INFLUENCE OF INDIVIDUAL INCOME AND COUNTRY-LEVEL INEQUALITY ON VALUES ABOUT DISTRIBUTIVE JUSTICE

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ABSTRACT

THOMAS LOEBER: Influence of Individual Income and Country-Level Inequality on
Values about Distributive Justice
(Under the direction of John D. Stephens.)

This paper explores how values about distributive justice vary with individual income and
country-level inequality. The most prominent model of this relationship, the Meltzer-
Richard model, predicts that higher inequality should make the rich more averse and the
poor more supportive of redistribution. However, most empirical studies have found the
opposite pattern. I try to adjudicate between two prominent explanations in the literature,
altruism versus inequality-induced fear of crime of rich individuals. Since the latter hy-
pothesis postulates that the rich only support redistribution for instrumental reasons, we
should find a different result if we ask them more abstract questions about distributive jus-
tice. Using data from the International Social Survey Program, I investigate this question
employing multilevel modeling. Because I find the same pattern than for the more instru-
mental questions about redistribution, I conclude that altruism is an important factor driv-
ing preferences for redistribution.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

INTRODUCTION

Different values about what constitutes distributive justice are one of the two major sources of differences in political ideology. Although conflict about these issues today rarely takes the violent form that class conflict sometimes took in the 19th and early 20th century, the outcome of the struggle about these ideals still has enormous ramifications for the fate of countries and the flourishing of their citizens. Understanding how people form these values is thus of vital interest to political science. The issue is also connected to a broader question about human nature: Are people fundamentally selfish, merely picking values that maximize their own self-interest and then finding rationalizations for them, or are humans capable of empathy and compassion, leading them to behave at least to some extent altruistically? Though a growing amount of empirical research clearly supports the latter, as will be discussed in detail below, most models and political science are based on the former, raising the question whether incorporating this finding will provide more explanatory power. These are the questions I will investigate in this paper.

A consistent finding of the literature has been that, while the rich are less supportive of redistribution than the poor, the rich are in fact more supportive of redistribution in more unequal countries contrary to what many of our theories suggest (e.g., Finersaas 2009). Two main explanations for this have been proposed for this: Firstly, some authors have explained this by pointing to the negative externalities of higher inequality, in particular crime, which lead the rich be to less averse to redistribution (Rueda and Stegmueller, forthcoming). Alternatively, it has been proposed that we need to jettison a widespread assumption about actors behavior, namely pure self-interestedness (Dimick, Rueda and Stegmueller 2014). Accordingly, the above puzzle would instead be due to the richs altruism, which makes them more supportive of redistribution in more unequal environments.

Most studies to date have directly looked at peoples support for redistribution, but unfortunately the observable consequences of both possible explanations are virtually

identical, making it impossible to adjudicate between these two theories. I attempt to solve this problem by instead looking at peoples values about distributive justice. Moving to this more abstract level should make the instrumental considerations of negative externalities less salient, and thus allows me to take a more pristine look on the extent of egalitarian attitudes of the rich. I find the same pattern that previous authors have found for support for distribution for egalitarian values: The rich hold considerably more egalitarian values in more unequal countries. This supports the position that the richs values about distributive justice are influenced by altruism.

THEORY

Self-interested and altruistic behavior

Many social science theories about human behavior can be group into one of two categories: Those that treat humans as purely self-interested, and those that see human behavior as motivated at least in part by altruism.[1] The former have their origin in enlightenment liberalism, eventually becoming predominant in economics. From there they gradually spread to political science, especially after explanations focusing on political culture started to fall out of favor in the 1970s.

The latter approach has long been an implicit part of social science explanations, but altruism only became an explicit focus recently. The background for this has been a number of developments in evolutionary biology: It has long been known that many animal species have an inborn tendency for altruism, such as the social insects (e.g., honeybees and ants), where a great proportion of individuals are sterile, foregoing spreading their own genes to help their sisters in their reproduction. Around half a century ago, evolutionary biologists started developing mathematical models that were able to explain why evolution does not always create purely self-interested animals. These focused on kin selection, group selection, and multilevel selection (Axelrod and Hamilton 1981, Dawkins

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[1]Of course, some theories might stay agnostic about this question, but these are usually theories that only focus on the macro-level, and thus are not about human *behavior*.

1976, Wilson and Sober 1994, Sober and Wilson 1998).

These above studies do not, of course, show that humans do in fact possess these altruistic behavioral tendencies; rather, they imply that humans could potentially possess these behavioral tendencies if the right circumstances prevail during their evolutionary history. It is indeed plausible that this was the case, because the survival and eventual dominance over the planet of our species depended to a large extent on cooperation between groups of individuals, which is much easier to achieve if it occurs not only for instrumental reasons. Furthermore, the development of inequality aversion is likely to have been conducive to an individuals genes transmission, because it is a mechanism that prevents a person from being taken advantage of.

Ultimately, however, the question of whether humans do exhibit altruistic behavioral tendencies is an empirical question that is best studied experimentally, because outside the lab it is usually impossible to ascertain whether a perceived altruistic behavior was not caused by ulterior motivations (e.g., whether the generous donor was really motivated by a desire for social recognition). These studies generally do in fact reveal considerable altruistic behavior: For instance, most experimental subjects playing the dictator game do not take advantage of the other person, even in a one-shot interaction with a random stranger whom they never get to meet.[2] Likewise, the public goods game reveals that most people are willing to contribute to the public good rather than to free-ride, as long as most other peoples do so as well. One reason that such cooperation can often be sustained is that most people are willing to pay a cost to punish free riders, even if their own personal gain in doing so is negligible. In fact, even outside observers are generally willing to punish cheaters at their own cost, even though they have nothing to gain. This has been termed conditional cooperation (Fehr and Gintis 2007) and has also been shown to have important implications for the legitimacy of different welfare state arrangements (Fong et al. 2006).

In addition, the case for conceiving of altruism as an evolutionary adaption is strength-

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[2]In this game, one person divides up the sum of money between him-or herself and another person. (By contrast to the ultimatum game, the recipient does not have the option to decline this deal.) Thus, a purely self-interested individual should never give anything to the other person in a one-shot game if the game is anonymous.

ened by the fact that the tendency for altruistic behavior in humans is correlated with particular brain structures (e.g., Mathur et al. 2010, Shamay-Tsoory et al. 2009). These structures are likely to be the mechanisms through which evolution transmits altruism or to be precise, the DNA sequences that code for these structures are the likely transmission mechanism.

Of course, this does not mean that humans always act completely unselfishly; the conditions under which they act selfishly and the conditions under which they do not are an important frontier of current research. Some conditions have already been identified: Firstly, the research on conditional altruism summarized above showed that most people stop behaving altruistically if free riders are not punished.[3] This makes sense, because it prevents people from being taken advantage of. Secondly, people tend to behave more altruistically towards members from their in-group rather than out-group, though what constitutes in-group versus out-group is socially constructed (Bloom 2013). Finally, the activation of the emotion of has been found to impede empathy, and thus altruism. As a result, political entrepreneurs resorting to racism often try to elicit this emotion about the respective outgroup.

I also do not want to assert that all humans exhibit this tendency for altruism; indeed, the more individuals in the population exhibit this trait, the greater the potential benefit for free-riders (in the terminology of biology: parasites). This indicates that there might be an equilibrium level of altruistic and selfish individuals (which, of course, depends in part on external factors such as monitoring and enforcement institutions). Fehr and Gintis (2007) empirically estimates in their public goods games that about 30% of the population are free riders, 50% are altruistic, and 20% pursue intermediate strategies. However, when the stakes are higher, few humans are willing to pursue their own self-interest without any regard to the cost of others, because of the inborn human capacity to feel empathy and compassion with others. People who lack this capacity, and are thus only able to cooperate with others for anticipated future gain a central feature of the homo

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[3]This is different from saying that most people stop *cooperating* if free riders are not punished. This could merely mean that cooperation was due to self-interested reasons in the first place.

economicus are what psychologists call psychopaths (Bloom 2013).

Altruism and preferences for redistribution

Let me stress that what I want to demonstrate in this paper is not that humans often behave altruistically this is best studied experimentally, and has long been proven beyond reasonable doubt; rather, what I want to argue is that taking this into account will give political scientists more predictive theories. I will apply this (meta-)theory to one specific empirical puzzle: failure of models relying on pure self-interest (such as the Meltzer-Richard model) to correctly predict the relationship between individual income, country level inequality, and support for government redistribution. These models make two predictions: Firstly, the rich should be less supportive of redistribution. This is generally confirmed, but only partially: Though this relationship is generally be found to be statistically significant (e.g., Finersaas 2009), the effect size is rather dismal. Though there are of course significant challenges in measuring the theoretically relevant variable, discounted lifetime income (what economists call permanent income), which biases the effect downwards, the explained variance is so small that it seems that there are many other more important factors driving this attitude. Fong (2001) examined the number of alternative explanations that proponents of the homo economicus approach have given for this small effect size, and concludes that self-interestedness alone cannot account for the observed pattern.

In this paper, however, I will mainly be concerned with a challenge to a second prediction of the homo economicus model: The prediction that the rich should be more averse to redistribution in more unequal countries, because they have more to lose in this context. A number of recent studies have uniformly disconfirmed this: While the rich tend to be less supportive of redistribution in almost all countries, this polarization around income is actually greater in more equal countries (Finersaas 2009, Rueda and Stegmueller forthcoming, Dimick et al. 2014). Furthermore, these authors find that most of this variation comes from the preferences of the rich: While the poor tend to be equally supportive of redistribution independent of country-level inequality, it is the preferences of the rich

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that vary with inequality (ibid).

Two major explanations have been proposed for this pattern: Stegmueller and Rueda (forthcoming) argue that the rich may have self-interested reasons to be more supportive of redistribution in more unequal countries if we take the negative externalities of inequality into account. In particular, they focus on fear of crime, using regional-level data from the European Social Survey. They find that individuals who are more afraid of crime are more supportive of redistribution, and that the effect of macro-inequality on preferences for redistribution becomes insignificant (though still sizable) once including fear of crime into the regression (controlling for some potentially confounding regional variables such as urbanization and health of the economy).

The second major explanation is altruism on part of the rich. In their work in progress, Dimick, Rueda, and Stegmueller (2014) look at within-state changes in inequality over time, and find that while these do not affect preferences for redistribution of the poor, increases in inequality make the rich more supportive of redistribution. Unfortunately, however, this empirical strategy does not allow us to rule out the fear-of-crime hypothesis.

Although I do agree that fear of crime can make the rich more supportive of redistribution than they would otherwise be, I find it unlikely that it would have such a huge effect. While the study does control for a number of potentially confounding regional covariates, fear of crime might be an indicator of living in an area with salient social problems, and this individual-level indicator might be more precise in picking up this personal experience of social problems than the regional-level measure of inequality is (since there is considerable within-region variation in inequality). In other words, it is possible that fear of crime, though no doubt influenced by personality characteristics, is a better indicator of an individuals exposure to inequality than the regional-level inequality data. If this is the case, the significance of the fear of crime variable does not necessarily mean that it is indeed fear of crime rather than altruism caused by the personal expense of social problems that is causal.

As the authors themselves concede, there are also theoretical reasons to be skeptical about the fear of crime argument: It might be cheaper for the rich to invest in personal

security services rather than to pay higher taxes. But more importantly, as outlined above, the experimental literature has clearly shown that this trait plays an important role in human behavior, which increases our confidence that it may indeed be altruism that drives the empirical pattern.

Values about distributive justice

I try to adjudicate between these two rival explanations by investigating peoples values about distributive justice. The studies summarized above, like most of the literature, look only at a single item that asks people whether the government should redistribute income from the rich to the poor. The answer to this question will be a combination of both normative considerations about distributive justice, as well as more instrumental calculations about the effects of such policies, e.g. on crime. I hypothesize that, if it is a purely self-interested consideration of externalities that drives the richs higher support for redistribution in more unequal countries, then we should see a different pattern if we instead look only at their values about distributive justice: In particular, I will look at three egalitarian values (to what extent income should be distributed according to the principles of equity, equality, and need) and two inegalitarian values (to what extent income should be distributed according to the two meritocratic principles of ability and effort). My focus will be the analysis of the egalitarian values. Before I describe these expectations in more detail, let me briefly summarize the theory underlying my choice of these five values.

While distributive justice is a major concern for political philosophers (most famously, Rawls 1971), political scientists have been more concerned with concrete attitudes, such as the aforementioned one about government redistribution. Much of the empirical research that has been done on values about distributive justice takes an experimental approach and is thus less concerned with how these values vary within a representative sample of the population, or even across countries. Rather, they have focused on the more foundational question of how people reason about distributive justice, e.g. whether they use a mix of different principles and how they make trade-offs (e.g.,Frohlich and Oppenheimer 1992, Mitchell et al. 1993, Scott et al. 2001, Michelbach et al. 2003). These stud-

ies found that people use a combination of principles: equality, need, merit, and efficiency. Most importantly for our purposes, participants were willing to trade off a lot of efficiency for equality, but this trade-off was mediated by assumptions about merit (the more merito-cratic a hypothetical society was described, the more participants were willing to trade off inequality for efficiency), especially for women. Furthermore, while it proved to be challenging to experimentally manipulate need independently of equality, need does seem to have an independent effect, especially again for women.

Aalberg (2003) turns to public opinion research to investigate how these same values vary across countries and how they covary with various sociodemographic characteristics, but her study is limited in that she only looks at bivariate correlations. Presumably in part as a result of the great number of correlations she assembles, she has trouble condensing these descriptive findings into any general conclusions. Thus, I pair her focus on egalitarian and meritocratic values with the more sophisticated empirical work about how individual income and country have level inequality influences preferences for government redistribution.

Hypotheses

If people are purely self-interested, the rich should be less supportive of the egalitarian distributive principles of need, inequality, and equity: Supporting these would be to admit especially in unequal countries that their own preeminent status is unjust, i.e. that they have more than they deserve, possibly even implying that something should be done to alleviate this injustice. Thus, it would be rational for a purely self-interested rich individual to rationalize the existence of any unfairness in order to avoid the associated psychological costs, for instance by blaming the poor for their own poverty. Indeed, there is a plethora of evidence in psychology that humans are willing to go to great length to ra-tionalize inconvenient truths. The greater inequality, the more the rich have to lose from egalitarianism; therefore, the polarization around these values should be greater in more unequal countries.

Conversely, it would be rational for a purely self-interested rich person to identify

strongly with the two meritocratic values of distributing income according to ability and effort. In conjunction with the rationalizing belief that they themselves are at the top of society because they are gifted and hard-working, subscribing to these meritocratic values makes the world seem just for the rich, and they do not have to feel guilty about their privileges. Again, the greater inequality, the greater the incentive for the rich to rationalize this inequality as meritocratic; thus, we should see a greater polarization around these values in more unequal countries.

By contrast, if individuals are motivated at least in part by altruistic considerations which is what I argue we should observe a different pattern: Since rich individuals in unequal countries are confronted with more inequality, inequity (unequal opportunities of the poor and minorities), and need (poverty) than they would be confronted with if they lived in more equal countries, this is going to trigger compassion for the disadvantaged. In turn, this will make them more supportive of egalitarian principles of distributing income. Since for the poor self-interest and altruism point in the same direction, inequality should have a smaller impact on their values compared to the rich's values. Overall, thus, polarization around egalitarian and meritocratic values should be lowest in the most unequal countries and highest in the most equal countries.

Note that I'm not arguing that individuals are *exclusively* motivated by altruism, but that their motives are a mixture of self-interest and altruism. If self-interest played no role at all, income should have no effect on values about distributive justice; these values should only be influenced by inequality (since people would then only consider sociotropic factors): The higher inequality, the more support for egalitarian and the less support for meritocratic values. While a nonsignificant effect of income would be a very strong support for my theory, I do not expect altruism to go that far. Rather, I expect *both* self-interest and altruism to determine values about distributive justice:

H1: Inequality should have a bigger effect on the values of the rich than the values of the poor: Support for equality, equity, and need will decline with income, but this decline will be smaller in more unequal countries. Consequently, polarization around income should be higher in more equal countries.

Furthermore, while we would ideally hope that asking people about these normative ideals should lead them to ignore instrumental calculations about the externalities of inequality, it is conceivable that thinking about distributive justice will unconsciously activate neural networks about crime if this is an important externality consideration for them. However, we can hypothesize that abstract questions about distributive justice activate these networks *less* than the direct questions about peoples preferences for government redistribution. Thus, the effect of inequality on increasing the egalitarian values of the rich should be bigger than the effect of inequality on increasing the richs preferences for redistribution. By contrast, if it is crime rather than altruism that drives the preferences of the rich, we should see the opposite.

H2: Inequality should increase class polarization around egalitarian values more than it increases class polarization around preferences for redistribution.

The opposite pattern is likely to hold regarding meritocratic values: On the one hand, the rich will be more supportive of meritocratic values, because this helps them rationalize their preeminent position in society. On the other hand, this tendency is curbed in more unequal countries by the compassion for the poor that the personal encounter of poverty triggers.

H3: Rich individuals will be more supportive of the two meritocratic principles (ability and effort), but this effect will be more pronounced in more equal countries.

DATA, MODEL, AND METHODS

Dependent variables

I will test this theory using data from the International Social Survey Programs (ISSP) module on social inequality. This module was implemented in four different years 1987, 1992, 1999, and 2009 and covers 27 countries.

For three of the five principles of distributional justice I will examine, I am able to create an index of multiple items; the remaining two are measured by a single item. I com-

pute each index by summing the respective items, and then divide by the number of items. The advantage of this averaging is that the scale remains comparable between different indices, independent of how many items an index contains. Thus, the marginal effects in the OLS regression can be interpreted as the effect measured on the original 1-5 scale that a one unit change in the independent variable is likely to have on each of the different items that make up the index.

Most of my items stem from a battery of questions that ask the respondents how important a given factor should be in deciding pay. The answer options are: essential (coded 5), very important, fairly important, not very important, or not important at all (coded 1). Below is a list of each of the principles for distributing resources and the items used to master each:

- Ability is measured from the following three items in terms of how each should be used to determine pay: the importance of how well the person does the job, job responsibility, and whether the job requires supervising others.[4]

- Effort is measured from the following two items in terms of how each should be used to determine pay: how hard people work, and the number of years spent in education and training.[5]

- Need is measured by two items: whether needing to support a family, and whether having children to support should be important in determining pay.[6]

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[4]Exact question wording: "In deciding how much people ought to earn, how important should each of these things be, in your opinion
How well he or she does the job how important should that be in deciding pay?
How much responsibility goes with the job?
Whether the job requires supervising others?"

[5]Exact question wording: "In deciding how much people ought to earn, how important should each of these things be, in your opinion
The number of years spent in education and training?
How hard he or she works at the job?"

[6]Exact question wording: "In deciding how much people ought to earn, how important should each of these things be, in your opinion
... What is needed to support a family?
... Whether the person has children to support?"
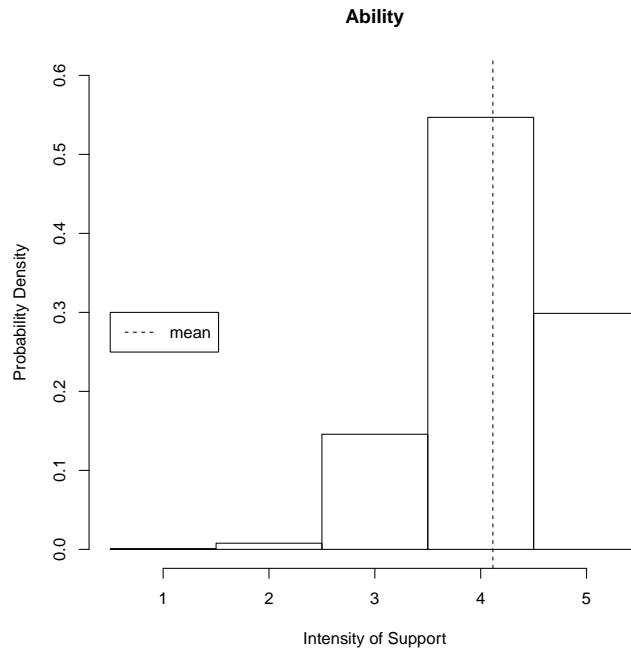
Ability

Fig. 1: Descr. stat.: support for distributing resources according to ability
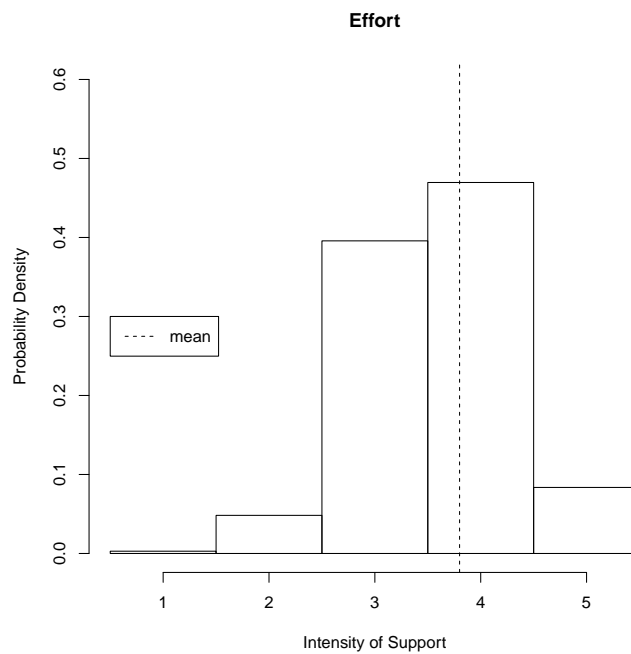
Effort

Fig. 2: Descr. stat.: support for distributing resources according to effort

- Equality is measured by a single item: whether it is right or wrong that people with

  higher incomes can buy better healthcare.[7] This is a less demanding conceptual-

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[7]Exact question wording: "Is it just or unjust right or wrong that people with higher incomes can buy better health care than people with lower incomes?"
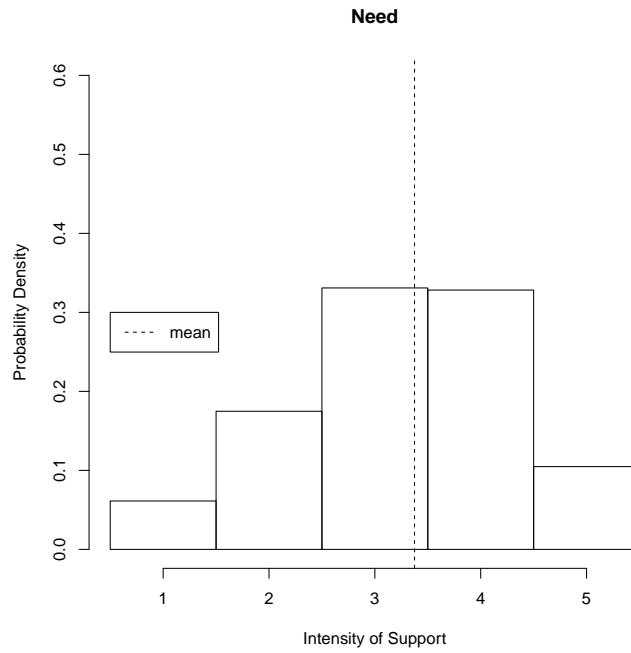
Need

Fig. 3: Descr. stat.: support for distributing resources according to need
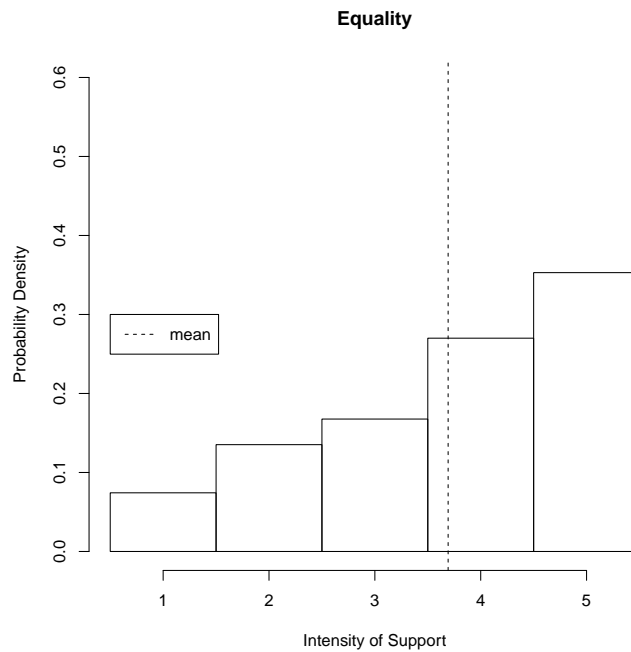
Equality

Fig. 4: Descr. stat.: support for distributing resources according to equality

ization of the value of equality than other authors have used. For example, Aalberg (2003) uses an item from the World Value Survey that asks whether it is just or unjust if one secretary, who is quicker, more efficient, and more reliable at her job than another secretary, is paid a specified amount more than the other secretary.

The problem with this operationalization is that the respondents have to label this as either just or unjust, with no intermediate possibilities. The reason I think this is too demanding an understanding of egalitarianism is because even from an egalitarian perspective it may be viewed as just if there is a small pay difference; the disagreement between more and less egalitarian minded citizens is instead likely to center around how much of a pay difference is warranted. The ISSP actually contains questions about how much the respondent thinks specific occupations should earn, and from this it would be possible to construct a better measure of egalitarianism by looking at the pay ratio of different occupations the respondent deems appropriate. I plan to compute this measure for future versions of this paper.

- Equity is measured by the item whether it is right or wrong that people with higher incomes can buy better education for their children.[8] In essence, this question is about whether it is unjust if a societys institutions give unequal chances to children from different social classes (assuming that the respondent understands that the quality of education influences a persons life chances.) Other authors have conceptualized equity very differently: For instance, Aalberg (2003) conflates it with what I have above called the principle of distributing resources according to effort and ability.

- In addition, I replicate the results from a typical study from the literature on the preferences over economic redistribution (e.g., Finersaas 2009), which uses an item that asks whether the government should reduce income differences.[9] Note that this asks for absolute redistribution, not relative to the status quo: A number of studies have mistakenly used relative questions such as whether the government should redistribute *more* to measure absolute preferences for distribution. This leads to support for redistribution being underestimated in countries that already redistribute a

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[8]Exact question wording: "Is it just or unjust right or wrong that people with higher incomes can buy better education for their children than people with lower incomes?"

[9]Exact question wording: "It is the responsibility of the government to reduce the differences in income between people with high incomes and those with low incomes. (Strongly agree through strongly disagree)"
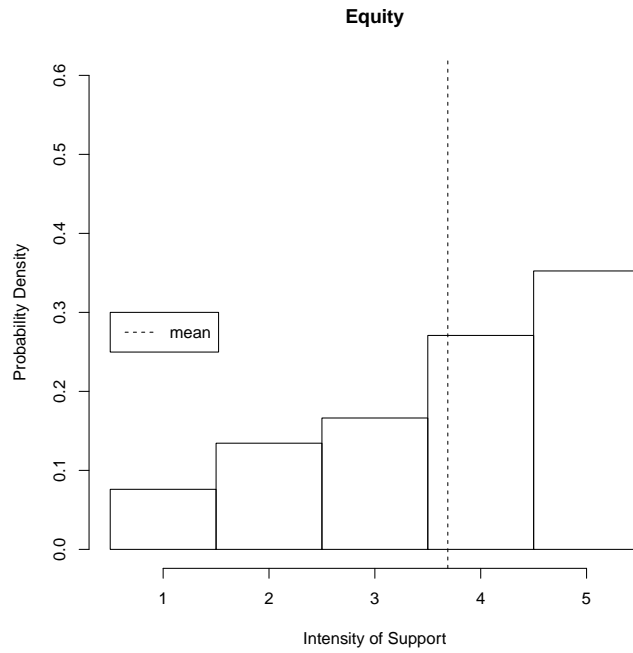
Equity

Fig. 5: Descr. stat.: support for distributing resources according to equity
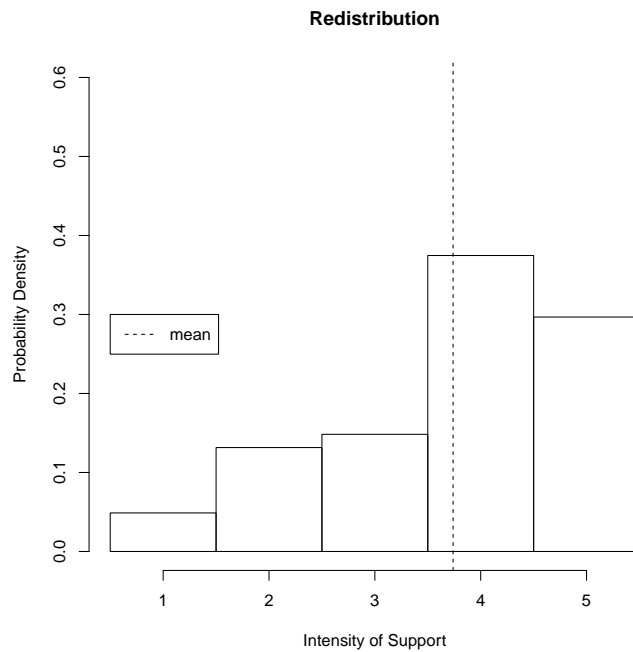
Redistribution

Fig. 6: Descr. stat.: support for government redistribution

lot, such as the Scandinavian countries. I avoid this bias by relying on questions that ask for absolute support. (The same is true for the items I use to measure the values about distributive justice, which ask the respondents about their support for distributional principles that are not relative to the countrys current institutions.) Note also

that while all the above questions are normative in the sense that they are should-questions, i.e. about how the world should be rather than how it is this last question is likely to be influenced in addition by more pragmatic considerations, such as considerations of how positive or negative externalities of government redistribution affect the respondents self-interest.

Independent variables

Country-level inequality is operationalized as the Gini coefficient of the countrys pre-tax income distribution. The Gini coefficient is a standard measure of (income) inequality but obviously condensing a whole distribution into one single measure inevitably loses information. In particular, Piketty (2014) suggests using alternative measures that are better able to reflect inequality of top (1%, .1%) incomes. While I plan to test whether this has any explanatory power for my present purposes in future versions of this paper, top incomes seem less relevant for my main variables of interest then overall inequality, because the most salient comparisons on citizens minds are likely to center around the pay differences they observe in their daily experience, such as between ordinary low-wage jobs compared to high-wage jobs such as doctors or lawyers. An exception might be the subset of post-Leninist countries in which the discussion about oligarchs has entered the public sphere. However, among the countries in my sample this is only the case for Russia. The rationale for using inequality of pre-tax income is that this is the starting point for redistribution; instead looking at post-tax-and-transfer income is likely to introduce bias. The data come from Fred Solts Standardized World Inequality Database (SWIID). While he provides multiple imputations, I simply use the average for each country-year. Most of the countries in my data set are developed countries, for which his estimates have a small variance anyway. Thus, the standard errors of my regressions should be underestimated only slightly.

One downside of the SWIID data is that they include retirees, which leads to a biased estimation of inequality: Because people tend to save less for retirement in more generous welfare states, where they can expect to receive more generous pensions, pre-tax-

and-transfer inequality is overestimated here (Gornick and Milanovic 2015). The OECD provides data for pre-tax-and-transfer inequality of the working age population, but these data are not available for most country-years. Since inequality is a slow-moving variable, it would be possible to interpolate the missing values using multiple imputation. I plan to redo this analysis using these data in the future, but I am still confident in the validity of my current findings due to the fact that, when taking preferences for distribution as my dependent variable, I find the same pattern as Finersaas (2009) and Dimick et al.(2014), who rely on post-tax-and-transfer income. This measure suffers from a different bias, but since this bias is likely to be unrelated to the bias in pre-tax-and-transfer income, the fact that we find the same result suggests that this result is not driven by the biases in inequality measures.

I operationalize individual income as the (within-country) z-score of the household income per equivalent adult. To do so I first compute an individuals equivalent income by dividing household income by the square root of the number of household members. This transformation is designed to take the economy of scale of the household into account, i.e. that the cost of financing a given consumption possibility per household member rises less than linearly as the number of household members increases. This is important because the variable of theoretical interest is not the amount of money per se that enters a persons bank account per month, but the consumption possibilities (and associated lifestyle) that this amount of money affords. The second step is to standardize this variable by subtracting the country mean and then dividing by the standard deviation, in order to make the incomes of people living in different countries comparable. The resulting relative income is an appropriate measure of a persons position in the economic hierarchy which is the theoretical concept we are interested in.

	Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
Income (z-score)	-2.45	-0.46	0.00	-0.00	0.14	26.89
Inequality (demeaned)	-16.51	-4.24	1.00	0.00	3.36	9.22

Table 1: Descr. stat. of important independent variables

I further control for important sociodemographic variables: Education is similar to

individual income in that it is a component of social status, but for my present purposes I consider it primarily as a control variable. I originally planned to measure it in years, but the descriptive statistics of this variable look flawed (there are a number of individuals with very high values (up to 81), and in addition some individuals are coded simply as still students, for whom a value would need to be imputed if you do not want to drop these observations (we do not even know whether they are high school or university students). Thus, I instead use the highest completed degree (measured in six categories), which does not suffer from the above problems. Though it is technically an ordinal variable, I treat it as an interval-level variable by using it as a linear control variable. This is warranted because I already have a large number (18) of explanatory variables, so I want to avoid creating five more by adding a dummy variable for each education level.

Gender is another important variable that can be expected to influence preferences: Firstly, women are socialized to be more caretaking, which makes them more supportive of egalitarian values. Secondly, in part as a result of the former, women are much more likely to work in caretaking professions, exacerbating the former effect. Furthermore, this makes them more likely to be state employees, and as a result makes them more supportive of state intervention in general and redistribution in particular (Huber and Stephens, 2001).

Likewise, age has been found to be an important determinant of redistributive preferences: The closer someone is to retirement, the bigger ones interest in government redistribution, since in most countries a large proportion of government spending goes to the elderly. While this effect of age arises out of pure self-interest, there are also reasons to expect that values about distributive justice vary with age: Firstly, people might rationalize this self-interest by identifying with the appropriate values. Secondly, the young have been found to hold more egalitarian values. Thirdly, cohort effects have been found with regard to political ideology, which we can expect to carry over to values about distributive justice. Since I do not expect age to have a linear effect, I also include a quadratic term. I measure age in decades, because this square term would otherwise become much larger than the other regressors, which led to problems in the convergence of the maximum like-

lihood estimator.

I also control for marital status and employment status because, like age, they lead people to have different interests regarding social policy. Again, the resulting material interests may both be rationalized through subscribing to different values about distributive justice. Furthermore, these variables also lead to different life experiences, which are likely to affect these values. The baseline for marital status is married, and I include dummy variables for widowed, divorced, separated, and single. The baseline category for employment status is employed, and I include dummy variables for unemployed, student or vocational training, retired, housewife/man, permanently discipled/sick, and other.

By contrast to many other studies that analyze the preferences for economic redistribution, I do not control for skill specificity, because I do not find the available measures to be convincing indicators of an individuals labor market risk.

Model

I use multilevel modeling with varying intercepts for countries and years. The models take the following form:

$$Value = \beta_0 + \beta_1 * RelativeIncome + \beta_2 * Inequality + \beta_3 Income * Inequality + \beta_4 * Female + \beta_5 * Age + \beta_6 * Age * Age + \beta_7 * Widowed + \beta_8 * Divorced + \beta_9 * Separated + \beta_{10} * Single + \beta_{11} * Education + \beta_{12} * Unemployed + \beta_{13} * Student + \beta_{14} * Retired + \beta_{15} * Housewife/man + \beta_{16} * Disabled + \beta_{17} * OtherEmploymentStatus + \alpha_{country} + \alpha_{year} + \varepsilon$$

The advantage of using multilevel modeling is that, by contrast to fixed-effects models, I can include explanatory variables that are (near-)constant across time. While inequality is not perfectly constant, it is sufficiently slow-moving that there is not much within-country variation over the time period I am studying, which would make our estimates very imprecise. The downside of multilevel models is that, since they are simply random-effects models, they bring with them the assumption that the unit effects (the country- and year-specific error terms) are uncorrelated with any of the explanatory vari-

ables. This potential problem is not widely discussed in the empirical political science literature relying on these models, in part because any resulting bias from a violation of this assumption is usually small. There are ways to correct for this potential correlation, but are not widely used since they are not implemented in the standard statistical packages yet.

Method

I estimate this model using the lmer package in R, a maximum likelihood estimation for mixed-effects models. The fact that my dependent variable can only take on five discrete values suggests that it would be preferable to use an ordered logit or probit model. Unfortunately, however, the estimation of multilevel ordered models is not implemented in R yet, presumably because of the computational intensity, which makes a Bayesian approach preferable. However, since my dependent variable takes on five different values, a linear model should not be too far off.

FINDINGS

The results from the regression can be found in tables 2 and 3 in the appendix, [10] and figures 6 through 12 graphically illustrate the effect of our two main variables of interest. In the following, I will focus mainly on the figures, since these give a more meaningful picture of the effect size. They show how the effect of income on values about distributive justice differs in equal and unequal countries. To generate these predictions, I set inequality to both the lowest (thin black line) and highest (thick red line) observed value that occurred in my sample. These predictions are for a typical individual in an average

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[10]Note that, since both relative income and inequality (the demeaned Gini coefficient) have a mean of 0, the coefficients on each of these two variables can be interpreted as the marginal effect of that variable when the other variable is held at its mean. Likewise, the significance level of each of the two variables can be interpreted as the significance level of its effect when the other variable is held at its mean. For our purposes, this is not what we are primarily interested in: Though all significant, the effect sizes at the mean are so close to 0 that they are theoretically uninteresting. What we would rather like to know is whether the values diverge significantly for the rich, because only here does the effect size become substantial. This can best be seen in the figures (citation).

country and year.[11] The 95% confidence intervals were computed by simulation.[12]

The rug plot at the bottom of each graph shows the distribution of income; it indicates that most respondents income lies between -3 and +10 standard deviations of the mean income. While I plotted predicted support for the whole income range, the huge effect sizes at the maximum income (around 26 standard deviations above the mean) should be interpreted with caution, since there are relatively few data points above around 12).

Before I look at each of the six values in turn, I want to note one general pattern: While the poor have similar preferences and values in equal and unequal countries, it is primarily the preferences and values of the rich that diverge in these two scenarios. Stegmueller and Rueda (2014) noted the same pattern for preferences for government redistribution, but the fact that it generalizes to values about distributive justice greatly increases our confidence in this finding. This implies that a theory explaining this pattern should focus on the preferences and values of the rich. This is the case for the theory I espouse, which concentrates on how inequality triggers altruism: Since for the poor the effects of self-interest and altruism are not in conflict with each other (both promote egalitarian values and preferences), the fact that inequality triggers altruism should thus have little impact on their preferences and values. By contrast, for the rich the effects of self-interest and altruism go in the opposite direction; therefore, if inequality triggers altruism, inequality should primarily change the preferences and values of the rich. The fact that I find that it is primarily the values of the rich that respond to inequality therefore provides some preliminary support for my theory. Let us now look at each of the values about dis-

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[11]I set the dummy variable for female to the proportion of women in the sample; the other categorical variables were set to their mode (employment status to employed, and marital status to married). I set all other variables to their mean. The random intercepts for country and year were set to their median, which was very close to zero.

[12]1000 estimates of the model's parameters were drawn from a multivariate normal distribution, using the estimated variance-covariance matrix. Then, a prediction for an average individual (see above) is computed from each parameter estimate, and the 95% confidence interval is computed using the 2.5th and 97.5th percentile of these 1000 estimates.

The normality assumption is justified because a maximum-likelihood estimator is asymptotically normally distributed, and my sample size is very large. Bootstrapping would allow relaxing this normality assumption, but is even more computationally intensive, making it impractical for large multilevel models such as this one. Note that it is not necessary to compute panel-corrected standard errors for a multilevel model, since this approach already models correlated error terms (Gelman and Hill 2006).

tributive justice in turn.

Figure 7 reproduces the results from other studies such as Stegmueller and Rueda (ibid.) and Finersaas (2009): It shows that, consistent with the homo economicus assumption, richer individuals prefer less government redistribution; but inconsistent with that model, the absolute value of the marginal effect of income is actually smaller in more un-
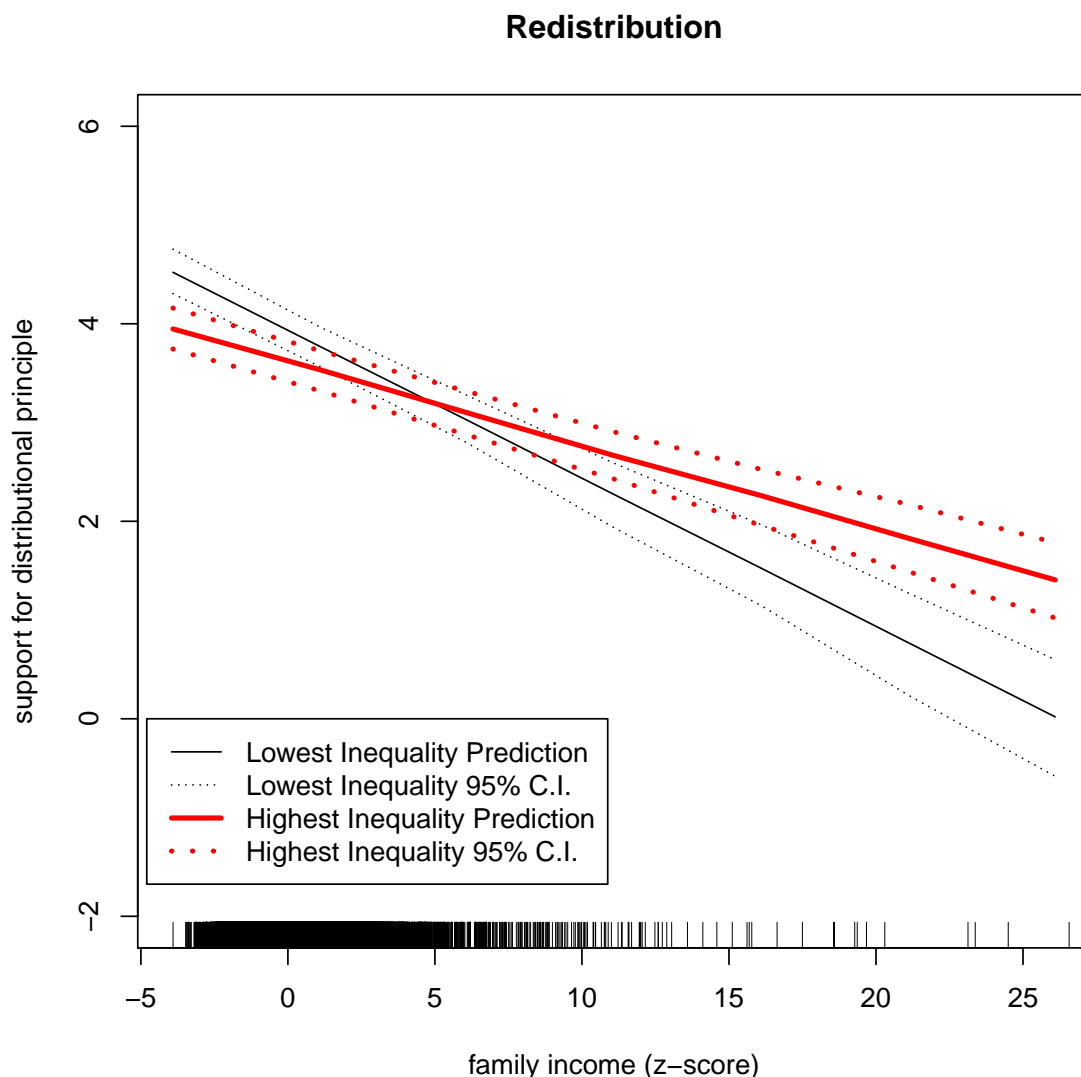
Redistribution

Fig. 7: Effect of individual income and country-level inequality on support for government redistribution. The original scale ranges from 5 (strong support) through 1 (strong opposition). Inequality is set to the minimum (black thin line) and maximum (red thick line) observed in the sample. Employment status is set to employed, marital status is set to married, the dummy variable for female is set to the proportion of women in the sample. All other variables are set to their mean. The rug plot at the bottom shows the distribution of income. Confidence intervals were computed by simulation and exclude the variation of the error term and random effects for country and year.

equal countries (i.e., the rich are less averse to redistribution in more unequal countries). The effect size is also substantial: A person with an income of 12 standard deviations above the mean on average values government redistribution one unit less (on a five-point scale) in an equal country compared to an unequal country.

Let us now turn to the egalitarian values. Hypotheses H1 and H2 are both supported by my findings for the values of equality and equity, but H1 is only partially and H2 is not at all supported by my findings for need. The results for equality and equity are almost the same (see figures 8 and 9). In very unequal countries, support for both egalitarian values is high across the income distribution (around 4 on a 1-5 scale): Here, the rich are as supportive as the poor of equity and even slightly more supportive of equality. By contrast, there is a substantial class polarization around these values in very equal countries: While the poorest are even slightly more supportive of both values here (around 4.5), the rich are strongly opposed to both values (the predicted support reaches the lowest possible value of 1 for an income of around 12). Most of the variation between equal and unequal countries comes from the rich, who change their values much more as inequality changes. All of these findings are in line with hypothesis H1. At first glance, it may appear that the fact that the slope is not negative for highly unequal countries (i.e., that support for both egalitarian values does not decline with income here) contradicts H1. On closer observation, however, it turns out that this pattern in slopes arises from the fact that I graph the results for countries with the maximum and minimum levels of equality observed in my sample. Thus, the predicted values for all other countries lie in between these two lines. This means that, because the slope for unequal countries is only slightly positive whereas the slope for equal countries is clearly negative, the slope for most countries with an inequality level in between these extremes will be negative. This is in line with H1.

Unfortunately, the findings for need only modestly support hypothesis H1: Though my prediction that support for distributing resources according to need will decline with income is corroborated, the hypothesis that this decline will be smaller in more unequal countries is only partially confirmed: The interaction term between income and inequality is insignificant, though the sign has the right direction, and figure 10 shows that the

Equality

Fig. 8: Effect of individual income and country-level inequality on distributing economic resources according to the value of equality. The original scale ranges from 5 (strong support) through 1 (strong opposition). Inequality is set to the minimum (black thin line) and maximum (red thick line) observed in the sample. Employment status is set to employed, marital status is set to married, the dummy variable for female is set to the proportion of women in the sample. All other variables are set to their mean. The rug plot at the bottom shows the distribution of income. Confidence intervals were computed by simulation and exclude the variation of the error term and random effects for country and year.

difference in fact become significant for very large incomes. In other words, the rich are only slightly more supportive of distributing resources according to need in more unequal countries. The reason for this weak finding could be that the two items I use to measure need might not capture this distributional principle adequately: Some people, though they might agree with the abstract principle that in an ideal world resources what be distributed
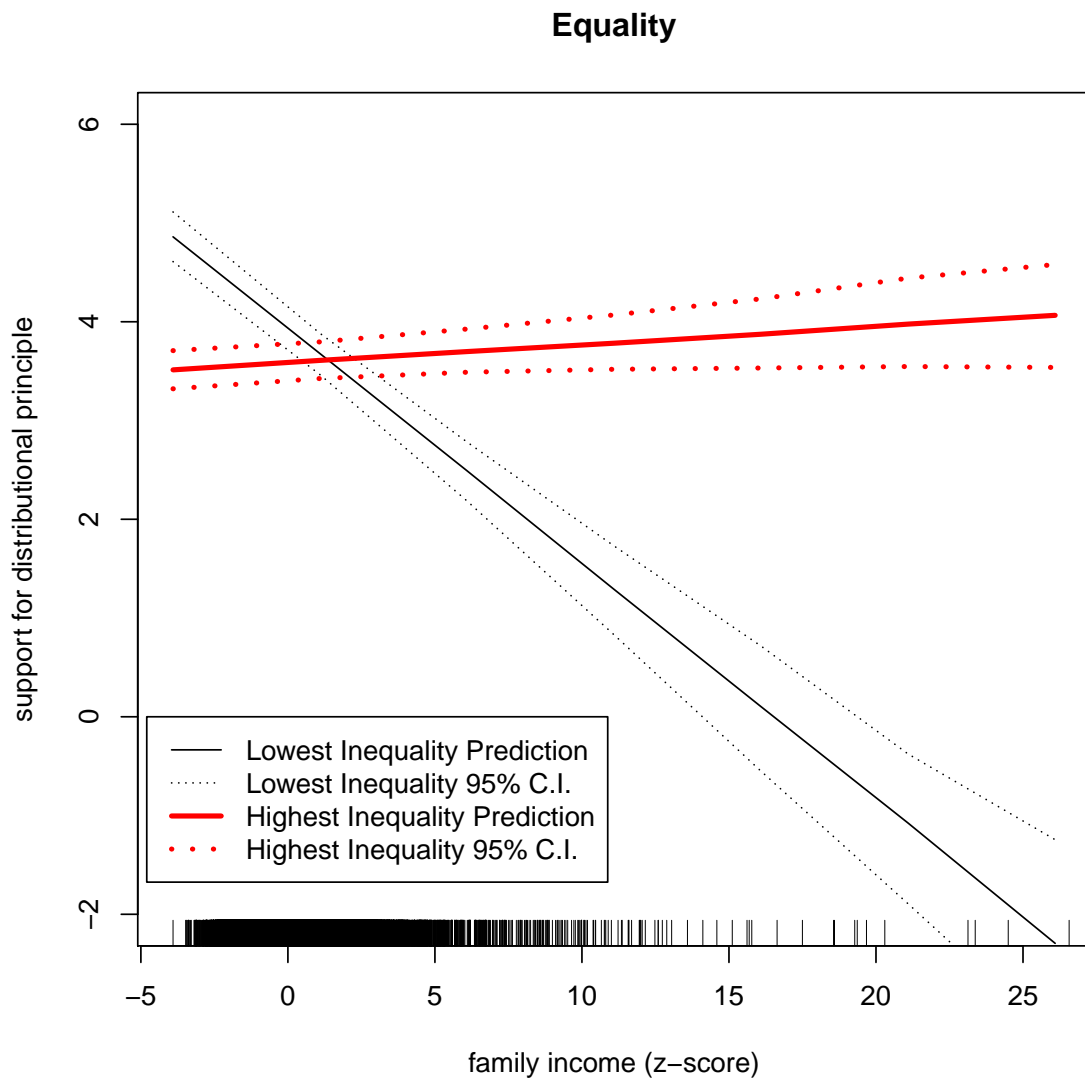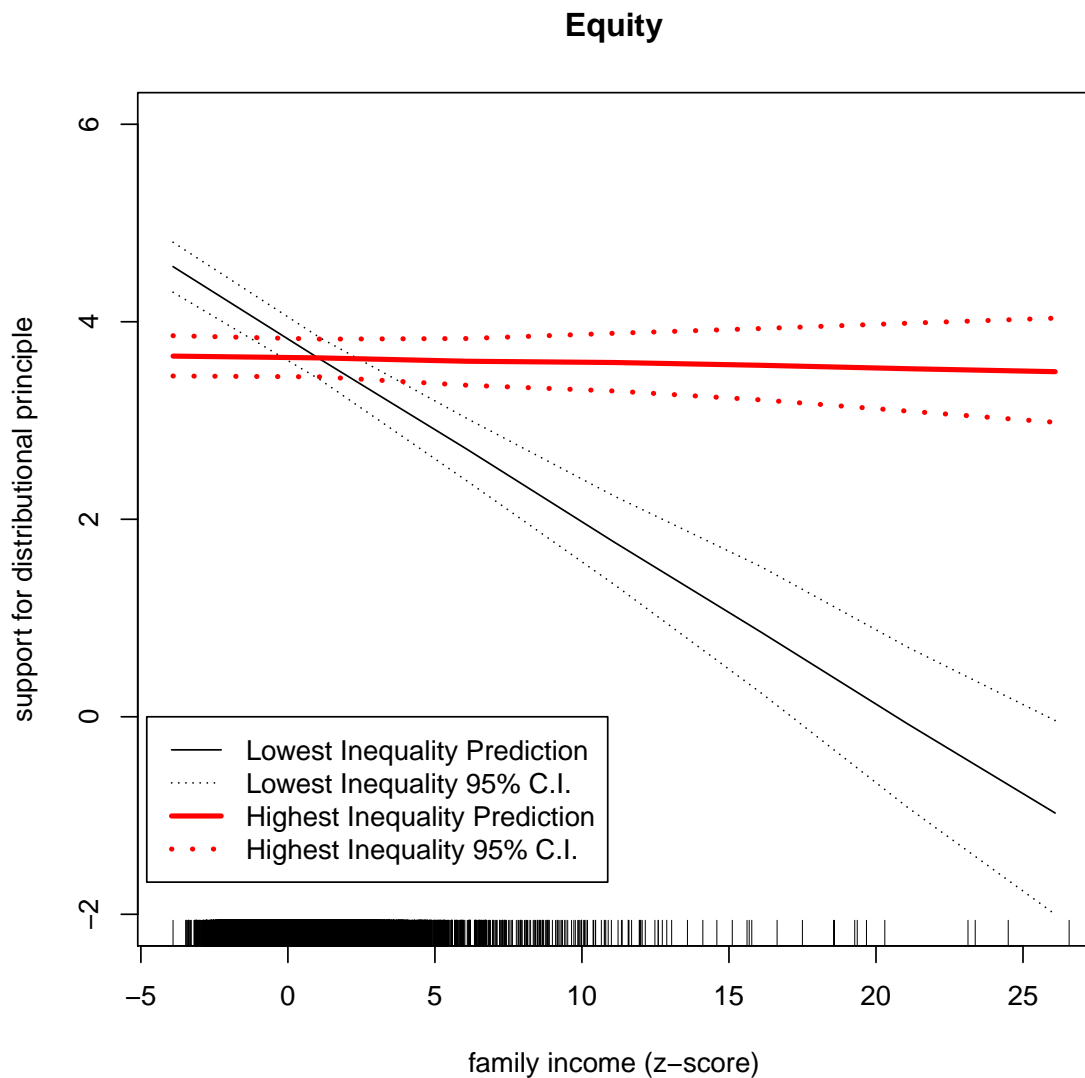
Equity

Fig. 9: Effect of individual income and country-level inequality on distributing economic resources according to the value of equity. The original scale ranges from 5 (strong support) through 1 (strong opposition). Inequality is set to the minimum (black thin line) and maximum (red thick line) observed in the sample. Employment status is set to employed, marital status is set to married, the dummy variable for female is set to the proportion of women in the sample. All other variables are set to their mean. The rug plot at the bottom shows the distribution of income. Confidence intervals were computed by simulation and exclude the variation of the error term and random effects for country and year.

according to need, may not agree with the proposal that employers should take need into

account when setting a wage.[13]

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[13]In particular, upper-class individual are likely to be much more familiar with the workings of the economy, and are thus more likely to view this suggestion as unrealistic. Though I control for education, which should partially remedy the resulting bias, this control might be too crude to prevent bias, in particular since the highest degree obtained measures the educated-ness of a person only with great error (it does not capture the quality of education as well as subsequent learning on the job, and both of these are highly correlated

On balance, though, there is a fair amount of support for hypothesis H1, which confirms the altruism argument, but is still equally consistent with the argument about the externalities of crime. To adjudicate between these two arguments, we need to turn to hypothesis H2. I again find support for it when looking at the two egalitarian values of equality and equity but not for need. As predicted, the effect of inequality on the values of equality and equity is much stronger (about 3-4 times as strong) than inequality's effect on preferences for redistribution: For the poorest individuals, moving from the most unequal to the most equal countries raises the poor's support for redistribution by around 0.5 but raises their support for egalitarian values by around 1.5. If we look at the rich (defined as having an income of around 12), this effect is even more striking: While moving from the most unequal to the most equal countries raises the rich's support for redistribution by around 0.75, it raises the rich's support for equality and equity by around 2.5-3. This suggests that it is altruism rather than fear of crime (or the consideration of other externalities) that drives this pattern: If the cause for the rich's greater willingness to endorse redistribution in more unequal countries was simply due to these kinds of instrumental calculations, inequality should have a smaller effect on abstract value such as equality and equity, because externality considerations are less salient here. However, we in fact observe the opposite, confirming the altruism hypothesis.[14]

These findings for need do not support hypothesis H2: The interaction effect between income and inequality is only marginally significant, and the estimated effect size is small. This runs counter to my prediction (as well as counter to the findings for equality and equity) that this interaction (the difference in slopes) should become larger when

with income, even when holding the highest obtained degree constant). Overall, thus, we should look for alternative measures of need that suffer from less of these problems.

[14]This still raises the question why inequality has a bigger effect on raising the rich's agreement with abstract egalitarian values than their willingness to actually endorse government redistribution. It might simply be due to the well-known fact that questions that make a trade-off more salient elicit lower support; thus, since asking about redistribution implies that easing the burden of the poor necessitates some sacrifice from the rich, the rich are less likely to agree to the question about redistribution. Alternatively, this finding could mean that the rich's endorsement of egalitarianism and redistribution declines as the actual costs to themselves become more real. In the conclusion to this paper I discuss how a study could be designed to investigate whether their egalitarian values are real or whether they only constitute "cheap talk."

moving from preferences about redistribution to more abstract values about distributive justice, where instrumental calculations about externalities should play less of a role. Again, this could be due to the fact that my items that are supposed to measure need do not capture this value very well.

Finally, I find strong support for hypothesis H3: In unequal countries, the rich are
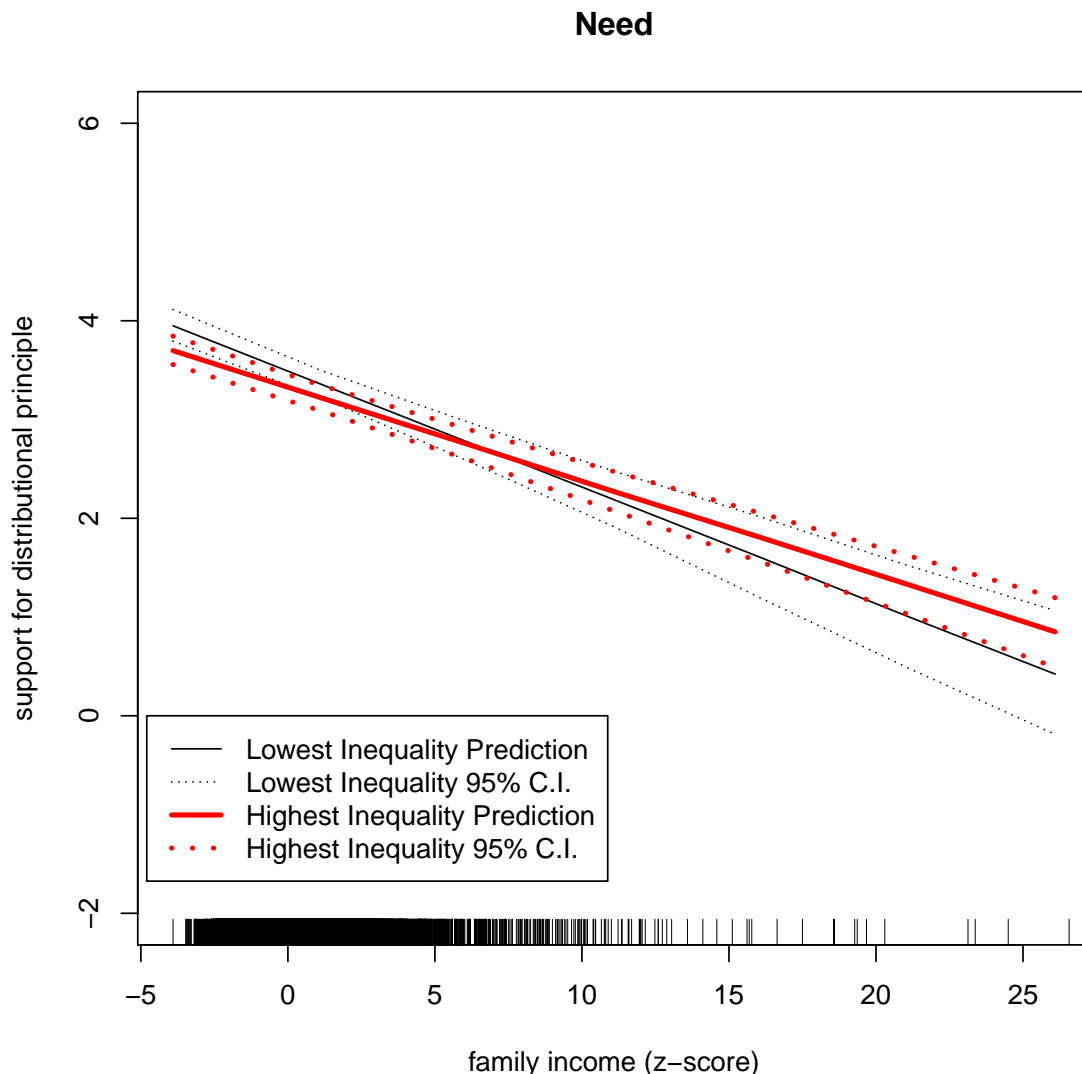
Need

Fig. 10: Effect of individual income and country-level inequality on distributing economic resources according to the value of need. The original scale ranges from 5 (strong support) through 1 (strong opposition). Inequality is set to the minimum (black thin line) and maximum (red thick line) observed in the sample. Employment status is set to employed, marital status is set to married, the dummy variable for female is set to the proportion of women in the sample. All other variables are set to their mean. The rug plot at the bottom shows the distribution of income. Confidence intervals were computed by simulation and exclude the variation of the error term and random effects for country and year.

less supportive of meritocracy than in equal countries (see figures 11 and 12). The effect size is substantial, though considerably smaller than for equity and equality: Moving from the lowest to the highest level of inequality, support decreases by around 0.75 and 1 for ability and effort, respectively, for people with an income 12 standard deviations above the mean. This is in line with the altruism argument but contradicts the self-interest argument
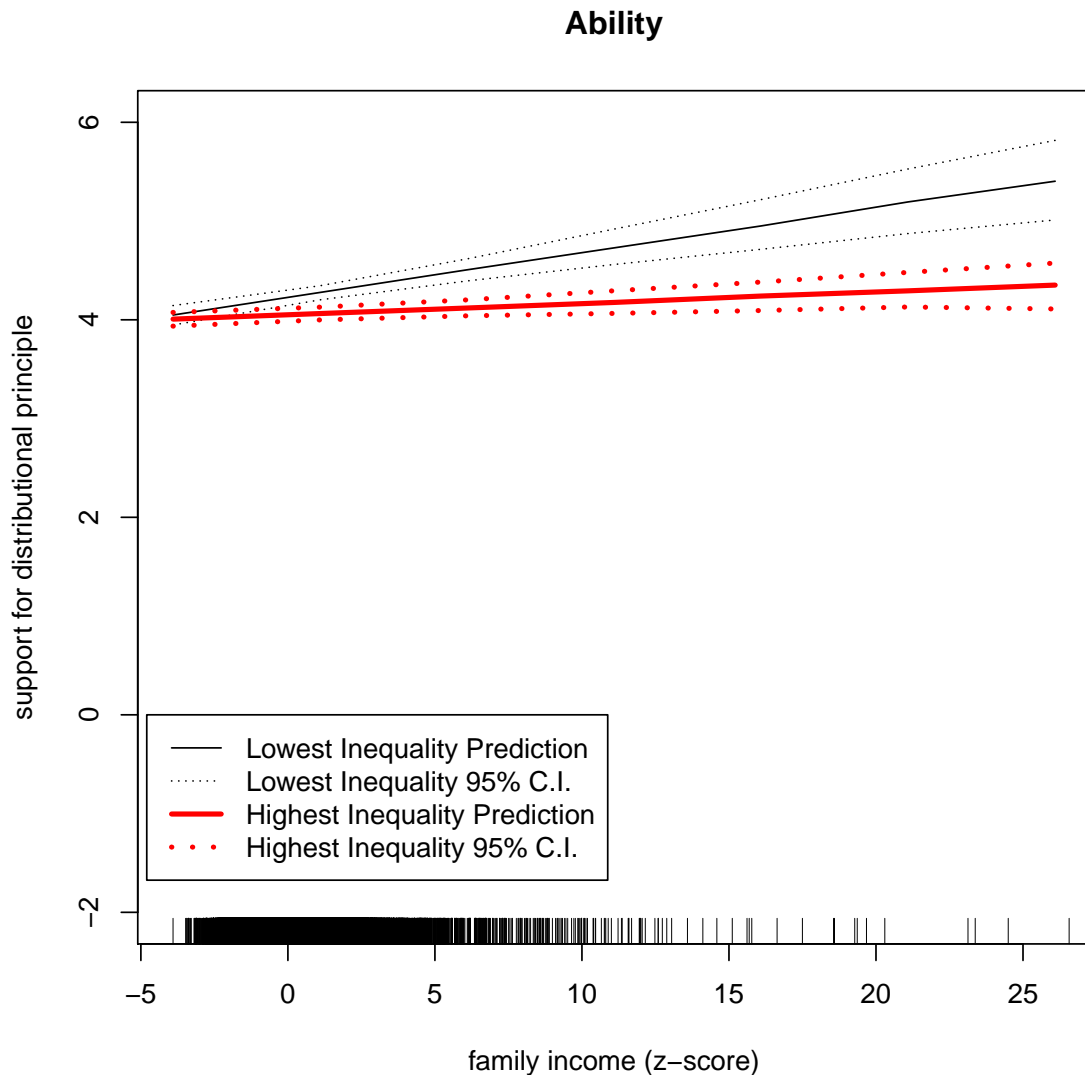
Ability

Fig. 11: Effect of individual income and country-level inequality on the value of distributing economic resources according to ability. The original scale ranges from 5 (strong support) through 1 (strong opposition). Inequality is set to the minimum (black thin line) and maximum (red thick line) observed in the sample. Employment status is set to employed, marital status is set to married, the dummy variable for female is set to the proportion of women in the sample. All other variables are set to their mean. The rug plot at the bottom shows the distribution of income. Confidence intervals were computed by simulation and exclude the variation of the error term and random effects for country and year.

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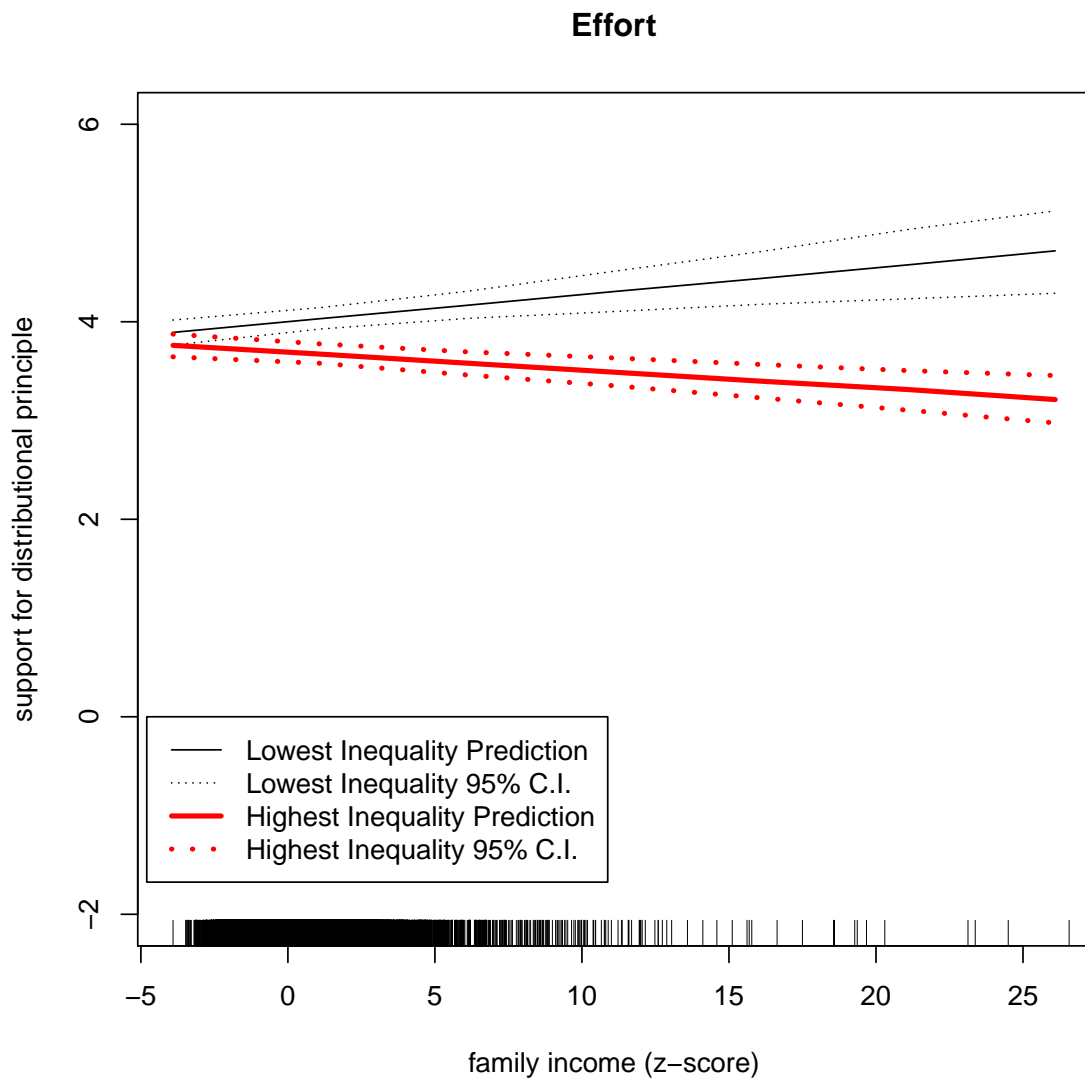
Effort

Fig. 12: Effect of individual income and country-level inequality on the value of distributing economic resources according to effort. The original scale ranges from 5 (strong support) through 1 (strong opposition). Inequality is set to the minimum (black thin line) and maximum (red thick line) observed in the sample. Employment status is set to employed, marital status is set to married, the dummy variable for female is set to the proportion of women in the sample. All other variables are set to their mean. The rug plot at the bottom shows the distribution of income. Confidence intervals were computed by simulation and exclude the variation of the error term and random effects for country and year.

(according to which they should rationalize their dominant position by viewing it as deserved). Surprisingly, while the rich are at least somewhat more supportive than the poor of the principle of distributing goods according to ability, the rich are in fact *less* supportive of the distributional principle of effort in unequal countries. Though this last finding is not what I predicted, it suggests that the effect of altruism relative to self-interest is even

stronger.

Overall, thus, I find support for the theory that it is altruism and not externality considerations that drive the rich's surprising preferences and values about redistribution. Most of my hypotheses were confirmed, with the exception of the unexpected pattern for need. At this point it is not clear whether this is due to the particular way I measured need (the items I used to do so are clearly less direct measures, compared to equality and equity), or whether this finding constitutes an actual anomaly.

DISCUSSION

As Rueda and Stegmueller (forthcoming) already noted, these findings stand in tension with Lupu and Pontussens (2011) famous argument that greater income distance between groups will make them less likely to have similar preferences. Regarding support for government redistribution, the opposite seems to be true: The preferences of the rich are closer to the preferences of the poor and countries in which inequality is greater, not smaller.

Furthermore, the present findings stand in partial conflict with a recent argument by Iversen and Soskice (2015) about inequality and political polarization. The authors show that contrary to what one may believe if one extrapolates from the American context more unequal countries have lower, not higher political polarization. I find this same pattern here for one of the two main dimensions of political polarization, the economic dimension: The greatest polarization around distributive justice in general, and economic redistribution in particular, is found in the most equal, not the most unequal countries. However, my findings are in conflict with the authors more specific findings: They argue that countries with an inegalitarian distribution of power will both have high inequality (for the reasons discussed above) and less informed lower-class voters (because of a poorer education system for these classes and because of the greater weakness of unions), which makes it rational to place themselves more in the political center. However, I find that the poor have similar attitudes towards redistribution and egalitarianism independent of a coun-

trys inequality. Rather, it is the richs attitudes and values that differ between rich and poor countries.

While Rueda and Stegmueller (forthcoming) thus reject this argument, as well as the related argument that the rich are able to distract the poor from the pursuit of their material self-interest through focusing on cultural issues (e.g., Tavits and Potter forthcoming), I think that while there is clearly a tension, it would be fallacious to regard these arguments as contradictory: In the absence of countervailing pressures on the poor (whether through poor education or cultural distraction), we would expect the poor to be even *more* supportive of redistribution and egalitarian values if inequality is higher, since they have even more reason to adapt attitudes and values in this context (note that self-interest and altruism push in the same direction for the poor). The fact that we observe that the poor exhibit the same level of support independent of inequality suggests that there must be some factors at work that curb the support for redistribution and egalitarian values among the poor in more unequal countries. Iversen and Soskice (2015) and Tavits and Potter (forthcoming) suggest possible causes of what this could be.

CONCLUSION

I have presented this study not as a test whether humans behave at least in part altruistically this is best studied using experimental methods, and has already been clearly confirmed. Rather, the contribution of this paper is to show that political science models gain in explanatory power if they take this into account. In particular, it explains one important puzzle regarding the redistributive preferences and egalitarian values of the rich: Why the rich are less averse to redistribution in more unequal countries.

One limitation of this study like all other studies relying on public opinion polls is that it is hard to know whether responses are genuine. This question is especially important giving the surprising finding that the rich become more supportive of redistribution in more unequal countries. By contrast to a simple social desirability bias, this problem is not easily dealt with through asking questions appropriately, because what we would

really like to know is how people would actually behave rather than what they think and feel: Given that a single persons opinion is unlikely to change government redistribution, we do not know whether they would still embrace as egalitarian values if that would require them to act on them, e.g. by giving away a substantial proportion of their income or wealth. Of course, a subset of the rich does already engage in philanthropy, but anecdotal evidence suggests that this giving can be for selfish reasons, such as to gain prestige by conspicuous giving or to buy a highly-increased chance of college admission for their children.

Future research might be able to address this question by looking at vote choice: If the support for egalitarian values on the part of the rich is really just cheap talk, then we should find that egalitarian values become less predictive of vote choice (especially in elections where that redistributive dimension is salient). However, the possibly insurmountable challenge is to control for confounding factors, e.g. the different salience of economic versus cultural values of voters in different social classes.

APPENDIX: REGRESSION TABLES

	Government Redistribution	Ability	Effort
Intercept	3.8307***	3.9849***	3.7088***
	(0.0952)	(0.0393)	(0.0568)
Female	0.1325***	0.0086	0.0746***
	(0.0074)	(0.0046)	(0.0048)
Age in Decades	0.0632***	0.0119	−0.0173
	(0.0141)	(0.0088)	(0.0091)
Age (in Decades) Square	−0.0066***	−0.0014	0.0032***
	(0.0015)	(0.0009)	(0.0009)
Widowed	−0.0671***	−0.0087	0.0077
	(0.0146)	(0.0090)	(0.0094)
Divorced	0.0301	−0.0026	0.0319
	(0.0275)	(0.0166)	(0.0174)
Separated	−0.0215	−0.0214*	0.0069
	(0.0170)	(0.0104)	(0.0109)
Single	−0.0823***	−0.0078	0.0038
	(0.0193)	(0.0119)	(0.0124)
Education	−0.0970***	0.0400***	0.0139***
	(0.0029)	(0.0018)	(0.0018)
Unemployed	−0.0605***	−0.0151	−0.0059
	(0.0150)	(0.0088)	(0.0092)
Student or Vocational Training	0.0067	−0.0202	0.0182
	(0.0174)	(0.0153)	(0.0160)
Retired	0.1821***	−0.0150	0.0374*
	(0.0311)	(0.0181)	(0.0189)
Housewife/-man	0.0802***	0.0408***	0.0513***
	(0.0134)	(0.0082)	(0.0085)
Permanently Disabled/Sick	−0.1253***	0.0080	0.0743***
	(0.0190)	(0.0113)	(0.0118)
Other Employment Status	0.0802***	−0.0401***	−0.0029
	(0.0161)	(0.0097)	(0.0101)
Relative Income	−0.1640***	0.0235***	−0.0095***
	(0.0042)	(0.0026)	(0.0027)
Inequality	−0.0125***	−0.0075***	−0.0123***
	(0.0017)	(0.0012)	(0.0011)
Relative Income*Inequality	0.0018*	−0.0011*	−0.0021***
	(0.0008)	(0.0005)	(0.0005)
AIC	270054.6792	146985.2328	156268.2495
BIC	270252.6173	147180.2544	156463.4686
Log Likelihood	−135006.3396	−73471.6164	−78113.1247
Num. obs.	91640	79757	80511
Num. groups: COUNTRY	27	27	27
Num. groups: YEAR	4	3	3
Var: COUNTRY (Intercept)	0.1306	0.0116	0.0353
Var: YEAR (Intercept)	0.0111	0.0017	0.0039
Var: Residual	1.1111	0.3683	0.4061

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$

Table 2: Regression results for redistributive preferences and meritocratic values

	Equity	Equality	Need
Intercept	3.4553***	3.5442***	3.8525***
	(0.1061)	(0.1008)	(0.0726)
Female	0.1326***	0.1434***	0.0594***
	(0.0103)	(0.0102)	(0.0073)
Age in Decades	0.0963***	0.0725***	−0.1000***
	(0.0196)	(0.0194)	(0.0139)
Age (in Decades) Square	−0.0107***	−0.0079***	0.0089***
	(0.0020)	(0.0020)	(0.0014)
Widowed	−0.0084	−0.0123	−0.0168
	(0.0198)	(0.0196)	(0.0142)
Divorced	0.0091	0.0057	0.0538*
	(0.0360)	(0.0357)	(0.0264)
Separated	0.0469*	0.0397	−0.0564***
	(0.0231)	(0.0228)	(0.0166)
Single	−0.0202	−0.0279	−0.0202
	(0.0262)	(0.0259)	(0.0189)
Education	−0.0079*	−0.0269***	−0.0909***
	(0.0039)	(0.0039)	(0.0028)
Unemployed	−0.0460*	−0.0122	0.0624***
	(0.0204)	(0.0202)	(0.0139)
Student or Vocational Training	0.0096	−0.0246	0.0690**
	(0.0344)	(0.0341)	(0.0242)
Retired	0.0639	0.1100**	0.1367***
	(0.0390)	(0.0385)	(0.0287)
Housewife/-man	0.0338	0.0690***	0.0494***
	(0.0183)	(0.0181)	(0.0130)
Permanently Disabled/Sick	0.0179	0.0126	−0.0179
	(0.0256)	(0.0254)	(0.0179)
Other Employment Status	−0.0103	0.0144	0.1116***
	(0.0215)	(0.0213)	(0.0153)
Relative Income	−0.0958***	−0.0983***	−0.1185***
	(0.0059)	(0.0059)	(0.0041)
Inequality	−0.0089**	−0.0157***	−0.0063***
	(0.0027)	(0.0027)	(0.0017)
Relative Income*Inequality	0.0055***	0.0064***	−0.0009
	(0.0012)	(0.0011)	(0.0008)
AIC	194994.6262	194179.5650	218049.9421
BIC	195183.9588	194368.9366	218244.7963
Log Likelihood	−97476.3131	−97068.7825	−109003.9711
Num. obs.	60830	60943	79124
Num. groups: COUNTRY	27	27	27
Num. groups: YEAR	2	2	3
Var: COUNTRY (Intercept)	0.1890	0.1863	0.0971
Var: YEAR (Intercept)	0.0027	0.0009	0.0008
Var: Residual	1.4371	1.4096	0.9174

***$p < 0.001$, **$p < 0.01$, *$p < 0.05$

Table 3: Regression results for egalitarian values

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