

Working title: Natives' and immigrants' preferences for redistribution

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Abstract

In recent decades of European history, the question of immigration has been opportunistically invoked to appeal to political constituencies. Learning from these campaigns, in this pre-registered experiment (RCT ID: AEARCTR-0007577), we ask whether those who have a history of building a welfare state (natives) form subjective entitlements to this welfare state, whether this view is shared by those who have no history of building it (immigrants), and whether the latter believe that history has no implication on their fair share of the welfare.

Subjects are paired and proceeds symbolizing the welfare must be divided between them. To create a situation analogous to building a welfare state, one member of a pair is randomly selected as the one responsible for creating the proceeds to be divided while holding productivity constant between parties. Orthogonally, we systematically pair subjects based on whether or not they have real-life migration backgrounds. That is, in half of the pairs (homo pairs), partners are either both migrants or both natives, while the other half are of mixed backgrounds (hetero pairs). Additionally, we collect unbiased third parties' views about the fair divisions.

We test whether beliefs about the fair division diverge more between parties in the homo than in the hetero pairs – indicating discrimination – and whether natives believe that they deserve (and subsequently claim) a higher share than immigrants do, showing a history effect. We also control for the heterogeneity of subjects' pre-treatment attitudes towards immigrants in the UK, redistribution, efficiency concerns, and Brexit votes.

Keywords: redistribution; discrimination; discrimination; self-serving beliefs; fairness; immigration; welfare; natives; efficiency

1. Introduction

Anti-immigrants sentiments in welfare states are often backed up by two arguments. First, natives claim that their history of building up their welfare state (or an efficient state) entitles them to a higher share of this welfare and consequently, they are reluctant to share their welfare with immigrants. Second, natives display discrimination when favoring natives over immigrants in distributive situations. These choices are often justified by claiming that immigrants are different than natives with respect to whatever dimension they need to emphasize in a situation (such as religion, norms, language, skin color, etc). In this experiment, we employ a dictator game including paired subjects both being UK residents, and investigate if these two channels (i.e., history and discrimination) are instrumental in forming self-serving beliefs about the fair distribution of welfare and selfish choices. To create a fertile ground for these arguments to emerge, we construct two frames and test whether they are self-servingly invoked in distributive situations.

In the first frame, which we call *history*, we manipulate to which party the creation of the to-be-divided resources taking a form of an efficiency factor (i.e., a proxy for the welfare state) is assigned. To this end, we experimentally manipulate subjects' history. This means that the creation of the to-be-divided efficiency is randomly attributed to one party (i.e., Generator) within the pair while the other party is not credited with creating the efficiency (i.e., NonGenerator) while keeping productivity levels constant within a pair - which facts are public knowledge (for similar approaches see, e.g., Dezsó & Loewenstein, 2019).

To test the second, *discrimination channel*, we experimentally manipulate the composition of the pairs as we have information about each party's birth country. To this end, we create heterogeneous and homogeneous pairs of UK residents. In the heterogeneous pairs, one party is UK-born (i.e., native) while the other is not (i.e., immigrant). In the homogeneous pairs, either both parties are natives or both are immigrants.

As a third factor, we vary whether any asymmetric division of the proceeds entails efficiency loss (as in the costly redistribution treatment arm) or not (as in the costless redistribution treatment arm).

We conjecture that the *history* and the *discrimination* channels increase the prevalence of self-serving beliefs about the fair distribution of the to-be-divided proceeds and selfish choices. In particular, we expect that Generators would believe themselves to be entitled to a higher share than nonGenerators would believe Generators deserve, which we would call the *history effect*. We also expect that parties in heterogeneous pairs will form more self-serving beliefs about their fair share of the proceeds and behave more selfishly than parties in homogeneous pairs. We would call this the *discrimination effect*. Additionally, we expect that the effect of being a Generator on fairness beliefs and distributive choices will be greater in heterogeneous than in homogeneous pairs.

However, we do not expect that whether or not redistribution is costly systematically influences fairness beliefs but does so for distributive choices. In particular, we suspect that divisions would be less asymmetric (and hence, selfish) when redistribution is costly than when it is costless.

Moreover, we control for the heterogeneity of subjects' pre-treatment attitudes towards (1) immigration to and immigrants in the UK, (2) Brexit votes, (3) redistribution in general, and (4) efficiency concerns. This allows us to investigate whether treatment effects vary according to subjects' characteristics along these aforementioned dimensions.

2. Research strategy

The gist of our setup is a dictator game where each party receives his/her share from the to-be-divided pie. In our case, the pie is a *multiplier* that needs to be divided between partners. The share each party gets is applied on his/her Stage 2 endowment and hence, amplifies the Stage 2 endowment. Note that the possible divisions of the multiplier are restricted such that one party's share from it can never go below 1 (i.e., Stage 2 endowment would never go below the original amount) excluding take money away from the partner.

One manipulation is that we randomize the party whose previous unpaid output (i.e., Stage 1 production) is converted into the to-be-divided multiplier, call this subject the Generator. Consequently, within one pair we always have a Generator (to whom the creation of the to-be-divided pie is attributed) and a non-Generator. Additionally, independently from the Generator treatment assignment, we also vary whether the pair is made up of parties with homogenous

migration backgrounds (both are migrants or nonmigrants to the UK) or heterogeneous backgrounds (one party is a migrant and the other is a nonmigrant). The Generator/non-Generator and the pair composition treatment assignments are varied on the within-subject level assuring that each subject is assigned to all 4 variations in randomized order.

As a between-subject factor, we vary whether deviating from equally splitting the to-be-divided pie is costly (the *costly redistribution* treatment arm) or not, as in the *costless redistribution arm*. We expect that this difference will only affect choice behaviors but not fairness beliefs.

2.1. Recruiting subjects from Prolific

Before we outline the study details, we explain how subjects will be screened and recruited into the study.

In the present study, we only allow UK residents to participate, which can be easily implemented using Prolific services (<https://app.prolific.co>). We will only allow subjects who claim to be UK residents (based on their Prolific settings in the “About You” section). Ex-post pairings of subjects can be implemented on Prolific by specifying the demographics of subjects who are allowed to enter the study. The treatment groups will be balanced concerning age, gender, income level, which is also possible to achieve on Prolific.

Subjects can at any point discontinue their participation, in which case they will not get paid.

3. Method

The experiment has a 2 (type of redistribution) X 2 (partner is different or same with respect to migration background) X 2 (Generator versus nonGenerator) factorial design.

The first is a between-subject factor with levels describing whether the subject is in the costly or in the costless redistribution treatment arm. Tables 1a and 1b summarize the possible divisions of the multiplier, the corresponding Stage 2 earnings, and the total pie for each division in both treatment arms. As one can see from Table 1a, which lists the possible divisions in the costly redistribution arm, any deviation from equally splitting the to-be-divided proceeds entails

efficiency loss. By contrast, using the divisions listed in Table 1b corresponding to the costless redistribution treatment arm, redistribution does not entail efficiency loss.

The second factor, again with two levels, is a within-subject one. It describes whether the subject is paired with someone with the same or different migration background (i.e., resulting in homogenous and heterogeneous pairs).

The third factor, also with two levels, describes whether the subject is in the Generator or the NonGenerator role. As mentioned earlier, within each pair, we have one Generator and one non-Generator, and the former is credited with the creation of the to-be-divided proceeds.

Table 1. Summarizing possible divisions in the costly redistribution (1a) and the costless redistribution (1b) treatment arms.

Table 1a.

Alternative	Person A's outcome		Person B's outcome		Total pie: Person A's and B's total Stage 2 earnings in GBP
	Share from the multi- plier	Corre- sponding Stage 2 earnings in GBP	Share from the multi- plier	Corre- sponding Stage 2 earnings in GBP	
1	1	0.4	2.5	1	1.4
2	1.2	0.48	2.4	0.96	1.44
3	1.4	0.56	2.3	0.92	1.48
4	1.6	0.64	2.2	0.88	1.52
5	1.8	0.72	2.1	0.84	1.56
6	2	0.8	2	0.8	1.6
7	2.1	0.84	1.8	0.72	1.56
8	2.2	0.88	1.6	0.64	1.52
9	2.3	0.92	1.4	0.56	1.48
10	2.4	0.96	1.2	0.48	1.44
11	2.5	1	1	0.4	1.4

Table 1b.

Alternative	Person A's outcome		Person B's outcome		Total pie: Person A's and B's total Stage 2 earnings in GBP
	Share from the multi- plier	Corre- sponding Stage 2 earnings in GBP	Share from the multi- plier	Corre- sponding Stage 2 earnings in GBP	
1	1.5	0.6	2.5	1	1.6
2	1.6	0.64	2.4	0.96	1.6
3	1.7	0.68	2.3	0.92	1.6
4	1.8	0.72	2.2	0.88	1.6
5	1.9	0.76	2.1	0.84	1.6
6	2	0.8	2	0.8	1.6
7	2.1	0.84	1.9	0.76	1.6
8	2.2	0.88	1.8	0.72	1.6
9	2.3	0.92	1.7	0.68	1.6
10	2.4	0.96	1.6	0.64	1.6
11	2.5	1	1.5	0.6	1.6

3.1. Summary of the experimental procedure

Subjects are informed that the experiment consists of four main parts, and they receive a brief description of these parts. They also learn that pairing is ex-post. Find experimental screenshots at the end of the document and code attached. Note, you can also find experimental screenshots of the preliminary spectator survey at the end of this document and the its code attached.

3.1.1. Basic demographic questions

Everyone starts with the following basic demographic questions.¹

- (1) Birth year
- (2) Gender
- (3) Birth country region
- (4) Length of residency in the UK
- (5) UK citizenship
- (6) Religion
- (7) Highest education level
- (8) Employment status
- (9) Income level
- (10) Household size
- (11) Political orientation

3.1.2. *Correlates – heterogeneity measures*

As in Epper, Fehr, & Senn (2020), we collect these pre-treatment measures in a counter-balanced order. Half of the subjects get these questions at this point, the other half get them after the main part of the experiment.

A. Attitude towards immigration/immigrants - Questions are adapted from Hellwig & Sinno (2017) and somewhat modified.

- (1) Britain should allow immigrants to come and live in the UK
 - a. Allow NONE to come and live here
 - b. Allow SOME to come and live here
 - c. Allow MANY to come and live here.
- (2) Immigrants take jobs away from other British people
 - a. Strongly disagree

¹ At the end of the study, we ask our participants to provide their beliefs about their last partner's birth country region, employment status, highest education level, religion and their beliefs about whether their partner holds UK citizenship. This would enable us to explore subjects' beliefs about their partner's demographics background. We incentivize this elicitation on precision.

- b. Somewhat disagree
- c. Neither disagree nor agree
- d. Somewhat agree
- e. Strongly agree

(3) Immigrants abuse the welfare state

- a. Strongly disagree
- b. Somewhat disagree
- c. Neither disagree nor agree
- d. Somewhat agree
- e. Strongly agree

(4) On average, immigrants contribute to the British economy more than natives do.

- a. Strongly disagree
- b. Somewhat disagree
- c. They are the same
- d. Somewhat agree
- e. Strongly agree

(5) Immigrants are needed to do jobs other British people won't do.

- a. Strongly disagree
- b. Somewhat disagree
- c. Neither disagree nor agree
- d. Somewhat agree
- e. Strongly agree

B. BREXIT vote: How did you vote on the Brexit referendum in 2016?

- a. I voted LEAVE the European Union
- b. I voted REMAIN a member of the European Union

- c. I was eligible to vote but I stayed away from voting
 - d. I was not eligible to vote
 - e. Prefer not to answer
- C. Efficiency concerns: It should be more important to the government to achieve a high growth rate than to reduce inequality between people through all sorts of government supports.
- a. Strongly disagree
 - b. Somewhat disagree
 - c. Neither disagree nor agree
 - d. Somewhat agree
 - e. Strongly agree
- D. Attitudes towards redistribution from Epper et al., (2020)
- (1) Social justice requires that income inequalities should be reduced.
- a. Strongly disagree
 - b. Somewhat disagree
 - c. Neither disagree nor agree
 - d. Somewhat agree
 - e. Strongly agree
- (2) We need larger income differences as incentives for individual effort.
- a. Strongly disagree
 - b. Somewhat disagree
 - c. Neither disagree nor agree
 - d. Somewhat agree
 - e. Strongly agree

FOUR TIMES – WITHIN-SUBJECTS VARIATIONS

3.1.3. Stage 1

Everyone completes a trivial image-labeling task entailing correctly selecting the name of the presented image from among four alternatives. For instance, if there is an image of a fork, and subjects are given three labels “lamp”, “fork”, “cat”, and “spoon”, then correct completion involves clicking on the word “fork”. Each party is given the same 10 images to label. To be paid 0.2 GBP for completing the Stage 1 task, they need to have at least 2 images correctly labeled. However, to be eligible to proceed to Stage 2, they need to correctly identify an additional 4 images. These additional unpaid 4 images are called the "surplus". Concerning this surplus, Persons A and B are informed that correctly identifying the additional 4 images (i.e., attaining the surplus which is unpaid in Stage 1) makes them eligible to proceed to Stage 2 where they will be endowed with money. This means that they have to correctly label 6 images to be eligible to enter Stage 2 where they receive an endowment and also the chance to increase this endowment.

At the end of this stage, they learn whether they completed Stage 1.

[Note, those failing to correctly label the 6 (i.e., 2+4) images were excluded from entering Stage 2. And proceed into the next within-subject iteration. If none left, then they finish the study.]

3.1.4. Stage 2:

Everyone individually receives the Stage 2 endowment of 0.4 GBP. At this point, the following two manipulations (creating the homo/hetero pairs and assigning one party to the Generator role) are implemented:

1. *Partner assignment = Homo/Hetero pair composition manipulation:* Parties learn that they are now paired with another person and also learn whether this person has the same (partner_same) or different (partner_different) migration background as their own. They learn that the stage 1 work, completion criteria, and stage 2 endowment are the same for their partner.
2. *Generator manipulation:* Subjects learn whether they are selected to be the Generator or not. They are truthfully informed that each party in the pair had a 50% chance of becoming the Generator, and a pair is always composed of a Generator and a non-Generator. The Stage 2 endowment multiplier is created from the Generator’s Stage 1 surplus, whereas the non-Generator’s Stage 1 surplus is not converted into the endowment multiplier but is rather ignored – a fact which is public knowledge.

At the point when the “generator manipulation” is performed, subjects learn about the presence and the source (from which party, i.e the Generator manipulation) of the endowment amplifier which multiplies their Stage 2 endowment of 0.4 GBP.

Then, in the costly redistribution treatment arm, subjects are presented Table 1a, while in the costless redistribution one, they are presented Table 1b.

Next, from each subject in a pair, we elicit two behaviors:

1. stated belief about the fair division (FB) and
2. distributive choice (DC).

In the first of the four situations (i.e., within-subject treatments), the order of the elicitation of these two behaviors is randomized. In the other three situations, the order is fixed: everyone gets the same order what they got at the first time.

(1) FB = Beliefs about fair distribution of the multiplier:

Everyone is asked to state what they believe to be the fair division of the multiplier from the vantage point of 40 neutral third parties. We apply the BSR method (binarized scoring rule, see, e.g., Hossain & Okui (2013)) to ensure that the elicitation is incentive compatible. One important feature is that subjects are asked to estimate the average *alternative number* (which ranges from 1-11) of the option chosen by spectators from among the 11 possible divisions rather than estimating the corresponding monetary value of the option. This approach is needed to account for unequal differences in terms of monetary value between the alternatives above and below the equal split.

All subjects receive a 0.2 GBP estimation bonus to start with. They are asked to estimate the mean of the option number across the 40 spectator choices. If subjects guess exactly right, they get the 0.2 GBP for sure (i.e. with 100% probability). Deviations from the true mean are, however, penalized. That is, the further the subject’s estimate falls from the true mean, the lower probability s/he is assigned to get the estimation bonus.

(2) DC = Distributive choice:

To elicit DCs, we use a strategy method here – everyone chooses her/his preferred distribution (selected from Tables 1a and 1b, depending on treatment assignment). Then, for

each within-subject pairing, one party from the dyad is randomly selected and his/her choice will be imposed on the pair. All 4 choices are paid out but subjects only learn about the outcome at the end of the experiment.

3.1.5. Beliefs about the partner

Subjects are asked to reveal their beliefs about their partner from the last round. We are interested in their beliefs about their partner's birth country region background, education level, employment status, religion, and whether their partner holds UK citizenship. One of these five questions is randomly selected for each subject and checked whether his/her belief is correct. Should it be correct, the subject receives 0.10 GBP.

3.1.6. Wrap-up

Subjects are informed that they are done with the experiment. They are reminded about how much they earn for completion and also that they will learn the payoffs from each part of the experiment in a couple of weeks. They are also asked to send us comments and describe in a few sentences their strategy when estimating and making choices.

4. Sample size and power

Our key manipulations are the “generator/nonGenerator” roles and the varying whether the partner has the same (partner_same) or different (partner_different) immigration background. Based on our sample size calculation, to detect a small effect of the IA of beliefs (generator* partner different) at 90 % power, we need $N=304$ in each between-subject treatment arm (costly or costless redistribution), $N_{\text{Total}} = 608$. Find the code for the sample size calculation attached.

As we will be using Prolific services, we are aware of attrition and also of the fact that some subjects just click through. Therefore, we exclude those subjects from the analysis who (1) do not complete the whole study or (2) for whom we find inconsistency in their key demographics (age, gender, nationality) with respect to what they have indicated on Prolific and in the experiment. For age, however, we allow +/- 1-year deviation.

5. Empirical strategy

The experiment tests whether the history channel and the discrimination channel influence beliefs and allocation choices. To measure the effect of history, we test whether people in the Generator role hold higher beliefs about their fair share and allocate themselves more than people in the NonGenerator role. To measure the effect of discrimination, we test whether beliefs about one's fair share and the actual allocations would be lower when the partner has the same versus a different birth country background. We also test whether these two channels interact such that the effect of being in the Generator role would be stronger when paired with a different rather than the same partner.

Apart from all these channels, we also test whether, on average, allocation choices would be more asymmetric when redistribution is costless than when it is costly.

Note, we assume no prior difference or differential treatment effect between UK and non-UK-born subjects, which assumption we also test.

Also note that the wealth effect could be an issue as we progress with the within-subject iteration (i.e., 4 experimental parts). This is because some subjects may fail to earn the 0.2 GBP in Stage 1 and they are directed to the next part. The potential wealth-effect emerging could be addressed by controlling for wealth or excluding those subjects who have a missing within-subject iteration in the analysis.

Moreover, in contrast to Alesina, Murard, & Rapoport (2019), we do not assume differences in responses between those who were administered before and after the experimental manipulations of the questions including the heterogeneity items (i.e., correlates).

Furthermore, we do not expect that the order in which fairness beliefs and distributive choices are elicited would influence either behavior. Nevertheless, we will test these assumptions.

5.1. Predictions about Fairness beliefs (FB)

Before we detail our predictions about fairness beliefs, we would like to mention that we are not expecting an effect of costlessness on fairness beliefs. Nevertheless, we keep this term in the regression models. Find code for the below detailed main analyzes attached.

5.1.1. Players' views about the fair solution: Analyzing Tension

To address the first set of predictions about player's beliefs about the fair solution, we create a variable called tension (for similar approaches, see Dezső & Loewenstein (2019), Dezső, Loewenstein, Steinhart, Neszveda, & Szászi (2015), or Gächter & Riedl (2005)).

Tension is a pair-level variable, as it is the difference between partners' views about the fair solution. The difference is calculated using players' stated beliefs about the mean spectators' views. As these beliefs are stated on the scale of the alternative numbers (rather than on the scale of the shares or the corresponding earnings), each alternative provides an outcome for the Generator and the nonGenerator within the pair. To calculate tension for each pair, we use the following formula: $Tension = FB_Generator - FB_nonGenerator$. E.g.: Generator believes that the fair solution is 9 and the nonGenerator believes it is 5 then, the tension is $9 - 5 = 4$ for this pair. (Here, believing 9 to be the fair solution as a Generator would mean the generator believes a share of 2.3 for him/herself to be fair while the non-generator would get a share of 1.4 in Table 1a (or 1.7 in Table 1b). Believing 5 to be the fair solution as the nonGenerator would mean the nonGenerator believes 2.2 for him/herself to be fair while the generator would get a share of 1.6 in Table 1a (or 1.8 in Table 1b).

$$Tension = intercept + \tau_1 Partner_diff + \tau_2 Costless$$

Prediction1: *On average, Generators will believe to be fair those solutions with higher alternative numbers (i.e., resulting in a higher share for themselves than for the nonGenerator) than nonGenerators. Therefore, $intercept > 0$.*

Prediction1a: *Views about the Generator's fair share will diverge more when partners differ (with respect to their birth country background) than when they are the same, $\tau_1 > 0$.*

Prediction1b: *Tension would not differ between the Costless and the Costly treatment arms, $\tau_2 = 0$.*

5.1.2. Players' views about their fair share: Analyzing MyFairShare

We look at each players' view about his/her fair share - again in terms of alternative number - and call this variable MyFairShare.

In the first model involving MyFairShare, we would like to test our main predictions. That is, we are only testing whether beliefs about one's fair share differ via the two channels (i.e., with Generator as a proxy for history and Partner_different as a proxy for discrimination).

$$\text{MyFairShare} = \text{intercept} + \phi_1 \text{Generator} + \phi_2 \text{Partner_different} + \phi_3 \text{Costless} + \phi_4 \text{demographics}$$

Prediction2: *Generators would believe in a higher share for themselves than nonGenerators believe for themselves, $\phi_1 > 0$.*

Prediction2a: *Beliefs of one's fair share would be higher when the partner is different than when s/he is the same, $\phi_2 > 0$.*

Prediction2b: *Beliefs would not differ across the Costless and Costly treatment arms, $\phi_3 = 0$.*

In the second model of MyFairShare, we test whether the two channels interact.

$$\text{MyFairShare} = \text{intercept} + \phi_1 \text{Generator} + \phi_2 \text{Partner_different} + \phi_3 \text{Costless} + \phi_4 \text{Generator} * \text{Partner_different} + \phi_5 \text{demographics}$$

Prediction2c: *With respect to mean MyFairShare, the effect of being a Generator would be stronger when the partner is different than when the partner is the same, $\phi_4 > 0$.*

Third, in an extended model of MyFairShare, we test whether UK and nonUK born people behave differently.

MyFairShare = intercept + ϕ_1 Generator + ϕ_2 Partner_different + ϕ_3 Costless + ϕ_4 Generator * Partner_different + ϕ_5 UK_born+ ϕ_6 demographics

Prediction2d: *With respect to mean MyFairShare, we do not expect any difference between Uk_born and nonUk_born subjects, $\phi_5 = 0$.*

In the Appendix, we plan to include further explorations about the *Generator X UK_born* and *UK_born X Partner_different* IAs one by one. Note, however, we have no specific predictions about these IAs.

5.2. Predictions about Distributive choices (DC)

We take each subject's distributive choice which describes how much s/he claims for her/himself and call this variable MyClaim.

In the first model about MyClaim, we are testing our main predictions about the effects of the two channels (i.e., history and discrimination). Here we are also expecting an effect of costly vs. costless redistribution MyClaim and hence, we include the Costless term.

MyClaim = intercept + δ_1 Generator + δ_2 Partner_different + δ_3 Costless+ δ_4 demographics

Prediction3: *Generators will claim more for themselves than nonGenerators do, $\delta_1 > 0$.*

Prediction3a: *Subjects with a different background partner will claim more for themselves than those with the same background partner, $\delta_2 > 0$.*

Prediction3b: *Subjects in the Costless treatments will claim more for themselves than those in the Costly treatments, $\delta_3 > 0$.*

In the second model of MyClaim, we test whether the two channels (Generator and Partner_different) interact.

$$\text{MyClaim} = \text{intercept} + \delta_1 \text{Generator} + \delta_2 \text{Partner_different} + \delta_3 \text{Costless} + \delta_4 \text{Generator} * \text{Partner_different} + \delta_5 \text{demographics}$$

Prediction3c: *With respect to MyClaim, the Generator effect would be stronger when the partner is different than when it is not different, $\delta_4 > 0$.*

In the extended model, we test whether UK and nonUK born people have different claims.

$$\text{MyClaim} = \text{intercept} + \delta_1 \text{Generator} + \delta_2 \text{Partner_different} + \delta_3 \text{Costless} + \delta_4 \text{Generator} * \text{Partner_different} + \delta_5 \text{UK_born} + \delta_6 \text{demographics}$$

Prediction3d: *We do not expect a difference between the mean claims of Uk_born and nonUk_born subjects, $\delta_5 = 0$.*

In the Appendix, we plan to include further explorations. We would include further IAs of the key terms one by one. We are particularly interested in the *Generator X Costless*, *Partner_different X Costless*, and *UK_born X Partner_different* IAs, although we have no predictions about them.

5.3. Heterogeneity

First, we compare mean heterogeneity responses between those who answered these questions before or after the actual experiment (the four different scenarios). We expect no differences between these two groups with respect to their responses to these heterogeneity questions.

We suspect that beyond the treatment manipulations, there would be some pre-treatment characteristics of subjects that could influence MyFairShare and MyClaim measures.

5.3.1. Immigration_index: We expect a significant correlation between items measuring attitudes towards immigration. Hence, we create a composite immigration_index.

Here, we would include the UK_born term both in the MyFairShare and MyClaim models and restrict the sample to UK_born. We predict that an increased negative attitude towards immigrants would be associated with higher average MyFairShare and MyClaim responses and we also expect an immigration index X Partner_different interaction.

5.3.2. Brexit_Vote: Response to the Brexit vote question. Same model and reasoning as for Immigration_index.

5.3.3. Efficiency concerns: Response to the efficiency question

Increased agreement on this item would be associated with lower MyFairShare and MyClaim responses. We will include these terms for the second models of MFairShare and MyClaim.

5.3.4. Redistribution_index: We will reverse code responses on the second question about redistribution. We expect a significant correlation between responses on the two items and hence, we will create a redistribution_index.

Increased agreement on this item would be associated with lower MyFairShare and MyClaim responses. We will include this term for the second models of MFairShare and MyClaim.

We will also correct for multiple hypothesis testing. In particular, we will adjust p-values for avoiding false-positive results.

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SCREENSHOTS

1. Preliminary Spectator survey

1.1. Welcome and a brief description

Welcome to our survey!

In this survey, we are interested in your view about how to distribute proceeds between two individuals. You will be asked to take the position of an impartial judge and provide your view about the fair division of resources between two parties.

The Principal Investigators of this study are [REDACTED]

This survey cannot be completed on a phone! You need to have at least a tablet or, preferably, a laptop or desktop computer screen to complete this survey. Additionally, you must have approximately 10 undisturbed minutes as you are not allowed to stop and resume the study at a later point. If you fail to complete the survey during this period, you will not get paid. In order to ensure completion, please do not look at your phone, email, or engage in other distractions while working on the survey.

Procedure: First, you will answer some demographic questions and some questions about your attitudes toward social issues. Then, you will have to stand in the shoes of an impartial judge. You will read a description of two people in a pair, and you will have to indicate, from the vantage point of an unbiased judge, the fair division of resources between them. It is very important that you very carefully read the page describing the members of the pair and the distributive situation. You should especially pay attention to text printed bold and/or red. Finally, you will be asked to very briefly explain your distributive choice.

Confidentiality: Your responses are anonymous and all data you provide are stored confidentially, according to the EU GDPR. Nobody will be able to link your responses to your personal information. All participants' responses will be aggregated, analyzed, and published in an academic publication. Your participation is voluntary, you can withdraw your participation at any time. In this case, you will not get paid.

If you have any questions, comments or you are seeking further information about the study, please contact [REDACTED]

If you are ready to proceed, click on Next.

Next

1.2. Consent

Consenting to participate

I want to participate in the study:

☒ Yes

☐ No

Next

1.3. Prolific ID

Your Prolific ID

Please confirm your Prolific ID:

Please double-check your Prolific ID here. If it is wrong, your payment will not reach you!
Click on Next if the presented ID is correct.

Next

1.4. Demographics

Demographic questions

Your year of birth?

Your gender?

Select the geographical region of your birth country:

For how long have you been living in the United Kingdom?

At the moment, do you hold UK citizenship?

- ☒ Yes
☐ No

Your religious affiliation?

Your highest level of education?

What is your current employment status?

What is your yearly household income? Please provide your best guess.

Including yourself, how many people (including adults and minors) live in your household?

1.5. Attitudes

Note, one between-subject factor varied whether this came before (pre) or after (post) the distributive situation.

Attitudes

To what extent do you think Britain should allow immigrants to come and live in the UK?

To what extent do you agree with the following statement? Immigrants take jobs away from other British workers.

To what extent do you agree with the following statement? Immigrants abuse the welfare system.

To what extent do you agree with the following statement? Immigrants contribute to the British economy.

To what extent do you agree with the following statement? Immigrants are needed to do the jobs other British people won't do.

How did you vote on the Brexit vote in 2016?

How would you describe your political preferences?

Next

1.6. Distributive situation in the eight treatments

Now, take the position of an impartial judge while reading the following scenario and answering the questions which follow.

Imagine that two people, called persons A and B are paired.

Person A was immigrant to the UK whereas Person B was born in the UK.

The background: Persons A's and B's Stage 1 task:

Before these two people were paired, they individually completed the exact same Stage 1 task. Their task was to correctly identify images. In particular, they were individually presented with 10 images, one by one. Under each image, there were four labels and they had to select the label that best described the image. For instance, if there was an image of a fork and they were given the labels of "lamp", "fork", "knife" and "spoon", they had to click on "fork". Both parties received the same 10 images and labels below them.

To get paid £0.20 for their Stage 1 work, they needed to have 2 images correctly labeled out of the 10 images presented. **However, in order to be eligible to proceed to Stage 2, they needed to correctly label an additional 4 images for which they did not get paid and this was called their "surplus".**

With respect to the surplus, Persons A and B were told the following: Correctly labeling the additional 4 images (i.e., completing the surplus) makes you eligible to proceed to Stage 2 where you will be endowed with more money. Most importantly, however, by creating this surplus you will also have the chance to have your Stage 2 endowment amplified with a multiplier which can significantly increase your final Stage 2 earnings but can never decrease it below the original size of the endowment.

[Note, those failing to correctly label the 2+4 images were excluded from entering Stage 2.]

The Stage 2 division:

Everyone reaching Stage 2 individually received the Stage 2 endowment of £0.40. Persons A and B were paired at this point. **Then, the pair was given an endowment-multiplier of 4, which needs to be divided between the two of them. The share of the multiplier each party receives will multiply each person's Stage 2 endowment of £0.40.**

This multiplier arose from Person A's Stage 1 surplus. Specifically, Person A (who is immigrant to the UK) and Person B (who is born in the UK) both had a 50% chance to have their surplus converted into this multiplier, to be decided by a virtual "coin flip". **This chance event played out so that person A was the one whose surplus ended up being converted into becoming the multiplier.**

Now you, as an impartial judge, are asked to divide the multiplier fairly between Persons A and B. The portion each party receives will be applied to (multiplied by) his/her Stage 2 endowment of £0.40 to yield his/her respective Stage 2 earnings.

In the table below, each row presents an alternative way to divide the multiplier. As you see, there are eleven alternatives for dividing the multiplier of 4 between Persons A and B. The division described in Alternative 6 (row 6) corresponds to equally splitting the multiplier. That is, each party in the pair gets a multiplier of 2 and, hence, each party's Stage 2 endowment would be multiplied by 2, yielding equal earnings of £0.80 for each party.

However, the multiplier can also be divided in an asymmetric fashion by deviating from equally splitting the multiplier. These divisions are presented in the other 10 alternatives. Above the equal split the divisions are favoring Person A, and below the equal split the divisions are favoring Person B.

These lopsided divisions are costly. This means that the part that is taken away from one party is halved when given to the other party. To understand this mechanism, consider Alternative 2 in row 2. Here Person A gets 2.4 from the multiplier, while Person B gets 1.2 from it. This is because compared to the equal split of 2, Person B's share was reduced by 0.8 which left him with a 1.2 share of the multiplier. This 0.8 was then halved, resulting in 0.4. This amount was then deposited to Person A's account and added to 2 which would have been his share in the event of equal split.

Alternatively, look at Alternative 8 in row 8. Here Person A gets 1.6 from the multiplier, while Person B gets 2.2 from it. This is because compared to the equal split of 2, Person A's share was reduced by 0.4 which left him with 1.6 share of the multiplier. This 0.4 was then halved, resulting in 0.2. This amount was then deposited to Person B's account and added to 2 which would have been his share in the event of equal split.

Note that in next-to-last column, we present the sum total earnings of Persons A and B for each alternative.

Please review this table and find the alternative that you think is the fairest division of the multiplier. In the last column, select the row in which the fairest division of the multiplier is presented.

Person A		Person B		Summed Stage 2 Earnings of Persons A and B	The Fair Solution (Click on the row in which the fair alternative is presented.)
<ul style="list-style-type: none">Is immigrant to the UKHad surplus converted into multiplier		<ul style="list-style-type: none">Is born in the UK			
Person A's share from the multiplier	Person A's stage 2 earnings after multiplier applied	Person B's share from the multiplier	Person B's stage 2 earnings after multiplier applied		
1.0	£0.40	2.5	£1.00	£1.40	<input type="radio"/>
1.2	£0.48	2.4	£0.96	£1.44	<input type="radio"/>
1.4	£0.56	2.3	£0.92	£1.48	<input type="radio"/>
1.6	£0.64	2.2	£0.88	£1.52	<input type="radio"/>
1.8	£0.72	2.1	£0.84	£1.56	<input type="radio"/>
2.0	£0.80	2.0	£0.80	£1.60	<input type="radio"/>
2.1	£0.84	1.8	£0.72	£1.56	<input type="radio"/>
2.2	£0.88	1.6	£0.64	£1.52	<input type="radio"/>
2.3	£0.92	1.4	£0.56	£1.48	<input type="radio"/>
2.4	£0.96	1.2	£0.48	£1.44	<input type="radio"/>
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Please provide a brief explanation of your choice.

Now, take the position of an impartial judge while reading the following scenario and answering the questions which follow.

Imagine that two people, called persons A and B are paired.

Persons A and B were both immigrant to the UK.

The background: Persons A's and B's Stage 1 task:

Before these two people were paired, they individually completed the exact same Stage 1 task. Their task was to correctly identify images. In particular, they were individually presented with 10 images, one by one. Under each image, there were four labels and they had to select the label that best described the image. For instance, if there was an image of a fork and they were given the labels of "lamp", "fork", "knife" and "spoon", they had to click on "fork". Both parties received the same 10 images and labels below them.

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Or, consider Alternative 8 in row 8. Here, Person A gets 1.8 from the multiplier while Person B gets 2.2 from it. This is because compared to 2, Person A's share was reduced by 0.2 which amount was then deposited to Person B's account giving him/her 2.2.

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1.7	£0.68	2.3	£0.92	£1.60	<input type="radio"/>
1.8	£0.72	2.2	£0.88	£1.60	<input type="radio"/>
1.9	£0.76	2.1	£0.84	£1.60	<input type="radio"/>
2.0	£0.80	2.0	£0.80	£1.60	<input type="radio"/>
2.1	£0.84	1.9	£0.76	£1.60	<input type="radio"/>
2.2	£0.88	1.8	£0.72	£1.60	<input type="radio"/>
2.3	£0.92	1.7	£0.68	£1.60	<input type="radio"/>
2.4	£0.96	1.6	£0.64	£1.60	<input type="radio"/>
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Or, consider Alternative 8 in row 8. Here, Person A gets 1.8 from the multiplier while Person B gets 2.2 from it. This is because compared to 2, Person A's share was reduced by 0.2 which amount was then deposited to Person B's account giving him/her 2.2.

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2.1	£0.84	1.9	£0.76	£1.60	<input type="radio"/>
2.2	£0.88	1.8	£0.72	£1.60	<input type="radio"/>
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2.0	£0.80	2.0	£0.80	£1.60	<input type="radio"/>
2.1	£0.84	1.9	£0.76	£1.60	<input type="radio"/>
2.2	£0.88	1.8	£0.72	£1.60	<input type="radio"/>
2.3	£0.92	1.7	£0.68	£1.60	<input type="radio"/>
2.4	£0.96	1.6	£0.64	£1.60	<input type="radio"/>
2.5	£1.00	1.5	£0.60	£1.60	<input type="radio"/>

Please provide a brief explanation of your choice.

Now, take the position of an impartial judge while reading the following scenario and answering the questions which follow.

Imagine that two people, called persons A and B are paired.

Person A was born in the UK whereas Person B was immigrant to the UK.

The background: Persons A's and B's Stage 1 task:

Before these two people were paired, they individually completed the exact same Stage 1 task. Their task was to correctly identify images. In particular, they were individually presented with 10 images, one by one. Under each image, there were four labels and they had to select the label that best described the image. For instance, if there was an image of a fork and they were given the labels of "lamp", "fork", "knife" and "spoon", they had to click on "fork". Both parties received the same 10 images and labels below them.

To get paid £0.20 for their Stage 1 work, they needed to have 2 images correctly labeled out of the 10 images presented. **However, in order to be eligible to proceed to Stage 2, they needed to correctly label an additional 4 images for which they did not get paid and this was called their "surplus".**

With respect to the surplus, Persons A and B were told the following: Correctly labeling the additional 4 images (i.e., completing the surplus) makes you eligible to proceed to Stage 2 where you will be endowed with more money. Most importantly, however, by creating this surplus you will also have the chance to have your Stage 2 endowment amplified with a multiplier which can significantly increase your final Stage 2 earnings but can never decrease it below the original size of the endowment.

[Note, those failing to correctly label the 2+4 images were excluded from entering Stage 2.]

The Stage 2 division:

Everyone reaching Stage 2 individually received the Stage 2 endowment of £0.40. Persons A and B were paired at this point. **Then, the pair was given an endowment-multiplier of 4, which needs to be divided between the two of them. The share of the multiplier each party receives will multiply each person's Stage 2 endowment of £0.40.**

This multiplier arose from Person A's Stage 1 surplus. Specifically, Person A (who is born in the UK) and Person B (who is immigrant to the UK) both had a 50% chance to have their surplus converted into this multiplier, to be decided by a virtual "coin flip". **This chance event played out so that person A was the one whose surplus ended up being converted into becoming the multiplier.**

Now you, as an impartial judge, are asked to divide the multiplier fairly between Persons A and B. The portion each party receives will be applied to (multiplied by) his/her Stage 2 endowment of £0.40 to yield his/her respective Stage 2 earnings.

In the table below, each row presents an alternative way to divide the multiplier. As you see, there are eleven alternatives for dividing the multiplier of 4 between Persons A and B. The division described in Alternative 6 (row 6) corresponds to equally splitting the multiplier. That is, each party in the pair gets a multiplier of 2 and, hence, each party's Stage 2 endowment would be multiplied by 2, yielding equal earnings of £0.80 for each party.

However, the multiplier can also be divided in an asymmetric fashion by deviating from equally splitting the multiplier. These divisions are presented in the other 10 alternatives. Above the equal split the divisions are favoring Person A, and below the equal split the divisions are favoring Person B.

These lopsided divisions are costly. This means that the part that is taken away from one party is halved when given to the other party. To understand this mechanism, consider Alternative 2 in row 2. Here Person A gets 2.4 from the multiplier, while Person B gets 1.2 from it. This is because compared to the equal split of 2, Person B's share was reduced by 0.8 which left him with a 1.2 share of the multiplier. This 0.8 was then halved, resulting in 0.4. This amount was then deposited to Person A's account and added to 2 which would have been his share in the event of equal split.

Alternatively, look at Alternative 8 in row 8. Here Person A gets 1.6 from the multiplier, while Person B gets 2.2 from it. This is because compared to the equal split of 2, Person A's share was reduced by 0.4 which left him with 1.6 share of the multiplier. This 0.4 was then halved, resulting in 0.2. This amount was then deposited to Person B's account and added to 2 which would have been his share in the event of equal split.

Note that in next-to-last column, we present the sum total earnings of Persons A and B for each alternative.

Please review this table and find the alternative that you think is the fairest division of the multiplier. In the last column, select the row in which the fairest division of the multiplier is presented.

Person A <ul style="list-style-type: none"> Is born in the UK Had surplus converted into multiplier 		Person B <ul style="list-style-type: none"> Is immigrant to the UK 		Summed Stage 2 Earnings of Persons A and B	The Fair Solution (Click on the row in which the fair alternative is presented.)
Person A's share from the multiplier	Person A's stage 2 earnings after multiplier applied	Person B's share from the multiplier	Person B's stage 2 earnings after multiplier applied		
1.0	£0.40	2.5	£1.00	£1.40	<input type="radio"/>
1.2	£0.48	2.4	£0.96	£1.44	<input type="radio"/>
1.4	£0.56	2.3	£0.92	£1.48	<input type="radio"/>
1.6	£0.64	2.2	£0.88	£1.52	<input type="radio"/>
1.8	£0.72	2.1	£0.84	£1.56	<input type="radio"/>
2.0	£0.80	2.0	£0.80	£1.60	<input type="radio"/>
2.1	£0.84	1.8	£0.72	£1.56	<input type="radio"/>
2.2	£0.88	1.6	£0.64	£1.52	<input type="radio"/>
2.3	£0.92	1.4	£0.56	£1.48	<input type="radio"/>
2.4	£0.96	1.2	£0.48	£1.44	<input type="radio"/>
2.5	£1.00	1.0	£0.40	£1.40	<input type="radio"/>

Please provide a brief explanation of your choice.

Next, take the position of an impartial judge while reading the following scenarios and answering the questions which follow.

Imagine that two people, called persons A and B are paired.

Persons A and B were both born in the UK.

The background: Persons A's and B's Stage 1 task:

Before these two people were paired, they individually completed the exact same Stage 1 task. Their task was to correctly identify images. In particular, they were individually presented with 10 images, one by one. Under each image, there were four labels and they had to select the label that best described the image. For instance, if there was an image of a fork and they were given the labels of "lamp", "fork", "knife" and "spoon", they had to click on "fork". Both parties received the same 10 images and labels below them.

To get paid £0.20 for their Stage 1 work, they needed to have 2 images correctly labeled out of the 10 images presented. **However, in order to be eligible to proceed to Stage 2, they needed to correctly label an additional 4 images for which they did not get paid and this was called their "surplus".**

With respect to the surplus, Persons A and B were told the following: Correctly labeling the additional 4 images (i.e., completing the surplus) makes you eligible to proceed to Stage 2 where you will be endowed with more money. Most importantly, however, by creating this surplus you will also have the chance to have your Stage 2 endowment amplified with a multiplier which can significantly increase your final Stage 2 earnings but can never decrease it below the original size of the endowment.

[Note, those failing to correctly label the 2+4 images were excluded from entering Stage 2.]

The Stage 2 division:

Everyone reaching Stage 2 individually received the Stage 2 endowment of £0.40. Persons A and B were paired at this point. **Then, the pair was given an endowment-multiplier of 4, which needs to be divided between the two of them. The share of the multiplier each party receives will multiply each person's Stage 2 endowment of £0.40.**

This multiplier arose from Person A's Stage 1 surplus. Specifically, Person A (who is born in the UK) and Person B (who is also born in the UK) both had a 50% chance to have their surplus converted into this multiplier, to be decided by a virtual "coin flip". **This chance event played out so that person A was the one whose surplus ended up being converted into becoming the multiplier.**

Now you, as an impartial judge, are asked to divide the multiplier fairly between Persons A and B. The portion each party receives will be applied to (multiplied by) his/her Stage 2 endowment of £0.40 to yield his/her respective Stage 2 earnings.

In the table below, each row presents an alternative way to divide the multiplier. As you see, there are eleven alternatives for dividing the multiplier of 4 between Persons A and B. The division described in Alternative 6 (row 6) corresponds to equally splitting the multiplier. That is, each party in the pair gets a multiplier of 2 and, hence, each party's Stage 2 endowment would be multiplied by 2, yielding equal earnings of £0.80 for each party.

However, the multiplier can also be divided in an asymmetric fashion by deviating from equally splitting the multiplier. These divisions are presented in the other 10 alternatives. Above the equal split the divisions are favoring Person A, and below the equal split the divisions are favoring Person B.

Consider for example Alternative 2 in row 2. Here, Person A gets 2.4 and Person B gets 1.6 from the multiplier. This is because compared to equally splitting and getting 2 from the multiplier, Person B's share was reduced by 0.4 which amount was then deposited to Person A's account giving him/her 2.4.

Or, consider Alternative 8 in row 8. Here, Person A gets 1.8 from the multiplier while Person B gets 2.2 from it. This is because compared to 2, Person A's share was reduced by 0.2 which amount was then deposited to Person B's account giving him/her 2.2.

Note that in next-to-last column, we present the sum total earnings of Persons A and B for each alternative.

Please review this table and find the alternative that you think is the fairest division of the multiplier. In the last column, select the row in which the fairest division of the multiplier is presented.

Person A		Person B		Summed Stage 2 Earnings of Persons A and B	The Fair Solution (Click on the row in which the fair alternative is presented.)
Person A's share from the multiplier	Person A's stage 2 earnings after multiplier applied	Person B's share from the multiplier	Person B's stage 2 earnings after multiplier applied		
1.5	£0.60	2.5	£1.00	£1.60	<input type="radio"/>
1.6	£0.64	2.4	£0.96	£1.60	<input type="radio"/>
1.7	£0.68	2.3	£0.92	£1.60	<input type="radio"/>
1.8	£0.72	2.2	£0.88	£1.60	<input type="radio"/>
1.9	£0.76	2.1	£0.84	£1.60	<input type="radio"/>
2.0	£0.80	2.0	£0.80	£1.60	<input type="radio"/>
2.1	£0.84	1.9	£0.76	£1.60	<input type="radio"/>
2.2	£0.88	1.8	£0.72	£1.60	<input type="radio"/>
2.3	£0.92	1.7	£0.68	£1.60	<input type="radio"/>
2.4	£0.96	1.6	£0.64	£1.60	<input type="radio"/>
2.5	£1.00	1.5	£0.60	£1.60	<input type="radio"/>

Please provide a brief explanation of your choice.

Now, take the position of an impartial judge while reading the following scenario and answering the questions which follow.

Imagine that two people, called persons A and B are paired.

Persons A and B were both born in the UK.

The background: Persons A's and B's Stage 1 task:

Before these two people were paired, they individually completed the exact same Stage 1 task. Their task was to correctly identify images. In particular, they were individually presented with 10 images, one by one. Under each image, there were four labels and they had to select the label that best described the image. For instance, if there was an image of a fork and they were given the labels of "lamp", "fork", "knife" and "spoon", they had to click on "fork". Both parties received the same 10 images and labels below them.

To get paid £0.20 for their Stage 1 work, they needed to have 2 images correctly labeled out of the 10 images presented. **However, in order to be eligible to proceed to Stage 2, they needed to correctly label an additional 4 images for which they did not get paid and this was called their "surplus".**

With respect to the surplus, Persons A and B were told the following: Correctly labeling the additional 4 images (i.e., completing the surplus) makes you eligible to proceed to Stage 2 where you will be endowed with more money. Most importantly, however, by creating this surplus you will also have the chance to have your Stage 2 endowment amplified with a multiplier which can significantly increase your final Stage 2 earnings but can never decrease it below the original size of the endowment.

[Note, those failing to correctly label the 2+4 images were excluded from entering Stage 2.]

The Stage 2 division:

Everyone reaching Stage 2 individually received the Stage 2 endowment of £0.40. Persons A and B were paired at this point. **Then, the pair was given an endowment-multiplier of 4, which needs to be divided between the two of them. The share of the multiplier each party receives will multiply each person's Stage 2 endowment of £0.40.**

This multiplier arose from Person A's Stage 1 surplus. Specifically, Person A (who is born in the UK) and Person B (who is also born in the UK) both had a 50% chance to have their surplus converted into this multiplier, to be decided by a virtual "coin flip". **This chance event played out so that person A was the one whose surplus ended up being converted into becoming the multiplier.**

Now you, as an impartial judge, are asked to divide the multiplier fairly between Persons A and B. The portion each party receives will be applied to (multiplied by) his/her Stage 2 endowment of £0.40 to yield his/her respective Stage 2 earnings.

In the table below, each row presents an alternative way to divide the multiplier. As you see, there are eleven alternatives for dividing the multiplier of 4 between Persons A and B. The division described in Alternative 6 (row 6) corresponds to equally splitting the multiplier. That is, each party in the pair gets a multiplier of 2 and, hence, each party's Stage 2 endowment would be multiplied by 2, yielding equal earnings of £0.80 for each party.

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These lopsided divisions are costly. This means that the part that is taken away from one party is halved when given to the other party. To understand this mechanism, consider Alternative 2 in row 2. Here Person A gets 2.4 from the multiplier, while Person B gets 1.2 from it. This is because compared to the equal split of 2, Person B's share was reduced by 0.8 which left him with a 1.2 share of the multiplier. This 0.8 was then halved, resulting in 0.4. This amount was then deposited to Person A's account and added to 2 which would have been his share in the event of equal split.

Alternatively, look at Alternative 8 in row 8. Here Person A gets 1.6 from the multiplier, while Person B gets 2.2 from it. This is because compared to the equal split of 2, Person A's share was reduced by 0.4 which left him with 1.6 share of the multiplier. This 0.4 was then halved, resulting in 0.2. This amount was then deposited to Person B's account and added to 2 which would have been his share in the event of equal split.

Note that in next-to-last column, we present the sum total earnings of Persons A and B for each alternative.

Please review this table and find the alternative that you think is the fairest division of the multiplier. In the last column, select the row in which the fairest division of the multiplier is presented.

Person A		Person B		Summed Stage 2 Earnings of Persons A and B	The Fair Solution (Click on the row in which the fair alternative is presented.)
• Is born in the UK • Had surplus converted into multiplier		• Is born in the UK			
Person A's share from the multiplier	Person A's stage 2 earnings after multiplier applied	Person B's share from the multiplier	Person B's stage 2 earnings after multiplier applied		
1.0	£0.40	2.5	£1.00	£1.40	<input type="radio"/>
1.2	£0.48	2.4	£0.96	£1.44	<input type="radio"/>
1.4	£0.56	2.3	£0.92	£1.48	<input type="radio"/>
1.6	£0.64	2.2	£0.88	£1.52	<input type="radio"/>
1.8	£0.72	2.1	£0.84	£1.56	<input type="radio"/>
2.0	£0.80	2.0	£0.80	£1.60	<input type="radio"/>
2.1	£0.84	1.8	£0.72	£1.56	<input type="radio"/>
2.2	£0.88	1.6	£0.64	£1.52	<input type="radio"/>
2.3	£0.92	1.4	£0.56	£1.48	<input type="radio"/>
2.4	£0.96	1.2	£0.48	£1.44	<input type="radio"/>
2.5	£1.00	1.0	£0.40	£1.40	<input type="radio"/>

Please provide a brief explanation of your choice.

1.7. Completion code

Completing the survey

Thank you for your participation in this study. Your completion code is:

771df956e04531acd1648627dcc4501b8b3a175a556097f1d131dbbf

When you proceed to the next page, we will try to redirect you back to Prolific and automatically submit your completion code. However in case this does not work, please copy this code and submit it manually on the Prolific website.

Next

2. Experimental screenshots

Here we only present images of key screens. For more details, please consult the experimental code. Additionally, the presented screenshots may come from different treatments.

2.1. Welcome

Welcome to our experiment!

Thank you for your willingness to participate.

First, we would like to inform you that this study cannot be completed on a phone and there is some reading involved in the experiment. You need to have at least a tablet or, preferably, a laptop or desktop computer screen to complete this study. Additionally, please complete the study without interruptions to ensure that you get paid for your time and for your choices. It takes approximately 8-10 minutes to complete the study.

Some questions and task in the experiment may seem repetitive. Nevertheless, in order to maximize your experimental earnings, please read all text and instructions. Make sure that you always pay attention to the highlighted text as they summarize key information.

Your task: In the experiment we will ask some demographic questions and some questions about your attitudes towards various social issues. Apart from these, the experiment consists of 4 different parts. Each part consists of two stages: stage 1 and stage 2. The stage 1 task is always to correctly select names of 10 images. The stage 2 task always to state your preferences about sharing resources with a partner with whom - technically speaking - you will be matched after you have submitted your responses. In order to proceed from stage 1 to stage 2 within a part, you need to successfully complete stage 1. If you fail to accomplish stage 1, you will be redirected to the next part (rather than completing Stage 2 of the focal part). Note that the back button is disabled. This means that you cannot go back to pages you have already passed.

Payment: After you submit your task in a timely fashion, you will be eligible for the completion payment indicated on Prolific when you accepted the task. Then, in maximum three weeks (or as soon as we have collected enough responses), your bonus payment will be added to your earnings and you will get paid the total amount (completion payment + bonus payment). In order to maximize your bonus payment, make sure that you pay close attention to the tasks, read all text carefully and consider all choices. You should especially pay attention to the bold and/or highlighted texts as they include crucial information. Beyond your luck, your performance and choices determine how much bonus you get.

Your maximum bonus earnings are 5.7 GBP and the minimum (if you happen to fail on every task) is 0 GBP.

Your mean (expected) bonus earnings are approximately 4.65 GBP.

Next

2.2. Consent

Consenting to participate

The guidelines of ethical conduct in empirical research require to inform study participants about the following points and ask for their consent.

Participation is voluntary: You can discontinue completion at any time. Note, however, that we only pay for completed studies.

Confidentiality: All information you provide will be anonymous and treated with utmost confidentiality. We are unable to link your responses to your identity.

Questions: Should you have any questions, please email the Principal Investigator:



Hereby I confirm that I am at least 18 years old. I have read the informed consent form and agree with all terms

I want to participate in the study:

☐ Yes


☐ No

[Next](#)

2.3. Prolific ID

Your Prolific ID

Please confirm your Prolific ID:

ID is presented here 

Please double-check your Prolific ID here. If it is wrong, your payment will not reach you!

Click on Next if the presented ID is correct.

[Next](#)

2.4. Demographics

Demographic questions

Your year of birth?

Your gender?

Select the geographical region of your birth country:

For how long have you been living in the United Kingdom?

At the moment, do you hold UK citizenship?

- ☒ Yes
☐ No

Your religious affiliation?

Your highest level of education?

What is your current employment status?

What is your yearly household income? Please provide your best guess.

Including yourself, how many people (including adults and minors) live in your household?

2.5. Attitudes

This page was presented before (pre) or after (post) the 4 main experimental parts.

Attitudes

To what extent do you agree with the following statement? Britain should allow immigrants to come and live in the UK:

To what extent do you agree with the following statement? Immigrants take jobs away from other British workers.

To what extent do you agree with the following statement? Immigrants abuse the welfare system.

To what extent do you agree with the following statement? On average, immigrants contribute to the British economy more than natives do.

To what extent do you agree with the following statement? Immigrants are needed to do the jobs other British people won't do.

How did you vote on the Brexit vote in 2016?

How would you describe your political preferences?

To what extent do you agree with the following statement? It should be more important to the government to achieve a high growth rate than to reduce inequality between people through all sorts of government support.

To what extent do you agree with the following statement? Social justice requires that income inequalities should be reduced.

To what extent do you agree with the following statement? We need larger income differences as incentives for individual effort.

Next

2.6. Instructions for Stage 1 in part 1

This page was presented in all 4 parts as Stage 1 instruction.

Instructions for part 1 of 4

You are in the **first part** and this part consists of two stages (Stage 1 and Stage 2).

Your Stage 1 task:

In stage 1, you will be asked to label 10 images. Specifically, your task will be to choose the correct name of the presented image among 4 answer choices. For example: If you see the image of a helicopter and your four options are: "knife", "airplane", "helicopter" and "ship" in order to get this image correctly labeled, you need to select "helicopter".

If you succeed with Stage 1, you will proceed to Stage 2.

What does succeeding at Stage 1 mean and what is your remuneration for the Stage 1 image labeling task?

Successfully completing Stage 1 means that you have at least 6 images correctly labeled. These 6 images are divided into 2-4 correctly labeled images.

1. If you **fail to correctly label 2 images**, you receive **no payment for Stage 1** and you are also not eligible to continue with Stage 2 within this first part. You simply skip to the next part.
2. If you label **at least 2 but fewer than 6 images correctly**, you get paid **£0.20 for the completion of 2 images**. However, **because you failed to have labeled the additional 4 images correctly**, you will **not be eligible to continue with Stage 2 within this first part**. You simply skip to the next part.
3. If you label **at least 2+4 (i.e., a total of 6) images correctly**, you get paid **£0.20 for completing the 2 images**. The **extra 4 correctly labeled images will be unpaid in Stage 1 and will be called your surplus**. Only by **completing this surplus (i.e., the extra 4 unpaid images)** will you be eligible to proceed to Stage 2 within this first part where you will be endowed with **more money**. By creating this surplus you will also have the chance to have your Stage 2 endowment amplified with a multiplier which can significantly increase your final Stage 2 earnings but can never decrease it below the original size of the endowment.

Click on next if you understood your Stage 1 task, the payment scheme and you are ready to start it.

Next

2.7. Images 1-10 in Part 1

The set of 10 images in the other 3 parts were very similar.

Question 1 of 10



Which label best fits the image?

- ☐ fat
- ☐ key
- ☐ pencil
- ☐ dog

Next

Question 2 of 10



Which label best fits the image?

- ☐ envelope
- ☐ elevator
- ☐ moisture
- ☐ balcony

Next

Question 3 of 10



Which label best fits the image?

- ☐ bread
- ☐ jail
- ☐ beach
- ☐ eagle

Next

Question 4 of 10



Which label best fits the image?

- ☐ race car
- ☐ motorbike
- ☐ kite
- ☐ rainbow

Next

Question 5 of 10



Which label best fits the image?

- ☐ school
- ☐ hate
- ☐ rainbow
- ☐ house

Next

Question 6 of 10



Which label best fits the image?

- ☐ sea
- ☐ grapes
- ☐ mountain
- ☐ beach

Next

Question 7 of 10



Which label best fits the image?

- ☐ map
- ☐ compass
- ☐ alarm clock
- ☐ watch

Next

Question 8 of 10



Which label best fits the image?

- ☐ rain
- ☐ cow
- ☐ catch
- ☐ cake

Next

Question 9 of 10



Which label best fits the image?

- ☐ orchard
- ☐ pears
- ☐ cheese
- ☐ sausage

Next

Question 10 of 10



Which label best fits the image?

- ☐ oatmeal
- ☐ milk
- ☐ cake
- ☐ coke

Next

2.8. Stage 1 results

Results of Stage 1

According to the Stage 1 remuneration scheme, for correctly labeling at least 2 images, you get £0.20.

Since you also succeeded at labeling at least 4 more images, these are your **surplus**. As mentioned before, **you do not get paid for these 4 images in Stage 1** but instead, they make you eligible proceeding to Stage 2 where you will be endowed with more money.

Next

2.9. Stage 2 Instructions

2.9.1.1. Part 1

You are in Stage 2 of part 1 now

Below you find the key information for Stage 2. In order to maximize your payoff from this Stage 2, it is crucial that you read this information very closely, understand and memorize it.

- In Stage 2, you are given an endowment of £0.40.
- Additionally, you are paired with another person who is your partner. This person is also a UK resident. Unlike you, however, **your partner was born outside of the UK.**
- Your partner is also endowed with the Stage 2 endowment of £0.40.
- You and your partner successfully created the surplus by labeling the extra four images correctly for which neither of you got paid. As you know, labeling this extra four images was unpaid for the both of you.
- In Stage 2, your pair (you and your partner) is given a multiplier which can be applied on your Stage 2 endowment of £0.40.
- **The size of this multiplier is 4 and it needs to be divided between the two of you.**
- The share you get from the multiplier is applied on your Stage 2 endowment of £0.40. This means, the share you get from the multiplier multiplies your endowment which then becomes your Stage 2 earnings. For instance, if your share is 2 from the multiplier then, your endowment of £0.40 is multiplied by 2, giving you a £0.80 Stage 2 earnings.

Where is this multiplier from?

Your partner and you each had a 50% chance to be selected and have his/her surplus of 4 unpaid images from Stage 1 converted into the multiplier of 4.

The resolution of this random draw

is that you are selected. Hence, this to-be-divided multiplier of 4 was created from your surplus of the 4 unpaid images, while your partner's surplus is ignored.

Next

2.9.2. Part 2

You are in Stage 2 of part 2 now

Below you find the key information for Stage 2. In order to maximize your payoff from this Stage 2, it is crucial that you read this information very closely, understand and memorize it.

- In Stage 2, you are given an endowment of £0.40.
- Additionally, you are paired with another person who is your partner. This person is also a UK resident. Just like you, **your partner was born in the UK.**
- Your partner is also endowed with the Stage 2 endowment of £0.40.
- You and your partner successfully created the surplus by labeling the extra four images correctly for which neither of you got paid. As you know, labeling this extra four images was unpaid for the both of you.
- In Stage 2, your pair (you and your partner) is given a multiplier which can be applied on your Stage 2 endowment of £0.40.
- **The size of this multiplier is 4 and it needs to be divided between the two of you.**
- The share you get from the multiplier is applied on your Stage 2 endowment of £0.40. This means, the share you get from the multiplier multiplies your endowment which then becomes your Stage 2 earnings. For instance, if your share is 2 from the multiplier then, your endowment of £0.40 is multiplied by 2, giving you a £0.80 Stage 2 earnings.

Where is this multiplier from?

Your partner and you each had a 50% chance to be selected and have his/her surplus of 4 unpaid images from Stage 1 converted into the multiplier of 4.

The resolution of this random draw

is that you are selected. Hence, this to-be-divided multiplier of 4 was created from your surplus of the 4 unpaid images, while your partner's surplus is ignored.

Next

2.9.3. Part 3

You are in Stage 2 of part 3 now

Below you find the key information for Stage 2. In order to maximize your payoff from this Stage 2, it is crucial that you read this information very closely, understand and memorize it.

- In Stage 2, you are given an endowment of £0.40.
- Additionally, you are paired with another person who is your partner. This person is also a UK resident. Just like you, **your partner was born in the UK.**
- Your partner is also endowed with the Stage 2 endowment of £0.40.
- You and your partner successfully created the surplus by labeling the extra four images correctly for which neither of you got paid. As you know, labeling this extra four images was unpaid for the both of you.
- In Stage 2, your pair (you and your partner) is given a multiplier which can be applied on your Stage 2 endowment of £0.40.
- **The size of this multiplier is 4 and it needs to be divided between the two of you.**
- The share you get from the multiplier is applied on your Stage 2 endowment of £0.40. This means, the share you get from the multiplier multiplies your endowment which then becomes your Stage 2 earnings. For instance, if your share is 2 from the multiplier then, your endowment of £0.40 is multiplied by 2, giving you a £0.80 Stage 2 earnings.

Where is this multiplier from?

Your partner and you each had a 50% chance to be selected and have his/her surplus of 4 unpaid images from Stage 1 converted into the multiplier of 4.

The resolution of this random draw

is that your partner is selected. Hence, this to-be-divided multiplier of 4 was created from your partner's surplus of the 4 unpaid images, while your surplus is ignored.



2.9.4. Part 4

You are in Stage 2 of part 4 now

Below you find the key information for Stage 2. In order to maximize your payoff from this Stage 2, it is crucial that you read this information very closely, understand and memorize it.

- In Stage 2, you are given an endowment of £0.40.
- Additionally, you are paired with another person who is your partner. This person is also a UK resident. Unlike you, however, **your partner was born outside of the UK.**
- Your partner is also endowed with the Stage 2 endowment of £0.40.
- You and your partner successfully created the surplus by labeling the extra four images correctly for which neither of you got paid. As you know, labeling this extra four images was unpaid for the both of you.
- In Stage 2, your pair (you and your partner) is given a multiplier which can be applied on your Stage 2 endowment of £0.40.
- **The size of this multiplier is 4 and it needs to be divided between the two of you.**
- The share you get from the multiplier is applied on your Stage 2 endowment of £0.40. This means, the share you get from the multiplier multiplies your endowment which then becomes your Stage 2 earnings. For instance, if your share is 2 from the multiplier then, your endowment of £0.40 is multiplied by 2, giving you a £0.80 Stage 2 earnings.

Where is this multiplier from?

Your partner and you each had a 50% chance to be selected and have his/her surplus of 4 unpaid images from Stage 1 converted into the multiplier of 4.

The resolution of this random draw

is that your partner is selected. Hence, this to-be-divided multiplier of 4 was created from your partner's surplus of the 4 unpaid images, while your surplus is ignored.

Next

2.10. Division Task

For half of the subjects, the order was “first divide then estimate” whereas, for the other half, it was the other way around. Additionally, half of the subjects were randomized into the costless and the other half was randomized into the costly treatment arm.

2.10.1. Costless treatment arm

Choose how to divide the multiplier!

In the table below, you find 11 alternative ways to divide the multiplier between you and your partner. Each row describes an alternative.

Alternative 6 presents the equal split of the multiplier where each of you gets 2 from the multiplier. If you apply this 2 on your Stage 2 endowment of £0.40, you each earn £0.80 in Stage 2 and the total earnings of the two of you would be £1.60.

Divisions which favor you are presented from Alternatives 7 through 11, while Alternatives from 1 through 5 present divisions favoring your partner.

Consider for instance, Alternative 11. Here, you take away 0.5 from your partner because compared to giving him/her 2 (equally splitting), s/he would only get 1.5 from the multiplier. Then, this 0.5 is given to you, giving you 2.5 from the multiplier.

Alternative number	Your choice (Click on the row in which the fair alternative is presented.)	You		Your Partner		Summed Stage 2 Earnings of You and Your Partner
		<ul style="list-style-type: none">born in the UKHad surplus converted into multiplier		<ul style="list-style-type: none">an immigrant to the UK		
		Your share from the multiplier	Your stage 2 earnings after multiplier applied	Your partner's share from the multiplier	Your partner's stage 2 earnings after multiplier applied	
1	<input type="radio"/>	1.5	£0.60	2.5	£1.00	£1.60
2	<input type="radio"/>	1.6	£0.64	2.4	£0.96	£1.60
3	<input type="radio"/>	1.7	£0.68	2.3	£0.92	£1.60
4	<input type="radio"/>	1.8	£0.72	2.2	£0.88	£1.60
5	<input type="radio"/>	1.9	£0.76	2.1	£0.84	£1.60
6	<input type="radio"/>	2.0	£0.80	2.0	£0.80	£1.60
7	<input type="radio"/>	2.1	£0.84	1.9	£0.76	£1.60
8	<input type="radio"/>	2.2	£0.88	1.8	£0.72	£1.60
9	<input type="radio"/>	2.3	£0.92	1.7	£0.68	£1.60
10	<input type="radio"/>	2.4	£0.96	1.6	£0.64	£1.60
11	<input type="radio"/>	2.5	£1.00	1.5	£0.60	£1.60

Your choice

Consult with the table and select the alternative you would like to have implemented. Click on the selected alternative in the second column. Your partner is also selecting the alternative s/he wants to have implemented. At the end of the experiment **one of you (you or your partner you are paired with) will be randomly selected (with each of you having 50% probability of being selected) and this person's choice will be implemented.** For instance, if you choose Alternative 8 and you partner chooses Alternative 10 and your partner is selected then, his/her choice will be imposed on both of you. This means that your partner will get 2.4 from the multiplier and you will get 1 from the multiplier.

Next

2.10.2. Costly treatment arm

Choose how to divide the multiplier!

In the table below, you find 11 alternative ways to divide the multiplier between you and your partner. Each row describes an alternative.

Alternative 6 presents the equal split of the multiplier where each of you gets 2 from the multiplier. If you apply this 2 on your Stage 2 endowment of £0.40, you each earn £0.80 in Stage 2 and the total earnings of the two of you would be £1.60.

Divisions which favor you are presented from Alternatives 7 through 11, while Alternatives from 1 through 5 present divisions favoring your partner.

Any deviation from equally splitting the multiplier is, however, costly. Splitting it in a way that is beneficial to you (as in Alternatives 7 through 11) implies that the amount you take away from your partner is halved before you get it.

Consider for instance, Alternative 11. Here, you take 1 away from your partner because compared to giving him/her 2 (equally splitting), s/he would only get 1 from the multiplier. But then only 0.5 (half of the 1) is given to you, giving you 2.5 from the multiplier.

Alternative number	Your choice (Click on the row in which the fair alternative is presented.)	You		Your Partner		Summed Stage 2 Earnings of You and Your Partner
		<ul style="list-style-type: none">born in the UKHad surplus converted into multiplier		<ul style="list-style-type: none">an immigrant to the UK		
		Your share from the multiplier	Your stage 2 earnings after multiplier applied	Your partner's share from the multiplier	Your partner's stage 2 earnings after multiplier applied	
1	<input type="radio"/>	1.0	£0.40	2.5	£1.00	£1.40
2	<input type="radio"/>	1.2	£0.48	2.4	£0.96	£1.44
3	<input type="radio"/>	1.4	£0.56	2.3	£0.92	£1.48
4	<input type="radio"/>	1.6	£0.64	2.2	£0.88	£1.52
5	<input type="radio"/>	1.8	£0.72	2.1	£0.84	£1.56
6	<input type="radio"/>	2.0	£0.80	2.0	£0.80	£1.60
7	<input type="radio"/>	2.1	£0.84	1.8	£0.72	£1.56
8	<input type="radio"/>	2.2	£0.88	1.6	£0.64	£1.52
9	<input type="radio"/>	2.3	£0.92	1.4	£0.56	£1.48
10	<input type="radio"/>	2.4	£0.96	1.2	£0.48	£1.44
11	<input type="radio"/>	2.5	£1.00	1.0	£0.40	£1.40

Your choice

Consult with the table and select the alternative you would like to have implemented. Click on the selected alternative in the second column. Your partner is also selecting the alternative s/he wants to have implemented. At the end of the experiment **one of you (you or your partner you are paired with) will be randomly selected (with each of you having 50% probability of being selected) and this person's choice will be implemented.** For instance, if you choose Alternative 8 and your partner chooses Alternative 10 and your partner is selected then, his/her choice will be imposed on both of you. This means that your partner will get 2.4 from the multiplier and you will get 1 from the multiplier.

Next

2.11. Estimation Task

2.11.1. Costless treatment arm

Estimate the fair division of the multiplier!

In the table below (scroll down as the page is long), you find 11 alternative ways to divide the multiplier between you and your partner. Each row describes an alternative.

Alternative 6 presents the equal split of the multiplier where each of you gets 2 from the multiplier. If you apply this 2 on your Stage 2 endowment of £0.40, you each earn £0.80 in Stage 2 and the total earnings of the two of you would be £1.60.

Divisions which favor you are presented from Alternatives 7 through 11, while Alternatives from 1 through 5 present divisions favoring your partner.

Consider for instance, Alternative 11. Here, you take away 0.5 from your partner because compared to giving him/her 2 (equally splitting), s/he would only get 1.5 from the multiplier. Then, this 0.5 is given to you, giving you 2.5 from the multiplier.

Now, consult the table and indicate your estimation on the slider below. Then, click on next to submit your answer!

Alternative Number	You <ul style="list-style-type: none"> born in the UK Had surplus converted into multiplier 		Your Partner <ul style="list-style-type: none"> an immigrant to the UK 		Summed Stage 2 Earnings of You and Your Partner
	Your share from the multiplier	Your stage 2 earnings after multiplier applied	Your partner's share from the multiplier	Your partner's stage 2 earnings after multiplier applied	
1	1.5	£0.60	2.5	£1.00	£1.60
2	1.6	£0.64	2.4	£0.96	£1.60
3	1.7	£0.68	2.3	£0.92	£1.60
4	1.8	£0.72	2.2	£0.88	£1.60
5	1.9	£0.76	2.1	£0.84	£1.60
6	2.0	£0.80	2.0	£0.80	£1.60
7	2.1	£0.84	1.9	£0.76	£1.60
8	2.2	£0.88	1.8	£0.72	£1.60
9	2.3	£0.92	1.7	£0.68	£1.60
10	2.4	£0.96	1.6	£0.64	£1.60
11	2.5	£1.00	1.5	£0.60	£1.60

Your estimation task

40 uninvolved UK residents recruited from Prolific who are informed about your and your partner's Stage 1 outcomes (earnings and the creation of the unpaid surplus) and also about both of your birth country backgrounds, were asked to indicate the fair division of the multiplier between the two of you. These subjects served as unbiased judges and they had no stakes in the division. Each of them selected an alternative number from this table which they see as the fair solution. **Now, you are asked to predict the mean of these judges' choices on the alternative scale and indicate this mean on the slider below. On the slider below, you can select any numbers between 1 and 11 but you should round your prediction to one decimal place.**

For this estimation task, you are given £0.20 as an estimation bonus. Whether you will get this money depends on **how closely your estimate falls to the true mean of the 40 unbiased judges' choices.** The closer your estimate is to the actual mean, the higher is the likelihood of getting £0.20. In order to maximize your expected payoff, the best strategy you can apply is to state your truthful estimate of the mean of the 40 judges' choice. Details on how an accurate guess maximizes your chances of winning £0.20 can be found [here](#).

Set the slider to your prediction of the average **alternative number judged to be fairest by 40 judges**:

Click on the blue slider bar to set a value.

Next

2.11.2. Costly treatment arm

Estimate the fair division of the multiplier!

In the table below (scroll down as the page is long), you find 11 alternative ways to divide the multiplier between you and your partner. Each row describes an alternative.

Alternative 6 presents the equal split of the multiplier where each of you gets 2 from the multiplier. If you apply this 2 on your Stage 2 endowment of £0.40, you each earn £0.80 in Stage 2 and the total earnings of the two of you would be £1.60.

Divisions which favor you are presented from Alternatives 7 through 11, while Alternatives from 1 through 5 present divisions favoring your partner.

Any deviation from equally splitting the multiplier is, however, costly. Splitting it in a way that is beneficial to you (as in Alternatives 7 through 11) implies that the amount you take away from your partner is halved before you get it. Similarly, splitting it in a way that is beneficial for your partner implies that the amount that is taken away from you is halved before your partner gets it.

Consider for instance, Alternative 11. Here, you take 1 away from your partner because compared to giving him/her 2 (equally splitting), s/he would only get 1 from the multiplier. But then only 0.5 (half of the 1) is given to you, giving you 2.5 from the multiplier.

Now, consult the table and indicate your estimation on the slider below. Then, click on next to submit your answer!

Alternative Number	You		Your Partner		Summed Stage 2 Earnings of You and Your Partner
	Your share from the multiplier	Your stage 2 earnings after multiplier applied	Your partner's share from the multiplier	Your partner's stage 2 earnings after multiplier applied	
1	1.0	£0.40	2.5	£1.00	£1.40
2	1.2	£0.48	2.4	£0.96	£1.44
3	1.4	£0.56	2.3	£0.92	£1.48
4	1.6	£0.64	2.2	£0.88	£1.52
5	1.8	£0.72	2.1	£0.84	£1.56
6	2.0	£0.80	2.0	£0.80	£1.60
7	2.1	£0.84	1.8	£0.72	£1.56
8	2.2	£0.88	1.6	£0.64	£1.52
9	2.3	£0.92	1.4	£0.56	£1.48
10	2.4	£0.96	1.2	£0.48	£1.44
11	2.5	£1.00	1.0	£0.40	£1.40

Your estimation task

40 uninvolved UK residents recruited from Prolific who are informed about your and your partner's Stage 1 outcomes (earnings and the creation of the unpaid surplus) and also about both of your birth country backgrounds, were asked to indicate the fair division of the multiplier between the two of you. These subjects served as unbiased judges and they had no stakes in the division. Each of them selected an alternative number from this table which they see as the fair solution. **Now, you are asked to predict the mean of these judges' choices on the alternative scale and indicate this mean on the slider below. On the slider below, you can select any numbers between 1 and 11 but you should round your prediction to one decimal place.**

For this estimation task, you are given £0.20 as an estimation bonus. Whether you will get this money depends on **how closely your estimate falls to the true mean of the 40 unbiased judges' choices.** The closer your estimate is to the actual mean, the higher is the likelihood of getting £0.20. In order to maximize your expected payoff, the best strategy you can apply is to state your truthful estimate of the mean of the 40 judges' choice. Details on how an accurate guess maximizes your chances of winning £0.20 can be found [here](#).

Set the slider to your prediction of the average **alternative number judged to be fairest by 40 judges**:

Click on the blue slider bar to set a value.

Next

2.12. Beliefs about who the last partner was

Your beliefs about your last partner's demographics

Finally, we would like to know about your beliefs about your last partner, who was born in the UK. Therefore, please answer the following four questions. After you have submitted your responses, the computer will randomly select one of the questions and matches your and your last round's partner's answer on this. If you made the correct choice, you will get an extra £0.10 bonus (i.e., *partner estimate bonus*).

The geographical region of his/her birth country:

Does s/he hold UK citizenship?

- ☐ Yes
☐ No

His/her religion:

His/her level of education:

His/her employment status:

Next

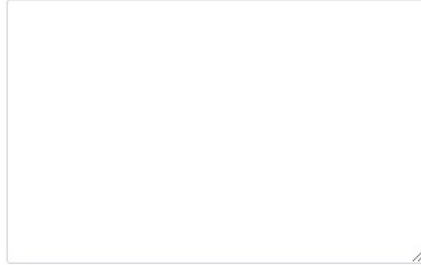
2.13. Results and comments

Results

Thank you very much! You have successfully completed the experiment.

You will be paid your hourly fee as indicated when you accepted participating in the experiment. Then, in maximum three weeks (or as soon as we have collected enough responses), we will add your bonus earnings from the image labeling tasks, your estimations and choices.

In the box below, please describe your strategy you applied when making your estimations and choices in the experiment! Also, mention if you had any technical problems, or any other issues with understanding the text or instructions.



Once ready, please click on next to get your completion code which makes you eligible to get paid.

Next

2.14. Completion

Completing the survey

Thank you for your participation in this study. Your completion code is:

25UOGKLH

When you proceed to the next page, we will try to redirect you back to Prolific and automatically submit your completion code. However in case this does not work, please copy this code and submit it manually on the Prolific website.

Next