute to the project, in case where the members of your group contribute the average **contribution** which is left of the input field.

This decision is binding and final. When you have finished completing the tables press the "Confirm" button.

Strategy method - Screen 3

Participants then saw the contribution schedule.

Enter your **non-conditional** contribution to the project (0-20 MU) for when you do not know the contribution of your group members.

Enter your **conditional** contribution to the project (contribution table)

If the members of your group contribute, on average, X MU. [X = 0-20]

If the members of your group contribute, on average, X MU. [X = 0-20]

If the members of your group contribute, on average, X MU. [X = 0-20]

And so on...

Strategy method - Screen 4

Your earnings are being calculated.

The average contribution of your groupmembers was X MU.

Consequently, your **conditional** contribution was X MU (this contribution had a 25% chance of being realised).

Your **non-conditional** contribution was X MU (and this had a 75% chance of being realised).

Your actual contribution was X MU.

Your earnings are being calculated.

There is no other information for this decision, but the money you have earned will be added to your final income.

Strategy method - Screen 5

You will now again face the same decisions you have just taken, but in a new **special case**.

In this case, you will be in a group composed only of you and the COMPUTER.

Everything else will take place in the same way as before, the only difference being that instead of 3 other people, you will play only with **the computer**.

The computer will take the decisions instead of the other 3 members of the virtual group.

The decisions of the computer will be taken **in a random and independent way** (each virtual player will therefore make its own decision at random).

You are **the only real human member in your group**, and only you will receive money from the outcome of this round.

Your income will be calculated as explained during the initial instructions.

Your income will be determined as if the other members of your group were using real money, although they are really only a computer playing randomly.

You will now play this special case in a single round.

You will not receive any information about your earnings obtained during this round until the experiment is over, but it is a real decision with real money.

Only the experimenter will be aware of your decision, and this will have no consequence for you later in the experiment apart from the fact you create additional income depending on the outcome of this round.

Your income obtained in this round will be added to your final income today.

BUTTON TO CONTINUE [I understand that I am in a group with the computer only]

Strategy method – screen 6

You must make two decisions.

For the first decision, you will play **non-conditionally** with the computer.

You will not know what the computer contributes, but it will contribute at random. Like before, there is a 75% chance that this will be your real contribution.

On the other hand, there is a 25% chance that your real contribution will be determined according to your second decision, as follows.

For the second decision, you have the possibility to vary your contribution, in the table of contributions, according to the decision of the computer.

Enter the amount you want to contribute to the project if your group members (virtual players on the computer) contribute the **average** contribution to the left of the input field.

This decision is binding and final. When you have finished completing the table, press the "Confirm" button

Enter your **non-conditional** contribution to the project (0-20 MU) for when you do not know the how much the computer contributes.

Enter your **conditional** contribution to the project (contribution table)

If the computer contributes, on average, X MU. [X = 0-20]

If the computer contributes, on average, X MU. [X = 0-20]

If the computer contributes, on average, X MU. [X = 0-20]

And so on...

Strategy method – screen 7

Your earnings are being calculated.

The average contribution of the computer was X MU.

Consequently, your **conditional** contribution was X MU (this contribution had a 25% chance of being realised).

Your **non-conditional** contribution was X MU (and this had a 75% chance of being realised).

Your actual contribution was X MU.

Your earnings are being calculated.

There is no other information for this decision, but the money you have earned will be added to your final income.