The Weight of Issues: Cross-Pressured Voters in the United States

Since the 1980s, political parties in the United States have taken divergent platforms on both economic and social issues, which forces cross-pressured voters—those with preferences to the left on one dimension and the right on the other—to suppress one dimension of conflict when voting. Using a new approach to existing survey data and two survey experiments, we show that the introduction of a religious or moral values dimension has a large impact on the choices of such voters. Contrary to classic Marxist arguments, we find no evidence that the introduction of the social dimension generates an asymmetric partial realignment that favors the economic right. Rather, the effect is symmetric and driven by social extremists on both the right and left.

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Introduction

A central feature of contemporary U.S. politics is that while party elites and party platforms are increasingly polarized along a single ideological dimension, the mass public has continued to show limited ideological constraint (Carsey and Layman 2002, Baldassarri and Gelman 2008, Mason 2015). A large literature demonstrates that since the 1980s, the parties have supplemented their divergent positions on economic issues with a set of sharply divergent positions on issues such as abortion, women’s rights, and gay marriage (Abramowitz 1995, Adams 1997, Layman 2001). This divergence left some voters—for example anti-tax supporters of abortion rights or morally conservative supporters of a higher minimum wage—with a dilemma. Unless they changed their preferences to match their partisanship (Layman and Carsey 2006), they were forced to choose between their moral and economic preferences when deciding whether to support Democrats or Republicans.

Several decades later, this dilemma remains. Cross-pressured voters—those with issue preferences to the left of the median on one issue dimension and to the right on the other—are still quite numerous in the United States (Treier and Hillygus 2009, Baldassarri and Goldberg 2014, Krasa and Polborn 2014). In a proportional representation system, new parties would likely have emerged to represent the views of such voters, but the increasingly polarized

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1 Treier and Hillygus (2009) estimate that between 35 and 40 percent are cross-pressured, Baldassarri and Goldberg (2014) put that figure at 41 percent and Feldman and Johnston (2014) bound it between 23 and 60 percent.
American two-party system has provided such voters with only two “bundles” of policies, thus forcing them to suppress one dimension or the other.

In spite of their numbers, we know surprisingly little about how cross-pressured Americans assign relative weights to the two dimensions when deciding which to suppress, and even less about how these micro-level choices affect the macro-level battle lines between Democrats and Republicans. One possibility is that the weights are homogeneous across the entire electorate. For instance, Bartels (2006) and Ansolabehere et al (2006) claim that voters across the ideological spectrum uniformly place far greater weight on the economic dimension.

A second possibility, consistent with the finding that issue extremity and importance correlate (Petty and Krosnick 1995), is that social extremists on both the left and right assign relatively more weight to social issues than social moderates when deciding for whom to vote. A third possibility is that there is an asymmetry such that one group of cross-pressured voters—religious social conservatives according to Thomas Frank (2004) or secular social progressives according to Andrew Gelman et al (2008)—places greater relative weight on the social dimension.

Each of these perspectives leads to a strikingly different understanding of contemporary U.S. politics, and a different interpretation of the rise of politicized religion that started in the 1980s. The first view implies that platform divergence on social issues encourages a symmetric partial realignment whereby some socially progressive Republicans become Democrats and some socially conservative Democrats become Republicans. In the second view, this symmetric
Realignment is driven not by the mass of voters with moderate or inchoate preferences, but by a smaller group of individuals with relatively consistent and/or extreme social preferences.

Alternatively, Thomas Frank (2004) revives a classic Marxist argument, famously describing an asymmetric realignment in which moral conservatives are more likely to suppress their economic preferences than are moral progressives, generating a significant long-term advantage for the economic right. If this argument is correct, it could help explain why the strict two-party system in the United States facilitates lower welfare expenditures and less redistribution than European multi-party democracies, where working-class moral conservatives need not suppress their left-of-center economic preferences (Huber and Stanig 2009).

The first contribution of this paper is to situate these scattered existing arguments within a unified theoretical framework that applies more generally to issue voting in two-party systems. The analysis reveals that the electoral consequences of shifts in party positions in a two-dimensional issue space depend crucially on the relative weights placed by different types of cross-pressured voters on the two issue dimensions. Rather than zooming in on the choices of cross-pressured voters, existing studies assess these weights by regressing voting behavior on issue preferences (e.g. Bartels 2006, Ansolabehere et al 2006). This approach is highly model-dependent and sensitive to differences in measurement error across the issue scales, and cannot disentangle relative weights from changes in party platforms and perceptions of those platforms.
This paper pursues three empirical approaches to uncovering the relative weights placed by voters on economic versus moral issues. First, it briefly revisits the traditional observational survey approach, replacing restrictive OLS models with a flexible machine-learning approach. We show that as the parties’ platforms diverged on the moral values dimension in the 1980s, many cross-pressured voters—especially those with the most extreme moral values preferences—appear to have brought their moral preferences and voting behavior into alignment. We see no evidence of an asymmetry favoring either party. This analysis is broadly consistent with what Carmines and Stimson (1989) and Adams (1997) call “issue evolution.”

Second, the central empirical contribution of this paper is to present the results of survey experiments that exogenously assign candidate platforms and contrast the choices of respondents under conditions of policy-bundling—where only two candidates take positions on both dimensions of conflict—with conditions where policies are unbundled. One form of unbundling is akin to a situation in which the parties do not offer distinctive platforms on the social or religious dimension, as in the United States in the 1970s. The other form of unbundling is akin to a proportional representation system in which candidates offer a wider range of platforms in the two-dimensional policy space. Our findings demonstrate that the choices of cross-pressured voters are dramatically different under conditions of policy bundling than when policies are unbundled. Religious moral conservatives as well as secular moral leftists are willing to ignore their economic preferences when the moral issue dimension is introduced. We see no evidence of an asymmetry favoring either the economic right or left.
Finally, we supplement this analysis by simply asking respondents which issue dimension is more important to them. Those with the most extreme moral values preferences on both sides are more likely to report that moral values are more important than economic issues.

Taken together, these observational and experimental results cast doubt on the notion of realignment in which a new cleavage completely displaces the old one, and more recent claims that American electoral politics is, in spite of the bluster about culture wars, still dominated almost exclusively by economic considerations (Bartels 2006). While some voters may have resolved cognitive dissonance by bringing their economic and moral preferences into line with the bundles offered by the two parties, many have not. As argued by Adams (1997), Abromowitz (1995) and others, there are sizable groups of cross-pressured moral progressives as well as traditionalists who are willing to suppress their economic preferences in order to elect more ideologically proximate candidates on the moral values dimension. This paper argues that the consequences of party divergence on a second dimension depends on how voters assign weights. In the United States, compared to moderates, extremists on both sides of the new cleavage assign moral issues a larger relative weight.

The Effects of Policy Bundling

Let us begin by considering a scenario that captures basic features of the distribution of preferences in many countries. Voters have preferences on two distinct policy dimensions—a primary dimension rooted in conflicts over the government’s role in regulating the economy
and redistributing income, and a secondary dimension related to moral issues like women’s rights, homosexuality, and abortion—and preferences on these two issue dimensions are positively but weakly correlated (de la O and Rodden 2008).

To capture this, we have generated issue scales using multiple policy questions from the 2008 and 2012 versions of the American National Election Survey (see the appendix for details). The scales are normalized to have mean zero and a standard deviation of 1. Figure 1 displays the moral scale on the horizontal axis and the economic scale on the vertical axis. The relationship between the moral and economic scales is captured in Figure 1 with a local polynomial regression. The scales are weakly correlated (around .20). Around 58 percent of the population is not cross-pressured: they have preferences to the right or left of the median on both dimensions. Henceforth, we refer to these on-diagonal voters as “right wing” and “left wing.” The remaining 42 percent of the population has preferences either to the left of the economic median and to the right of the moral median (henceforth Christian Democrats), or to the right of the economic median but to the left of the moral median (Libertarians).
Figure 1: Simple example of two-dimensional preference distribution: ANES 2008-2012

We consider a simple model of vote choice in which political platforms are first exogenously determined by the candidates, $c_j$, and then voters simply choose the most proximate candidate in the two-dimensional Euclidean issue space. By the Pythagorean Theorem, this amounts to the following decision rule for voters:

$$\min \sqrt{(c_{je} - v_{ie})^2 + (c_{jm} - v_{im})^2}$$  \hspace{1cm} (1)

where $c_{je}$ and $c_{jm}$ are the economic and moral platforms of each candidate $j$, and $v_{ie}$ and $v_{im}$ are the economic and moral preferences of the voter $i$.

Let us first analyse a scenario in which only the economic dimension is politicized. In Panel A of Figure 2, two candidates, $c_1$ and $c_2$, set their platforms symmetrically around the median voter on the economic dimension, but they are perceived as offering identical platforms directly at the median on the moral values dimension. The non-economic dimension is not politicized, and neither party is proposing any significant change to the status quo. This is the standard description of American politics prior to the politicization of issues like abortion, religious freedom, and gay rights. It also corresponds to countries like Great Britain and the Nordic countries, where party conflict has little to do with issues like abortion and gay rights. In Figure 2A, all voters above the economic median vote for the party of the right (represented in red), and all voters below the economic median vote for the left (represented in blue), regardless of their moral views. The isoprobability frontier—where voters are indifferent between the candidate of the left and right—is simply a horizontal line at the median economic preference.
Next, let us consider what happens when the second dimension is activated. This might happen because parties react to an exogenous shock that changes the status quo, like the Roe versus Wade Supreme Court decision, or because parties, responding to groups of highly motivated activists, strategically undertake the “flanking” maneuvers described by Miller and Schofield (2003).

**Figure 2: Hypothetical candidates and voter weights**
In Panel B of Figure 2, a flanking move of this kind is portrayed: both candidates keep their economic positions the same, but \( c_1 \) moves .5 of a standard deviation to the moral right and \( c_2 \) moves symmetrically to the moral left. The improved proximity on the moral dimension causes some of the voters in each of the off-diagonals to switch to the opposite candidate. The isoprobability frontier separating the voters of the right and left parties has now shifted from horizontal to diagonal. This account of the rise of multi-dimensional competition captures the standard accounts in the literature, such as those of Miller and Schofield (2003) or Krasa and Polborn (2014), where diverging candidate platforms on the second issue dimension cause a rotation in the isoprobability frontier, conceived as a straight line.

However, it is possible that the divergence of candidate platforms on the moral issue dimension is not especially consequential if voters attach far less weight to those issues (Bartels 2006). Let us consider the term \( \alpha_i \), capturing the relative weight placed by each respondent on economic versus moral issues, which changes the voter’s decision rule as follows:

\[
\min \sqrt{(1 - \alpha_i)(c_{je} - v_{ie})^2 + \alpha_i(c_{jm} - v_{im})^2}
\]  

(2)

In this formulation, if \( \alpha_i \) is sufficiently large (small), a cross-pressured voter will choose the party that is more distant in Euclidian space because she gives greater weight to the moral (economic) dimension. If everyone has \( \alpha = 0 \), the isoprobability line would not change no matter how much the candidates diverge on the moral dimension. If everyone has \( \alpha = .5 \), the isoprobability frontier shifts as a straight line when candidates diverge on the moral values dimension. However, the indifference curve of an individual with \( \alpha_i > .5 \) becomes increasingly ellipsoidal in a vertical direction as \( \alpha_i \) gets larger and the relative importance of proximity on
the moral values dimension increases. For an individual with $\alpha_i < .5$, the indifference curve becomes increasingly ellipsoidal in a horizontal direction as she becomes relatively less willing to accept compromise on the economic dimension.

We interpret the classic Marxist story about religion, as famously applied to the American context by Thomas Frank (2004) as an assertion that it induces a positive correlation between $\alpha_i$ and $v_{im}$. In other words, more religiosity is correlated not only with increasingly right-wing preferences on the non-economic policy dimension, but also with a greater weight on that dimension—a decreasing willingness to sacrifice sacred for secular preferences.² This hypothesis is consistent with recent psychological literature demonstrating that many religious individuals have a distinctive approach to morality, favoring a non-consequentialist logic whereby there is a class of sacred moral values that should never be sacrificed in favor of secular goods like monetary gain (Piazza and Sousa 2014; Tetlock 2003).

Let us now examine a situation in which the candidates occupy the same positions as in Figure 2B, but now the voters are weighting the policy distances by $\alpha_i$ that is perfectly correlated with $v_{im}$. In Figure 2C, we see that this has a dramatic effect. Because they place larger weight on moral values, many Christian Democrats now prefer $c_1$ which is closer on the moral values dimension. Because they place greater weight on economics, the vast majority of Libertarians also now prefer the party of the right.

² Note that this version of the Marxist argument is distinctive from that of Roemer (1998), where policy-bundling generates an asymmetric push against the preferences of the economic left not because of asymmetric weights, but because of a specific feature of the joint distribution of preferences on the two dimensions.
In this scenario the isoprobability frontier is no longer a straight line, but a curve that paints the leftist party into a corner. This is a troubling scenario for the party of the left: political competition is shifted to the economic right of where it would be in the absence of candidate divergence on the second dimension or the absence of a correlated $\alpha_i$. Of course the same phenomenon would plague the party of the right if $\alpha_i$ were negatively correlated with preferences on the moral dimension, such that secular voters would disproportionately abandon the party of the right upon introducing the moral values dimension (Gelman et al 2008: 88-93).

A third possibility is that $\alpha_i$ displays a U-shaped relationship with moral values preferences, such that it takes on low values among moral moderates, but increases symmetrically as voters become more extreme. This possibility is consistent with the finding that people who hold extreme opinions on an issue are also much more likely to consider these opinions as personally important (Ajzen 2001; Petty and Krosnick 1995). If extremely religious people place higher weight on the moral values dimension because it touches on deeply held moral principles that cannot easily be subjected to trade-offs, perhaps the same is true for extremists on the moral left who view abortion, gender equality, and gay marriage as fundamental rights. Consistent with this view, strong Republicans and strong Democrats are equally likely to report in surveys that their views on abortion or same-sex marriage reflect deeply held moral convictions (Ryan 2014). This u-shaped relationship is also built into the assumptions of the two-dimensional models of Schofield. In Schofield (2008), the activists
pushing the parties to adopt divergent policy platforms on the social dimension are social extremists with ellipsoidal indifference curves.$^3$

In Panel D of Figure 2, we consider a case in which the relationship between $\alpha$ and moral preferences has a parabolic shape, such that moral extremists of both the left and right place greater relative weight on the moral dimension and moderates give it a weight approaching zero. The isoprobability frontier takes an S shape, with the party of the right gaining ground especially among the most morally conservative Christian Democrats, and the party of the left gaining ground especially among the most morally progressive Libertarians.

**Observational research in the United States**

There is little disagreement that the platforms of the two major American parties have diverged significantly since the 1980s, as depicted in the examples above. But there is little agreement about the electoral consequences of this shift. A common empirical approach is to select clusters of items to include in issue-specific scales, and examine whether a multi-dimensional structure is helpful in explaining voting patterns. Several papers apply this approach and find that the correlation between moral and economic preferences is relatively low, and examine whether the divergence of party platforms on the moral dimension has led to a shift in the ideological content of the battle line between Democrats and Republicans.

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$^3$ Of course, a similar argument could be made about the existence of a u-shaped relationship between alpha and economic preferences. We assess this empirically in the supporting information. The results suggest that economic moderates and extremists place a similar importance on both issue dimensions.

With the exception of Baldassarri and Goldberg (2014), these papers conceive of the isoprobability frontier as a straight line, and do not adopt flexible modeling strategies that might unearth the possible kinks in the frontier described above. Instead of relying on regression analysis, we use a support vector machine (SVM), a global classification model that generates a non-overlapping partition of the two-dimensional space according to presidential vote choice based on maximum marginal linear discriminants. That is, the SVM classifier chooses the hyperplane with the maximum margin between Democrats and Republicans. The resulting partition line between the predominantly Democratic and Republican surfaces is our estimate of the isoprobability lines.

We apply the SVM classifiers to two different datasets: the American National Election Studies (ANES) and the General Social Survey (GSS). For the ANES we are able to generate consistent issue scales between 1984 and 2012, while for the GSS we go back to 1976. The supporting information discusses the strength and weaknesses of each dataset for our purposes. In both dataset, we create scales of economic and moral issues. The items tap into the core substantive content of the economic and moral dimensions as defined in previous

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4 There is also a countervailing literature using techniques such as item-response-theory (IRT) models to a number of binary policy-related survey responses. Some recent papers calculate the percent of responses correctly predicted by the first dimension, and then conclude that the data are “one dimensional” if this success rate does not improve a great deal with the addition of the second dimension (Jessee 2009, Tausanovitch and Warshaw 2013). However, Ahler and Broockman (2014) show that such techniques, especially when applied to binary survey responses, can easily misclassify cross-pressured voters as “moderates” on a single dimension.
studies (Baldassarri and Goldberg 2014; Feldman and Johnston 2014; Treier and Hillygus 2009). The items must also have been asked in most of the waves and exhibit at least moderate correlations with the other items in the scales. The supporting information provides details about the questions, the measurement models, and the properties of the scales. It also describes the main differences in the socio-demographic and political profiles of respondents in the four quadrants.

We expect that the isoprobability line is horizontal in the early period when moral issues were less divisive and that it shifts in later periods. Besides the overall shift, we are interested in specific changes in the shape of the isoprobability line.
Figure 3: Isoprobability lines in the American National Election Studies 1980-2012
Figure 4: Isoprobability lines in the General Social Survey 1976-2008

Figures 3 and 4 display the evolution of the shape of the isoprobability lines over time in the ANES and the GSS respectively. In both datasets, we observe a clear shift from a more horizontal to a diagonal isoprobability line over time. The shift started in the 1980s, during the period that is widely acknowledged to have seen the rise in importance of moral issues. We do not measure the exact location of party platforms and the shift could conceivably be attributed to other changes that occurred during the period. Still, the pattern is consistent with the claim that as positions on the moral issue dimension diverged, a sizable number of cross-pressured
respondents switched to the party with a congruent position on moral issues. This is compatible with what Adams (1997), building on Carmines and Stimson (1989), describes as a gradual “issue evolution” that stops well short of a complete realignment. There is no single, big-bang realignment, and the isoprobability line has not become vertical. Rather, it has become rather stable and diagonal, which is inconsistent with Bartels’ (2006) notion of economic dominance.

Next, we examine the precise shape of the isoprobability line during and after the rise of moral issues. The line should be c-shaped (facing downwards or upwards) if alpha is correlated with moral conservatism or liberalism, implying that either the Democrats or the Republicans disproportionately benefit from the realignment. Alternatively, the shift could lead to symmetric wins and losses of cross-pressured voters for both camps if the relative importance of moral issues is either constant across individuals, in which case we would expect a straight diagonal line, or is correlated with moral extremism, in which case we would expect an s-shape.

The results support the latter account, and disconfirm the first. In the GSS, which has a larger number of respondents and allows for more accurate observation of changes in the off-diagonals, we see clear s-shaped lines in 1984 and 1988, precisely during the critical rise of moral issues in national political debate. This finding is in line with the notion that the partial realignment of the party system was initially driven by activist with strong and consistent moral values preferences. This resonates with the panel data analysis of Carsey and Layman (2006), who find that voting behavior shifts into alignment with the parties’ abortion platforms over time among individuals who report that abortion is salient.
The observational data point to an important transformation of American electoral politics, but it is difficult to know what exactly lies behind it. Importantly, we cannot know whether the shift can be attributed to the divergence in party platforms over time, or to a change in the weights placed by voters on the social relative to the economic dimension. Previous observational studies also fail to distinguish between both possibilities. In fact, Krasa and Polborn (2014) simply use the relative predictive power of economic preferences vs. religiosity in a model of vote choice as proxies for platform divergence, assuming away the issue of weights. Bartels (2006) and Ansolabehere et al (2006), on the other hand, treat coefficients on issue scales in simple vote choice models as proxies for weights but do not consider change in party platforms. In any case, voter weights and perceptions of platform divergence both plausibly shape one another, and are mutually shaped by long-term trends like secularization and the women’s movement and shocks like the Roe versus Wade decision. In addition, multiple non-issue considerations (including valence considerations or candidate’s attractiveness) vary from election to election and may correlate with issue positions and other individual characteristics.

Candidates experiments

The remainder of this paper attempts to cut through this thicket by gaining experimental control over party platforms through the use of hypothetical candidates. Our goal is to enable causal inferences about the effect of divergence between candidates on moral issues. Generating unbundled counterfactuals and contrasting them with a scenario that
captures the contemporary U.S. party system allows us to draw inferences about voters’ weights that cannot emerge from the analysis of observational data.

**Design and procedures**

We asked respondents to vote for hypothetical candidates and exogenously created the menu of choices such that we can compare the vote choices of citizens in a policy bundling situation, in which two candidates differ on both economic and moral issues, and their choices in other situations that, by design, do not require cross-pressured citizens to engage in a trade-off between their economic and moral issue positions. Comparing vote choices in the presence or absence of policy bundling allows us to assess if introducing moral issues in a two-party system leads some cross-pressured respondents to vote for candidates who do not hold their most preferred economic platform, and if this switch is more pronounced for some voters than others.

We embedded the experiments in two online surveys fielded by SSI, a polling company, in June 2013 and July 2014. In total, 1619 respondents completed the first survey and 909 completed the second. The supporting information provides details of the studies.\(^5\)

The experiments have four treatment conditions. The first two conditions describe candidates with positions on only one dimension, allowing us to elicit the baseline support for

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\(^5\) The sample, while similar to the population in terms of socio-demographic characteristics, is more left-leaning than the population, as is usual in online surveys. The left skew was larger in the second study compared to the first study. Table A2 in the supporting information reports the distribution of key political variables such as partisan identification, ideology, or attitudes towards abortion in the two studies and the 2012 American National Election Study. The samples, especially the second, are also less religious than comparable samples, but the difference is not large.
each camp in a one-dimensional issue space. In treatment (1), the *economics only* condition for brevity, the two candidates differ only on economic issues, a situation akin to our characterization of American presidential elections prior to the Reagan era. In treatment (2), the *morals only* condition, they differ only on moral issues. In treatments (3) and (4) candidates have positions on economic and moral issues. Treatment (3), the *policy bundling* condition, describes two candidates with congruent positions on economic and moral issues. This is the only treatment that forces cross-pressured respondents to suppress their preferences on one dimension and the situation that most resembles the current political system in the United States. Treatment (4), the *unbundled* condition, frees respondents of forced choice in a two-dimensional issue space by providing four candidates occupying all quadrants. After reading the descriptions, respondents were asked to choose one of the candidates, and they did not have the option of abstaining.

We attempted to avoid projection of partisanship and non-issue considerations by emphasizing that the candidates were hypothetical, had otherwise similar positions on all major platforms and issues, and did not belong to a party (e.g. Tomz and Van Houweling 2008, 2009). Specifically, all participants were told: “We would like to know your opinion about two [four] candidates. They have similar platforms on all major political issues except for the positions we describe below. The description is general, and is not about candidates from a specific party. Which candidate do you prefer?” In this way, the design attempted to approximate our theoretical setup in which vote choice is only driven by issue positions and assumes away other factors including partisanship.
To recapitulate, in the absence of policy bundling, cross-pressured individuals should choose the closest candidate on the economic dimension. That is, Christian Democrats will prefer economically left-wing candidates and Libertarians will vote for right-wing candidates when competition is only about economic issues as well as in a four-candidate situation. We ask if policy bundling causes a sizeable number of cross-pressured respondents to vote for an economically distant candidate. We are interested in two comparisons. The first is the vote for the economically right-wing candidate in the baseline economics only situation and in the policy bundling situation. This difference addresses the question: How do voters’ choices in a two party system change following the introduction of debate on moral issues? We also compare vote choices in the policy bundling and unbundled conditions and address the counterfactual: How would the choices of American voters change after the sudden introduction of a broader menu of choices?

The economic positions of candidates describe their views on social spending and taxes, while the moral issue positions are views on abortion and same-sex marriage. Previous research suggests that these issues are the most important markers of economic and moral attitudes in the US (Treier and Hillygus 2009).

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6 Including the condition with two candidates with only positions on moral issues is necessary for design purposes, but here we focus on the analysis of the differences between the three conditions of more analytical interest. Our comparisons attempt to capture the evolution of issues in the US and they also address the counterfactual question of how voters would choose if a proportional representation allowed new parties to occupy positions in the off-diagonals. Alternative designs more explicitly dynamic could have analyzed within-person change by first first presenting candidates with only positions on economic issues and then adding moral issue positions. The advantage of experimentally assigned platforms would be lost in such a design and it would not be possible to tease out the effect of platforms from the effect of carry-over effects similar to party attachments. Hence we build a simplified setting.
We used a different description of economic positions in the two experiments, which produced large changes in the choices of respondents. In the first experiment, the wording was: “Candidate [A/B]: Wants [less/more] spending on social programs and [lower/higher] taxes for wealthy citizens.” The supporting information shows an example of how respondents visually encountered the information. A large majority of respondents (73 percent) chose the economically left-wing candidate in the economics only condition. In order to compensate for this skew, and to assess the robustness of the results to a different location of the candidates in the economic issue space, the second experiment modified the question wording, proposing tax changes for all citizens rather than only for the rich: “Candidate [A/B]: Wants [lower/higher] taxes and [less/more] spending on social programs.” This time, only 35 percent of respondents chose the economically left-wing candidate.

Having one study with the left-wing candidate perceived as centrist on economic issues and the other study with this candidate perceived at the extreme left (and corresponding changes for the right-wing candidate) is useful because it allows us to focus, in each experiment, on a different group of cross-pressured respondents: In the first experiment, the placement of the candidates situates a majority of respondents to the left of the mid-point between the candidates on economic issues, resulting in a large number of cross-pressured moral conservatives with left-wing preferences. In the second experiment, a majority of respondents are economically right of center relative to the midpoint between the candidates, generating many cross-pressured Libertarians.
In both experiments, the moral issue positions were described as follows: “Candidate [A/B]: Wants [more/fewer] restrictions on abortion and [a ban on/legal] same-sex marriage.” In the first experiment, 52 percent of respondents voted for the left-wing candidate in the *morals only* condition, but this figure rose to 62 percent in the second. The difference may be due in part to sampling variability and to the somewhat more morally liberal views of the latter sample (see supporting information). The combination of the two skews in the second experiment, along with the smaller total number of cases, leaves us with very few cross-pressured Christian Democrats and impedes making inferences about their choices.

For these reasons, the analysis of the first experiment concentrates on the reactions of Christian Democrats while the analysis of the second experiment focuses on Libertarians.

The studies also contained information about respondents’ background and political views. To situate respondents on economic issues we estimate latent scores based on three questions about redistribution, unemployment benefits, and taxes. The measure of moral issue positions is the latent score of three questions about abortion, same-sex marriage, and adoption by same-sex couples. Higher values stand for morally conservative views.

**Results**

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7 We use a standard structural equation measurement model. As discussed in the supporting information, we regard this approach as preferable to IRT given the continuous response options of our questions. The results are robust to using other methods to extract the latent scores of economic and moral conservatism, such as factor analysis, principal component analysis, and generalized structural equation models. The correlations between the measures are always larger than 0.95. The supporting information provides further details about the questions and reliabilities. The first survey contained a larger number of issue questions. The results are substantively the same when we estimate economic and moral positions using a larger number of items. We present the results based on scales constructed using the exact same items in order to maximize comparability across the two studies.
Table 1 reports the share of the vote for each candidate in each condition for the two experiments.

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<th>Table 1: Vote choice across treatment conditions</th>
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<tr>
<td>First experiment</td>
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<td><strong>Economics only</strong></td>
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<td>Economically left-wing</td>
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<td>Economically right-wing</td>
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<td><strong>Morals only</strong></td>
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<td>Morally left-wing</td>
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<td>Morally right-wing</td>
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<td><strong>Policy bundling</strong></td>
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<td>Left-wing on both dimensions</td>
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<td>Right-wing on both dimensions</td>
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<tr>
<td><strong>Unbundled</strong></td>
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<tr>
<td>Left-wing on both dimensions</td>
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<tr>
<td>Right-wing on both dimensions</td>
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<tr>
<td>Christian Democrat</td>
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<td>Libertarian</td>
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<td><strong>Number of observations</strong></td>
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We observe large changes in support for the candidates in the policy bundling condition relative to the baseline conditions in both studies. Support for the economically conservative candidate is 10 percentage points higher in the policy bundling condition than in the economics only condition in the first experiment and the difference is statistically significant (p=0.002). The 13 percentage-point difference in the second experiment is also significant (p=0.006). These findings should not be interpreted as evidence consistent with asymmetric effects because the results are shaped by ceiling effects. As described above, in the first experiment a large share of respondents chose the candidate of the economic left in the baseline condition, and the
introduction of moral issues had more room to reduce the vote for that candidate. The opposite is true in the second experiment.

Next we turn to assessing heterogeneous treatment effects and ask: Does policy bundling cause cross-pressured respondents to disregard proximity on economic issues and vote for the candidate that is closer on moral issues? We expect consistently left- and right-wing respondents to be largely unaffected by the treatment. Because they are not cross-pressured, the introduction of a congruent second dimension should not change their votes. The focus of interest is on the reactions of cross-pressured respondents.

In order to identify cross-pressured voters, we divide the sample in two groups: economically left- and right-wing voters. We use the economic position at which respondents are indifferent between the two candidates as the cut-point. For each group, we plot vote choices against the continuous measure of moral issues, which allows us to explore differences between moral moderates and extremists. If we repeat the same classification in the moral dimension, hence dividing respondents in four quadrants, we find that a substantial share of respondents (37 percent) experiences cross-pressures, which is similar to the estimates of previous research.

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8 In order to find the position in which respondents have an equal probability of voting for each candidate, we regress vote for the candidates in the economics only condition on voters’ economic issues score. We estimate that the probability of voting for each candidate equals 0.5 at the value 0.86 in the economic issue scale in the first experiment and at -0.56 in the second. These values are the cut-points. We obtain similar cut-points when using the results of the unbundled condition. The distribution of the economic issue scales in both experiments is approximately normal with a light right skew.
Note: The lines are the proportion voting for the economically left-wing candidate at different values of moral issue positions, estimated using lowess smoothers. The data are subsetted by respondents’ economic position and treatment condition. The triangles display the location of respondents on moral issues and their vote choices.

**Figure 5: Vote choice by issue orientation across treatment conditions**

Before estimating treatment effects, Figure 5 presents the raw data and plots the average proportion of respondents who vote for the economically left-wing candidate at different moral positions in the three relevant experimental conditions. Cross-pressured Christian Democrats are at the right end of the left panel. Libertarians are at the left side of the right panel.
As expected, non-cross-pressured respondents make similar choices in all conditions. Respondents with left-of-center preferences on both issues (situated at the left side of the left panel) always voted for the economically leftist candidate in very high numbers. Right-wing respondents (the right extreme of the right panel) also voted for the economically conservative candidate at similar numbers in all treatment conditions.

By contrast, both cross-pressured groups exhibit very different behavior across treatment conditions, suggesting that they are strongly responsive to moral issues. Relative to situations where they can express their economic preferences unconstrained, many cross-pressured voters behave differently under policy bundling.\(^9\)

In the first experiment, all economically liberal respondents vote at high rates for economically left-wing candidates when not forced to choose, but we observe a steep gradient in the policy bundling condition: votes for that candidate decline as respondents become more morally conservative. Christian Democrats make very different choices across conditions, implying that they care intensely about moral issues.\(^10\) We observe the opposite effect for Libertarians: many shift to the left-wing candidate in the policy bundling situation. For Libertarians, the line is somewhat curved, consistent with a strong importance of moral issues among moral extremists.

\(^9\) We do not imply that moral issues are more important than economic issues for these respondents. When comparing vote choices in the morals only and the policy bundling conditions we find that, as suggested by the results presented in Table 1, a very large number of newly cross-pressured respondents vote against their moral values and prioritize proximity on economic values.

\(^10\) This pattern holds for both Catholic and Protestant respondents, who exhibit very similar behavior across treatment conditions. We cannot break by Protestant denominations either because cell sizes become very small. We also fail to find clear differences when subsetting by racial and ethnic backgrounds, but again the number of cases is too small to make inferences. We acknowledge that specific groups within the electorate may react differently to cross-pressures, but this is not an issue we can address.
The second experiment, which allows us to focus on Libertarians, confirms that many are willing to vote against their economic preferences in a policy bundling situation, even if they overwhelmingly prefer economically right-wing candidates when not forced to choose. The large difference is visible in the left side of the bottom right panel. The only unexpected result is the lack of a treatment effect among cross-pressed Christian Democrats in the second experiment. As the plots suggest, the number of Christian Democrats is extremely sparse, and hence the pattern is driven by very few cases.

Next, we estimate treatment effects. For simplicity, we focus on only one comparison, between the *economics only* situation, which we define as the control condition, and the *policy bundling* situation, the treatment. As the raw data suggests, the pattern is the same when defining the unbundled situation as the baseline. The treatment effect is the effect of learning about the candidate’s moral views on vote choice in a two-candidate system. Assuming ignorability of treatment assignment, granted by the experimental design, allows for identification of the full marginal distributions of the control and treatment outcomes at different values of the moral issue scales (Imbens 2004). We also assume smoothness in the regression function of the outcome on the treatment, which seems to hold as observed in Figure 5.

To estimate the treatment effects at different moral positions, we fit a logistic regression model predicting vote choice with the treatment, the respondent’s moral issue
positions, modeled curvilinearly to allow flexibility, and the interaction between the two. The estimator is the average difference in vote for the left for the treated units (in the policy bundling condition) and the controls (in the economics only condition) at different values of moral issues. Again, we separate economically liberal and conservative respondents.

First experiment

![Graphs showing effects on vote choice for different economic and moral issue positions in the first experiment.]

Second experiment

![Graphs showing effects on vote choice for different economic and moral issue positions in the second experiment.]

Note: The figures present the difference in the predicted probability of voting for the economically left-wing candidate in the policy bundling condition (treatment) and the economics only condition (control) at different moral issue positions. The data are subsetted by respondents’ economic position.

**Figure 6: The effects of introducing a moral dimension of electoral competition on vote choice**

\footnote{Using higher order polynomials yields substantively identical results. As suggested from an assessment of figure 5, the results do not change when using a matching estimator of treatment effects.}
Figure 6 presents the point estimates and confidence intervals of the treatment effects. Cross-pressured Libertarians respond to the treatment by shifting to the economically left-wing candidate. This effect is clearer in the second experiment, but the difference is also large and statistically significant at high values of moral liberalism in the first experiment, where learning about moral issues causes a 40 percentage point increase in the predicted probability of voting for the left-wing candidate among Libertarians with moral issue positions one standard deviation below the mean.

For Christian Democrats, we observe a substantively large and statistically significant treatment effect in the first experiment. Learning about moral issue positions increases the probability of voting for the right-wing candidate by 30 percentage points or more among those with moral issue positions one standard deviation more conservative than the mean. In the second experiment, we do not observe a treatment effect, which may be due to the reasons discussed above. However, the point estimates are on average negative, as expected.\textsuperscript{12}

Overall, the results confirm that learning about moral issues can cause very large changes in the choices of cross-pressured respondents. The finding of large treatment effects among both groups of cross-pressured voters is inconsistent with the hypothesis of asymmetric effects. Both strongly cross-pressured Christian Democrats and Libertarians change their votes at high rates under policy bundling. Congruent with the results of the observational data, the

\textsuperscript{12} Although not statistically significant, the point estimates suggest that the treatment reduces vote for the left by about 15 percentage points at mid levels of moral conservatism (between 0.5 and 1 standard deviation above the mean).
experimental evidence suggests that the introduction of moral issues leads to a partial realignment that is largely symmetric for both camps. This effect is driven by moral extremists, for whom the spatial distance to the hypothetical candidate with the opposing moral platform is largest.

**The self-reported relative importance of issues for moral moderates and extremists**

In the second survey, we also asked respondents to directly assess the relative importance of proximity on economic and moral issues when deciding for whom to vote. The wording was: “When deciding for whom to vote, which is more important for you: the positions of candidates on economic issues (such as taxes and services) or their positions on social issues (such as abortion and gay marriage)?” Respondents were offered seven response options ranging from “Only economic issues are important” (scored as 1) to “Only social issues are important” (scored as 7). This measure is a self-report of alpha, the individual-level relative weight of economic and moral issues. Larger values imply a larger relative weight of the latter. Figure 7 presents the average responses to this question at different values of the moral issues scale.
The results line up neatly with the observational and the experimental data. The self-reports of alpha once more disconfirm the claim that moral issues are unimportant for American voters. A majority of respondents (51 percent) reports that both issues dimensions are equally important when deciding for whom to vote. When one dimension is more important, it is often the economic one: The second most frequent answer is that “economic issues are considerably more important,” chosen by 24 percent of respondents. We find neither the asymmetry predicted by the Marxist story nor its opposite. The same u-shaped pattern emerges when plotting responses against levels of religiosity. This is the analysis that most directly allows us to show that alpha is u-shaped: Moral issues are relatively more important for moral extremists.\textsuperscript{13}

\textsuperscript{13} See the supporting information for more detailed analyses.
Discussion and Conclusions

This paper asks how voters who become cross-pressured upon the politicization of moral issues make their choices. Such cross-pressured voters can be found in large numbers in our surveys as well as other larger, more representative surveys like the ANES. In both the observational and the experimental analyses there is no evidence for the conjecture that voters place very low weight on moral issues relative to economic issues. We have presented results of two survey experiments which show that the introduction of a bundled set of policy platforms related to moral values leads large numbers of cross-pressured individuals to abandon their favored candidate on the economic dimension (and vice-versa). We also examined the popular Marxist claim that moral conservatives place greater weight on the non-economic dimension of conflict than do moral liberals. In one experiment, the cut-points produced by respondents’ perceptions of the hypothetical candidates gave us an ideal scenario for examining cross-pressured moral conservatives and we found that the treatment effect was much larger among them. However, a small change to the hypothetical platform produced a much larger group of cross-pressured Libertarians, and in this experiment, the treatment effect was much larger among them.

In both studies, the largest treatment effects were found among those with the most extreme moral values preferences. This result dovetails with our analysis of self-reported relative weights, which suggested that the most extreme moral conservatives and moral progressives are more likely to report that they give greater weight to the moral values
dimension. These results resonate with Carsey and Layman’s (2006) findings that only voters who consider abortion important changed their partisanship in a panel study from the 1990s.

While the survey experiment allowed us to examine the partial realignment of electoral competition in response to the manipulation of candidate platforms, our analysis of survey data from the 1970s to the present allowed us some measure of external validity by observing the partial realignment of partisan politics as the parties’ platforms on the social dimension diverged over time. Not only did the dividing line between Democratic and Republican voters shift, but as in the survey experiment, that shift appears to have been driven, at least initially, by those with the most extreme preferences on the social dimension.

These findings are consistent with the theoretical literature on multi-dimensional politics that is summarized in Miller and Schofield (2008). However, they make for an uncomfortable fit with claims like those of Bartels (2006) that U.S. electoral politics is dominated almost exclusively by economic issues, as well as with the literature on roll call voting in Congress (e.g. Poole and Rosenthal 2007), which is widely viewed as characterized by a single dimension that is overwhelmingly about economic issues.

The economic dominance in roll-call voting in legislatures and the continued electoral pull of moral issues can be reconciled if, as several scholars have pointed out, divisive social issues fail to reach the floor of Congress for a vote because party gatekeepers keep them off the agenda when the party is not unified, precisely because they are highly salient for important parts of the party (e.g. Harbridge 2015; Snyder 1992). Our results suggest that even though moral issues may not dominate roll call voting, scholars should resist the temptation to
focus exclusively on income inequality and economic preferences when attempting to explain the growing polarization of roll call voting in Congress and state legislatures. It is entirely plausible that the polarization of roll-call voting on economic issues has increased precisely because of the presence of cross-pressured voters. Perhaps Republicans and Democrats who represent districts with moderate economic views can get away with extreme voting records on economic issues because important groups of cross-pressured voters place relatively large weight on non-economic issues.

Our results throw cold water on a popular version of the Marxist claim that the coexistence of a strict two-party system and a strong religious cleavage generates a systematic disadvantage for the party of the economic left. We find little evidence to support the claim that the relatively low level of redistribution in the United States is explained by the presence of religious moral conservatives who suppress their economic preferences.

Finally, our results help place the U.S. political system in comparative perspective by addressing the age-old question about whether the United States might have a different party system under a European-style system of proportional representation. A good deal of ideological heterogeneity is indeed suppressed by U.S. institutions. This grows increasingly clear every four years as insurgents in presidential primaries appeal to cross-pressured voters within the parties (see, e.g. Pew Research Center 2005). Groups that would give rise to partisan entry under a more proportional system are thorns in the sides of party leaders in the United States.
Bibliography


Supporting information

1. Constructing the issue scales in the American National Election Studies and the General Social Survey

To conduct the observational study, we use both the American National Election Studies (ANES) and the General Social Survey (GSS). The ANES is specifically designed to study electoral behavior and asks about presidential vote just after each election, hence facilitating more accurate recall. It has two main problems. First, we are only able to generate consistent issue scales between 1984 and 2012 because the number of identical questions declines dramatically before 1984 casting doubt on the validity of longitudinal comparisons. Second, the number of cases is more limited than in the GSS. We only use the surveys conducted in presidential years, but including the surveys conducted in midterm election years does not result in a large increase in the number of observations because only some of the waves (1990, 1994, and 1998) ask about recall of the vote in the last presidential elections. The results do not change significantly when we add those cases and, in any case, this approach does not allow us to explore in more detail the shifts in the isoprobability lines in the period of realignment before the 1990s, which is the most relevant for us.

The GSS is conducted long after each election making recall of presidential votes possibly less accurate, but this dataset has important advantages. We are able to create consistent scales for a somewhat longer period stretching between 1976 and 2008 and the number of observations is also more than twice as large as in the ANES because we pool responses to the multiple waves conducted between presidential elections. More cases allow for a more accurate examination of the shifts in the isoprobability lines in the sparsely populated areas of cross-pressed and extremist voters. Because the hypotheses differ precisely about the predicted patterns in these areas, the GSS may overall be the most appropriate dataset for this analysis.

American National Election Studies: Time Series Cumulative Data File

We use the cumulative file of the American National Election Studies (September 25, 2014 version) and select the studies conducted on Presidential Election years between 1992 and 2012. The variables included in the economic and moral issue scales are items that have been asked in most of the period (at least six out of the eight waves) and that have at least moderate correlations with the other issues.14

Items included in the economic issue scale (reliability coefficient is 0.76):
- VCF0806: Governmental or private health insurance plan (7-point scale)
- VCF0809: Guaranteed jobs and income (7-point scale)

14 For instance, we exclude questions on spending on crime and science because they show very low correlations with other items.
- VCF0839: Government Services and Spending (7-point scale)
- VCF0886: Federal Spending: Poor people (3-point scale)
- VCF0887: Federal Spending: Child care (3-point scale)
- VCF0890: Federal Spending: Public schools (3-point scale)
- VCF0894: Federal Spending: Welfare programs (3-point scale)
- VCF9049: Federal Spending: Social Security (3-point scale)

Items included in the moral issue scale (reliability coefficient is 0.76):
- VCF0834: Women should have an equal role (7-point scale)
- VCF0838: Abortion (4-point scale)
- VCF0876a: Law against homosexual discrimination (4-point scale)
- VCF0877a: Gays in the military (4-point scale)
- VCF0878: Should Gays/Lesbians be able to adopt children (2-point scale)
- VCF0851: Newer lifestyles contribute to society breakdown (5-point scale)
- VCF0852: One should adjust moral views to changes (5-point scale)
- VCF0853: More emphasis on traditional values (5-point scale)
- VCF0854: Tolerance of different moral standards (5-point scale)

We extract the scores of the latent variables from the indicators using a standard structural equation measurement model for latent traits. The correlations with the scores obtained when using other latent variable extraction techniques range from 0.97 to 0.99. This approach is preferable to IRT because many of the indicators are continuous while IRT is most commonly used and best suited for dichotomous or other categorical variables. One common solution in similar situations is to dichotomize responses (Tausanovitch and Warshaw 2013), but we refrain from doing this because the quality of attitudinal measures is higher when using polytomous scales (Krosnick and Presser 2010; Saris and Gallhofer 2007).

We exclude 145 cases with missing values for all of the items included in one of the issue scales. The model imputes the missing data based on the observed correlations between the items. When drawing the svm plots, we drop 232 observations with very conservative issue positions of 2.5 standard deviations above the mean in order to keep the axes similar in size and to avoid large areas of the plots populated by a very sparse number of cases. The svm plots, which only include voters, draw on a total of 12,376 observations.

All the decisions are documented and can be consulted in the replication materials.

The following table examines the socio-demographic and attitudinal characteristics of respondents classified in four quadrants according to their issue orientation using data from the 2012 ANES dataset. Left-wing respondents have scores of economic and moral issue positions below the mean value in the sample, right-wing respondents have issue positions above the mean in both, and Christian-Democrats and Libertarians occupy the two off-diagonal quadrants.
Cross-pressured voters have distinct socio-demographic and political profiles. Christian Democrats are more racially diverse than other groups, much less educated and poorer, and more likely to live in the South. They are the group with the lowest turnout rate. They are similar in religious denomination and church attendance to right-wing voters. Libertarians stand out for their high level of education and infrequent church attendance. They have higher incomes than left-wing respondents and similar to right-wing respondents.
General Social Survey: 1972-2012 Cross-Sectional Cumulative Data

We use the Cross-Sectional Cumulative Data (June 19, 2014 version) of the General Social Survey (GSS) 1972-2012 and select the studies conducted between 1977 and 2012. We pool together all waves asked in the four years after each election.\(^{15}\) The variables included in the economic and moral issue scales are items that have been asked in most years (for most variables in over 20 waves) and that have at least moderate correlations with the other issues.

Items included in the economic issue scale (reliability coefficient is 0.73):
- eqwth: Government should reduce income differences (7-point scale)
- natheal: Spending on health (3-point scale)
- natcity: Spending on problems of big cities (3-point scale)
- natenvir: Spending on environment (3-point scale)
- natfare: Spending on welfare (3-point scale)
- nateduc: Spending on education (3-point scale)
- natsoc: Spending on social security (3-point scale)
- conbus: Confidence in business (3-point scale)
- conlabor: Confidence in labor (3-point scale)
- helppoor: Government should improve standard of living (5-point scale)
- helpnot: Government should do more (5-point scale)
- helpsick: Government should help to pay for medical care (5-point scale)
- helpblack: Government should aid blacks (5-point scale)

Items included in the moral issue scale (reliability coefficient is 0.69):
- abortion: Additive score of seven questions about circumstances in which abortion is justified (abdefect abnomore abhlth abpoor abrape absingle abany) (7-point scale)
- fepol: Women are not suited for politics (2-point scale)
- conclerg: Confidence in organized religion (3-point scale)
- prayer: Bible prayer in public schools (2-point scale)
- sexeduc: Sex education in public schools (2-point scale)
- divlaw: Divorce laws (2-point scale)
- premarsx: Sex before marriage wrong (4-point scale)
- homosex: Homosexual sex relations wrong (4-point scale)
- suicide1: Suicide if incurable disease (2-point scale)

Again, the scales were created using a standard structural equation measurement model. The GSS has a complex ballot design with fixed and rotating modules, split ballots, and, since 1988, with the issue questions spread across three different ballots. We do not include about 6000

\(^{15}\) For instance, we pool responses to the 1977, 1978, 1979, and 1980 surveys which asked about vote choice in the 1976 presidential election and the 2010 and 2012 waves that asked about vote choice in the 2008 presidential election. Note that at the time of writing the data asking about vote in the 2012 election had not been released.
cases with missing values for all of the items included in one of the issue scales. We also drop 583 observations with very extreme issue positions of 2.5 standard deviations above the mean on any of the scales. The svm plots only include voters. This leaves us with 27,346 observations.
2. The candidates experiment

Characteristics of the studies and the samples

The online studies, conducted in the US in June 2013 and July 2014, contained quotas by age, education, and place of residence generated using census estimates. Hence, the distribution of these variables is similar to the overall US population. In spite of this, the samples may differ from the population in important respects. Table A2 compares the distribution of responses to variables that had the exact same question wording in our surveys and in the pre- and post-election waves of the 2012 American National Election Study.
Table A2: Comparison of selected questions of the online surveys with the 2012 Time Series ANES

<table>
<thead>
<tr>
<th></th>
<th>ANES 2012 face-to-face</th>
<th>ANES 2012 web</th>
<th>SSI 2013</th>
<th>SSI 2014</th>
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<td>Unweighted</td>
<td>Weighted</td>
<td>Unweighted</td>
<td>Weighted</td>
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<tr>
<td><strong>Party identification</strong></td>
<td></td>
<td></td>
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<tr>
<td>Democrat</td>
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<td>34.6</td>
<td>38.1</td>
<td>36.1</td>
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<tr>
<td>Republican</td>
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<td>24.9</td>
<td>27.6</td>
<td>29.4</td>
</tr>
<tr>
<td>Independent</td>
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<td>37.2</td>
<td>31.2</td>
<td>31.1</td>
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<td>Other party</td>
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<td>3.3</td>
<td>3.1</td>
<td>3.5</td>
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<td></td>
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<tr>
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<td>13.1</td>
<td>11.3</td>
<td>10.4</td>
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<tr>
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<td>11.7</td>
<td>11.8</td>
</tr>
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<td>30.7</td>
<td>35.2</td>
<td>36.0</td>
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<tr>
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<td>17.1</td>
<td>14.7</td>
<td>15.0</td>
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<td>20.1</td>
<td>20.0</td>
<td>19.1</td>
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<tr>
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<td>4.7</td>
<td>3.9</td>
<td>4.6</td>
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<td></td>
</tr>
<tr>
<td>Should never be allowed</td>
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<td>11.8</td>
<td>11.1</td>
<td>12.5</td>
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<td>27.6</td>
<td>27.2</td>
<td>27.7</td>
</tr>
<tr>
<td>For other reasons</td>
<td>15.9</td>
<td>17.5</td>
<td>15.1</td>
<td>14.6</td>
</tr>
<tr>
<td>Personal choice</td>
<td>44.2</td>
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<tr>
<td><strong>Same-sex marriage</strong></td>
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<td></td>
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<td>Allowed to marry</td>
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<td>42.9</td>
<td>39.1</td>
<td>40.1</td>
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<td>33.3</td>
<td>34.6</td>
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<tr>
<td>No legal recognition</td>
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<td>26.3</td>
<td>26.3</td>
</tr>
</tbody>
</table>

Note: The table reports the distribution of responses for questions that had the exact same question wording in the 2012 American National Election Study and in the online surveys conducted in June 2013 and July 2014.

The comparison suggests that the online samples, particularly the second, are more ideologically liberal than the ANES samples. A left-wing bias is common in online samples. However, the differences are not large in magnitude. In terms of party identification, the distribution of responses was similar to the unweighted ANES responses and suggests that the samples are not unusual. The last survey was more liberal on abortion and same-sex marriage.
In robustness checks, we attempted to address the ideology bias by weighting observations by reported partisanship and past reported vote choice. We used the weighted full sample of the 2012 American National Election Study (ANES) study to create the weights. The unweighted results we report in the paper, however, never change significantly.

Generation of the economic and moral issue scales in the survey experiments

The economic and moral issue scales are the latent scores extracted from measurement models applied to the following issue questions. We also fitted various alternative models with identical results. The first experiment contained a larger number of issue questions, but the results do not change when using scales that include those. We retain the shorter scales to maximize comparability. Higher values always stand for morally conservative views.

Items included in the economic issue scale (reliabilities reported in the text):
- Spending on unemployment benefits (5-point scale)
- The government should reduce income differences (7-point scale)
- Raising taxes for the rich (5-point scale). The rich were defined as earning more than $250,000 per year in the first study and $100,000 per year in the second study.

Items included in the moral issue scale (reliabilities reported in the text):
- Abortion (4-point scale)
- Same-sex marriage (3-point scale)
- Adoption by same-sex couples (2-point question in the first study and modified 5-point question in the second study)

The survey experiment

To illustrate how respondents encountered information about the candidates, we reproduce the wording of the policy bundling condition in the first experiment.

We would like to know your opinion about two [four] candidates. They have similar platforms on all major political issues except for the positions we describe below. The description is general, and is not about candidates from a specific party.
Which candidate do you prefer?
- Candidate A
- Candidate B

3. The relative importance of issues across issue positions

Table A3 extends the results presented in the section “The relative importance of issues for moral moderates and extremists” in two ways. First, while the paper focuses on the correlation between alpha and moral issues, here we also examine if economic issue positions predict the self-reported relative importance of issues. Second, we present a multivariate analysis instead of a simple bivariate analysis in order to control for characteristics that may affect the relative importance of each dimension such as socio-economic status or geographic location.

We model the self-reported relative importance of issues (where higher values stand for a larger relative importance of moral issues) as a function of moral values in model 1 and include a squared term in order to directly test the idea that both groups of moral extremists attach more relative importance to moral issues. The results replicate the u-shaped pattern found in the bivariate analyses and are robust to the inclusion of controls for economic issue positions (in model 3), individual-level characteristics (model 4), and state fixed-effects (model 5).

Model 2 assesses the relationship between relative importance and economic conservatism, and finds a negative correlation. However, this relationship is not statistically significant when controlling for respondents’ position on moral issues and becomes even smaller in size when adding controls. This finding suggests that the relative importance of issues is constant for economic extremists and moderates. This is relevant because throughout the analysis we assume away the correlation between alpha and economic issue positions. Table A3 suggests that this is a reasonable assumption.
Table A3: The relative importance of issues across moral and economic issue positions

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
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</thead>
<tbody>
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<td>-0.20***</td>
<td>-0.19***</td>
<td>-0.19***</td>
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</tr>
<tr>
<td></td>
<td>(0.04)</td>
<td>(0.05)</td>
<td>(0.05)</td>
<td>(0.05)</td>
<td></td>
</tr>
<tr>
<td>Moral issues squared</td>
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<td>0.35***</td>
<td>0.34***</td>
<td>0.33***</td>
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+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001. Individual level controls are: age, sex, education, income, race, Hispanic origin, marital status, home ownership, religious denomination, and church attendance.