

# Inequality, social mobility and redistributive preferences

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# Inequality, Social Mobility and Redistributive Preferences

Isabel Günther and Bruno Martorano\*

#### Abstract

Previous studies on preferences for redistribution have shown that even though information on inequality changes concerns about inequality, it barely changes redistributive preferences. In an online experiment, we challenge previous results by showing US citizens a short video with facts on both inequality and social mobility and test the impact on different redistributive policies. Information on inequality of outcomes increases consensus on a more progressive tax system, whereas information on lack of equal opportunities increases participants' preferences for redistribution via fiscal spending. Both informational treatments have a stronger impact when participants also learn that higher inequality is not a necessary part of economic development. All informational treatments have a stronger impact for citizens, who underestimate the current level of inequality and trust the government.

JEL Classification: D31, D63, D90, H20, H40)

Keywords: Inequality, Social Mobility, Redistribution

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## **1. Introduction**

How people form and develop preferences for redistribution have been longstanding questions in economics. Given today's high levels of inequality of outcomes and opportunities, which are rising in many countries, these questions in economics are gaining in importance.

One of the earliest and most prominent theories — the 'median voter model' — focuses on the role of inequality of outcomes in promoting higher demand for redistribution (Meltzer and Richard, 1981). More recent theories, however, emphasize the role of inequality of opportunities, explaining that there could be less support for redistribution even in highly unequal settings if people believe that everyone has a shot at climbing the social ladder (Benabou and Ok, 2001; Piketty, 1995; Roemer, 1998). Empirical evidence in favor of either hypothesis, i.e. that with rising inequality or declining social mobility the demand for redistribution increases, is, however, scarce (Ciani et al 2021; Mengel and Weidenholzer, 2022). Most importantly, it is still unknown if different types of inequalities may generate preferences for alternative types of redistributive policies. With this study, we investigate whether and how information about inequality of outcomes and information on inequality of opportunities effects the demand for redistribution.

One of the key assumptions of the theoretical literature mentioned above is that citizens know whether they are relatively rich or poor (Gimpelson and Treisman, 2018). Recent empirical studies, however, argue that the assumption of perfect information seems to be unrealistic, and citizens' perceptions of inequality or social mobility often deviate from reality (Alesina et al., 2018; Chambers et al., 2015; Davidai and Gilovich, 2015; Hauser and Norton 2017; Kiatpongsan and Norton 2014; Kraus and Tan, 2015; Norton and Ariely 2011; Osberg and Smeeding 2006). People also do not know much about their own position within an income distribution (Cruces et al. 2013; Fernández-Albertos and Kuo 2018; Karadja et al 2017).<sup>1</sup> These findings would indicate that redistributive preferences might shift if additional information on inequality is provided.

A new strand of the literature has, therefore, investigated experimentally whether information about *inequality of outcomes* or *inequality of opportunities* affects the policy preferences of economic agents. Kuziemko et al. (2015), for example, provide participants in their experiment with an *omnibus information treatment* with customized data on US income inequality.<sup>2</sup> While their omnibus information treatment largely increases concerns about inequality, it only affects preferences for the estate tax rate. In a more recent study, Alesina et al. (2018) test the impact of explicitly *negatively-framed qualitative information* (i.e., without data) about lack of social mobility on redistributive preferences.<sup>3</sup> Similar to Kuziemko et al. (2015), their information treatment does not affect preferences for redistribution; results only become significant for (self-declared) left-wing participants.

Recently, there have been many other studies that test the impact of providing information either on inequality of outcomes or on inequality of opportunities to participants, but the evidence is still not conclusive. Similar to Alesina et al. (2018) and Kuziemko et al. (2015), more recent studies also show that

<sup>&</sup>lt;sup>1</sup> Cruces et al. (2013) and Karadja et al. (2017) estimate the impact of these biases on preferences for redistribution. Using a survey experiment in Argentina, Cruces et al. (2013) report that people who overestimate their relative economic position tend to demand more redistribution after receiving information about their actual position in the distribution. Using a survey experiment in Sweden, Karadja et al. (2017) confirm that people misperceive their position in the distribution; yet, they show that those who underestimate their relative economic position tend to demand less redistribution after being informed about their actual position in the distribution.

<sup>&</sup>lt;sup>2</sup> Kuziemko et al. (2015) provide participants with information on different topics including (i) their position in the income distribution, (ii) what they "would have made" in a hypothetical scenario of low inequality, (iii) the redistributive capacity of the estate tax, and (iv) the fact that it might be possible to increase taxes without hurting economic development.

<sup>&</sup>lt;sup>3</sup> It is worth noting that participants in the study of Alesina et al. (2018) are not only from the US, but also from France, Italy, Sweden, and the United Kingdom, which is why they could not provide detailed facts. The informational treatment consists of two animations indicating that the chances of a poor child remaining poor in adulthood are high and the other reporting that the chances of a child from a high-income family staying rich later in life are also high.

information on inequality changes participants' attitudes towards inequality, but not participants' demand for redistribution (see Ciani et al. 2021 for an overview and summary).

One conceptual explanation for these findings might be that people may falsely believe that (increasing) inequality in outcomes or even in opportunities has to be tolerated in order to achieve economic development (see, for example, Pellicer et al. 2019; Stantcheva 2021). This belief stands against the empirical evidence that inequality is not necessary, but that it might indeed be harmful, for economic development, and that it is a political choice (Stiglitz 2015, Alvaredo et al 2017, Saez, 2021). A methodological explanation that previous empirical studies did not find an effect of information on redistributive preferences might be that providing participants with omnibus treatments and/or blurry information has some side effects, such as little attention or low understanding. Processing information requires mental effort to derive meaning, develop thoughts, and revise beliefs, therefore, as shown by a new strand of the literature in development economics, pictures and videos could be more effective in communicating relevant information (Haaland et al 2023).

Moreover, to our knowledge, there is no study to date which compares the effects of different types of inequality (i.e. inequality of outcomes and opportunities) on redistributive preferences with the same methodological approach.

Against this background, this study has two objectives: first, we analyze how inequality of outcomes *and* inequality of opportunities change people's redistributive preferences across various redistributive policies. Second, we aim to analyze whether information that inequality is avoidable, i.e. the notion that there is no trade-off between economic equity and efficiency, leads to higher redistributive preferences. Third, in contrast to previous studies, we use relatable and easy to understand information provided to participants in the form of an entertaining video. We conducted an online experiment using Amazon

Mechanical Turk (MTurk) with a sample of around 1,500 individuals in the United States. Participants were randomized into five groups that watched a video on inequality of wealth (outcomes) in the US, social mobility (opportunities) in the US and on its *avoidability*, i.e., that inequality (of outcomes or opportunities) is not inevitable for economies to grow.

We find that while the informational treatment on inequality of outcomes mostly increases participants' preferences for raising taxes on rich families, information on lack of social mobility rather increases participants' preferences for redistribution via public spending. Importantly, the informational treatments increase demand for redistributive policies more strongly when US inequality (or lack of social mobility) is compared to Canada, which has lower inequality and higher social mobility, but similar levels of wealth. As theory would predict, the informational treatments have a larger effect on redistributive preferences among citizens who underestimate the current level of inequality and have more trust in government. In contrast to previous studies, information does not have a stronger impact on redistributive preferences for left-wing voters.

We further explore whether the information treatments induce changes in attitudes towards inequality or changes in knowledge, in other words whether informational treatments function more as a primer rather than conveying new information. Our initial findings suggest that changes in attitudes towards inequality, rather than changes in knowledge, seem to be the major channel through which information on inequality shapes preferences for redistribution. While previous studies show that US citizens' perceptions of inequality deviate from reality, participants in our survey (in 2018) demonstrate on average a good knowledge about the level of inequality and social mobility in the US. However, most participants still hold the belief that inequality is an *inevitable* consequence of economic development. The notion that the same levels of wealth can be achieved with lower levels of inequality seems to be new information to participants. But more in-depth research is needed here.

Our study relates to three strands of literature. First, it adds to the literature using experiments to study the effects of information about inequality on preferences for redistribution.<sup>4</sup> Our paper is, however, the first randomized survey experiment which analyzes how information about different types of inequalities shape people's preferences for various redistributive policies. Prior studies investigate the impact of giving participants information about either economic inequality or social mobility (see Ciani et al. 2021). These studies, however, are not comparable since the way in which information is provided to participants largely differs across studies. For example, Kuziemko et al. (2015), focuses on inequality of outcomes, and Alesina et al. (2018), focuses on inequality of opportunities, which are not comparable, as the former provides a very detailed omnibus information treatment, whereas the latter analyzes a very general "information" treatment (without any figures and facts). Hoy and Mager (2021a) only investigate whether receiving combined information about both the level of economic inequality and degree of intergenerational mobility leads people to revise their preferences for redistribution, but they do not compare how different types of information impact different types of redistributive policies.

Second, we introduce an additional component by providing participants with information that high inequalities are avoidable, which has not yet been done with a representative sample, let alone for a high-income country. There is only one other study that has analyzed how people react to learning that inequality is not necessary for economic development. However, it was only conducted with low-income groups (Pellicer et al.,2019). Moreover, the study that was conducted in South Africa provided participants with information also about higher income countries such as US or high incomes but lower inequality such as the Netherlands. However, South Africa's recent history of apartheid

<sup>&</sup>lt;sup>4</sup> See Alesina et al 2018; Ashok et al 2015; Bastani and Waldenström 2021; Becker 2020; Boudreau and MacKenzie, 2018; Cruces et al 2013; Hoy and Mager 2021a; Hoy and Mager 2021b; Karadja et al 2017; Kuziemko et al. 2015; Lergetporer et al. 2020; McCall et al. 2017; Pellicer et al. 2019; Sands 2017; Sands and de Kadt 2020; Settele 2021; Stantcheva 2021.

makes it questionable whether a comparison with the Netherland's inequality is reasonable. Most importantly, it is also important to understand how the entire population (and not just the very poorest) react to the information that inequality is not necessary for economic development. In our study, we therefore use a representative sample of the US population and provide participants with information on Canada that has, in comparison to the US, very similar levels of economic development as well as similar institutional settings, but much lower inequality and higher social mobility.

Third, we add a methodological contribution to the literature. While there is a growing literature in development economics showing how media or videos may shape beliefs and influence behavior (Bernard et al., 2014, DellaVigna and Kaplan, 2007, La Ferrara et al., 2012, Riley, 2022, Yanagizawa-Drott, 2014), to our knowledge, this is the first study using a video to evaluate how information about inequalities affects preferences for redistribution.

The paper is organized as follows. Section 2 describes the experimental design and data. Section 3 reports the main results and shows the heterogenous effects of our informational treatment. Section 4 investigates the potential channels through which information on inequality contributes to redistributive preferences. Section 5 discusses the robustness of our results. Section 6 concludes.

## 2. Experimental Design and Data

#### 2.1. Questionnaire and Experimental Design

The data used in this paper originates from an online survey<sup>5</sup> and experiment in the US.<sup>6</sup> Data were collected via Amazon's MTurk in May 2018. The experimental survey took, on average, 13 minutes to complete and the median was 11 minutes. Respondents were paid 2 USD for their participation, i.e., 11 USD per hour, which is higher than the minimum wage of 7.25 USD per hour at the time,<sup>7</sup> and somewhat higher than related studies. For instance, Kuziemko et al (2015) paid 1.5 USD for a survey of about 15 minutes for the participation on MTurk. Alesina et al (2018) paid participants 2.5 USD per survey completed. In their study, the average time for completion of the survey among respondents was 40 minutes and the median time was 15 minutes.

At the beginning of our survey, participants were informed that this survey is conducted by the Swiss Federal Institute of Technology (ETH) in Zurich, Switzerland. Participants were also informed that they were free to drop out at any time and take as little or as much time as they needed to answer all questions. Participants were then asked for some demographic information (including gender, age, civil status, family composition), their educational background, and income class. Following Alesina et al (2018), we also asked participants a number of questions on inequality before the treatment. The main aim was to document people's knowledge about inequality to better explain our results, but also to show how perceptions of inequality have changed recently in the US. With regard to social mobility, we asked participants to report their beliefs about the chances that a child from one of the poorest 20% of families will make it to the richest 20% of families when grown up.<sup>8</sup> With regard to

<sup>7</sup> Data are from U.S. Department of Labor:

<sup>&</sup>lt;sup>5</sup> The full questionnaire is reported in Online Appendix A.

<sup>&</sup>lt;sup>6</sup> The experiment was reviewed and approved by the ETH Zurich Ethics Commission.

https://www.dol.gov/whd/state/stateMinWageHis.htm

<sup>&</sup>lt;sup>8</sup> Options ranged from (1) close to zero to (5) high.

inequality of outcomes, we asked participants how much of the total wealth in the US (including cash, bonds, stocks, and real estate) is held by the richest 20% of the US population. Moreover, participants were asked how much more wealth the richest 20% of US families have in comparison to the poorest 20% of US families. Last, a question on trust in government was also asked.

The main objective of our treatments was to provide participants with information concerning different types and aspects of inequality. Hence, after this first part of the survey, participants were randomized into two main treatment groups and one control (see Figure 1). The first group was provided with information on inequality of wealth in the US - with data extracted from the 2013 Survey of Consumer Finances.<sup>9</sup> The second group was exposed to information on social mobility - with data drawn from Chetty et al (2014). To test the avoidability aspect of inequality, two sub-groups per block received the same information on inequality of wealth and on social mobility but they also received some additional and comparable information on Canada (Figure 1). Data for Canada on wealth distribution were from the national statistical office, i.e., the Statistics Canada,<sup>10</sup> while those on intergenerational mobility were taken from Corak (2017). The justification for comparing the US and Canada is given by the fact that they have very similar levels of economic and social development as well as similar institutional settings. Yet, economic inequality is much lower in Canada than in the US. Thus, the strategy was to test the impact of information on the changeability of inequality by providing participants with a resonant experience of what a more equal society might look without sacrificing economic development. In contrast to previous studies, we used a short video as a mean of communication, which is considered more effective in conveying information (Haaland et al 2023). Participants were not able to skip the page with the video. They had to wait about two minutes (i.e., the duration

<sup>&</sup>lt;sup>9</sup> https://www.federalreserve.gov/econres/scfindex.htm

<sup>&</sup>lt;sup>10</sup> https://www150.statcan.gc.ca/n1/pub/75-006-x/2015001/article/14194-eng.htm

of the video) before advancing to the next page.<sup>11</sup> The four videos were short (around two minutes) and similar to each other.<sup>12</sup> The text provided in the videos is shown in Online Appendix B and the videos are now also available on YouTube (not during the experiment).<sup>13</sup> Last, the control group watched a video on the history of the US with the same length (Figure 1). As discussed in Haaland et al (2023), the use of an active control group reduces the role of prior beliefs on the outcome of interest as well as side effects of informational treatment interventions, such as emotional responses.

After the treatment, participants were asked a number of questions concerning their attitudes towards inequality and their redistributive preferences. With regard to attitudes towards inequality, participants were asked to indicate whether they "strongly disagree" (1) to strongly agree (5) with the following statement:

- a) differences in wealth in the US are too large;
- b) wealth within the US should be made more equal;
- c) in the US everybody has a chance to make it and be economically successful;
- d) the large gap between the poor and the rich in the US is inevitable;
- e) the US economic system is fair.

Concerning preferences for redistributions, participants were first asked their opinion on the following two statements:

- It is the responsibility of the government to reduce inequality;
- the government should raise taxes on rich families.

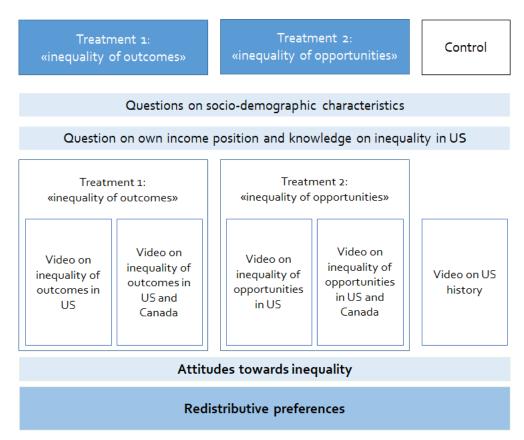
<sup>&</sup>lt;sup>11</sup> This was based on the average length of the video.

<sup>&</sup>lt;sup>12</sup> In particular: the video on inequality in the US is 1 minute and 45 seconds; the video on wealth inequality in the US and Canada is 2 minutes and 8 seconds; the video on social mobility in the US is 1 minute and 59 seconds; the video on social mobility in the US and Canada is 2 minutes and 16 seconds.

<sup>&</sup>lt;sup>13</sup> The links are: <u>https://www.youtube.com/watch?v=9SiucLhZ0I8</u>; <u>https://www.youtube.com/watch?v=JoKD7a7Qa1Y</u>; <u>https://www.youtube.com/watch?v=InWjiPz6-RI</u>; https://www.youtube.com/watch?v=IJzCafuobqg

Answers to each statement could range from 1 (strongly disagree) to 5 (strongly agree). Additional questions on preferences for redistribution were taken from the survey of Alesina et al. (2018). Concerning taxation, we asked participants to choose their preferred income tax rates on the top 1 percent, the next 19 percent ( $80^{th} - 99^{th}$  percentile), the next 30 percent ( $50^{th} - 79^{th}$  percentile), and the bottom 50 percent. On the spending side, participants were asked to allocate public resources (100%) across the following categories: health, education, defense and national security, social insurance and income support programs, social security and Medicare, and public infrastructure.

#### Figure 1: Experimental Design



#### 2.2. Data Quality and Descriptive Statistics

In total, 1,532 US citizens took part in our experiment - 613 receiving information on inequality of outcomes, 629 receiving information on inequality of opportunities and 290 in the control group. Our study was implemented using MTurk, an Amazon-owned crowdsourcing platform where people, including academic researchers, have the possibility to post small tasks (Human intelligence tasks - HITs) for crowd-workers, known as "Turkers". Table 1 compares some descriptive statistics to the same characteristics from other surveys. Our sample has similar characteristics as the sample of Kuziemko et al. (2015), who also used the MTurk platform to perform an experiment. The only difference is the share of people employed. Yet, this discrepancy makes our sample more representative and closer to the 2011 CBS survey and RAND's online American Life Panel (ALP).<sup>14</sup> In comparison to the 2011 CBS survey and RAND's online American Life Panel (ALP), participants in our study are younger, more liberal and more educated. Moreover, the share of Hispanics in our survey is smaller than those involved in the 2011 CBS survey and RAND's online American Life Panel (ALP). This result is expected and consistent with previous studies using MTurk (Berinsky et al. 2012; Huff and Tingley, 2015). The remaining variables are similar in their mean values (Table 1).

MTurk has been widely used for data collection because it gives researchers the possibility of collecting a large number of high-quality data in a short period of time. Yet, it has also been reported that MTurk started to experience a "bot crisis," first noticed in the summer of 2018, which created some concerns about the quality of MTurk data for academic research (Kennedy et al 2020). Chmielewski and Kucker (2020), for example, show that there was a substantial decrease in data quality during and to some extent after summer 2018, documented by an increasing number of participants failing responses to

<sup>&</sup>lt;sup>14</sup> Data referred to CBS election poll and to the American Life Panel are extracted from Kuziemko et al. (2015)

validity questions. However, this crisis should not affect our study considering that the data were collected in the spring of 2018 and in particular in May 2018.

	Our sample	Kuziemko et al. (2015)	CBS election poll	American Life Panel	Alesina et al (2018)	Current Population Survey
Male	0.466	0.428	0.476	0.417	0.480	0.480
Age	37.236	35.41	48.99	48.94		
US-born	0.812				0.940	0.850
White	0.741	0.778	0.739	0.676		
Black	0.090	0.076	0.116	0.109		
Hispanic	0.061	0.044	0.0983	0.180		
Employed	0.547	0.465	0.587	0.557	0.620	0.580
Married	0.422	0.397	0.594	0.608	0.510	0.490
University degree or higher	0.564					
College degree		0.433	0.318	0.309	0.420	0.280
Political views	2.194	2.176	1.586			

Table 1: Comparison to other samples

Source: authors' elaboration on MTurk survey in column 1 and information reported in Kuziemko et al. (2015) (column 2) and Alesina et al (2018) (column 5). Data referring to CBS election poll and to the American Life Panel are extracted from Kuziemko et al. (2015). Data referring to the Current Population Survey are extracted from Alesina et al (2018). Note: Political views could range between 1 (conservatives) and 3 (liberals).

Despite that, a number of measures were taken to analyse and ensure data quality. First, participants with the same IP address (72 observations) and participants with GPS data outside the US (76 observations) were excluded from our analysis.<sup>15</sup> These two characteristics overlap in some cases; thus, only 137 observations were excluded from the original sample. Second, the time for completing the survey was recorded in order to detect if participants spent a reasonable amount of time answering our questions. We excluded participants who spent one standard deviation less than the average time used to complete the survey within each group. Hence another 41 observations were dropped. Third, following Alesina et al. (2018), we introduced an "attention check"

<sup>&</sup>lt;sup>15</sup> QGIS 2.14 was used in order to check if observations had a GPS code in the US. Kennedy et al (2020) use several tests of data quality, including common attention checks, open-ended comments, consistency checks, and show that participants located outside the US tend to contribute much lower-quality data.

question just before the treatments. Participants were asked if they had devoted their full attention until that point. To increase the probability of receiving honest responses, we clarified that their answer would not affect their payment for survey participation. Our strategy was also intended to increase respondents' attention just before receiving crucial information on inequality. 3 participants replied that they did not pay attention to the survey. Those participants were excluded from the analysis, as well. Fourth, 45 observations were dropped from the analysis because they have missing information about income or political view. Overall, we deleted 226 observations from our original sample and the analysis in Section 3 is based on these 1,532 - 226 = 1,306 observations (Table 2).

To ensure that these changes did not affect the randomization process, we conducted a balance test across the various treatments for the cleaned sample. Table C1 in the Online Appendix shows the results of the test. The first column refers to the probability of being treated (independent of the information shown), while the remaining columns show the probability of being in the various treatment groups. Overall, the groups are balanced along observable characteristics. Coefficients are statistically significant in very few cases. The time spent to complete the survey is one of these, which is expected given the slight differences in video length.

Table 2:	Observations	excluded	from	original	sample
1.0010 2.	0 0001 100000			B	2 min pro

Groups of participants excluded	Number
Participants with the same IP address and with GPS data outside of US	137
Participants who did not spend enough time	41
Participants who did not pay attention	3
Participants with missing information about income or political view	45
Total Participants excluded	226

After the treatment, participants were also asked three questions on the content of the video: a) how many countries the US was compared to in the video; b) in how many quintiles families were sorted; and c) out of 100 children born in the poorest 20% of families in the US, how many make it to the top 20% over the course of their lifetime.<sup>16</sup> About 69% of respondents replied correctly to all three questions after the treatment and 93% replied correctly to at least two out of three questions (see Figure C1 in Online Appendix C).<sup>17</sup> We also reestimated our baseline models including only participants who answered correctly to at least two out of three "attention check" questions. The regressions reported in Table C3 in Online Appendix C show that the results hold, confirming the validity of the main estimates discussed in Section 3 and reassuring data quality. Given these precautionary measures taken, we are confident that our results are not driven by limited data quality.

#### 2.3. Empirical strategy

To measure the impact of the information treatments on participants' policy preferences, we estimate the following regression model:

(1) 
$$y_i = \alpha + \beta_1 T_{ij} + \beta_2 X_i + u_i$$

where *i* refers to the individual, and *j* to the treatment status. *y* defines the outcomes of interest — i.e., the redistributive preferences. *T* is the treatment variable and *X* refers to a set of control variables that includes: (a) demographic characteristics, i.e., the sex of the respondent and four dummy variables indicating if the participant has less than 45 years old, if he/she is married, if the participant has children, and if he/she and his/her parents were born in the US; (ii) socio-economic information, i.e., a dummy variables indicating if the

<sup>&</sup>lt;sup>16</sup> It is worth highlighting that we asked the same questions to all the participants in the different treated groups. For each question, there were five response options including two options as "Can't remember" and "There was no information in the video that would help me to answer this question".

<sup>&</sup>lt;sup>17</sup> More information about the performance of each group is reported in Table C2 in Online Appendix C.

respondent is full-time employee, part-time employee, self-employee, unemployed, the income class,<sup>18</sup> and a dummy variable indicating if the respondent has a university degree or higher; (iii) trust in government measured through a question asking participants how much of the time can they trust the government to do what is right — values range from 1 (Never) to 5 (All the time); (iv) and a dummy variable indicating if the respondent is "liberal" or "very liberal".<sup>19</sup> We also include a variable indicating the wave (early or end of May 2018) and two variables measuring the log of number of "HITs approved" and the log of the time spent to complete the survey.<sup>20</sup> Descriptive statistics are reported in Table D1 Online Appendix D.

In the main text, we report the estimates derived from an Ordinary Least Squares (OLS) estimation including the control variables. Results without controls are very similar and reported in Table G1 Online Appendix G.

#### 3. Results

#### 3.1. Impact of information on preferences for redistribution

We first analyse the impact of our informational treatments on respondents' preferences for redistribution. Participants are asked to indicate whether they "strongly disagree" (1) or "strongly agree" (5) with the following statement: "It is the responsibility of the government to reduce inequality between poor and rich". Table 3, column 1, shows that both treatments significantly and similarly

<sup>&</sup>lt;sup>18</sup> 5 classes are considered: less than 20,000 USD; 20,000 USD to 40,000 USD; 40,000 USD to 75,000 USD; 75,000 USD to 125,000 USD; 125,000 USD and over.

<sup>&</sup>lt;sup>19</sup> The original variable is based on the following question: "On economic policy matters, where do you see yourself on the liberal/conservative spectrum?". Answers could be: Very liberal (1); Liberal (2); Moderate (3); Conservative (4); Very conservative (5).

<sup>&</sup>lt;sup>20</sup> HIT, or Human Intelligence Task, is a single, self-contained, online task. Each HIT asks a worker to perform a certain task. After completing the task, the worker has to submit the answer. HITs got approved within 30 days after the submission of the task.

move participants toward agreeing that it is the responsibility of the government to reduce inequality.

After this initial stage, we investigate respondents' policy preferences with regard to taxation and fiscal spending. Concerning taxation, we consider three outcomes, namely (i) participants' support for raising taxes on rich families,<sup>21</sup> (ii) the top tax rate on the richest 1%, and (iii) the estate tax rate. On the spending side, we test the impact of the informational treatments on the share of public resources participants think should be spent on education (corresponding to indirect redistribution and equalizing opportunities) and that should be spent on social insurance and income support programs (corresponding to direct redistribution and equalizing outcomes).

Concerning taxation, Table 3, column 2, shows that information on inequality of outcomes, rather than information on lack of social mobility, increase participants' support for raising taxes on rich families. The effect of the treatment on inequality of outcomes is associated with a 0.233-unit change (or 6.306%) increase in the share agreeing that taxes should be raised on rich families and the differences between the two treatments are statistically significant. Furthermore, information on inequality of outcomes also seems to play a role in influencing preferences on the tax rate on the richest 1% and on the estate tax rate (Table 3, columns 3 and 4). For example, the treatment on wealth inequality in US increases the preferred top 1% average tax rate by 3.589 percentage points (from 36.462% in the control group) and the preferred estate tax rate by 5.574 percentage points (from 28.142% in the control group). By contrast, the impact of treatment on inequality of opportunities is very small and insignificant.

With regard to public spending, Table 3, columns 6, shows that information on lack of social mobility, rather than information on inequality of outcomes

<sup>&</sup>lt;sup>21</sup> Participants are asked to indicate whether they "strongly disagree" (1) or "strongly agree" (5) with the following statement: "The government should raise taxes on rich families."

(wealth), plays a significant role in promoting preferences for redistribution through social insurance and income support programmes. Information on lack of social mobility increases the share of resources allocated for this spending category by 2.164 percentage points (from 13.248% in the control group), whereas information on wealth inequality does not change preferences for social spending.

As discussed in the introduction, people may falsely believe that (increasing) inequality in outcomes or even in opportunities has to be accepted for economic development to occur (see for example, Pellicer et al. 2019; Stantcheva 2021). Hence, we introduce an additional component by providing participants with information on the *avoidability* of inequality. As described in Section 2.1, two sub-groups per block received the same information on inequality of wealth and on lack of social mobility but they also received some additional and comparable information on Canada. Table 4 reports the results of our analysis. Information on the *inevitability* of inequality seems to play an important role in magnifying the impact of inequality on preferences for redistribution. The treatment effect is stronger for those who learn about lower inequality or higher social mobility in Canada. However, differences between participants who received information only on US and those who received also information on Canada are in most cases not statistically significant. The only exception is related to the video on social mobility in the US and Canada; this treatment increases the share of spending on education by 1.628 percentage points (up from 19.644% in the control group).

#### Table 3: Redistributive preferences

	Government should reduce inequality	Raising Tax of Rich Families	Tax Top 1%	Estate tax	Expenditure on education	Social Insurance and Income Support Programmes
	(1)	(2)	(3)	(4)	(5)	(6)
Video Inequality of Outcomes (1)	0.257***	0.233***	3.589**	5.574***	-0.244	0.918
	[0.082]	[0.082]	[1.395]	[1.689]	[0.694]	[0.563]
Video Inequality of Opportunities (2)	0.242***	0.140	1.392	1.902	0.687	2.164***
	[0.082]	[0.081]	[1.388]	[1.679]	[0.690]	[0.560]
Control mean	3.172	3.695	36.462	28.142	19.644	13.248
p-value diff (1) vs (2)	0.818	0.154	0.049	0.007	0.093	0.006
Obs.	1,306	1,306	1,306	1,299	1,305	1,306
R-squared	0.274	0.237	0.109	0.116	0.071	0.076

Notes: "It is the responsibility of the government to reduce inequality" is a continuous variable. It ranges from 1 (strongly disagree) to 5 (strongly agree). "Raise Tax" refers to the opinion of participants on the following statement: "The government should raise taxes on rich families". Answers could range from 1 (strongly disagree) to 5 (strongly agree). "Tax rate top 1%" and "Estate tax" are continuous (respondents' preferred average tax rate, in percent). "Expenditure on education" and "Social Insurance and Income Support Programs" are continuous (respondents' preferred share of total budget). Controls included in all regressions are indicator variables for gender, age, he/she and his/her parents were born in the US, having children, being married, being full employed, being part-time employed, being self-employed, being unemployed, income class, university degree, trust in government, being "liberal", wave, (log) number of "HITs approved", (log) duration of the survey. Standard errors in parentheses. \*\*\* p < 0.01, \*\* p < 0.05.

We have three novel findings. First, information on inequality changes demand for redistribution. Previous literature has only found a weak impact or only for very specific sub-groups (see Alesina et al., 2018 and Kuziemko et al., 2015). The differences between our findings and the previous literature might be explained by differences in the information content of the treatment. For example, Kuziemko et al. (2015) provide participants with an "omnibus information treatment" on (i) their position in the income distribution, (ii) what they "would have made" today in a hypothetical scenario of equal growth across income groups since 1980, (iii) how few people pay the estate tax in the US and that estate taxes improve intergenerational mobility, and (iv) the fact that it is possible to raise taxes on top incomes without hurting economic development. By contrast, we just provide participants with simple facts about inequality in the US following the idea that information must be clear and easy to understand (Haaland et al 2023). In the study of Alesina et al (2018) not all participants are from US, but also from France, Italy, Sweden, and the United Kingdom. This forced them to use qualitative statements on lack of social mobility so that all participants had access to the same information. In contrast, we provide participants with actual and precise numbers on inequality and social mobility, which is considered to be important to increase the credibility of information (Haaland et al 2023).<sup>22</sup>

Second, different types of inequality play different roles in preferences for taxation versus fiscal spending. Information on social mobility is more likely to increase preferences for redistribution via public spending while information on disparities of outcomes (wealth) tend to promote support for reducing inequality through tax policy.

<sup>&</sup>lt;sup>22</sup> Note that the fact that we used videos instead of text does not seem to drive our results. We tested two additional treatment groups where the exact text of the video was only provided for participants to read. Results of the text treatments are not different to the video treatments. Results are available from the authors upon request.

Third, in most cases, informational treatment is stronger when people are given additional information that higher inequalities are not a necessary or automatic part of higher levels of wealth. Our interpretation is that if people falsely believe that inequalities cannot be reduced without a decline in average income, they are more inclined to accept the current situation of high inequalities (Pande 2011); conversely, if people see a chance of reducing disparities without hurting economic wealth, they might aspire for more redistributive policies. We further test this explanation in section 3.3. Of course, we are aware that this is only one explanation for our findings; others are possible.

	Government should reduce inequality	Raising Tax	Tax Top 1%	Estate tax	Expenditure on education	Social Insurance and Income Support Programmes
	(1)	(2)	(3)	(4)	(5)	(6)
Video Inequality of Outcomes in US (1)	0.257***	0.162	3.360**	4.762**	-0.110	1.028
	[0.095]	[0.094]	[1.610]	[1.949]	[0.799]	[0.650]
Video Inequality of Outcomes: US vs Canada (2)	0.258***	0.302***	3.818**	6.374***	-0.381	0.811
	[0.094]	[0.094]	[1.600]	[1.937]	[0.794]	[0.645]
Video Inequality of Opportunity in US (3)	0.196**	0.116	2.430	2.880	-0.270	2.176***
	[0.094]	[0.094]	[1.598]	[1.931]	[0.793]	[0.645]
Video Inequality of Opportunity: US vs Canada (4)	0.289***	$0.165^{*}$	0.372	0.951	1.628**	2.148***
	[0.094]	[0.093]	[1.594]	[1.929]	[0.791]	[0.643]
Control mean	3.172	3.695	36.462	28.142	19.644	13.248
p-value diff (1) vs (2)	0.993	0.131	0.773	0.401	0.730	0.735
p-value diff (3) vs (4)	0.315	0.597	0.191	0.311	0.015	0.965
Obs.	1,306	1,306	1,306	1,299	1,305	1,306
R-squared	0.274	0.238	0.110	0.118	0.075	0.076

Table 4: Redistributive preferences - the impact of information that high inequality is not an inevitable part of economic development

Notes: "It is the responsibility of the government to reduce inequality" is a continuous variable. It ranges from 1 (strongly disagree) to 5 (strongly agree). "Raise Tax" refers to the opinion of participants on the following statement: "The government should raise taxes on rich families". Answers could range from 1 (strongly disagree) to 5 (strongly agree). "Tax rate top 1%" and "Estate tax" are continuous (respondents' preferred average tax rate, in percent). "Expenditure on education" and "Social Insurance and Income Support Programs" are continuous (respondents' preferred share of total budget). Controls included in all regressions are indicator variables for gender, age, he/she and his/her parents were born in the US, having children, being married, being full employed, being part-time employed, being self-employed, being unemployed, income class, university degree, trust in government, being "liberal or very liberal", wave, (log) number of "HITs approved", (log) duration of the survey. Standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05.

#### 3.2. Heterogenous impacts of the intervention

The expected impact of informational treatments on redistributive preferences might depend on what participants believe about inequality prior to the informational treatment as well as on socio-economic characteristics of participants. Hence, this section investigates the role of prior knowledge on inequality, trust in government, political ideology and income position in shaping the effects of the informational treatments.

Prior knowledge of inequality. One of the main hypotheses of the recent literature is that low demand for redistribution might be explained by the fact that US citizens misperceive the true level of inequality (Hauser and Norton 2017; Kiatpongsan and Norton 2014; Norton and Ariely 2011; Osberg and Smeeding 2006). Yet, our survey results (before the informational treatments) show that participants tend to generally have a good understanding about the state of inequality in the US. Participants estimate that the share of wealth going to the top 20% is 70%, which is very close to the actual level (73%) (see Online Appendix Figure E1).<sup>23</sup> There is, however, still a reasonable share of people who underestimate inequality. Hence, this section tests the role of prior knowledge of inequality, splitting the sample between people who underestimated the share of wealth held by the richest 20% and those who guessed rightly or even overestimate it. Our findings confirm the important role of prior knowledge. In particular, the informational treatment is particularly strong among those participants who underestimated the current level of inequality in the society; by contrast, the informational treatment has a lower impact on preferences for redistribution among those who overestimated the current level of inequality (Table F1 in Online Appendix F).

 $<sup>^{23}</sup>$  It is also interesting to observe that almost 70% of participants think (before the informational treatments) that a child from one of the poorest 20% of families has a low chance to make it into the richest 20% of families; the chances are 7% (see Figure E2 in the Online Appendix E).

*Trust in the government*. Alesina et al (2018) postulate that the low demand for redistribution might be explained by negative views of the government, possibly because citizens "see the government as a problem and not as the solution" (Alesina et al 2018: 521). This conclusion also applies to Kuziemko et al. (2015) who argue that the small effects of their informational experiment on redistributive preferences might be explained by "distrust in government [that] inhibits respondents from translating concern for inequality into support for redistribution by the government" (Kuziemko et al. 2015: 1481). We also analyze the role of this variable splitting the sample into people who trust the government and people who do not trust the government. Informational treatments have a much larger effect on preferences for public redistribution among people who trust the government (Table F2 in Online Appendix F).

*Political ideology*. Alesina et al (2018) show that their informational treatment has no effect on policy preferences. Yet, results become significant when considering the respondents' political position. "Left-wing respondents are more pessimistic about mobility: their preferences for redistribution are correlated with their mobility perceptions; and they support more redistribution after seeing pessimistic information. None of this is true for right-wing respondents" (Alesina et al 2018: 521). Hence, using information on participants' political position, we split the sample into three groups i.e. conservative, moderate and liberal. In contrast to previous studies, there is not a clear relationship between political position and the impact of information on preferences for redistribution, indicating that our baseline results are not driven by political ideology (Table F3 in Online Appendix F).

*Income position*. Income is recognized as an important factor in explaining how people build their preferences for redistribution. The median voter model predicts that high inequality leads lower-income individuals to demand more redistribution (Meltzer and Richard 1981). Hence, we expect that the informational treatments on lower-income participants have a stronger effect on their support for redistributive policies than for higher-income participants. We analyse the impact of income by splitting the sample into three groups i.e. higher-, middle- and lower-income groups - and then re-estimate the main equation.<sup>24</sup> Results are reported in Online Appendix Table F4. Main results seem to be driven by changes in redistribute preferences in the middle-income group. By contrast, we observe that, in most of the cases, the coefficients of our information treatments are no longer significant at conventional levels only considering the high- or low-income group (Online Appendix Table F4).<sup>25</sup>

#### 4. Information: knowledge or attitude update?

Thus far, our analysis reveals that information on disparities of outcomes and inequality of opportunities shapes preferences for redistribution. But what is the pathway through which information on inequality affect preferences for redistribution?

The objective of informational treatments is typically to change the information set available to economic agents to study how people form and change their preferences if confronted with new information. Some recent literature on preferences for redistribution, however, shows that providing people with information barely affects policy preferences. Our hypothesis is that policy preferences change only when attitudes do, i.e. when high inequalities is

<sup>&</sup>lt;sup>24</sup> We group participants based on the income information reported in our survey, i.e., total household income before taxes. The low-middle income group includes participants reporting less than 40,000 USD or less household income per year. The middle income includes participants reporting between 40,000 USD and 74,999 USD. The high-middle income group includes participants reporting 75,000 USD or more household income per year.

 $<sup>^{25}</sup>$  However, it might be noted that people tend to wrongly estimate their own income position in the income distribution (Cruces et al 2013). Therefore, we develop an additional test considering three groups – below, average, and above – considering participants' perceptions about their income position. The exact question is "Compared with other American families, would you say that your household's income is...". Answers could range from 1 (Far below average) to 5 (Far above average). Results seem to be driven by changes in the preferences of participants who perceive themselves to be in the average-income group (Online Appendix Table F5).

perceived as something that needs to and can be changed. Against this background, we re-estimate our main regressions, but using various indicators capturing attitudes towards inequality as well as an index composed of these indicators, as the depending variable. The index is given by the responses to the following 5 statements: a) differences in wealth in the US are too large; b) wealth within the US should be made more equal; c) in the US everybody has a chance to make it and be economically successful; d) the large gap between the poor and the rich in the US is inevitable; e) the US economic system is fair. Answers to each statement range from 1 (strongly disagree) to 5 (strongly agree). For the sake of simplicity, the coding of the three variables, "everybody has a chance to make it and be economically successful", "the large gap between the poor and the rich in the US is inevitable" and "the US economic system is fair", has been inverted. As a result, the overall index ranges between 5 and 25, with 5 meaning that people are not concerned about inequality in the US and 25 reflecting that people are highly concerned about inequality. Note, that all these questions were asked after the informational treatments.

Results are reported in Table 5. Column 1 shows that information on inequality strongly shapes attitudes towards inequality. Interestingly, information on inequality of outcomes and information on inequality of opportunities, as well as information on the avoidability of inequality influences people's perception of inequality very similarly (Column 1, Panel A).

Table 5 also reports the impact of the informational treatments on each individual indicator used to build the composite indicator of attitudes toward inequality. As expected, the informational treatments on wealth inequality are more likely to change attitudes towards inequalities of outcomes (Column 3, Panel A), whereas the informational treatments on social mobility are more likely to change attitudes towards inequality of opportunities (Column 4, Panel A). However, the effects of the different informational treatments are not statistically different across the various inequality attitudes indicators,

indicating that the informational treatments might function more as a primer for participants than actually updating knowledge on inequality and social mobility.

There is one exception: only showing information on the "changeability" of inequality promotes the idea that inequality is not *inevitable* (Column 5, Panel B). First, this indicates that, here, participants are more likely to be provided with actual new information (and not only primed with regard to high inequality in the US). Indeed the prior ignorance concerning this fact is large. In the control group, only 32% of participants state that the large gap between the poor and the rich in the US is not *inevitable*, whereas 79% already state that wealth inequality is too large in the US (see Table E1 in the Online Appendix E). Second, this latter result helps explain why the informational treatments are often stronger in raising demand for redistributive policies when US inequality (or lack of social mobility) is compared to the case of Canada.

#### Table 5: Attitudes towards Inequality

	Attitudes towards	Differences in	Wealth should be	Not everybody	Inequality is not inevitable	Economic system is unfair
	inequality	wealth in the US are too large	made more equal	has a chance	inevitable	is unfair
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A:						
Video Inequality of Outcomes (1)	1.403***	0.362***	$0.288^{***}$	0.336***	0.199**	0.220***
(-)	[0.276]	[0.075]	[0.071]	[0.080]	[0.085]	[0.070]
Video Inequality of Opportunity (2)	1.434***	0.251***	0.236***	0.534***	0.189**	0.224***
	[0.274]	[0.074]	[0.071]	[0.080]	[0.084]	[0.070]
Control mean	17.046	3.653	4.061	2.966	2.943	3.424
p-value diff (1) vs (2)	0.888	0.064	0.366	0.002	0.887	0.940
Obs.	1,306	1,306	1,306	1,306	1,306	1,306
R-squared	0.342	0.255	0.175	0.261	0.171	0.278
Panel B:						
Video Inequality of Outcomes in US (3)	1.185***	$0.298^{***}$	0.293***	0.258***	0.140	0.196**
1 5 (-7	[0.318]	[0.086]	[0.082]	[0.092]	[0.098]	[0.081]
Video Inequality of Outcomes: US vs Canada (4)	1.615***	0.423***	0.281***	0.412***	0.255***	0.243***
1 5	[0.316]	[0.086]	[0.082]	[0.092]	[0.097]	[0.081]
Video Inequality of Opportunity in US (5)	1.277***	0.227***	0.192**	0.567***	0.109	0.182**
	[0.315]	[0.086]	[0.082]	[0.092]	[0.097]	[0.080]
Video Inequality of Opportunity: US vs Canada (6)	1.596***	0.276***	0.280***	0.504***	0.270***	0.266***
	[0.315]	[0.085]	[0.081]	[0.091]	[0.097]	[0.080]
Control mean	17.046	3.653	4.061	2.966	2.943	3.424
p-value diff (3) vs (4)	0.170	0.141	0.882	0.089	0.232	0.559
p-value diff (5) vs (6)	0.305	0.561	0.274	0.485	0.092	0.289
Obs.	1,306	1,306	1,306	1,306	1,306	1,306
R-squared	0.344	0.256	0.176	0.263	0.174	0.278

Notes: Attitudes towards inequality is given by the responses to the 5 statements reported in columns 2-6. Answers to each statement range from 1 (strongly disagree) to 5 (strongly agree). The overall index of Attitudes towards inequality ranges between 5 and 25, with 5 meaning that people are not concerned about inequality in the US and 25 reflecting that people are highly concerned about inequality. Controls included in all regressions are indicator variables for gender, age, he/she and his/her parents were born in the US, having children, being married, being full employed, being part-time employed, being self-employed, being unemployed, income class, university degree, trust in government, being "liberal or very liberal", wave, (log) number of "HITs approved", (log) duration of the survey. Standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05.

## 4. Multiple inference correction

Testing multiple outcomes, as in our case, increases the probability of making erroneous inferences. Hence, we use two standard ways for dealing with multiple inference problems namely computing the average effect size and implementing a p-value adjustment.

The former approach allows us to test whether the global impact of the treatments is different from zero using thematic indices as dependent variables. Following this strategy, we have built three indexes. The first index combines all the variables used above to measure preferences for redistribution. The second index refers to taxation and combines participants answers about raising taxes on rich families, on the preferred tax rate on the top 1%, and on the preferred estate tax rate. The third index refers to public spending and groups together information on preferences for spending on education and preferences for social insurance and income support programs. We calculate the average effect size across outcomes applying a seemingly unrelated regression framework, taking into account covariance across estimates, in the spirit of Clingingsmith et al (2009).<sup>26</sup> Results are reported in Table G2 in Online Appendix G. They show that similar to our main results, participants prefer to increase taxes when they are exposed to information on inequality of outcomes; by contrast, they prefer to use spending when they receive information on inequality of opportunities (Table G2 in Online Appendix G).

However, the average effect can mask important heterogeneous effects. In such a setting, it would be better to investigate the significance of individual coefficients adjusting p-values through multiple-test procedures (Benjamini and

<sup>&</sup>lt;sup>26</sup> As explained by Clingingsmith et al (2009: 1144), "although results on any component question could potentially be due to chance (Type I error), this is less likely when one simultaneously considers several related questions in an index. Moreover, the use of indices reduces the risk of low statistical power (Type II error)." However, there are also a number of disadvantages associated to this empirical strategy including the difficulties in interpreting the coefficient of the index, the fact that it is not possible to quantify the impact on the individual outcome and the potential bias due to the selection of the indicators used to build the index.

Hochberg 1995). The Familywise Error Rate is one of the most known procedures. According to this, coefficients might be understood as part of a "family" of *n* hypotheses. The family-wise error rate is then defined as the probability of rejecting the null hypothesis of the "family", i.e., at least one type I error in the "family" of hypotheses (Anderson 2008). There are several methods within this procedure used to correct the p-value. The simplest one is the Bonferroni correction that divides the p-value by the number of tests. Yet, this method assumes that outcomes are independent and may suffer from poor power. In this paper, we, thus, use an additional approach based on the free step-down resampling methodology suggested by Westfall and Young (1993).<sup>27</sup>

Yet, the Familywise Error Rate approach becomes too conservative if there is an increasing number of tests. Therefore, Benjamini and Hochberg (1995) suggest to adjust the p-value by applying a False Discovery Rate correction. This is defined as the expected proportion of the null hypotheses that are erroneously rejected considering all rejections. This approach affords better power, while admitting weak control of the Familywise Error Rate in addressing the multiplicity problem (Benjamini and Hochberg 1995).<sup>28</sup> Table G3 in Online Appendix G shows the results of our analysis comparing the initial p-value against the p-value adjusted applying the Familywise Error Rate approach with the methodology suggested by Westfall and Young (1993) (*pwyoung*) and the Bonferroni-Holm correction (*pbonf*), and the p-value adjusted applying the False Discovery Rate approach using the method of Simes (1986) (*simes*).

<sup>&</sup>lt;sup>27</sup> According to Anderson (2008: 1485): "this algorithm is more powerful than the Bonferroni correction (and other algorithms) for three reasons. First, the free step-down resampling method computes an exact probability rather than an upper bound ... Second, when a hypothesis is rejected, the free step-down resampling method removes it from the family being tested, increasing the power of the remaining tests... Finally, unlike Bonferroni, free step-down resampling incorporates dependence between outcomes. This can substantially increase power if outcomes are highly correlated".

<sup>&</sup>lt;sup>28</sup> Indeed, "if all tested hypotheses are true, controlling the FDR [False Discovery Rate] controls the traditional FEW [Familywise Error Rate]. But when many of the tested hypotheses are rejected, indicating that many hypotheses are not true, the error from a single erroneous rejection is not always as crucial for drawing conclusions from the family tested, and the proportion of errors is controlled instead" (Benjamini and Yekutieli 2001: 1167).

Results are similar using different methodologies and are in line with our baseline estimates.

# 5. Conclusion

Do different types of inequality lead citizens' to have different preferences for redistribution? We conducted an online experiment using the Amazon Mechanical Turk (MTurk) platform on a sample of approximately 1,500 individuals. We show that information on different types of inequalities may have different effects on people's redistributive preferences; information on lack of social mobility is more likely to increase preferences for direct fiscal redistribution through spending, while information on disparities of outcomes tends to increase support for reducing inequality through increasing tax rates for the rich. We also find that especially among citizens who trust the government and underestimate the current level of inequality, information on inequality increases support for redistributive policies.

Interestingly, we show that the informational treatment is in most cases stronger once people are provided with information that economic development is possible without high(er) inequalities. This finding seems to suggest that an individual's preference for redistribution is also influenced by whether the individual believes that reforms to promote equality are possible without reducing average wealth. Finally, our results suggest that information about avoidability updates most participants' knowledge, whereas other information treatments may be more of a primer, with most participants knowing about high inequality and low social inequality in the US.

Our study creates new foundational knowledge about inequality and preferences for redistribution, but we also want to highlight some limitations of our work. As explained above, our study relies on experimental data collected from MTurk that began experiencing a "bot crisis" in the summer of 2018. We took extensive measures to guarantee data quality and to test the robustness of our results. Moreover, experimenter demand effects are a common concern with experimental studies (Orne 1962; Zizzo 2010), however, it seems that this effect is less important in the context of online survey experiments (de Quidt et al., 2018; Haaland et al 2023; Mummolo and Peterson, 2019).

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#### **ONLINE APPENDIX**

# for "Demand for redistribution: the role of information about inequality of outcomes and opportunity"

Isabel Günther and Bruno Martorano

#### **Appendix A. Survey Questionnaire**

We have reported the answer options in italic below the question. Answers options are separated by a semicolon. Many of our questions were taken from the survey of Alesina et al. (2018).

#### 1. Informed Consent

I am aged 18 or older.

Yes; No

#### 2. I have read the information and want to participate in this study.

Yes; No

#### 3. What is your gender?

Male; Female; Other; Rather not say

# 4. In what year were you born? Please select the relevant year from the dropdown list.

2000; 1999; 1998; 1997; 1996; 1995; 1994; 1993; 1992; 1991; 1990; 1989; 1988; 1987; 1986; 1985; 1984; 1983; 1982; 1981; 1980; 1979; 1978; 1977; 1976; 1975; 1974; 1973; 1972; 1971; 1970; 1969; 1968; 1967; 1966; 1965; 1964; 1963; 1962; 1961; 1960; 1959; 1958; 1957; 1956; 1955; 1954; 1953; 1952; 1951; 1950; 1949; 1948; 1947; 1946; 1945

#### 5. What is your family background?

Both of my parents and I were born in the United States; I was born in the United States but one (or both) of my parents was (were) NOT born in the United States; I was NOT born in the United States.

#### 6. Do you have children?

No; Yes

#### 7. What is your marital status?

Single; Married; Other

#### 8. What is your highest educational attainment?

Some high school, no degree; High school diploma; Some college, no degree; Bachelor's degree; Graduate degree (Master's, Ph.D.); Other, please specify

#### 9. What is your current employment status?

Full-time employee; Part-time employee; Self-employed or small business owner; Unemployed and looking for a job; Student; Not in the labor force (for example retired, full-time parent)

#### 10. What was your TOTAL household income before taxes last year (2017)?

0 USD to 9,999 USD; 10,000 USD to 14,999 USD; 15,000 USD to 19,999 USD; 20,000 USD to 29,999 USD; 30,000 USD to 39,999USD; 40,000 USD to 49,999 USD; 50,000 USD to 74,999 USD; 75,000 USD to 99,999 USD; 100,000 USD to 124,999 USD; 125,000 USD to 149,999 USD; 150,000 USD to 199,999 USD; 200,000 USD and over; Don't know, and can't guess; Rather not say

#### 11. How would you describe your ethnicity/race?

European American / White; African American / African; Hispanic / Latino; Asian American / Asian, Other

#### 12. In which state do you live today?

AL; AK; AZ; AR; CA; CO; CT; DC; DE; FL; GA; HI; ID; IL; IN; IA; KS; KY; LA; ME; MD; MA; MI; MN; MS; MO; MT; NE; NV; NH; NJ; NM; NY; NC; ND; OH; OK; OR; PA; RI; SC; SD; TN; TX; UT; VT; VA; WA; WV; WI; WY

#### 13. What is your total number of "HITs approved"?

If you do not know this number you can find it on https://worker.mturk.com/dashboard. Enter 0 if this is your first HIT on MTurk.

# 14. Compared with other American families, would you say that your household's income is...

Far below average; Below average; Average; Above average; Far above average

#### 15. What do you think: which has more to do with why a person is poor?

Because of lack of effort on his or her part; Because he or she does not have any particular talent; Because of bad luck; Because of lack of opportunities; Because of family background; Because of governmental policies

#### 16. What do you think: which has more to do with why a person is rich?

Because he or she has worked harder than others; Because he or she has more talents; Because of luck; Because of great opportunities; Because of family background; Because of governmental policies

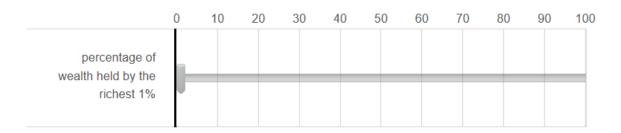
17. What do you think are the chances that a child from one of the 20% poorest families will grow up to be among the richest 20% of families?

Close to zero; Low; Fairly low; Fairly high; High

**18.** Have a guess: How much more wealth do the the richest 20% of US families have in comparison to the poorest 20% of US families?

5 times more wealth; 10 times more wealth; 25 times more wealth; 50 times more wealth; 100 times more wealth

**19.** Have a guess: How much of the total wealth in the US (including cash, bonds, stocks, and real estate) is held by the richest 1% of the US population?



20. Have a guess: How much of the total wealth in the US (including cash, bonds, stocks, and real estate) is held by the richest 20% of the US population?

	0	10	20	30	40	50	60	70	80	90	100
percentage of wealth held by the richest 20%											

#### 21. How much of the time can you trust the government to do what is right?

All the time; Most of the time; Only some of the time; Rarely; Never

22. Before proceeding to the next section, we want to ask for your feedback about the responses you provided so far. It is vital to our study that we only include responses from people who devoted their full attention to this study. This will not affect the payment you will receive for taking this Survey in any way. In your honest opinion, have you devoted your full attention to this study so far?

Yes, I have devoted my full attention to the questions so far and I think you should use my responses for your study; No, I have not devoted full attention to the questions so far and I think you should NOT use my responses for your study

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#### [INFORMATIONAL TREATMENTS – see Appendix B]

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#### 23. To how many countries are the US compared in the video?

None; One; Two; Can't remember; There was no information in the video that would help me to answer this question.

24. In the video, families are sorted from the poorest to the richest and divided into:

3 groups; 5 groups; 10 groups; Can't remember; There was no information in the video that would help me to answer this question.

25. Out of 100 children born in the poorest 20% of families in the US, how many make it to the top 20% over the course of their life time?

0 out of 100; 7 out of 100; 20 out of 100; Can't remember; There was no information in the video that would help me to answer this question.

26. Please indicate whether you agree or disagree with the following statement: "Differences in wealth in the US are too large."

Strongly disagree; Disagree; Neither agree nor disagree; Agree; Strongly agree

27. Please indicate whether you agree or disagree with the following statement: "In the United States everybody has a chance to make it and be economically successful."

Strongly disagree; Disagree; Neither agree nor disagree; Agree; Strongly agree

28. Please indicate whether you agree or disagree with the following statement: "Wealth within the US should be made more equal."

Strongly disagree; Disagree; Neither agree nor disagree; Agree; Strongly agree

29. Please indicate whether you agree or disagree with the following statement: "The large gap between the poor and the rich in the US is inevitable."

Strongly disagree; Disagree; Neither agree nor disagree; Agree; Strongly agree

30. How fair do you think is the economic system in the United States?

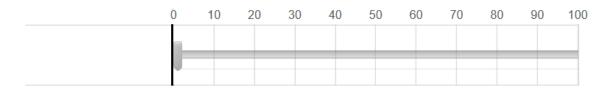
Very fair; Fair; Neither fair nor unfair; Unfair; Very unfair

---

31. In your opinion, what should be the income tax rate of the richest 1% of families?

	Ò	10	20	30	40	50	60	70	80	90	100
	_										
	Ť										

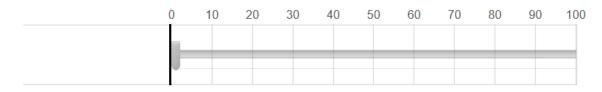
32. In your opinion, what should be the income tax rate of the next richest 19% of families (81-99 percentile)?



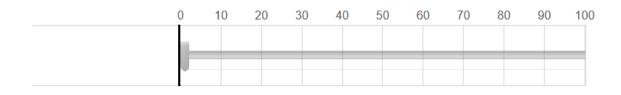
33. In your opinion, what should be the income tax rate of the next 30% of families (51-80 percentile)?

Ò	10	20	30	40	50	60	70 8	30 9	0 100
_									
-									
·									

34. In your opinion, what should be the income tax rate of the bottom 50% of families (0-50 percentile)?



35. The estate tax is a tax on the transfer of wealth from a deceased person to his or her heirs. In your opinion, what should be the estate tax rate for the richest 20% of families?



36. We now ask you how you would like to spend the total government budget. Suppose that you are the person in charge of the US budget for the next year. You can choose how you want to divide the budget (in percentages) between the following 6 categories (summing up to 100%).

 Public Spending on Health : \_\_\_\_\_\_; Spending on Schooling and Higher Education

 : \_\_\_\_\_\_; Defense and National Security : \_\_\_\_\_\_; Social Insurance and Income

 Support Programs : \_\_\_\_\_\_; Social Security, Medicare : \_\_\_\_\_; Public

 Infrastructure : \_\_\_\_\_; Total : \_\_\_\_\_\_

**37.** Please indicate whether you agree or disagree with the following statement: "The government should raise taxes on rich families."

Strongly disagree; Disagree; Neither agree nor disagree; Agree; Strongly agree

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

Very liberal; Liberal; Moderate; Conservative; Very conservative; Rather not say

**39.** If you wish, feel free to comment on this study.

#### **Appendix B. Informational treatments**

#### Information on Wealth inequality in the USA.

This video provides facts about wealth inequality in the United States. 161 million families live in the United States. Let's sort them from the poorest to the richest and divide them into five groups of equal size. This means from the poorest 20% to the richest 20%. Now consider the total wealth of all families in the United States, which is almost 75 trillion US Dollars. If we would distribute this wealth equally, it would look like this. Each group, from the bottom group to the top group, would own an equal share of 20% of the overall wealth. In other words, if all wealth would be distributed equally each family would own on average 528 thousand US Dollars. However, the actual distribution in the United States is far from equal, the reality looks like this: the average wealth of a family in the poorest group is 88 thousand US Dollars. The average wealth of a family in the richest group is about 2 million US Dollars. This means that the richest 20 percent of the population owns 73 percent of the total wealth. The other 80 percent of the population shares only 27 percent of the total wealth. Even more disturbing is the fact that the richest 1 percent alone owns almost half of the total wealth in the United States. Although the United States are one of the richest nations in the world, wealth is in the hands of few.

#### Wealth Inequality: USA vs Canada

This video provides facts about wealth inequality in the United States and Canada. Both countries are equally wealthy and among the richest countries in the world. 161 million families live in the United States. Let's sort them from the poorest to the richest and divide them into five groups of equal size. This means from the poorest 20% to the richest 20%. Now consider the total wealth of all families in the United States, which is almost 75 trillion US Dollars. If we would distribute this wealth equally, it would look like this. Each group, from the bottom group to the top group, would own an equal share of 20% of the overall wealth. In other words, if all wealth would be distributed equally each family would own on average 528 thousand US Dollars. However, the actual distribution in the United States is far from equal, the reality looks like this. The average wealth of a family in the poorest group is 88 thousand US Dollars. The average wealth of a family in the richest group is about 2 million US Dollars. Now, let's compare the United States to Canada. While both countries are equally rich, wealth inequality is high in the United States whereas it is much more equally distributed in Canada. The middle class in Canada owns almost twice the wealth than the middle class in the United States. While in the United States the richest 20 percent of the population holds 73 percent of the country's total wealth, Canada's richest 20 percent of the population holds only 47 percent. Even more disturbing is the fact that the richest 1 percent in the United States owns almost half of the total wealth. In Canada the richest 1 percent owns only 15 percent of the total wealth. Canada's shared prosperity shows that most American families could lead a much better live if wealth would be more equally distributed.

#### Information on Wealth inequality in the USA - Equal Opportunities?

This video provides facts about wealth inequality and equality of opportunities in the United States. 161 million families live in the United States. Let's sort them from the poorest to the richest and divide them into five groups of equal size. This means from the poorest 20% to the richest 20%. Now consider the total wealth of all families in the United States, which is almost 75 trillion US Dollars. If we would distribute this wealth equally, it would look like this. Each group, from the bottom group to the top group, would own an equal

share of 20% of the overall wealth. In other words, if all wealth would be distributed equally each family would own on average 528 thousand US Dollars. However, the actual distribution in the United States is far from equal, the reality looks like this: the average wealth of a family in the poorest group is 88 thousand US Dollars. The average wealth of a family in the richest group is about 2 million US Dollars. But in terms of equal opportunities the question is less what is the difference between the bottom and the top, but rather what are your chances of climbing up the economic ladder and moving from the bottom to the top. Let's say 100 children are born into the poorest 20% of families. If the US would provide equal chances to everybody, being born into the poorest families would have no effect on the future wealth of these 100 children. Children would have the same chance to end up in any of the wealth groups. That means 20 out of 100 children should make it to the richest 20% of the population over their lifetime. However, the reality is quite different. Only seven out of 100 children will make it to the richest 20 percent of the population. The USA shows very low social mobility. The "American dream" is far from reality.

# Information on Wealth inequality in the USA and Canada - Equal Opportunities?

This video provides facts about wealth inequality and equality of opportunities in the United States and Canada. 161 million families live in the United States. Let's sort them from the poorest to the richest and divide them into five groups of equal size. This means from the poorest 20% to the richest 20%. Now consider the total wealth of all families in the United States, which is almost 75 trillion US Dollars. If we would distribute this wealth equally, it would look like this. Each group, from the bottom group to the top group, would own an equal share of 20% of the overall wealth. In other words, if all wealth would be distributed equally each family would own on average 528 thousand US Dollars. However, the actual distribution in the United States is far from

equal, the reality looks like this. The average wealth of a family in the poorest group is 88 thousand US Dollars. The average wealth of a family in the richest group is about 2 million US Dollars. Now, let's compare the United States to Canada. While both countries are equally rich, in US the richest 20 percent of the population holds 73 percent of the country's total wealth, while Canada's richest 20 percent of the population holds only 47 percent. But in terms of equal opportunities the question is less what is the difference between the bottom and the top, but rather what are your chances of climbing up the economic ladder and moving from the bottom to the top. Let's say 100 children are born into the poorest 20% of families ... If the US and Canada would provide equal chances to everybody, being born into the poorest families would have no effect on the future wealth of these 100 children. That means 20 out of 100 children should make it to the richest 20% of the population over their lifetime. However, the reality is quite different. While only seven out of 100 children in US will make it to the richest 20 percent of the population, 19 out of 100 children in Alberta (Canada) should have the possibility to end up in the wealthiest group over their lifetime. Canada's shared prosperity shows that most American families could lead a much better live today and tomorrow if wealth would be more equally distributed.

## Appendix C. Data quality analysis

Table C1: Balance Test

	(1)	(2)	(3)
		Treatment -	Treatment -
	Treatment	Inequality of	Inequality of
		Outcomes	Opportunity
Female	0.0254	0.00367	0.0218
	(0.0228)	(0.0284)	(0.0286)
Age	-0.000261	0.00201	-0.00227
-	(0.00105)	(0.00131)	(0.00132)
US-born (Yes=1)	0.0468	0.0309	0.0160
	(0.0286)	(0.0357)	(0.0359)
Married (Yes=1)	0.0230	0.0131	0.00984
	(0.0263)	(0.0328)	(0.0330)
Children (Yes=1)	-0.0307	0.0167	-0.0475
	(0.0267)	(0.0333)	(0.0335)
University	0.0161	-0.0369	0.0531
	(0.0234)	(0.0291)	(0.0293)
Full-time employee (Yes=1)	0.0526	0.0159	0.0367
	(0.0335)	(0.0418)	(0.0420)
Part-time employee (Yes=1)	0.0399	0.0164	0.0235
	(0.0424)	(0.0529)	(0.0532)
Self-employed (Yes=1)	0.0659	0.0590	0.00698
	(0.0421)	(0.0525)	(0.0527)
Unemployed (Yes=1)	0.0196	0.0100	0.00962
	(0.0530)	(0.0660)	(0.0664)
Income class (\$20,000-\$40,000)	-0.0224	0.0180	-0.0404
	(0.0380)	(0.0474)	(0.0476)
Income class (\$40,000-\$75,000)	-0.0337	-0.0598	0.0261
	(0.0370)	(0.0461)	(0.0463)
Income class (\$75,000-\$125,000)	-0.00677	0.0435	-0.0502
	(0.0424)	(0.0528)	(0.0531)
Income class (\$125,000 and over)	-0.0501	-0.00287	-0.0473
meome class (\$123,000 and over)	(0.0531)	(0.0662)	(0.0666)
Trust in government	-0.0142	-0.0372**	0.0230
Trust in government	(0.0141)	(0.0176)	(0.0176)
Liberal (Yes=1)	0.00364	0.00446	-0.000811
	(0.0226)	(0.0281)	(0.0283)
Wave	0.00519	-0.00210	0.00729
wave	(0.0219)	(0.0273)	(0.00729)
In hits	-0.00205	-0.0124**	0.0103
<u></u>	(0.00488)	(0.00608)	(0.0103)
In time	(0.00488) 0.217***	(0.00608) 0.0896**	0.127***
ln_time			
Constant	(0.0297) -0.640***	(0.0370)	(0.0372) -0.544**
Constant		-0.0954	
	(0.211)	(0.263)	(0.264)
Observations	1,306	1,306	1,306
R-squared Notes: We use an OLS regression for	0.050	0.026	0.022

Notes: We use an OLS regression for running the balance test. The treatment status is regressed on the observable characteristics. Standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05.

	To how many countries are the US compared in the video?	In the video, families are sorted from the poorest to the richest and divided into how many groups?	Out of 100 children born in the poorest 20% of families in the US, how many make it to the top 20% over the course of their lifetime?	% replying correctly to at least 2 out of 3 questions
Video Inequality of Outcomes	74	91	84	90
Video Inequality of Opportunities	78	97	90	96

Table C2. Share of the respondents (by treatment and questions) who reported correct answers

	Government	Raising Tax	Tax Top 1%	Estate tax	Expenditure on	Social
	should reduce				education	Insurance and
	inequality					Income Support
						Programmes
	(1)	(2)	(3)	(4)	(5)	(6)
Video Inequality of Outcomes (1)	0.233***	$0.222^{***}$	3.389**	5.066***	-0.045	0.935
	[0.083]	[0.083]	[1.392]	[1.694]	[0.706]	[0.551]
Video Inequality of Opportunities (2)	0.246***	0.144	1.290	1.533	0.747	2.194***
	[0.081]	[0.081]	[1.371]	[1.668]	[0.695]	[0.543]
Control mean	3.172	3.695	36.462	28.142	19.644	13.248
p-value diff $(1)$ vs $(2)$	0.844	0.244	0.064	0.010	0.168	0.005
Obs.	1,242	1,242	1,242	1,235	1,241	1,242
R-squared	0.290	0.251	0.127	0.128	0.073	0.090

Table C3. Redistributive preferences - participants who did answer correctly to at least 2 out of 3 "attention check" questions

Notes: Baseline estimations with only participants who answered correctly at least 2 out of 3 "attention check" questions. "It is the responsibility of the government to reduce inequality" is a continuous variable. It ranges from 1 (strongly disagree) to 5 (strongly agree). "Raise Tax" refers to the opinion of participants on the following statement: "The government should raise taxes on rich families". Answers could range from 1 (strongly disagree) to 5 (strongly agree). "Raise Tax" refers to the opinion of participants on the following statement: "The government should raise taxes on rich families". Answers could range from 1 (strongly disagree) to 5 (strongly agree). "Tax rate top 1%" and "Estate tax" are continuous (respondents' preferred average tax rate, in percent). "Expenditure on education" and "Social Insurance and Income Support Programs" are continuous (respondents' preferred share of total budget). Controls included in all regressions are indicator variables for gender, age, he/she and his/her parents were born in the US, having children, being married, being full employed, being part-time employed, being self-employed, being unemployed, income class, university degree, trust in government, being "liberal or very liberal", wave, (log) number of "HITs approved", (log) duration of the survey. Standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05.

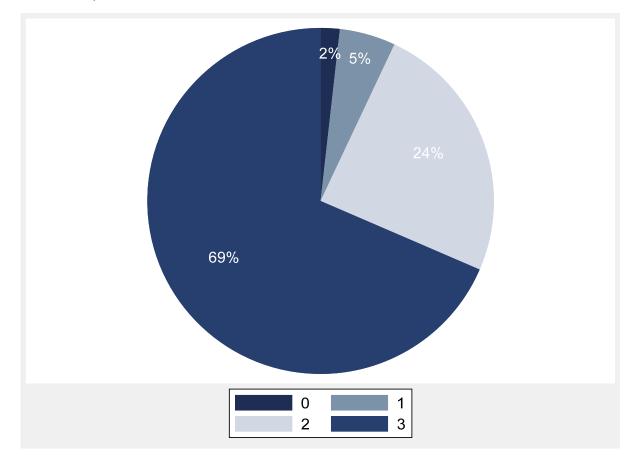


Figure C1. Share of people reporting 0, 1, 2 or 3 correct answers (control group is excluded)

# Appendix D. Descriptive statistics

Table D1. Descriptive statistics

	Mean	Std. Dev.	Min	Max
Female	0.53	0.50	0	1
Age	37.24	11.92	18	73
US-born (Yes=1)	0.81	0.39	0	-
Married (Yes=1)	0.42	0.49	0	
Children (Yes=1)	0.46	0.50	0	
University	0.56	0.50	0	
Full-time employee (Yes=1)	0.55	0.50	0	
Part-time employee (Yes=1)	0.12	0.32	0	
Self-employed (Yes=1)	0.12	0.33	0	
Unemployed (Yes=1)	0.06	0.24	0	
Income class (\$0-\$20,000)	0.14	0.35	0	
Income class (\$20,000-\$40,000)	0.24	0.43	0	
Income class (\$40,000-\$75,000)	0.34	0.48	0	
Income class (\$75,000-\$125,000)	0.20	0.40	0	
Income class (\$125,000 and over)	0.08	0.27	0	
Trust in government	2.80	0.78	1	:
Liberal (Yes=1)	0.45	0.50	0	
Wave	1.50	0.50	1	4
ln_hits	7.59	2.36	0	1:
ln_time	6.57	0.38	6	

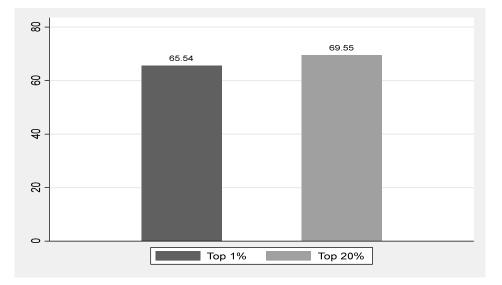
# Appendix E: Knowledge of inequality and attitudes toward inequality

	Differences in wealth in the US are too large	Wealth within the US should be made more equal	Not Everybody has a chance to make it and be econ. successful	The large gap between the poor and the rich in the US is <b>not</b> inevitable	The US economic system is unfair
Strongly agree	41.22	21.76	6.49	9.54	11.07
Agree	37.40	41.60	33.59	22.90	44.27
Neither agree nor disagree	9.92	21.37	17.94	25.57	26.34
Disagree	9.16	10.69	33.97	36.26	12.60
Strongly disagree	2.29	4.58	8.02	5.73	5.73

Table E1. Respondents' attitudes toward inequality

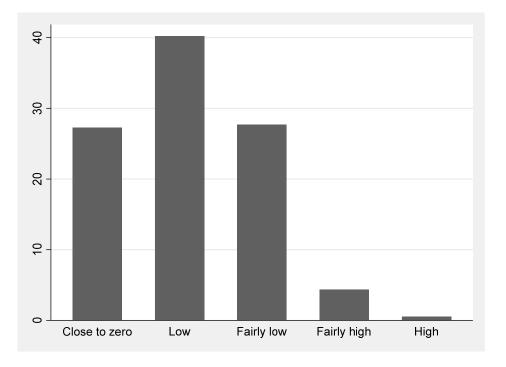
Source: Authors' calculation. Notes: statistics are computed on control group (N=262).

Figure E1. Participants' perceptions of wealth inequality in US — total wealth in the US held by the richest 1% and the top 20% of the US population



Source: Authors' calculation

Figure E2. Participants' perceptions of social mobility in US: chances that a child from one of the poorest 20% of families will grow up to be among the richest 20% of families.



Source: Authors' calculation. Notes: the exact question is "What do you think are the chances that a child from one of the 20% poorest families will grow up to be among the richest 20% of families?"

## Appendix F: Heterogenous impact of the intervention

Table F1. Share of wealth top 20%

	1	2	3	4	5	6
	It is the resp. of the government to reduce inequality	Raise Tax	Tax Top 1%	Estate tax	Expenditure on education	Social Insurance and Income Sup. Programmes
<u>Underestimate</u>						
Video Inequality of Outcomes (1)	0.280**	$0.370^{***}$	7.522***	7.965***	-0.752	0.619
	[0.136]	[0.134]	[2.254]	[2.644]	[1.115]	[0.995]
Video Inequality of Opportunities (2)	0.260	0.198	1.954	0.858	0.331	1.963
	[0.139]	[0.137]	[2.303]	[2.702]	[1.139]	[1.017]
Control mean	3.052	3.500	31.667	25.885	20.042	13.375
p-value diff (1) vs (2)	0.845	0.096	0.001	0.000	0.204	0.078
Obs.	530	530	530	530	530	530
R-squared	0.263	0.204	0.107	0.113	0.087	0.074
Overestimate						
Video Inequality of Outcomes (3)	0.242**	0.135	1.244	3.876	0.155	1.214
	[0.104]	[0.104]	[1.785]	[2.224]	[0.902]	[0.680]
Video Inequality of Opportunities (4)	0.241**	0.104	1.132	2.747	1.015	2.419***
	[0.102]	[0.102]	[1.751]	[2.180]	[0.885]	[0.667]
Control mean	3.241	3.807	39.235	29.455	19.412	13.175
p-value diff (3) vs (4)	0.995	0.720	0.939	0.536	0.244	0.031
Obs.	776	776	776	769	775	776
R-squared	0.300	0.271	0.124	0.134	0.075	0.096

Notes: Dependent variables and controls are the same as in Table 3. Standard errors are in parentheses. \*\*\* p<0.01, \*\* p<0.05.

	1	2	3	4	5	6	
	Responsibility of the government to reduce inequality	Raise Tax	Tax Top 1%	Estate tax	Expenditure on education	Social Insurance and Income Support Programmes	
<u>Trust</u>							
Video Inequality of Outcomes (1)	0.356***	0.298***	3.646**	5.688***	-0.008	0.401	
	[0.097]	[0.094]	[1.614]	[1.956]	[0.797]	[0.637]	
Video Inequality of Opportunities (2)	0.275***	0.176	1.167	2.046	1.580**	1.705***	
	[0.095]	[0.093]	[1.591]	[1.927]	[0.786]	[0.628]	
Control mean	3.157	3.670	36.730	28.163	19.157	13.773	
p-value diff (1) vs (2)	0.303	0.112	0.059	0.022	0.015	0.012	
Obs.	883	883	883	880	883	883	
R-squared	0.231	0.205	0.100	0.120	0.083	0.057	
<u>No trust</u>							
Video Inequality of Outcomes (1)	0.082	0.128	3.446	4.925	-1.097	2.309**	
	[0.152]	[0.158]	[2.742]	[3.275]	[1.379]	[1.135]	
Video Inequality of Opportunities (2)	0.153	0.079	1.690	1.456	-1.409	3.427***	
	[0.154]	[0.161]	[2.787]	[3.328]	[1.402]	[1.154]	
Control mean	3.208	3.753	35.818	28.091	20.829	11.987	
p-value diff (1) vs (2)	0.540	0.687	0.404	0.169	0.767	0.199	
Obs.	423	423	423	419	422	423	
R-squared	0.413	0.342	0.168	0.177	0.099	0.159	

## Table F2. Regression results on policy preferences – trust in government

Notes: Dependent variables and controls are the same as in Table 3. Standard errors are in parentheses. \*\*\* p<0.01, \*\* p<0.05.

	1	2	3	4	5	6
	Responsibility of the government to reduce inequality	Raise Tax	Tax Top 1%	Estate tax	Expenditure on education	Social Insurance and Income Support Programmes
Conservative						
Video Inequality of Outcomes (1)	0.500***	0.175	1.934	5.297	-0.872	0.376
	[0.175]	[0.189]	[2.520]	[2.963]	[1.515]	[1.089]
Video Inequality of Opportunities (2)	0.578***	0.110	-0.314	4.027	1.816	1.981
	[0.180]	[0.194]	[2.581]	[3.036]	[1.553]	[1.115]
Control mean	1.955	2.746	28.134	15.672	18.106	10.910
p-value diff (1) vs (2)	0.589	0.681	0.282	0.606	0.032	0.076
Obs.	330	330	330	326	329	330
R-squared	0.223	0.125	0.155	0.217	0.141	0.096
Moderate						
Video Inequality of Outcomes (1)	0.147	0.366**	4.295	6.988**	-0.716	2.026
	[0.156]	[0.154]	[2.584]	[3.047]	[1.322]	[1.039]
Video Inequality of Opportunities (2)	0.019	0.031	0.305	-0.451	-0.588	2.735***
	[0.154]	[0.152]	[2.551]	[3.006]	[1.305]	[1.026]
Control mean	3.122	3.568	35.797	26.260	21.081	12.149
p-value diff $(1)$ vs $(2)$	0.301	0.006	0.051	0.002	0.903	0.387
Obs.	392	392	392	389	392	392
R-squared	0.060	0.054	0.046	0.069	0.101	0.090

# Table F3. Regression results on policy preferences – political position

<u>Liberal</u>						
Video Inequality of Outcomes (1)	0.168	0.173	2.884	3.541	0.395	0.702
	[0.098]	[0.089]	[2.111]	[2.595]	[0.943]	[0.847]
Video Inequality of Opportunities (2)	0.164	$0.184^{**}$	1.677	0.934	0.857	$2.040^{**}$
	[0.097]	[0.088]	[2.085]	[2.563]	[0.931]	[0.836]
Control mean	3.873	4.322	41.483	36.424	19.678	15.178
p-value diff (1) vs (2)	0.967	0.871	0.467	0.201	0.532	0.045
Obs.	584	584	584	584	584	584
R-squared	0.088	0.080	0.093	0.068	0.084	0.062

Notes: Dependent variables and controls are the same as in Table 3. Standard errors are in parentheses. \*\*\* p<0.01, \*\* p<0.05.

	1	2	3	4	5	6
	Responsibility of the government to reduce inequality	Raise Tax	Tax Top 1%	Estate tax	Expenditure on education	Social Insurance and Income Support Programmes
Lower-income group						
Video Inequality of Outcomes (1)	0.024	0.145	0.786	1.710	-0.982	-0.111
	[0.130]	[0.126]	[2.494]	[2.877]	[1.065]	[1.019]
Video Inequality of Opportunities (2)	0.042	0.093	-1.072	-3.581	0.763	1.338
	[0.131]	[0.127]	[2.515]	[2.901]	[1.075]	[1.028]
Control mean	3.533	3.880	39.217	32.598	19.609	14.891
p-value diff (1) vs (2)	0.860	0.595	0.339	0.018	0.036	0.068
Obs.	496	496	496	496	496	496
R-squared	0.264	0.210	0.114	0.139	0.112	0.058
<u>Middle-income group</u>						
Video Inequality of Outcomes (1)	0.456***	0.313**	6.936***	8.568***	1.858	2.312**
	[0.141]	[0.146]	[2.318]	[2.872]	[1.255]	[0.956]
Video Inequality of Opportunities (2)	$0.481^{***}$	0.289**	4.590**	6.150**	1.900	3.271***
	[0.134]	[0.140]	[2.216]	[2.746]	[1.199]	[0.914]
Control mean	2.916	3.516	32.842	24.479	18.957	11.968
p-value diff (1) vs (2)	0.819	0.841	0.209	0.295	0.967	0.213
Obs.	450	450	450	445	449	450
R-squared	0.271	0.236	0.133	0.096	0.117	0.111

# Table F4. Regression results on policy preferences – Income position

<u>Higher-income group</u>						
Video Inequality of Outcomes (1)	0.266	0.217	1.932	5.609	-1.985	0.619
	[0.164]	[0.164]	[2.475]	[3.104]	[1.343]	[0.919]
Video Inequality of Opportunities (2)	0.166	-0.019	-0.443	2.275	-1.375	1.352
	[0.167]	[0.167]	[2.524]	[3.162]	[1.369]	[0.937]
Control mean	3.041	3.685	37.521	26.781	20.699	12.795
p-value diff (1) vs (2)	0.462	0.081	0.245	0.194	0.582	0.333
Obs.	360	360	360	358	360	360
R-squared	0.316	0.280	0.131	0.185	0.064	0.133

Notes: Dependent variables and controls are the same as in Table 3. Standard errors are in parentheses. \*\*\* p<0.01, \*\* p<0.05.

	1	2	3	4	5	6
	Responsibility of the government to reduce inequality	Raise Tax	Tax Top 1%	Estate tax	Expenditure on education	Social Insurance and Income Support Programmes
Below the average						
Video Inequality of Outcomes (1)	0.158	0.133	2.181	3.878	0.314	0.690
	[0.127]	[0.131]	[2.327]	[2.731]	[1.029]	[0.958]
Video Inequality of Opportunities (2)	0.134	0.038	-0.962	-2.021	1.743	2.416**
	[0.125]	[0.130]	[2.302]	[2.702]	[1.018]	[0.947]
Control mean	3.396	3.911	39.495	31.208	18.198	13.832
p-value diff (1) vs (2)	0.811	0.366	0.092	0.007	0.083	0.025
Obs.	501	501	501	500	501	501
R-squared	0.306	0.222	0.165	0.165	0.089	0.068
Average						
Video Inequality of Outcomes (1)	0.284**	0.397***	5.653***	8.086***	-0.463	1.123
	[0.131]	[0.122]	[2.163]	[2.608]	[1.120]	[0.883]
Video Inequality of Opportunities (2)	0.293**	0.310**	3.427	4.723	0.624	1.959**
	[0.132]	[0.123]	[2.180]	[2.628]	[1.129]	[0.890]
Control mean	3.065	3.472	32.926	25.056	20.804	12.852
p-value diff $(1)$ vs $(2)$	0.929	0.373	0.194	0.105	0.220	0.232
Obs.	567	567	567	564	566	567
R-squared	0.235	0.260	0.092	0.101	0.107	0.075

Table F5. Regression results on policy preferences – Participants' perception of their own income position

Above the average						
Video Inequality of Outcomes (1)	0.421**	0.034	1.495	3.477	-2.241	0.647
	[0.196]	[0.207]	[3.008]	[3.961]	[1.713]	[1.149]
Video Inequality of Opportunities (2)	0.351	0.048	1.292	3.153	-1.794	2.463**
	[0.190]	[0.201]	[2.919]	[3.844]	[1.663]	[1.115]
Control mean	2.962	3.736	37.887	28.596	20.057	12.943
p-value diff $(1)$ vs $(2)$	0.669	0.935	0.935	0.921	0.753	0.059
Obs.	238	238	238	235	238	238
R-squared	0.383	0.324	0.188	0.223	0.114	0.222

Notes: Dependent variables and controls are the same as in Table 3. Standard errors are in parentheses. \*\*\* p<0.01, \*\* p<0.05.

#### **Appendix G: Robustness tests**

Table G1: Redistributive preferences – no controls

	Government should reduce inequality	Raising Tax	Tax Top 1%	Estate tax	Expenditure on education	Social Insurance and Income Support Programmes
	(1)	(2)	(3)	(4)	(5)	(6)
Video Inequality of Outcomes (1)	0.276***	0.221**	3.508**	5.573***	-0.377	0.753
	[0.091]	[0.089]	[1.410]	[1.709]	[0.707]	[0.555]
Video Inequality of Opportunities (2)	0.253***	0.123	1.070	1.836	0.870	$1.862^{***}$
	[0.091]	[0.088]	[1.402]	[1.699]	[0.704]	[0.552]
Control mean	3.172	3.695	36.462	28.142	19.644	13.248
p-value diff (1) vs (2)	0.756	0.167	0.032	0.007	0.028	0.013
Obs.	1,351	1,351	1,351	1,344	1,350	1,351
R-squared	0.007	0.005	0.006	0.010	0.004	0.010

Notes: "It is the responsibility of the government to reduce inequality" is a continuous variable. It ranges from 1 (strongly disagree) to 5 (strongly agree). "Raise Tax" refers to the opinion of participants on the following statement: "The government should raise taxes on rich families". Answers could range from 1 (strongly disagree) to 5 (strongly agree). "Tax rate top 1%" and "Estate tax" are continuous (respondents' preferred average tax rate, in percent). "Expenditure on education" and "Social Insurance and Income Support Programs" are continuous (respondents' preferred share of total budget). Standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05.

	1	2	3
	Redistributive preferences	Taxation	Spending
Video Inequality of Outcomes	0.145***	0.213***	0.050
	[0.045]	[0.061]	[0.048]
Video Inequality of Opportunities	0.127***	0.093	0.190***
	[0.044]	[0.060]	[0.048]
chi2	11.36	13.37	20.10
p-value	0.003	0.001	0.000

Table G2. Average effect size (AES) across outcomes (components)

Notes: The "Redistributive preferences" index groups preferences on "Raise Tax", "Tax rate top 1%", "Estate tax", "Expenditure on education" and "Expenditure on Social Insurance and Income Support Programs". The taxation index groups preferences on "Raise Tax", "Tax rate top 1%", "Estate tax", while the spending index includes "Expenditure on education" and "Expenditure on Social Insurance and Income Support Programs". Controls included in all regressions are indicator variables for gender, age, he/she and his/her parents were born in the US, having children, being married, being full employed, being part-time employed, being self-employed, being unemployed, income class, university degree, trust in government, being "liberal or very liberal", wave, (log) number of "HITs approved", (log) duration of the survey. Standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05.

		1	2	3	4	5	6
		It is the responsibility of the government to reduce inequality	Raise Tax	Tax Top 1%	Estate tax	Expenditure on education	Social Insurance and Income Support Programmes
Video Inequality of Outcomes	p-value	0.002	0.004	0.010	0.001	0.725	0.103
	pwyoung	0.000	0.000	0.020	0.000	0.710	0.140
	pbonf	0.009	0.018	0.031	0.006	0.725	0.206
	simes	0.008	0.024	0.045	0.007	0.904	0.226
Video Inequality of Opportunities	p-value	0.003	0.085	0.316	0.258	0.320	0.000
	pwyoung	0.000	0.320	0.570	0.570	0.570	0.000
	pbonf	0.015	0.342	0.773	0.773	0.773	0.001
	simes	0.010	0.188	0.535	0.411	0.703	0.001

Table G3. Regression results on preferences for redistribution – p-value adjustment applying multiple-test procedures

Notes: p-values are from our baseline estimation (Table 3). *pwyoung* refers to the p-value adjusted applying the Familywise Error Rate approach with the methodology suggested by Westfall and Young (1993). *pbonf* refers to an one-step multiple-test procedure. *simes* refers to the p-value adjusted applying the False Discovery Rate approach using the method of Simes (1986). "It is the responsibility of the government to reduce inequality" and "Raise Tax" range from 1 (strongly disagree) to 5 (strongly agree). "Tax rate top 1%" and "Estate tax" are continuous (respondents' preferred average tax rate, in percent). "Expenditure on education" and "Social Insurance and Income Support Programs" are continuous (respondents' preferred share of total budget). Controls included in all regressions are indicator variables for gender, age, he/she and his/her parents were born in the US, having children, being married, being full employed, being part-time employed, being self-employed, being unemployed, income class, university degree, trust in government, being "liberal or very liberal", wave, (log) number of "HITs approved", (log) duration of the survey. Standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05.

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