

# Supplementary Material

## Redistribution Over Gains and Losses: Social Preferences and Moral Rules

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## **I. Instructions**

*A. Student Sample*

*(See next page)*

## INTRO

Please, enter your subject ID here:

Welcome! You are about to take part in a decision-making experiment. This experiment has been financed by various research institutions. Just for showing up you have already earned £2.50. You can earn additional money depending on the decisions made by you and other participants. It is therefore very important that you read these instructions with care.

It is important that you remain silent and do not look at other people's work. If you have any questions, or need assistance of any kind, please raise your hand and an experimenter will come to you. You may use the provided scrap paper but no phones, calculators, or other devices. If you use a device, talk, laugh, exclaim out loud, etc., you will be asked to leave and you will not be paid. We expect and appreciate your following of these rules.

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We would like to stress that any choices you make in this experiment are entirely anonymous. Please do not touch the computer or its mouse until you are instructed to do so. If you have any questions at any point, please raise your hand and one of us will come to your desk to answer your question. Please do not ask any question out loud. Thank you.

### **General guidelines**

The experiment has several tasks. We will give you the instructions of each task just before you start it. Your final payment will be determined by only one of the tasks, which will be picked at random at the end of the experiment. The role of everyone involved in the task will also be determined at random at the end of the experiment. We will provide you with some feedback on the final payment when you come to collect your earnings at the end of the experiment

**Click >> to continue.**

## **MJ\_INTRO**

**You are now an outside OBSERVER of the following decision problem.**

*This decision problem involves two people. One chooses between two distributions of money, and each player will get the money they got for the distribution chosen.*

**Your task as an observer is to give your moral rating of Person A** in scenarios that we'll present you in the following screens. There are no right or wrong moral judgments. Focus on judging according to your own personal views of morality, regardless of whether they coincide or not to social customs.

Rate the morality of Person A on a scale from -50 (extremely bad) to +50 (extremely good) with the sliders provided. In each case you must click on the slider to activate it and then move it to the rating you decide on.

## **MJ\_GAINS**

Person A had to choose between the following two distributions of income:

Qualtrics Survey Software

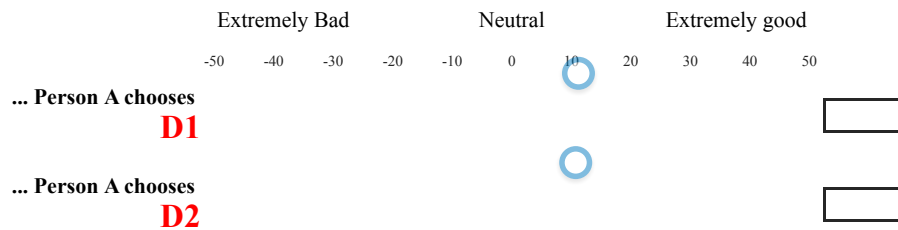
27/04/2023, 19:30

**D1: £10 for Person A, £0 for Person B**

VS

**D2: £0 for Person A, £0 for Person B**

Please rate Person A's morality if ...



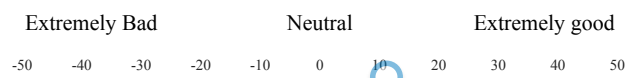
Person A had to choose between the following two distributions of income:

**D1: £10 for Person A, £0 for Person B**

VS

**D2: £1 for Person A, £1 for Person B**

Please rate Person A's morality if ...





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... Person A chooses  
**D1**



... Person A chooses  
**D2**



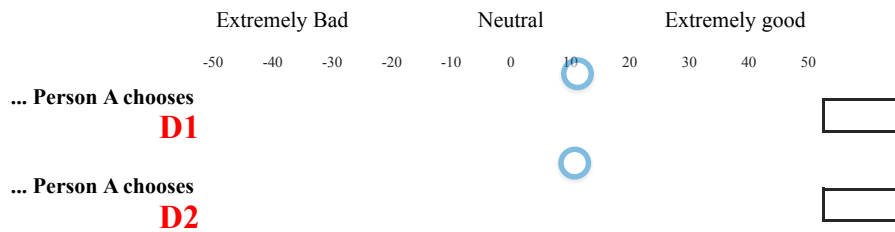
Person A had to choose between the following two distributions of income:

**D1:** £10 for Person A, £0 for Person B

vs

**D2:** £2 for Person A, £2 for Person B

Please rate Person A's morality if ...



Person A had to choose between the following two distributions of income:

Qualtrics Survey Software

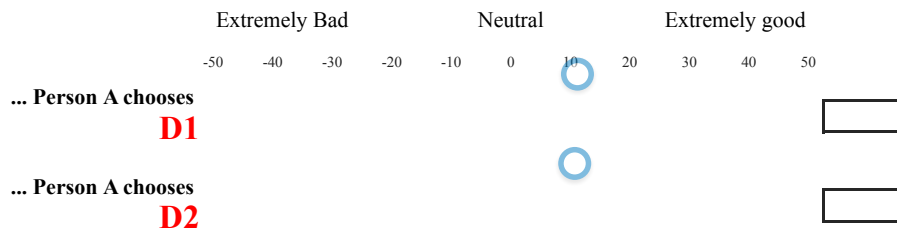
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**D1:** £10 for Person A, £0 for Person B

vs

**D2:** £3 for Person A, £3 for Person B

Please rate Person A's morality if ...



Person A had to choose between the following two distributions of income:

**D1:** £10 for Person A, £0 for Person B

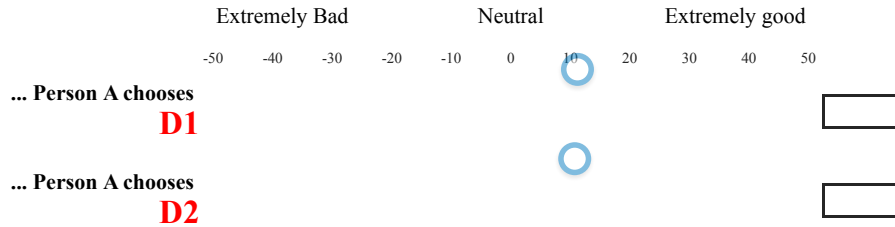
vs

**D2:** £4 for Person A, £4 for Person B

Please rate Person A's morality if ...

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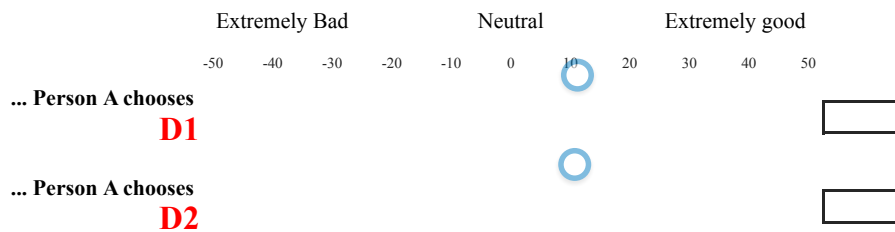
Person A had to choose between the following two distributions of income:

**D1:** £10 for Person A, £0 for Person B

vs

**D2:** £5 for Person A, £5 for Person B

Please rate Person A's morality if ...



Person A had to choose between the following two

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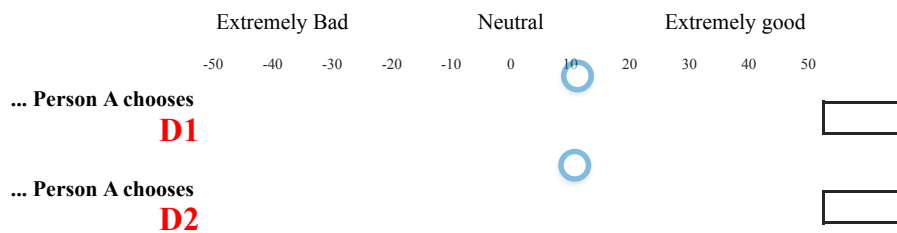
distributions of income:

**D1:** £10 for Person A, £0 for Person B

vs

**D2:** £6 for Person A, £6 for Person B

Please rate Person A's morality if ...



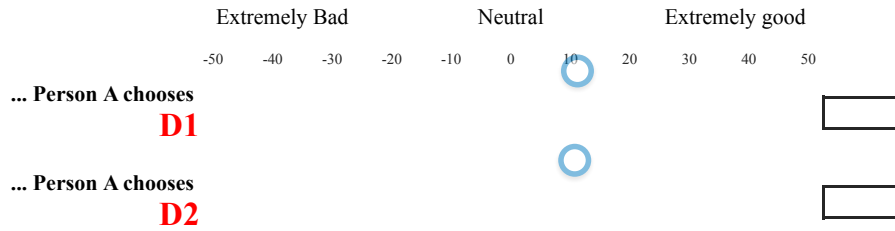
Person A had to choose between the following two distributions of income:

**D1:** £10 for Person A, £0 for Person B

vs

**D2:** £7 for Person A, £7 for Person B

Please rate Person A's morality if ...



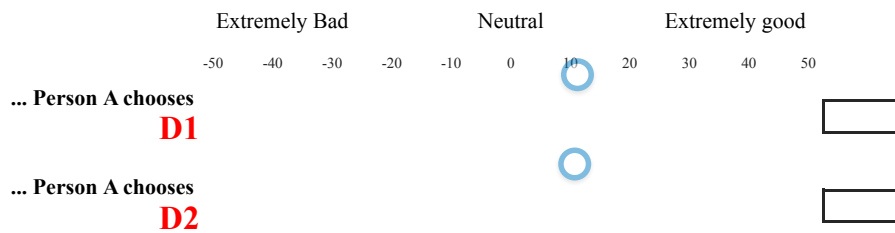
Person A had to choose between the following two distributions of income:

**D1:** £10 for Person A, £0 for Person B

VS

**D2:** £8 for Person A, £8 for Person B

Please rate Person A's morality if ...



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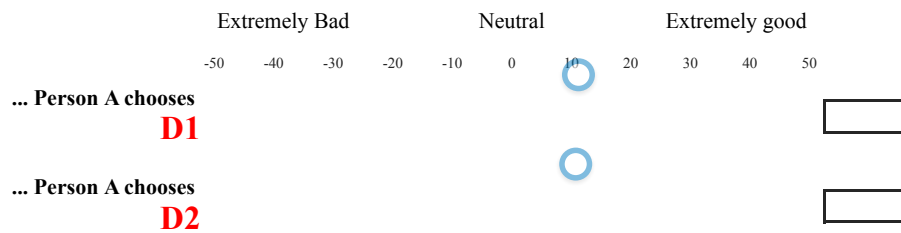
Person A had to choose between the following two distributions of income:

**D1:** £10 for Person A, £0 for Person B

VS

**D2:** £9 for Person A, £9 for Person B

Please rate Person A's morality if ...



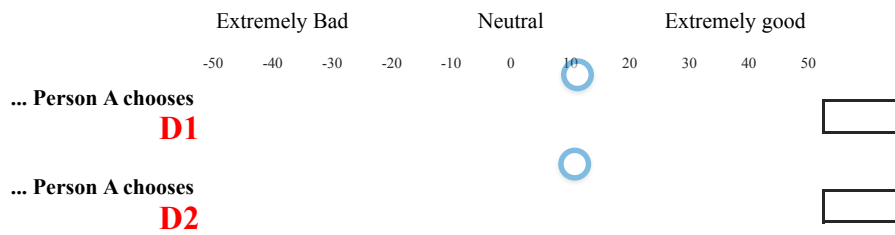
Person A had to choose between the following two distributions of income:

**D1:** £10 for Person A, £0 for Person B

VS

**D2:** £10 for Person A, £10 for Person B

Please rate Person A's morality if ...



### MJ\_LOSSES

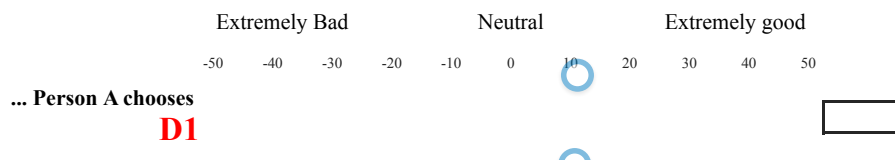
Person A had to choose between the following two distributions of income:

**D1:** £0 for Person A, -£10 for Person B

VS

**D2:** -£10 for Person A, -£10 for Person B

Please rate Person A's morality if ...



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... Person A chooses  
**D2**



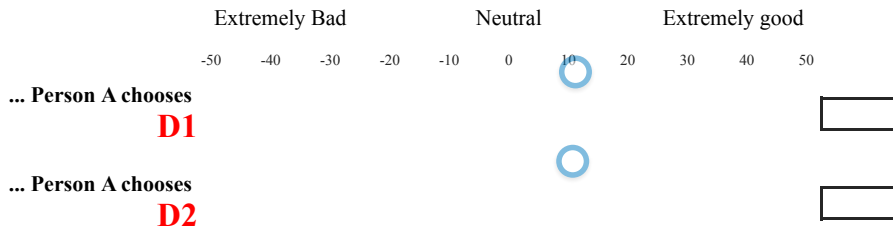

Person A had to choose between the following two distributions of income:

**D1:** £0 for Person A, -£10 for Person B

vs

**D2:** -£9 for Person A, -£9 for Person B

Please rate Person A's morality if ...



Person A had to choose between the following two distributions of income:

**D1:** £0 for Person A, -£10 for Person B





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... Person A chooses  
**D1**

... Person A chooses  
**D2**



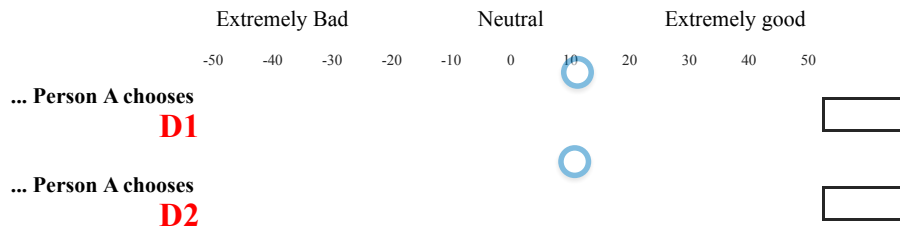
Person A had to choose between the following two distributions of income:

**D1:** £0 for Person A, -£10 for Person B

vs

**D2:** -£6 for Person A, -£6 for Person B

Please rate Person A's morality if ...



Person A had to choose between the following two distributions of income:

Qualtrics Survey Software

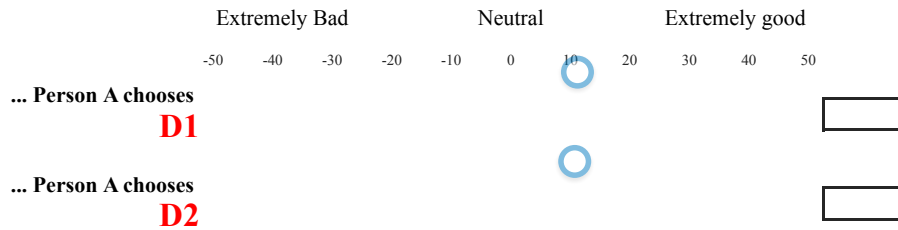
27/04/2023, 19:30

**D1: £0 for Person A, -£10 for Person B**

vs

**D2: -£5 for Person A, -£5 for Person B**

Please rate Person A's morality if ...



Person A had to choose between the following two distributions of income:

**D1: £0 for Person A, -£10 for Person B**

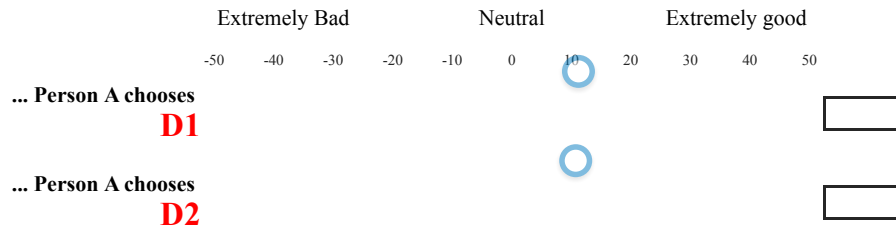
vs

**D2: -£4 for Person A, -£4 for Person B**

Please rate Person A's morality if ...

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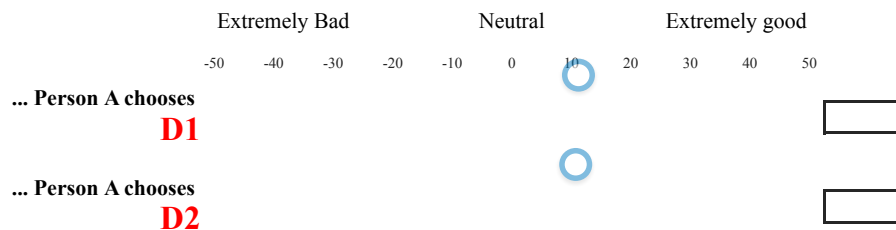
Person A had to choose between the following two distributions of income:

**D1:** £0 for Person A, -£10 for Person B

vs

**D2:** -£3 for Person A, -£3 for Person B

Please rate Person A's morality if ...



Person A had to choose between the following two

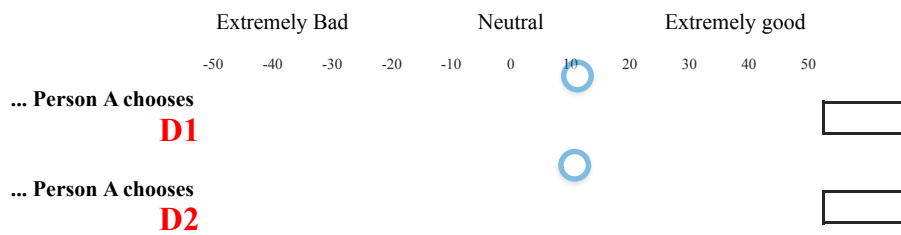
distributions of income:

**D1:** £0 for Person A, -£10 for Person B

vs

**D2:** -£2 for Person A, -£2 for Person B

Please rate Person A's morality if ...



Person A had to choose between the following two distributions of income:

**D1:** £0 for Person A, -£10 for Person B

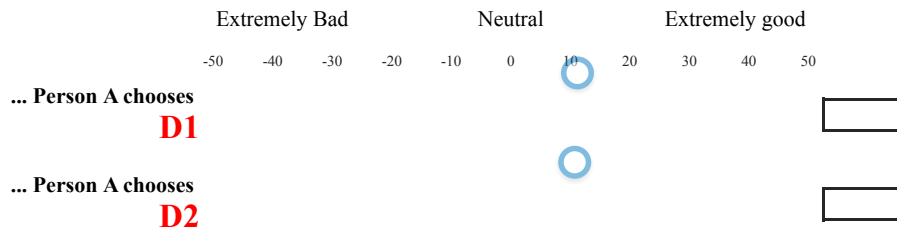
vs

**D2:** -£1 for Person A, -£1 for Person B

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Please rate Person A's morality if ...



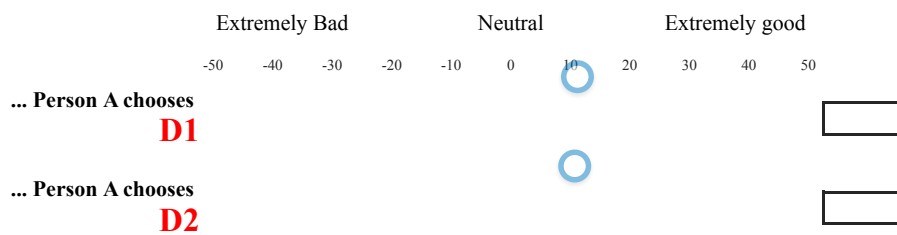
Person A had to choose between the following two distributions of income:

**D1:** £0 for Person A, -£10 for Person B

VS

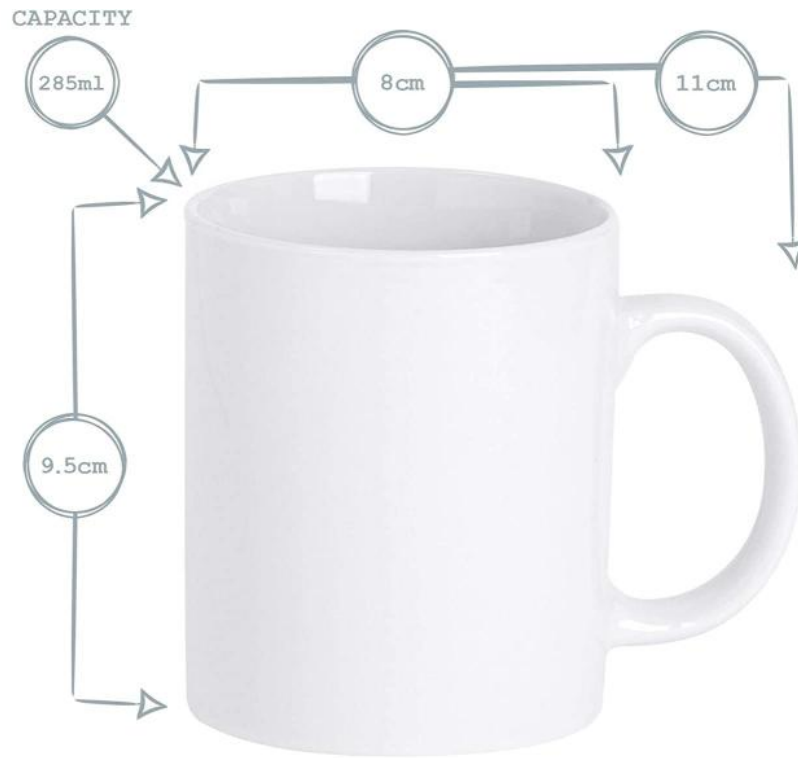
**D2:** £0 for Person A, £0 for Person B

Please rate Person A's morality if ...



## WTA

If this task is chosen for payment, we will give you a mug similar to the following one:



Dishwasher Safe Microwave Safe 2 Year Warranty

Your task below is to state the minimum price at which you'd be willing to sell the mug.

If this task is chosen for payment, we will make you an offer.

- If you stated a lower price than our offer, you will sell the mug to us with our offer as the final selling price.
- If you stated a higher price than our offer, you will not sell the mug and receive it as a bonus for completing this task.

Our offer will be picked at random from any number between £0 to £10, rounded to two decimal places. All prices are equally likely. There is a scientific reason for proceeding this way. Since you cannot influence the price, as it will be determined randomly, you have an incentive to state the price that corresponds to your **true preference**. We will also not be able to negotiate about the price.

**Task: The lowest price I'm willing to accept to sell this**



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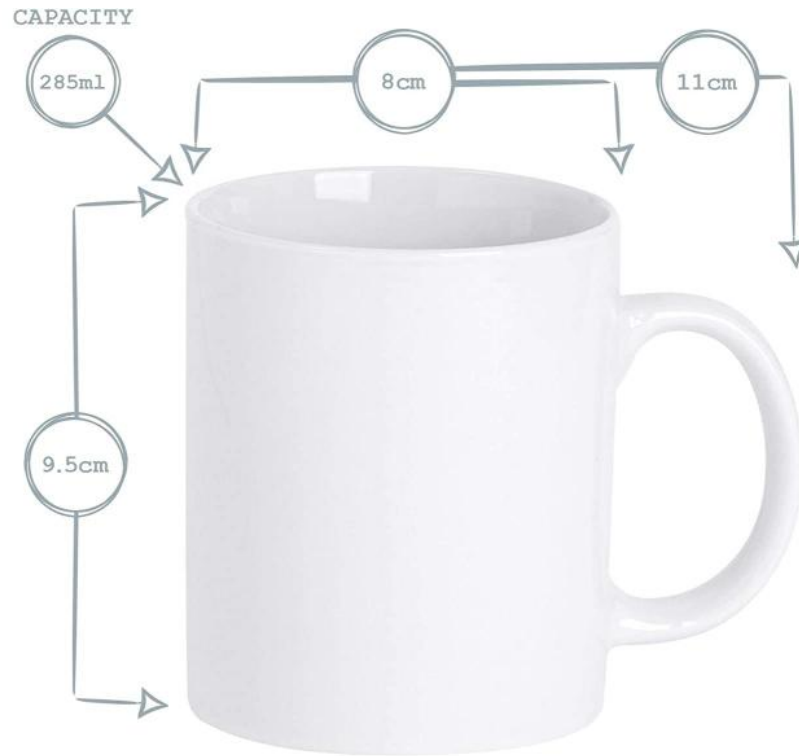
mug is (in £):

## WTP

If this task is chosen for payment, we will endow you with £10, and the option to use them to buy from us a mug similar to the following one:

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Dishwasher Safe



Microwave Safe



2 Year Warranty

Your task below is to state the maximum price at which you'd be willing to buy the mug.

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If this task is chosen for payment, we will make you an offer.

- If you stated a higher price than our offer, you will buy the mug from us with our offer as the final selling price, and will keep any remaining money of the £10.
- If you stated a lower price than our offer, you will not buy the mug and keep the £10.

Our offer will be picked at random from any number between £0 to £10, rounded to two decimal places. All prices are equally likely. There is a scientific reason for proceeding this way. Since you cannot influence the price, as it will be determined randomly, you have an incentive to state the price that corresponds to your **true preference**. We will also not be able to negotiate about the price.

**Task: The highest price I'm willing to accept to buy this mug is (in £):**

## **MDG\_Gains**

During this task you will be paired with another participant, as it involves two roles. One chooses between two distributions of payoffs, and the other will receive whatever payoff corresponds to them as a result of the chosen distribution.

### **Payoffs**

If this task is chosen for payment, the computer randomly assigns you and the other player to one of the roles. Additionally, the computer will randomly choose one among the several binary distribution problems you will face.

If you are put in the role of the person that chooses the distribution, then the distribution you chose in the binary decision problem selected for payment will determine both your and the other person's payoff.

If the other player is put in the role of the person that chooses the distribution, then whatever distribution he chooses in the binary decision problem selected for payment will determine both their and your payoff.

### **Choose between both distributions of payoffs in the following**

### decisions

Decision 1	£10 for me, £0 for other <input type="radio"/>	£0 for me, £0 for other <input type="radio"/>
Decision 2	£10 for me, £0 for other <input type="radio"/>	£1 for me, £1 for other <input type="radio"/>
Decision 3	£10 for me, £0 for other <input type="radio"/>	£2 for me, £2 for other <input type="radio"/>
Decision 4	£10 for me, £0 for other <input type="radio"/>	£3 for me, £3 for other <input type="radio"/>
Decision 5	£10 for me, £0 for other <input type="radio"/>	£4 for me, £4 for other <input type="radio"/>
Decision 6	£10 for me, £0 for other <input type="radio"/>	£5 for me, £5 for other <input type="radio"/>
Decision 7	£10 for me, £0 for other <input type="radio"/>	£6 for me, £6 for other <input type="radio"/>
Decision 8	£10 for me, £0 for other <input type="radio"/>	£7 for me, £7 for other <input type="radio"/>
Decision 9	£10 for me, £0 for other <input type="radio"/>	£8 for me, £8 for other <input type="radio"/>
Decision 10	£10 for me, £0 for other <input type="radio"/>	£9 for me, £9 for other <input type="radio"/>
Decision 11	£10 for me, £0 for other <input type="radio"/>	£10 for me, £10 for other <input type="radio"/>

### Satisfaction

In this task, you must indicate **your level of satisfaction with each allocation of money** by moving the slider to the desired satisfaction rating. These scenarios are

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imaginary and none of these allocations will be chosen for payment. However, we ask you to think about the allocations as if they were to happen for real and state your satisfaction from each allocation as honestly and truthfully as possible. **There are no true or false responses: just go with what feels as your true satisfaction.**

The allocations will be presented in the left hand side of each slider as (£x, £w, £y, £z); where **£x** refers to **your income** and **£w, £y, and £z** refers to the **three other subjects' incomes**.

### How satisfied are you with these allocations of money?



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	<input type="radio"/>	<input type="text"/>
(£94, £66, £66, £10)	<input type="radio"/>	<input type="text"/>
(£93, £60, £60, £17)	<input type="radio"/>	<input type="text"/>
(£107, £53, £53, £17)	<input type="radio"/>	<input type="text"/>
(£97, £60, £60, £13)	<input type="radio"/>	<input type="text"/>
(£102, £59, £59, £10)	<input type="radio"/>	<input type="text"/>
(£109, £60, £60, £10)	<input type="radio"/>	<input type="text"/>
(£100, £66, £66, £10)	<input type="radio"/>	<input type="text"/>
(£96, £60, £60, £14)	<input type="radio"/>	<input type="text"/>
(£91, £60, £60, £19)	<input type="radio"/>	<input type="text"/>
(£100, £59, £59, £12)	<input type="radio"/>	<input type="text"/>
(£106, £57, £57, £10)	<input type="radio"/>	<input type="text"/>
(£100, £64, £64, £10)	<input type="radio"/>	<input type="text"/>
(£99, £61, £61, £10)	<input type="radio"/>	<input type="text"/>
(£95, £65, £65, £10)	<input type="radio"/>	<input type="text"/>
Set this statement to 5	<input type="radio"/>	<input type="text"/>
(£106, £60, £60, £10)	<input type="radio"/>	<input type="text"/>

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(£98, £62, £62, £10)



(£100, £65, £65, £10)



(£107, £60, £60, £10)



(£96, £64, £64, £10)



(£102, £58, £58, £12)



(£104, £58, £58, £10)



(£93, £67, £67, £10)



(£110, £55, £55, £10)



(£100, £67, £67, £10)



(£108, £56, £56, £10)



(£100, £63, £63, £10)



(£94, £60, £60, £16)



(£100, £53, £53, £24)



(£105, £55, £55, £15)



(£106, £54, £54, £16)



(£116, £52, £52, £10)





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(£92, £60, £60, £18)	<input type="radio"/>	
(£112, £54, £54, £10)	<input type="radio"/>	<input type="text"/>
(£104, £60, £60, £10)	<input type="radio"/>	<input type="text"/>
(£109, £51, £51, £19)	<input type="radio"/>	<input type="text"/>
(£100, £57, £57, £16)	<input type="radio"/>	<input type="text"/>
(£97, £63, £63, £10)	<input type="radio"/>	<input type="text"/>
(£101, £60, £60, £10)	<input type="radio"/>	<input type="text"/>
(£100, £69, £69, £10)	<input type="radio"/>	<input type="text"/>
(£102, £60, £60, £10)	<input type="radio"/>	<input type="text"/>
(£95, £60, £60, £15)	<input type="radio"/>	<input type="text"/>
(£99, £60, £60, £11)	<input type="radio"/>	<input type="text"/>
(£104, £56, £56, £14)	<input type="radio"/>	<input type="text"/>
(£100, £55, £55, £20)	<input type="radio"/>	<input type="text"/>
(£118, £51, £51, £10)	<input type="radio"/>	<input type="text"/>
(£108, £52, £52, £18)	<input type="radio"/>	<input type="text"/>
Set this statement to -50	<input type="radio"/>	<input type="text"/>
(£100, £52, £52, £26)	<input type="radio"/>	<input type="text"/>

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(£100, £60, £60, £10)




(£91, £69, £69, £10)




(£100, £62, £62, £10)




(£100, £61, £61, £10)




(£103, £57, £57, £13)




(£114, £53, £53, £10)




(£100, £58, £58, £14)




(£100, £56, £56, £18)




(£101, £59, £59, £11)




(£100, £68, £68, £10)




## MDG\_Losses

During this task you will be paired with another participant, as it involves two roles.

One chooses between two distributions of payoffs, and the other will receive whatever payoff corresponds to them as a result of the chosen distribution.

If this task is chosen for payment, **you will receive an endowment of £10 to compensate potential losses.**

### Payoffs

If this task is chosen for payment, the computer randomly assigns you and the other player to one of the roles. Additionally, the computer will randomly choose one among the several binary distribution problems you will face.

If you are put in the role of the person that chooses the distribution, then the distribution you chose in the binary decision problem selected for payment will determine both your and the other person's payoff.

If the other player is put in the role of the person that chooses the distribution, then whatever distribution he chooses in the binary decision problem selected for payment will determine both their and your payoff.

### Choose between both distributions of payoffs in the following decisions

Decision 1	£0 for me, -£10 for other <input type="radio"/>	-£10 for me, -£10 for other <input type="radio"/>
Decision 2	£0 for me, -£10 for other <input type="radio"/>	-£9 for me, -£9 for other <input type="radio"/>
	£0 for me, -£10 for other	-£8 for me, -£8 for other

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Decision 3	<input type="radio"/>	<input type="radio"/>
Decision 4	£0 for me, -£10 for other	-£7 for me, -£7 for other
Decision 5	<input type="radio"/>	<input type="radio"/>
Decision 6	£0 for me, -£10 for other	-£6 for me, -£6 for other
Decision 7	<input type="radio"/>	<input type="radio"/>
Decision 8	£0 for me, -£10 for other	-£5 for me, -£5 for other
Decision 9	<input type="radio"/>	<input type="radio"/>
Decision 10	£0 for me, -£10 for other	-£4 for me, -£4 for other
Decision 11	<input type="radio"/>	<input type="radio"/>
	£0 for me, -£10 for other	-£3 for me, -£3 for other
	<input type="radio"/>	<input type="radio"/>
	£0 for me, -£10 for other	-£2 for me, -£2 for other
	<input type="radio"/>	<input type="radio"/>
	£0 for me, -£10 for other	-£1 for me, -£1 for other
	<input type="radio"/>	<input type="radio"/>
	£0 for me, -£10 for other	£0 for me, £0 for other
	<input type="radio"/>	<input type="radio"/>

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**Default Question Block**

Please write your subject ID from the experiment in the box below.

Your subject ID is the number in the orange token we gave you at the beginning of the experiment.

**SOCIODEMOGRAPHICS****Your Gender:****Your Age:****Would you describe yourself as a left wing or a right wing?**

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**How religious are you?**

**How large was the community where you have lived most of your life?**

**What is your field of study?**


Here are a number of **personality traits** that may or may not apply to you. Please indicate on the scale below the extent to which you agree or disagree with that statement. You should rate the extent to which the pair of traits applies to you, even if one characteristic applies more strongly than the other.

	Disagree strongly	Disagree moderately	Disagree a little	Neither agree nor disagree	Agree a little	Agree moderately	Agree strongly
Extraverted, enthusiastic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Critical, quarrelsome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dependable, self-disciplined	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Anxious, easily upset	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Open to new experiences, complex	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reserved, quiet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Sympathetic, warm	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(
Disorganized, careless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(
Calm, emotionally stable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(
Conventional, uncreative	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(

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*B. Representative Sample*

*(See next page)*



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## Consent Form

Do you consent to participating in this Study? If so, click Yes. If no, click No. You can withdraw from the study whenever you want, but if you do so we will not be able to pay you for your participation.

- Yes  
 No

## INTRO

Please, enter your prolific ID here:

Welcome! You are about to take part in a decision-making experiment. This experiment has been financed by various research institutions. We will pay you £2 if you complete the survey. You can earn additional money depending on the decisions made by you and

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

We would like to stress that any choices you make in this experiment are entirely anonymous.

### **General guidelines**

The experiment has several tasks. We will give you the instructions of each task just before you start it.

**Only one of all the tasks is a real one**, in the sense that will be chosen for payment, and the other are fictitious. **You will not know which task was for real until you finish the experiment.** 20% of subjects completing the experiment will be randomly chosen for payment. If you are selected, your final payment will be determined by the real task .

Some tasks are not incentivised, meaning that your answer will not influence your income if you were to be selected for the extra payment. Whenever you are playing a non-incentivised task, you

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will be explicitly told so.

We ask you to answer all tasks as honestly and seriously as possible.

**Click >> to continue.**

## **MJ\_INTRO**

**The following tasks are not incentivised, meaning that your answers here will not influence your income if you were to be randomly selected for the extra payment.**

**You are now an outside OBSERVER of the following decision problem.**

***This decision problem involves two people. One chooses between two distributions of money, and each player will get the money they got for the distribution chosen.***

**Your task as an observer is to give your moral rating of Person A** in scenarios that we'll present you in the following screens. There are no right or wrong moral judgments. Focus on judging according to your own personal views of morality,

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regardless of whether they coincide or not to social customs.

Rate the morality of Person A on a scale from -50 (extremely bad) to +50 (extremely good) with the sliders provided. In each case you must click on the slider to activate it and then move it to the rating you decide on.

## MJ\_GAINS

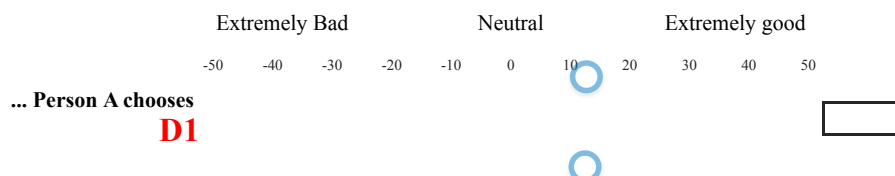
Person A had to choose between the following two distributions of income:

**D1:** £10 for Person A, £0 for Person B

VS

**D2:** £0 for Person A, £0 for Person B

Please rate Person A's morality if ...



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... Person A chooses  
**D2**

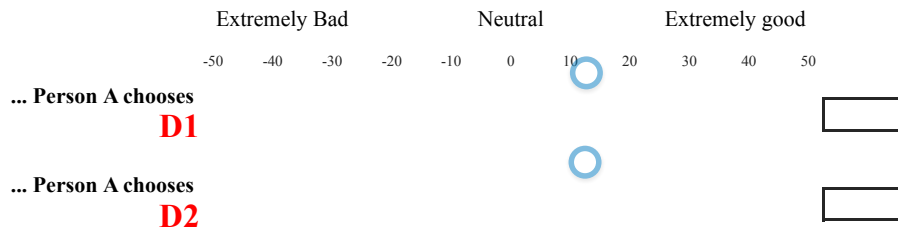
Person A had to choose between the following two distributions of income:

**D1:** £10 for Person A, £0 for Person B

vs

**D2:** £1 for Person A, £1 for Person B

Please rate Person A's morality if ...



Person A had to choose between the following two distributions of income:

**D1:** £10 for Person A, £0 for Person B

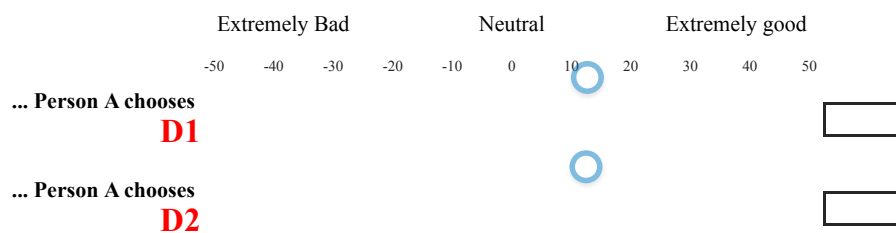
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VS

**D2: £2 for Person A, £2 for Person B**

Please rate Person A's morality if ...



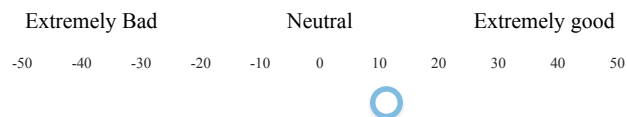
Person A had to choose between the following two distributions of income:

**D1: £10 for Person A, £0 for Person B**

VS

**D2: £3 for Person A, £3 for Person B**

Please rate Person A's morality if ...



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... Person A chooses  
**D1**

... Person A chooses  
**D2**



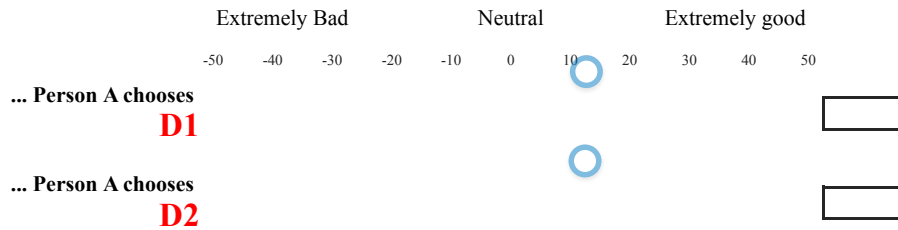
Person A had to choose between the following two distributions of income:

**D1:** £10 for Person A, £0 for Person B

VS

**D2:** £4 for Person A, £4 for Person B

Please rate Person A's morality if ...



Person A had to choose between the following two distributions of income:

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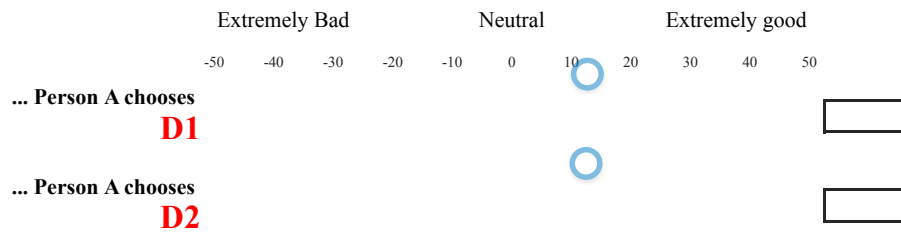
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**D1:** £10 for Person A, £0 for Person B

VS

**D2:** £5 for Person A, £5 for Person B

Please rate Person A's morality if ...



Person A had to choose between the following two distributions of income:

**D1:** £10 for Person A, £0 for Person B

VS

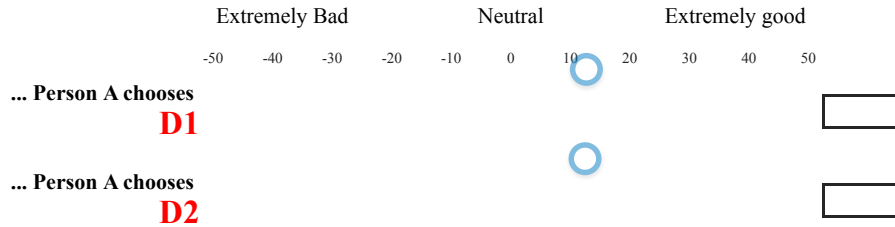
**D2:** £6 for Person A, £6 for Person B

Please rate Person A's morality if ...



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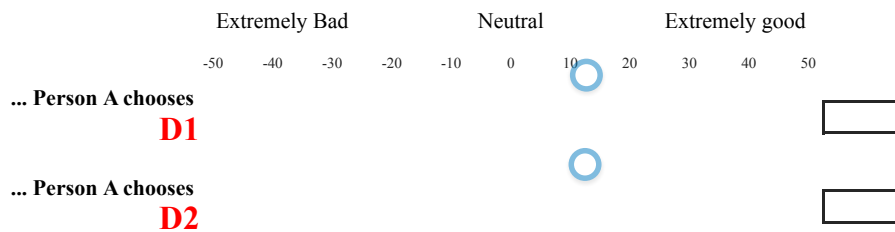
Person A had to choose between the following two distributions of income:

**D1:** £10 for Person A, £0 for Person B

vs

**D2:** £7 for Person A, £7 for Person B

Please rate Person A's morality if ...



Person A had to choose between the following two

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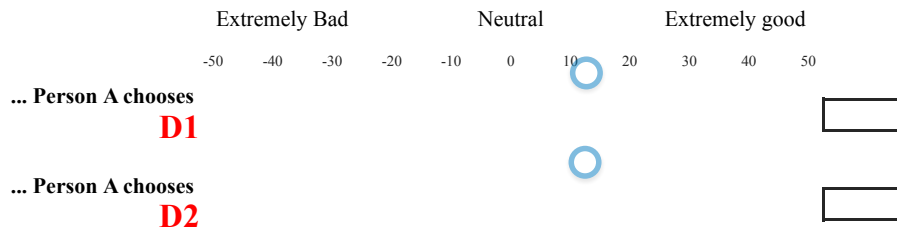
distributions of income:

**D1:** £10 for Person A, £0 for Person B

vs

**D2:** £8 for Person A, £8 for Person B

Please rate Person A's morality if ...



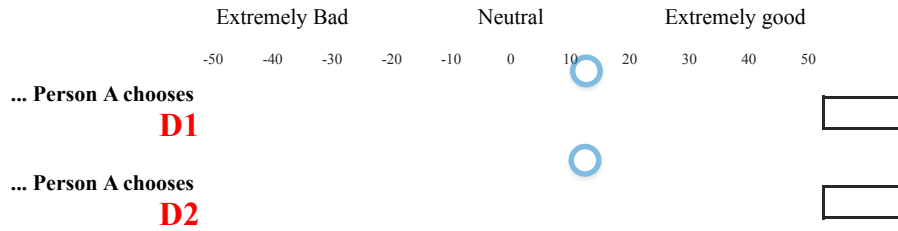
Person A had to choose between the following two distributions of income:

**D1:** £10 for Person A, £0 for Person B

vs

**D2:** £9 for Person A, £9 for Person B

Please rate Person A's morality if ...



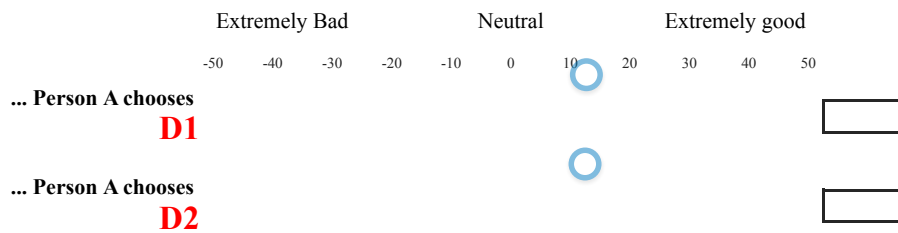
Person A had to choose between the following two distributions of income:

**D1:** £10 for Person A, £0 for Person B

VS

**D2:** £10 for Person A, £10 for Person B

Please rate Person A's morality if ...



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## MJ\_LOSSES

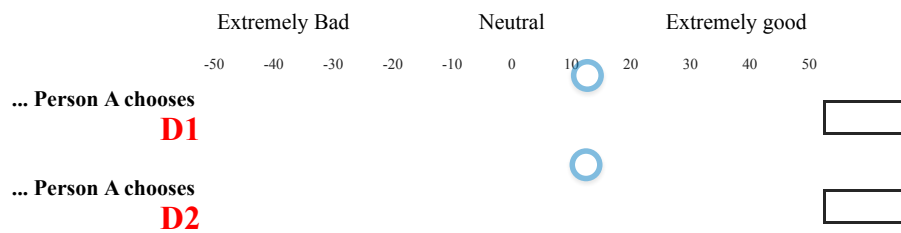
Person A had to choose between the following two distributions of income:

**D1:** £0 for Person A, -£10 for Person B

vs

**D2:** -£10 for Person A, -£10 for Person B

Please rate Person A's morality if ...



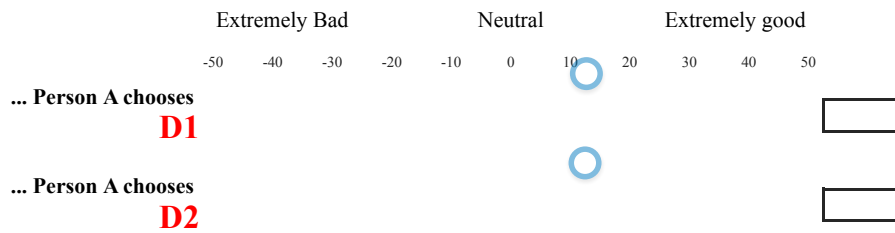
Person A had to choose between the following two distributions of income:

**D1:** £0 for Person A, -£10 for Person B

vs

**D2: -£9 for Person A, -£9 for Person B**

Please rate Person A's morality if ...



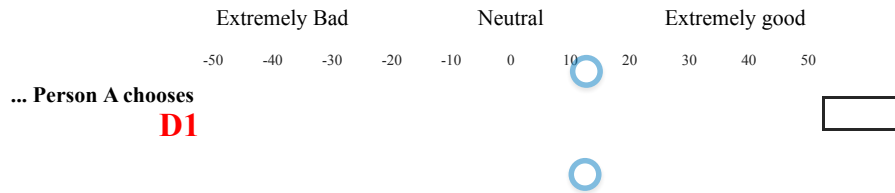
Person A had to choose between the following two distributions of income:

**D1: £0 for Person A, -£10 for Person B**

VS

**D2: -£8 for Person A, -£8 for Person B**

Please rate Person A's morality if ...



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... Person A chooses  
**D2**

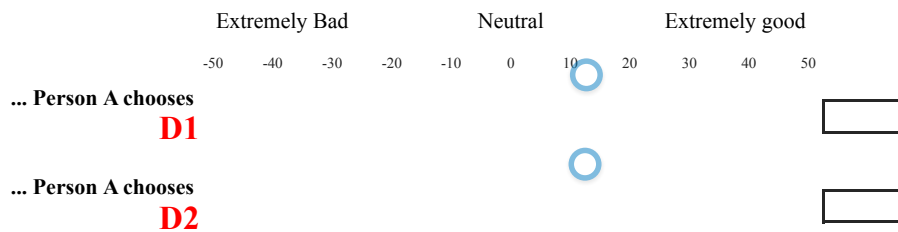
Person A had to choose between the following two distributions of income:

**D1:** £0 for Person A, -£10 for Person B

vs

**D2:** -£7 for Person A, -£7 for Person B

Please rate Person A's morality if ...



Person A had to choose between the following two distributions of income:

**D1:** £0 for Person A, -£10 for Person B



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... Person A chooses  
**D1**

... Person A chooses  
**D2**



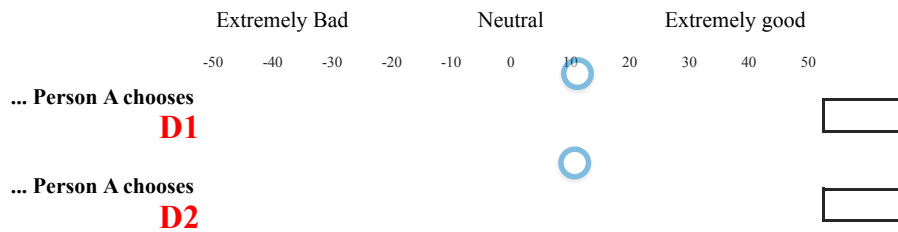
Person A had to choose between the following two distributions of income:

**D1:** £0 for Person A, -£10 for Person B

vs

**D2:** -£4 for Person A, -£4 for Person B

Please rate Person A's morality if ...



Person A had to choose between the following two distributions of income:

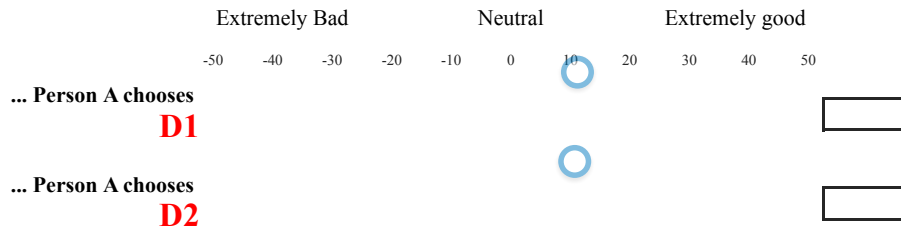


**D1:** £0 for Person A, -£10 for Person B

vs

**D2:** -£3 for Person A, -£3 for Person B

Please rate Person A's morality if ...



Person A had to choose between the following two distributions of income:

**D1:** £0 for Person A, -£10 for Person B

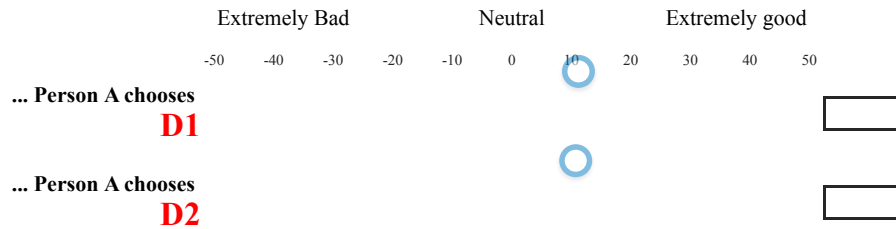
vs

**D2:** -£2 for Person A, -£2 for Person B

Please rate Person A's morality if ...

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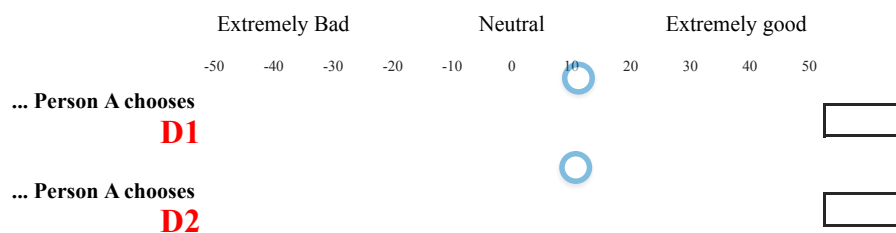
Person A had to choose between the following two distributions of income:

**D1:** £0 for Person A, -£10 for Person B

vs

**D2:** -£1 for Person A, -£1 for Person B

Please rate Person A's morality if ...



Person A had to choose between the following two

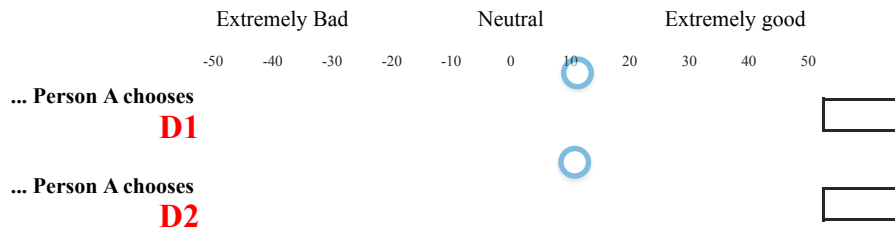
distributions of income:

**D1:** £0 for Person A, -£10 for Person B

vs

**D2:** £0 for Person A, £0 for Person B

Please rate Person A's morality if ...

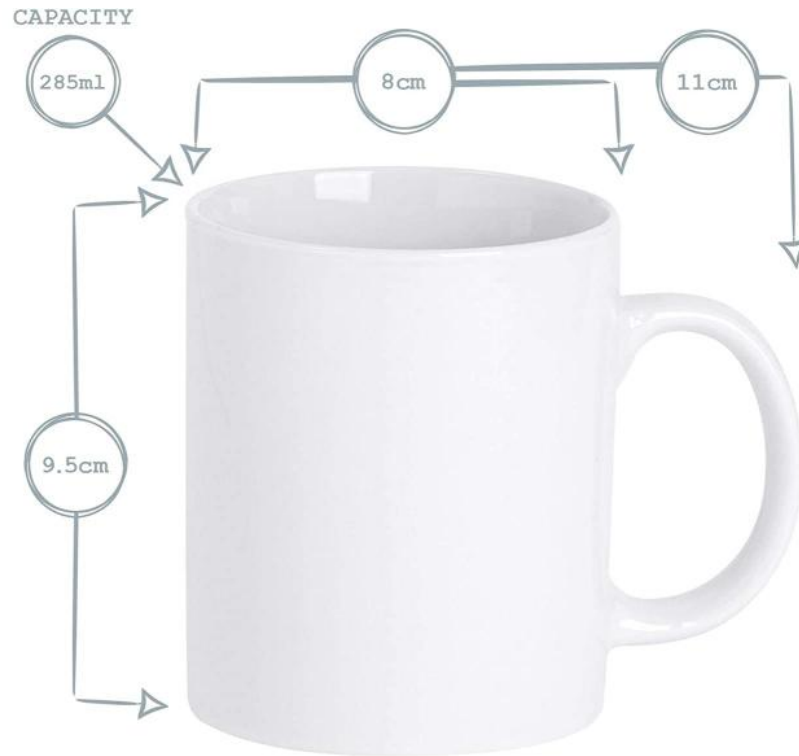


## WTA

If this task is chosen for payment, we will give you a mug similar to the following one:

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Dishwasher Safe



Microwave Safe



2 Year Warranty

Your task below is to state the minimum price at which you'd be willing to sell the mug.

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If this task is chosen for payment, we will make you an offer.

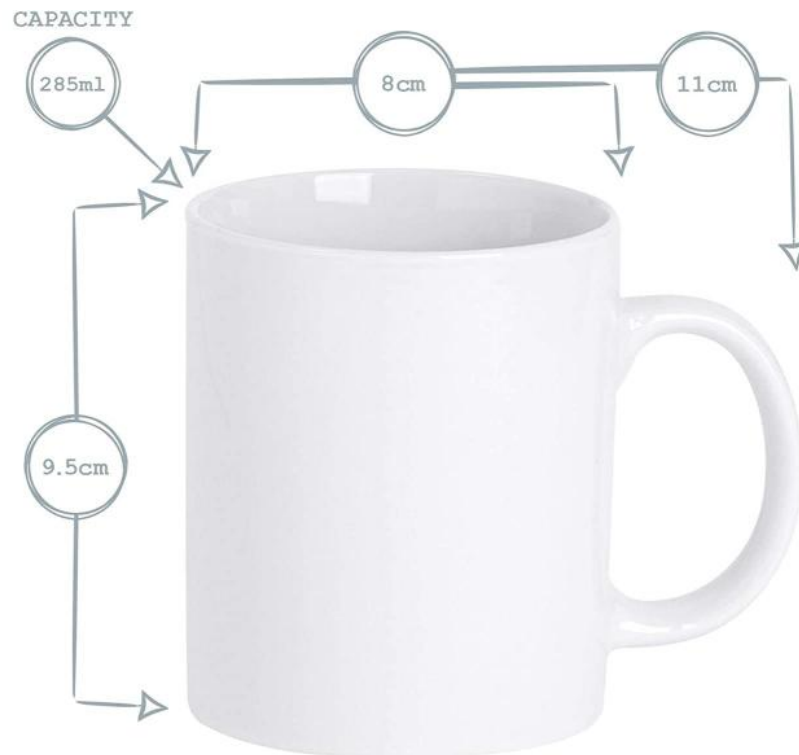
- If you stated a lower price than our offer, you will sell the mug to us with our offer as the final selling price.
- If you stated a higher price than our offer, you will not sell the mug and receive it as a bonus for completing this task.

Our offer will be picked at random from any number between £0 to £10, rounded to two decimal places. All prices are equally likely. There is a scientific reason for proceeding this way. Since you cannot influence the price, as it will be determined randomly, you have an incentive to state the price that corresponds to your **true preference**. We will also not be able to negotiate about the price.

Task: The lowest price I'm willing to accept to sell this mug is (in £):

**WTP**

If this task is chosen for payment, we will endow you with £10, and the option to use them to buy from us a mug similar to the following one:



Dishwasher Safe



Microwave Safe



2 Year Warranty

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Your task below is to state the maximum price at which you'd be willing to buy the mug.

If this task is chosen for payment, we will make you an offer.

- If you stated a higher price than our offer, you will buy the mug from us with our offer as the final selling price, and will keep any remaining money of the £10.
- If you stated a lower price than our offer, you will not buy the mug and keep the £10.

Our offer will be picked at random from any number between £0 to £10, rounded to two decimal places. All prices are equally likely. There is a scientific reason for proceeding this way. Since you cannot influence the price, as it will be determined randomly, you have an incentive to state the price that corresponds to your **true preference**. We will also not be able to negotiate about the price.

**Task: The highest price I'm willing to accept to buy**

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this mug is (in £):

## **MDG\_Gains**

During this task you will be paired with another participant, as it involves two roles. One chooses between two distributions of payoffs, and the other will receive whatever payoff corresponds to them as a result of the chosen distribution.

### **Payoffs**

If this task is chosen for payment, the computer randomly assigns you and the other player to one of the roles. Additionally, the computer will randomly choose one among the several binary distribution problems you will face.

If you are put in the role of the person that chooses the distribution, then the distribution you chose in the binary decision problem selected for payment will determine both your and the other person's payoff.

If the other player is put in the role of the person that chooses the distribution, then



whatever distribution he chooses in the binary decision problem selected for payment will determine both their and your payoff.

**Choose between both distributions of payoffs in the following decisions**

Decision 1	£10 for me, £0 for other <input type="radio"/>	£0 for me, £0 for other <input type="radio"/>
Decision 2	£10 for me, £0 for other <input type="radio"/>	£1 for me, £1 for other <input type="radio"/>
Decision 3	£10 for me, £0 for other <input type="radio"/>	£2 for me, £2 for other <input type="radio"/>
Decision 4	£10 for me, £0 for other <input type="radio"/>	£3 for me, £3 for other <input type="radio"/>
Decision 5	£10 for me, £0 for other <input type="radio"/>	£4 for me, £4 for other <input type="radio"/>
Decision 6	£10 for me, £0 for other <input type="radio"/>	£5 for me, £5 for other <input type="radio"/>
Decision 7	£10 for me, £0 for other <input type="radio"/>	£6 for me, £6 for other <input type="radio"/>
Decision 8	£10 for me, £0 for other <input type="radio"/>	£7 for me, £7 for other <input type="radio"/>
Decision 9	£10 for me, £0 for other <input type="radio"/>	£8 for me, £8 for other <input type="radio"/>
Decision 10	£10 for me, £0 for other <input type="radio"/>	£9 for me, £9 for other <input type="radio"/>
Decision 11	£10 for me, £0 for other <input type="radio"/>	£10 for me, £10 for other <input type="radio"/>

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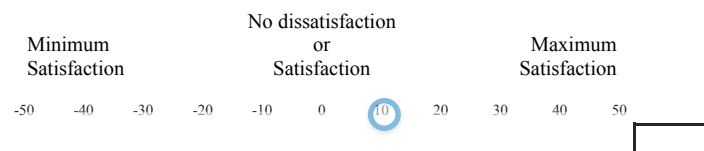
## Satisfaction

**The following tasks are not incentivised, meaning that your answers here will not influence your income if you were to be randomly selected for the extra payment.**

In this task, you must indicate **your level of satisfaction with each allocation of money** by moving the slider to the desired satisfaction rating. These scenarios are imaginary and none of these allocations will be chosen for payment. However, we ask you to think about the allocations as if they were to happen for real and state your satisfaction from each allocation as honestly and truthfully as possible. **There are no true or false responses: just go with what feels as your true satisfaction.**

The allocations will be presented in the left hand side of each slider as (£x, £w, £y, £z); where **£x** refers to **your income** and **£w, £y, and £z** refers to the **three other subjects' incomes**.

### How satisfied are you with these allocations of money?



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(£95, £60, £60, £15)	<input type="radio"/>	
(£108, £60, £60, £10)	<input type="radio"/>	<input type="text"/>
Set this statement to 5	<input type="radio"/>	<input type="text"/>
(£106, £60, £60, £10)	<input type="radio"/>	<input type="text"/>
(£104, £58, £58, £10)	<input type="radio"/>	<input type="text"/>
(£107, £60, £60, £10)	<input type="radio"/>	<input type="text"/>
(£100, £66, £66, £10)	<input type="radio"/>	<input type="text"/>
(£96, £64, £64, £10)	<input type="radio"/>	<input type="text"/>
Set this statement to -50	<input type="radio"/>	<input type="text"/>
(£116, £52, £52, £10)	<input type="radio"/>	<input type="text"/>
(£102, £58, £58, £12)	<input type="radio"/>	<input type="text"/>
(£101, £60, £60, £10)	<input type="radio"/>	<input type="text"/>
(£106, £54, £54, £16)	<input type="radio"/>	<input type="text"/>
(£100, £61, £61, £10)	<input type="radio"/>	<input type="text"/>
(£114, £53, £53, £10)	<input type="radio"/>	<input type="text"/>
(£100, £68, £68, £10)	<input type="radio"/>	<input type="text"/>
(£100, £62, £62, £10)	<input type="radio"/>	<input type="text"/>

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(£98, £60, £60, £12)



(£100, £52, £52, £26)



(£100, £53, £53, £24)



(£100, £58, £58, £14)



(£108, £52, £52, £18)



(£100, £57, £57, £16)



(£96, £60, £60, £14)



(£118, £51, £51, £10)



(£93, £67, £67, £10)



(£94, £66, £66, £10)



(£98, £62, £62, £10)



(£99, £60, £60, £11)



(£109, £51, £51, £19)



(£97, £63, £63, £10)



(£100, £55, £55, £20)



(£109, £60, £60, £10)



(£95, £65, £65, £10)



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	<input type="radio"/>	<input type="text"/>
(£100, £63, £63, £10)	<input type="radio"/>	<input type="text"/>
(£106, £57, £57, £10)	<input type="radio"/>	<input type="text"/>
(£94, £60, £60, £16)	<input type="radio"/>	<input type="text"/>
(£100, £51, £51, £28)	<input type="radio"/>	<input type="text"/>
(£102, £60, £60, £10)	<input type="radio"/>	<input type="text"/>
(£103, £57, £57, £13)	<input type="radio"/>	<input type="text"/>
(£105, £60, £60, £10)	<input type="radio"/>	<input type="text"/>
(£104, £60, £60, £10)	<input type="radio"/>	<input type="text"/>
(£102, £59, £59, £10)	<input type="radio"/>	<input type="text"/>
(£104, £56, £56, £14)	<input type="radio"/>	<input type="text"/>
(£91, £60, £60, £19)	<input type="radio"/>	<input type="text"/>
(£100, £59, £59, £12)	<input type="radio"/>	<input type="text"/>
(£100, £60, £60, £10)	<input type="radio"/>	<input type="text"/>
(£101, £59, £59, £11)	<input type="radio"/>	<input type="text"/>
(£108, £56, £56, £10)	<input type="radio"/>	<input type="text"/>
(£99, £61, £61, £10)	<input type="radio"/>	<input type="text"/>

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(£100, £65, £65, £10)		<input type="checkbox"/>
(£92, £60, £60, £18)		<input type="checkbox"/>
(£105, £55, £55, £15)		<input type="checkbox"/>
(£91, £69, £69, £10)		<input type="checkbox"/>
(£92, £68, £68, £10)		<input type="checkbox"/>
(£100, £54, £54, £22)		<input type="checkbox"/>
(£97, £60, £60, £13)		<input type="checkbox"/>
(£100, £56, £56, £18)		<input type="checkbox"/>
(£103, £60, £60, £10)		<input type="checkbox"/>
(£100, £69, £69, £10)		<input type="checkbox"/>
(£110, £55, £55, £10)		<input type="checkbox"/>
(£112, £54, £54, £10)		<input type="checkbox"/>
(£100, £64, £64, £10)		<input type="checkbox"/>
(£107, £53, £53, £17)		<input type="checkbox"/>
(£93, £60, £60, £17)		<input type="checkbox"/>
(£100, £67, £67, £10)		<input type="checkbox"/>

## MDG\_Losses

During this task you will be paired with another participant, as it involves two roles. One chooses between two distributions of payoffs, and the other will receive whatever payoff corresponds to them as a result of the chosen distribution.

If this task is chosen for payment, **you will receive an endowment of £10 to compensate potential losses.**

### Payoffs

If this task is chosen for payment, the computer randomly assigns you and the other player to one of the roles. Additionally, the computer will randomly choose one among the several binary distribution problems you will face.

If you are put in the role of the person that chooses the distribution, then the distribution you chose in the binary decision problem selected for payment will determine both your and the other person's payoff.

If the other player is put in the role of the person that chooses the distribution, then whatever distribution he chooses in the binary decision problem selected for payment will determine both their and your payoff.

**Choose between both distributions of payoffs in the following decisions**

Decision 1	£0 for me, -£10 for other <input type="radio"/>	-£10 for me, -£10 for other <input type="radio"/>
Decision 2	£0 for me, -£10 for other <input type="radio"/>	-£9 for me, -£9 for other <input type="radio"/>
Decision 3	£0 for me, -£10 for other <input type="radio"/>	-£8 for me, -£8 for other <input type="radio"/>
Decision 4	£0 for me, -£10 for other <input type="radio"/>	-£7 for me, -£7 for other <input type="radio"/>
Decision 5	£0 for me, -£10 for other <input type="radio"/>	-£6 for me, -£6 for other <input type="radio"/>
Decision 6	£0 for me, -£10 for other <input type="radio"/>	-£5 for me, -£5 for other <input type="radio"/>
Decision 7	£0 for me, -£10 for other <input type="radio"/>	-£4 for me, -£4 for other <input type="radio"/>
Decision 8	£0 for me, -£10 for other <input type="radio"/>	-£3 for me, -£3 for other <input type="radio"/>
Decision 9	£0 for me, -£10 for other <input type="radio"/>	-£2 for me, -£2 for other <input type="radio"/>
Decision 10	£0 for me, -£10 for other <input type="radio"/>	-£1 for me, -£1 for other <input type="radio"/>
Decision 11	£0 for me, -£10 for other <input type="radio"/>	£0 for me, £0 for other <input type="radio"/>

## SOCIODEMOGRAPHICS



Qualtrics Survey Software

27/06/2023, 20:05

**How many hours in total do you work per week?**

**Your Gender:**

**Your Age:**

**What is your nationality?**

**Would you describe yourself as a left wing or a right wing?**

**How religious are you?**

Qualtrics Survey Software

27/06/2023, 20:05

**How large was the community where you have lived the most time of your life?**

**What is your highest qualification attained?**

**Please choose the category that describes the total amount of income you earned this year.**

Here are a number of **personality traits** that may or may not apply to you. Please indicate on the scale below the extent to which you agree or disagree with that statement. You should rate the extent to which the pair of traits applies to you, even if one characteristic applies more strongly than the other.

	Disagree strongly	Disagree moderately	Disagree a little	Neither agree nor disagree	Agree a little	Agree moderately	Agree strongly
Extraverted, enthusiastic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Critical, quarrelsome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Qualtrics Survey Software

27/06/2023, 20:05

Dependable, self-disciplined	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Anxious, easily upset	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Open to new experiences, complex	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reserved, quiet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sympathetic, warm	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Disorganized, careless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Calm, emotionally stable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Conventional, uncreative	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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## II. Additional Statistical Analysis

### A. Moral Judgments

In this subsection we present 4 tables. Each of the tables presents a subset of statistical tests we performed to document the statistical evidence supporting claims about the patterns of moral judgments made in the main text of the paper. We summarize the statistical tests performed in each Table below, and briefly describe the main findings of the statistical tests.

Tables 1 and 2 report Mann-Whitney tests where the null hypotheses are that the moral judgments of each scenario are not statistically significantly different from 0. Table 1 (resp. Table 2) reports the outcomes of the tests that were carried out using the data of the student sample (resp. representative sample). For each table, this comprises making 44 tests, one per each moral judgment scenario. In order to perform the tests, we compare the moral judgments of each scenario of the relevant group against the moral judgments of a theoretical group with the same sample size for which all its members give a moral rating of 0 to each scenario. Tables 1 and 2 report the values of the  $Z$  statistic, the  $p$ -value, and a Bonferroni-corrected  $p$ -value for each statistical test; where the correction involves taking into account 44 simultaneous tests. The outcomes of the statistical tests clearly show that moral judgments of both the student and the representative sample are significantly different from 0, evidencing that subjects interpreted the binary dictator games as morally important issues.

Table 3 reports the outcomes of several Mann-Whitney tests that were carried out to compare the moral judgments of each scenario across samples. Again, we report the  $Z$  statistic, the  $p$ -values, and the Bonferroni corrected  $p$ -values (44 simultaneous tests) for each of the tests. The results show that, at low levels of efficiency (i.e., from 0 : 10 to 5 : 5), the moral judgments of choosing the unequal distribution in binary dictator games over losses were different across samples. More specifically, the representative sample found it more blameworthy when Person  $A$  was choosing the unequal distribution. Additionally, the moral judgments of choosing the egalitarian distribution in binary dictator games over gains with high efficiency (i.e., from 6 : 4 onwards) also differed across samples. The difference highlights the fact that subjects from the representative sample found Person  $A$  more praiseworthy when they chose the egalitarian distribution.

Table 4 reports the outcomes of several Wilcoxon sign-rank tests that we carried out to test whether the moral judgments of equivalent scenarios of binary dictator games over gains and losses differed. As with the previous tests, we report in Table 4 the test statistic (i.e.,  $W$ ), the  $p$ -value, and the Bonferroni-corrected  $p$ -value (accounting for 22 simultaneous tests with the student sample, and for 22 simultaneous tests with the representative sample) of each statistical test. The tests provide evidence supporting the claim that the moral judgments of choosing the egalitarian outcome

systematically differ between binary dictator games over gains and losses with identical levels of efficiency. More specifically, both the subjects of the student and the representative sample found the choice of the egalitarian distribution more praiseworthy in the binary dictator games over gains.

TABLE 1  
DO MORAL JUDGMENTS DIFFER FROM 0? — STUDENT SAMPLE

<i>Scenario</i>		Gains			Losses		
		Statistic	<i>p</i> -value		Statistic	<i>p</i> -value	
Efficiency	$a_d$	<i>Z</i>	normal	Bonferroni	<i>Z</i>	normal	Bonferroni
0:10	uneq	0.73	0.46	1	-5.21	0.00***	0.00***
0:10	egal	4.56	0.00***	0.00***	4.95	0.00***	0.00***
1:9	uneq	-6.82	0.00***	0.00***	-8.54	0.00***	0.00***
1:9	egal	17.13	0.00***	0.00***	7.53	0.00***	0.00***
2:8	uneq	-9.32	0.00***	0.00***	-11.14	0.00***	0.00***
2:8	egal	19.31	0.00***	0.00***	9.59	0.00***	0.00***
3:7	uneq	-10.88	0.00***	0.00***	-12.11	0.00***	0.00***
3:7	egal	19.88	0.00***	0.00***	10.86	0.00***	0.00***
4:6	uneq	-12.31	0.00***	0.00***	-12.99	0.00***	0.00***
4:6	egal	20.94	0.00***	0.00***	11.64	0.00***	0.00***
5:5	uneq	-13.60	0.00***	0.00***	-14.09	0.00***	0.00***
5:5	egal	22.03	0.00***	0.00***	14.39	0.00***	0.00***
6:4	uneq	-14.60	0.00***	0.00***	-15.67	0.00***	0.00***
6:4	egal	22.02	0.00***	0.00***	15.26	0.00***	0.00***
7:3	uneq	-14.79	0.00***	0.00***	-16.13	0.00***	0.00***
7:3	egal	22.26	0.00***	0.00***	14.94	0.00***	0.00***
8:2	uneq	-15.43	0.00***	0.00***	-16.22	0.00***	0.00***
8:2	egal	22.57	0.00***	0.00***	15.22	0.00***	0.00***
9:1	uneq	-15.99	0.00***	0.00***	-17.00	0.00***	0.00***
9:1	egal	22.18	0.00***	0.00***	15.77	0.00***	0.00***
10:0	uneq	-17.28	0.00***	0.00***	-18.17	0.00***	0.00***
10:0	egal	19.81	0.00***	0.00***	14.79	0.00***	0.00***

NOTE.—The table reports the significance outcomes of several Mann-Whitney tests. the first two columns and the headings ‘Gains’ and ‘Losses’ uniquely identify the scenario. The Bonferroni-corrected *p*-value accounts for 44 simultaneous hypothesis tests. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ .

TABLE 2  
DO MORAL JUDGMENTS DIFFER FROM 0? — REPRESENTATIVE SAMPLE

<i>Scenario</i>		Gains			Losses		
		Statistic	<i>p</i> -value		Statistic	<i>p</i> -value	
Efficiency	<i>a<sub>d</sub></i>	<i>Z</i>	normal	Bonferroni	<i>Z</i>	normal	Bonferroni
0:10	uneq	-8.42	0.00***	0.00***	-11.1	0.00***	0.00***
0:10	egal	7.82	0.00***	0.00***	7.04	0.00***	0.00***
1:9	uneq	-14.74	0.00***	0.00***	-12	0.00***	0.00***
1:9	egal	20.36	0.00***	0.00***	8.48	0.00***	0.00***
2:8	uneq	-16.4	0.00***	0.00***	-13.4	0.00***	0.00***
2:8	egal	22	0.00***	0.00***	9.72	0.00***	0.00***
3:7	uneq	-16.19	0.00***	0.00***	-14.12	0.00***	0.00***
3:7	egal	21.65	0.00***	0.00***	11.52	0.00***	0.00***
4:6	uneq	-17.85	0.00***	0.00***	-13.28	0.00***	0.00***
4:6	egal	23.02	0.00***	0.00***	12.09	0.00***	0.00***
5:5	uneq	-18.34	0.00***	0.00***	-14.29	0.00***	0.00***
5:5	egal	23.06	0.00***	0.00***	14.11	0.00***	0.00***
6:4	uneq	-18.82	0.00***	0.00***	-14.2	0.00***	0.00***
6:4	egal	23.2	0.00***	0.00***	12.7	0.00***	0.00***
7:3	uneq	-18.94	0.00***	0.00***	-15.31	0.00***	0.00***
7:3	egal	22.96	0.00***	0.00***	14.04	0.00***	0.00***
8:2	uneq	-18.97	0.00***	0.00***	-14.1	0.00***	0.00***
8:2	egal	23.26	0.00***	0.00***	14.68	0.00***	0.00***
9:1	uneq	-19.32	0.00***	0.00***	-14.23	0.00***	0.00***
9:1	egal	23.2	0.00***	0.00***	14.86	0.00***	0.00***
10:0	uneq	-19.41	0.00***	0.00***	-14.64	0.00***	0.00***
10:0	egal	22.58	0.00***	0.00***	14.68	0.00***	0.00***

NOTE.—The table reports the significance outcomes of several Mann-Whitney tests. the first two columns and the headings ‘Gains’ and ‘Losses’ uniquely identify the scenario. The Bonferroni-corrected *p*-value accounts for 44 simultaneous hypothesis tests. \* *p* < .1, \*\* *p* < .05, \*\*\* *p* < .01.

TABLE 3  
DO MORAL JUDGMENTS DIFFER ACROSS SAMPLES?

<i>Scenario</i>		Gains			Losses		
		Statistic	<i>p</i> -value		Statistic	<i>p</i> -value	
Efficiency	<i>a<sub>d</sub></i>	<i>Z</i>	normal	Bonferroni	<i>Z</i>	normal	Bonferroni
0:10	uneq	5.72	0.00***	0.00***	4.57	0.00***	0.00***
0:10	egal	-1.07	0.29	1	-0.84	0.4	1
1:9	uneq	7.04	0.00***	0.00***	3.79	0.00***	0.01**
1:9	egal	-0.35	0.73	1	0.13	0.9	1
2:8	uneq	6.64	0.00***	0.00***	3.79	0.00***	0.01**
2:8	egal	-0.69	0.49	1	0.84	0.4	1
3:7	uneq	5.58	0.00***	0.00***	3.43	0.00***	0.03**
3:7	egal	-1.27	0.2	1	0.38	0.71	1
4:6	uneq	6.11	0.00***	0.00***	3.07	0.00***	0.09*
4:6	egal	-2.58	0.01**	0.43	0.02	0.98	1
5:5	uneq	5.37	0.00***	0.00***	2.81	0.00***	0.22
5:5	egal	-3.21	0.00***	0.06*	0.36	0.72	1
6:4	uneq	4.5	0.00***	0.00***	1.76	0.08*	1
6:4	egal	-3.13	0.00***	0.07*	1.5	0.13	1
7:3	uneq	3.2	0.00***	0.06*	1.49	0.14	1
7:3	egal	-3.33	0.00***	0.04**	0.31	0.76	1
8:2	uneq	3.02	0.00***	0.11	0.2	0.84	1
8:2	egal	-3.87	0.00***	0.00***	-0.2	0.84	1
9:1	uneq	1.36	0.18	1	-1.03	0.3	1
9:1	egal	-4.72	0.00***	0.00***	0.3	0.76	1
10:0	uneq	-1.01	0.31	1	-3.76	0.00***	0.00***
10:0	egal	-4.56	0.00***	0.00***	-0.27	0.79	1

NOTE.—The table reports the significance outcomes of several Mann-Whitney tests. the first two columns and the headings ‘Gains’ and ‘Losses’ uniquely identify the scenario. The Bonferroni-corrected *p*-value accounts for 44 simultaneous hypothesis tests. \* *p* < .1, \*\* *p* < .05, \*\*\* *p* < .01.

TABLE 4  
DO MORAL JUDGMENTS OF GAINS AND LOSSES DIFFER?

<i>Scenario</i>		Student Sample			Representative Sample		
		Statistic	<i>p</i> -value		Statistic	<i>p</i> -value	
Efficiency	<i>a<sub>d</sub></i>	<i>W</i>	normal	Bonferroni	<i>W</i>	normal	Bonferroni
0:10	uneq	5.04	0.00***	0.00***	3.19	0.00***	0.06*
0:10	egal	0.23	0.82	1	0.76	0.45	1
1:9	uneq	4.02	0.00***	0.00***	0.39	0.70	1
1:9	egal	6.79	0.00***	0.00***	6.89	0.00***	0.00***
2:8	uneq	2.73	0.01**	0.27	0.36	0.72	1
2:8	egal	7.03	0.00***	0.00***	8.27	0.00***	0.00***
3:7	uneq	2.12	0.03**	1	0.14	0.89	1
3:7	egal	7.07	0.00***	0.00***	8.17	0.00***	0.00***
4:6	uneq	2.03	0.04**	1	-1.39	0.16	1
4:6	egal	8.24	0.00***	0.00***	9.55	0.00***	0.00***
5:5	uneq	1	0.32	1	-1.59	0.11	1
5:5	egal	8.65	0.00***	0.00***	10.54	0.00***	0.00***
6:4	uneq	2.03	0.04**	1	-1.3	0.19	1
6:4	egal	9.14	0.00***	0.00***	11.43	0.00***	0.00***
7:3	uneq	0.59	0.56	1	-0.83	0.40	1
7:3	egal	10.35	0.00***	0.00***	11.44	0.00***	0.00***
8:2	uneq	1.44	0.15	1	-2.82	0.00***	0.20
8:2	egal	10.96	0.00***	0.00***	12.14	0.00***	0.00***
9:1	uneq	1.16	0.25	1	-2.29	0.02	0.97
9:1	egal	8.85	0.00***	0.00***	11.89	0.00***	0.00***
10:0	uneq	1.91	0.06*	1	-3.19	0.00***	0.06*
10:0	egal	6.6	0.00***	0.00***	10.04	0.00***	0.00***

NOTE.—The table reports the significance outcomes of several sign-rank tests. the first two columns uniquely identify the scenario. The Bonferroni-corrected *p*-value accounts for 22 simultaneous hypothesis tests for the student sample and the representative sample data. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ .



*B. Regression analysis*

In this subsection we present 2 tables. Table 5 replicates the analysis in Section **IV B** of the main paper but with a Population Average specification. Table 6 replicates the analysis in Section **IV B** of the main paper but with a fixed effects specification. Both specifications yield qualitatively similar conclusions, as coefficients reported below have the same sign and significance as the ones reported in the main text of the paper. The fixed effects analysis computes the average marginal effects using the bias-correction reported in Cruz-Gonzalez, Fernandez-Val, and Weidner (2017). In the fixed effects specification, the average marginal effects are computed for the interactions as well, hence they are not directly comparable to those found using the population average and the random effects specification, which only report the AME's of the main variables.

TABLE 5  
 PANEL DATA ESTIMATES AND AVERAGE MARGINAL EFFECTS OF THE LOGISTIC REGRESSIONS: POPULATION AVERAGE

	Student Sample		Representative Sample		Student Sample		Representative Sample		Student Sample		Representative Sample		Student Sample		Representative Sample	
	$\beta$ / SE	(1) AME	$\beta$ / SE	(1') AME	$\beta$ / SE	(2) AME	$\beta$ / SE	(2') AME	$\beta$ / SE	(3) AME	$\beta$ / SE	(3') AME	$\beta$ / SE	(4) AME	$\beta$ / SE	(4') AME
<i>Game Features</i>																
<i>b</i>	0.514*** (0.030)	0.0722***	0.417*** (0.023)	0.057***	0.443*** (0.033)	0.059	0.357*** (0.029)	0.041***	0.407*** (0.037)	0.054***	0.357*** (0.029)	0.041***	0.251*** (0.085)	0.063***	0.33*** (0.070)	0.042***
<i>losses</i>	1.002*** (0.191)	-0.009	0.939*** (0.154)	-0.071***	0.913*** (0.206)	-0.003	0.891*** (0.177)	-0.049***	0.694*** (0.218)	-0.012	0.892*** (0.177)	-0.049***	1.574*** (0.516)	0.005	1.816*** (0.344)	-0.065***
<i>b × losses</i>	-0.200*** (0.030)		-0.289*** (0.027)		-0.177*** (0.033)		-0.252*** (0.029)		-0.151*** (0.035)		-0.253*** (0.029)		-0.184* (0.097)		-0.248*** (0.081)	
<i>Moral Rules</i>																
<i>Blame Avoidance</i>																
<i>Praise Seeking</i>																
<i>mj(egal) - mj(ineq)</i>																
<i>Social Preferences</i>																
<i>Inequality Aversion</i>																
<i>Maximin</i>																
<i>Social Efficiency</i>																
Constant	-2.789 (0.194)		-1.301 (0.129)		-2.789 (0.247)		-1.435 (0.149)		-3.137*** (0.31)		-1.496*** (0.200)		-2.739*** (0.454)		-2.185*** (0.294)	
Clusters	305		348		305		348		288		348		288		348	
Panel Data Model	PA		PA		PA		PA		PA		PA		PA		PA	
Predictions	×		×		×		×		×		×		×		×	
Order Dummies	×		×		×		×		×		×		×		×	
3-Way Interactions	×		×		×		×		×		×		×		×	

NOTE.—The table reports the regression coefficients, the average marginal effects, and the standard errors (in parentheses) of several logit, population average regression models. The dependent variable is a dummy that takes the value 1 when a subject chooses the egalitarian distribution and 0 otherwise. In models (1) and (1'), we include as independent variables *b*, which is defined as the gain of the receiver (relative to the unequal distribution outcomes) when the egalitarian distribution is chosen; *losses*, which is a dummy that takes the value 1 when the binary dictator game involves losses and 0 otherwise; and an interaction between both. In models (2) and (2'), we include the theoretical predictions of social preference and moral rules models as independent variables. In models (3) and (3'), we include dummies to control for order effects. In models (4) and (4'), we include three-way interactions between *b*, *losses*, and each of the theoretical predictions. We omit order effects and three-way interactions from the output to make the table more compact. The bottom of the table acknowledges the number of subjects included in each regression. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ .

TABLE 6  
PANEL DATA ESTIMATES AND AVERAGE MARGINAL EFFECTS OF THE LOGISTIC REGRESSIONS: FIXED EFFECTS

	Student Sample (1)		Representative Sample (1')		Student Sample (2)		Representative Sample (2')		Student Sample (3)		Representative Sample (3')		Student Sample (4)		Representative Sample (4')	
	$\beta$	SE	$\beta$	SE	$\beta$	SE	$\beta$	SE	$\beta$	SE	$\beta$	SE	$\beta$	SE	$\beta$	SE
<i>Game Features</i>																
<i>b</i>	0.808***	(0.027)	0.664***	(0.023)	0.732***	(0.032)	0.083***	(0.027)	0.586***	(0.033)	0.736***	(0.027)	0.082***	(0.027)	0.586***	(0.027)
<i>losses</i>	1.659***	(0.173)	1.561***	(0.13)	1.601***	(0.192)	0.173***	(0.152)	1.523***	(0.199)	1.554***	(0.152)	0.166***	(0.152)	1.523***	(0.152)
<i>b</i> × <i>losses</i>	-0.325***	(0.03)	-0.462***	(0.026)	-0.306***	(0.032)	-0.035***	(0.027)	-0.415***	(0.033)	-0.297***	(0.027)	-0.033***	(0.027)	-0.415***	(0.027)
<i>Moral Rules</i>																
Blame Avoidance					0.526***	(0.16)	0.061***	(0.15)	-1.034***	(0.166)	0.481***	(0.15)	0.055***	(0.15)	-1.034***	(0.15)
Praise Seeking					-0.474**	(0.221)	-0.053**	(0.184)	0.008	(0.375)	-0.375	(0.231)	-0.042*	(0.184)	0.008	(0.375)
<i>m<sub>i</sub>(gain) - m<sub>i</sub>(loss)</i>					0.008***	(0.002)	0.001***	(0.002)	0.018***	(0.003)	0.007***	(0.003)	0.001***	(0.002)	0.018***	(0.003)
<i>Social Preferences</i>																
Inequality Aversion					0.201	(0.141)	0.023	(0.141)	0.193	(0.132)	0.244	(0.148)	0.028*	(0.132)	0.193	(0.132)
Maximin					-0.041	(0.155)	-0.005	(0.141)	0.266*	(0.162)	-0.086	(0.141)	-0.01	(0.141)	0.266*	(0.141)
Social Efficiency					0.277**	(0.114)	0.032**	(0.097)	0.084	(0.119)	0.284**	(0.097)	0.033**	(0.097)	0.084	(0.097)
Constant																
Clusters	305		348		305		348		288		348		288		348	
Panel Data Model	FE		FE		FE		FE		FE		FE		FE		FE	
Predictions	✓		✓		✓		✓		✓		✓		✓		✓	
Order Dummies	✗		✗		✗		✗		✗		✗		✗		✗	
3-Way Interactions	✗		✗		✗		✗		✗		✗		✗		✗	

NOTE.—The table reports the regression coefficients, the average marginal effects, and the standard errors (in parentheses) of several logit, fixed effects regression models. We use Cruz-Gonzalez, Fernandez-Val, and Weidner (2017) technique to account for the bias in logit, fixed effects models. The dependent variable is a dummy that takes the value 1 when a subject chooses the egalitarian distribution and 0 otherwise. In models (1) and (1'), we include as independent variables *b*, which is defined as the gain of the receiver (relative to the unequal distribution outcomes) when the egalitarian distribution is chosen; *losses*, which is a dummy that takes the value 1 when the binary dictator game involves losses and 0 otherwise; and an interaction between both. In models (2) and (2'), we include the theoretical predictions of social preference and moral rules models as independent variables. In models (3) and (3'), we include dummies to control for order effects. In models (4) and (4'), we include three-way interactions between *b*, *losses*, and each of the theoretical predictions. We omit order effects and three-way interactions from the output to make the table more compact. The bottom of the table acknowledges the number of subjects included in each regression. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ .

### C. Further Statistical Tests

In this subsection we present 3 additional tables. As previously with the other subsections, we briefly describe the content of each table, and their outcomes, below.

Table 7 presents the output of the binomial tests comparing each theory's proportion of 100% accuracy (i.e., 22 successes) in the extrapolation exercise to the 22 binary dictator games. We compare each proportion of full success against the proportion of 22 successes that our random benchmark would get. As discussed in the main text, our random benchmark is a theory whose successes are modelled by a binomial distribution with probability of success  $p = 0.5$  per game in  $k = 22$  trials. The table clearly shows that all the theories perform better than the random benchmark. These tests are important as they are the ones used to compute the sample size needed in each of the two experiments to get a statistical power of 80% given  $\alpha = 0.05$ . The fact that we got a positive result in each test is a very strong indicator that the theories have empirical content beyond what could be expected by randomness.

Table 8 reports the Bonferroni-corrected  $p$ -values (accounting for 15 simultaneous tests in each sample) of McNemar's tests. Each test compares the proportions of 100% accuracy of two theories. Using McNemar's tests allows us to control for the inherent dependency of the data (as the theoretical predictions of two theories come from the same subjects; and, in some cases, make identical predictions). The outcomes of the test point out that, in the student and the representative sample, the proportion of full success of social preferences and material selfishness are significantly different. Additionally, in the representative sample the proportions of full success of social preference and moral rule models are also significantly different. This is due to the higher proportion of full success of models of moral rules relative to those of social preferences.

Table 9 reports tests comparing the distribution of successes of each theory across samples. We perform both Kolmogorov-Smirnov, Two-Sample tests and Mann-Whitney tests. We find that Praise Seeking, Inequality Aversion, Social Efficiency, and Homo Economicus are theories whose distributions of successes differ across samples. This result appears as the distribution of successes of Praise Seeking (resp. Inequality Aversion, Social Efficiency, and Homo Economicus) has a heavier right tail (resp. left tail) in the representative sample. This is further confirmed by a higher (resp. lower) mean of successes of Praise Seeking (resp. Inequality Aversion, Social Efficiency, and Homo Economicus) in the representative sample.

TABLE 7  
DO THEORIES FARE BETTER THAN RANDOMNESS?

	Student Sample		Representative Sample	
	Normal	Bonferroni	Normal	Bonferroni
<i>Moral Rules</i>				
Blame Avoidance	0.00***	0.00***	0.00***	0.00***
Praise Seeking	0.00***	0.00***	0.00***	0.00***
<i>Social Preferences</i>				
Inequality Aversion	0.00***	0.00***	0.00***	0.00***
Maximin	0.00***	0.00***	0.00***	0.00***
Social Efficiency	0.00***	0.00***	0.00***	0.00***
Homo Economicus	0.00***	0.00***	0.00***	0.00***

NOTE.—The table reports the significance outcomes of several binomial tests comparing each theory's empirical probability of full success (i.e., 22 successes) against the probability of success of a binomial random variable with parameters  $k = 22, p = 0.5$ . The benchmark probability gives the likelihood of full success of a theory making guesses at random in the binary dictator games. The Bonferroni-corrected  $p$ -values account for 12 simultaneous hypothesis tests. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ .

TABLE 8  
IS 100% THEORETICAL SUCCESS EQUALLY COMMON?

	Bonferroni $p$ -value (15 simultaneous tests)	
	Student Sample	Representative Sample
<i>Blame Avoidance vs ...</i>		
Praise Seeking	1	1
Inequality Aversion	1	0.01**
Maximin	1	0.01**
Social Efficiency	1	0.00***
Homo Economicus	1	1
<i>Praise Seeking vs ...</i>		
Inequality Aversion	1	0.01**
Maximin	1	0.01**
Social Efficiency	1	0.00***
Homo Economicus	1	1
<i>Inequality Aversion vs ...</i>		
Maximin	1	1
Social Efficiency	1	1
Homo Economicus	0.06*	0.02**
<i>Maximin vs ...</i>		
Social Efficiency	1	1
Homo Economicus	0.01***	0.07*
<i>Social Efficiency vs ...</i>		
Homo Economicus	0.18	0.00***

NOTE.—The table reports the significance outcomes of several NcNemar tests comparing the theories' empirical probabilities of full success (i.e., 22 successes) against each other. The Bonferroni-corrected  $p$ -values account for 15 simultaneous hypothesis tests in the student sample and the representative sample. \*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ .

TABLE 9  
DO DISTRIBUTIONS OF THEORY SUCCESSES DIFFER ACROSS SAMPLES?

	Kolmogorov-Smirnov			Mann-Whitney				
	Statistic	<i>p</i> -value		Mean successes		Statistic	<i>p</i> -value	
		<i>D</i>	Normal	Bonferroni	Student		Representative	<i>Z</i>
<i>Moral Rules</i>								
Blame Avoidance	0.08	0.2	2.43	13.56	13.41	0.48	0.63	7.56
Praise Seeking	0.14	0.00***	0.03**	12.28	13.59	-3.12	0.00***	0.02**
<i>Social Preferences</i>								
Inequality Aversion	0.13	0.01**	0.08*	14.09	12.68	3.01	0.00***	0.03**
Maximin	0.1	0.07*	0.86	13.66	12.65	1.67	0.1	1.14
Social Efficiency	0.23	0.00***	0.00***	13.88	11.31	6.25	0.00***	0.00***
Homo Economicus	0.23	0.00***	0.00***	11.24	8.93	5.26	0.00***	0.00***

NOTE.—The table reports the test statistic and significance outcomes of several Kolmogorov-smirnov, Two-Sample and Mann-whitney tests comparing each theory’s distribution of success across samples. We also provide the mean successes in the student and representative samples for reference. The Bonferroni-corrected *p*-values account for 12 simultaneous hypothesis tests. \* $p < .1$ , \*\* $p < .05$ , \*\*\* $p < .01$ .

### III. Pre-Registration documents

We did one preregistration per experiment. The preregistration documents go into detail explaining the experimental design, the rationale for the sample size for each experiment, and the confirmatory statistical analysis. To access the OSF project linked to the paper, please click [here](#).

The three-way interaction specifications of the regression analyses were not pre-registered. Furthermore, the Dirichlet-multinomial analysis was not pre-registered. The former is important because it allows us to explore, when plotting the predicted probabilities, whether the effects of each theory depend on the game-specific features of the data. The latter is important because it allows us to structurally estimate the probability that, when drawing a choice at random from our sample, each theory has of being the driver of such choice (assuming the choice is driven by either of the theories considered).

#### A. Student Sample

To access the Pre-registration of the experiment with the student sample, please click [here](#).

#### B. Representative Sample

To access the Pre-registration of the experiment with the representative sample, please click [here](#).