Intergenerational Mobility and Preferences for Redistribution*

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Abstract

Using new cross-country survey and experimental data, we investigate how beliefs about intergenerational mobility affect preferences for redistribution in France, Italy, Sweden, the U.K., and the U.S.. Americans are more optimistic than Europeans about social mobility. Our randomized treatment shows pessimistic information about mobility and increases support for redistribution, mostly for "equality of opportunity" policies. We find strong political polarization. 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, possibly because they see the government as a "problem" and not as the "solution."

Keywords: Redistribution, Intergenerational Mobility, Taxation, Online Experiment, Fairness.

JEL Codes: D31, D72, H21, H23, H24, H41

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1 Introduction

In 1966, John Steinbeck conjectured that there is not much support for redistribution in America because the working poor see themselves as "temporarily embarrassed millionaires."[1] Are people willing to accept high levels of inequality if they think that everyone has a shot at climbing the social ladder? Is tolerance for inequality linked to a belief in equality of opportunity? In this paper we have two objectives: First, we want to rigorously document what people think about intergenerational mobility across countries, using new detailed and quantitative survey data. Second, we will study the effect of perceptions of social mobility on support for redistribution.

The (stereo)typical view about intergenerational mobility distinguishes between "American" and "European" attitudes. Americans are thought to view the market system as relatively fair, and to believe in the "American dream," i.e., the notion that one can make it from rags to riches with sufficient effort. Thus, Americans supposedly view wealth as a reward for ability and effort, and poverty as the result of inability to take advantage of opportunities. In contrast, Europeans tend to believe that the economic system is unfair, and that wealth is the result of family history, connections, and sticky social classes. Poverty is the result of bad luck and the inability of society to take care of the needy regardless of their effort.[2]

However, the American dream today may have become more accurately described by the green light at the end of Daisy's dock in *The Great Gatsby*. Gatsby likes to contemplate it and reaches for it relentlessly: it is the embodiment of a "dream" that seems "so close that [we] could hardly fail to grasp it," and provides Gatsby with profound motivation to work hard and succeed. Yet it ends up being out of reach and unattainable. Indeed, new data (Chetty et al., 2014) suggests that intergenerational mobility in the U.S. on average may, in fact, not be higher than in Europe.

In order to document the anatomy of people's beliefs about intergenerational mobility and the fairness of their economic system, we collect new survey and experimental data for five countries (France, Italy, Sweden, the U.K., and the U.S.). Our survey design is one of our contributions; it allows us to obtain standardized, representative data from these five countries, with detailed and quantitative questions on government, a variety of policies, and perceptions. We believe this improves upon earlier surveys. The policy questions we ask reflect a realistic trade-off – e.g., we avoid having respondents think that there are "free lunches." We also randomize the order of several questions in an informative way. The questions are designed to attract respondents' attention, are visually appealing, and, in some cases, interactive or animated.[3]

We begin by comparing people's perceptions of mobility to recent data on actual intergenerational mobility in the five countries to assess whether people's perceptions are realistic. We then

[1] John Steinbeck, *American and Americans*, 1966.

[2] These disparate attitudes are deeply ingrained in the different history of the places. Europe went through centuries of feudalism when wealth was associated with nobility and birth, and intergenerational mobility was close to non-existent. In the U.S., the first generation of rich individuals were immigrants who had started poor and represented the very finest example of the "American Dream."

[3] The online survey tools used in this paper can easily be scaled up and modified in future research, to collect additional data on more countries, expand the set of questions asked, or run additional experimental treatments.

turn to the link between perceived intergenerational mobility and redistributive policies. To get at the causal link between perceptions of mobility and redistributive preferences, we implement a randomized perception treatment, through which we aim to make respondents' perceptions of mobility more pessimistic. Throughout the paper, we use the word "optimism" to label perceptions of high social mobility, i.e., a lower perceived chance of staying stuck in the bottom quintile and a higher chance of moving to the top quintile. Conversely, "pessimism" is used to designate a low perception of mobility. "over-optimism" (respectively, "over-pessimism") is used to refer to believing in more (respectively, less) social mobility than there is in reality.

Our key findings are as follows. Americans are more optimistic than Europeans about intergenerational mobility, and they are over-optimistic relative to actual mobility in the U.S., especially about the probability of a child from a family in the bottom quintile making it to the top quintile– the "American dream." We show that, paradoxically, optimism is particularly high in U.S. states where actual mobility is particularly low. Europeans are not only more pessimistic than Americans, but they are also too pessimistic relative to the true degree of mobility, and have particularly gloomy views about the probability of a child born poor remaining stuck in the bottom quintile. Both Americans and Europeans believe that hard work increases the chances of making it out of poverty and into the middle class, but few believe that individual effort can make a large difference in reaching the very top, or that hard work can make up completely for a poor family background.

Many respondents think the government has the necessary tools to make opportunities more equal, and that unequal opportunities are a significant social problem. Even so, many do not trust the government's ability or willingness to implement appropriate policies. Views on mobility are highly correlated with policy preferences across all countries: respondents who are more pessimistic about mobility tend to favor more generous redistributive policies and higher levels of government involvement. Interestingly the correlation is stronger for "equality of opportunity" policies (e.g., public education or health spending) than for equality of outcome policies (e.g., progressive taxation or safety net policies). We also uncover very sharp differences between left and right leaning respondents. Among left-wing respondents, those who are more pessimistic about the level of intergenerational mobility tend to support more aggressive government intervention and more redistribution. Among right-wing respondents, those who are more pessimistic do not, presumably because they have very negative views of government. Those right wing respondents who believe there are low chances for children from the bottom quintile to make it, despite putting in a lot of effort, do support somewhat more redistribution.

Our experimental treatment, which is meant to make the treated group more pessimistic about mobility, has a large and significant first-stage effect on mobility perceptions and that effect persists one week later in a follow-up survey. The treatment has a polarizing effect on policy preferences, consistent with the descriptive correlations. Left-wing respondents become even more supportive of redistributive policies in general and especially equal opportunity policies. Right-wing respondents also change their views about social mobility, but they do not want any additional government intervention. Thus, it appears that the treatment is either "preaching to the choir" or "falling on

deaf ears."

Related literature. Our work builds on the theoretical literature on the link between intergenerational mobility and support for redistributive policies. Piketty (1995) argues that individuals' views about social mobility and their support for redistribution depend on their own personal experience of mobility; heterogeneous beliefs can persist because of differing private experiences. Bénabou and Ok (2001) discuss why the median voter may prefer less redistribution if he considers the prospects of upward mobility in the future, or for future generations. Alesina and Angeletos (2005) provide models with two equilibria. In the "American" equilibrium, people believe that effort is the main source of income, and accordingly they support low redistribution and low taxes. As a result, with the low taxes, agents indeed work hard and the expectation on effort is self-fulfilling. The "European" equilibrium has the opposite features.

Empirical work by Alesina and La Ferrara (2005) and Alesina and Giuliano (2011) (and the references cited therein,) confirms that views about fairness are critical determinants of preferences for redistribution. Alesina et al. (2001) and Alesina and Glaeser (2004) suggested the hypothesis that Americans may be more optimistic than Europeans about social mobility. This was based on qualitative and vastly incomplete data from the World Value Survey, and they do not investigate direct links between beliefs about mobility and policy preferences as we do in this paper. Here, we rigorously document actual, quantitative perceptions of mobility across five countries and compare them to actual data. We also provide experimental (exogenous) variation in mobility perceptions. We complement those with detailed quantitative and qualitative questions on the role of individual effort, fairness, government, and redistributive policies.

Several papers have studied actual intergenerational mobility across or within countries: Solon (2002), Björklund and Jäntti (1997), Jäntti et al. (2006), Blanden (2013), and Roine and Waldenström (2015). Peichl and Ungerer (2016) compare intergenerational mobility in Eastern and Western Germany. Technical work on the measurement of mobility is done by Niehues and Peichl (2014).[4] Intergenerational mobility in Sweden has been studied by Roine and Waldenström (2009), Björklund, Roine, and Waldenström (2012), and Waldenström (2016). In the U.S., Hilger (2016a) and Hilger (2016b) document long-run trends in intergenerational mobility, including among minorities. Recent research based on new IRS tax data has highlighted strong geographical disparities in opportunities (Chetty et al. (2016) and Chetty and Hendren (2016)). Chetty et al. (2014) provide new local measures of mobility which we build on. There are also related papers on the effects of standard redistributive policies on equality of opportunity, including Peichl et al. (2011) who focus on Europe, and Gelber and Weinzierl (2016) who study optimal policy design when parents can influence their children's opportunities.

We most strongly connect to the literature on how people form preferences for redistribution. Lockwood and Weinzierl (2016) and Lockwood and Weinzierl (2015) study alternative preferences for redistribution that go beyond utilitarianism. Weinzierl (2014) and Weinzierl (2016) also use on-

[4] See also Gottschalk and Spolaore (2002).

line survey tools similar to ours to elicit respondents' social welfare judgments. Ashok, Kuziemko, and Washington (2016), Charite, Fisman, and Kuziemko (2016), Karadja et al. (2017), and Buell, Kuziemko, Norton, and Reich (2014) use experimental designs through online platforms to understand people's views about fairness and redistributive preferences.[5] Cruces et al. (2013) study how people form their perceptions of the income distribution and how this shapes their support for redistribution. Ariely and Norton (2011) also document the biased perceptions of the income distribution. Kuziemko et al. (2015) show that shifting respondents' perceptions of inequality only mildly increases support for redistribution.[6] We complement this research on inequality to provide evidence on the perception of mobility, and the effect of providing information about mobility on opinions about government intervention. Also notable, we introduce a broad international component into the experimental literature by conducting our study simultaneously in five different countries.

The rest of the paper is organized as follows: Section 2 explains our survey methodology and our data sources for actual intergenerational mobility. In Section 3, we describe the perceptions of intergenerational mobility and in Section 4, we turn to their correlation with redistribution. Section 5 analyzes the perception experiment and is followed by our concluding section.

2 Data, Survey, and Methodology

2.1 Data on Actual Intergenerational Mobility Across Countries

Our choice of countries – the U.S., Sweden, Italy, France, and the United Kingdom– is driven by the desire to cover a wide range of economic, social, and political experiences. To measure actual intergenerational mobility, we use what to our knowledge is the best currently available data. To describe the data sources, we refer to the first generation as the "parents" and to the second generation as the "children."

U.S.: Information on intergenerational mobility for the U.S. comes from Chetty et al. (2014), and is based on administrative tax records covering the universe of taxpayers 1996-2012. The parents' income is measured as average total pre-tax household income over the years 1996-2000. Children belong to the 1980-85 cohorts and their family income is measured in 2011 and 2012.

Italy: Data on mobility for Italy come from Acciari et al. (2016) and is based on administrative tax records covering the universe of all taxpayers aged 35-55 in 1998-99. Children's income is measured in 2011-2012, when they are age 37 or older.

[5] In the social psychology literature, Chambers and Swan (2015) confirm that perceptions of social mobility in the U.S. are deeply divided across party lines. Using survey tools, Davidai and Gilovich (2015) show that U.S. respondents have biased perceptions about mobility relative to reality, a finding we confirm here and extend to other countries. None of these papers have an experimental component or study the link to redistributive preferences.

[6] George (2016) studies social mobility and support for redistribution in the U.S. and finds no relationship between social mobility and redistribution preferences, but a significant effect on voting for the Republican party.

Sweden: Data for Sweden are from Jäntti et al. (2006). They use administrative data from the Statistics Sweden Register, consisting of a 20% random sample of all male children born in 1962. For the parents' generation, fathers' earnings only are measured in 1970, 1975 and 1980. The sons' earnings are measured in 1996 and 2000, when they are 34 and 38, and are averaged over these two years.

U.K.: For the U.K. our data source is the British Cohort Study on fathers and sons. The "children sample" is composed of 2806 males, all born in a single week in 1970. Their earnings are measured in 2004, when they are 34 years old. For fathers, income is the average in years 1980 and 1986, when the children were 10 and 16.

France: The France data is based on the 1977, 1985, and 2003 waves of the survey "Formation et Qualification professionnelle," conducted by the national Statistics Institute. This survey does not contain explicit information on income, so we compute transition probabilities between income quintiles using information on parents' and children's education, profession, year of birth, and region of residence. Appendix OA.3 provides a detailed description of this procedure.

2.2 Survey Data Collection

We collected survey data in two main waves between February and October 2016. Appendix Table A1 reports the dates and sample sizes for all survey waves carried out. The first wave was a small pilot survey, without any experimental treatment, of around 500 respondents per country. We append it to the second (main) wave for the purpose of the descriptive analysis (on the control groups only), because the questions asked were identical. The U.S. has a larger sample size because we conducted a third wave there, for the purpose of increasing the sample size for the state-level analysis in Section 3.4. Overall, the total sample sizes for each country are 4705 for the U.S., 2148 for the U.K., 2148 for France, 2143 for Italy, and 1494 for Sweden. We also conducted a follow-up survey (without any randomized treatment) one week after each wave on U.S. respondents to test for the persistence of the treatment effects.

U.S. respondents were contacted through the survey company C&T Marketing; European respondents by the survey company Respondi. These companies maintain panels of respondents that they can email with survey links. The respondents who choose to respond are first channelled through some screening questions that ensure that the final sample is nationally representative along gender, age, and income dimensions. Respondents are paid if they fully complete the survey. The pay per survey completed was $2.50 in the U.S., $2.20 for Italy, France, and the U.K., and $5.50 for Sweden. The average time for completion of the survey among respondents was 40 minutes and the median time of completion was 15 minutes.

2.3 The Survey

The full survey in English is reported in Appendix A.5, while the questionnaires in Italian, French, and Swedish can be seen by following the links to the survey's web interface in the Appendix. We worked with native speakers so as to get translations that fit well with the local culture and understanding.[7] All surveys followed this general structure:

Socioeconomic background and own experience of mobility: We start with questions about individuals' socioeconomic backgrounds, such as gender, income, education, ethnicity, state and zip code, marital and family status, and political leanings. We also ask questions to assess a respondent's own experience of mobility: we ask about their parents' education (which we can compare to their own education), ask them to assess the prestige of their job relative to that of their father and mother, to compare their family income when growing up to that of other families at that time, and to compare their family income now to that of other families.

Views on fairness: Respondents are asked two similar (but intentionally not identical) questions about their views on the fairness of the economic system, one before the treatment and one after the treatment.[8] Before the treatment, they are asked whether they perceive the economic system in their country to be "basically fair" or "basically unfair." After the treatment, they are asked whether they believe that everyone in their country gets a chance to succeed (we call it the "American dream" question). We also ask whether they believe the main reason for being poor (respectively, rich) is the lack of effort (respectively, hard work) or rather circumstances beyond one's control (respectively, advantages).

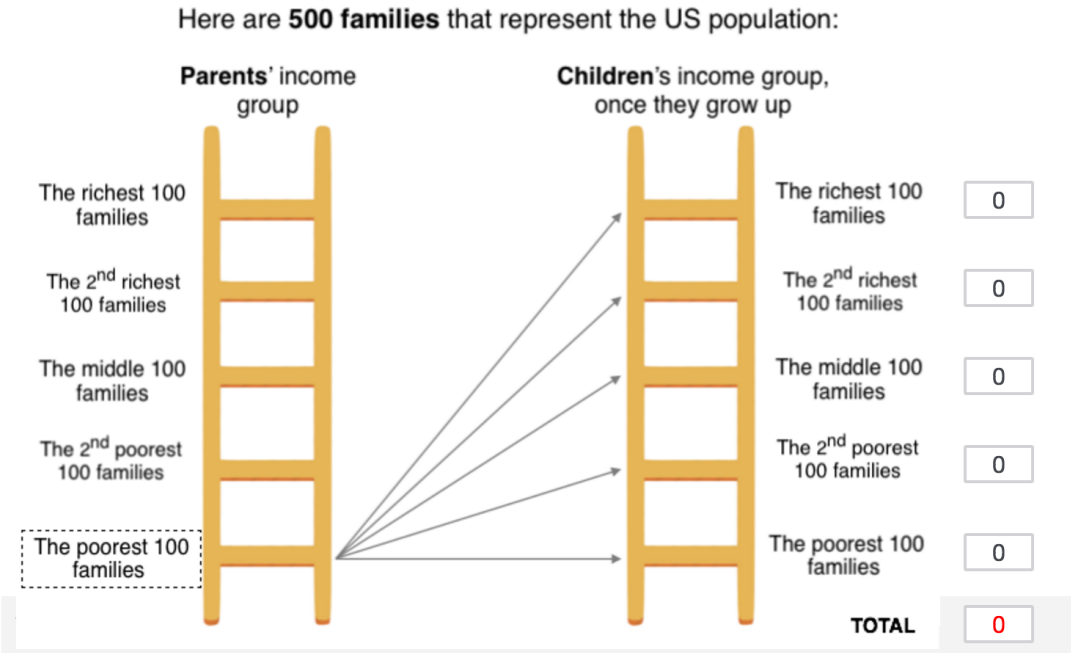
Perceptions of mobility: The core part of the survey are questions designed to elicit respondents' beliefs about upward mobility. We ask both precise quantitative and more general qualitative questions. The main question used to elicit respondents' beliefs about mobility uses a picture with two ladders (see Figure 1) that represents, on the left, the parents' income distribution split into five quintiles, and, on the right the children's income distribution split into the same quintiles. Respondents have to fill out the empty fields to indicate their views on how many out of 100 children from the bottom quintile can make it to each quintile when they grow up. The answers must sum to 100. More specifically, respondents are told:

For the following questions, we focus on 500 families that represent [THE COUNTRY'S] population. We divide them into five groups on the basis of their income, with each group containing 100 families. These groups are: the poorest 100 families, the second poorest 100 families, the middle 100 families, the second richest 100 families, and the richest 100 families.

[7] The authors themselves are fluent in three of the four languages and native in two.

[8] Questions asked before the treatment can serve as covariates for studying differential treatment effects. Questions asked after the treatment serve as outcome variables, potentially affected by the treatment.

FIGURE 1: LADDER QUESTION TO ELICIT PERCEIVED MOBILITY



In the following questions, we will ask you to evaluate the chances that children born in one of the poorest 100 families, once they grow up, will belong to any of these income groups. Please fill out the entries to the right of the figure below to tell us, in your opinion, how many out of 100 children coming from the poorest 100 families will grow up to be in each income group.

In the control and treatment groups, respondents are then asked one of two additional questions (the question is randomly assigned): the first asks about the chances of very hard-working people making it. The second asks about very talented people. Specifically, we rephrase the earlier question, replacing the first paragraph with one of these two options:

[Perceptions conditional on "effort":] *Consider 100 children coming from the poorest 100 families. These children are very determined and put in hard work both at school and, later in life, when finding a job and doing that job.*

[Perceptions conditional on "talent":] *Consider 100 children coming from the poorest 100 families. These children are very talented.*

We also ask the following qualitative versions of these questions to elicit respondents' beliefs about mobility. Although they are less precise and cannot be compared well to actual data (as we will do with the quantitative answers), they serve as robustness checks on the quantitative ones.

Do you think the chances that a child from the poorest 100 families will grow up to be among

the richest 100 families are: [Close to zero, Low, Fairly Low, Fairly High, High].

and repeat this question for the chances of growing up to be among the second richest families.

The randomized perception treatment, which is described in detail in Section 5, appears at this point in the survey.

Policy preferences: We ask three groups of questions about policy preferences: 1) the overall level of government intervention that people would like (through a series of questions presented below); 2) how a fixed level of revenues should be raised; and 3) how a fixed amount of budget should be allocated to various categories of spending. This distinction is key to being able to distinguish respondents' preferred total size of government from who they think should bear the costs and benefits from it.

First, respondents are asked to choose average income tax rates for four groups ranked by income: the top 1%, the next 9%, the next 40% and the bottom 50%. They are constrained to set taxes so as to raise the current level of revenue in their country, i.e., to split the current level of the tax burden in their country among the four income groups in a way that they view as fair (see Appendix Figure A3).[9]

Second, we ask respondents to rate their support for the estate tax. Finally, we ask them to allocate 100% of the budget to six spending categories: 1) Defense and National Security, 2) Public Infrastructure, 3) Spending on Schooling and Higher Education, 4) Social Security, Medicare, Disability Insurance, and Supplementary Security Income, 5) Social Insurance and Income Support Programs, and 6) Public Spending on Health (see Appendix Figure A4).

To get a sense of the desired level of intervention, we ask respondents whether they would be in favor of "more policies to increase the opportunities for children born in poor families and to foster more equality of opportunity, such as education policies," alerting them that these policy expansions would have to be financed either through higher taxes or reduced spending on other policies.[10]

Views on government: We ask respondents what is their desired scope of government intervention on a scale from 1 to 7, where 1 means "that the government should not concern itself with making the opportunities for children from poor and rich families less unequal," and 7 means "that the government should do everything in its power to reduce this inequality of opportunities." They are also asked whether they think that lowering taxes to stimulate growth or raising taxes to expand programs for the poor would do more to foster equal opportunities.

We ask three additional questions in a randomized way: some respondents see these before the treatment, while others see them after. For respondents who see them before, the responses

[9]To do so, while respondents choose the average tax rates on each group using sliders (see Appendix Figure A3), a fifth slider at the bottom adjusts to show what fraction of the target revenue has been raised, and alerts the respondents when the target revenue has been met.

[10]This question thus imposes a budget constraint in a milder way than the aforementioned budget allocation question.

are considered pre-existing characteristics used to study the heterogeneous effects of the treatment among groups delimited by these characteristics. For respondents who see them after the treatment, they are treated as outcomes potentially influenced by the treatment. These three questions are: 1) about trust in government ("How much of the time do you think you can trust the government to do what is right?"); 2) how much do you think that the government can do about unequal opportunities for children from poor and rich families; and 3) do you believe that if opportunities are unequal among children from poor and rich families, this is a problem. That third question is, at a general level, about whether people care about unequal opportunities and perceive them as something to be eliminated. Importantly, it does not ask about whether people think that opportunities in their country are currently too unequal or not.

Therefore, there are three randomizations in place, which create eight treatment or control groups, summarized in Appendix Table A2: 1) the main perception treatment (see Section 5); 2) whether respondents are asked about the chances of very-hard working children or talented children; and 3) whether respondents are asked the three questions on government (described in the previous paragraph) before or after the questions eliciting mobility perceptions. Table A4 shows that these three layers of randomization were balanced along observable characteristics.

The exact definition of the variables used in the tables is in Appendix A.3.

2.4 Ensuring Data Quality

Overall, the consistency and internal logic of the answers was excellent. Respondents did not express unrealistic views–i.e., levels of policies that would be difficult to justify under reasonable economic assumptions–about mobility and economic forces. We took several steps to ensure the best possible data quality. For example, in the first and consent page of the survey (see Appendix Figure A5), we warn respondents that "*responding without adequate effort may result in [their] responses being flagged for low quality.*" At the same time, we appeal to respondents' sense of social responsibility by saying that we are non-partisan researchers who seek to improve knowledge on social issues and add that *"it is very important for the success of our research that you answer honestly and read the questions very carefully before answering."* We also keep track of the time that respondents spend on each survey page so as to be able to flag respondents who spend an unreasonably short time on a certain question. We drop the few respondents (7.6% across all waves and countries) who spend less than 5 minutes on the full survey or less than 30 seconds on the main mobility question. We confirm that spending a shorter time on the survey is not significantly correlated with any characteristics (such as income, education, political views, etc.)

After the section with background questions and before we show the treatment, we ask respondents whether they have *"devoted [their] full attention to the questions so far"* and whether, in their honest opinion, they believe that we should use their responses for the study. Only 0.78% of respondents answered that we should not use their responses for our study. This "attention check" question has been shown by Meade and Craig (2012) to stimulate respondents to pay extra

attention to the subsequent questions (not to detect dishonest replies). We strategically placed this question right before one of the most important questions that elicit views on intergenerational mobility.

For the "ladder" question that elicits views on social mobility, we constrain the answers to sum to 100. We also tell respondents that they need at least one minute to read and think through this question. We check for careless or strange answer patterns by tabulating the response distributions and by flagging responses such as "0" or "100." Appendix Table A3 reports such cases: fortunately, there are very few. In our baseline results, we drop respondents who entered "100" in any quintile except Q1, but adding them back does not change any of the results appreciably. We also ask about mobility in a more qualitative way as described in Section 2.3.

Finally, at the end of the survey, we ask respondents for feedback including whether they believe the survey was politically biased. Only 17.7% of respondents say they felt that it was. Of these, 11.4% felt it was left-wing biased while 6.3% felt it was right-wing biased.

2.5 Sample Characteristics

Table 1 shows the characteristics of our sample in each country, along with statistics from nationally representative sources. We purposely construct our samples to be almost perfectly representative along the gender, age, and income dimensions. The other non-targeted respondent characteristics shown in the table – namely, marital, employment, and immigrant statuses and education – are very representative as well.

3 Mobility (Mis)perceptions

3.1 Actual and Perceived Mobility

Table 2 displays actual intergenerational mobility in each country. For each country, each row shows, in descending order, the probability of a child from the bottom quintile ($Q1$) of the income distribution moving to quintile Qj with $j = 1, 2, 3, 4, 5$. For each country, the first column shows the actual probability, while the second shows the perceived probability. In parentheses below the perceived probabilities are the p-values for the equality test between perception and reality. The final set of columns provide a comparison of the U.S. and Europe overall.

On average, social mobility is lower in the U.S. than in other countries.[11] The probability of a child from the bottom quintile remaining in the bottom quintile is highest in the U.S. (33.1%), lower in Continental Europe (below 30%), and lowest in Sweden (26.7%). The probabilities of moving from the bottom to the fourth or to the fifth quintiles are also lowest in the U.S.. The probability of moving to the top quintile is 7.8% in the U.S., but close to 11% on average in Europe. Note that

[11] Nevertheless, one needs to bear in mind the large spatial heterogeneity in the U.S., as described in Chetty et al. (2014) and which we consider in Section 3.4.

the differences between perceptions and reality are statistically highly significant in all countries. Perceptions are also significantly different in the U.S. and Europe.

Figure 2 graphically illustrates these perceptions relative to reality. Panel A shows the average perceived probability of remaining in the bottom quintile against the actual probability in each country. Points above the 45 degree line indicate more pessimistic perceptions. Panel B similarly illustrates the probability of moving from the bottom to the top quintile. In this figure, being optimistic about mobility implies being above the 45 degree line. Finally, Panel C shows the perceived and actual probabilities of going from the bottom quintile to quintiles $Q2$, $Q3$, and $Q4$.

This figure highlights one of our key results. In general, Europeans are not only more pessimistic than Americans, but they are also too pessimistic relative to reality, while Americans are too optimistic. Three additional facts stand out. First, Americans vastly over-estimate the probability of making it to the top of the ladder for children starting from the bottom. They believe almost 12 kids will make it from the bottom to the top while the actual number is a bit below eight. This is the embodiment of the idea of the "American dream." Second, Europeans are too pessimistic about the chances of getting out of poverty, i.e., out of the bottom quintile. For instance, French respondents think that 35 kids will be stuck in poverty, when in reality it is only 29. Third, Europeans are too pessimistic about the probability of making it to the upper middle class (the fourth quintile). The answers to the qualitative and quantitative questions are highly correlated and paint a very similar picture.

This figure also shows that, despite these systematic biases, average perceptions are not unreasonably distant from reality. For instance, the perceived probabilities of moving to quintiles 3 and 4 in the U.S. are 22.3% and 12%, while the actual probabilities are 18.7% and 12.7%. In France, the perceived probabilities of moving to quintiles 2 and 3 are, respectively, 23.6% and 21.5%, while the actual probabilities are 23.8% and 23%.

However, at the individual level there is considerable dispersion in the answers. Figure 3 shows the distribution of the negative absolute error – the absolute deviation between the actual and the perceived probability of remaining in the bottom quintile (Q1 to Q1) and of moving to the top quintile (Q1 to Q5)– in the U.S. and European samples. This is a measure of individual-level accuracy. The figure shows that at the individual level accuracy is considerably worse than average accuracy. In the U.S., 99.4% (respectively, 68.1%) of respondents are less accurate than average for the probability of remaining in the bottom quintile (respectively, moving to the top quintile). In Europe, 85.5% (respectively, 89.4%) of respondents are less accurate than average for the probability of remaining in the bottom quintile (respectively, moving to the top quintile). If we consider the probability of moving to the top quintile in the U.S., the average individual absolute error is 166% larger than the error of the average perception (10.4 percentage points vs. 3.9 percentage points). Similarly, if we consider the probability of remaining in the bottom quintile in Europe, the average individual absolute error is 211% larger than the error of the average perception (19.6 percentage points vs. 6.3 percentage points). This "wisdom of crowds" effect is also found among expert forecasts in DellaVigna and Pope (2016).

While it is beyond the scope of this paper to explain where these differing perceptions of mobility come from in the different countries, we can conjecture that part of their roots lie in the vastly contrasting histories. As explained in Cullen (2004), the U.S. was founded by poor immigrants, who were fleeing persecution and lack of freedom, and established a new living. They believed that in the New World anyone could make it if only they worked hard enough. Europe in contrast was for centuries a feudal society in which birth irrevocably determined one's place in society. These differing ideas are further perpetuated by each country's literature and art, and areas reinforced by the media. Indeed, as shown by DellaVigna and Kaplan (2007), the media can have a strong influence on voting patterns and political views. The U.S. media places strong focus on the American dream, opportunity, and on those successful people who have made it. In European media and public discourse, this focus is much more diluted.

3.2 Heterogeneity in perceptions

Next, we systematically analyze the individual characteristics that are most strongly correlated with perceptions of mobility. Figure 4 compares the mean perceptions of mobility among respondents with different characteristics. We define "left-wing" respondents as those who say they are "liberal" or "very liberal" on economic issues. "Right-wing" respondents are defined as those who report being "conservative" or "very conservative" on economic issues. Focusing our survey question exclusively on economic issues allows us to better compare political orientations across countries, where different parties sometimes mix traditionally liberal and traditionally conservative elements, depending upon whether one considers economic or social issues. For each of the five countries, the exact phrasing was adapted to that country's political spectrum. In France, categories were: "Extreme gauche, Gauche, Centre, Droite, Extreme droite"; in Italy, the U.K., and Sweden, it was "Left, Center-Left, Center, Center-Right, Right."

The left leaning respondents are significantly more pessimistic than the right leaning ones, an important observation for what follows. Women, parents, lower income respondents, those without a college education, and African-Americans are more likely to be optimistic about mobility. We discuss the results on African-Americans in more detail in Section 3.4. Those who believe that being rich or poor is mostly the result of individual effort, or who believe that the economic system is fair, or that unequal opportunities are not a problem, are also more optimistic. Another significant factor, but less so, is whether one has experienced upward mobility during one's life,[12] and whether one is the child of immigrants; both predict more optimism. The young have more polarized views and they tend to assign more probability to tail outcomes: they are both more pessimistic about the likelihood of being stuck in the bottom quintile and more optimistic about the likelihood of making it to the top quintile.[13]

[12]This is consistent with the idea in Piketty (1995) that a personal experience of mobility leads to an update of one's beliefs about the underlying social mobility mechanism.

[13]Results using the qualitative measures of perceptions instead are generally consistent with these quantitative ones.

The relation between college education (or income) and pessimism is significant, even after we control for other personal characteristics, including political affiliation (see Appendix Table OA3). The psychology literature emphasizes that people tend to take excessive credit for their own success, while blaming failure on outside circumstances and luck (Frank, 2016; Gilovich et al., 2002). On the one hand, this would lead lower income or less educated agents to "self-justify" their bad economic outcomes, believing that mobility is low and the economic system is unfair. On the other hand, high income and college-educated agents would assign their success mostly (and excessively so) to their own effort, rather than to the presence of more mobility (which is not due to their own merit). Consistent with this hypothesis, we find that college educated individuals believe more in the impact of effort on the chances of making it out of poverty and becoming rich. They, and high-income individuals, are significantly more likely to reply that the main reason for being poor is lack of effort and the main reason for being rich is individual effort, even after we control for the full array of personal characteristics and political affiliation. Thus college-educated and high-income people may believe that making it was very difficult, and that it was their own individual effort that helped them to succeed, despite a system that features low mobility.

Inequality Perceptions and Mobility Perceptions

Are perceptions and misperceptions of social mobility related to perceptions and misperceptions of inequality? To address this question, we conducted a small additional survey on U.S. respondents: in addition to the aforementioned questions about mobility perception, we asked about perceived shares in total income, capital income, and net wealth, of the top 1%, the top 10% and the bottom 50% of households, as well as the taxes paid by different groups. Figure A8 in the Appendix shows that on average there are quite significant misperceptions of inequality in the U.S.. In particular, respondents overestimate the share of income and wealth going to the top 1%. Table A5 shows that respondents who think there is more inequality also think there is less mobility. Those who underestimate inequality also overestimate mobility.

3.3 Perceived Role of Individual Effort and Hard Work

In the debate about social mobility, key elements are the scope for individual responsibility and the extent to which individual effort pays off. We explore this in Figure 5. The vertical bars in different colors represent the different countries and the black bars are the confidence intervals at the 95% confidence level. The bars are split into five groups representing the five quintiles. For each country c and quintile j, the height of the vertical bars represents the gap between the perceived probability of a child from the bottom quintile in country c moving to quintile j. These results come from the question about very hard working children (i.e., the perception conditional on effort) minus the perceived probability from the baseline question (i.e., the perception unconditional on effort). This figure highlights four facts. First, respondents do not believe that individual effort can make up for a poor family background: even when thinking about very hard working people, the respondents still say that mobility is very far from perfect. This is the case despite the fact that we intentionally

phrased the question in a strong way to emphasize a "best case" type of scenario. Second, in all countries respondents believe that individual hard work greatly decreases the probability of a child from the bottom quintile remaining in the bottom quintile. Third, in all countries respondents also believe that individual effort increases the chance of moving from poverty to the middle class (Q1 to Q3). Fourth, the perceived probability of moving from the bottom to the top quintile is only very moderately affected by the consideration of effort.

We discovered that groups that believe more in the role of effort for improving the chances of moving out of the bottom quintile are the college-educated and, understandably, those who believe that the reason for being poor is lack of effort. Those who believe more strongly in the role of effort for improving the chances of making it to the very top quintile are the young, the college educated, the right-wing, those who believe that the main reason for being either rich or poor is effort, and those who think that the system is broadly fair. Those who believe that unequal opportunities are, in principle, a problem do not update their beliefs conditional on effort more strongly (although they are significantly more pessimistic about mobility conditional on effort).

It is interesting that both left and right wing respondents do not update in a significantly different way their beliefs about the chances of staying stuck in the bottom quintile. In other words, across the political spectrum, respondents agree about how much individual effort improves the chances of escaping poverty. However, there are differences in how left and right wing respondents update their beliefs about making it to the top quintile conditional on effort: the right-wing respondents believe much more firmly in the impact of effort. These results are all available in the Online Appendix.

3.4 Geography of Perceptions in the U.S.

The work by Chetty et al. (2014) has shown that the degree of *actual* social mobility in the U.S. varies dramatically across regions. In our data, we can explore the geographical variation in *perceptions* of mobility.[14]

The top left panel of Figure 6 represents actual mobility at the state level. It is measured by the probability of a child from a family in the bottom quintile making it to the top quintile. In general, mobility is higher (as indicated by darker colors) in the North and Northwest and lower in the South and Southeast. The top right panel replicates this map, but now plots the perceptions of respondents from each state. It is easy to see the negative correlation between the two maps. The bottom left panel of Figure 6 shows the ratio of the perceived transition probability from the bottom to the top quintile divided by the actual probability. Overoptimism seems higher in places with lower mobility. Formally, the correlation between actual and perceived mobility at the state level is -0.3 (p-value of 0.047).[15] The bottom right panel of Figure 6 shows the degree of

[14] Newman et al. (2015) document the link between local inequality and the belief that the U.S. is a meritocracy.

[15] This relation is not driven by the Southeastern states. Excluding South Carolina, North Carolina, Virginia, West Virginia, Tennessee, Kentucky, Georgia, Alabama, Mississippi, and Florida from the calculation yields a correlation of -0.348 with a p-value of 0.056.

overoptimism relative to the national average in the U.S., not relative to the mobility in the state. The same patterns are apparent, suggesting that states that are more overoptimistic relative to state-level mobility are also more overoptimistic relative to the national mobility level.

Are perceptions of mobility geographically correlated with other key socio-economic variables? We explore this systematically at the commuting zone (CZ) level, assigning respondents to CZs using their zip codes, and using actual mobility numbers and several key covariates from Chetty et al. (2014).[16] We consider the effect on perceived mobility of measures of racial segregation, income segregation, social capital, the Gini coefficient, the share of employment in manufacturing, and the college graduation rate controlling for the respondent's gender, age, number of children, income, political affiliation, educational attainment, personal mobility experience, and immigrant status. we find that perceptions are more optimistic when there is more racial segregation, less income segregation, and more social capital. The latter two correlations are as one may expect: with a lot of income segregation, it may be harder to observe the growth out of poverty of certain families, because poor and rich families live separately.

The sign on the effect of racial segregation may seem odd at first. Recall from Section 3 that African-Americans, although a small share of our sample, were more optimistic about mobility. There are at least two possible explanations for this fact. First, it may be due to "system justification" an idea support by a large body of evidence from the social psychology literature (see the survey paper by Jost et al. (2004)) emphasizing, somewhat paradoxically, that particularly bad social and economic situations tend to be self-justified by respondents to avoid cognitive dissonance and to lend some legitimacy to the suffering caused. Second, it could be that minorities use their own racial group as a reference point when there is more racial segregation, which could inflate their perceived mobility relative to true mobility (although we are not aware of studies that establish this rigorously). These are points that deserve future research, with surveys better equipped (and larger) to address these issues.

Another interesting pattern is that the presence of more minorities and immigrants in a respondent's commuting zone is significantly correlated with less support for redistribution, especially among right-wing respondents.[17] It may be that right-wing respondents believe that redistributive policies will mostly benefit immigrants or minorities, which they may not want.

More generally, the geographical patterns in perceptions, and their correlations with other key socio-economic variables deserve further attention.

4 Perceptions of Mobility and Policy Preferences

Here, we discuss some views about fairness and the government and then look at the link between mobility perceptions and policy preferences.

[16] These results are in Appendix Table OA7.
[17] This is shown in Online Appendix Table OA8.

4.1 Views on Fairness

Figure 7 shows respondents' views on fairness and the role of government, by country (in Panel A) and by political affiliation (in Panel B). The first row shows the fraction of respondents who think the system is "basically fair, since all [members of country X] have an equal opportunity to succeed." The second row shows the fraction of respondents who agree with the statement that "in [country X] everybody has a chance to make it and be economically successful." This is the idea of the "American Dream." The next two rows focus on the roles of effort and luck. Row 3 shows the fraction of respondents who believe that a person is poor because of a lack of effort rather than due to "circumstances beyond his or her control." Row 4 shows the fraction of respondents who believe that people become rich mostly because they "worked harder than others" and not because they "had more advantages than others."

There are several noteworthy findings. First, on average, the U.S. respondents have a much higher tendency than the European respondents to agree that the system is fair (50% believe so) and that everyone has a chance of making it (53% agree). The Swedish respondents also are positively inclined on fairness issues – 65% believe in the fairness of the Swedish economic system. It is possible – although purely conjectural – that Swedish respondents believe that their welfare state delivers this perceived fairness, while Americans may believe that the market does. The Italian and French responders are extremely skeptical about the fairness of the system (only 10% and 19%, respectively, agree that the system is basically fair). Second, U.S. respondents believe more strongly in the role of effort, both in getting out of poverty and in becoming rich. Italians believe the least in the effect of effort on economic outcomes.[18]

Third, as shown in Panel B, left-wing respondents hold more negative views on fairness. Only 26% of them (as opposed to 49% of right wing respondents) think that the system is "basically fair," and only 24% (as opposed to 46% of right wing respondents) think that everybody gets a fair shot. Similarly, just about 19% and 18% respectively think that effort or lack thereof is the main reason for being poor or rich (as opposed to 46% and 46% respectively for right-wing respondents). The political polarization of views on fairness is most prevalent in the U.S. and the U.K., but it is present in all countries.[19]

4.2 Views of Government

Views of government are complex and multi-faceted, so we asked five different questions on government. The answers are shown in the last rows of Figure 7, where we show the responses by country (in Panel A) or by political affiliation (in Panel B). We seek to understand whether respondents think that their government can be trusted to perform well; whether it has the capacity and tools to reduce unequal opportunities; whether government intervention is desirable to reduce unequal

[18] These differing perceptions about the role of effort versus luck are at the core of the multiple equilibria (called the "U.S." and the "European" equilibria) in Alesina and Angeletos (2005).

[19] Except perhaps in Italy where more negative views seems to reign across the political spectrum.

opportunities; and whether, starting from the status quo, the right way to go is towards more government intervention, i.e. "raising taxes,"or less government intervention with lower taxes. Finally, we inquire about whether people perceive unequal opportunities to be a problem to start with, and hence a potential area for government intervention.

In all countries except Sweden, the fraction of people who feel they can never trust the government is high, particularly in France and Italy. The exception is Sweden. At the same time, when asked whether the government in principle has "the ability and tools" to "reduce the inequality of opportunities between children born in poor and rich families", most respondents answer that the government can do "some" or "a lot."

When asked to designate on a scale of 1 to 7 (increasing in the desired strength of intervention) the optimal scope of government intervention for reducing unequal opportunities , the U.S. respondents expressed a wish for less government intervention intensity than did those in the European countries. This does not mean that European respondents support further expansions of the role of government starting from the current status quo. Indeed, when respondents are asked about "what [they] think would do more to make the opportunities for children from poor and rich families less unequal," the fraction who think that "lowering taxes on wealthy people and corporations to encourage more investment in economic growth" would be better than "raising taxes on wealthy people and corporations to expand programs for the poor" is 32% in the U.S. but even higher in France and Italy. Given that the answer to this question depends on the starting level of taxes in a country, this may not be surprising, as the U.S. has lower taxes than either of the European countries.

In Panel B, left-wing respondents are shown to be significantly more likely to trust the government, to believe that the government has the tools and capacity to address unequal opportunities, and to think that unequal opportunities are a problem.[20] They support significantly higher levels of government intervention than right-wing respondents. The starkest contrast is that right-wing respondents are much more likely to think that scaling back the involvement of government in the economy is the better way to improve unequal opportunities. Overall, close to 60% of right-wing respondents believe that less government involvement, and freeing the economy, is the key to addressing unequal opportunities, as opposed to just 20% of left-wing respondents.

Particularly striking is the agreement across countries and political orientations on the view that unequal opportunities for children from poor and rich families – should they exist – would be a problem.[21] Hence, in principle, we could expect that more pessimism about the fairness of

[20]The U.K. is an exception: right-wing respondents are more likely to say that they trust the government. We believe this is because "Brexit" was very salient at the time of the survey, and the right-wing government had successfully pushed through the referendum and gained a lot of popularity with the winning "leave" vote, which was the privileged vote of the right-wing. We believe this is what inflated the perceptions of right-wing respondents in favor of that particular government, and, conversely, strongly reduced perceptions among left-wing respondents. However, even in the U.K., the views of left and right wing respondents on the other dimensions of governments are in line with those in other countries.

[21]Recall that this question is about respondents' general attitude towards unequal opportunities and does not specifically ask about their perceptions of the extent of mobility in their own country.

opportunities would be correlated with support for policies to equalize opportunities.

A respondent may oppose more redistribution if he has a negative view of the government on *any* of the dimensions we ask about. The last row shows the fraction of respondents who answer: that they can "never" trust the government; or that to reduce the inequality of opportunities between children born in poor and rich families, the government has the ability and the tools to do "nothing at all" or "not much"; that they support little government intervention (less than 4 on the scale of 1 to 7); or that "lowering taxes on wealthy people and corporations to encourage more investment in economic growth" would be the better way to equalize opportunities.

The polarization between left-wing and right-wing respondents, and its consistency across all countries, is striking. The fraction of right-wing respondents who hold a negative view of the government along at least one of the dimensions we ask about is staggeringly high at 80%. On the other hand, left-wing respondents have a much more favorable opinion of government, its role, its desirability, and its capacities.

4.3 Policy Preferences and Views on Mobility

We will use the word "pessimism" to designate a higher perceived probability of a child from a family in the bottom quintile remaining in the bottom quintile and the word "optimism" to designate a higher perceived probability of moving to the top quintile. We regress respondents' policy preferences on their perceived transition probabilities, including all individual level controls and country fixed effects. Hence, we capture the residual effect of pessimism or optimism on policy preferences, conditional on many individual characteristics, including political views. Table 3 shows the coefficients from these regressions.

Columns 1 and 6 focus on how respondents want to allocate the country's budget between two different spending categories: "Opportunities," which includes spending on schooling and higher education, as well as public spending on health (categories 3 and 6)[22]; and "Safety Net," which includes social insurance and income support programs (category 5 in the survey questionnaire, as described in Section 2). Column 2 shows support for the estate tax. In column 3, the dependent variable is a dummy equal to one if the respondent supports increasing government spending on "equality of opportunity policies." In column 4, the dependent variable is the preferred level of government intervention against unequal opportunities, on a scale of 1 to 7. In column 5, the dependent variable is a dummy equal to one if the respondent believes that unequal opportunities are a very serious problem. Columns 7 and 8 report respondents' preferred tax rate on the top 1% and on the bottom 50% respectively. In column 9 the dependent variable is a dummy equal to one if the respondent says that to "reduce the inequality of opportunities between children born in poor and rich families,"the government can do "some" or "a lot."

Panels A and C report the regression results for all respondents in the control group. Panel

[22]We grouped these two categories in this way for the analysis, but respondents only saw the six categories as described in Section 2 and in Appendix A.5.

A uses as explanatory variables the unconditional mobility perceptions; Panel C uses the perceptions conditional on effort. Mobility perceptions are significantly correlated with support for redistribution, especially with support for equality-of-opportunity policies. Perceptions conditional on effort are slightly more strongly correlated with more support for redistribution than are the unconditional beliefs.

Panels B and D report the results separately for left-wing and right-wing respondents. Among left-wing respondents, pessimism is significantly positively correlated with support for redistribution along all of these dimensions. Optimism is significantly correlated with these same policies in the opposite way, except for the estate tax, overall government intervention and the budget spent on the safety net. Overall, support for equality-of-opportunity policies is much more sensitive to pessimism and optimism than is support for equality-of-outcome policies, such as safety net policies. For instance, an increase of 10 percentage points in the perceived probability of remaining in the bottom quintile increases desired spending on equality-of-opportunity policies by 0.3 percentage points, but increases spending on the safety net by only 0.2 percentage points. When asked to think conditional on effort, left-wing respondents do not drastically change their policy support.

On the other hand, right-wing respondents are less sensitive to either optimism or pessimism. It seems that right-wing respondents simply do not want much redistribution, regardless of their views on mobility. Their policy preferences do appear to be more significantly correlated with their beliefs conditional on effort. In sum, the right-wing respondents do not want much redistribution to start with, nor do they want more redistribution whether they are more pessimistic or optimistic, unless they believe that a poor kid is doomed to not make it out of the bottom quintile despite the maximal effort

5 Randomized Perception Experiment

In the previous section, we reported significant correlations between mobility perceptions and policy preferences. These correlations could reflect the causal effect of mobility perceptions on policy preferences, the opposite effect, or the effect of a third variable such as overall political views. Therefore, an experiment is needed to shift perceptions of mobility in a controlled way so as to isolate the causal effect of mobility perceptions on policy preferences.[23] In this section, we turn to the experimental evidence.

5.1 The Experiment

The treatment's goal is to shift people's perceptions of mobility. To design it, several important constraints had to be taken into account.

First, all respondents' perceptions had to be shifted monotonically in the same direction– i.e.,

[23]Such a controlled shift in perceptions is extremely difficult to find in a natural experiment setting, which makes an experimental approach more appealing.

either in the direction of more pessimism or more optimism. We chose to make people more "pessimistic" because the design of an appealing and convincing treatment seemed more straightforward. Second, mobility perceptions needed to be shifted *without* changing the respondents' perceptions of policies or the government. Otherwise, we might mechanically prime people to respond in a certain way to the policy questions. Third, the treatment had to be homogeneous across countries and to show all respondents identical information. This precluded showing them actual data about mobility per country (which are heterogeneous). As we saw in Figure 2, respondents in different countries are overly pessimistic or overly optimistic to varying degrees about different quintiles. For instance, Europeans are too pessimistic about the chance of staying stuck in poverty (but not so much about the chance of moving to the other quintiles), while Americans are especially optimistic about making it to the very top. Changing each of these quintiles separately in a different direction (e.g., towards the actual one) would be very difficult and probably confusing to respondents. Even within the same country, left-wing and right-wing respondents start from quite different baseline beliefs.

In that sense, our experiment differs from the "informational" treatments in Kuziemko et al. (2015), who provide information on actual inequality in the U.S.. It would of course be interesting to explore a treatment that shows people data on actual mobility in each country, but this would not be interpretable as the causal effect of more (or less) pessimistic views on mobility.

Fourth, we did not want to give actual and precise numbers in order to limit experimenter induced demand and the temptation for treated respondents to simply repeat those numbers without really thinking about the message they convey. As a result, we only used qualitative statements in the treatment. How different groups would translate those qualitative statements into quantitative facts was not clear *ex ante* (although the direction was clear). The goal was to prompt people to think about low mobility in a salient way rather than to target a given perception.

Fifth, the treatment had to be truthful and not provide any incorrect information. Therefore, we made general, high-level qualitative statements, not precise quantitative ones. Some perceptions, namely those that are relatively optimistic (for instance, the perceived Q1 to Q3 mobility in most countries, or the perceptions of right-wing respondents, or the perceptions of U.S. respondents) are moved in the direction of reality. However, we acknowledge that for some respondents who were already very pessimistic, or for some perceptions (such as the probability to stay stuck in the bottom in Europe), the treatment may have been misleading and moved people further away from reality. We could not think of a way to avoid this pitfall while also having the treatment satisfy all of the other criteria listed here.

To better attract and maintain respondents' attention, the treatment is animated and appears as a "movie."[24] It consists of two animations, one related to children from low income families and the other related to children from high income families. An introductory page tells respondents that they are about to see two short animations that summarize two key findings of recent academic

[24]See the animated U.S. version of the treatment here: https://harvard.az1.qualtrics.com/SE/?SID=SV_5dxninfErZ246X3. All other survey links are available for the reader to see in Appendix .

studies on the link between one's family background and one's chances of making it in life (see the screenshot in Appendix Figure A6). On the first animation (see the screenshots in Appendix Figure A7), respondents are told that:

"The chances of a poor kid staying poor as an adult are extremely large. Only very few kids from poor families will ever make it and become rich."

On the second animation, respondents are told that:

"Children born in rich families are extremely likely to remain rich themselves when they grow up, like their parents. It is extremely rare for a child from a rich family to become poor later in life."

5.2 First Stage: Treatment Effects on Perceptions

The "first-stage" of our treatment worked well. The treatment had a large and statistically significant effect on perceptions of social mobility. Table 4 shows that the perceived probability of remaining in the bottom quintile increases by 9.7 percentage points, and the probability of moving up to the third and fourth quintiles decreases significantly, by around 5.9 and 1.8 percentage points, respectively. The order of magnitude of these changes is very similar across countries.[25] While there is no significant effect on the reported perceived probability of making it from the bottom to the very top quintile according to the quantitative question, the qualitative questions do show significant effects of making it to the fourth and fifth quintile. The last column shows that there is a marked decrease of 3 percentage points in the fraction of people who say that they believe that "everybody has a fair chance of making it," (our so-called "American dream" question). There are also large and significant effects on the perceived mobility conditional on effort. The table further shows that the treatment effects on mobility perceptions are equally strong for left-wing and right-wing respondents (we cannot reject the hypothesis that the effects on left and right wing are the same).

In order to test for the persistence of the treatment effects, we re-ran the survey for the U.S. one week later, checking whether people who had been treated still maintained different views relative to the control group. Table 5 reports the results of this follow-up survey. Overall, the originally treated individuals still exhibit increased pessimism one week later relative to the control group.[26] For example, the treatment effect on the probability of remaining in the first quintile among the subset of treated respondents who took both the main survey and the follow-up was 9 percentage points and it persists, significantly, at 6 percentage points. The effects on the probability of moving to the third, fourth, and fifth quintiles are very close also in magnitude and significance in the original and the follow up rounds. In the Online Appendix, we show that the effect decays faster among right-wing respondents.

[25] Results are available from the authors.

[26] The first-stage effect on left- and right-wing respondents who took the follow-up was not significantly different; this was also true in the full sample, including those who did not take the follow-up.

5.3 Treatment Effects on Policy Preferences

Table 6 reports the treatment effects on taxes and spending in the same format as the cross-sectional relations from Table 3. Panels A and B present the reduced-form treatment effects: in Panel A the results are shown for all respondents; in Panel B the treatment dummy is interacted with dummies for being left-wing and right-wing. In the last column, we construct a standardized index, called "Redistribution Index," following the methodology in Kling et al. (2007). It consists in an equally weighted average of the z-scores of the policy outcomes variables from columns 1 through 9, with signs oriented so that more support for redistribution means a higher Redistribution index. Despite the significant and durable impact on perceptions of mobility, the treatment has no significant impact on the value ascribed to redistributive policies by the government. For the standardized Redistribution index, the point estimate is 0.013 with a standard error of 0.009.

Panels B and D show that this masks considerable heterogeneity between left-wing and right-wing respondents. Amongst the former, more pessimism about mobility leads to more support for equality-of-opportunity policies. On average, treated respondents support more spending on equality-of-opportunity policies and are more likely to perceive unequal opportunities as a major problem. They also support the estate tax. There is no effect on support for equality-of-outcome policies, such as the budget allocated to the Safety Net or the income tax rates. This pattern is consistent with the cross-sectional relations from Section 4.3, where equality-of-opportunity policies exhibited a stronger correlation with mobility perceptions. The overall Redistribution index for left-wing respondents has a point estimate of 0.052 (standard error 0.015).

In contrast, for right-wing respondents, there is no effect on any measure of policy preferences, and some point estimates are even negative. Despite having become significantly more pessimistic about mobility, the treated right-wing respondents are not more likely to think that unequal opportunities are a problem. In fact, they are more likely to reduce their belief that the government has tools to act against unequal opportunities (see column 9). Left- and right-wing respondents have significantly different responses to the treatment (p-value of 0.03).

We can rescale the treatment effects on policy preferences by the first-stage effect of the treatment on mobility perceptions– i.e., we can use our treatment as an instrument for mobility perceptions. This will estimate the causal effect of mobility perceptions on support for policies only if we assume that the treatment had no direct effect on policy preferences except through mobility perceptions. We designed the treatment with this criterion in mind and, except for the aforementioned effect on the perceptions of right-wing respondents about the government's tools, we find no effect of the treatment on views of government. Nevertheless, the rescaled estimates reported in the bottom panel of Table 6 are only suggestive of a potential IV estimate and mainly meant to facilitate a comparison to the correlations in Table 3.

When comparing the rescaled treatment effects to the correlations in Table 3, we see an interesting pattern. Equality-of-opportunity policies show an even stronger treatment effect than the descriptive cross-sectional relations in Section 4.3. This supports the idea that equality of oppor-

tunity policies are causally linked to views on mobility. Equality-of-outcome policies, such as the budget spent on the Safety Net and the income tax, only showed an effect in the cross-section, not in the experiment. This indicates that the relation between pessimism and support for ex-post redistribution is in fact driven by other respondent characteristics, such as views of government, and is not causal.

5.4 Polarization: Left versus Right

Yet the message of the right is increasingly: It's not your fault that you're a loser; it's the government's fault.

J.D. Vance, Hillbilly Elegy: A Memoir of a Family and Culture in Crisis

Why do right-wing respondents react so differently from left-wing respondents to the same information about mobility? We can rule out the possibility that right-wing respondents did not believe the information in the treatment, given their equally strong first-stage effects on mobility perceptions.[27] Also, recall from Section 4.3 that for right-wing respondents pessimism and optimism were not correlated with more support for redistributive policies, except if it was conditional on effort. Here, right-wing respondents' perceptions conditional on effort also are strongly affected by the treatment, yet there is still no causal effect on support for redistribution.

The explanation probably lies in the polarized attitudes towards the government already documented in Section 4. The treatment is either "preaching to the choir" or "falling on deaf ears." Section 4 described how right-wing respondents have much worse views of government and are more averse to government intervention. In fact, the treatment itself may have further deteriorated the negative views of right-wing respondents about the government, because there is a significant treatment effect on the belief that the government does not have the tools to resolve unequal opportunities (column 9 of Table 6). In other words, the treatment does make respondents think that there is low social mobility, but only left-wing respondents believe that the government should do something about it. If anything, right-wing respondents may think that the government is the cause of the problem, not a solution. The treatment clearly has polarizing effects on respondents.[28]

6 Conclusions

In this paper, we explore the anatomy of perceptions of intergenerational mobility and fairness of opportunity, and how they shape preferences for redistribution. We develop detailed, quantitative survey questions and a randomized perception treatment to collect information on individual views

[27] It is worth noting that relative to left-wing respondents, right-wing respondents are slightly more likely to say that they perceived the survey as being left-wing biased, but there is no difference in the perceived bias of the survey between right-wing respondents in the control and treatment groups.

[28] This effect is broadly consistent across all countries, although it is strongest in the European countries, except in Sweden.

of mobility, fairness, government, and support for redistributive policies in five countries on both sides of the Atlantic.

Our respondents seem to have inaccurate perceptions of actual intergenerational mobility: Americans are too optimistic relative to the actual mobility in the U.S., while Europeans are too pessimistic. There is a lot of heterogeneity in perceptions based on individual characteristics, and wide geographical variation in perceptions across the U.S.. Pessimism and optimism about social mobility are significantly correlated with policy preferences: across all countries, the more pessimistic respondents tend to favor more generous redistributive policies, especially equality-of-opportunity policies. These correlations are confirmed by the exogenous treatment, which increases support for redistribution through equality-of-opportunity policies.

Furthermore, we uncovered a stark political polarization manifest not only in very different baseline views of mobility, government, and redistribution, but also in divergent responses to the same exogenously provided information. When treated with pessimistic information about mobility, only left-wing respondents want significantly more redistribution. Although the same treatment shifts right-wing respondents' perceptions of mobility, it has no effect on their support for redistribution. This is likely due to their negative views of government; they may see the latter as the cause of the problem, not the solution.

There are three directions which we believe are promising for future work using such large-scale cross-country survey tools and experimental treatments. First, the geographical disparities in perceptions in the U.S. raise the question of where people's information about mobility or inequality comes from: is it the media, interactions with their neighbors, or other sources? Second, it would be very fruitful to understand how the existence of racial inequality in the U.S. affects the link between mobility and support for redistribution. Third, one could explore how immigration (and the more or less accurate perceptions about immigrants) affect preferences for redistribution and the welfare state in Europe and the U.S..

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TABLES AND FIGURES

Table 1: Sample Characteristics

	US		UK		France		Italy		Sweden	
	Sample	Pop	Sample	Pop	Sample	Pop	Sample	Pop	Sample	Pop
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Male	0.48	0.48	0.48	0.49	0.50	0.48	0.50	0.48	0.47	0.50
18-29 y.o.	0.26	0.27	0.26	0.24	0.23	0.21	0.19	0.19	0.21	0.24
30-39 y.o.	0.18	0.19	0.18	0.20	0.20	0.19	0.22	0.21	0.18	0.19
40-49 y.o.	0.19	0.21	0.21	0.21	0.21	0.20	0.23	0.24	0.19	0.21
50-59 y.o.	0.21	0.20	0.18	0.20	0.20	0.20	0.20	0.20	0.21	0.18
60-69 y.o.	0.16	0.14	0.16	0.16	0.16	0.19	0.17	0.17	0.21	0.18
Income Bracket 1	0.16	0.18	0.31	0.31	0.31	0.32	0.27	0.27	0.33	0.33
Income Bracket 2	0.22	0.20	0.35	0.35	0.30	0.30	0.28	0.28	0.26	0.29
Income Bracket 3	0.23	0.22	0.11	0.11	0.14	0.14	0.18	0.19	0.22	0.22
Income Bracket 4	0.39	0.39	0.23	0.23	0.25	0.24	0.27	0.26	0.18	0.17
Married	0.51	0.49	0.47	0.41	0.44	0.46	0.55	0.46	0.41	0.33
Native	0.94	0.85	0.89	0.87	0.94	0.85	0.97	0.92	0.91	0.82
Employed	0.62	0.58	0.65	0.61	0.63	0.47	0.64	0.45	0.66	0.67
Unemployed	0.08	0.08	0.05	0.03	0.12	0.05	0.11	0.06	0.07	0.05
College	0.42	0.28	0.37	0.42	0.30	0.25	0.38	0.15	0.33	0.36

Notes: This table displays summary statistics from our surveys (in odd columns) alongside nationally representative statistics (in even columns). Detailed sources for each variable and country are listed in the Online Appendix and briefly summarized here. The sources are: 1) for the U.S.: The Census Bureau and Current Population Survey. Income brackets (annual gross household income) are defined as less than $20,000; $20,000-$40,000; $40,000-$70,000; more than $70,000. 2) for the U.K.: Eurostat Census Data and Office of National Statistics. Income brackets (monthly net household income) are: less than £1,500; £1,500-£2,500; £2,500-£3,000; more than £3,000, 3) for France: Eurostat Census Data and INSEE. Income brackets (monthly net household income, in Euros) are: less than 1,500; 1,500-2,500; 2,500-2,000; more than 3,000; 4) for Italy: Eurostat Census Data, Bank of Italy and ISTAT. Income brackets (monthly net household income, in Euros) are: less than 1,500; 1,500-,2450; 2,450-3,350; more than 3,350; 5) for Sweden: Eurostat Census Data and Statistics Sweden. Income brackets (monthly gross household income, in SEK) are: less than 33,000; 33,000-42,000; 42,000-58,000; more than 58,000.

Table 2: Perceived and Actual Transition Probabilities Across Countries

	US		UK		France		Italy		Sweden		US vs EU	
	Actual	Perceived	Actual	Perceived	Actual	Perceived	Actual	Perceived	Actual	Perceived	Perceived US	Perceived EU
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Q1 to Q5	7.8	11.7	11.4	10.0	11.2	9.1	10.4	10.1	11.1	9.2	11.7	9.6
		(0.00)		(0.00)		(0.00)		(0.48)		(0.00)		(0.00)
Q1 to Q4	12.7	12.0	12.9	10.6	12.8	10.5	15.6	11.2	17.3	11.2	12.0	10.9
		(0.00)		(0.00)		(0.00)		(0.00)		(0.00)		(0.00)
Q1 to Q3	18.7	22.3	19.9	19.4	23.0	21.5	21.0	21.9	21.0	24.5	22.3	21.6
		(0.00)		(0.13)		(0.00)		(0.03)		(0.00)		(0.06)
Q1 to Q2	27.7	21.8	25.1	22.2	23.8	23.6	25.8	23.1	23.8	23.1	21.8	23.0
		(0.00)		(0.00)		(0.55)		(0.00)		(0.09)		(0.00)
Q1 to Q1	33.1	32.2	30.6	37.8	29.2	35.3	27.3	33.6	26.7	32.0	32.2	34.9
		(0.07)		(0.00)		(0.00)		(0.00)		(0.00)		(0.00)
Observations		2,170		1,290		1,297		1,242		881	2,170	4,710
P-value from Joint Test		0.00		0.00		0.00		0.00		0.00		0.00

Notes: The first five rows of the table report the average perceived probabilities (in odd columns) and actual probabilities (in even columns) that a child born to parents in the bottom quintile of the income distribution will be in quintiles 5, 4, 3, 2, and 1 respectively, when adult. Columns 11 and 12 show the perceived probabilities for the US and the four European countries. P-values for tests of equality of the average perceived probability to the actual probability, or of the average perceived probability in the U.S. to the one in Europe are in parentheses. The last row shows the p-value from the joint test that the average perceived probabilities are jointly different from the actual probabilities, and, in Column 12, that the average perceptions in the U.S. are jointly different from those in Europe. See Section 2.1 for a description of the data sources on actual mobility.

Table 3: Cross-sectional Relation between Perceptions and Policy Preferences

	Budget Opp. (1)	Support Estate Tax (2)	Support Equality Opp. Policies (3)	Government Interv. (4)	Unequal Opp. Very Serious Problem (5)	Budget Safety Net (6)	Tax Rate Top 1 (7)	Tax Rate Bottom 50 (8)	Govt. Tools (9)
A. Unconditional Beliefs									
Q1 to Q1	0.030	0.000	0.004	0.002	0.001	0.013	0.057	-0.035	-0.000
	(0.007)	(0.000)	(0.001)	(0.001)	(0.000)	(0.005)	(0.012)	(0.007)	(0.000)
Q1 to Q5	-0.044	0.000	-0.004	0.001	-0.000	-0.011	-0.041	0.060	-0.000
	(0.011)	(0.000)	(0.001)	(0.001)	(0.000)	(0.007)	(0.019)	(0.011)	(0.000)
B. Unconditional Beliefs for Left and Right Wing									
Q1 to Q1 × Left-Wing	0.030	0.001	0.006	0.004	0.002	0.020	0.069	-0.041	0.001
	(0.011)	(0.000)	(0.001)	(0.001)	(0.000)	(0.008)	(0.020)	(0.011)	(0.000)
Q1 to Q1 × Right-Wing	0.019	-0.000	0.003	0.003	0.001	0.003	0.039	-0.033	-0.000
	(0.012)	(0.001)	(0.001)	(0.002)	(0.000)	(0.008)	(0.021)	(0.012)	(0.000)
Left-Wing	1.410	0.128	0.223	0.139	0.067	0.885	2.191	-0.652	0.034
	(0.681)	(0.029)	(0.066)	(0.092)	(0.027)	(0.469)	(1.221)	(0.689)	(0.028)
Right-Wing	-1.161	-0.051	-0.329	-0.713	-0.056	-0.769	-1.487	1.423	-0.057
	(0.664)	(0.029)	(0.065)	(0.090)	(0.026)	(0.457)	(1.201)	(0.678)	(0.028)
p-value diff.	0.506	0.026	0.082	0.659	0.024	0.140	0.288	0.598	0.172
Q1 to Q5 × Left-Wing	-0.080	-0.001	-0.006	-0.003	-0.002	-0.013	-0.054	0.060	-0.001
	(0.018)	(0.001)	(0.002)	(0.002)	(0.001)	(0.013)	(0.032)	(0.018)	(0.001)
Q1 to Q5 × Right-Wing	-0.009	0.001	-0.002	0.002	0.001	-0.003	-0.001	0.039	0.000
	(0.019)	(0.001)	(0.002)	(0.003)	(0.001)	(0.013)	(0.034)	(0.019)	(0.001)
Left-Wing	1.499	0.159	0.382	0.411	0.170	1.076	2.549	-0.868	0.089
	(0.471)	(0.020)	(0.046)	(0.064)	(0.018)	(0.324)	(0.837)	(0.471)	(0.020)
Right-Wing	-2.216	-0.095	-0.318	-0.544	-0.041	-1.300	-2.862	1.793	-0.050
	(0.484)	(0.021)	(0.047)	(0.065)	(0.019)	(0.333)	(0.860)	(0.484)	(0.020)
p-value diff.	0.007	0.094	0.153	0.142	0.003	0.582	0.258	0.418	0.141
Observations	4290	4289	4290	4290	4290	4290	3442	3442	4290

Table 3 (continued): Cross-sectional Relation between Perceptions and Policy Preferences

	Budget Opp. (1)	Support Estate Tax (2)	Support Equality Opp. Policies (3)	Government Interv. (4)	Unequal Opp. Very Serious Problem (5)	Budget Safety Net (6)	Tax Rate Top 1 (7)	Tax Rate Bottom 50 (8)	Govt. Tools (9)
C. Beliefs Conditional On Effort									
Q1 to Q1	0.033	0.001	0.003	0.003	0.002	0.030	0.049	0.005	-0.001
	(0.010)	(0.000)	(0.001)	(0.001)	(0.000)	(0.007)	(0.016)	(0.010)	(0.000)
Q1 to Q5	-0.050	-0.001	-0.007	-0.001	-0.000	-0.016	-0.066	0.073	0.000
	(0.015)	(0.001)	(0.001)	(0.002)	(0.001)	(0.010)	(0.024)	(0.014)	(0.001)
D. Beliefs Conditional On Effort for Left and Right Wing									
Q1 to Q1 × Left-Wing	0.007	0.001	0.004	0.003	0.002	0.033	0.052	-0.002	-0.001
	(0.016)	(0.001)	(0.002)	(0.002)	(0.001)	(0.011)	(0.026)	(0.016)	(0.001)
Q1 to Q1 × Right-Wing	0.041	0.001	0.005	0.006	0.002	0.029	0.041	0.007	-0.001
	(0.019)	(0.001)	(0.002)	(0.003)	(0.001)	(0.013)	(0.031)	(0.018)	(0.001)
Left-Wing	2.344	0.148	0.259	0.265	0.106	0.702	2.910	-0.386	0.088
	(0.766)	(0.033)	(0.076)	(0.105)	(0.030)	(0.526)	(1.269)	(0.752)	(0.032)
Right-Wing	-2.477	-0.076	-0.504	-0.826	-0.048	-1.421	-1.787	1.867	-0.056
	(0.738)	(0.032)	(0.073)	(0.102)	(0.029)	(0.507)	(1.248)	(0.739)	(0.031)
p-value diff.	0.165	0.608	0.711	0.520	0.396	0.818	0.781	0.714	0.651
Q1 to Q5 × Left-Wing	-0.071	-0.003	-0.010	-0.010	-0.003	-0.012	-0.083	0.063	-0.001
	(0.027)	(0.001)	(0.003)	(0.004)	(0.001)	(0.019)	(0.045)	(0.026)	(0.001)
Q1 to Q5 × Right-Wing	-0.032	-0.000	-0.008	-0.002	0.000	-0.036	-0.028	0.075	0.001
	(0.027)	(0.001)	(0.003)	(0.004)	(0.001)	(0.018)	(0.045)	(0.027)	(0.001)
Left-Wing	1.464	0.187	0.443	0.517	0.177	1.045	3.020	-0.473	0.088
	(0.640)	(0.028)	(0.063)	(0.088)	(0.025)	(0.441)	(1.068)	(0.629)	(0.027)
Right-Wing	-3.010	-0.082	-0.329	-0.625	-0.040	-1.060	-2.688	1.781	-0.084
	(0.653)	(0.028)	(0.064)	(0.090)	(0.025)	(0.450)	(1.095)	(0.645)	(0.027)
p-value diff.	0.306	0.111	0.664	0.126	0.029	0.366	0.382	0.756	0.197
Observations	2543	2542	2543	2543	2543	2543	2112	2112	2543

Notes: The table reports estimates of regressions of the variable in the column on mobility perception (interacted with political affiliation in Panels B and D). Interactions of mobility perceptions and "Moderate" are not reported. Outcome variables are defined in Appendix A.3. "p-value diff" is the p-value of a test of equality of the effects on left- and right-wing respondents. Panels A and B consider unconditional perceptions; panels C and D consider perceptions when respondents are asked to think about very hard working individuals. The p-value of a joint test of equality of the left- and right-wing effects across equations is 0.133 for Q1 to Q1 perceptions and 0.11 for Q1 to Q5 perceptions. The mobility perceptions Q1 to Q1 and Q1 to Q5 are expressed as the number of children out of 100 from the bottom quintile. Example how to read the coefficients: If a respondent who is left wing thinks 10 more children out of 100 from the bottom quintile will remain in the bottom quintile, their preferred spending on opportunities (education and health) as a share of the total budget increases by 0.3 percentage points. Controls included in all regressions are: indicator variables for gender, age less than 45, having children, being in the top quartile of the income distribution, having a college degree, political affiliation, having a job with a status higher than father, having at least one of the parents not born in the country, and country times survey wave fixed effects. Standard errors in parentheses. $^{*}p < 0.1$,$^{**}p < 0.05$,$^{***}p < 0.01$

Table 4: First Stage Treatment Effects on Mobility Perceptions

	Q1 to Q1 (1)	Q1 to Q2 (2)	Q1 to Q3 (3)	Q1 to Q4 (4)	Q1 to Q5 (5)	Q1 to Q4 (Qual.) (6)	Q1 to Q5 (Qual.) (7)	American Dream Alive (8)
A. Unconditional Beliefs								
Treated	9.691	-2.123	-5.885	-1.806	0.123	-0.197	-0.212	-0.031
	(0.560)	(0.278)	(0.304)	(0.201)	(0.344)	(0.018)	(0.020)	(0.009)
B. Unconditional Beliefs for Left and Right Wing								
Treated × Left-Wing	10.209	-2.126	-6.093	-2.053	0.063	-0.189	-0.180	-0.010
	(0.980)	(0.488)	(0.532)	(0.353)	(0.603)	(0.032)	(0.035)	(0.016)
Treated × Right-Wing	11.145	-2.181	-6.139	-2.236	-0.589	-0.225	-0.236	-0.045
	(0.979)	(0.487)	(0.531)	(0.352)	(0.602)	(0.032)	(0.035)	(0.016)
Left-Wing	4.060	0.594	-1.803	-1.358	-1.494	-0.186	-0.256	-0.080
	(0.975)	(0.485)	(0.529)	(0.351)	(0.600)	(0.032)	(0.035)	(0.016)
Right-Wing	-0.616	0.406	0.654	0.085	-0.530	0.041	-0.003	0.121
	(0.978)	(0.487)	(0.531)	(0.352)	(0.602)	(0.032)	(0.035)	(0.016)
p-value diff.	0.499	0.937	0.951	0.713	0.445	0.422	0.248	0.140
Observations	8585	8585	8585	8585	8585	8585	8585	8585
C. Beliefs Conditional On Effort								
Treated	8.016	0.501	-5.434	-2.642	-0.441	-0.175	-0.153	
	(0.663)	(0.373)	(0.525)	(0.307)	(0.417)	(0.027)	(0.030)	
D. Beliefs Conditional On Effort for Left and Right Wing								
Treated × Left-Wing	8.342	0.837	-5.101	-3.064	-1.013	-0.172	-0.172	
	(1.191)	(0.671)	(0.944)	(0.552)	(0.749)	(0.049)	(0.054)	
Treated × Right-Wing	8.816	0.819	-5.383	-3.309	-0.943	-0.209	-0.151	
	(1.158)	(0.653)	(0.918)	(0.537)	(0.728)	(0.048)	(0.052)	
Left-Wing	3.976	0.807	-2.679	-0.966	-1.138	-0.175	-0.254	
	(1.161)	(0.654)	(0.920)	(0.538)	(0.730)	(0.048)	(0.052)	
Right-Wing	-1.546	-0.469	0.420	1.329	0.265	0.128	0.065	
	(1.146)	(0.646)	(0.908)	(0.531)	(0.720)	(0.047)	(0.052)	
p-value diff.	0.775	0.985	0.831	0.751	0.947	0.592	0.779	
Observations	5118	5118	5118	5118	5118	5117	5117	

Notes: The table reports first-stage effects on mobility perceptions. The dependent variable in Column j for $j = 1, 2, 3, 4, 5$ is the perceived probability of a child from the bottom quintile moving to quintile j. The dependent variable in Column 6 (respectively, 7) measures qualitatively on a scale from 1 to 5 the respondent's perceived probability of moving from the first to the fourth (respectively, to the fifth) quintile for a child from the bottom quintile, where 1 means "Close to zero" and 5 means "High". Panels A and B (respectively, C and D) show the effect on unconditional probabilities (respectively, perceptions conditional on effort). The dependent variable in Column 8 is a dummy equal to one if the respondent agrees or strongly agrees with the statement that in her country "everybody has a chance to make it and be economically successful." "p-value diff" is the p-value of a test of equality of the effects among left- and right-wing respondents. "Dep. Var. Mean (Left-wing)" and "Dep. Var. Mean (Right-wing)" are the means of the dependent variable for respondents in the control group who are left-wing or right-wing, respectively. All regressions include the same controls as Table 3. Standard errors in parentheses. $^{*}p < 0.1, ^{**}p < 0.05, ^{***}p < 0.01$

Table 5: Persistence of Treatment Effects on Mobility Perceptions

	First Survey All Respondents (1)	First Survey Who Took Follow Up (2)	Follow up Respondents (3)
Q1 to Q1			
Treated	8.308	9.254	5.671
	(0.899)	(1.748)	(1.675)
Q1 to Q2			
Treated	-1.731	-1.428	-0.968
	(0.444)	(0.920)	(0.943)
Q1 to Q3			
Treated	-5.479	-6.676	-3.945
	(0.491)	(1.019)	(1.013)
Q1 to Q4			
Treated	-1.733	-1.879	-1.417
	(0.335)	(0.642)	(0.688)
Q1 to Q5			
Treated	0.636	0.729	0.659
	(0.582)	(1.243)	(1.069)
Q1 to Q4 (Qual.)			
Treated	-0.230	-0.140	-0.110
	(0.030)	(0.062)	(0.066)
Q1 to Q5 (Qual.)			
Treated	-0.245	-0.116	-0.044
	(0.034)	(0.070)	(0.071)
Obs.	3354	815	815

Notes: The coefficients and standard errors in row j refer to a regression of the variable listed in row j on a dummy for being in the treatment group. Column 1 shows the effects on the full sample of respondents in the first survey, while column 2 shows the effects in the first survey, but only for respondents who also took the follow up survey. Column 3 shows the effects in the follow up survey. All regressions include the same controls as Table 3. Standard errors in parentheses. $^{*}p < 0.1,^{**}p < 0.05,^{***}p < 0.01$

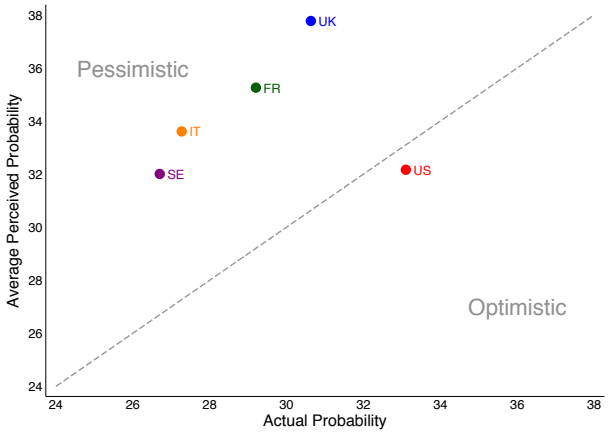
Table 6: Treatment Effects on Policy Preferences

	Budget Opp. (1)	Support Estate Tax (2)	Support Equality Opp. Policies (3)	Government Interv. (4)	Unequal Opp. Very Serious Problem (5)	Budget Safety Net (6)	Tax Rate Top 1 (7)	Tax Rate Bottom 50 (8)	Govt. Tools (9)	Redistribution Index (10)
A. Treatment Effects										
Treated	0.108	0.002	0.010	-0.020	0.046	0.225	0.357	0.155	-0.017	0.013
	(0.227)	(0.010)	(0.022)	(0.030)	(0.013)	(0.160)	(0.398)	(0.226)	(0.013)	(0.009)
B. Treatment Effects for Left and Right Wing										
Treated X Left-Wing	0.823	0.032	0.078	0.124	0.103	0.111	0.551	0.257	-0.008	0.052
	(0.398)	(0.017)	(0.039)	(0.053)	(0.022)	(0.281)	(0.686)	(0.389)	(0.023)	(0.015)
Treated X Right-Wing	0.031	-0.001	-0.025	-0.020	0.018	0.200	0.661	-0.386	-0.049	0.006
	(0.397)	(0.017)	(0.039)	(0.053)	(0.022)	(0.281)	(0.691)	(0.392)	(0.023)	(0.015)
Left-Wing	1.159	0.147	0.352	0.327	0.110	1.099	2.514	-1.166	0.077	0.173
	(0.396)	(0.017)	(0.039)	(0.053)	(0.022)	(0.280)	(0.696)	(0.395)	(0.023)	(0.015)
Right-Wing	-1.834	-0.086	-0.314	-0.582	-0.054	-1.239	-2.428	1.343	-0.045	-0.171
	(0.397)	(0.017)	(0.039)	(0.053)	(0.022)	(0.281)	(0.701)	(0.398)	(0.023)	(0.015)
p-value diff.	0.159	0.164	0.061	0.056	0.007	0.823	0.910	0.245	0.211	0.030
C. IV Estimates										
Q1 to Q1	0.011	0.000	0.001	-0.002	0.005	0.023	0.036	0.016	-0.002	0.001
	(0.023)	(0.001)	(0.002)	(0.003)	(0.001)	(0.017)	(0.040)	(0.023)	(0.001)	(0.001)
D. IV Estimates for Left and Right Wing										
Q1 to Q1 X Left-Wing	0.082	0.003	0.008	0.012	0.011	0.011	0.052	0.024	-0.001	0.005
	(0.040)	(0.002)	(0.004)	(0.005)	(0.002)	(0.028)	(0.065)	(0.038)	(0.002)	(0.001)
Q1 to Q1 X Right-Wing	0.003	-0.000	-0.002	-0.002	0.002	0.018	0.059	-0.034	-0.004	0.001
	(0.036)	(0.002)	(0.003)	(0.005)	(0.002)	(0.025)	(0.062)	(0.035)	(0.002)	(0.001)
Left-Wing	-3.910	-0.067	-0.030	-0.778	-0.214	2.179	0.017	0.353	0.126	-0.088
	(2.492)	(0.105)	(0.241)	(0.337)	(0.141)	(1.746)	(4.238)	(2.443)	(0.141)	(0.093)
Right-Wing	-3.953	-0.178	-0.336	-1.169	-0.027	-0.347	-4.965	4.889	0.116	-0.258
	(2.270)	(0.095)	(0.220)	(0.307)	(0.123)	(1.591)	(3.978)	(2.294)	(0.124)	(0.085)
p-value diff.	0.143	0.149	0.056	0.053	0.004	0.848	0.938	0.257	0.276	0.022
Observations	8585	8584	8585	8585	4281	8585	6851	6851	4281	8585

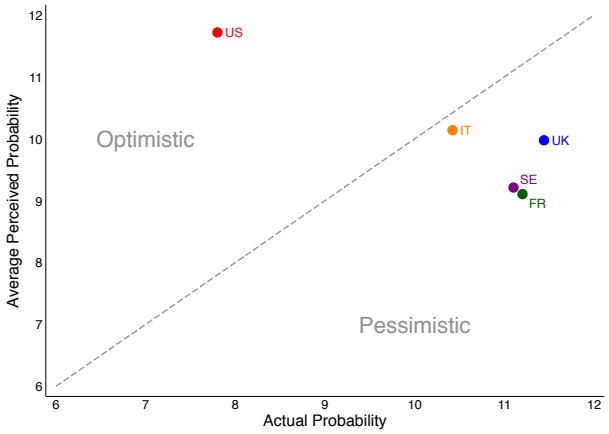
Notes: Panels A and B report the treatment effects; Panels C and D scale the effect of the treatment on the policy in each column by the first stage effect of the treatment on the perceived probability of remaining in the first quintile, by regressing the policy listed in the column on the perceived probability of remaining in the first quintile, instrumented by a dummy for being in the treatment group. Panels B and D report these two types of effects interacted with left-wing and right-wing dummies. The dependent variable in column 10 is the unweighted average of the z-scores of all variables from columns 1-9, oriented so that a higher index means more support for redistribution. See the notes to Table 3. Standard errors in parentheses. $^{*}p < 0.1,^{**} p < 0.05,^{***} p < 0.01$

Figure 2: Actual and Perceived Mobility Across Countries

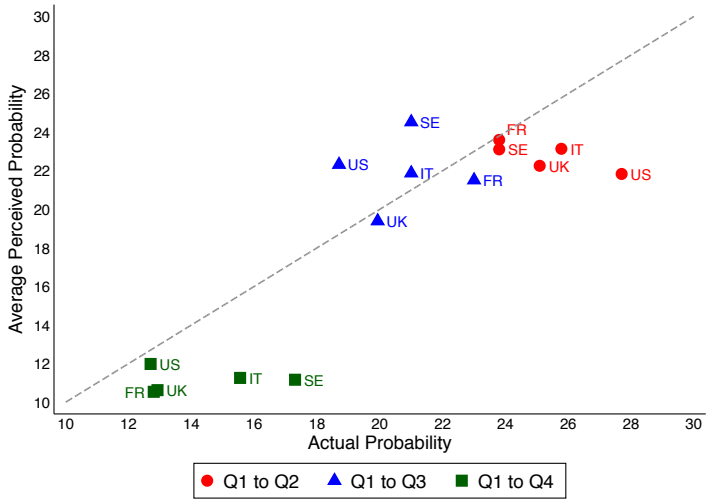
A: Q1 to Q1 probability



B: Q1 to Q5 probability

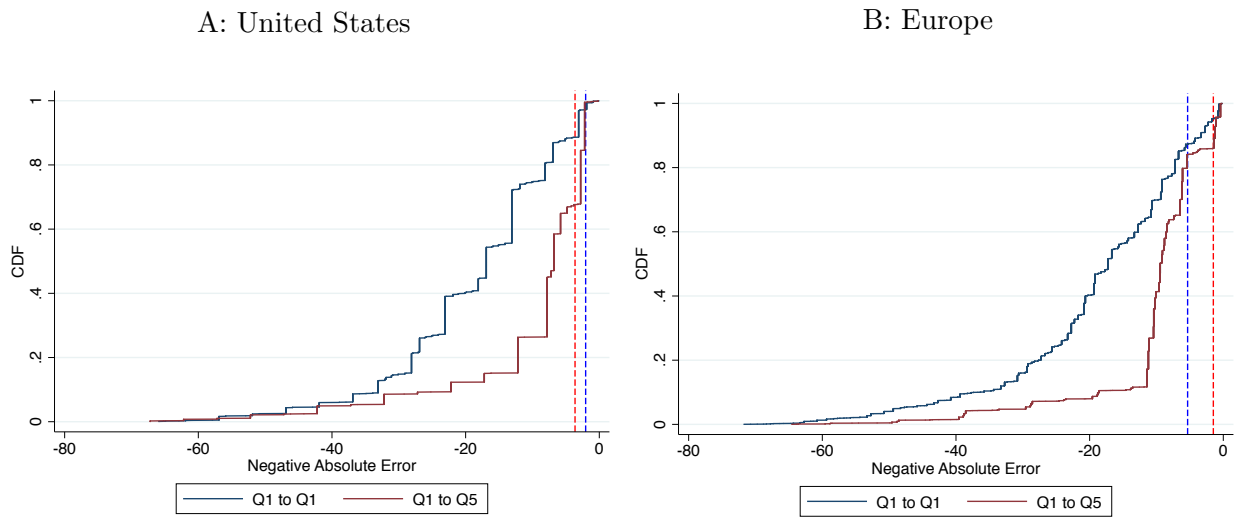


C: Q1 to Q2, Q1 to Q3 and Q1 to Q4 probabilities



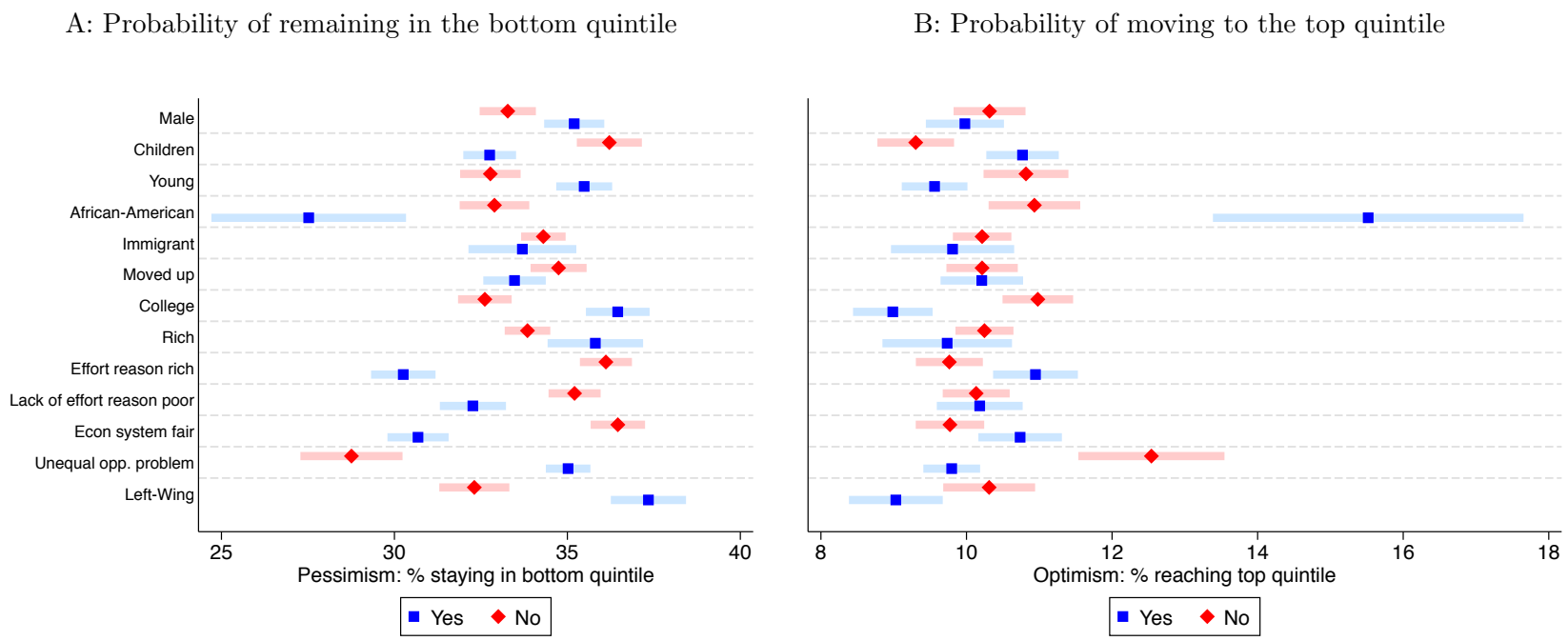
Notes: The figures shows the average perceived probability in each country (y axis) of a child from the bottom quintile remaining in the bottom quintile (Panel A), moving to the top quintile (Panel B), or moving to the second, third, or fourth quintile (Panel C) against the actual probability in the country (x axis). The dotted line is the 45 degree line.

Figure 3: Accuracy of Individual Level Perceptions



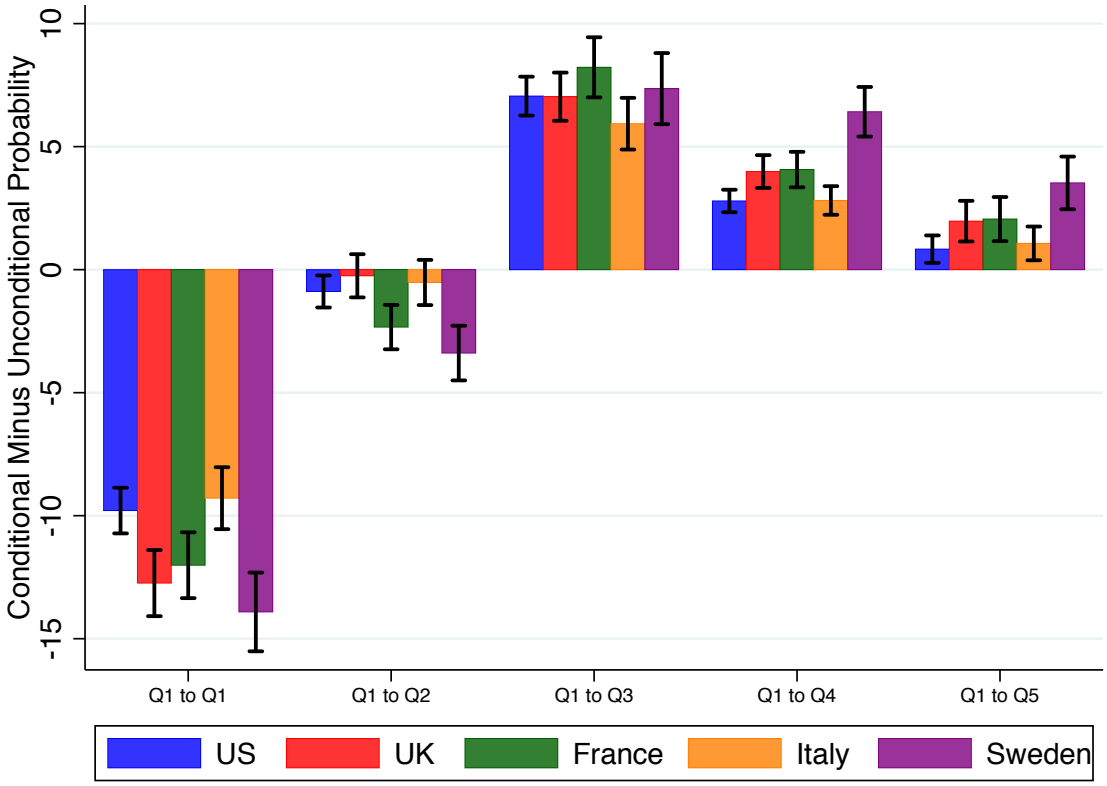
Notes: The figure shows the distribution of the negative absolute error – the absolute deviation between the actual and the perceived probability of remaining in the bottom quintile (Q1 to Q1) and of moving to the top quintile (Q1 to Q5)– in the U.S. (panel A) and European samples (panel B). The dotted red (respectively, blue) line is the negative absolute error of the average perception for the Q1 to Q5 (respectively, Q1 to Q1) transition probability. The accuracy at the individual level is considerably worse than the accuracy of the average perception.

Figure 4: Heterogeneity in Mobility Perceptions



Notes: The figure shows the average perceived probability of a child from the bottom quintile remaining in the bottom quintile (Panel A) or moving to the top quintile (Panel B) for different groups of respondents. The shaded areas are 90% confidence intervals around the average response. See Appendix A.3 for a definition of the groups.

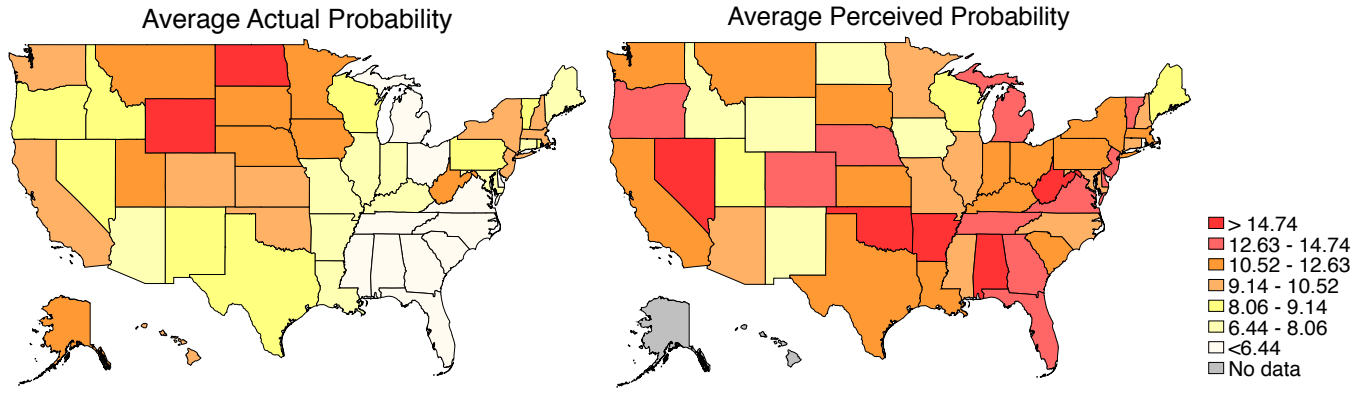
FIGURE 5: THE PERCEIVED ROLE OF EFFORT



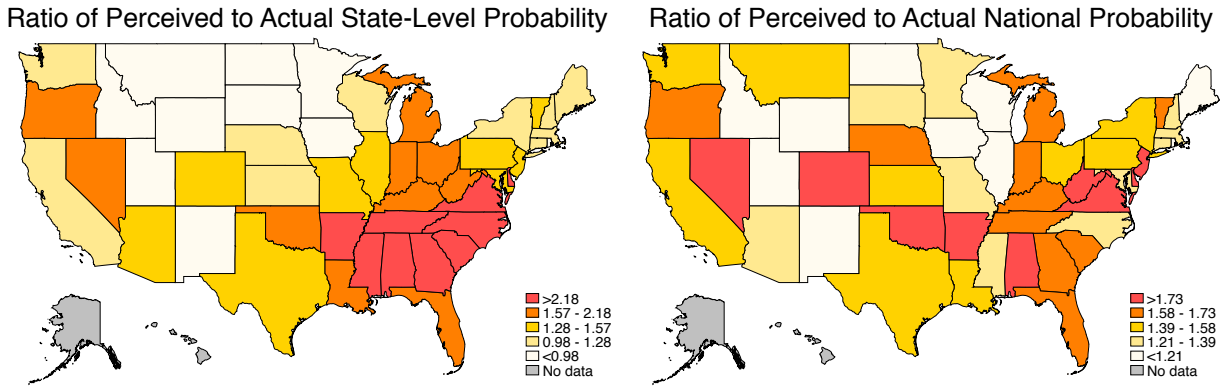
Notes: The figure shows, for each country and each quintile i, the means and 95% confidence intervals for the difference between the perceived probability that a child born in a family from the bottom quintile will be in quintile i in the question that asks respondents to think about a very hard working person (i.e., mobility conditional on effort) and the perceived probability in the baseline question (i.e., unconditional on effort).

FIGURE 6: ACTUAL AND PERCEIVED PROBABILITY OF MOVING FROM THE BOTTOM TO THE TOP QUINTILE ACROSS U.S. STATES

Panel A:

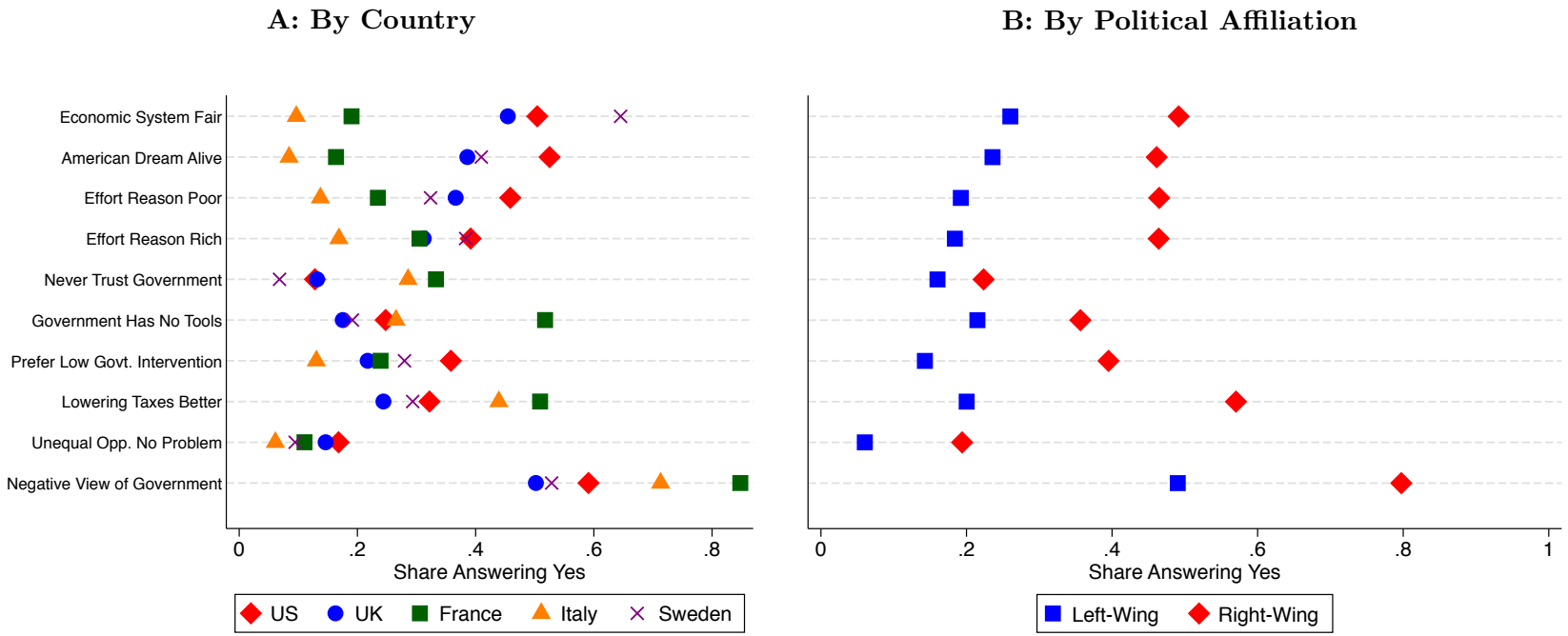


Panel B:



Notes: The top left panel shows the actual probability of a person born in a family in the bottom quintile moving to the top quintile in each state. The top right panel shows the corresponding average perceived probability among respondents in our survey who live in that state. The bottom left panel shows the ratio of the average state-level perceived probability to the actual state-level probability. The bottom right panel shows the ratio of average state-level perceived probability to the average real national probability. The average real national probability of moving from the bottom to the top quintile in the United States is 7.8%. Data on actual transition probabilities is from Chetty et al. (2014).

Figure 7: Perceptions of Government and Fairness



Notes: The figure shows the share of respondents answering "Yes" to the questions listed on the vertical axis. Panel A shows shares by country, while Panel B shows shares by political affiliation. *Economic System Fair*, *American Dream Alive*, *Effort Reason Poor*, *Effort Reason Rich* are dummies equal to one if the respondent says that the economic system in her country is "basically fair," she agrees or strongly agrees with the statement that in her country "everybody has a chance to make it and be economically successful," "lack of effort on his or her own part" is the most important reason for a person being poor, and "she or he worked harder than others" is the most important reason for a person being rich. *Never Trust Government*, *Government Has No Tools*, *Prefer Low Govt. Intervention*, *Lowering Taxes Better*, *Unequal Opp. No Problem* are dummies equal to one if the respondent says that the government can never be trusted to do what is right, thinks that the government has the ability and the tools to do nothing or not much to improve mobility, supports little government intervention (less than 5 on a scale from 1 to 7), thinks that "lowering taxes on wealthy people and corporations to encourage more investment in economic growth" is better than "raising taxes [...] to expand programs for the poor" to improve mobility, perceive unequal opportunities to be "Not a problem" or "A small problem," respectively. *Negative View of Government* is a dummy equal to one if the respondent answers that she can "never" trust the government, or that to reduce the inequality of opportunities between children born in poor and rich families the government has the ability and the tools to do "nothing at all" or "not much," or that she supports little government intervention (less than 5 on the scale from 1 to 7), or that "lowering taxes on wealthy people and corporations to encourage more investment in economic growth" would be the better way to equalize opportunities.

APPENDIX

A.1 Survey Information

We collected data in three waves. The first smaller pilot wave (Wave A) consisted of only the survey part (without a treatment) of about 500 respondents in February 2016. We append this wave to the main wave for the descriptive analysis of perceptions in Section 3[29] The second and main wave (Wave B) with the perception treatment was conducted in September 2016. We conducted a third wave (Wave C) in the United States in October 2016 to ensure robustness and increase sample size in the U.S. The only difference between Wave B and Wave C was that in the latter all respondents were asked the questions on mobility for very hard-working people. Follow-up surveys were conducted in the US about one week after wave B and wave C, respectively.

We report the full text of the U.S. version of the survey in Section A.5, and the links to the survey in each country in Section A.4.

Table A1 reports the number of respondents for each survey wave and country. Table A2 summarizes the 8 randomization groups of Wave B. Wave C had only 4 randomization groups (Group 1-Group 4). Table A3 reports the share of respondents with strange answer patterns in the "ladder" mobility question. Table A4 shows that respondents assigned to different randomization groups are not different in terms of baseline demographic characteristics.

Table A1: Survey waves, Dates and Sample Sizes

	Sample size	Date
Wave A - US	499	February 2016
Wave A - US Extra	204	April 2016
Wave A - UK	550	February 2016
Wave A - France	550	February 2016
Wave A - Italy	548	February 2016
Wave A - Sweden	495	February 2016
Wave B - US	2002	September 2016
Wave B - Follow Up	423	September 2016
Wave B - UK	1598	September 2016
Wave B - France	1598	September 2016
Wave B - Italy	1595	September 2016
Wave B - Sweden	999	September 2016
Wave C - US	2000	October 2016
Wave C - Follow Up	586	October 2016

[29] We conducted a small additional survey in the US in April 2016, in order to collect additional responses from the less populous states. We use responses from this additional wave in section 3.4.

Table A2: Randomization Groups

	Treatment/Control	Saw govt. block before/after mobility questions	Effort/talent
Group 1	Control	Before	Effort
Group 2	Treatment	Before	Effort
Group 3	Control	After	Effort
Group 4	Treatment	After	Effort
Group 5	Control	Before	Talent
Group 6	Treatment	Before	Talent
Group 7	Control	After	Talent
Group 8	Treatment	After	Talent

Notes: "Before" and "After" refer to whether the block was seen before or after main perception treatment (or the equivalent place in the survey for the control group).

Table A3: Response Patterns

	Waves A	Waves B and C
100 in any quintile	0.05	0.04
100 in quintile Q2/Q3/Q4/Q5	0.03	0.02
0 in quintile Q1/Q2/Q3	0.12	0.12
20 in each quintile	0.06	0.06

Notes: The table shows the share of respondents whose responses to the ladder question on perceptions exhibits any of the patterns described, namely: whether the respondent puts the number 100 in any of the quintiles, puts the number 100 in any of the quintiles except Q1, puts the number 0 in the quintiles Q1, Q2, or Q3, and finally, puts the same number (20) in all of the quintiles.

Table A4: Covariates Balance Across Groups

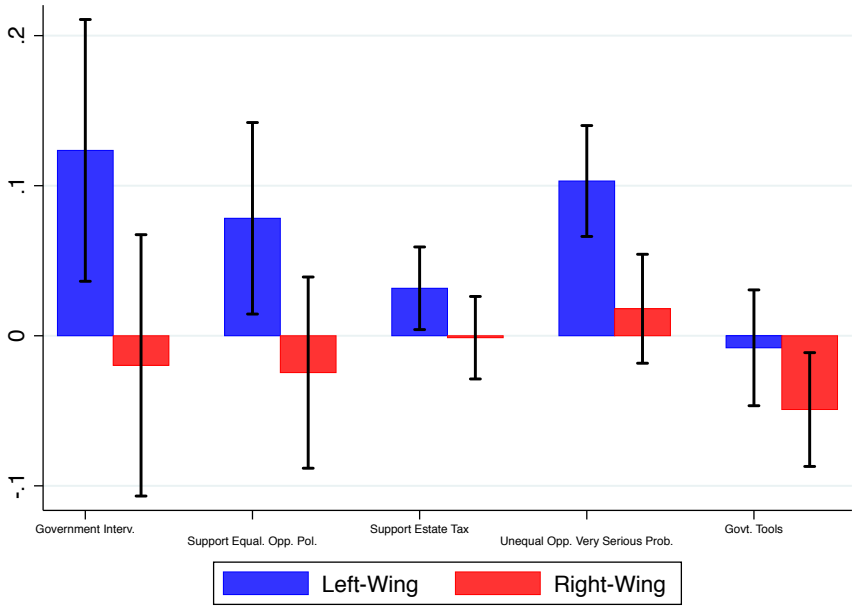
	Treated (1)	Government Questions (2)	Effort Questions (3)
Male	0.99	0.51	0.70
Age	0.45	0.42	0.58
Married	0.35	0.70	0.45
Has children	0.60	0.13	0.33
Native	0.17	0.73	0.84
Employed	0.92	0.73	0.58
Unemployed	0.23	0.59	0.41
Not in labor force	0.79	0.86	0.79
Has university degree	0.61	0.42	0.00
Left-wing	0.91	0.98	0.12

Notes: The table shows the p-value from a series of regressions of the form $y_{ic} = \alpha + \beta Covariate_i + \gamma_c + \epsilon_{ic}$, where $Covariate_i$ is the variable listed in the row and γ_c are country fixed effects. In the column "Treated", y_{ic} is a dummy equal to one if the respondent was in the treatment group and zero if she was in the control group. In column (2), y_{ic} is a dummy equal to one if the respondent saw the three survey questions on fairness and government whose order was randomized (described in the text) before the main perception treatment (or the equivalent place in the survey for those not treated by the main perception treatment). In column (3), y_{ic} is a dummy equal to one if the respondent was asked about the mobility prospects of very hard-working children, and equal to zero is she was asked about the mobility prospects of very talented children.

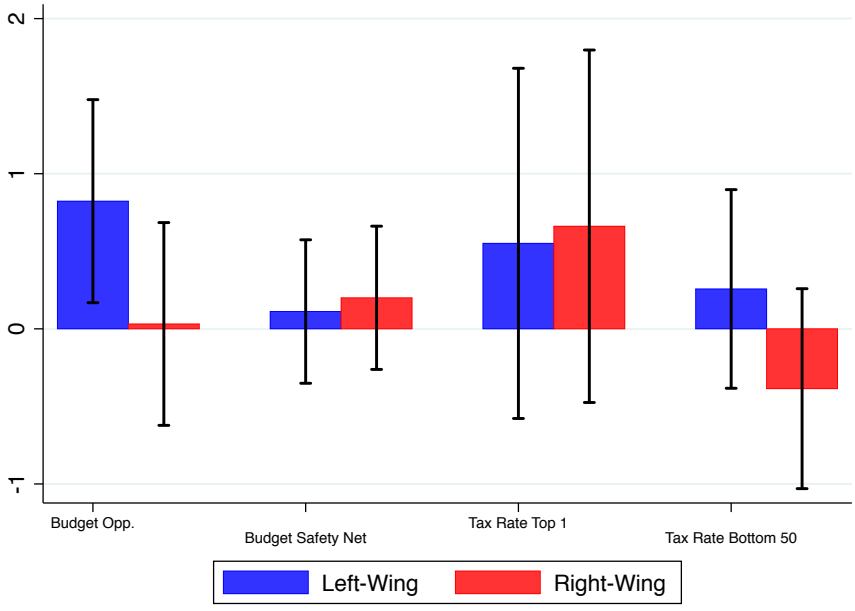
A.2 Additional Results

FIGURE A1: HETEROGENEITY IN TREATMENT EFFECTS BY POLITICAL AFFILIATION

Panel A:



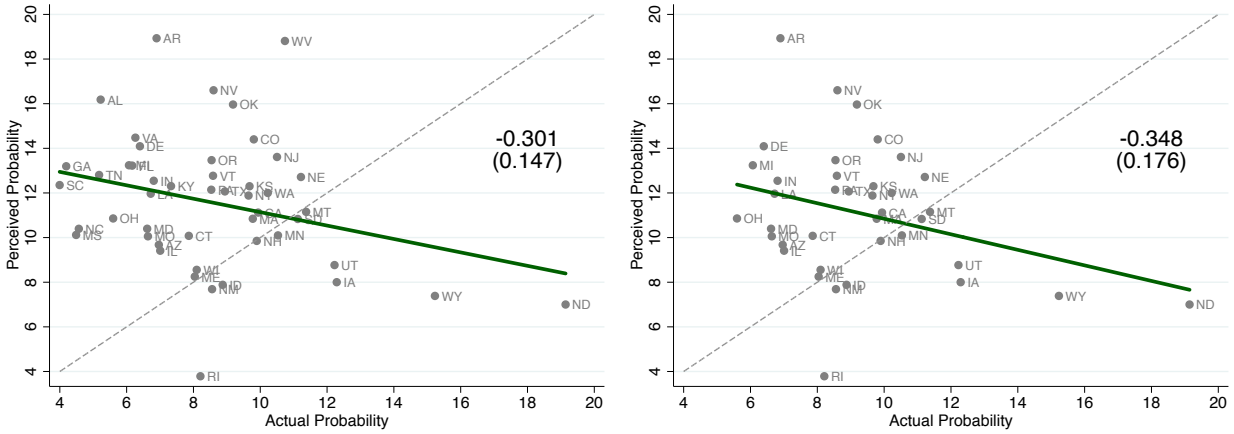
Panel B:



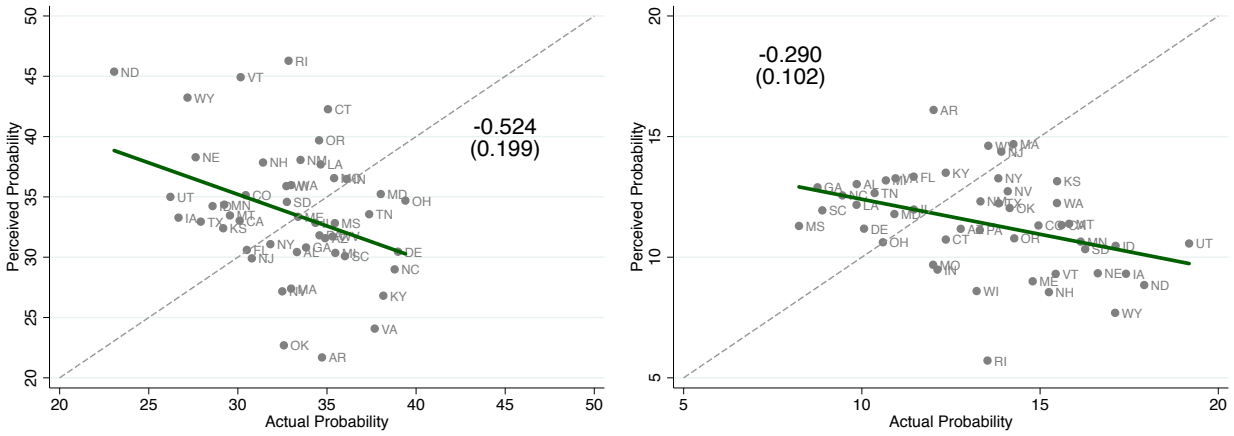
Notes: The figures shows the treatment effects for left-wing and right-wing respondents from Panel A of Table 6, together with 90% confidence intervals. See the notes to Table 6.

FIGURE A2: ACTUAL AND PERCEIVED TRANSITION PROBABILITIES ACROSS U.S. STATES

Perceived and actual Q1 to Q5: All states (Left panel) and Omitting South-Eastern States (Right Panel)



Perceived and actual Q1 to Q1 (Left panel) and Q1 to Q4 (Right panel)



Notes: The figure shows the average perceived probability in each state (y axis) against the actual probability in the state (x axis), together with the best-fit line and the coefficient and standard error of the slope. The dotted line is the 45 degree line. See the notes to Figure 6.

A.3 Variable Definitions

Demographic variables:

Male: respondent is male.

Young: respondent is younger than 45 years old.

African-American: respondent is African-American (asked in the U.S. only).

Children: respondent has at least one child.

Rich: respondent's household income is above the 75th percentile of the respondents' household income distribution in the country.

College: respondent has college degree.

Left-wing: respondent's views on economic issues are liberal or very liberal.

Right-wing: respondent's views on economic issues are conservatives or very conservatives.

Moved up: dummy equal to one if the level of status of the respondent's job is higher than his father's one.

Immigrant: dummy equal to one if at least one of the respondent's parents is not born in the country.

Mobility Perceptions:

Q1 to Q[X]: perceived probability of being in the Xth quintile as an adult for a child with parents in the first quintile.

Q1 to Q[X] Effort: perceived probability of being in the Xth quintile as an adult for a hard-working child with parents in the first quintile.

Q1 to Q4 (Qual.): qualitative question on perceived chances, on a scale from 1 to 5, of moving from the first to the fourth quintile, where 1 is "Close to zero", 2 is "Low", 3 is "Fairly low", 4 is "Fairly high" and 5 is "High".

Q1 to Q5 (Qual.): qualitative question on perceived chances, on a scale from 1 to 5, of moving from the first to the fifth quintile, where 1 is "Close to zero", 2 is "Low", 3 is "Fairly low", 4 is "Fairly high" and 5 is "High".

Perceptions of Fairness:

Economic System Fair: dummy equal to one if respondent believes that the economic system in her country is basically fair, since all have an equal opportunity to succeed.

American Dream Alive: dummy equal to one if respondent agrees or strongly agrees with the statement "In [country] everybody has a chance to make it and be economically successful" (equal to zero if neither agrees nor disagrees, disagrees, or strongly disagrees).

Effort Reason Poor: dummy equal to one if respondent believes that "Lack of effort on his or her own part" is a more important determinant of why a person is poor than "Circumstances beyond his or her control".

Effort Reason Rich: dummy equal to one if respondent believes that "Because she or he worked harder than others" is a more important determinant of why a person is poor than "Because she

or he had more advantages than others".
Unequal Opp. Problem: dummy equal to one if the respondent believes that if children from poor and rich backgrounds have unequal opportunities in life this is "A problem" or "A serious problem" or "A very serious problem" (equal to zero if it is "Not a problem" or "A small problem").
Unequal Opp. No Problem: dummy equal to one if the respondent believes that if children from poor and rich backgrounds have unequal opportunities in life this is "Not a problem" or "A small problem".
Unequal Opp. Very Serious Problem: dummy equal to one if the respondent believes that if children from poor and rich backgrounds have unequal opportunities in life this is "A very serious problem".

Policy Preferences and Role of Government:
Tax Rate Top 1: Average income tax rate for households in the top 1% of the income distribution.
Tax Rate Bottom 50: Average income tax rate for households in the bottom 50% of the income distribution.
Support Estate Tax: Dummy equal to one if respondent is in favor of the estate tax (defined as answering 4 or 5 on a scale from 1 to 5, where 1 means "do not support at all" and 5 means "strongly support").
Budget Safety Net: share of current government budget that should be allocated to safety net policies.
Budget Opp.: share of current government budget that should be allocated to education and health.
Support Equality Opp. Policies: respondent's support, on a scale from 1 to 5, for policies to increase the opportunities for children born in poor families and to foster more equality of opportunity. The respondent was told that "to finance an expansion of policies promoting equal opportunity, it would have to be the case that either other policies are scaled down or taxes are raised".
Government Interv.: respondent's support, on a scale from 1 to 7, for government intervention to make the opportunities for children from poor and rich families less unequal.
Lowering Taxes Better: dummy equal to one if the respondent believes that "lowering taxes on wealthy people and corporations to encourage more investment in economic growth" would do more to make the opportunities for children from poor and rich families less unequal than "raising taxes on wealthy people and corporations to expand programs for the poor".
Trust Govt.: dummy equal to one if the respondent answers that she can trust the government to do what is right "Most of the time" or "Always" (it takes value zero if the answer is "Never" or "Only some of the time").
Never trust government: dummy equal to one if the respondent answers that she can never trust the government to do what is right.
Govt. Tools: dummy equal to one if the respondent answers that to reduce the inequality of opportunities between children born in poor and rich families the government has the ability and the tools to do "Some" or "A lot" (it takes value zero if the answer is "Nothing at all" or "Not much").
Government has no tools: dummy equal to one if the respondent answers that to reduce the in-

equality of opportunities between children born in poor and rich families the government has the ability and the tools to do "Nothing at all" or "Not much."

Prefer Low Govt. Intervention: dummy equal to one if the respondent prefers a low degree of government intervention to make the opportunities for children from poor and rich families less unequal (at point 4 or below on the scale from 1 to 7).

Negative View of Government: dummy equal to one if the respondent answers that she can "never" trust the government, or that to reduce the inequality of opportunities between children born in poor and rich families the government has the ability and the tools to do "Nothing at all" or "Not much," or that she supports little government intervention (less than 5 on the scale from 1 to 7 of the variable *Government Interv.*), or that "lowering taxes on wealthy people and corporations to encourage more investment in economic growth" would be the better way to equalize opportunities.

A.4 Links to surveys

- Survey U.S.: https://harvard.az1.qualtrics.com/SE/?SID=SV_5dxninfErZ246X3
- Survey U.K.: https://harvard.az1.qualtrics.com/SE/?SID=SV_7TCttX32sJZGUnP
- Survey France: https://harvard.az1.qualtrics.com/SE/?SID=SV_55NxjdOVSEVnHBb
- Survey Italy: https://harvard.az1.qualtrics.com/SE/?SID=SV_ezmyMMB2lTJgoeh
- Survey Sweden: https://harvard.az1.qualtrics.com/SE/?SID=SV_cZxXzaGNNjn6w5L

A.5 Detailed Survey Questionnaires

Answer options are in *italic*, separated by a semicolon.

1. See Figure A5

   Yes, I would like to take part in this study, and confirm that I AM A U.S. RESIDENT and am 18 or older; No, I would not like to participate.

2. What is your gender?

   Male; Female

3. What is your age?

4. What was your TOTAL household income, before taxes, last year (2015)?

   $0 - $9,999; $10,000 - $14,999; $15,000 - $19,999; $20,000 - $29,999; $30,000 - $39,999; $40,000 - $49,999; $50,000 - $69,999; $70,000 - $89,999; $90,000 - $109,999; $110,000 - $149,999; $150,000 - $199,999; $200,000 +

5. Please indicate your marital status

   Single; Married; Other

6. How many children do you have?

   I do not have children; 1; 2; 3; 4; 5 or more

7. How would you describe your ethnicity/race?

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

8. Were you born in the United States?

   Yes; No

9. Were both of your parents born in the United States?

   Yes; No

10. Where was your father born?

    Unites States; South or Central America, or Mexico; Canada; Europe; Asia; Africa; Oceania

11. In which state do you live?

12. In which ZIP code do you live?

13. Which category best describes your highest level of education?

    Eighth Grade or less; Some High School; High School degree / GED; Some College; 2-year College Degree; 4-year College Degree; Master's Degree; Doctoral Degree; Professional Degree (JD, MD, MBA)

14. Which category best describes your father's highest level of education?

    Eighth Grade or less; Some High School; High School degree / GED; Some College; 2-year College Degree; 4-year College Degree; Master's Degree; Doctoral Degree; Professional Degree (JD, MD, MBA); I come from a single-parent family and my father was not present

15. Which category best describes your mother's highest level of education?

    Eighth Grade or less; Some High School; High School degree / GED; Some College; 2-year College Degree; 4-year College Degree; Master's Degree; Doctoral Degree; Professional Degree (JD, MD, MBA); I come from a single-parent family and my mother was not present

16. What is your current employment status?

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

17. If you compare your job (or your last job if you currently don't have a job) with the job your father had while you were growing up, would you say that the level of status of your job is:

    Much higher than my father's; Higher than my father's; About equal to my father's; Lower than my father's; Much lower than my father's; My father did not have a job while I was growing up OR I come from a single-parent family

18. If you compare your job (or your last job if you currently don't have a job) with the job your mother had while you were growing up, would you say that the level of status of your job is:

    Much higher than my mother's; Higher than my mother's; About equal to my mother's; Lower than my mother's; Much lower than my mother's; My mother did not have a job while I was growing up OR I come from a single-parent family

19. When you were growing up, compared with American families back then, would you say your family income was:

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

20. Right now, compared with American families, would you say your own household income is:

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

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

    Very liberal; Liberal; Moderate; Conservative; Very conservative

22. Before proceeding to the next set of questions, 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 in any way the payment you will receive for taking this survey. In your honest opinion, should we use your responses, or should we discard your responses since you did not devote your full attention to the questions so far?

    Yes, I have devoted 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.

23. Do you think the economic system in the United States is:

    Basically fair, since all Americans have an equal opportunity to succeed; Basically unfair, since all Americans do not have an equal opportunity to succeed

24. Which has more to do with why a person is poor?

    Lack of effort on his or her own part; Circumstances beyond his or her control

25. Which has more to do with why a person is rich?

    Because she or he worked harder than others; Because she or he had more advantages than others

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

    Never; Only some of the time; Most of the time; Always

27. If children from poor and rich backgrounds have unequal opportunities in life, do you think this is:

    Not a problem at all; A small problem; A problem; A serious problem; A very serious problem

28. To reduce the inequality of opportunities between children born in poor and rich families, the government has the ability and the tools to do:

    Nothing at all; Not much; Some; A lot

29. We would now like to ask you what you think about the life opportunities of children from very poor families.

    For the following questions, we focus on 500 families that represent the U.S. population. We divide them into five groups on the basis of their income, with each group containing 100 families. These groups are: the poorest 100 families, the second poorest 100 families, the middle 100 families, the second richest 100 families, and the richest 100 families.

    In the following questions, we will ask you to evaluate the chances that children born in one of the poorest 100 families, once they grow up, will belong to any of these income groups.

    Please fill out the entries to the right of the figure below to tell us, in your opinion, how many out of 100 children coming from the poorest 100 families will grow up to be in each income group.

    From our experience, this question will take you at the very least 1 minute to answer.

    Please note that your entries need to add up to 100 or you will not be able to move on to the next page.

    Figure 1 here.

30. Do you think the chances that a child from the poorest 100 families will grow up to be among the richest 100 families are:

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

31. Do you think the chances that a child from the poorest 100 families will grow up to be among the second richest 100 families are:

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

32. We are still interested in the life opportunities of children from very poor families, but we now focus on a different group of poor children.

    From our experience, this question will take you at the very least 45 seconds to answer.

    Consider 100 children coming from the poorest 100 families.

    These children are very determined and put in hard work both at school and, later in life, when finding a job and doing that job.

    Please fill out the entries to the right of the figure below to tell us, in your opinion, how many out of these 100 children will grow up to be in each income group.

    Please note that your entries need to add up to 100 or you will not be able to move on to the next page.

    Figure 1 here.

33. Do you think the chances that one of these hard working children will grow up to be among the richest 100 families are:

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

34. Do you think the chances that one of these hard working children will grow up to be among the second richest 100 families are:

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

35. We are still interested in the life opportunities of children from very poor families, but we now focus on a different group of poor children.

    From our experience, this question will take you at the very least 45 seconds to answer.

    Consider 100 children coming from the poorest 100 families.

    These children are very talented.

    Please fill out the entries to the right of the figure below to tell us, in your opinion, how many out of these 100 children will grow up to be in each income group.

    Please note that your entries need to add up to 100 or you will not be able to move on to the next page.

    Figure 1 here.

36. Do you think the chances that one of these talented children will grow up to be among the richest 100 families are:

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

37. Do you think the chances that one of these talented children will grow up to be among the second richest 100 families are:

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

38. How do you feel about the following statement?

    "In the United States everybody has a chance to make it and be economically successful."

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

39. Some people think that the government should not concern itself with making the opportunities for children from poor and rich families less unequal. Others think that the government should do everything in its power to make the opportunities for children from poor and rich families less unequal. Think of a score of 1 as meaning that the government should not concern itself with making the opportunities for children from poor and rich families less unequal, and a score of 7 meaning that the government should do everything in its power to reduce this inequality of opportunities.

What score between 1 and 7 comes closest to the way you feel?

1; 2; 3; 4; 5; 6; 7

40. What do you think would do more to make the opportunities for children from poor and rich families less unequal?

    Lowering taxes on wealthy people and corporations to encourage more investment in economic growth; Raising taxes on wealthy people and corporations to expand programs for the poor.

41. Do you support more policies to increase the opportunities for children born in poor families and to foster more equality of opportunity, such as education policies? Naturally, to finance an expansion of policies promoting equal opportunity, it would have to be the case that either other policies are scaled down or taxes are raised.

    I very strongly oppose more policies promoting equality of opportunity; I oppose more policies promoting equality of opportunity; I am indifferent; I support more policies promoting equality of opportunity; I very strongly support more policies promoting equality of opportunity.

42. In the next two questions, we ask you to think about the total level of funds that the government raises and spends today on various policies. For the purpose of these questions, suppose that the level of government spending is fixed at its current level and cannot be changed. We will ask about your views on two aspects:

    - First, on the fair split of the tax burden to raise this level of funds.
    - Second, on how you think the government should spend this level of funds.

43. See Figure A3

44. We now ask you how you would like to spend the total government budget. Suppose that you are the person deciding on the U.S. budget for the next year. You can choose how you want to divide the budget (in percent) between the following 6 categories:

    See Figure A4

45. The estate tax is a tax on the transfer of wealth from a deceased person to her heirs. This tax applies only to individuals with wealth above a certain threshold. On a scale from 1 to 5, how would you rate your support for the estate tax, where 1 means do not support at all and 5 means strongly support?

    1; 2; 3; 4; 5

46. Do you feel that this survey was biased?

    Yes, left-wing bias; Yes, right-wing bias; No, it did not feel bias

47. Please feel free to give us any feedback or impression regarding this survey.

FIGURE A3: QUESTION ON PREFERRED INCOME TAX RATES FOR VARIOUS INCOME GROUPS

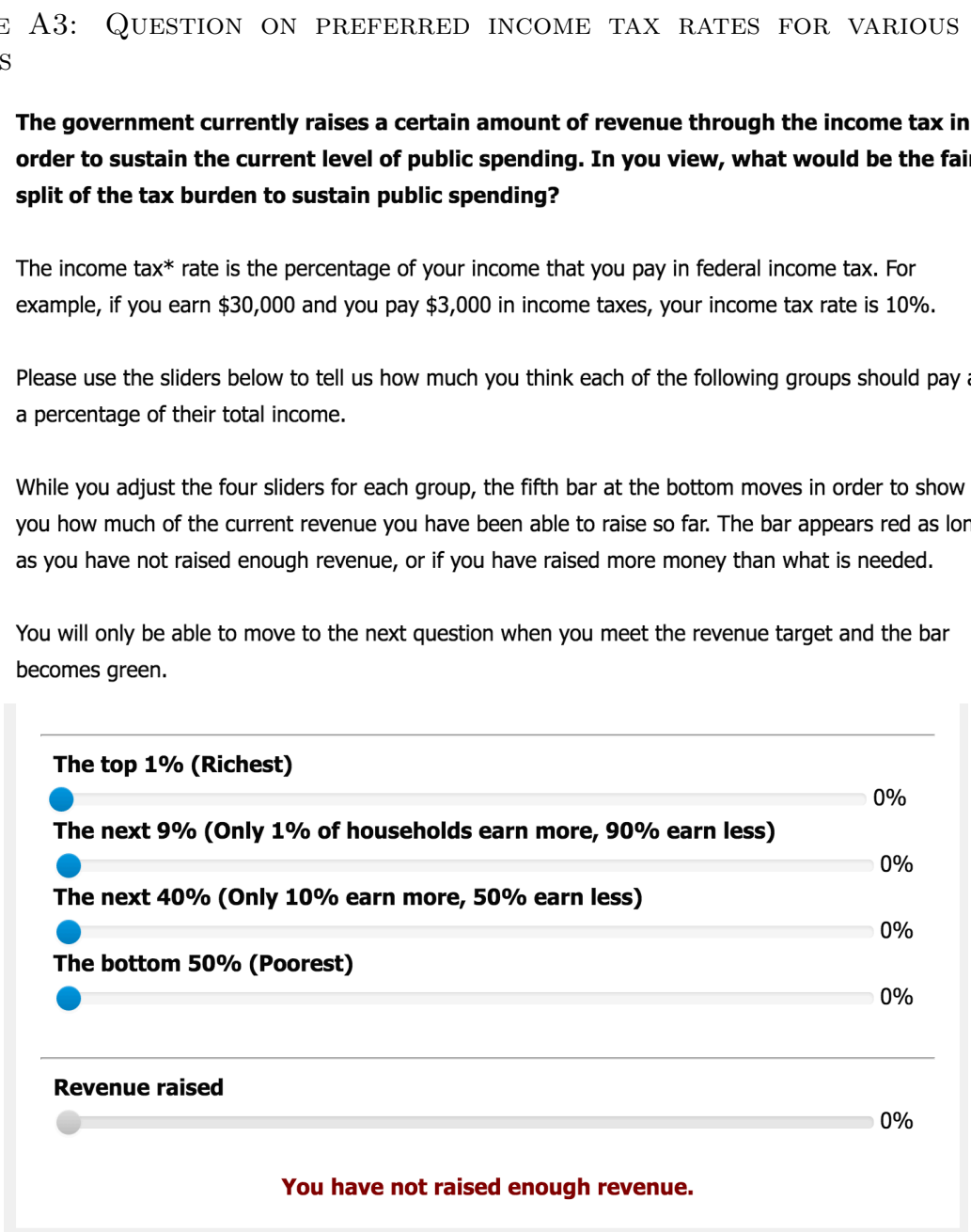


FIGURE A4: QUESTION ON PREFERRED ALLOCATION OF GOVERNMENT BUDGET

1) **Defense and National Security**, which refers to the costs of the Defense department and the costs of supporting security operations in foreign countries.

2) **Public Infrastructure**, which includes, among others, transport infrastructure like roads, bridges and airports, and water infrastructure.

3) **Spending on Schooling and Higher Education**, including help for children from low income families to attend school and university.

4) **Social Security, Medicare, Disability Insurance and Supplementary Security Income (SSI)**, which provide income support and help with health care expenses to the elderly and the disabled.

5) **Social Insurance and Income Support Programs**. This covers help to the unemployed (through unemployment insurance) and help for low income families (such as through Food stamps or the earned income tax credit (EITC), a tax credit for low-income working families)

6) **Public Spending on Health**, such as Medicaid for the poor (a healthcare program for low income families) or tax subsidies to help families buy health insurance.

Please enter the percent of the budget you would assign to each spending category (the total must sum to 100):

Defense and National Security	0
Public Infrastructure	0
Spending on Schooling and Higher Education	0
Social Security, Medicare, Disability Insurance and Supplementary Security Income (SSI)	0
Social Insurance and Income Support Programs	0
Public Spending on Health	0
Total	0

Figure A5: First page of the survey (English version)

We are a non-partisan group of academic researchers from Harvard. Our goal is to understand how information we see and hear in the media influences views on policies. No matter what your political views are, this is an important question and by completing this survey, you are contributing to our knowledge as a society. You might not agree with all the information presented, and that is perfectly fine. Our survey will give you an opportunity to express your own views.

It is very important for the success of our research that you **answer honestly** and **read the questions very carefully** before answering. Anytime you don't know an answer, just give your best guess. However, please be sure to spend enough time reading and understanding the question. To ensure the quality of survey data, your responses will be subject to sophisticated statistical control methods. **Responding without adequate effort may result in your responses being flagged for low quality.**

It is also very important for the success of our research project that you **complete the entire survey**, once you have started. This survey should take (on average) about 10 minutes to complete.

Notes: Your participation in this study is purely voluntary. Your name will never be recorded. Results may include summary data, but you will never be identified. If you have any question about this study, you may contact us at socialsciencestudies@gmail.com

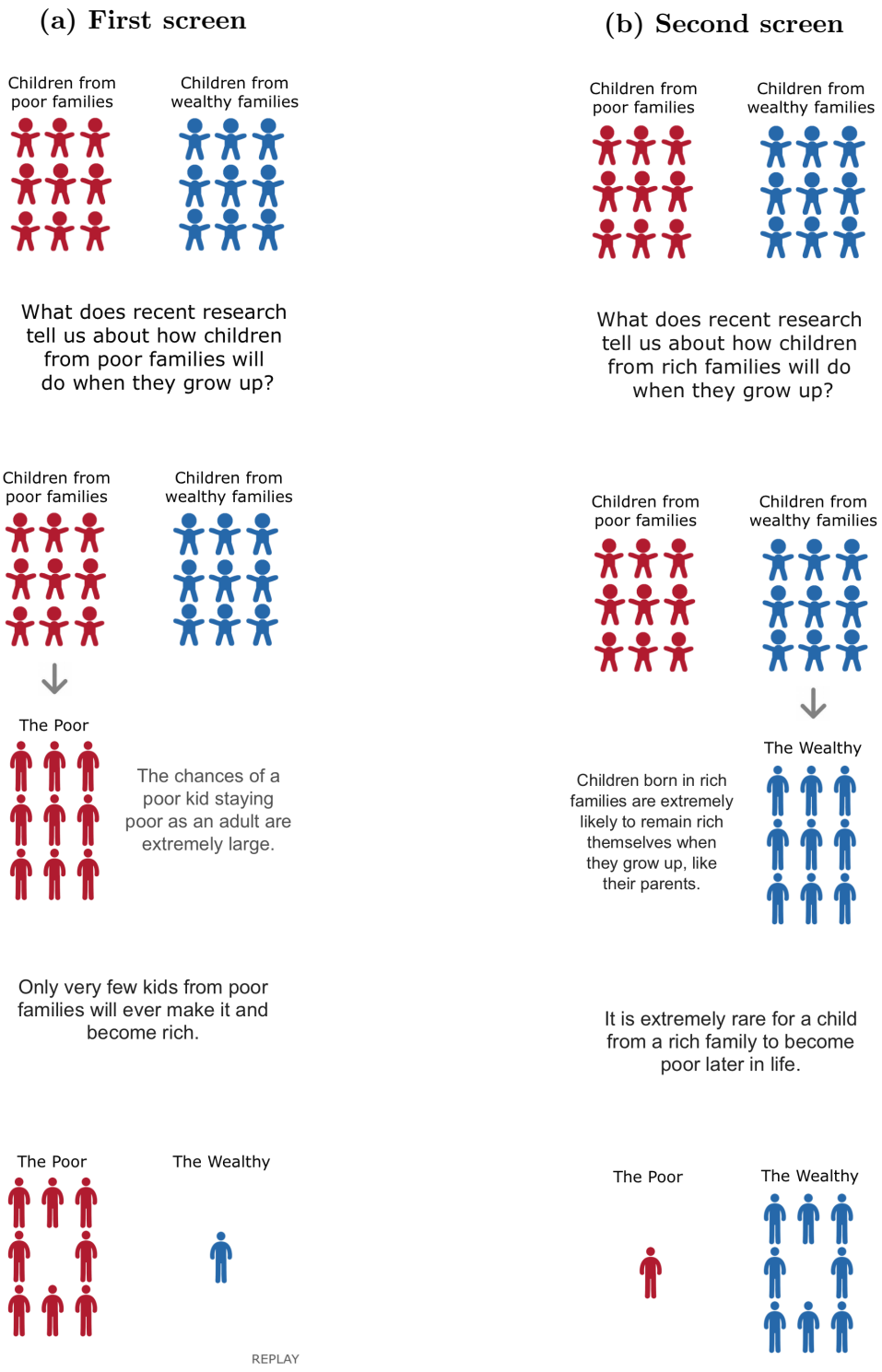
Figure A6: Treatment animation - introduction

Recent academic research has been exploring the link between one's family background and one's chances of making it in life. These **recent academic studies** have leveraged new large-scale datasets to explore the opportunities available to children from different family backgrounds and their chances of making it in life.

We will now show you **two short animations** that summarize the two key findings of these studies. Please proceed to the next page when you are ready.

>>

FIGURE A7: TREATMENT ANIMATION



A.6 (Mis)perceptions of inequality

We conducted an additional, small survey in the U.S. (484 respondents) to elicit respondents' perceptions of inequality. The survey had no treatment component, and asked the same questions on perceptions of mobility as our main surveys.

We asked questions about inequality in i) income, ii) capital income more specifically, and iii) wealth. For each of these three variables, we asked respondents about their perceived shares of the top 1%, the top 10%, and the bottom 50%. We also asked respondents about their perceived income tax rates for different groups of taxpayers. The additional questions are reported below.

New Questionnaire Questions:

1. What percent of total national income in the United States do you think goes to the top 1% richest households? (Please enter a number between 0 and 100 to indicate the percent (%)).

2. What percent of total national income do you think goes to the top 10% richest households?

3. Finally, what percent of total national income do you think goes to the bottom 50% (poorest) households?

4. Now think about total income coming from capital in the United States. This is income that comes for instance from interest on savings in your bank account or mutual fund, in the form of capital gains or dividends from holding stock in companies, or from investing in a business. Take the top 1% richest households by capital income (the 1% of households with the most capital income). What percent of total capital income in the United States do you think goes to these households? (Please enter a number between 0 and 100 to indicate the percent (%)).

5. What percent of total capital income do you think goes to the top 10% richest households?

6. Finally, what percent of total capital income do you think goes to the bottom 50% (poorest) households?

7. Now think about the total wealth in the United States.
   Take the top 1% wealthiest households (the 1% of households with the most wealth). What percent of total wealth in the United States do you think goes to these households? (Please enter a number between 0 and 100 to indicate the percent (%)).

8. What percent of total wealth do you think goes to the top 10% wealthiest households?

9. Finally, what percent of total wealth do you think goes to the bottom 50% (least wealthy) households?

10. Please use the sliders below to tell us how much you think each of the following groups currently pays in income tax as a percentage of their total income.

- The top 1% (Richest)
- The next 9% (Only 1% of households earn more, 90% earn less)
- The next 40% (Only 10% earn more, 50% earn less)
- The bottom 50% (Poorest)

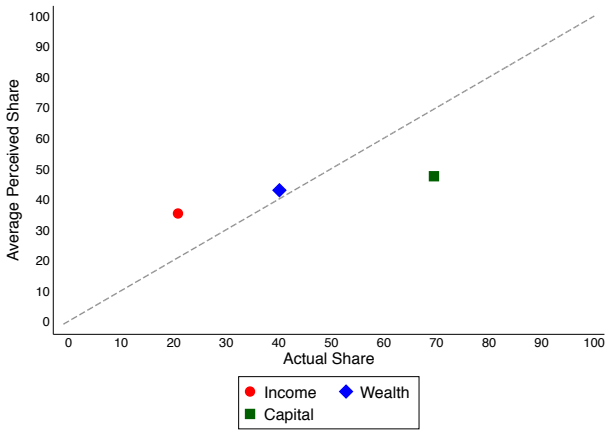
Table A5: Correlation between perceptions of mobility and perceptions of inequality and taxes

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A:	Perceived Share Income Top 1	Perceived Share Income Top 10	Perceived Share Capital Top 1	Perceived Share Capital Top 10	Perceived Share Wealth Top 1	Perceived Share Wealth Top 10	Perceived Average Tax Rate Top 1
Q1 to Q1	0.115	0.189	0.146	0.179	0.179	0.192	-0.103
	(0.054)	(0.054)	(0.056)	(0.056)	(0.055)	(0.056)	(0.042)
Panel B:	Overestimate Share Income Top 1	Overestimate Share Income Top 10	Overestimate Share Capital Top 1	Overestimate Share Capital Top 10	Overestimate Share Wealth Top 1	Overestimate Share Wealth Top 10	Overestimate Average Tax Rate Top 1
Overestimate Q1 to Q1	0.062	0.160	0.173	0.157	0.139	0.051	-0.078
	(0.044)	(0.046)	(0.047)	(0.041)	(0.045)	(0.023)	(0.047)
Panel C:	Overestimate Share Income Top 1	Overestimate Share Income Top 10	Overestimate Share Capital Top 1	Overestimate Share Capital Top 10	Overestimate Share Wealth Top 1	Overestimate Share Wealth Top 10	Overestimate Average Tax Rate Top 1
Overestimate Q1 to Q5	0.024	-0.127	-0.109	-0.157	-0.122	-0.037	0.093
	(0.043)	(0.045)	(0.046)	(0.040)	(0.044)	(0.023)	(0.045)
Observations	484	484	484	484	484	484	484

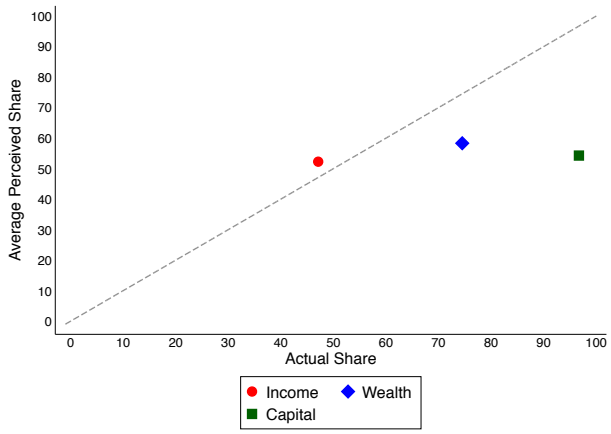
Notes: Regression results from the variables in the columns on the variables in the rows. The dependent variables are: columns 1 and 2: the perceived share of national income of the top 1% and top 10%. Columns 3 and 4: the perceived share of capital income of the top 1% and top 10%. Columns 5 and 6: the perceived share of wealth of the top 1% and top 10%. Column 7: perceived average income tax rate for the top 1%. In Panel A the dependent variables are the perceived shares of income/capital/wealth going to the group or the perceived average tax rate. In Panel B and C the dependent variables are dummies equal to one if the perceived share (or perceived tax rate) is higher than reality. *Q1 to Q1* is the perceived probability that a child born to parents in the bottom quintile of the income distribution will be in quintile 1 when adult. *Overestimate Q1 to Q1* (respectively, *Overestimate Q1 to Q5*) is a dummy equal to one if the perceived probability that a child born to parents in the bottom quintile of the income distribution will be in quintile 1 (respectively, 5) when adult is higher than reality. Controls included in all regressions are: indicator variables for gender, age less than 45, having children, being in the top quartile of the income distribution, having a college degree, political affiliation, having at least one of the parents not born in the country. Standard errors in parentheses. $^{*}p < 0.1,^{**}p < 0.05,^{***}p < 0.01$

Figure A8: Actual and Perceived Inequality

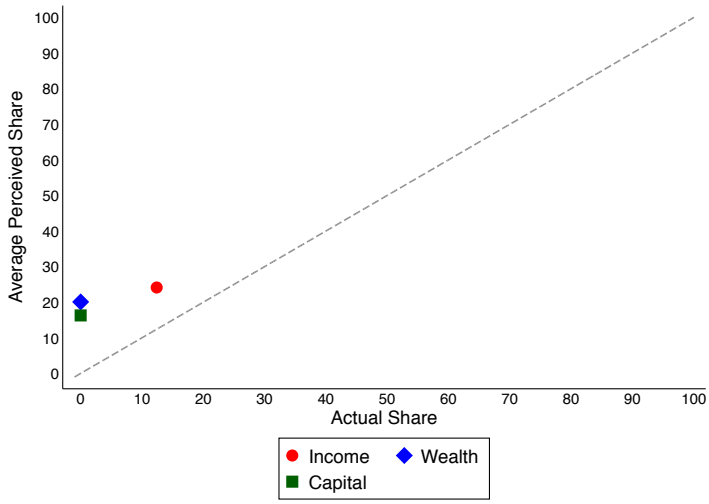
A: Shares to the top 1%



B: Shares to the top 10%



C: Shares to the bottom 50%



Notes: The figure shows the average perceived share (y axis) of total income, capital income, and wealth going to the top 1% of households (Panel A), to the top 10% of households (Panel B) and to the bottom 50% of households (Panel C) against the actual shares (x axis). The dotted line is the 45 degree line. Data on actual shares of capital income is from Saez and Zucman (2015). Data on actual shares of national income and wealth is from the World Wealth and Income Database.