

# VALUES AS LUXURY GOODS AND POLITICAL BEHAVIOR

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## Abstract

Motivated by novel survey evidence, we develop a theory of political behavior in which the relative weight voters place on values rather than material considerations increases in income. The model unifies several stylized facts about US politics and makes new predictions. The luxury goods idea implies—and two datasets confirm—that rich moral liberals are considerably more likely to vote against their economic interests than poor moral conservatives, cautioning against the common narrative that the working class is particularly politically motivated by values. For sufficiently morally liberal voters, increased income can even reduce the likelihood of voting for Republicans. Rich liberals' and poor conservatives' asymmetric priorities also explain why Democrats are internally more heterogeneous than Republicans, and why income and voting Republican are positively correlated across voters but negatively across states. Finally, we interpret the secular partisan realignment of rich moral liberals and poor moral conservatives through our model. (JEL: D72, P10)

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*Erst kommt das Fressen, dann kommt die Moral. – A hungry man has no conscience.*

Bertolt Brecht, The Threepenny Opera

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### Teaching Slides

A set of Teaching Slides to accompany this article is available online as Supplementary Data.

## 1. Introduction

A growing body of empirical work documents that people's policy views and voting behavior depend both on the economic incentives that are traditionally emphasized by political economists and on people's values. The empirical insight that both material and non-material considerations matter for political behavior raises the question of how people trade off these concerns when they are in conflict with each other. This is of particular interest in the context of widely discussed voter groups that appear to vote "against their economic interests": morally conservative working-class voters who vote Republican (Frank 2007) and morally liberal educational elites who vote Democrat. These patterns have attracted attention because they appear to be present in a broad set of countries (Gethin, Martínez-Toledano, and Piketty 2021; CappeLEN, Enke, and Tungodden 2022).

To shed light on how the conflict between material incentives and values shapes policy views and voting behavior, we develop a formal theory of political behavior in which *values are luxury goods*: The relative weight that people place on non-material versus material issues increases in their absolute income. This assumption does not mean that the poor have "weaker" values, or that their values are more or less extreme. Instead, the assumption of luxury goods only captures the idea that—relative to the poor—the rich are more likely to vote based on their values rather than their pocketbook.

While the luxury goods property of non-economic values posited in our model is plausibly relevant for political behavior and competition in many contexts, we focus our empirical investigation on the United States. We do this both because the United States has a relatively simple two-party system and because there exists a rich literature of stylized facts against which we can assess our model's predictions. Our main objectives are to (i) present novel survey evidence supporting the luxury goods assumption; (ii) demonstrate how this assumption explains and unifies various known empirical regularities about contemporary US political conflict that appear puzzling from the perspective of traditional models; and (iii) derive and empirically test new predictions that follow from the luxury goods assumption. Our key message is that a simple idea—values as luxury goods—unifies a broad set of stylized facts.

*Motivating evidence.* The concept of values as luxury goods originated in Maslow's (1943) "hierarchy of needs" and gained prominence through the influential "postmaterialism" literature initiated by Inglehart (1997, 2020). Using the World Values Survey, Inglehart and colleagues consistently demonstrated that as people become wealthier, they report placing greater emphasis on their values relative to material concerns.

This idea also has intuitive appeal in the political domain. Gelman et al. (2007) argue that the rich can “afford” to prioritize their views on moral and cultural issues because they need to worry less about feeding their families. They provide indirect evidence consistent with a luxury goods mechanism.<sup>1</sup> To provide more direct evidence for such a mechanism, we conducted a tailored survey of 1,200 US voters. Respondents first indicated their opinion on five economic and five social policy issues. We then asked them to allocate 100 points among these same issues to indicate their relative importance for determining which political candidate the respondent would support.

We find that the relative weight voters place on the social issues significantly increases with household income. Descriptively, moving a voter from the lowest to the highest income category in our survey increases the relative weight placed on social issues by 13%. This correlation persists when controlling for other demographic factors. In conjunction with additional indirect evidence discussed below in Section 2, we interpret these results as suggesting that—as far as political behavior is concerned—values constitute luxury goods.

*Model setup.* To cleanly isolate the implications of values as luxury goods for individual voter behavior, we assume that party positions are exogenously fixed (which, for individual voters, they are). We assume a two-dimensional policy space in which one party offers a more conservative platform on both an economic and a social dimension.

Voters’ primitive types consist of their income and their values. We refer to voters with conservative/liberal values as “moral conservatives/liberals”, with the implicit understanding that these values could also be cultural in nature. In the model, values determine the voter’s ideal social policy. A voter’s ideal economic policy, such as the desired level of redistributive taxation, is determined by their relative income position in society. We adopt a reduced-form formulation according to which richer voters desire a “higher” economic policy (e.g., lower taxes). We also allow values to affect the voter’s ideal economic policy in ways that are in line with the empirical evidence (more conservative values predict lower demand for redistribution), though almost none of our results depend on the assumption that values can affect the desired economic policy.

Our main assumption is that while all voters (including the poor) place non-zero utility weight on their values, this weight strictly increases in absolute income. As a result, wealthier voters express their values more strongly.

*Model implications and empirical tests.* To see the most basic implication of the luxury goods assumption, consider the canonical comparative static effect of an increase in a voter’s relative income on his vote choice. In traditional models such as Meltzer and Richard (1981), richer voters have more conservative ideal economic policies. While this effect remains operational in our model, income-dependent utility weights generate an additional indirect income effect. For moral liberals, this indirect effect counteracts the direct one as they can now “afford” to prioritize their liberal

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1. Gelman et al. (2007) and Gelman (2009) interpret the steeper voting-income gradients in richer states as evidence for a luxury goods mechanism. Bartels (2006) documents that social issue preferences are more strongly correlated with voting behavior among the rich.

values over their material concerns. In contrast, for moral conservatives, a higher income leads them to place a higher weight on their conservative values, which further strengthens the support of the conservative party.

As a result, our model predicts that the voting behavior of moral conservatives is more responsive to income than that of moral liberals. Indeed, the model makes the stark prediction that the effect of income on voting can even be zero or negative for voters who are sufficiently morally liberal. This produces a version of the “gauche caviar”: rich voters who support left-wing policies and candidates. It is worth contrasting this model prediction with two-dimensional voting models with fixed utility weights. In those models, every voter—no matter how morally liberal—has a threshold income level above which s/he would vote for the conservative party. In our model, this prediction—which we view as counterintuitive—does not hold.

We empirically study these predictions in two datasets, the American National Election Studies (ANES) and a nationally representative Moral Foundations Questionnaire (MFQ) dataset. In line with our model predictions, we find that the positive effect of income on voting Republican is substantially more pronounced among moral conservatives than among moral liberals. Within the set of very morally liberal voters, the effect of income on voting Republican is even weakly *negative* in both datasets.

In our model, these patterns have direct implications for who is more likely to vote against their economic interests. Consider two groups of voters that are both “off-diagonal” in income/values space and have attracted considerable attention in the recent popular debate: voters who are either rich and morally liberal or poor and morally conservative, such that they align with each party on only one dimension. While an influential body of narratives focuses on the “puzzle” that poor moral conservatives (PMCs) vote Republican (Frank 2007; Hacker and Pierson 2020), it is maybe equally puzzling that rich moral liberals (RMLs; such as the educational elite) often vote Democrat. Indeed, our model predicts that RMLs are *more* likely to vote against their material interests than PMCs. The simple intuition is that both groups need to trade off their economic incentives and their values, and RMLs place a higher weight on their values than PMCs do.

We again test this new prediction empirically. In both the ANES and the MFQ, rich and morally liberal voters are more than 20 percentage points more likely to vote Democratic than poor and morally conservative people are to vote Republican. While much prior work has separately investigated the voting behavior of PMCs and RMLs, we provide the first model and empirical evidence that directly compare the two.

The asymmetry in terms of whether the rich and poor vote based on material or non-material considerations also has implications for understanding within-party supporter heterogeneity. In our model, people vote Democratic for two fundamentally different reasons: either because they are poor (in this case, more or less independent of their values, because the weight on these is relatively small) or because they are rich and have very liberal values. For Republican voters, on the other hand, the mirror image of this pattern is less likely to arise: The very poor will less often vote Republican even if they have conservative values because—being poor—they place a lower weight on their

values. As a result, our model predicts that the set of Democratic voters is internally more heterogeneous than the set of Republican ones. We are not aware of other formal models that have made such a prediction.

We again take this prediction to the data in the ANES and MFQ. Consistent with the model (and some prior work in political science), Democratic voters exhibit significantly greater heterogeneity in both income and values.

In a final step of our analysis with fixed party positions, we consider the widely known “voting-income paradox” first popularized by Gelman et al. (2007): Income and voting Republican are positively correlated across voters, yet state average income and state Republican vote share are negatively correlated. Our model shows how this pattern can emerge through the luxury goods logic. As highlighted above, our model predicts that the voting-income gradient is larger among more conservative voters. Thus, the voting-income slope should be larger in a morally conservative state like Kentucky than in a morally liberal state like Connecticut (which is true). If the morally more conservative state has a lower average income, our model naturally generates (under some restrictions) that the sign of the voting-income relationship flips going from the individual to the aggregate level.

Overall, our analysis suggests that various seemingly puzzling stylized facts are ultimately driven by the logic of values as luxury goods. While some of the empirical regularities that we document have antecedents in political science—see below for references—our model provides a simple framework to tie multiple stylized facts together that are often viewed as unrelated.

*Extension: secular change and realignment.* While our paper is focused on a static context with fixed party positions, we also present a more speculative extension that considers changes in voting patterns over time. We focus on the effects of long-run increases in incomes, which means that voters place a higher weight on values in the later period. As a result, holding party positions fixed, “off-diagonal” voters become more likely to vote in line with their values rather than their material concerns and realign: PMCs (such as the white rural working class) swing toward the Republican party, while RMLs (the canonical “educational elite”) swing toward the Democrats. Thus, our model offers a novel mechanism that may have contributed to the widely discussed realignment patterns observed in the United States.

*Related literature.* Our framework with two-dimensional types differs from much of the formal literature on electoral competition, which adopts a one-dimensional framework. Our work builds on contributions that model competition in multi-dimensional settings but feature fixed weights (e.g., Schofield 2007; Bade 2011; Krasa and Polborn 2014a,b; Dragu and Fan 2016; Nunnari and Zápal 2017). Pástor and Veronesi (2021) highlight how diminishing marginal utility of money can make a preference for equality a luxury good. Our paper also relates to recent theoretical work on values or ethics in political economy (e.g., Tabellini 2008), as well as to models that link political competition to psychological or cultural factors (e.g., Besley and Persson 2019; Bonomi, Gennaioli, and Tabellini 2021; Rodrik, Ash, and Mukand 2021; Callander and Carbajal 2022; Gennaioli and Tabellini 2023).

Our setup assumes the presence of only two major parties, as is often the case in majoritarian electoral systems such as in the United States. However, the structure of voters' political preferences that we posit is clearly independent of a country's specific electoral system, and as such, we believe that future work may profitably embed our approach into models of proportional representation. One reason why we believe this would be beneficial is that some of the empirical regularities that our paper ties together are also visible in Europe. For instance, the contemporaneous importance of values is a recurring phenomenon throughout the Western world (Cappelen, Enke, and Tungodden 2022; Enke, Rodríguez-Padilla, and Zimmermann 2022b). Moreover, our model prediction that the voters of left-wing parties are more internally heterogeneous than those of right-wing parties jibes with a casual observation of the party landscape in some European countries. For example, in Germany, until the 1980s, politics was largely organized around a traditional economic left-right divide between the Social Democrats and the Christian Democrats, until the internal divisions within the Social Democratic Party became so large that the Green Party (essentially the culturally very liberal wing of the Social Democrats) emerged. Relatedly, in both France and Italy, a widely discussed stylized fact is that the party landscape on the left is more fragmented than on the right, which puts left-wing parties there at a "structural disadvantage" in terms of winning elections.<sup>2</sup>

The paper proceeds as follows. Section 2 presents motivating evidence for the luxury goods assumption. Section 3 exposits the model. Section 4 analyzes the static model and presents empirical evidence that tests the model's predictions. Section 5 presents an extension to secular change, and Section 6 concludes. All proofs of propositions are in [Online Appendix B](#).

## 2. Motivating Evidence

### 2.1. Targeted Survey

*Design..* To study voters' relative weights on economic and social policy issues, we implemented a two-part survey. Our survey builds on the design of Spenkuch and Teso ([n/a](#)), though they do not study the dependence of issue weights on income.

In Part 1, for each of five social and five economic policy topics, respondents selected one of five statements as most representative of their opinion on that topic. These five statements were clearly ordered along liberal-versus-conservative lines. Social topics included immigration, affirmative action and minorities, free speech and cancel culture, abortion, and LGBTQ rights. Economic ones included the minimum wage, taxes on rich households, taxes on businesses, health care, and taxes on/subsidies for usage of fossil fuels; the results do not depend on whether the latter issue is coded as economic or social.

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2. We are grateful to Clemence Tricaud and Guido Tabellini for pointing us to these discussions in French and Italian politics.

In Part 2 of the survey, respondents were asked to distribute 100 points among these ten issues to indicate how important they each are for determining which political candidate they would vote for. Respondents were shown the ten statements they had selected as most representative of their opinion, and then allocated 100 points among them. To prevent order effects, the order of the ten topics was randomized across respondents. Respondents could only proceed to the next screen when their ten topic weights summed to 100. As respondents provided their weights, the computer program simultaneously displayed the sum of allocated points, freeing respondents from the cognitive burden of keeping track of how many points they had already allocated. Aside from eliciting various demographics of interest, we measured household income in two ways: (i) respondents placed themselves into one of twelve household income categories, and (ii) we provided a text box for free entry of a dollar value.

[Online Appendix A](#) contains screenshots of the key components of the survey flow, including the statements among which respondents indicated their preferred opinion and the elicitation of the issue weights.

The survey was run on the online platform *Prolific*, which has been shown to deliver substantially higher-quality data than *Amazon Mechanical Turk* (Gupta, Rigotti, and Wilson 2021). We interspersed three attention checks throughout the survey and excluded all participants who failed one of them. Given our research question, we desired a sample that is balanced on political views. Thus, we made use of *Prolific's* sample stratification options to gather data on an equal number of roughly 500 self-identified Democrats and Republicans each, as well as 200 independents. We ended up with a total sample of 1,196 respondents. While the sample is not nationally representative, it is considerably broader and more diverse than typical convenience participant pools. A total of 50% of participants are men, the median age is 40 (interquartile range is 31–54), 55% have a college degree, and median self-reported household income is \$59,450 (interquartile range is \$32,000–\$98,000). A total of 24% of the sample report an annual household income of at least \$100,000.

*Results..* Respondents clearly engaged with the task of assigning importance weights to the different topics, as can be inferred from the presence of systematic variation in weights across topics. The most important topic, on average, is health care (15.4 points), and the least important one is affirmative action and minorities (average of 6.3 points). On average, respondents allocate 9.0 points to each social issue and 11.0 to economic ones.

Table 1 reports the results on the link between social issue weights and income. Because respondents were forced to allocate exactly 100 points across the 10 topics, we can simply analyze the data by looking at the social weights and ignore the economic ones. Thus, each observation in Table 1 is a respondent social weight, for a total of 5,980 observations, five social topics per respondent.<sup>3</sup>

3. For transparency, [Online Appendix Table A.2](#) breaks these results down into the ten separate policy topics. However, our deliberate survey design with a fixed budget of 100 importance points does not allow us to meaningfully identify fine-grained variation within social policy topics. While we find that the

TABLE I. Income and issue weights for social policy topics.

	<i>Dependent variable:</i> Issue weight (social topics)							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Income category (0–11)	0.099*** (0.03)	0.11*** (0.03)	0.097*** (0.04)	0.095*** (0.04)	0.38*** (0.14)	0.42*** (0.14)	0.33*** (0.14)	0.34*** (0.14)
Log HH income								
Extremity of opinion (0–2)	3.52*** (0.17)	3.54*** (0.17)	3.06*** (0.40)	3.03*** (0.40)	3.54*** (0.17)	3.57*** (0.17)	3.57*** (0.17)	3.03*** (0.40)
Age								
1 if female	-0.0034 (0.01)	-0.0034 (0.01)	-0.0095 (0.01)	-0.0095 (0.01)	-0.0041 (0.01)	-0.0041 (0.01)	-0.0041 (0.01)	-0.010 (0.01)
1 if college degree	0.067 (0.23)	0.057 (0.22)	0.057 (0.22)	0.057 (0.22)	0.063 (0.23)	0.063 (0.23)	0.057 (0.22)	0.057 (0.22)
Religiosity (0–10)	-0.30 (0.24)	-0.15 (0.24)	-0.15 (0.24)	-0.15 (0.24)	-0.27 (0.24)	-0.27 (0.24)	-0.13 (0.24)	-0.13 (0.24)
Survey wave FE	Yes (0.03)	Yes (0.03)	Yes (0.03)	Yes (0.03)	Yes (0.03)	Yes (0.03)	Yes (0.03)	Yes (0.03)
Topic FE	No (0.03)	Yes (0.03)	Yes (0.03)	Yes (0.03)	No (0.03)	Yes (0.03)	Yes (0.03)	Yes (0.03)
Opinion FE	No (0.03)	No (0.03)	No (0.03)	No (0.03)	No (0.03)	No (0.03)	No (0.03)	No (0.03)
Observations	5,980	5,980	5,980	5,980	5,895	5,895	5,895	5,895
R <sup>2</sup>	0.00	0.12	0.13	0.15	0.00	0.12	0.13	0.15

Notes. Ordinary least squares (OLS) estimates, standard errors (clustered at respondent level) in parentheses. The dependent variable is the weight assigned to each social policy topic, for a total of five observations per respondent. Log household (HH) income is computed as the log of the average of (i) a text box entry asking for HH income and (ii) the midpoint of the income category a respondent indicated. The sample in columns (5)–(8) includes all respondents who indicated an HH income of more than \$1 in the free text entry format. Opinion fixed effects (FE) are fixed effects for each possible response option, i.e., four fixed effects. \*\* p<0.05. \*\*\* p<0.01.

Column (1) shows that the social issue weights significantly increase in respondents' income category. Columns (2)–(4) successively add controls. Perhaps unsurprisingly, respondents with more extreme social opinions (calculated as the absolute distance between the respondent's opinion and the midpoint of 3) also report significantly higher issue weights. Column (3) adds further demographics, the strongest pattern being that religious people report placing a higher weight on social issues. Regardless of whether or not these covariates are included, income and social issue weights are always positively linked. Finally, column (4) shows the arguably most stringent specification, in which we control for fixed effects for the respondent's opinion (four fixed effects given that each question has five response options). Even in this specification, income is significantly linked to issue weights, with a largely unchanged coefficient estimate.

In terms of quantitative magnitude, the regression coefficient says that moving from the lowest (below \$10,000) to the highest (at least \$150,000) income category changes each social issue weight by 1.1 points, from a baseline of 8.4 (an increase of 13%). Figure 1 reports a binscatter plot that visualizes this relationship.

Columns (5)–(8) replicate the same analyses but now use a continuous measure of log household income that is computed by averaging the two income elicitations described above (see the table notes for details). The results are very similar.

Online Appendix A.2 presents an alternative perspective on our data by providing an across-respondent analysis with the total number of social importance points as outcome variable. This analysis facilitates a direct quantitative comparison with demographics. Our estimates suggest that the richest respondents allocate 5.5 points more to the social topics than the poorest respondents, a magnitude that is about one-third of the religiosity coefficient.<sup>4</sup>

These empirical patterns are at odds with popular anecdotal accounts that assert that the voting behavior of the poor is to a much larger extent driven by values than that of the rich (e.g., Frank 2007; Hacker and Pierson 2020). Rather, we interpret the data as saying that values are a luxury good: Whichever values people hold, they matter more for people's vote choice the richer they are.

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positive link between income and social issue weights is strongest for the topics of immigration, affirmative action, and free speech and cancel culture, this does not mean that the relative weights placed on the other topics would not increase in income if they were only contrasted with economic issues. For instance, it is conceivable that respondents who allocated many points to immigration and affirmative action would have allocated these points to LGBTQ rights had the former two categories not been available. As a result, we can only conclude that the relative weight between social and economic issues as a whole increases in income.

4. This magnitude of one-third holds both in terms of coefficient estimates and in terms of standardized betas. Specifically, our estimates suggest that a one standard deviation increase in our income index is associated with an increase of 8% of a standard deviation in social importance points, while a one standard deviation increase in religiosity is associated with an increase of 26% of a standard deviation in social importance points (thus income is about one-third as important as religiosity).

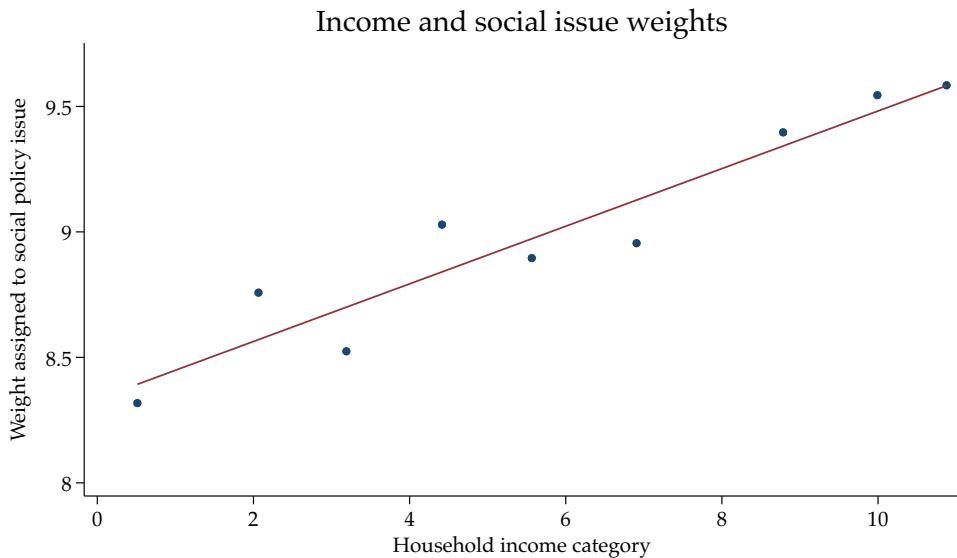


FIGURE 1. Binscatter plot of the link between household income and subjective importance weights assigned to each social policy topic. The figure shows a partial correlation plot that visualizes the results of the regression reported in column (2) of Table 1, based on 5,980 issue weights reported by 1,198 survey respondents for each of five social policy topics.

## 2.2. Additional Indirect Evidence

There is also other, more indirect evidence to suggest that values are particularly important for the political views of the rich.<sup>5</sup> Based on a large focus group study of 8,000 Americans, the recent “Hidden tribes” report (Hawkins et al. 2019) classifies voters according to their primary political concerns. In the report, the two groups that are most pre-occupied with moral and cultural issues are labeled “progressive activists” on the left and “devoted conservatives” on the right. The report describes these two voter groups by highlighting that their material positions are unusually secure:

*Progressive activists: Their own circumstances are secure, which perhaps frees them to devote more attention to larger issues of justice in society... [such as] issues of fairness and equity.*

*Devoted conservatives: They are one of the highest income-earning groups, and feel more secure than most other Americans. They are highly engaged in social issues...[and] feel that traditional values are under assault.*

5. Also see the discussion in Gelman et al. (2007).

Arguably, this implicit or explicitly alludes to the idea that materially secure voters can “afford” to prioritize their values. On the flipside, the report highlights that those voter groups that are less concerned with moral or cultural issues are materially less secure. In line with this, US Senator Sherrod Brown recently asserted that:<sup>6</sup>

*When you’re on the edge, worried about the next layoff or health setback and struggling to make ends meet, the latest Twitter feud or cable news controversy [about culture wars] is just background noise.*

### 3. Model

#### 3.1. Preferences

We analyze a setting with a two-dimensional policy space, with  $x_e$  and  $x_s$  denoting the realized economic and social policy, respectively. We adopt the convention that “higher” policies are more conservative. In our model, voter primitives are not their ideal points on economic and social policy. Rather, these ideal points are determined by the voter primitives of log income,  $y$ , and the voter’s values,  $\mu$ . The central object of interest in our paper is the political implications of how voters trade off income and their moral concerns.

We emphasize that  $\mu$  does not capture whether a voter has “better” or “worse” values but, instead, conservative or liberal ones. Our model is one of horizontal rather than vertical differences in values. Henceforth, we refer to voters with high (low)  $\mu$  as “moral conservatives (liberals)”, with the implicit understanding that some of the relevant values need not be moral in nature (e.g., cultural values). We do not impose assumptions on the correlation between  $y$  and  $\mu$ .<sup>7</sup> We take income and values (rather than ideal policy points) as primitives to allow for the (empirically relevant) possibility that values affect economic policy views.

The deterministic part of a voter’s overall utility is given by a weighted average of two components, which we call material ( $M$ ) and non-material (or values-based) utility,  $P$ . The weight function  $w(y)$  ranges from 0 to 1 and is increasing and concave.

$$U = [1 - w(y)]M + w(y)P. \quad (1)$$

*Discussion.* In standard household theory, some physical goods are inferior and some are normal. In much the same way, it would be surprising if the rate at which voters trade off material wealth and their values is unaffected by their wealth. By assuming that the weight function  $w(\cdot)$  is increasing in income, our model ensures

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6. See <https://www.sherrodbrown.com/news/2022/the-american-prospect-op-ed-becoming-the-workers-party-again/>.

7. In practice, there appears to be very little correlation. In the ANES, the correlation between log income and the moral conservatism score described below is negative but small,  $r = -0.04$ , and in the MFQ, it is even positive (but also small),  $r = 0.06$ .

that the ratio of the importance of philosophical happiness to economic happiness is higher for richer people.

When presenting the paper, several economists have asked us whether our approach of modeling issue weights as increasing in income could be replaced by assuming a fixed weight of philosophical and economic utility, but using the concavity of economic utility in income to argue that economic policy becomes less important as voters get richer.

While this argument is intuitive, it is not necessarily technically correct because increased income may potentially have two distinct effects. First, concavity of utility in income means that the marginal effect of a *fixed increase in effective income* decreases. However, second, the extent to which changes in economic policy affect the size of an individual's effective income is plausibly also increasing in income. For example, even if a richer voter cares less about the marginal dollar, they may care more about the tax rate than a poor voter because the absolute implications (in dollar terms) of the tax rate for their after-tax income are larger. For example, if voter A has an income of \$1 million and voter B has an income of \$100,000, then changing the tax rate from 30% to 40% would produce a loss of \$100,000 for A and of \$10,000 for B. Now, due to diminishing marginal utility, A may care less about this loss because he is already very rich, but because these two countervailing effects exist, diminishing marginal utility of money alone is not necessarily sufficient to generate that richer voters care less about economic policy.<sup>8</sup> In summary, our assumption that the weight of philosophical issues increases in income is, in fact, an *assumption*, rather than a generic *implication* of decreasing marginal utility of income.

*Material utility.* Material utility is a function of individual income and the implemented economic policy  $x_e$ . Rather than setting up an explicit model of material utility, we employ a reduced-form one, which is compatible with several interpretations:

$$M(x_e, y, \bar{y}) = y - \frac{1}{2} \left[ x_e - \underbrace{(r(y - \bar{y}))}_{\text{Materially-optimal economic policy}} \right]^2. \quad (2)$$

Here,  $y$  denotes individual (log) income and  $\bar{y}$  average (log) income in society. We assume that  $r(\cdot)$  is an increasing and differentiable function of the individual's relative economic position in society.

Many natural economic models have the property that materially optimal policies are monotone in relative income. For example, in a model of redistribution, relatively richer agents prefer lower taxes. Similarly, if the level of taxation determines the

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8. To take a different example, consider an economic policy that affects the prices of different goods, such as through tariffs. Shephard's Lemma implies that the effect of a good's price change is proportional to the quantity consumed, and since richer people often consume a larger quantity of imported goods, they are also "more affected" by this policy (say, in terms of the equivalent variation).

amount of public goods that can be provided to citizens, the ideal level of taxation will also depend on relative income.

*Values-based (non-material) utility.* Non-material utility  $P$  depends on the deviation of social policy,  $x_s$ , from the voter's values, captured by  $\mu$ . This is the first component of equation (3).

We also allow values to potentially affect how the voter thinks about economic policy. This is captured by the second term in equation (3), according to which the voter suffers disutility from the degree to which the implemented economic policy deviates from an increasing function of the voter's values. For example, a broad body of work in economics and psychology has documented that variation in moral values along the particularism-versus-universalism continuum is strongly linked not just to social policy views but also to economic policy views. Voters with more particularist (more morally conservative) values desire both lower redistribution and less immigration or affirmative action.<sup>9</sup>

The assumption that values affect both the voter's ideal social and their ideal economic policy implies that, in our model, economic and social ideal points are correlated. While we wish to allow for this possibility (because it is true in practice), almost all of our results are driven by the assumption of values as luxury goods (i.e., that  $w(y)$  is strictly increasing), rather than by the relation between ideal social and economic policies. To make this transparent, we formulate overall non-material utility as

$$P(x_e, x_s, \mu) = -\frac{1}{2}(x_s - \mu)^2 - \frac{\lambda}{2} \left[ x_e - \underbrace{h(\mu)}_{\text{Morally-optimal economic policy}} \right]^2, \quad (3)$$

where  $h(\cdot)$  is an increasing differentiable function capturing how the values-optimal economic policy depends on  $\mu$ . The parameter  $\lambda \geq 0$  determines how much ideal economic policies depend on values. If  $\lambda = 0$ , the voter's ideal economic policy only depends on income and is uncorrelated with his ideal social policy. Below, all propositions will clearly indicate if they require  $\lambda > 0$  (only Proposition 1 does).

Because we allow economic policy views to depend on values, we allow for the possibility that even rich people can be economically left-wing if they have sufficiently liberal values. However, even if a voter favors the Democrats in both economic and social policy because he is morally very liberal, such a voter still exhibits the same fundamental conflict between material concerns and values we are interested in.<sup>10</sup>

9. See Enke, Rodríguez-Padilla, and Zimmermann (2022b) and Cappelen, Enke, and Tungodden (2022) for work in economics. In the psychology literature, the 20 papers reviewed in the meta-study by Kivikangas et al. (2021) document that universalism is predictive of both social and economic left-wing orientation.

10. Moreover, our model of voter choice is a probabilistic voting model, so even a voter whose *policy preferences* favor the same party on economic and social policies may ultimately vote for the other party because of idiosyncratic candidate preferences (or unmodeled preferences on other policy dimensions).

*Utility function.* Substituting (2) and (3) into (1) yields

$$U = [1 - w(y)] \left\{ y - \frac{1}{2} [x_e - r(y - \bar{y})]^2 \right\} - w(y) \left[ \frac{\lambda}{2} (x_e - h(\mu))^2 + \frac{1}{2} (x_s - \mu)^2 \right] \quad (4)$$

The key characteristic of this utility function is that the utility derived from social policy is a strongly superior good (luxury good). To see this, consider the equivalent variation of an individual's utility loss due to social policy differing from the individual's ideal position  $\mu$ . Suppose the individual's income increases. For fixed weight  $w$ , the equivalent variation would increase proportionately with income. However, since  $w$  is increasing in  $y$ , the equivalent variation increases more than proportionately with income.

### 3.2. Ideal Policies

We now turn to characterizing a voter's ideal economic and social policies that maximize (4). Clearly,  $x_s^* = \mu$  is optimal in terms of social policy. Maximizing with respect to  $x_e$  yields

$$\begin{aligned} x_e^* &= \frac{1 - w(y)}{1 - (1 - \lambda)w(y)} r(y - \bar{y}) + \frac{w(y)\lambda}{1 - (1 - \lambda)w(y)} h(\mu) \\ &= [1 - W(y, \lambda)]r(y - \bar{y}) + W(y, \lambda)h(\mu), \end{aligned} \quad (5)$$

where  $W(y, \lambda) \equiv (w(y)\lambda)/(1 - (1 - \lambda)w(y))$ . Thus,  $x_e^*$  is a weighted average of the materially optimal economic policy and the values-optimal economic policy, where the weight on the values-optimal policy increases in income if and only if  $\lambda > 0$ . Because of the indirect effect that is due to  $W(y, \lambda)$ , the relationship between income and the ideal economic policy is more involved than in standard models.

### 3.3. Voting

We assume that there are exactly two parties, called Democrats and Republicans. Let  $x_e^i$  and  $x_s^i$  be the economic and social positions of party  $i \in \{D, R\}$ . Party positions are exogenous, and we assume that, on both dimensions, Republican positions are more conservative than Democratic ones (i.e.,  $x_e^D < x_e^R$  and  $x_s^D < x_s^R$ ).

In addition to their policy utility, voters also receive an idiosyncratic utility shock  $\varepsilon$ , which could reflect local candidates' competence or the voter's evaluation of differences between the parties beyond the economic and social policy dimensions that are at the center of our model. The utility shock enters additively to utility from party positions, and is measured in a way that positive realizations indicate a non-policy preference for the Democratic party. That is, voter  $j$  supports the Republican party if and only if

$$U_j^R - U_j^D > \varepsilon_j,$$

where the left-hand side is voter  $j$ 's net policy preference for the Republican positions. Let the density of the net utility shock  $\varepsilon$  be denoted by  $\psi$ , and assume that it is always positive, with associated cumulative distribution  $\Psi$ . Then, the probability that a voter votes for the Republican candidate is given by  $\Psi(U^R - U^D)$ , where, of course, the policy utility difference depends on the voter's type  $(y, \mu)$ .

Without loss of generality, we can normalize policies in a way that they are symmetric around zero (i.e., such that  $x_e^D = -x_e^R$  and  $x_s^D = -x_s^R$ ). Furthermore, let  $\Delta x_e \equiv x_e^R - x_e^D$  and  $\Delta x_s \equiv x_s^R - x_s^D$  denote the degree of economic and values-based polarization between Republicans and Democrats. Using this, we can write the utility difference  $\Delta U$  as

$$\Delta U \equiv U^R - U^D = [1 - w(y)]\Delta x_e r(y - \bar{y}) + w(y)[\lambda \Delta x_e h(\mu) + \Delta x_s \mu]. \quad (6)$$

#### 4. Model Implications and Empirical Tests

Throughout the analysis, we intersperse theoretical predictions with empirical results. All empirical analyses are correlational in nature. We rely on two datasets: the MFQ and the ANES. The MFQ is an influential psychological questionnaire that measures people's moral values (Haidt 2012). The MFQ dataset we rely on stems from a nationally representative online survey conducted by Enke (2020) with about 4,000 respondents. Enke (2020) develops a summary statistic of the relative importance of particularist versus universalist values that we also rely on. For simplicity, we refer to this index as "moral conservatism". This dataset covers the 2016 election.

Unlike the MFQ, the ANES has the advantage that it allows for the construction of an economic conservatism index in addition to a moral conservatism index. As described in [Online Appendix C.1](#), we follow the methodology of Anscombe, Rodden, and Snyder (2006) in constructing an index of economic conservatism from survey questions about, for example, social security and federal spending. Our ANES moral conservatism index follows the same methodology, except that we restrict attention to survey questions that are related to the universalism versus particularism cleavage, such as questions about family values, LGBTQ rights, and tolerance. We do this for the sake of comparability with the MFQ results, but our results are almost identical when we include all survey questions.<sup>11</sup>

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11. A potential concern is that our results are driven by the classification of specific survey questions as economic or moral, particularly questions like immigration, which have both an economic and moral dimension. In [Online Appendix E.2](#), we show that our results are robust to various ways of constructing the economic and moral indices.

#### 4.1. Income and Economic Policy Views

To begin, it is instructive to consider how support for a higher (more conservative) economic policy changes as a function of income:

$$\frac{\partial x_e^*}{\partial y} = \underbrace{[1 - W(y, \lambda)] r'(y - \bar{y})}_{\text{direct income effect, +}} + \underbrace{\frac{\partial W(y, \lambda)}{\partial y} [h(\mu) - r(y - \bar{y})]}_{\text{indirect values-based effect, ?}}. \quad (7)$$

The first term (direct effect) is positive, as in standard political economy models: From the perspective of material incentives, higher income induces the voter to prefer a more conservative economic policy, as in Meltzer and Richard (1981). However, the sign of the second term (indirect effect) depends on whether an individual's values-optimal economic policy,  $h(\mu)$ , is to the left or to the right of his materially optimal economic policy,  $r(y - \bar{y})$ . For voters who are sufficiently conservative (high  $\mu$ ), both the direct and the indirect income effects are positive. For morally liberal voters, on the other hand, the two effects point in opposite directions because the higher weight on values leads them to favor left-wing economic policies. Thus, the desired economic policies of rich and poor moral liberals are more similar to each other than those of rich and poor moral conservatives. This gives rise to the concept of the “gauche caviar”: people who are sufficiently rich that their values make them economically left-wing, even though a more conservative economic policy would be materially better for them.

**PROPOSITION 1.** *Suppose that  $\lambda > 0$ . Then, the relationship between economic policy views and income is stronger among moral conservatives. Formally,*

$$\frac{\partial^2 x_e^*}{\partial y \partial x_s^*} = h'(\mu) \frac{\partial W(y, \lambda)}{\partial y} > 0.$$

The proof is obvious from (7) by noting that  $x_s^* = \mu$ . Note that Proposition 1 is the only one in the paper that relies on the assumption that values affect not only voters' social policy views but also their economic policy views ( $\lambda > 0$ ).

We reiterate that even the “gauche caviar” exhibits the fundamental conflict between money and values that we study in this paper. While they may have left-leaning ideal policy points on both social and economic policy, these reflect the conflict between material considerations and values. Specifically, for a “gauche caviar”, voting Democrat has three implications: liberal social policy (good) and liberal economic policy (morally good but financially bad).

*Empirical evidence.* To our knowledge, this is a new (and distinctive) prediction of our model that crucially depends on the idea that the non-material weight increases in income. For example, canonical models such as Meltzer and Richard (1981) do not make such a prediction. Similarly, two-dimensional models that feature both income and values do not make such a prediction as long as the utility weights do not depend on income.

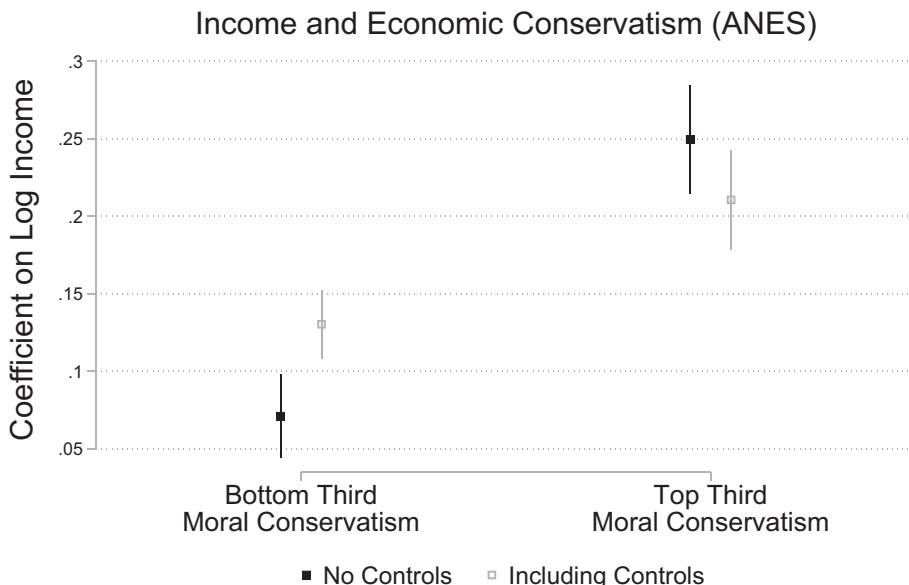


FIGURE 2. Coefficients from OLS regressions of the economic conservatism index on log income, split by moral conservatism. 95% confidence intervals reported. In a Wald test of the equality of coefficients,  $p < 0.001$ . Data from ANES, total  $N = 12,601$ . Income and the conservatism indices all have mean zero and standard deviation one. Controls include state and year FE, gender, age, age squared, and education. Regression results are reported in [Online Appendix Table D.2](#).

We proceed by investigating the empirical patterns in the ANES. We use the economic conservatism index as a proxy for  $x_e^*$  and the moral conservatism index as a proxy for  $x_s^* = \mu$ . Figure 2 summarizes the results. We plot standardized beta coefficients that report by which fraction of a standard deviation economic conservatism changes in response to a one standard deviation increase in log income. We show the results of two regression specifications, one without controls and one that conditions on state and year FE, age, age squared, and gender. Moreover, motivated by the emphasis on education in the recent literature (Gethin, Martínez-Toledano, and Piketty 2021), we also control for it in this second specification. Consistent with Proposition 1, we find that the coefficient in a regression of economic conservatism on income is more than twice as large among top-tercile as among bottom-tercile moral conservatism respondents.

Throughout the paper, we reference regression evidence in figure notes and relegate the tables to appendices. None of our results rely on the tercile splits we visualize but always also hold with the full sample and the underlying continuous variables; see, for example, [Online Appendix Table D.2](#).

In [Online Appendix E](#), we present analyses that break all of our main empirical results down by time period. These analyses generally show that most results are considerably stronger in the 2004–2020 than in the 1988–2000 period. Our model of

values as luxury goods may thus be understood as being especially descriptive of reality in the contemporary period.

#### 4.2. Income and Voting

Recall that the probability of voting  $R$  is  $\Psi(\Delta U) = \Psi(U^R - U^D)$ . Differentiating (6) with respect to  $\mu$  shows that morally conservative voters are more likely to vote Republican as

$$\frac{d\Pr(R|\mu)}{d\mu} = \psi(\Delta U) \frac{d\Delta U}{d\mu} = \psi(\Delta U) w(y) (\lambda h'(\mu) \Delta x_e + \Delta x_s) > 0. \quad (8)$$

In contrast, the effect of an increase in income  $y$  on the probability of voting  $R$  is more complicated:

$$\begin{aligned} \frac{d\Pr(R|y, \mu)}{dy} = \psi(\Delta U) & \left\{ \underbrace{[1 - w(y)] \Delta x_e r'(y - \bar{y})}_{\text{direct income effect, +}} \right. \\ & \left. + \underbrace{w'(y)[\Delta x_e (\lambda h(\mu) - r(y - \bar{y})) + \Delta x_s \mu]}_{\text{indirect values-based effect, ?}} \right\}. \end{aligned} \quad (9)$$

As in the analysis of economic policy views, there is a direct income effect and an indirect values-based effect. The sign of the direct income effect is positive because, from a purely material perspective, richer voters prefer the Republicans' more conservative economic policy (i.e.,  $r(\cdot)$  is increasing). The sign of the indirect effect again depends on a voter's values. It is positive for morally conservative voters, so that the probability of voting Republican is unambiguously increasing in income for these voters. However, the indirect effect is negative for sufficiently liberal voters. Intuitively, if an increase in income makes a sufficiently liberal voter rich enough to "afford" voting based on values, they can become more likely to vote Democrat. We now state results based on this intuition formally in Proposition 2.

#### PROPOSITION 2.

1. For any  $y$ , there exists a critical level  $\mu^*(y)$  such that  $d\Pr(R)/dy \gtrless 0$  if and only if  $\mu \gtrless \mu^*(y)$ .
2. We have  $d^2\Pr(R)/d\mu dy$ , as given by (B.1) in the Online Appendix, positive if  $|\psi'(\Delta U(y, \mu))|$  is sufficiently small. In particular, this is the case if  $\psi$  is uniform.

The first part of Proposition 2 shows that, for each income level  $y$ , there is a critical level of moral conservatism,  $\mu^*(y)$ , such that the marginal income effect is negative for more liberal voters and positive for more conservative ones. This claim follows immediately because the terms in curly brackets (9) are strictly increasing in  $\mu$  in an unbounded way. This first part of the proposition has two closely related implications.

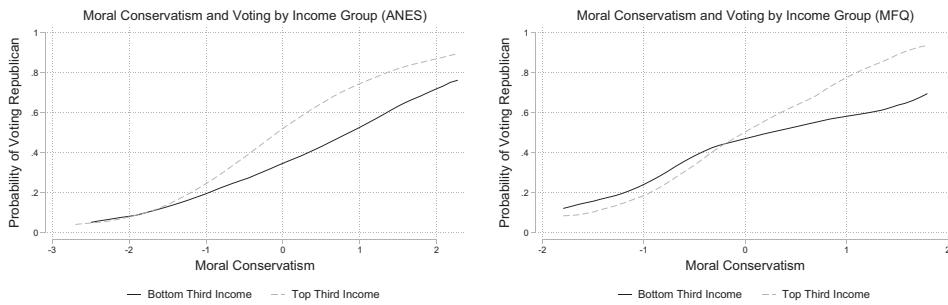


FIGURE 3. The figure shows local polynomial plots of the link between voting Republican and moral conservatism, separately for respondents in the top/bottom third of the income distribution. The left panel uses data from the ANES ( $N = 11,273$ ) and the right panel from the MFQ ( $N = 2,145$ ). Both moral conservatism indices have mean zero and standard deviation one; see [Online Appendix C](#).

First, among morally very liberal voters, the income effect on voting Republican can be zero or even negative. Second, unlike in a two-dimensional model with fixed utility weights, in our model it is not true that every voter—no matter how morally liberal—could state a cutoff income level above which s/he would vote Republican: In our model, not every moral liberal “has a price” because even a very high income need not push in a conservative direction if it increases the weight placed on values sufficiently strongly.

The second part of Proposition 2 contains a somewhat stronger claim, namely, that the marginal effect of income is increasing in the voter’s moral conservatism,  $\mu$ . This is not true in general because there are two effects. The first one, corresponding to the intuition discussed above, has a definitive sign. The second one is related to the fact that an increase in  $\mu$  changes  $\Delta U$  and thus  $\psi(\Delta U)$ , the value of the density of  $\varepsilon$  at  $\Delta U$ . If the distribution of  $\varepsilon$  is sufficiently close to a uniform distribution ( $\psi' \approx 0$ ), then the size of the second effect is small, and the first effect dominates. In this case, Proposition 2 states that voting is more responsive to variation in income among moral conservatives than among moral liberals.<sup>12</sup> As the proof in [Online Appendix B](#) highlights, this prediction is again driven by the assumption of income-dependent utility weights,  $w'(y) > 0$ . A two-dimensional setup with constant weights does not generate this prediction.

*Empirical evidence.* The left panel of Figure 3 shows the relationship between voting Republican in 1988–2020 and the ANES moral conservatism index, separately for respondents in the top and bottom third in the income distribution. The right panel shows the same pattern for 2016, except that the horizontal axis represents the MFQ moral conservatism index. In both panels, we see that the link between values and voting is considerably stronger among the rich. For example, in the MFQ data, in

12. We discuss the case where  $\psi$  is not approximately constant after the proof of Proposition 2 in [Online Appendix B](#).

the top third income group, the probability of voting Republican increases by 60 percentage points going from moral conservatism of less than ( $-1$ ) to conservatism greater than  $1$ , while the corresponding increase in the bottom third income group is only 46 percentage points.<sup>13</sup>

These results jibe with a literature in political science. Bartels (2006) documents that social issue positions are more strongly correlated with voting behavior among the rich. Similarly, McCarty, Poole, and Rosenthal (2016) and Gelman et al. (2007) both report that the income gradient is particularly steep among evangelicals and religious people more generally.

Relating this figure back to our model, the first part of Proposition 2 clarifies that our model is consistent with the stylized fact (visible in Figure 3) that, within the set of morally relatively liberal people, the rich are no more likely to vote Republican than the poor are. Indeed, in the MFQ data, the correlation between income and voting Republican is even significantly *negative* when we restrict attention to the 25% most morally liberal voters in the data ( $p < 0.05$ ). In a two-dimensional voting model with fixed utility weights for material concerns and non-material issues, the probability of voting Republican would always strictly increase in income. Our model with income-dependent utility weights, on the other hand, is consistent with the zero (or even negative) correlation within the set of morally very liberal voters.

To evaluate the statistical significance of the interaction effect between moral conservatism and income that is at the heart of Proposition 2, we regress a binary voting indicator on household income, separately for top- and bottom-tercile moral conservatism. As shown in Figure 4, in both the ANES and the MFQ, the effect of a one standard deviation increase in log income on the probability of voting Republican is about 8–10 percentage points larger among moral conservatives; see Online Appendix Tables D.3 and D.4 for regression tables. Thus, the evidence shows that—as predicted by our model—the link between values and voting is much stronger among the rich, or, equivalently, that the link between voting and income is stronger among moral conservatives.<sup>14</sup>

### 4.3. Voting against One's Material Interests

The insight that values are more relevant for the voting behavior of the rich affords interesting insights into the behavior of “off-diagonal” voters in income/social conservatism space: those  $(y, \mu)$  types who are either rich and morally liberal or poor and morally conservative. The moral and financial motivations of these voters align with each party on one dimension, such that they are potential swing voters in elections.

13. A potential concern is that the results in Figure 3 reflect higher measurement error and, hence, greater attenuation among the poor. However, as we show in Online Appendix Figure D.1, we do not see a similar pattern for the link between economic policy views and voting. This suggests that the main mechanism is not more noise for poorer people.

14. Online Appendix Table E.5 shows that this result holds for all of the individual moral questions in the ANES survey.

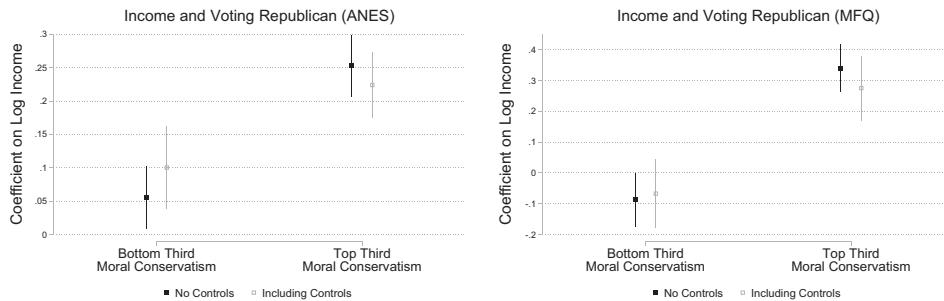


FIGURE 4. Log income coefficient in a voting regression by level of moral conservatism. The left panel uses data from the ANES ( $N = 11,273$ ) and the right panel from the MFQ ( $N = 2,145$ ). In a Wald test of the equality of coefficients,  $p < 0.01$  in both datasets. All variables are standardized to have mean zero and standard deviation one. Controls include gender, age, age squared, and education. Regression results are reported in [Online Appendix Tables D.3 and D.4](#).

Moreover, these groups have received a large amount of attention in the popular discussion, such as in the bestseller “What’s the matter with Kansas?” (Frank 2007). Interestingly, while Frank accuses the rich moral liberals (RMLs) in the Democratic Party of being responsible for Democrats losing the heartland working class, he does not discuss that they themselves often vote against their (economic) interests, too. In fact, the existing literature has rarely compared how much poor moral conservatives (PMCs) actually vote Republican *relative to* how much RMLs vote Democratic.

Proposition 3 compares the voting behavior of an RML and a PMC who are, in a sense, mirror images of each other: They have moral ideal points that are symmetric around zero, and their materially optimal economic policies are also symmetric around zero. Thus, RML is better off economically with the Republican platform, but prefers the Democrats values-wise, and vice versa for PMC.

Proposition 3 shows that RML is actually more likely to vote against their material interests than PMC. Intuitively, this again reflects the assumption of income-dependent utility weights. Because of the income effect, it is more important for RML to align with the Democrats values-wise than it is for PMC to align with the Republicans.

**PROPOSITION 3.** *Suppose that  $h$  is a linear function (i.e.,  $h(\mu) = \ell\mu$  for some  $\ell > 0$ ) and that the function  $\psi$  is symmetric around 0 (i.e., no party has an expected valence advantage).*

*Consider two voters, RML and PMC, such that  $-\mu_{PMC} = \mu_{RML}$  and  $r(y_{RML} - \bar{y}) = -r(y_{PMC} - \bar{y})$ . Then,  $Pr(D|RML) > Pr(R|PMC)$ .*

Since we cannot observe individual *probabilities* of voting Republican, an empirical test of Proposition 3 requires that we aggregate across voters. If, in such an aggregation, every voter in the set of “rich moral liberals” is perfectly matched with a mirror “poor moral conservative” type as defined in Proposition 3, then the

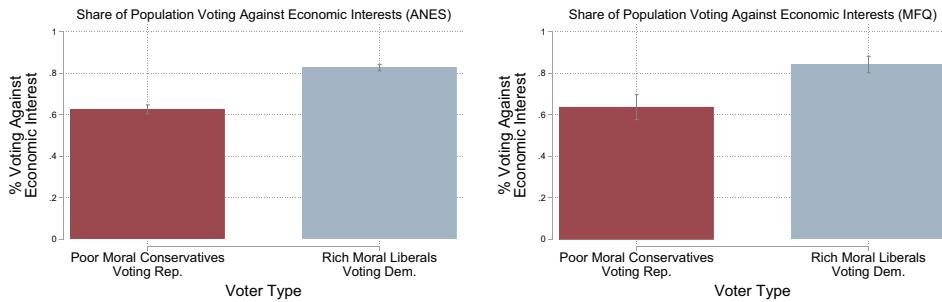


FIGURE 5. Sample mean and 95% confidence interval of the share of PMCs who vote Republican and RMLs who vote Democrat. Here, we define “rich” and “poor” as the top/bottom third of household income and “morally conservative/liberal” as the top/bottom third of the moral conservatism indices. The top panel uses ANES data ( $N = 4,274$ ) and the bottom panel MFQ data ( $N = 608$ ). In  $t$ -tests,  $p < 0.001$  in both datasets.

percentage of Democratic votes in the former set should be larger than the percentage of Republican votes in the latter set (assuming sufficiently many voters in each set). Moreover, by continuity, the result holds in such an aggregation even if the two empirical groups are slightly unbalanced (i.e., do not consist of voters that are *exact* mirror images of each other).

*Empirical evidence.* Given that this new prediction is in stark contrast with many popular (qualitative) narratives, we again test it using ANES and MFQ data. Figure 5 plots the fraction of RMLs and PMCs who vote “against their material interests”. Here, we define “rich” and “poor” as the top/bottom third of household income, and “morally conservative” and “morally liberal” as the top/bottom third of the moral conservatism indices. Figure 5 shows that RMLs are about 35% more likely to vote Democrat than PMCs are to vote Republican. These comparisons are statistically significant in both datasets.<sup>15</sup> Again, we highlight that this new stylized fact is not predicted by two-dimensional voting models with constant weights, but it naturally arises in our setup with income-dependent weights.<sup>16</sup>

#### 4.4. Within-Party Supporter Heterogeneity

The higher emphasis on values among the rich also has direct implications for within-party constituent heterogeneity in income and values. Our main insight is that the set

15. A potential concern is that these results are spurious and driven by an overall higher vote share for Democrats than Republicans in the ANES and MFQ datasets. To correct for such a potential confound, [Online Appendix Figure D.2](#) shows the demeaned vote shares for each group by subtracting the overall Republican and Democratic vote shares. RMLs are still significantly more likely to vote against their economic interests relative to PMCs.

16. [Online Appendix Figure E.4](#) shows that this gap between PMCs and RMLs has become more pronounced over time, largely driven by the RMLs increasingly voting Democrat. This is consistent with the income of RMLs increasing more than the incomes of PMCs over time.

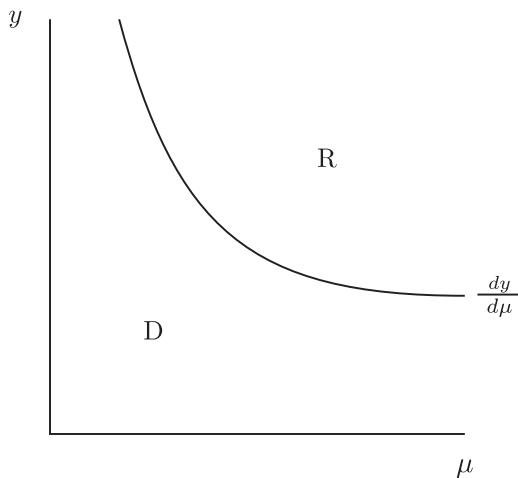


FIGURE 6. A voting isoprobability curve in  $(\mu, y)$  space, where larger values of  $\mu$  and  $y$  correspond to more conservative values and higher income, respectively. Voters with preferences in the upper contour set of the curve vote Republican, and those with preferences in the lower contour set vote Democrat (in expectation).

of Democratic voters is more fragmented than the set of Republican ones. To show this analytically, we first introduce the concept of an isoprobability curve.

**DEFINITION 1.** An isoprobability curve is given by the set of  $(y, \mu)$  for which the probability of voting Republican is constant, that is, for which  $\Delta U$  is constant.

A special case of an isoprobability curve is the level set for which the probability of voting Republican is 1/2. All voters who are located to the right of this curve are more likely to vote  $R$  rather than  $D$ , and vice versa.

Proposition 4 analyzes properties of the isoprobability curves. Isoprobability curves are usually downward-sloping. We show that this holds also in our model for voters who are not too morally liberal, and also applies for all voters if the weight function is of the logistic form (i.e.,  $w(y) = c + \rho(y - k)/1 + \rho(y - k)$ , with  $\rho$  sufficiently small).

Furthermore, if the weight function is either linear or logistic, then isoprobability curves are always strictly convex, as illustrated in Figure 6. Convexity establishes a sense in which the set of  $D$  voters is more heterogeneous than the set of  $R$  voters: both some very poor and some very rich people vote Democratic. Intuitively, the reason for this asymmetry is that RMLs are more willing to vote against their material interests than PMCs. Thus, in our model, the  $D$  party is a “big tent” that attracts both the very poor and some of the very rich.

## PROPOSITION 4.

1. The slope of the isoprobability curve is given by

$$\begin{aligned} \frac{dy}{d\mu} &= -\frac{w(y)[\lambda h'(\mu)\Delta x_e + \Delta x_s]}{[1-w(y)]\Delta x_e r'(y-\bar{y}) + w'(y)[\Delta x_e(\lambda h(\mu) - r(y-\bar{y})) + \Delta x_s\mu]} \\ &= -\frac{\frac{w(y)}{1-w(y)}\left[\lambda h'(\mu) + \frac{\Delta x_s}{\Delta x_e}\right]}{r'(y-\bar{y}) + \frac{d}{dy}\left(\frac{w(y)}{1-w(y)}\right)[1-w(y)]\left[\lambda h(\mu) - r(y-\bar{y}) + \frac{\Delta x_s}{\Delta x_e}\mu\right]}. \end{aligned} \quad (10)$$

A sufficient condition for (10) to be negative at  $(\mu, y)$  for any weight function is that  $\lambda h(\mu) - r(y-\bar{y}) + (x_s^R - x_s^D)/(x_e^R - x_e^D)\mu \geq 0$  (i.e., isoprobability curves are downward-sloping for all individuals who are not too liberal).

An alternative condition for (10) to be negative for all voters is that  $w(y) = (c + \rho(y-k))/(1 + \rho(y-k))$ , with  $c \in (0, 1)$  and  $\rho$  sufficiently small.

2. Suppose that  $r(\cdot)$  and  $h(\cdot)$  are linear functions. If the weight function satisfies  $d/dy(w'(y)/w(y)) \leq 0$  and  $w''(y)(1-w(y)) + 2[w'(y)]^2 \geq 0$  for all  $y$ , then all downward-sloping isoprobability curves are convex.

In particular, a linear weight function, and  $w(y) = c + \rho(y-k)/1 + \rho(y-k)$  with  $\rho > 0$  satisfy these conditions.

*Empirical evidence.* To test the model prediction that the voting-isoprobability curve is convex, we compute the predicted probability of voting Republican for voters with different levels of income and conservatism. We implement probit regressions—reported in [Online Appendix Tables D.3](#) and [D.4](#)—of a binary voting indicator on (i) income, (ii) moral conservatism, and (iii) their interaction. This specification is the simplest possible specification that allows income and values to interact and, hence, does not force estimated isoprobability curves to be linear (which is what one would do if only income and moral conservatism were allowed to linearly enter the regression). Based on the resulting regression coefficients, we compute those  $(y, \mu)$  combinations that deliver identical voting probabilities. Figure 7 presents the results by plotting  $(y, \mu)$  combinations for which the predicted probability of voting Republican is 50% (black line) or 75% (red line). In both datasets, the estimated isoprobability curves are convex, as predicted.

Intuitively, the convexity of isoprobability curves means that voters may support the Republican party if they are *both* relatively affluent and morally conservative, while the Democratic supporters are *either* poor *or* morally liberal. In other words, Republican voters are relatively homogeneous, while Democrats are more heterogeneous (relative to what we would expect if isoprobability curves were linear).<sup>17</sup>

17. Of course, the degree of intra-party heterogeneity does not only depend on the shape of the isoprobability curves, but also on the size of the different parties (we would expect a party with more

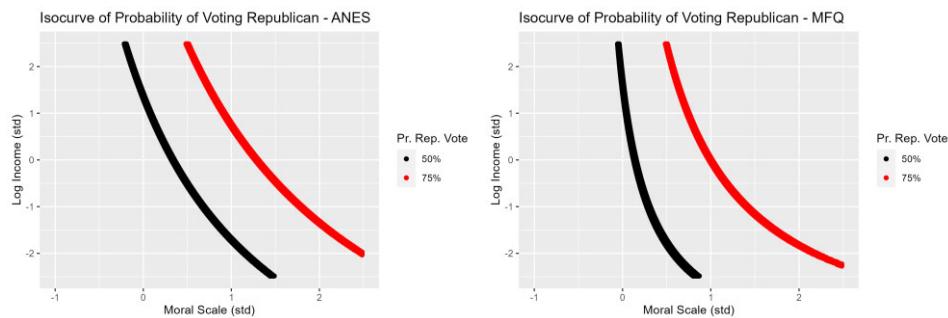


FIGURE 7. Isoprobability curves of voters with a 50% and 75% probability of voting Republican. The left panel uses ANES data, and the right panel uses MFQ data. The isoprobability curve is constructed by computing the fitted value of the probability of voting Republican for each  $(\mu, y)$  pair using the estimated regression coefficients from Tables D.3 and D.4 in the Online Appendix, and then plotting the set of voters who have an equal probability of voting Republican.

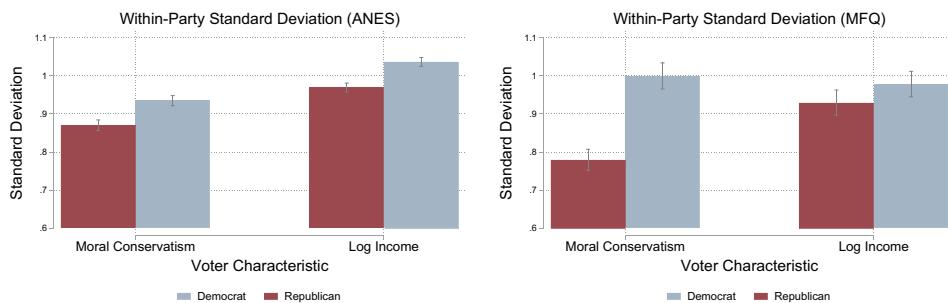


FIGURE 8. Sample standard deviation and 95% confidence interval of moral conservatism and log income, split by whether a respondent voted Republican or Democrat. The top panel uses ANES data ( $N = 13,175$ ), and the bottom panel uses MFQ data ( $N = 3,471$ ). In  $F$ -tests of the equality of standard deviations across groups, the  $p$ -value is  $p < 0.01$  for moral conservatism and log income in the ANES, as well as for moral conservatism in the MFQ. For log income in the MFQ, it is  $p = 0.08$ .

As a further test of the idea of greater within-party heterogeneity on the left, we compute the standard deviation of income and moral conservatism within the sets of ANES and MFQ respondents who voted Republican and Democrat, respectively. Figure 8 summarizes the results. All four comparisons point in the hypothesized direction, as Democratic voters are more heterogeneous in terms of their values and income across datasets. All of these comparisons are statistically significant.

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supporters to be more heterogeneous than one with fewer) and on the shape of the joint distribution of voter types (e.g., if voter types below the isoprobability curve are heavily clustered, while those above it are more spread out, then the Republican party could be more heterogeneous).

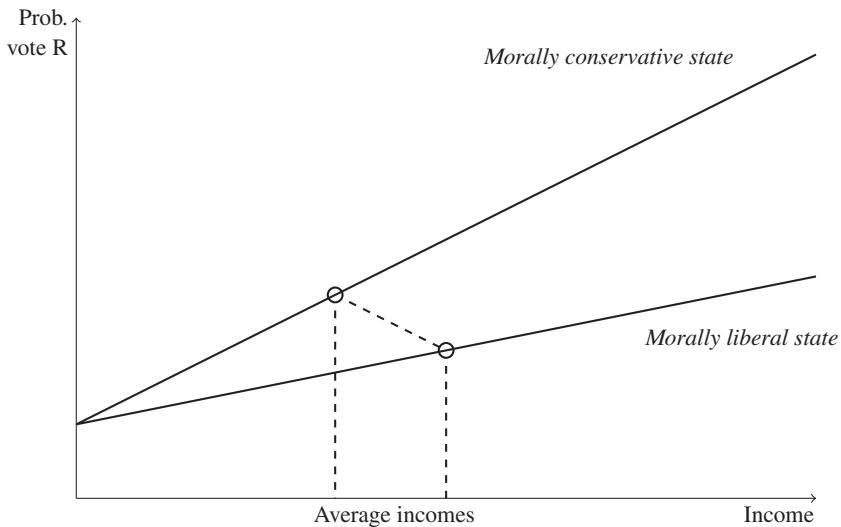


FIGURE 9. Illustration of across-individual and across-state relationship between income and voting. The solid line illustrates the individual-level link between income and the probability of voting R. The dots show average incomes in each of the two states.

#### 4.5. An Income-Voting Puzzle

A widely known stylized fact is that the correlation between income and voting switches going from the individual to the district or state level. When looking at individual voting behavior, income and voting Republican are positively correlated. At the district or state level, on the other hand, average income and Republican vote shares are negatively correlated. This pattern was first popularized by Gelman et al. (2007) and Gelman (2009). Interestingly, they informally propose that these patterns could be driven by the logic of values as luxury goods. Figure 9 illustrates their argument. Suppose there are two states, one that is morally relatively liberal and one that is morally relatively conservative. Further assume that average income in the morally conservative state is lower.

Proposition 2 showed that, in our model, the voting-income gradient will be larger when voters are morally more conservative. As shown in Figure 9, this differential slope can produce that average income and Republican vote shares are negatively correlated (if the morally conservative state is, on average, poorer). These patterns are not just a hypothetical possibility: As proposed in Gelman et al. (2007), we confirm in [Online Appendix Figure D.3](#) that the voting-income gradient in the ANES is indeed significantly steeper in morally more conservative states.

Proposition 5 formally clarifies under which conditions our model can generate these patterns, that is, that the marginal income effect is larger in states that have, on average, more morally conservative voters.

**PROPOSITION 5.** Suppose that  $\psi$  is uniform, and  $r(\cdot)$  and  $w(\cdot)$  are linear functions. Consider two subsets of voters,  $S_1$  and  $S_2$ , and let the type distribution in  $S_i$  be given by the density  $f_i(\mu)g_i(y)$ .

Then, the following are sufficient conditions for the average marginal effect of income on the probability of voting Republican to be larger in set  $S_1$  than in  $S_2$ :

1. Density  $f_1$  first-order dominates density  $f_2$ , while  $g_1 = g_2$ .
2. Density  $g_2$  first-order dominates density  $g_1$ , while  $f_1 = f_2$ .

The intuition for the first condition is straightforward from Proposition 2: Set  $S_1$  contains a more conservative distribution of voters, and thus comprises voters whose probability of voting Republican reacts more strongly to increased income.

As for the second condition in Proposition 5, the assumptions on functional forms are sufficient to guarantee that the probability of voting Republican is concave in income. In combination, the two parts of Proposition 5 show that two effects point in the same direction: If a state is poorer and morally more conservative, then both of these effects make the voting-income gradient steeper, hence producing the pattern illustrated in Figure 9.

## 5. Extension: Secular Change

So far, we have analyzed the implications of political preferences where moral issues have luxury goods characteristics, holding fixed the parties' positions. We now present a tentative extension to changes over time, both in terms of voter preferences (where long-term economic growth leads to voters weighing values more strongly) and in terms of the parties' policy choices that are influenced by these changing preferences. Our objective for this section is, in particular, to speak to the most widely discussed voter realignments that have taken place over the last 50 years, namely, those of poor and morally conservative voters (such as the rural working class) from Democrats to Republicans (Frank 2007; Hacker and Pierson 2020) and those of rich and morally liberal voters (the “educational elite”) from Republicans to Democrats (Gethin, Martínez-Toledano, and Piketty 2021).

For this analysis, it is analytically convenient to focus on a setting in which the incomes of all voters are scaled multiplicatively by  $\beta > 1$  between an “early” period and a “late” period, so that each voter's relative income remains constant. Since the income variable in the model,  $y$ , is the logarithm of income, this means that each  $y_j$  grows by  $\ln(\beta)$ , and so does  $\bar{y}$ . Therefore, each voter's materially optimal economic policy remains constant, but his weight on non-material issues increases.

The following Proposition 6 shows that, as incomes increase over time, PMCs become more likely to vote Republican, and RMLs become more likely to vote for Democrats when party positions are fixed.

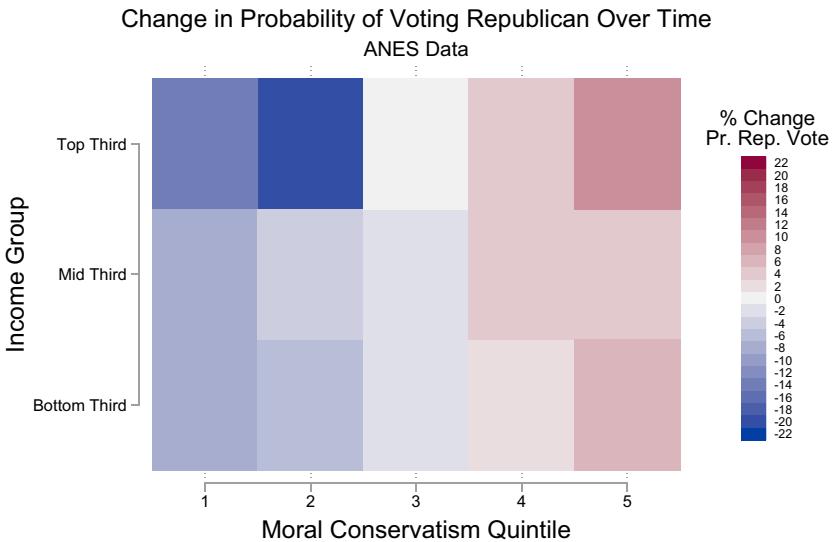


FIGURE 10. Percentage point change in Republican vote share over time as a function of fundamentals ( $y, \mu$ ). The figure shows the change in Republican vote share in the ANES, from the time period 1988–2000 to 2004–2020.

**PROPOSITION 6.** *Assume that each voter's income increases by a factor of  $\beta - 1$  (i.e., a voter's  $y$  increases by  $\ln(\beta)$ ), while party positions remain fixed. Then a voter's probability of voting Republican increases if and only if*

$$\lambda h(\mu) + \frac{(x_s^R - x_s^D)}{(x_e^R - x_e^D)}\mu - [r(y - \bar{y})] > 0. \quad (11)$$

To interpret this proposition, define a moral conservative (liberal) as a voter for whom  $\lambda h(\mu) + \mu(x_s^R - x_s^D)/(x_e^R - x_e^D) > (<)0$ . Likewise, define a voter as rich (poor) if  $r(y - \bar{y}) > (<)0$ .

For morally conservative and poor voters, the first term in (11) is positive, and the second (deducted) term is negative, so that the left-hand side of (11) is unambiguously positive. Thus, PMCs become more likely to vote Republican. Analogously, for RMLs, both effects go in the opposite direction, so they become more likely to vote for Democrats. These effects are intuitive: As voters weigh their values more highly after everyone's income increases, a values-based realignment takes place.

In contrast, and somewhat surprisingly, for the two “core supporter” groups (i.e., poor moral liberals among the Democrats and rich moral conservatives among Republicans), the effect of a uniform income increase on voting is ambiguous, as the two partial effects go in opposite directions. Intuitively, core supporters agree with their party both on moral and on economic grounds. As moral issues rise in importance for voters, economic ones decrease, and so the net effect is ambiguous.

Figure 10 compares these predictions with the data by showing changes in vote shares from the time period 1988–2000 to 2004–2020, as a function of voter

characteristics (income and values).<sup>18</sup> In the data, moral conservatism becomes substantially more predictive of voting over time, such that PMCs swing Republican and RMLs Democrat. The figure also serves as an important reminder that—in contrast to some popular narratives—it is not generically true that poor voters have trended Republican. Instead, only those poor voters who are socially conservative have done so—a pattern that is consistent with Proposition 6.

*Changes in party positions.* For conceptual clarity, Proposition 6 keeps party positions fixed. When the set of party supporters changes, it is plausible that this, in turn, changes the equilibrium party positions. For instance, a general increase in voters' emphasis on moral issues, in conjunction with the result of Proposition 6 that RMLs leave the Republican party, may lead to a morally conservative shift for the Republican party, and a movement by the Democratic party in the opposite direction (because both parties now need to appease a changed configuration of supporters, respectively).

However, to fully endogenize party positions requires a model of how they are determined based on voters' preferences, and this is beyond the scope of the present paper.<sup>19</sup> Instead, the following Proposition 7 helps us to think about how changes in party positions—however achieved—affect voter behavior.

We consider a symmetric change in party positions that leaves the midpoint between the two parties' positions unchanged; that is, when Democrats move to the left (on economic and/or social issues), then Republicans move to the right by the same amount.<sup>20</sup> The first part of Proposition 7 deals with a balanced polarization on both economic and social issues and shows that this increases the probability that any given type votes for his policy-preferred party ("sorting"). In contrast, the second part deals with polarization on social issues, which leads to a systematic realignment of which voter types prefer which party, on average. Any mixed change in polarization can be decomposed into the two cases covered by the proposition.<sup>21</sup>

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18. Much prior work has studied realignment. Krasa and Polborn (2014c) find that economically conservative and socially liberal voters tended to switch from voting Republican to Democrat, while economically liberal and socially conservative voters tended to switch from voting Democrat to voting Republican. Relatedly, Gingrich and Häusermann (2015) and Gethin, Martínez-Toledano, and Piketty (2021) provide evidence that the educational elite (which researchers often think of as relatively rich and morally liberal) mostly voted Republican in the 1950s–1960s, yet increasingly voted Democrat over time.

19. Multidimensional models of competition between office-motivated candidates are notoriously problematic with respect to equilibrium existence (Plott 1967; McKelvey 1976). In a previous version of this paper, Enke, Polborn, and Wu (2022a), we sketch a model that is instead based on the methodology of Polborn and Snyder (2017), who posit party positions as aggregating the ideal positions of the set of supporters of each party, respectively. In this approach, party positions are endogenously differentiated, intuitively because party positions are set to make one's own constituents happy.

20. The reason for this assumption is that asymmetric movements—say, Republicans becoming much more extreme than Democrats—will clearly benefit one side, but the reason is less "polarization", but rather that one party takes up less competitive positions.

21. If  $(x_{s,1}^R - x_{s,1}^D)/(x_{s,0}^R - x_{s,0}^D) = \ell > k$ , then we can think of the total change as the sum of two steps: First, pure social polarization by factor  $\ell/k$  that leads to moral liberals/ conservatives being more likely to vote

## PROPOSITION 7.

1. If both economic and social party platforms polarize symmetrically over time, then voter sorting increases. Formally, if

$$\frac{x_{s,1}^R - x_{s,1}^D}{x_{s,0}^R - x_{s,0}^D} = \frac{x_{e,1}^R - x_{e,1}^D}{x_{e,0}^R - x_{e,0}^D} = k > 1,$$

then  $\Psi(U_1^R - U_1^D) \geq \Psi(U_0^R - U_0^D)$  if and only if  $\Psi(U_0^R - U_0^D) \geq 1/2$ .

2. If social party platforms polarize symmetrically over time and economic platforms are unchanged, a realignment based on values takes place, meaning that moral conservatives (liberals) become more (less) likely to vote R. Formally, if

$$\frac{x_{s,1}^R - x_{s,1}^D}{x_{s,0}^R - x_{s,0}^D} > 1 \quad \wedge \quad x_{e,1}^R = x_{e,0}^R \quad \wedge \quad x_{e,1}^D = x_{e,0}^D,$$

then  $\Psi(U_1^R - U_1^D) \geq \Psi(U_0^R - U_0^D)$  if and only if  $\mu \geq 0$ .

Both claims follow from (6) in a straightforward way. Part 2 of Proposition 7 implies a form of realignment based on values. When only social polarization increases, then the utility difference changes by  $w(y)\mu\Delta x_s$ , which is positive if and only if  $\mu > 0$ . As a result, values become “more important” for voting: any fixed voter type becomes more likely to vote R if and only if he is morally conservative. Note that this occurs without any voter becoming more extreme (in terms of their values), or putting more weight on non-material issues (in terms of the weight  $w$ ). This effect is of particular relevance for those voters who are close to being indifferent, such as “off-diagonal” voters that are either poor and morally conservative or rich and morally liberal.

Both Proposition 6 and part 2 of Proposition 7 provide complementary explanations regarding the realignment of morally conservative working-class voters toward the Republican party. Why have many of these voters swung Republican *even though* incomes in the United States increased more strongly for the rich than for the poor over the last generation, which should push the poor toward the Democrats?

First, Proposition 6 shows that an income increase over time can explain why RMLs swung Democratic. If, in response to these voter movements, the parties polarize on social issues, this can lead PMCs to swing Republican *even if* their relative incomes decrease. This is stated formally in the following corollary.

**COROLLARY 1.** Consider a voter of a fixed type  $\mu_j, y_j$ , and suppose that there is symmetric social polarization, as well as growth in average income from  $\bar{y}_{old}$  to  $\bar{y}_{new}$

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D/R, respectively. Second, after the first step, a proportional increase in polarization increases every type’s probability of voting for their ideologically preferred party. In such a mixed case, (i) realignment based on values takes place and (ii) core supporters become more likely to vote for their previously preferred parties, which implies stronger voter sorting.

(voter  $j$ 's income remains fixed). Then, the change in voter  $j$ 's policy utility difference is given by

$$\begin{aligned}\Delta(U^R - U^D) = & [1 - w(y_j)](x_e^R - x_e^D) \left[ r(y_j - \bar{y}_{new}) - r(y_j - \bar{y}_{old}) \right] \\ & + w(y_j)\mu \left[ x_{s,new}^R - x_{s,old}^R + x_{s,old}^D - x_{s,new}^D \right]\end{aligned}$$

*Some caveats.* While the application of our model to secular change is more speculative than the core results presented in Section 4, we believe that the main mechanism is well worth exploring in detail in future research: that RMLs may swing Democratic because rising incomes induce them to prioritize their values, and that this, in turn, induces the parties to polarize on social issues. We view this perspective as promising in part because it is consistent with work in sociology that argues that rural working-class voters feel that the Democratic Party “abandoned” them to cater to the values of coastal elites (e.g., Sherman 2009; Cramer 2016).

This said, there are clearly many forces outside our model that may affect secular change and that can provide alternative (and complementary) explanations for some of the empirical regularities. To illustrate, if globalization has diminished the scope for redistribution, then this might reduce the relative salience of economic issues in political competition, and might mechanically increase the salience of moral issues (since those issues still can be controlled by national governments). Alternatively, it is conceivable that special interest groups are easier to organize around moral issues, and that the influence of opposing extremist groups has led to increased polarization on moral issues.

## 6. Conclusion

This paper has shown that the simple idea of income-dependent utility weights—which is bolstered by a considerable body of evidence—sheds light on various puzzling stylized facts about the nature of political conflict in the United States: (i) In a survey, voters' social issue weights increase in income; (ii) the voting-income gradient strongly depends on the voters' moral conservatism; (iii) more rich moral liberals than poor moral conservatives vote against their economic interests; (iv) within-party heterogeneity is larger on the left; and (v) individual-level and state-level voting-income gradients can look very different from each other. We are not aware of previous contributions that have tied these patterns together in a single, simple model.

An open question for future research is to study the relationship between the idea of values as luxury goods and the literature on the political effects of trade shocks. On the face of it, this latter literature is sometimes interpreted as suggesting that decreases in income *increase* the salience of cultural and social issues (Frank 2007; Guriev and Papaioannou 2022), which appears to be the opposite of the luxury goods idea. Indeed, a recurring finding in the literature appears to be that trade shocks lead to a rightward shift in voting behavior (e.g., Autor et al. 2020; Colantone and Stanig 2018a,b), though the quantitative magnitude of these effects is generally pretty small

(Margalit 2019). While these results superficially may seem at odds with ours, we view them as consistent with each other for two reasons.

First, the luxury goods idea asserts that when income decreases, the *weight* voters place on social and cultural issues decreases—the literature on trade shocks, on the other hand, shows that the *values themselves* sometimes change in response to shocks. For example, Colantone and Stanig (2018b) and Bonomi, Gennaioli, and Tabellini (2021) both show that trade shocks lead people to develop more conservative attitudes, which plausibly translate into more conservative voting. According to this perspective, an increased salience of cultural topics (as it results from economic shocks) may reflect a shift in issue positions rather than in issue weights. Indeed, we find it a bit difficult to believe that after a factory worker has been laid off and is constantly worried about how to feed their family, they start placing a lower *weight* on redistribution, while we find it intuitively plausible that their *values themselves* may become more conservative.

A second mechanism that may contribute to the seeming inconsistency between our approach and the trade shock literature is that our analysis focuses on the cross-section of voters (all of our analyses include year fixed effects), while the trade shock literature also considers changes over time, such that shifts in party positions start playing a role. For instance, one possibility is that when economic shocks hit, voters place a higher weight on cultural issues not because their deep utility weights have changed, but instead because the parties polarize on cultural issues (Bonomi, Gennaioli, and Tabellini 2021), or because they make these issues more salient in the popular discussion (see Danieli et al. 2022, for a related decomposition exercise). Papers such as Colantone and Stanig (2018b) and Bonomi, Gennaioli, and Tabellini (2021) show that voting behavior shifts in a particular direction (as a function of district characteristics such as trade exposure), yet such shifts in voting behavior could also partly reflect shifts in party positions. For instance, suppose that when trade shocks hit, the parties polarize on social issues. Then, even if the utility functions of voters are unaffected by the trade shock, voting behavior will shift in systematic ways across districts. For example, if in response to a trade shock the parties polarize on social issues, socially conservative districts (that are likely more strongly exposed to trade shocks) would move right purely as a result of changes in party positions. We believe that part of the seeming inconsistency between our paper and the trade shock literature is to be careful about the effects of changes in party positions. Sorting out these mechanisms is a fascinating direction for future research.

## References

- Ansolabehere, Stephen**, Jonathan Rodden, and James M. Snyder (2006). “Purple America.” *Journal of Economic Perspectives*, 20, 97–118.
- Autor, David**, David Dorn, Gordon Hanson, and Kaveh Majlesi (2020). “Importing Political Polarization? The Electoral Consequences of Rising Trade Exposure.” *American Economic Review*, 110(10), 3139–3183.
- Bade, Sophie** (2011). “Electoral Competition with Uncertainty Averse Parties.” *Games and Economic Behavior*, 72, 12–29.

- Bartels, Larry M. (2006). "What's the Matter with What's the Matter with Kansas?" *Quarterly Journal of Political Science*, 1, 201–226.
- Besley, Timothy and Torsten Persson (2019). "The Rise of Identity Politics." LSE Documents. Available at: <https://www.lse.ac.uk/economics/Assets/Documents/personal-pages/tim-besley/working-papers/the-rise-of-identity-politics.pdf>
- Bonomi, Giampaolo, Nicola Gennaioli, and Guido Tabellini (2021). "Identity, Beliefs, and Political Conflict." *Quarterly Journal of Economics*, 136(4), 2371–2411.
- Callander, Steven and Juan Carlos Carballo (2022). "Cause and Effect in Political Polarization: A Dynamic Analysis." *Journal of Political Economy*, 130, 825–880.
- Cappelen, Alexander W., Benjamin Enke, and Bertil Tungodden (2022). "Universalism: Global Evidence." Tech. rep., National Bureau of Economic Research.
- Colantone, Italo and Piero Stanig (2018a). "Global Competition and Brexit." *American Political Science Review*, 112, 201–218.
- Colantone, Italo and Piero Stanig (2018b). "The Trade Origins of Economic Nationalism: Import Competition and Voting Behavior in Western Europe." *American Journal of Political Science*, 62, 936–953.
- Cramer, Katherine J. (2016). *The Politics of Resentment: Rural Consciousness in Wisconsin and the Rise of Scott Walker*. University of Chicago Press.
- Danieli, Oren, Noam Gidron, Shinnosuke Kikuchi, and Ro'ee Levy (2022). "Decomposing the Rise of the Populist Radical Right." Working Paper.
- Dragu, Tiberiu and Xiaochen Fan (2016). "An Agenda-Setting Theory of Electoral Competition." *The Journal of Politics*, 78, 1170–1183.
- Enke, Benjamin (2020). "Moral Values and Voting." *Journal of Political Economy*, 128(10), 3679–3729.
- Enke, Benjamin, Mattias Polborn, and Alex Wu (2022a). "Values as Luxury Goods and Political Polarization." Tech. rep., National Bureau of Economic Research.
- Enke, Benjamin, Ricardo Rodríguez-Padilla, and Florian Zimmermann (2022b). "Moral Universalism and the Structure of Ideology." *Review of Economic Studies*, 90(4), 1934–1962.
- Frank, Thomas (2007). *What's the Matter with Kansas?: How Conservatives Won the Heart of America*. Picador.
- Gelman, Andrew (2009). *Red State, Blue State, Rich State, Poor State: Why Americans Vote the Way They Do—Expanded Edition*. Princeton University Press.
- Gelman, Andrew, Boris Shor, Joseph Bafumi, and David Park (2007). "Rich State, Poor State, Red State, Blue State: What's the Matter with Connecticut?" *Quarterly Journal of Political Science*, 2, 345–367.
- Gennaioli, Nicola and Guido Tabellini (2023). "Identity Politics." Working paper.
- Gethin, Amory, Clara Martínez-Toledano, and Thomas Piketty (2021). "Brahmin Left versus Merchant Right: Changing Political Cleavages in 21 Western Democracies, 1948–2020." *Quarterly Journal of Economics*, 137(1), 1–48.
- Gingrich, Jane and Silja Häusermann (2015). "The Decline of the Working-Class Vote, the Reconfiguration of the Welfare Support Coalition and Consequences for the Welfare State." *Journal of European Social Policy*, 25, 50–75.
- Gupta, Neeraja, Luca Rigotti, and Alistair Wilson (2021). "The Experimenters' Dilemma: Inferential Preferences over Populations." arXiv:2107.05064.
- Guriev, Sergei and Elias Papaioannou (2022). "The Political Economy of Populism." *Journal of Economic Literature*, 60(3), 753–832.
- Hacker, Jacob S. and Paul Pierson (2020). *Let Them Eat Tweets: How the Right Rules in an Age of Extreme Inequality*. Liveright Publishing.
- Haidt, Jonathan (2012). *The Righteous Mind: Why Good People are Divided by Politics and Religion*. Vintage.
- Hawkins, Stephen, Daniel Yudkin, Miriam Juan-Torres, and Tim Dixon (2019). "Hidden Tribes: A Study of America's Polarized Landscape."
- Inglehart, Ronald (1997). *Modernization and Postmodernization: Cultural, Economic, and Political Change in 43 Societies*. Princeton University Press.

- Inglehart, Ronald** (2020). *Modernization and Postmodernization: Cultural, Economic, and Political Change in 43 Societies*. Princeton University Press.
- Matias Kivikangas, J.**, Belén Fernández-Castilla, Simo Järvelä, Niklas Ravaja, and Jan-Erik Lönnqvist (2021). "Moral Foundations and Political Orientation: Systematic Review and Meta-Analysis." *Psychological Bulletin*, 147, 55.
- Krasa, Stefan** and Mattias Polborn (2014a). "Policy Divergence and Voter Polarization in a Structural Model of Elections." *Journal of Law and Economics*, 57, 31–76.
- Krasa, Stefan** and Mattias Polborn (2014b). "Social Ideology and Taxes in a Differentiated Candidates Framework." *American Economic Review*, 104(1), 308–22.
- Krasa, Stefan** and Mattias K. Polborn (2014c). "Policy Divergence and Voter Polarization in a Structural Model of Elections." *Journal of Law and Economics*, 57, 31–76.
- Margalit, Yotam** (2019). "Economic Insecurity and the Causes of Populism, Reconsidered." *Journal of Economic Perspectives*, 33, 152–170.
- Maslow, Abraham Harold** (1943). "A Theory of Human Motivation." *Psychological Review*, 50, 370.
- McCarty, Nolan**, Keith T. Poole, and Howard Rosenthal (2016). *Polarized America: The Dance of Ideology and Unequal Riches*. MIT Press.
- McKelvey, Richard D.** (1976). "Intransitivities in Multidimensional Voting Models and Some Implications for Agenda Control." *Journal of Economic Theory*, 12, 472–482.
- Meltzer, Allan H.** and Scott F. Richard (1981). "A Rational Theory of the Size of Government." *Journal of Political Economy*, 89, 914–927.
- Nunnari, Salvatore** and Jan Zápal (2017). "Dynamic Elections and Ideological Polarization." *Political Analysis*, 25, 505–534.
- Pástor, Lúboš** and Pietro Veronesi (2021). "Inequality Aversion, Populism, and the Backlash against Globalization." *The Journal of Finance*, 76, 2857–2906.
- Plott, Charles R.** (1967). "A Notion of Equilibrium and Its Possibility under Majority Rule." *The American Economic Review*, 57(4), 787–806.
- Polborn, Mattias K.** and James M. Snyder (2017). "Party Polarization in Legislatures with Office-Motivated Candidates." *The Quarterly Journal of Economics*, 132, 1509–1550.
- Rodrik, Dani**, Elliot Ash, and Sharun W. Mukand (2021). "Economic Interests, Worldviews, and Identities: Theory and Evidence on Ideational Politics." HKS Faculty Research Working Paper Series.
- Schofield, Norman** (2007). "The Mean Voter Theorem: Necessary and Sufficient Conditions for Convergent Equilibrium." *The Review of Economic Studies*, 74, 965–980.
- Sherman, Jennifer** (2009). *Those Who Work, Those Who Don't: Poverty, Morality, and Family in Rural America*. University of Minnesota Press.
- Spenkuch, Jörg** and Edoardo Teso (n/a). "Weighted Political Preferences." Project in Progress.
- Tabellini, Guido** (2008). "The Scope of Cooperation: Values and Incentives." *Quarterly Journal of Economics*, 123, 905–950.

## Supplementary Data

Supplementary data are available at [JEEA](#) online.