Experimental instructions: Counterfactual experiments
Shallow Meritocracy

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January 14, 2021

Parts I contains the full experimental instructions of the counterfactual experiment. Section I.1 to I.5 show the instructions for a respondent in condition Counterfactual High. Section II provides an overview of all experimental variations in the study and displays instructions for the most important variations.

Contents

Part I

Full instructions (condition *Counterfactual High*)

1 Introduction to study

Welcome

Thank you very much for participating in this study! This study is conducted by researchers from the University of Bonn. Participation in the study typically takes **15 minutes** and is **anonymous**.

In this study, you will make several decisions that have **real consequences for other persons**. You also have the chance to **earn additional money**. Therefore, please read and respond to the survey carefully.

It is very important for the quality of our research that you **answer honestly** and **read the questions very carefully** before answering.

Participant information and informed consent form

Below, you find the informed consent form of this study. We ask you to confirm that you want to take part in this study.

Who is responsible for the study?
Responsible for the execution of the study and therefore for the processing of your data:

Peter Andre
Bonn Graduate School of Economics (BGSE)
University of Bonn
Kaiserstr. 1, 53113 Bonn
Germany

What are the purposes of the study?
The purpose of this study is to improve our understanding of human behavior in economic contexts. We are interested in natural, unbiased behavior. Hence, no details on the background of this research project is given beforehand, which is in accordance with the standard in experimental economics. All necessary information will be provided in due time.

What happens with my data?
All participating employees and scientists work in accordance with the provisions of the Data Protection Regulation, the Federal Data Protection Act and the relevant State Data Protection Acts.

Immediately after the collection, your data will be stored anonymously and, then, will be statistically analysed. No conclusions about your person can be drawn from these results. We work together with other partners, universities and laboratories for this study. These also only receive anonymized data, which do not allow any identification of your person. Even the laboratory or survey institute is no longer in a position to merge the survey data with your name after the execution of the survey.

Your data will be stored on a server within the EU, which is not operated by the University of Bonn. We have taken all necessary precautions with the operator of the server and concluded all contracts which are necessary in order to comply with data protection.

For this study, we collect "special categories of personal data", in particularly data revealing migration background (racial or ethnic origin - term according to Art. 9 GDPR) or political opinions, which we use only for research purposes and solely with your consent.

Which rights do I have?
You have the right to obtain information about the personal data stored about you (Art. 15 GDPR). Should incorrect data be processed, you have the right to rectification (Art. 16 GDPR). When the legal requirements are met, you have the right to request the deletion or restriction of the processing and submit an objection against the processing of your data (Art. 17, 18 and 21 GDPR).

You have the right to complain to the competent data protection authorities.

The consent given here can be withdrawn at any time with effect for the future. However, if your data has already been anonymized, it can no longer be associated with you. Therefore we are unable to "remove" your data from the result.

Declaration of Consent
I hereby consent to the processing of my personal data for the research project PA1901FA for the questions on human behavior in economic contexts.
I can withdraw my consent at any time. I have taken note of all information concerning the usage of my data and on my rights in the privacy policy.

I confirm that I am 18 years of age or older and freely participate in the study.
I understand that **close attention to the survey is required** for my response to count.

I confirm

I do not confirm

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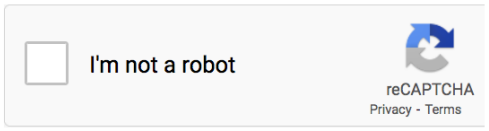
Before you proceed to the HIT, please complete the captcha below.



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The next question is about the following problem. In questionnaires like ours, sometimes there are participants who do not carefully read the questions and just quickly click through the survey. This compromises the results of research studies. **To show that you are reading the survey carefully, please choose both "Very strongly interested" and "Not at all interested" as your answer to the next question.**

Given the above, how interested are you in politics?

- Very strongly interested
- Very interested
- A little bit interested
- Not very interested
- Not at all interested

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Which gender describes you more accurately?

Male

Female

What is your age?

In which state do you currently reside?

Please enter your US Postal Code.

What was your yearly household income in 2020 in US dollars before taxes and deductions?

Note: The household income is the total amount of money earned by every member of your household.

- Less than 15,000
- Between 15,000 and 25,000
- Between 25,000 and 50,000
- Between 50,000 and 75,000
- Between 75,000 and 100,000
- Between 100,000 and 150,000
- Between 150,000 and 200,000
- More than 200,000

What is the highest level of education you have completed?

- 12th grade or less
- Graduated high school or equivalent
- Some college, no degree
- Associate degree
- Bachelor's degree
- Post-graduate degree

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2 Instructions

This study consists of three parts. Part 1 is the longest and main part of the study. It begins on the next page.

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Part 1

In what follows, we will ask you to make a series of decisions that might have **consequences for a real-life situation**.

Please read the following pages very carefully. A **quiz** will test your understanding. You can proceed with the study only if you answer all quiz questions correctly.

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The context of your decision

Our institute currently hires adults from the US general public on an online job portal to work on an important task for one of our projects.

Task
These workers search for publicly available email addresses of academic economists. In each task, a worker is given the name of one economist, searches for the economist's personal or university webpage, identifies his or her email address and sends it to us.

The task requires no special qualification or ability, but demands concentration and effort. Typically, it takes about 2 minutes to complete one task.

Workers can freely choose how long they work and how many tasks they want to complete. At most, each worker can complete 50 tasks.

The context of your decision

Payment

Each worker receives a fixed reward of $2.00 for completing the job as well as a variable payment. The variable payment depends on the number of completed tasks, a piece-rate, and your decisions in this survey. From now on, when we say "payment", we are only referring to this variable payment. It is calculated in two steps:

(1) A worker initially earns a fixed amount for each solved task. We refer to this amount per task as a piece-rate.

variable payment = number of tasks x piece-rate

For example, a worker who has a piece-rate of $0.20 and solves 10 tasks receives a variable payment of $2 (namely $0.20 x 10).

(2) Afterwards, someone else determines the final payments. Workers are informed about this, although they do not know how and why this happens.

This is where you come into play ...

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Your decisions

In the last weeks, we hired 100 workers and matched them into 50 pairs. The decisions that you and others make in this study determine their final earnings. We randomly select one study respondent for each pair of workers.

If you are one of the selected respondents, **your decisions determine the final earnings of a pair of workers**. Let us call them *worker A* and *worker B*.

You can redistribute the payments between worker A and worker B. That is, you decide which share of the total payment amount each worker receives.

Example: Worker A receives a payment of $10 and worker B of $5 so that the sum of their payments is $15. You can freely choose how to distribute the total amount of $15 between both workers.

Completely anonymous: Please note that your decisions are completely anonymous. The workers will receive the shares that you choose with no further information. In particular, they will not learn anything about you or the nature of your decisions.

Multiple decisions - each might matter

We ask you to consider **8 different scenarios** corresponding to different possible work outcomes for worker A and worker B. 7 of those scenarios are hypothetical. 1 scenario is real and describes what actually happened when worker A and worker B worked on this task.

You will make **one distribution decision for each scenario**. If you are among the selected respondents, your decision in the real scenario is implemented and determines how much each worker earns. However, you will not be told which scenario really happened, so all of your decisions are important.

Therefore, please take each decision seriously. It might matter a lot to two real workers from the US.

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The piece-rates

Recall that the piece-rates of the workers determine how much they initially earn for each task. In what follows, we explain how these piece-rates are determined.

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The piece-rates

The workers knew that they would be **randomly assigned one of two piece-rates**. This means that a coin was flipped for each worker and determined which piece-rate a worker was assigned. Each worker had a 50% chance of being assigned either piece-rate.

High piece-rate: $0.50.
Low piece-rate: $0.10.

Before they knew to which piece-rate they were assigned, the **workers had to decide how many tasks they would complete for a piece-rate of $0.50 and how many tasks they would complete for a piece-rate of $0.10**.

In other words, each worker made two decisions: Each worker committed to the number of tasks he/she would complete for a high piece-rate *and* to the number of tasks he/she would complete for a low piece-rate.

Their decisions were binding. After they made their decisions, the workers learned which piece-rate they were assigned. Then they had to complete the number of tasks they had committed to do for their randomly assigned piece-rate.

Which piece-rates were assigned to worker A and worker B?

Worker A and worker B were **randomly assigned different piece-rates**.

Worker A was randomly assigned the high piece-rate, which means that **worker A earned $0.50 per completed task**. Worker A was informed about the rate, and then A completed the number of tasks he/she committed to do for a piece-rate of $0.50.

Worker B was randomly assigned the low piece-rate, which means that **worker B earned $0.10 per completed task**. Worker B was informed about the rate, and then B completed the number of tasks he/she committed to do for a piece-rate of $0.10.

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What if ...?

Please read the following information very carefully.

Worker A and worker B were randomly assigned different piece-rates. Worker A earned $0.50 per task, and worker B earned $0.10 per task.

You may wonder what worker B would have done if he/she had also earned a high piece-rate of $0.50. In other words, if worker B had been in the same situation as worker A, would worker B have chosen to complete a different number of tasks?

Recall: We know the answer to this question because worker B also committed to the number of tasks he/she would complete for a piece-rate of $0.50.

We will inform you about what worker B would have done for a piece-rate of $0.50 in each of the 8 different scenarios.

You can proceed to the next page only after at least 20 seconds. Please read the information on this page very carefully.

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What if ...?

To sum up, we will not only inform you about how many tasks worker A and worker B actually completed, we will also inform you about how many tasks worker B would have completed if he/she had also earned a high piece-rate of $0.50.

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Quiz

Which of the following statements are correct?

If you want to read parts of the instructions again, navigate to previous pages using the "back" button at the bottom of this page.

Each worker could freely decide how many tasks to complete.

True	False

Worker A and worker B were randomly assigned different piece-rates.

True	False

Worker A earned $0.50 per task. Worker B earned $0.10 per task.

True	False

Worker B also committed to the number of tasks he/she would complete for a piece-rate of $0.50. We will inform you about this.

True	False

Your decisions can determine the workers' earnings.

True	False

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Submit responses

Well done! All responses were correct.

You can now click on the next-button to start with the first scenario.

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3 Redistribution decisions

Scenario 1

Different piece-rates
- Worker A: $0.50
- Worker B: $0.10

Completed tasks
- Worker A: 45 tasks (90% of the work)
- Worker B: 5 tasks (10% of the work)

Payment
- Worker A: $22.50 (98% of the total payment)
- Worker B: $0.50 (2% of the total payment)

Total payment: $23.00

What if worker B had also earned a piece-rate of $0.50?
For a piece-rate of $0.50, worker B would also have completed 45 tasks.
- Worker A: 45 tasks (50% of the work)
- Worker B: 45 tasks (50% of the work)

Please split the total payment between both workers.
To do so, please specify which share of the total payment each worker gets. The shares need to add up to 100%.

Share of **worker A**	0 %
Share of **worker B**	0 %
Total	0 %

→

Scenario 2

Different piece-rates
- Worker A: $0.50
- Worker B: $0.10

Completed tasks
- Worker A: 50 tasks (100% of the work)
- Worker B: 0 tasks (0% of the work)

Payment
- Worker A: $25.00 (100% of the total payment)
- Worker B: $0.00 (0% of the total payment)

Total payment: $25.00

What if worker B had also earned a piece-rate of $0.50?
For a piece-rate of $0.50, worker B would also have completed 50 tasks.
- Worker A: 50 tasks (50% of the work)
- Worker B: 50 tasks (50% of the work)

Please split the total payment between both workers.
To do so, please specify which share of the total payment each worker gets. The shares need to add up to 100%.

Share of **worker A**	0	%
Share of **worker B**	0	%
Total	0	%

→

Scenario 3

Different piece-rates
- Worker A: $0.50
- Worker B: $0.10

Completed tasks
- Worker A: 35 tasks (70% of the work)
- Worker B: 15 tasks (30% of the work)

Payment
- Worker A: $17.50 (92% of the total payment)
- Worker B: $1.50 (8% of the total payment)

Total payment: $19.00

What if worker B had also earned a piece-rate of $0.50?
For a piece-rate of $0.50, worker B would also have completed 35 tasks.
- Worker A: 35 tasks (50% of the work)
- Worker B: 35 tasks (50% of the work)

Please split the total payment between both workers.
To do so, please specify which share of the total payment each worker gets. The shares need to add up to 100%.

Share of **worker A**	0	%
Share of **worker B**	0	%
Total	0	%

→

Scenario 4

Different piece-rates
- Worker A: $0.50
- Worker B: $0.10

Completed tasks
- Worker A: 30 tasks (88% of the work)
- Worker B: 4 tasks (12% of the work)

Payment
- Worker A: $15.00 (97% of the total payment)
- Worker B: $0.40 (3% of the total payment)

Total payment: $15.40

What if worker B had also earned a piece-rate of $0.50?
For a piece-rate of $0.50, worker B would have completed 33 tasks.
- Worker A: 30 tasks (48% of the work)
- Worker B: 33 tasks (52% of the work)

Please split the total payment between both workers.
To do so, please specify which share of the total payment each worker gets. The shares need to add up to 100%.

Share of **worker A**	0 %
Share of **worker B**	0 %
Total	0 %

→

Scenario 5

Different piece-rates
- Worker A: $0.50
- Worker B: $0.10

Completed tasks
- Worker A: 34 tasks (85% of the work)
- Worker B: 6 tasks (15% of the work)

Payment
- Worker A: $17.00 (97% of the total payment)
- Worker B: $0.60 (3% of the total payment)

Total payment: $17.60

What if worker B had also earned a piece-rate of $0.50?
For a piece-rate of $0.50, worker B would have completed 15 tasks.
- Worker A: 34 tasks (69% of the work)
- Worker B: 15 tasks (31% of the work)

Please split the total payment between both workers.
To do so, please specify which share of the total payment each worker gets. The shares need to add up to 100%.

Share of **worker A**	0 %
Share of **worker B**	0 %
Total	0 %

→

Scenario 6

Different piece-rates
- Worker A: $0.50
- Worker B: $0.10

Completed tasks
- Worker A: 28 tasks (60% of the work)
- Worker B: 19 tasks (40% of the work)

Payment
- Worker A: $14.00 (88% of the total payment)
- Worker B: $1.90 (12% of the total payment)

Total payment: $15.90

What if worker B had also earned a piece-rate of $0.50?
For a piece-rate of $0.50, worker B would have completed 32 tasks.
- Worker A: 28 tasks (47% of the work)
- Worker B: 32 tasks (53% of the work)

Please split the total payment between both workers.
To do so, please specify which share of the total payment each worker gets. The shares need to add up to 100%.

Share of **worker A**	0	%
Share of **worker B**	0	%
Total	0	%

→

Scenario 7

Different piece-rates
- Worker A: $0.50
- Worker B: $0.10

Completed tasks
- Worker A: 1 tasks (5% of the work)
- Worker B: 18 tasks (95% of the work)

Payment
- Worker A: $0.50 (22% of the total payment)
- Worker B: $1.80 (78% of the total payment)

Total payment: $2.30

What if worker B had also earned a piece-rate of $0.50?
For a piece-rate of $0.50, worker B would have completed 28 tasks.
- Worker A: 1 tasks (3% of the work)
- Worker B: 28 tasks (97% of the work)

Please split the total payment between both workers.
To do so, please specify which share of the total payment each worker gets. The shares need to add up to 100%.

Share of **worker A**	0	%
Share of **worker B**	0	%
Total	0	%

Last scenario

Different piece-rates
- Worker A: $0.50
- Worker B: $0.10

Completed tasks
- Worker A: 1 tasks (33% of the work)
- Worker B: 2 tasks (67% of the work)

Payment
- Worker A: $0.50 (71% of the total payment)
- Worker B: $0.20 (29% of the total payment)

Total payment: $0.70

What if worker B had also earned a piece-rate of $0.50?
For a piece-rate of $0.50, worker B would have completed 7 tasks.
- Worker A: 1 tasks (13% of the work)
- Worker B: 7 tasks (88% of the work)

Please split the total payment between both workers.
To do so, please specify which share of the total payment each worker gets. The shares need to add up to 100%.

Share of **worker A**	0 %
Share of **worker B**	0 %
Total	0 %

→

We asked you to consider 8 different scenarios. 7 of those scenarios are hypothetical. 1 scenario is real and describes what actually happened when worker A and worker B worked on this task.

What do you think: Which of the 8 scenarios was the real scenario?

Don't know	1	2	3	4	5	6	7	8

→

You split money between two workers.

What was the reasoning that shaped your decisions?

Please describe briefly.

→

4 Beliefs about effort response

Part 2

Now, the short part 2 begins. Part 2 is not only about worker A and worker B but about all 100 workers who worked on the tasks.

If your answers to the next three questions are correct, you receive a $5 Amazon gift card. In this case, you will be notified after you completed the survey, and the code will be sent to you via email within a week.

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Workers' effort

In the tasks, workers were randomly assigned to different piece-rates.

High piece-rate: $0.50.
Low piece-rate: $0.10.

We know how many tasks a worker would have completed in both of the two situations.

Question 1
Please think about all workers who decided to complete **0 tasks for a piece-rate of $0.10**.

What do you think? How many tasks did these workers decide to complete for a piece-rate of $0.50?
Note: We will consider your guess correct if it is, at most, one task away from the true value.

Question 2

Please think about all workers who decided to complete **5 tasks for a piece-rate of $0.10**.

What do you think? How many tasks did these workers decide to complete for a piece-rate of $0.50?

Note: We will consider your guess correct if it is, at most, one task away from the true value.

Question 3

Please think about all workers who decided to complete **15 tasks for a piece-rate of $0.10**.

What do you think? How many tasks did these workers decide to complete for a piece-rate of $0.50?

Note: We will consider your guess correct if it is, at most, one task away from the true value.

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5 Short post-experimental questionnaire

Part 3

Now, the short and final part 3 begins. Please answer the following final questions.

What is your current employment status?

- Full-time employee
- Part-time employee
- Self-employed or small business owner
- Unemployed and looking for work
- Student
- Not in labor force (for example: retired or full-time parent)

On *economic policy matters*, where do you see yourself on the liberal/conservative spectrum?

- Very liberal
- Liberal
- Moderate
- Conservative
- Very conservative

Do you think of yourself as closer to the Republican or Democratic party?

- Republican
- Democratic

How would you describe your ethnicity/race?

White	African American/Black	Hispanic/Latino	Asian/Asian American	American Indian	Other

Your feedback

Feel free to leave a comment in case

- some parts of the survey were unclear or confusing
- you experienced a technical issue
- you want to give general feedback on the survey

Any comment is valuable and will improve the research project.

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Thank you very much for completing the survey

Thank so much for your time and responses.

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Part II
Overview of experimental variations

The study contains the following between-subject variations:

- Condition *Baseline*: Contains no information about the counterfactual effort choice of worker B (see below for example). Also, does not contain the two instructions pages with the title “What if ...?”.
- Condition *Counterfactual Low*: In scenarios 1-3, worker B would not adjust his/her effort provision to a higher piece-rate (see below for example).
- Quiz: The quiz questions are tailored to each treatment.
- Redistribution scenarios 4-7: Effort choices and counterfactual choices are randomly drawn.
- Order of the first three redistribution scenarios is varied randomly.

Condition *Baseline*

Scenario 1

Different piece-rates
- Worker A: $0.50
- Worker B: $0.10

Completed tasks
- Worker A: 35 tasks (70% of the work)
- Worker B: 15 tasks (30% of the work)

Payment
- Worker A: $17.50 (92% of the total payment)
- Worker B: $1.50 (8% of the total payment)

Total payment: $19.00

Please split the total payment between both workers.
To do so, please specify which share of the total payment each worker gets. The shares need to add up to 100%.

Share of **worker A**	0 %
Share of **worker B**	0 %
Total	0 %

Condition *Counterfactual Low*

Scenario 1

Different piece-rates
- Worker A: $0.50
- Worker B: $0.10

Completed tasks
- Worker A: 45 tasks (90% of the work)
- Worker B: 5 tasks (10% of the work)

Payment
- Worker A: $22.50 (98% of the total payment)
- Worker B: $0.50 (2% of the total payment)

Total payment: $23.00

What if worker B had also earned a piece-rate of $0.50?
For a piece-rate of $0.50, worker B would still have completed 5 tasks.
- Worker A: 45 tasks (90% of the work)
- Worker B: 5 tasks (10% of the work)

Please split the total payment between both workers.
To do so, please specify which share of the total payment each worker gets. The shares need to add up to 100%.

Share of **worker A**	0 %
Share of **worker B**	0 %
Total	0 %

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