



UvA-DARE (Digital Academic Repository)

Inducing good behavior

van der Veen, A.

Publication date
2012

[Link to publication](#)

Citation for published version (APA):

van der Veen, A. (2012). *Inducing good behavior*. [Thesis, fully internal, Universiteit van Amsterdam].

General rights

It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations

If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: <https://uba.uva.nl/en/contact>, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.

B. Instructions “How to Subsidize Contributions to Public Goods”

This appendix contains the instructions that were presented on-screen to the participants. For the six treatments we only needed three different sets of instructions. In the treatments gradual-45, quick-45, gradual-75, and quick 75 subjects received exactly the same instructions. These treatments only differed in the way the subsidy was changed during the experiment.

Instructions treatments: gradual-45, quick-45, gradual-75, and quick 75

Instructions

Welcome to this experiment. Please read the following instructions with care. If something is not clear, raise your hand and we will help you. After everyone has finished reading the instructions and before the experiment starts, you will receive a handout with a summary of the instructions. You can use this handout throughout the experiment.

You will be asked to make a number of decisions. The experiment consists of two parts. Below this section, you will find the instructions for the first part. After part 1 has been completed you will receive instructions for the second part. Your decisions and the decisions of other participants will determine how much money you earn.

During the experiment, your earnings will be denoted in points. Your earnings in the experiment will be equal to the sum of your earnings in part 1 and in part 2. At the end of the experiment, your earnings (in points) will be converted into money. For each 18 points you earn, you receive 1 eurocent. Hence, 1800 points are equal to 1 euro. Your earnings will be privately paid to you in cash.

Part 1

In part 1, you will earn money with two different tasks. One task is an individual task and the other is a group task. You will perform both of them at the same time. The individual task will be on the left side of your screen and the group task on the right side. You will earn points

for both tasks simultaneously. Your earnings for the individual task do not depend on your actions in the group task and your earnings for the group task do not depend on your actions in the individual task. Part 1 will last between 25 and 45 minutes. Both tasks will stop at the same time. The computer will inform you when part 1 is finished.

Although both tasks run at the same time, it is up to you to decide how much time you want to spend on each task. You can switch between the tasks whenever you want.

Individual task

In the individual task, you will earn points by keeping a randomly moving red dot inside a box. In the big window on the left side of the screen you will see a red dot making random movements. The dot starts inside the box, and your task is to keep it inside that box by moving the box. You can move the box by pressing (with your mouse) on one of the four arrow buttons above the white field. The box will move in the same direction as the direction of the arrow (up, down, left, right).

At the end of every second the computer determines whether the dot is inside or outside the box. If it is inside the box you will receive 15 points, if it is outside you will receive 0 points for that second. You start with zero points and your earnings for this task equal the sum of earnings in all seconds. While you perform the individual task, your total earnings for this task will be listed in the upper left part of the screen.

Group task

You are randomly assigned to a group of 6 participants (including yourself). Throughout this task, you will remain in this group of 6 persons. For the group task each participant will decide about how much to contribute to the group. Your earnings for this task depend on your own decisions as well as on the decisions of the other participants in your group.

For each second, the computer calculates how many points you get for that second and these points are added to the total for the group task. Your earnings for every second depend on the endowment you get every second, your contribution to the group in that second, the contributions that the others in your group make in that second and the level of the subsidy in that second.

Each group-member receives an endowment of 10 points in every second. In the beginning, each group-member decides how much to contribute to the group (a contribution equals at least 0 points and at most 10 points). In each subsequent second, each group-member may change the own contribution. If a group-member does not change the contribution, this person's contribution equals the contribution that he or she made in the previous second.

Contributing to the group has two effects on your payoff: a benefit effect and a cost effect. We will first deal with the benefit effect. Your contribution benefits yourself and the other members of your group in the following way. Every second, the computer adds up all contributions made in your group and multiplies the sum with 1.2. The resulting number of points is equally divided between the 6 group-members. This means that in each second you will receive 0.2 point for each point contributed to the group.

Now we deal with the cost effect of your contribution. Contributing points to the group is costly for you. Your contribution will be subsidized though, which means that part of the money that you spend on contributing is returned to you. The higher the subsidy, the less you actually pay for your contribution. In this sense, the subsidy determines how costly your contribution is. The subsidy denotes the part of your contribution that you do not have to pay. For instance, if the subsidy is 0.000, each point that you will contribute to the group will cost you 1 point. If the subsidy is 0.250, each point that you will contribute to the group will cost you 0.750 point, if the subsidy is 0.500, each point that you will contribute to the group will cost you 0.500 point, etc.

The subsidy may change during the experiment. It is at least 0.000 and at most 0.800. Whether it changes or not is outside of your control. All participants in the group face the same subsidy. All participants will be clearly informed when and how the subsidy changes. **AT THE START OF THE EXPERIMENT, THE SUBSIDY EQUALS 0.000.**

Summarizing, in each second:

(i) costs of contributing = own contribution*(1-subsidy)

(ii) earnings group task = 10 – costs of contributing + 0.2*sum contributions

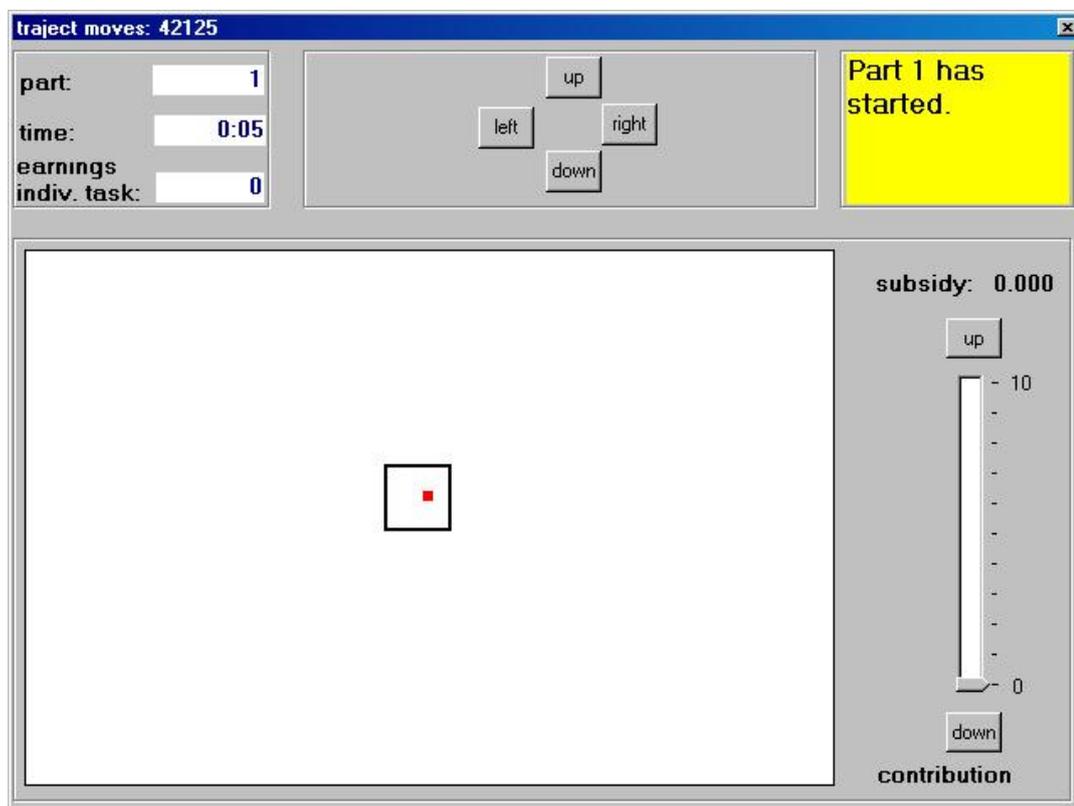
During part 1 group-members will NOT be informed about the contributions of the others in the group. There will also be no information about the earnings for the group task. This information will only be revealed at the end of part 2.

Making your decisions in part 1

Below you see a picture of the screen that will be used in part 1 to enter your decisions. On the left part of the screen you find the window used for the individual task. During the experiment the red dot will move randomly and your goal is to move the white box such that the red dot stays in the box. You move the white box by pressing the arrows above the window. On the right part of the screen you find the window used for the group task. In the gray area you see a slider. With that slider you will indicate how much you want to contribute to the group task. You can change your contribution by changing the position of that slider.

Above the slider you see the subsidy for that second. Each time the subsidy changes the background of the subsidy number turns red for a second.

On the next screen you will be requested to answer some control questions. Please answer these questions now.



Instructions treatment: gradual-75-single

Instructions

Welcome to this experiment. Please read the following instructions with care. If something is not clear, raise your hand and we will help you. After everyone has finished reading the instructions and before the experiment starts, you will receive a handout with a summary of the instructions. You can use this handout throughout the experiment.

You will be asked to make a number of decisions. The experiment consists of two parts. Below this section, you will find the instructions for the first part. After part 1 has been completed you will receive instructions for the second part. Your decisions and the decisions of other participants will determine how much money you earn.

During the experiment, your earnings will be denoted in points. Your earnings in the experiment will be equal to the sum of your earnings in part 1 and in part 2. At the end of the experiment, your earnings (in points) will be converted into money. For each 18 points you earn, you receive 1 eurocent. Hence, 1800 points are equal to 1 euro. Your earnings will be privately paid to you in cash.

Part 1

In part 1, you will earn money with two different tasks. One task is an individual task and the other is a group task. What is special about the individual task is that the computer forces you to make the same choices as a participant of a previous experiment. The individual task will be on the left side of your screen and the group task on the right side. You will earn points for both tasks simultaneously. Your actions only affect your earnings for the group task. Your earnings for the group task do not depend on the actions of the previous participant for the individual task. Part 1 will last between 25 and 45 minutes. Both tasks will stop at the same time. The computer will inform you when part 1 is finished.

Individual task

In the individual task, the previous participant earned points by keeping a randomly moving red dot inside a box. In the big window on the left side of the screen you will see a red dot making random movements. The dot starts inside the box, like it did for the previous participant. The previous participant's task was to keep it inside that box by moving the box. He or she could move the box by pressing (with the mouse) on one of the four arrow buttons above the white field. The box will move in the same direction as the direction of the arrow (up, down, left, right) pushed by the previous participant. You cannot influence this process.

At the end of every second the computer determines whether the dot is inside or outside the box. If it is inside the box you will receive 15 points (like the previous participant did), if it is outside you will receive 0 points for that second (again, like the previous participant did). You start with zero points and your earnings for this task equal the sum of earnings in all seconds. Your total earnings for this task will be listed in the upper left part of the screen.

Group task

You are randomly assigned to a group of 6 participants (including yourself). Throughout this task, you will remain in this group of 6 persons. For the group task each participant will decide about how much to contribute to the group. Your earnings for this task depend on your own

decisions as well as on the decisions of the other participants in your group.

For each second, the computer calculates how many points you get for that second and these points are added to the total for the group task. Your earnings for every second depend on the endowment you get every second, your contribution to the group in that second, the contributions that the others in your group make in that second and the level of the subsidy in that second.

Each group-member receives an endowment of 10 points in every second. In the beginning, each group-member decides how much to contribute to the group (a contribution equals at least 0 points and at most 10 points). In each subsequent second, each group-member may change the own contribution. If a group-member does not change the contribution, this person's contribution equals the contribution that he or she made in the previous second.

Contributing to the group has two effects on your payoff: a benefit effect and a cost effect. We will first deal with the benefit effect. Your contribution benefits yourself and the other members of your group in the following way. Every second, the computer adds up all contributions made in your group and multiplies the sum with 1.2. The resulting number of points is equally divided between the 6 group-members. This means that in each second you will receive 0.2 point for each point contributed to the group.

Now we deal with the cost effect of your contribution. Contributing points to the group is costly for you. Your contribution will be subsidized though, which means that part of the money that you spend on contributing is returned to you. The higher the subsidy, the less you actually pay for your contribution. In this sense, the subsidy determines how costly your contribution is. The subsidy denotes the part of your contribution that you do not have to pay. For instance, if the subsidy is 0.000, each point that you will contribute to the group will cost you 1 point. If the subsidy is 0.250, each point that you will contribute to the group will cost you 0.750 point, if the subsidy is 0.500, each point that you will contribute to the group will cost you 0.500 point, etc.

The subsidy may change during the experiment. It is at least 0.000 and at most 0.800. Whether it changes or not is outside of your control. All participants in the group face the same subsidy. All participants will be clearly informed when and how the subsidy changes. **AT THE START OF THE EXPERIMENT, THE SUBSIDY EQUALS 0.000.**

Summarizing, in each second:

- (i) costs of contributing = own contribution*(1-subsidy)
- (ii) earnings group task = 10 – costs of contributing + 0.2*sum contributions

During part 1 group-members will NOT be informed about the contributions of the others in the

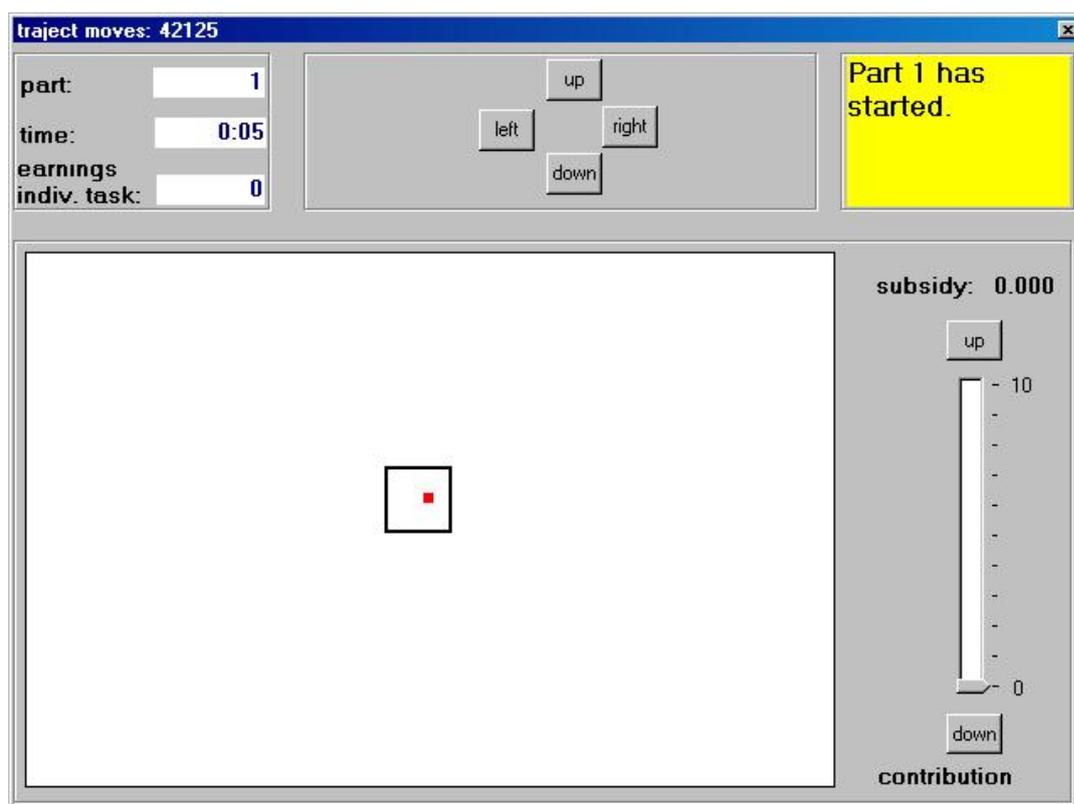
group. There will also be no information about the earnings for the group task. This information will only be revealed at the end of part 2.

Making your decisions in part 1

Below you see a picture of the screen that will be used in part 1 to enter your decisions for the group task. On the left part of the screen you find the window used for the individual task. During the experiment the red dot will move randomly and you will observe how the previous participant moved the white box. On the right part of the screen you find the window used for the group task. In the gray area you see a slider. With that slider you will indicate how much you want to contribute to the group task. You can change your contribution by changing the position of that slider.

Above the slider you see the subsidy for that second. Each time the subsidy changes the background of the subsidy number turns red for a second.

On the next screen you will be requested to answer some control questions. Please answer these questions now.



Instructions treatments: predict-75

Introduction

Welcome to this session. In this session we will ask you to state your beliefs about what has happened in a previous experiment. You will not carry out that experiment yourself, but we will ask you to state your beliefs about what participants did in that experiment. The closer your beliefs are to how the previous participants actually behaved, the more you will earn.

After you have finished stating your beliefs, we will ask you to make two other types of decisions that allow you to make additional money. You will earn points during this session. At the end of the session your points for all three types of decisions will be added up and combined with a starting capital of 8000 points. The resulting total number of points will be exchanged into euros at a rate of 1000 points is 1 euro. Only at the end of the session you will be informed how much you earned with each type of decisions. You will receive the instructions for a next part only when a previous part is finished.

On your table you will find a hardcopy of the instructions given to the participants in that previous experiment. During your session you are allowed to keep them. We want you to study these instructions now.

Now you have studied the instructions of the previous experiment, we will explain what you will be asked to do. You will be asked several times to state your probability judgment about certain statements. For each of three statements there will be five sub-questions. After you have finished all sub-questions, one of the fifteen sub-questions is chosen at random by the computer and your answer on that sub-question determines the points you earnings for this part.

During the group task in the previous experiment, contributing became less costly over time as a result of an increase of the subsidy. Participants of the previous experiment participated in one of the "gradual" groups or one of the "quick" groups. We will ask you some questions about how the participants of the two type of groups behaved.

1. In the "gradual" groups the subsidy started increasing after exactly 4 minutes. During 16 minutes and 40 seconds it was raised gradually until it reached 0.75 after exactly 20 minutes and 40 seconds. Then it stayed at 0.75 until the end of the task after exactly 28 minutes.
2. In the "quick" groups the subsidy was increased in one time from 0 to 0.75 after exactly 4 minutes and it stayed at 0.75 until the end of the task after exactly 28 minutes.

As you could see in the instructions of the previous experiment, participants only knew that

their experiment would start with a subsidy of 0 and that this subsidy could change during the experiment.

We will present you with 3 statements and ask you 5 sub-questions per statement. The statements refer to the handout with the figures that show how the subsidy changed in the “gradual” group and the “quick” group.

The statements and sub-questions we will ask you are:

1. For all participants, the subsidy started at the same level (see both figures of the handout). What is your probability judgment (in %) that at the START the average contribution of all participants was in the interval . . .
2. For the participants in the GRADUAL groups, the subsidy changed as indicated in the lower figure of the handout. What is your probability judgment (in %) that at the END the average contribution of the participants in the GRADUAL groups was in the interval . . .
3. For the participants in the QUICK groups, the subsidy changed as indicated in the upper figure of the handout. What is your probability judgment (in %) that at the END the average contribution of the participants in the QUICK groups was in the interval . . .

These statements are presented one after another. For each statement you have to give your probability judgment for five intervals. Each time an interval is shown you choose a percentage.

The table that is handed out to you shows how much you earn for a particular probability judgment for an interval. The table contains three columns. The first column shows the percentage of your probability judgment, the second column displays your earnings if the real average contribution level (“the true value”) is in the interval and the third column shows what you get if it is not in the interval. You find your earnings by looking in the row that corresponds to your probability judgment and the column that corresponds to the real average contribution (second column if the average contribution is inside the interval, third column if it is outside the interval).

You will make your decision on the computer in the following way. After you have typed in your probability judgment, the computer will open the same table as the one handed out on paper. The row that corresponds with your chosen probability judgment is preselected. You can pick a different row in the table if you prefer to change your probability judgment. You can do this by selecting the up or down arrow, or by clicking the mouse in the menu and scroll to another probability judgment. Next, when you click on <confirm> your choice is final and you continue with the next statement. When you are finished, press <confirm> with your mouse.

After you pressed <confirm> with your mouse, you will be asked your probability judgment

for the next interval. When you have provided judgments for all five intervals / sub-questions, you will continue to the next statement.

After you have completed the three statements with the fifteen sub questions the computer randomly draws one of the fifteen sub-questions. Your answer together with the actual average contribution for the relevant sub-question determines your earnings for reporting your probability judgment.

On the next screen you will be requested to answer some control questions. Please answer these questions now.