



Working Paper Series

**American Exceptionalism? Differences
in the Elasticity of Preferences for Redis-
tribution between the United States and
Western Europe**

Christopher Hoy
Franziska Mager

ECINEQ WP 2020 - 530

American Exceptionalism? Differences in the Elasticity of Preferences for Redistribution between the United States and Western Europe[‡]

Christopher Hoy

Australian National University

Franziska Mager

Oxfam Great Britain

Abstract

Are lower levels of support for redistribution in the United States compared to Western Europe due overly optimistic beliefs about mobility and inequality or fundamental differences in preferences? We test this through a randomized survey experiment with 6,601 respondents, half of which received information about mobility and inequality. The treatment led to greater polarization between Americans and Western Europeans. In the United States, the results were driven by respondents that do not prefer lower inequality. Our findings illustrate that differences in redistributive preferences across the Atlantic are due to a greater underlying tolerance of inequality as opposed to incorrect beliefs.

Keywords: Inequality; Redistribution; Social Mobility; Political Economy.

JEL Classification: D31; D63; D72; D83; P16.

[‡]The study was registered with the American Economic Association RCT registry (ID number AEARCTR-0002534). This paper presents independent analysis and was funded by Oxfam International. The content of the paper is solely the responsibility of the authors and does not necessarily reflect the official views of the funder. The authors are very grateful for comments provided by Julian Jager, Russell Toth, Ben Goldsmith, Deborah Hardoon, David Hope, Alice Krozer, David McArthur and seminar participants at the London School of Economics, University College London and the Australian National University

1 Introduction

Over the past four decades, income inequality has risen dramatically in the United States, but remained relatively stable in Western Europe (see Figure 1). This is partly due to the level of government-led redistribution, measured in terms of the difference in pre-tax and post-tax Gini coefficients, in the United States being around half that of Western Europe (OECD, 2019). Social scientists often attribute this variation in the level of redistribution to differences in the general population’s beliefs about upward mobility, whereby Americans are more likely to believe in the capacity of individuals to “move up” in the national income distribution if they are willing to work hard enough (i.e. the American Dream) (Alesina and Glaeser 2004, Alesina and La Ferrara 2005, Alesina, Stantcheva and Teso 2018). Recent evidence shows that Americans are also more likely than Western Europeans to underestimate just how unequal the distribution of wealth is in their country (Bublitz 2016, Nieuhaus 2014, Norton and Ariely 2011). Overly optimistic beliefs about both the level of inequality and degree of mobility tend to be negatively correlated with people’s support for redistribution (Gimpelson and Treisman 2018, Hauser and Norton 2017). This raises the question: would differences in support for redistribution across the Atlantic remain if people were accurately informed about the extent of inequality and upward mobility in their country?

[Insert Figure 1]

We answer this question by conducting a large scale, randomized survey experiment of over 6,000 people simultaneously across the United States, the United Kingdom, the Netherlands and Denmark. We use the same approach as Alesina, Stantcheva and Teso (2018) and collect a sample of respondents that is broadly representative of the population with internet access in each country, using market research survey firms, YouGov and RIWI. Half of the respondents in each country are randomly allocated to receive information about inequality and mobility in their country (treatment group) and the other half receive no information (control group). The treatment was designed to provide respondents with an indication of the size of differences in wealth in their country that are due to factors outside the control of individuals. Prior to receiving the treatment,

respondents provided information about their existing perception of inequality, preferred level of inequality and other background characteristics. Following the treatment, respondents answered questions about their support for redistribution that have been used in prior studies on this topic (e.g. Alesina, Stantcheva and Teso 2018).

Seminal theories suggest that people's preferences for redistribution are partly shaped by their beliefs about the size of differences in wealth in their country that are due to factors outside the control of individuals (Alesina and Giuliano 2011). As such, people's redistributive preferences depend on their beliefs about both the level of inequality and the degree of upward mobility in their country (Meltzer and Richard 1981, Benabou and Ok 2001, Piketty 1995). Alesina and Angeletos (2005) build on these theories by arguing that the substantially lower levels of redistribution in the United States than in Western Europe can primarily be explained by differences in beliefs about the extent to which disparities in wealth are primarily due to effort (or lack thereof). In other words, Americans may be less supportive of redistribution than Western Europeans purely because they are more likely to hold overly optimistic beliefs about inequality and mobility.

We test whether these cross-country differences in preferences for redistribution remain after correcting for overly optimistic beliefs. By doing so we are able to examine whether Americans truly have a higher underlying tolerance of inequality than Western Europeans. Descriptive studies that compare differences in preferences between the United States and Western Europe are constrained by the fact that their results may be driven by inaccurate beliefs about inequality and/or mobility. Previous randomized survey experiments have also been unable to fully address this because they have only tried to correct overly optimistic beliefs about one of these factors (i.e. either inequality or mobility) (Kuziemko et al. 2015, Alesina, Stantcheva and Teso 2018).

We find that our treatment led to greater polarization in preferences for redistribution between Americans and Western Europeans. Accurate information about inequality and mobility lowered support for redistribution in the United States. The same information, provided at the same time, to a similar sample of the national population increased support for redistribution in the United Kingdom and Denmark, and there was a limited effect in the Netherlands. The size of the treatment effect was noteworthy. For example,

in the case of agreement that the government was responsible for closing the gap between the rich and poor, the treatment increased differences in levels of support between the United States and the United Kingdom threefold (from 6 to 18 percentage points). The results in the United States and Denmark are primarily driven by respondents that had stated, prior to the treatment, that they do not prefer lower levels of inequality. In contrast, the results for the United Kingdom and the Netherlands (when they exist) are driven by respondents who had stated they prefer lower levels of inequality.

Our findings in the United Kingdom, Denmark and the Netherlands are fairly consistent with a modified version of Alesina and Giuliano's (2011) theoretical model about how people will respond to accurate information regarding inequality and mobility, given that most people hold overly optimistic beliefs. As predicted, the treatment increased support for redistribution. In contrast, the results of the experiment in the United States are entirely inconsistent with the predictions of seminal models (e.g. Alesina and Giuliano 2011). This appears to be due to people increasing their tolerance of differences in wealth due to luck after receiving the treatment, which is consistent with a well-established psychological process known as system justification motivation (Trump 2018). Collectively, our results imply that lower levels of support for redistribution in the United States, compared to Western Europe, are primarily due to differences in people's tolerance of inequality as opposed to the often cited view that it is because of differences in beliefs (e.g. Alesina and Angelones 2004).

Our study extends the existing literature on this topic in three main ways. Firstly, prior to this study the effect of providing information about the size of differences in wealth that are due to factors outside the control of individuals on respondents' preferences for redistribution had not been tested, despite the strong theoretical basis to do so. The small number of related randomized survey experiments on the elasticity of preferences for redistribution have focused on providing information about either inequality or mobility (Kuziemko et al. 2015, Alesina, Stantcheva and Teso 2018). These studies have found that information about only inequality or mobility rarely changes preferences for redistribution and when it does the effect is in a similar direction across countries.

Secondly, this is the first study to explore heterogeneity in the elasticity of preferences

for redistribution across the United States and Western Europe. We show that there are relatively similar levels of support for redistribution and beliefs about the level of inequality in the control group, however there are fundamental differences between how people respond to information about inequality and mobility. Therefore, variation between the United States and Western Europe not only stems from differences in preferences in the absence of information, but from differences in preferences in response to information.

Thirdly, we make a novel contribution by capturing the extent to which differences in support for redistribution between the United States and Western Europe are due to an underlying tolerance of inequality as opposed to incorrect beliefs. We show that differences in beliefs are less relevant than previously thought, which means there is a deeper underlying divide between the true preferences of people on either side of the Atlantic.

The rest of this paper is structured as follows. In the second section, we present a theoretical framework of how perceptions of inequality shape support for redistribution and discuss the related literature on this topic. This is followed by a description of the methodology, outline of the context of the study, and discussion of the survey data we collected. We then outline the findings of the randomized survey experiment and discuss the implications.

2 Theory and Related Literature

2.1 Theoretical framework of how preferences relate to inequality and mobility

People's preferences for redistribution are theorized to be partly shaped by the size of differences in wealth in their country and the extent to which these differences are primarily due to factors outside an individual's control (as opposed to effort) (Meltzer and Richard 1981, Benabou and Ok 2001, Piketty 1995). Alesina and Giuliano (2011) provide a simple model of a utility function incorporating this, whereby they decompose the overall level of national inequality (Q) into differences in wealth due to effort (Q^e) and

luck (Q^l). Their model can be expressed formally as follows:

$$U_i = U(c_i) - \delta_i^e (Q^e - Q_i^{e*})^2 - \delta_i^l (Q^l - Q_i^{l*})^2 \quad (1)$$

where c_i is individuals' consumption, Q_i^{e*} represents the ideal level of inequality due to effort for individual (i) and δ_i^e is the weight they place on deviations from it. Q_i^{l*} represents the ideal level of inequality due to luck for individual (i) and δ_i^l is the weight they place on deviations from it.

Alesina and Giuliano (2011) highlight that existing theories of preferences for redistribution suggest that, for most individuals, differences in wealth due to effort are considered to be more acceptable than differences due to luck (i.e. $\delta_i^l > \delta_i^e$) (e.g. the Prospect of Upward Mobility (POUM) Hypothesis (Benabou and Ok 2001)). As actual differences in wealth due to luck cannot be directly measured, the degree of inequality and upward mobility can be used as a proxy. In settings where there is high inequality and low mobility, there is little scope for poorer individuals to exert effort to reduce the large differences between their levels of wealth and those of people richer than them. This is comparable to the situation where there are large differences in wealth due to luck (i.e. $Q^l > Q^e$).

To align this model with existing empirical studies that show, on average, people tend to underestimate the level of inequality and overestimate the degree of mobility (Gimpelson and Treisman 2018, Hauser and Norton 2017), we rewrite this model in beliefs. Specifically, we replace Q^e with bQ^e (belief about the extent of inequality due to effort) and replace Q^l with bQ^l (belief about the extent of inequality due to luck). As such, if inequality is higher than people believe and mobility is lower, this is similar to the situation where people underestimate the extent of inequality due to luck (i.e. $Q^l > bQ^l$).

We follow Alesina and Angeletos (2005) who infer that views about the causes of inequality are likely to translate into preferences for redistribution¹. They argue that as Americans are more likely than Western Europeans to believe that differences in wealth are primarily due to effort, they are also more likely to be accepting of inequality and subsequently to prefer less redistribution. This implies that disparities in support for

¹However, it is important to note that views about the role of the government may mediate how changes in utility alter preferences for redistribution.

redistribution between Americans and Western Europeans can largely be attributed to differences in people's beliefs about the source of inequality (i.e. bQ^l) as opposed to underlying differences in people's preferences (i.e. Q^{l*}).

Three hypotheses emerge from this revised model and existing empirical studies:

Hypothesis 1: On average, providing accurate information about the level of inequality and degree of inequality will raise people's support for redistribution as $Q^l > bQ^l$

Hypothesis 2: This information will raise people's support for redistribution if they prefer lower levels of inequality due to luck than they believe to be the case as $Q^l > bQ^l > Q^{l*}$

Hypothesis 3: This information will raise people's support for redistribution even if people do not prefer lower levels of inequality due to luck than they believe to be the case as $Q^l > Q^{l*} > bQ^l$

2.2 Empirical studies examining this theory

Although this theory has not been tested within the framework of a rigorous experiment, a small number of randomized survey experiments, primarily in the United States, have examined the effect of providing information about the extent of either inequality or mobility. These studies have shown that information tends to have a limited effect on people's support for redistribution (Kuziemko et al. 2015, Zilinsky 2014, Bublitiz 2016, Alesina, Stantcheva and Teso 2018, McCall et al. 2017). For example, Kuziemko et al. (2015) illustrate that extensive information about the level of inequality only leads to increases in support for inheritance taxes among Americans. In a randomized survey experiment across the United States and Western Europe that provided respondents with information only about social mobility, Alesina, Stantcheva and Teso (2018) show this can lead to increases in support for "equality of opportunity" policies among left-wing voters but has no effect on right-wing voters or "equality of outcome" policies.

The limited effect from information about inequality or mobility in other randomized survey experiments may be because they only provided information about one of these aspects. For example, information about mobility (such as in the case in Alesina,

Stantcheva and Teso 2018) is only likely to have a limited effect on respondents' views when they also underestimate the size of wealth differences across their country. Similarly, information about the level of inequality (such as in the case in Kuziemko et al. 2015) is unlikely to have a large effect when respondents also tend to be overly optimistic about upward mobility.

There is an alternative explanation for why these studies may fail to find noteworthy effects. A psychological process known as system justification motivation may be present whereby people may increase their preferred level of inequality or lower their preferred degree of mobility after receiving an information treatment (i.e. $Q_{t0}^{l*} < Q_{t1}^{l*}$) (Trump 2018). By doing so people adjust their preferences to be more content with the status quo. Trump (2018) provides suggestive evidence that this may be the case for people in the United States through doing a series of experiments about inequality and preferences for redistribution using the online platform Mechanical Turk.

3 Methodology

3.1 Setting of study

The four countries we conducted our study in (the United States, the United Kingdom, the Netherlands and Denmark) have similar average living standards but considerably different tax and redistributive policies as well as different levels of inequality and mobility. The United States and the United Kingdom exhibit relatively low taxes and government spending while the Netherlands and Denmark are characterized by relatively high levels of taxation and redistribution (see Table A1 in Appendix). For example, the ratio of the top income tax threshold and the average wage is only 1.3 and 1.4 in Denmark and the Netherlands respectively, whereas it is 3.8 in the United Kingdom and 9.3 in the United States (OECD 2019)². In light of these differences in policies across countries, it is unsurprising that the United States and the United Kingdom have substantially higher levels of income inequality and lower levels of social mobility than the Netherlands and

²The top marginal tax rate is relatively similar across countries; the main difference between countries is the share of the population that is required to pay it.

Denmark (OECD 2019). Interestingly, there is a much smaller difference between the countries in terms of the share of wealth held by the richest 20 percent of the population (ranging from 71.5 to 87.7 percent) (Credit Suisse 2019).

Despite the differences in actual levels of inequality and mobility, Americans tend to be far more likely to overestimate mobility and underestimate inequality than Western Europeans. This has been illustrated in a number of cross-country surveys, such as Alesina, Stantcheva and Teso (2018), Bublitz (2016), WVS 2019 and Niehues (2014). This is also consistent with studies that have solely focused on the United States, such as Norton and Ariely (2011), who show that Americans tend to underestimate the level of wealth inequality and Davidai and Gilovich (2015) who show that they also overestimate mobility.

3.2 Survey design

Our randomized survey experiment was conducted with over 6000 respondents in Denmark, the Netherlands, the United Kingdom and the United States in October and November 2017. Data was collected from a broadly representative sample of the population with internet access in each country using online survey firms YouGov and RIWI, which is similar to the approach used by Alesina, Stantcheva and Teso (2018) (see Table A2 in Appendix)³. In every country, the treatment and control groups had around 750 respondents, which is a similar sample size to seminal studies by Kuziemko et al. (2015) and Alesina, Stantcheva and Teso (2018).

The survey consists of two sections. The first section was implemented prior to the randomized information treatment; the second section was implemented afterwards. The first section collects information about people's existing beliefs about and preferences for inequality as well as their demographic characteristics. The second section includes questions about people's desire for government action to address inequality, sourced from

³This resulted in a sample of respondents that did not perfectly match a nationally representative sample of the population and we re-weight the sample accordingly. In the body of the paper we present the weighted average treatment effects and in the appendix we present the sample average treatment effects.

previous studies on this topic (Alesina, Stantcheva and Teso 2018, ISSP 2009). Following Alesina, Stantcheva and Teso (2018) and Karadja, Mollerstrom and Seim (2017), we use the answers to these questions to create a Redistribution Index, which is the unweighted average of the z-scores of the answers to all questions about preferences for redistribution, oriented so that a higher index means more support for redistribution. We present both the answers to each question and the Redistribution Index in the tables of results.

To measure respondents' beliefs about the level of national inequality, previous studies have used a range of techniques, such as stylized distributions (ISSP 2009) or asking respondents to estimate the share of wealth in each quintile of the national wealth distribution (Norton and Ariely 2011). We follow the rationale behind existing approaches (Hauser and Norton 2017) but we minimize measurement error by gathering people's perceptions on an ordinal scale. Namely, respondents were asked to select one of six options that they believe represents the current distribution of income in their country, ranging from perfectly equal to extremely unequal (Figure A1 in Appendix). They were also asked to select the distribution they would prefer existed using an identical scale (see Figure A2 in Appendix). The purpose of these questions was not to determine the share of respondents that accurately estimated the extent of inequality (this issue has already been addressed by a range of studies, such as Norton and Ariely 2011). Instead, we compare answers to these questions to determine whether respondents would prefer inequality to be lower than what they perceive it to be. This provides us with an estimate of respondents' pre-existing preferences for lower inequality and we examine the heterogeneous effects of the treatment that follows based on this.

3.3 Information treatment

Prior to answering the second section of the survey, half of the respondents in each country were randomly allocated to receive information about the level of inequality and mobility in their country (the treatment group) and the other half received no information (i.e. they went straight from the first to the second part of the survey) (the control group). Randomization ensures that the effect of the treatment can be determined by

comparing averages of answers of questions to the control group. The randomization was successful and there were no statistically significant differences between treatment and control groups (see Table A3 in Appendix).

The treatment was designed to capture the effect of informing respondents that there are large differences in wealth in their country due to factors outside the control of individuals. This was achieved by providing accurate information that clearly conveys that there is both a high level of inequality and low upward mobility in their country (see Figure A3 in Appendix). Each of these components of the treatment is comparable to what was used in previous studies. We use exactly the same information about mobility as Alesina, Stantcheva and Teso (2018), who describe qualitatively the lack of mobility that exists in the United States and Western Europe. In regard to inequality, we provide respondents with information about the share of wealth held by the richest quintile in their country, which is similar for all countries (as mentioned above this varied from 71.5 percent in the Netherlands to 87.7 percent in the United States). As such, respondents in the treatment group in each country received almost identical information.

4 Data

4.1 Beliefs about the level of inequality in each country

Respondents' beliefs about the level of income inequality are somewhat similar across countries, even though there are large differences in reality. This can be seen in Figure 2 below, whereby between 47 and 63 percent of respondents in the United States, the Netherlands and the United Kingdom believe extremely or very unequal distributions of income exist. On the other hand, only 32 percent of respondents in Denmark reported this was the case.

[Insert Figure 2]

It is not surprising that respondents in the United Kingdom and the United States were more likely to perceive higher levels of income inequality than the other countries,

given that the Gini coefficient is up to 50 percent higher (see Table A1 in Appendix). Similarly, the relatively low share of respondents that perceive inequality to be extremely or very unequal in Denmark is to be expected, given that the country has one of the lowest Gini coefficients in the world.

4.2 Preferences for lower inequality in each country

The share of respondents expressing greater desire for equality is relatively comparable across countries (with the exception of the United Kingdom). Between 54 and 59 percent of respondents in the United States, the Netherlands and Denmark expressed a desire for this to be the case, whereas in the United Kingdom 79 percent of respondents wanted lower levels of inequality. Given the relatively high levels of actual inequality in the United Kingdom, it could be anticipated that most respondents would desire greater equality. However, the moderate desire for lower inequality in the United States (similar to the level in Denmark) suggests there may be a greater acceptance of inequality in the country. The only way to be sure is to test the level of people's support for redistribution once they are provided with accurate information (i.e. after inaccurate beliefs have been corrected).

5 Results

5.1 First stage: Treatment Effects on Perceptions

Prior to examining the effects of the treatment on preferences for redistribution, we present the treatment effects on respondents' views about whether the gap between the rich and poor is too large in their country (see Table 1). There was a positive and statistically significant effect from the treatment in terms of increasing the share of respondents that agreed the gap between the rich and poor is too large in the United Kingdom and Denmark. However there is a negative effect from the treatment in the United States and no effect in the Netherlands.

[Insert Table 1]

5.2 Treatment Effects on Preferences for Redistribution

The treatment always had a negative impact on various measures of support for redistribution in the United States (see Table 2). In contrast, the treatment had a positive impact on various measures of support for redistribution in the United Kingdom and Denmark. There were no overall effects from the treatment in the Netherlands.

[Insert Table 2]

The contrast in the direction of the treatment effect between the United States and the Western European countries can be clearly seen using the example of the share of respondents that agreed the government is responsible for closing the gap between rich and poor (see Figure A4 in Appendix). The level of agreement was relatively similar across countries in the control group, whereby the differences between the United States and Netherlands, the United Kingdom and Denmark, were less than one, six and nine percentage points, respectively. However, in the treatment group the difference between the United States and the United Kingdom tripled. Further, the difference more than doubled between respondents in the treatment groups in the United States and the Netherlands. Despite a nine percentage point difference in the control group, whereby Denmark had lower levels of agreement than the United States, there was no difference between these countries in the treatment group.

5.3 Heterogeneous Treatment Effects

The overall effect of the treatment was primarily driven by respondents that prefer lower levels of inequality in the United Kingdom and the Netherlands, while the opposite is the case in the United States (see Table 3). In Denmark, the main effect was also driven by respondents that had stated prior to the treatment that they do not prefer lower levels of inequality.

[Insert Table 3]

This trend can be seen using the example of the share of respondents that agreed the government is responsible for closing the gap between the rich and poor (see Figure

A5 in Appendix). The levels of support for redistribution are relatively similar across countries in the control group and, as would be expected, people who prefer lower levels of inequality are more supportive of redistribution. However, the contrast between countries in the treatment group is stark. Among respondents that prefer inequality to be lower, the treatment increases support for redistribution in the United Kingdom, the Netherlands and Denmark, while there was no statistically significant effect in the United States. Among respondents that do not prefer inequality to be lower, the treatment decreased support for redistribution in the United States and there were no statistically significant effects in the other countries.

6 Discussion

The findings from our experiments in the United Kingdom, Denmark and the Netherlands are fairly consistent with the hypotheses discussed in Section 2. Providing accurate information about inequality and mobility (i.e. Q^l) resulted in respondents becoming more supportive of redistribution in the United Kingdom and Denmark as predicted in Hypothesis 1⁴. This information increased support for redistribution among people who prefer lower levels of inequality due to luck in the United Kingdom and in the Netherlands to some extent (consistent with Hypothesis 2⁵) and among people who do not prefer lower levels of inequality due to luck in Denmark (consistent with Hypothesis 3⁶).

The results for the United States are entirely inconsistent with the hypotheses in Section 2. The treatment reduced overall support for redistribution, and this was primarily

⁴**Hypothesis 1:** On average, providing accurate information about the level of inequality and degree of inequality will raise people's support for redistribution as $Q^l > bQ^l$

⁵**Hypothesis 2:** This information will raise people's support for redistribution if they prefer lower levels of inequality due to luck than they believe to be the case as $Q^l > bQ^l > Q^{l*}$

⁶**Hypothesis 3:** This information will raise people's support for redistribution even if people do not prefer lower levels of inequality due to luck than they believe to be the case as $Q^l > Q^{l*} > bQ^l$

driven by respondents who stated prior to the treatment that they do not prefer lower levels of inequality. The most likely explanation for these findings is that people are increasing their preferred level of differences in wealth due to luck after they receive the information (i.e. $Q_{t0}^{l*} < Q_{t1}^{l*}$). As such, people were willing to adjust their preferences to be more content with the status quo, which is known as a psychological process called system justification motivation (Trump 2018).

A potential reason to be concerned with the findings in the United States is that they could be driven by a phenomenon known as the “backfire effect” (Nylan and Reifler 2010). This occurs when presenting information to respondents that contradicts their priors leads them to strengthen their prior beliefs (Nylan and Reifler 2010). The backfire effect could occur in this survey experiment if respondents dismiss the treatment and become more likely to believe that inequality is not very high in the United States. However, there are at least three reasons to believe this is not driving our results. Firstly, the treatment provides information about inequality and we are measuring outcomes in terms of support for redistribution, which is not equivalent to the backfire effect as it relates to how views change with respect to the same outcome. Secondly, our treatment does not directly contradict respondents’ stated beliefs about income inequality as we provide information about wealth inequality and mobility. Thirdly, we conducted the same experiment across multiple countries at the same time so it is difficult to explain why a backfire effect would exist for respondents in one country but not others.

Collectively, our results illustrate that lower levels of support for redistribution in the United States compared to Western Europe are primarily due to underlying differences in people’s tolerance of inequality (i.e. Q^{l*}). This is in contrast to a dominant view in the literature that argues that differences in support for redistribution can primarily be explained by differences in beliefs about the extent of mobility and to some degree inequality (bQ^l) (e.g. Alesina and Angeletos 2005). We provided the same treatment, at the same point in time, to a similar sample of the population in these countries, and this led to greater polarization between respondents’ preferences for redistribution in the United States and Western Europe. For example, in the case of agreement that the government was responsible for closing the gap between rich and poor, the treatment increased differ-

ences in levels of support between the United States and the United Kingdom threefold. This can only be explained by Americans having a greater tolerance of inequality than Western Europeans (i.e. $Q_{WE}^{l*} < Q_{US}^{l*}$).

Our results also illustrate that the elasticity of preferences for redistribution in response to information about inequality in the United States is substantially different to that of Western European countries. While there are relatively similar levels of support for redistribution and beliefs about the level of inequality in the control group, the treatment leads to opposite effects between the countries. Information about inequality and mobility appears to have triggered a negative response from respondents who do not prefer lower levels of inequality in the United States and a positive response from respondents who prefer lower levels of inequality in the United Kingdom (and occasionally in the Netherlands). The findings in Denmark provide additional insight because the effect is driven by people who had previously stated they did not prefer lower inequality (just like the case in the United States). However, instead of becoming less in favor of redistribution (as is the case in the United States), respondents seem to have updated their beliefs about the extent of inequality and realized it is worse than they desire. These results can be reconciled with our model as they imply that the preferred level of inequality in Denmark is much lower than in the United States (i.e. $Q_{DE}^{l*} < Q_{US}^{l*}$).

Due to the important differences between the focus of our study and existing survey experiments, the findings are not directly comparable. We have a strong theoretical basis for providing information about both the level of inequality and the degree of mobility, and the lack of effect from information treatments in other randomized survey experiments to date may be because they only provided information about one of these aspects. For example, information about mobility (such as the case in Alesina, Stantcheva and Teso 2018) is only likely to have a limited effect on respondents' views when they also underestimate the size of income differences in their country. Similarly, information about the level of inequality (such as the case in Kuziemko et al. 2015) is unlikely to have a large effect when respondents also tend to be overly optimistic about upward mobility. By combining information about both the level of inequality and the degree of mobility we are able to address incorrect beliefs about both of these issues in a single treatment.

7 Conclusion

We show that people's preferences for redistribution respond to accurate information about inequality and mobility in the opposite direction in the United States than in Western European countries. Our study suggests that lower levels of support for redistribution in the United States compared to Western Europe are primarily due to underlying differences in people's tolerance of inequality. This is in contrast to a dominant view in the literature that argues that differences in support for redistribution can mainly be explained by differences in beliefs.

Future research on this topic could consider taking at least two directions. Firstly, randomized survey experiments could include multiple treatments about inequality and/or mobility to tease out whether information on these topics are substitutes or complements. Secondly, the effect of different types of information about inequality (such as about wage inequality) on support for government-led redistribution could be explored to detect whether the nature of inequality is driving the effects we observe.

8 References

Alesina, Alberto, and George Angeletos. 2005. "Fairness and Redistribution." *American Economic Review*. 95:4: 960-980.

Alesina, Alberto, and Paola Giuliano. 2011. "Preferences for Redistribution." In *Handbook of Social Economics*, edited by Jess Benhabib, Alberto Bisin, and Matthew Jackson, 93-131. North Holland: Elsevier.

Alesina, Alberto, and Edward Glaeser. 2004. *Fighting Poverty in the US and Europe: A World of Difference*. Oxford University Press.

Alesina, Alberto, and Eliana La Ferrara. 2005. "Preferences for Redistribution in the Land of Opportunities." *Journal of Public Economics*. 89:5: 897-931

Alesina, Alberto, Stefanie Stantcheva, and Edoardo Teso. 2018. "Intergenerational Mobility and Preferences for Redistribution." *American Economic Review*. vol. 108, no. 2:521-554.

Benabou, Roland, and Efe A. Ok. 2001. "Social Mobility and the Demand for Redistribution: The POUM Hypothesis." *Quarterly Journal of Economics*. 116:2: 447-487.

Bublitz, Elisabeth. 2016. "Misperceptions of income distributions: Cross-country evidence from a randomised survey experiment." *Mimeo*.

Corak, Miles. 2013. "Income Inequality, Equality of Opportunity, and Intergenerational Mobility." *Journal of Economic Perspectives*. 27:3: 79-102.

Credit Suisse. 2019. "Global Wealth Report." <https://www.credit-suisse.com/corporate/en/research/research-institute/global-wealth-report.html> (Accessed 15 July 2019).

Davidai, Shai, and Thomas Gilovich. 2015. "Building a More Mobile America - One Income Quintile at a Time". *Perspectives in Psychological Science*. 10:1:60-71.

Gimpelson, Vladimir, and Daniel Treisman. 2018. "Misperceiving Inequality." *Economics and Politics*. vol. 30, no. 1:27-54.

Hauser, Oliver, and Michael Norton. 2017. "(Mis)perceptions of Inequality." *Current Opinion in Psychology*. vol. 18:21-25.

International Social Survey Programme (ISSP). 2009. <https://www.gesis.org/issp/modules/issp-modules-by-topic/social-inequality/2009/> (Accessed 31 July 2017).

Karadja, Mounir, Johanna Mollerstrom and David Seim. 2017. "Richer (and Holier) than Thou? The Effect of Relative Income Improvement on Demand for Redistribution." *Review of Economics and Statistics*. vol. 99, no. 2:201-212.

Kuziemko, Ilyana, Michael I. Norton, Emmanuel Saez, and Stefanie Stantcheva. 2015. "How Elastic are Preferences for Redistribution? Evidence from Randomized Survey Experiments." *American Economic Review*. vol. 105, no. 4:1478-1508.

McCall, Leslie, Derek Burk, Marie Laperrière, and Jennifer A. Richeson. 2017. "Exposure to Rising Inequality Shapes Americans' Opportunity Beliefs and Policy Support." *Proceedings of the National Academy of Sciences*. 114:36: 9593-9598.

Meltzer, Allan, and Scott Richard. 1981. "A Rational Theory of the Size of Government." *The Journal of Political Economy*. vol. 89, no. 5:914-927.

Niehues, Judith. 2014. "Subjective Perceptions of Inequality and Redistributive Preferences". *IW-Trends*.

Norton, Michael, and Dan Ariely. 2011. "Building a Better America - One Wealth Quintile at a Time." *Perspectives on Psychological Science*. vol. 6, no. 9:9-12.

Nyhan, B. and Reifler, J. 2010. "When Corrections Fail: The persistence of political misperceptions". *Political Behavior*. 32:2: 303-330.

Organisation of Economic Cooperation and Development (OECD) 2019. "OECD Income Distribution Database" <http://www.oecd.org/social/income-distribution-database.htm> (Accessed July 1, 2019).

Piketty, Thomas. 1995. "Social Mobility and Redistributive Politics". *Quarterly Journal of Economics*. 110:3: 551-584.

Trump, Kris-Stella. 2018. "Income Inequality Influences Perceptions of Legitimate Income Differences". *British Journal of Political Science*. 48:4: 929-952.

World Bank. 2017. "World Development Indicators." <https://data.worldbank.org/datacatalog/world-development-indicators> (accessed July 17, 2017).

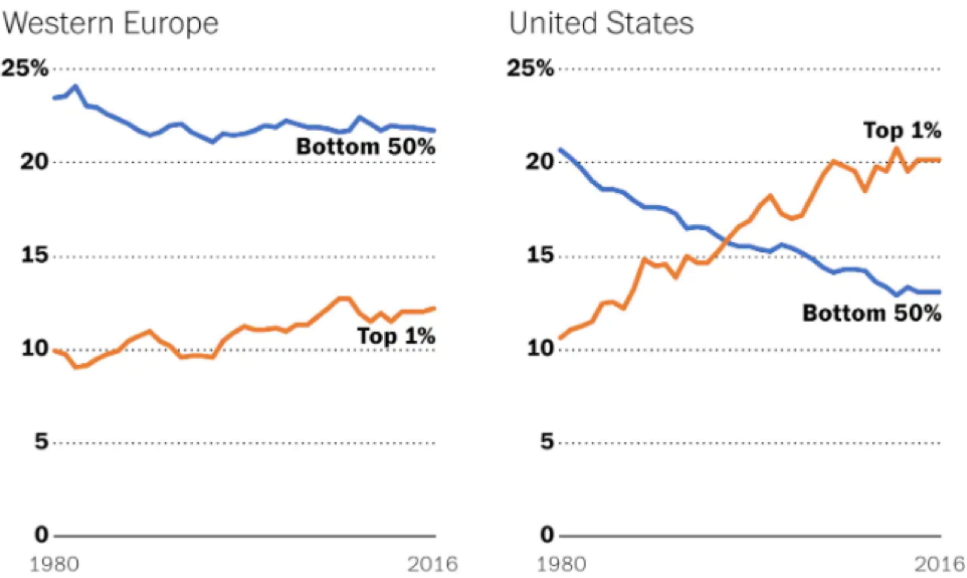
World Inequality Lab. 2019. "World Inequality Report." <https://wir2018.wid.world/> (accessed July 1, 2019)

World Values Survey (WVS). 2019. <http://www.worldvaluessurvey.org/WVSContents.jsp?CMSID=Findings> (Accessed July 1, 2019).

Zilinsky, Jan. 2014. "Learning About Income Inequality: What is the Impact of Information on Perceptions of Fairness and Preferences for Redistribution?" Available at SSRN: <https://ssrn.com/abstract=2485121> or <http://dx.doi.org/10.2139/ssrn.24851>

Tables and Figures

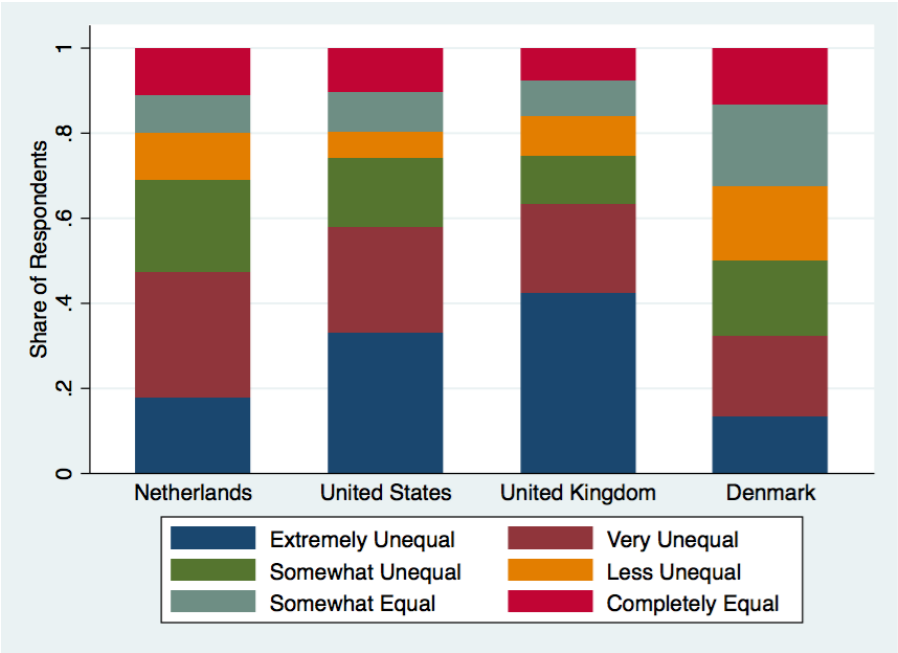
FIGURE 1: TOP 1% VS. BOTTOM 50% NATIONAL INCOME SHARES IN THE US AND WESTERN EUROPE (1980-2016)



This figure displays how the share of the Top 1% of national income has grown in the US since 1980 and the share of the Bottom 50% has fallen, while in Western Europe the share of the Top 1% and Bottom 50% has remained fairly stable.

Source: World Inequality Lab (2019)

FIGURE 2: PERCEPTION OF THE LEVEL OF INEQUALITY ACROSS COUNTRIES



This figure is based on respondents' answers to the question shown in Figure A1.

This figure displays how between 47% and 63% of respondents in the United States, the Netherlands and the United Kingdom believe extremely or very unequal distributions of income exist, while only 32% of respondents in Denmark report this to be the case.

Table 1: “First Stage” treatment effects

	(NE)	(US)	(UK)	(DE)
GAP	-0.021 (0.02)	-0.045** (0.02)	0.031* (0.02)	0.049** (0.02)
Controls	Y	Y	Y	Y
Mean dep. var.	0.6242	0.7495	0.8273	0.5581
Observations	1535	1660	1517	1889

Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. *GAP*: Indicator variable that takes on the value 1 if a respondent states they strongly agree or agree the gap between the rich and poor is too large in COUNTRY X or 0 otherwise. *NE*: Netherlands. *US*: United States. *UK*: United Kingdom. *DE*: Denmark.

This table presents the results of the following OLS regression:

$$Y_i = \beta_0 + \beta_1 T_i + X_i \gamma + \varepsilon_i, \quad (2)$$

where Y_i is an indicator variable that takes on the value 1 if respondent i states they strongly agree or agree the gap between the rich and poor is too large in COUNTRY X or 0 otherwise. β_1 captures the average difference in the share of respondents in the treatment group and the control group who selected they strongly agree or agree the gap between the rich and poor is too large in COUNTRY X. T_i is an indicator variable that takes the value of 1 if the respondent is in the treatment group and 0 otherwise. X_i is a vector of variables that controls for potential imbalance in background characteristics of individual i (age, gender, education level, location, household income) between the treatment and control groups. β_0 is the intercept term and ε_i is the error term.

Table 2: Main treatment effects

	(NE)	(US)	(UK)	(DE)
URGENT	0.023 (0.03)	-0.042* (0.02)	0.052*** (0.02)	0.055** (0.02)
Controls	Y	Y	Y	Y
Mean dep. var.	0.6590	0.7495	0.7812	0.5536
RESPONSIBILITY	0.031 (0.03)	-0.070*** (0.02)	0.042* (0.02)	0.045** (0.02)
Controls	Y	Y	Y	Y
Mean dep. var.	0.6021	0.6435	0.6789	0.5354
TOP 1%	-0.006 (0.03)	-0.036* (0.02)	0.035* (0.02)	0.027 (0.02)
Controls	Y	Y	Y	Y
Mean dep. var.	0.6182	0.7192	0.8254	0.6529
INDEX	0.035 (0.04)	-0.108*** (0.04)	0.091*** (0.03)	0.092** (0.04)
Controls	Y	Y	Y	Y
Observations	1535	1660	1517	1889

Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. *URGENT*: Indicator variable that takes on the value 1 if a respondent states they that believe very urgent or urgent action is required from the government to reduce inequality or 0 otherwise. *RESPONSIBILITY*: Indicator variable that takes on the value 1 if a respondent states they strongly agree or agree the government is responsible for closing the gap between the rich and the poor in COUNTRY X or 0 otherwise. *TAX TOP 1%*: Indicator variable that takes on the value 1 if a respondent states would rather the government raise income taxes on the richest 1% of people as opposed to cut public services to decrease government debt or 0 otherwise. *INDEX*: is the unweighted average of the z-scores of variables *URGENT*, *RESPONSIBILITY* and *TAX TOP 1%*, oriented so that a higher index means more support of redistribution. *NE*: Netherlands. *US*: United States. *UK*: United Kingdom. *DE*: Denmark.

This table presents the results of the following OLS regression:

$$Y_i = \beta_0 + \beta_1 T_i + X_i \gamma + \varepsilon_i, \quad (3)$$

where Y_i is an indicator variable for the responses from individual i to each question in the Appendix, which takes on the value 1 if the respondent selects the outcome of interest in the respective survey question, and the value 0 if the respondent does not select this option. β_1 captures the average difference in the share of respondents in the treatment group and the control group who selected the outcome of interest to the respective survey question. T_i is an indicator variable that takes the value of 1 if the respondent is in the treatment group and 0 otherwise. X_i is a vector of variables that controls for potential imbalance in background characteristics of individual i (age, gender, education level, location, household income) between the treatment and control groups. β_0 is the intercept term and ε_i is the error term.

Table 3: Heterogenous Treatment Effects by Respondents' Prior Preferences for Inequality

	(NE)	(US)	(UK)	(DE)
Respondents that prefer lower inequality				
URGENT	0.004 (0.03)	-0.008 (0.02)	0.048** (0.02)	0.027 (0.03)
RESPONSIBILITY	0.066** (0.03)	-0.050 (0.03)	0.049** (0.02)	0.055* (0.03)
TOP1%	-0.007 (0.03)	-0.041* (0.02)	0.038** (0.02)	0.002 (0.03)
INDEX	0.051 (0.05)	-0.081** (0.04)	0.093*** (0.03)	0.065 (0.05)
Observations	806	984	1197	1058
Respondents that do not prefer lower inequality				
URGENT	0.055 (0.04)	-0.089** (0.04)	0.065 (0.05)	0.092*** (0.04)
RESPONSIBILITY	-0.002 (0.04)	-0.095** (0.04)	-0.003 (0.06)	0.038 (0.03)
TOP1%	0.012 (0.04)	-0.037 (0.04)	0.010 (0.05)	0.071** (0.03)
INDEX	0.044 (0.06)	-0.156** (0.06)	0.061 (0.09)	0.143** (0.06)
Observations	729	676	320	831

Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. *URGENT*: Indicator variable that takes on the value 1 if a respondent states they that believe very urgent or urgent action is required from the government to reduce inequality or 0 otherwise. *RESPONSIBILITY*: Indicator variable that takes on the value 1 if a respondent states they strongly agree or agree the government is responsible for closing the gap between the rich and the poor in COUNTRY X or 0 otherwise. *TAX TOP 1%*: Indicator variable that takes on the value 1 if a respondent states would rather the government raise income taxes on the richest 1% of people as opposed to cut public services to decrease government debt or 0 otherwise. *INDEX*: is the unweighted average of the z-scores of variables *URGENT*, *RESPONSIBILITY* and *TAX TOP 1%*, oriented so that a higher index means more support of redistribution. *NE*: Netherlands. *US*: United States. *UK*: United Kingdom. *DE*: Denmark.

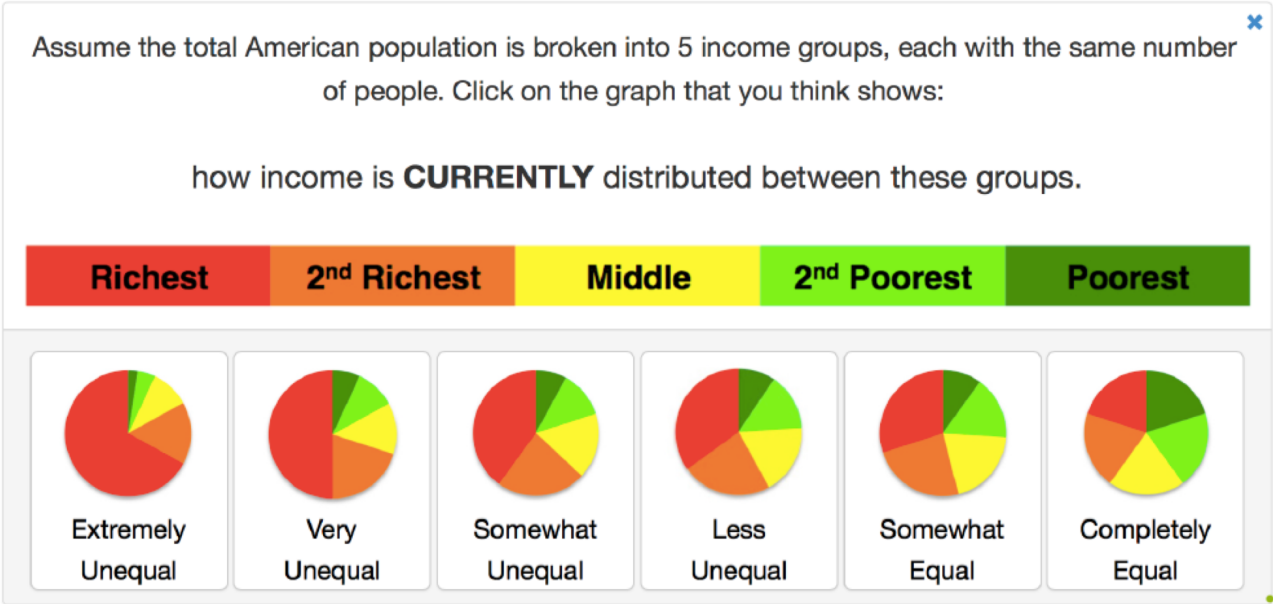
This table presents heterogenous treatment effects based on whether respondents' had a prior preference for lower inequality or not by estimating the following OLS regression:

$$Y_i = \beta_0 + \beta_1 T_i + X_i \gamma + \varepsilon_i, \quad (4)$$

where Y_i is an indicator variable for the responses from individual i to each question in the Appendix, which takes on the value 1 if the respondent selects the outcome of interest in the respective survey question, and the value 0 if the respondent does not select this option. β_1 captures the average difference in the share of respondents in the treatment group and the control group who selected the outcome of interest to the respective survey question. T_i is an indicator variable that takes the value of 1 if the respondent is in the treatment group and 0 otherwise. X_i is a vector of variables that controls for potential imbalance in background characteristics of individual i (age, gender, education level, location, household income) between the treatment and control groups. β_0 is the intercept term and ε_i is the error term.

APPENDIX

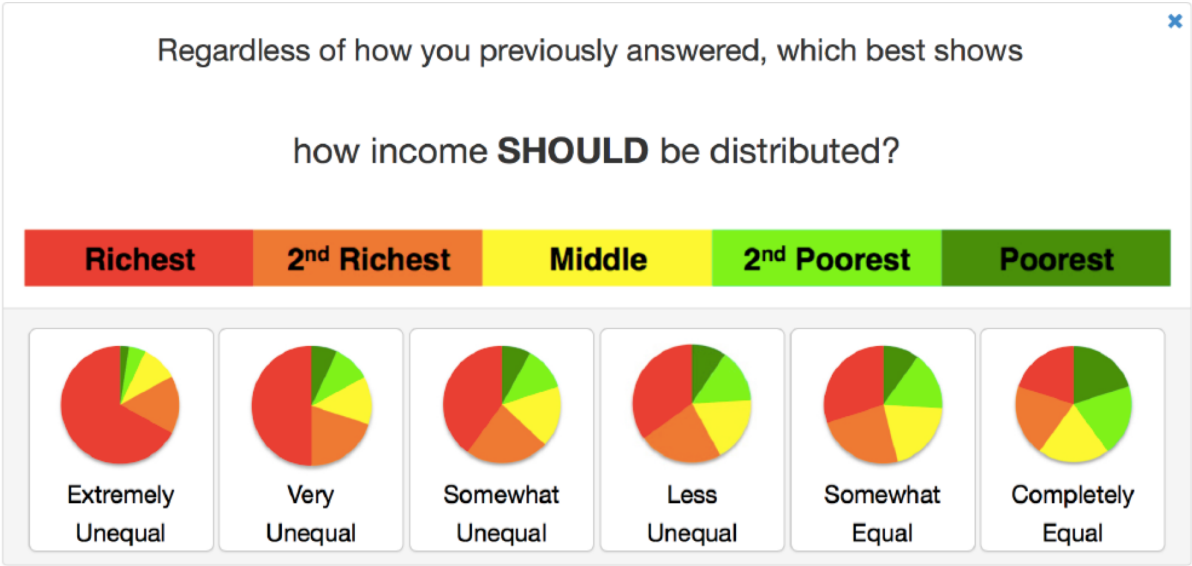
FIGURE A1 - QUESTION ABOUT RESPONDENTS’ PERCEPTION OF THE EXISTING LEVEL OF INEQUALITY IN THE UNITED STATES



Note: The most unequal distribution option is based upon the actual level of income inequality in South Africa. This is followed by the distribution in the United States, the United Kingdom and the Netherlands. The most equal distribution options are more equitable than what exists in any country in the world. The preamble to the question was adjusted in each country. For example, in the United Kingdom the question stated “the total British population”, not “the total American population”.

This figure shows the question that was asked about people’s views on the current level of inequality in the United States.

FIGURE A2 - QUESTION ABOUT RESPONDENTS' PREFERENCE FOR THE LEVEL OF INEQUALITY IN THE UNITED STATES



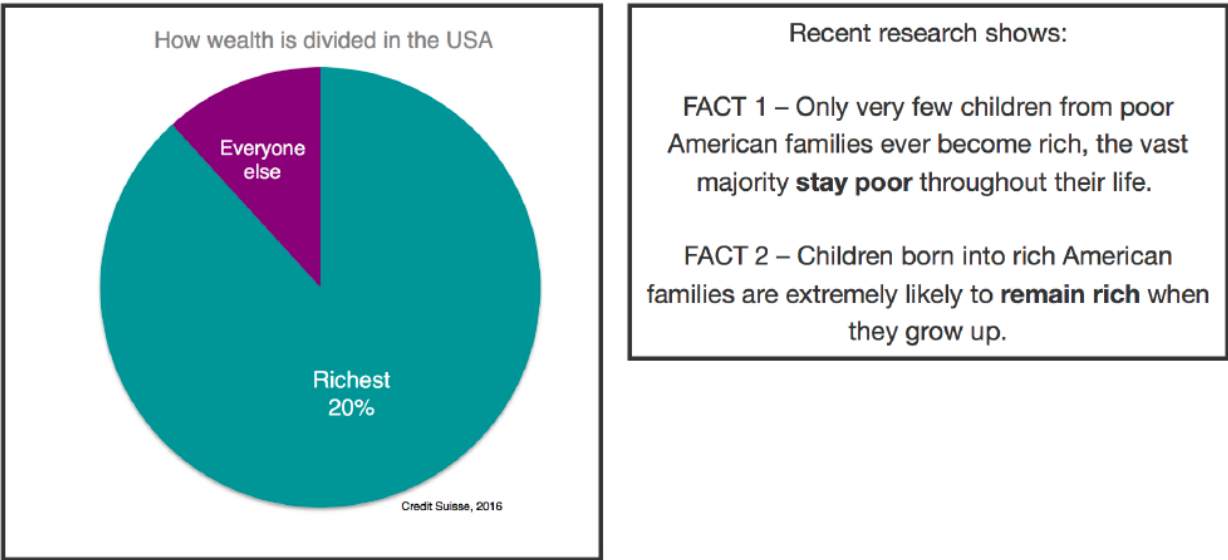
Note: The most unequal distribution option is based upon the actual level of income inequality in South Africa. This is followed by the distribution in the United States, the United Kingdom and the Netherlands. The most equal distribution options are more equitable than what exists in any country in the world. The preamble to the question was adjusted in each country. For example, in the United Kingdom the question stated “the total British population”, not “the total American population”.

This figure shows the question that was asked about people’s preference for the level of inequality in the United States.

FIGURE A3: TREATMENT - INFORMATION ABOUT THE LEVEL OF WEALTH INEQUALITY AND DEGREE OF MOBILITY

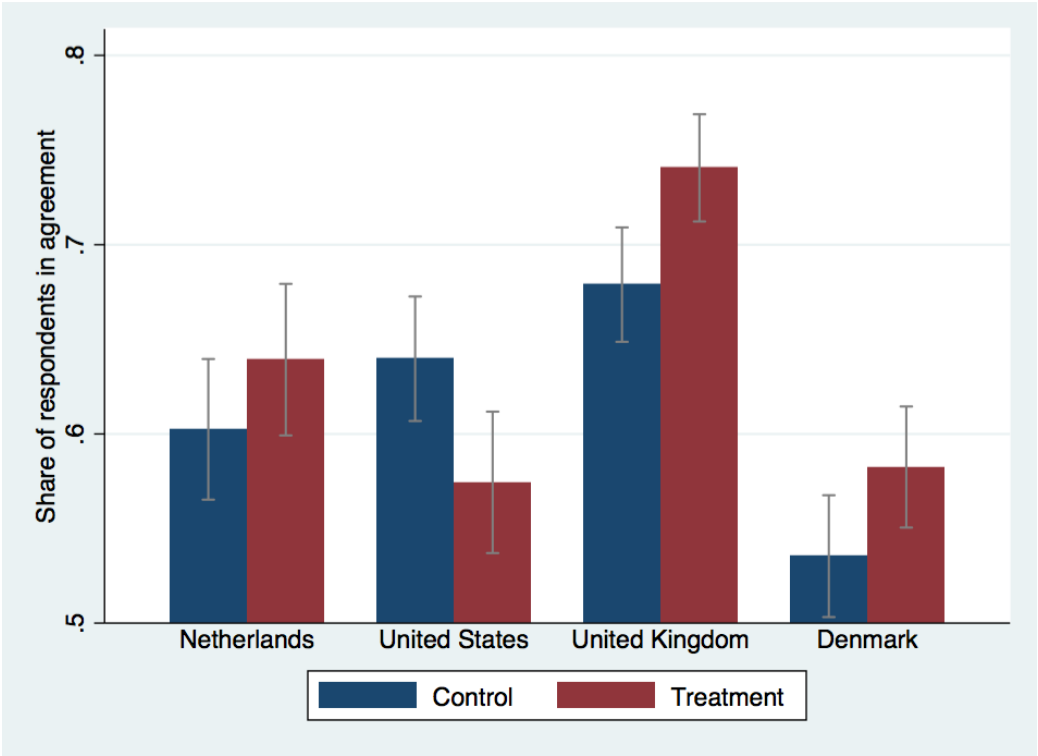
The richest 20% of people in the USA have **88%** of the country’s wealth
(wealth = total value of assets such as savings, house etc.).

This leaves over 260 million people with only 12% of the country’s wealth.



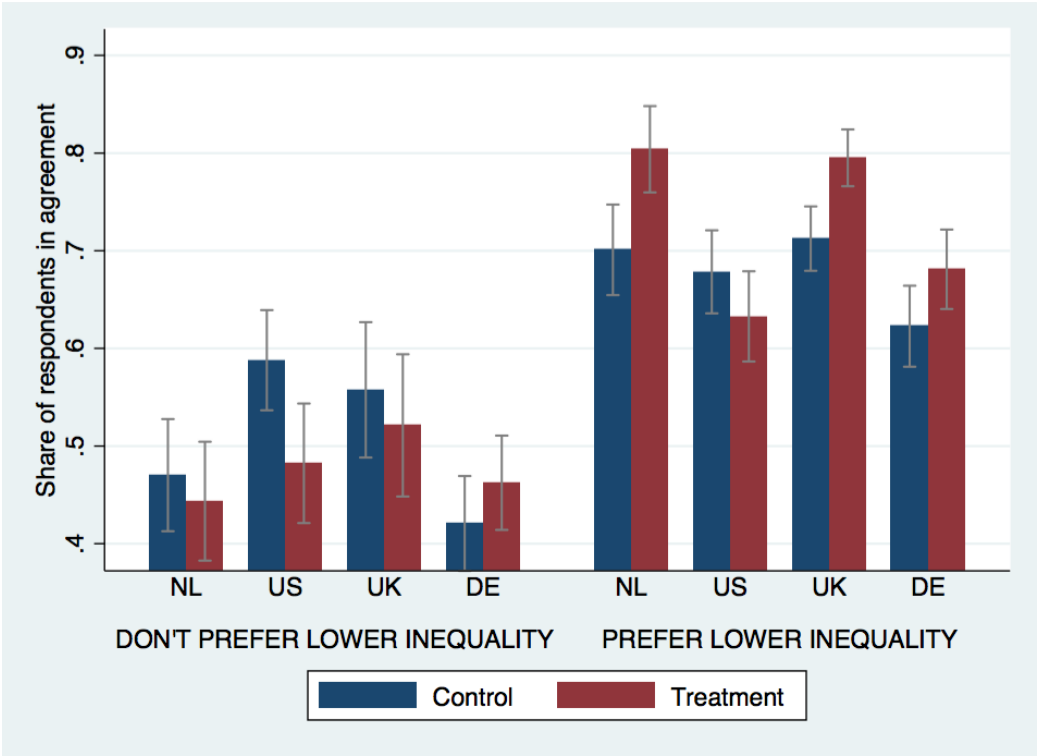
This figure displays the information that was provided to respondents who were randomly allocated to the treatment group in the United States.

FIGURE A4: MAIN EFFECT OF THE TREATMENT ACROSS COUNTRIES IN TERMS OF THE SHARE OF RESPONDENTS THAT AGREE THE GOVERNMENT IS RESPONSIBLE FOR CLOSING THE GAP BETWEEN THE RICH AND POOR



This figure illustrates the effect of the treatment on the share of respondents that strongly agree or agree the government is responsible for closing the gap between the rich and poor in their country.

FIGURE A5: HETEROGENEOUS EFFECT OF THE TREATMENT ACROSS COUNTRIES IN TERMS OF AGREEMENT THE GOVERNMENT IS RESPONSIBLE FOR CLOSING THE GAP BETWEEN THE RICH AND POOR



NL: Netherlands. US: United States. UK: United Kingdom. DE: Denmark.

This figure illustrates the heterogenous effects of the treatment on the share of respondents that strongly agree or agree the government is responsible for closing the gap between the rich and poor in their country based on whether respondents' held a prior preference for inequality to be lower.

TABLE A1: BACKGROUND INFORMATION ABOUT INEQUALITY AND MOBILITY AS WELL AS TAX AND REDISTRIBUTION POLICIES IN THE NETHERLANDS, THE UNITED STATES, THE UNITED KINGDOM AND DENMARK

	Source	NE	US	UK	DE
Income GINI	OECD 2019	0.28	0.39	0.35	0.26
Wealth held by top 20%	Credit Suisse 2018	71.5	87.7	75.4	82.3
Intergenerational income mobility	Corak 2015	N/A	0.47	0.5	0.15
Government spending (Share of GDP)	OECD 2019	0.446	0.379	0.422	0.545
Ratio of top tax threshold to average wage	OECD 2019	1.4	9.3	3.8	1.3
Difference between pre- and post-tax GINI	OECD 2019	28	17.5	23.5	36

NE: Netherlands. *US*: United States. *UK*: United Kingdom. *DE*: Denmark. We were unable to source a measure of intergenerational income mobility for the Netherlands from a cross-country database. However it is expected to be slightly higher than that of Denmark and lower than the United States and the United Kingdom.

This table shows the United States and the United Kingdom exhibit relatively low taxes and government spending compared to the Netherlands and Denmark, however these countries have substantially higher levels of income inequality and lower levels of social mobility.

TABLE A2: AGE AND GENDER OF THE SURVEY SAMPLE AND ADULT POPULATION IN EACH COUNTRY

	Survey Sample		Adult Population	
	Male (%)	18-35 years old (%)	Male (%)	18-35 years old (%)
Denmark	50.07	27.63	49.74	29.97
Netherlands	59.85	42.02	49.76	29.35
United Kingdom	47.18	24.36	49.34	30.70
United States	52.82	43.03	49.50	33.84

This table shows that on average the characteristics of the respondents to our survey are somewhat similar to the national population in each country. To address any concerns about the representativeness of the survey, we re-weight responses to match the national population. In the body of the paper we present the weighted average treatment effects. The sample average treatment effects are qualitative similar.

Source: World Bank (2017)

TABLE A3: BALANCE TABLE ACROSS TREATMENT AND CONTROL GROUPS

	NETHERLANDS		UNITED STATES		UNITED KINGDOM		DENMARK	
	Control μ/σ	Treatment Effect	Control μ/σ	Treatment Effect	Control μ/σ	Treatment Effect	Control μ/σ	Treatment Effect
Under 35 years old	0.428 [0.017]	0.037	0.414 [0.016]	-0.022	0.219 [0.015]	-0.038*	0.260 [0.014]	-0.033
Male	0.643 [0.016]	0.015	0.535 [0.017]	-0.006	0.496 [0.018]	-0.007	0.508 [0.016]	0.032
College education	0.456 [0.017]	0.035	0.374 [0.016]	0.020	0.387 [0.018]	-0.006	0.455 [0.016]	0.040*
Urban Dweller	0.521 [0.017]	-0.001	0.551 [0.017]	0.011	0.356 [0.017]	0.028	0.308 [0.015]	-0.024
Right wing	0.284 [0.016]	-0.038	0.228 [0.014]	-0.001	0.368 [0.017]	0.030	0.327 [0.015]	0.016
Observations		1535		1660		1517		1889

***, **, and * indicate significance at the 1, 5, and 10 percent critical level. *Male*: Dummy equal to one if the respondent is male and zero otherwise. *Under over35yrs*: Dummy equal to one if the respondent's age is under 35 years old and zero otherwise. *Urban dweller*: Dummy equal to one if the respondent resides in urban areas and zero otherwise. *College education*: Dummy equal to one if the respondent's education level is at least a Bachelor's degree and zero otherwise. *Right wing*: Dummy equal to one if the respondent's selected they would vote for a right wing party if a national election was held today and zero otherwise.

This table shows there are no statistically significant differences in background characteristics between the treatment and control groups.

8.1 Variable Definitions and Survey Questions

Background characteristics:

Male: Dummy equal to one if the respondent is male and zero otherwise.

Under over35yrs: Dummy equal to one if the respondent's age is under 35 years old and zero otherwise.

Urban dweller: Dummy equal to one if the respondent resides in urban areas and zero otherwise.

College education: Dummy equal to one if the respondent's education level is at least a Bachelor's degree and zero otherwise.

Right wing: Dummy equal to one if the respondent's selected they would vote for a right wing party if a national election was held today and zero otherwise.

Variables related to concern about inequality and support for redistribution:

GAP: Indicator variable that takes on the value 1 if a respondent states they strongly agree or agree the gap between the rich and poor is too large in COUNTRY X or 0 otherwise.

URGENT: Indicator variable that takes on the value 1 if a respondent states they that believe very urgent or urgent action is required from the government to reduce inequality or 0 otherwise.

RESPONSIBILITY: Indicator variable that takes on the value 1 if a respondent states they strongly agree or agree the government is responsible for closing the gap between the rich and the poor in COUNTRY X or 0 otherwise.

TAX TOP 1%: Indicator variable that takes on the value 1 if a respondent states would rather the government raise income taxes on the richest 1% of people as opposed to cut public services to decrease government debt or 0 otherwise.

The following questions were asked immediately following the treatments:

To what extent do you agree with the following statement “The gap between the rich and the poor in COUNTRY X is too large”. 1. strongly agree 2. agree 3. neither agree nor disagree 4. disagree 5. strongly disagree

In your opinion, how urgent or not urgent does the difference in incomes between rich and poor in COUNTRY X need to be resolved by the national government? 1. very urgent 2. quite urgent 3. less urgent 4. not urgent at all

To what extent do you agree with the following statement “It is the responsibility of the government to reduce the gap between the rich and the poor?” 1. strongly agree 2. agree 3. neither agree nor disagree 4. disagree 5. strongly disagree

As you may know, there have been proposals to decrease government debt by either raising income taxes on the richest 1% of people or cutting public services. Do you think income taxes on the richest 1% of people should be? 1. increased 2. stay the same 3. decreased