Are There Minorities Intense Enough to Overcome Majority Preferences? *

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Abstract

The literature on democratic representation is permeated by the claim that voters who care more about particular policies have disproportionate influence. One mechanism for this influence is that these voters are more likely to vote on the basis of candidate positions. In a simple extension of spatial voting, candidates hew towards the preferences of these more intense voters rather than simply taking the position of the median. This paper tests this mechanism empirically. I measure intensity of preferences in the United States using conjoint analysis, drawing from Sides, Tausanovitch, and Vavreck (2022). Using 4,941,690 experiments from Nationscape, I show that there is a very strong relationship between conjoint effects, which allow for the impact of intensity, and survey marginals, which do not. Among 44 issues, there are no cases in which the vote-maximizing policy position disagrees with the majority position. This strong relationship between marginals and intensity-weighted effects holds true across the nation as a whole and within all 50 states. However, within the Republican party there are some important counter examples. Most notably, Republicans in primary elections may benefit from supporting abortion bans and bans on immigration from predominantly Muslim countries even though these policies are opposed by large majorities of Republicans. In rare but important cases, taking account of preference intensity changes the standard expectation that candidates should hew to the preferences of the median voter.

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1 Introduction

Among the most urgent questions in the study of democracy is why counter-majoritarian policies persist? Why are policies sometimes enacted over the objections of a majority? Lax and Phillips (2012) famously find that policy is congruent with voter preferences "only half the time" in the American states. Caughey and Warshaw (2022) show that it takes time for policies to come in line with majority preferences, but that 36% of policies remain contrary to majority preferences even in the last year in which they are polled. Why do counter-majoritarian policies persist at such a high rate in a democracy?

One plausible explanation for this phenomenon is that the intense preferences of a minority of voters allows them to subvert the will of the majority. Fiorina (1974) shows formally that if a smaller constituency cares more an issue, legislators can benefit electorally from supporting the minority view. This happens because there are many issues, and legislators can plausibly gain more votes from the minority group if they side with the minority than they lose from the majority group. If the minority group cares more, they are more likely to vote on the basis of the issue in question.

This idea can be found in the theory of probabilistic voting (Banks and Duggan, 2005; Coughlin and Nitzan, 1981), prominent work on legislator decision-making (Arnold, 1990; Fenno, 1989; Kingdon, 1989), the literature on issue publics (Krosnick, 1990; Converse, 1964), and elsewhere. In a notable recent book, Hill (2022) argues that differences in preference intensity are important for explaining counter-majoritarian policy- what he calls "frustrated majorities." The core insight of these works is that no vehicle of institutional bias is needed for minorities who care more about particular policies to get their way, whether it be campaign finance, lobbying, insider access or biased electoral or legislative institutions. Legislators have an ex ante incentive to give more weight to constituents with more intense preferences.

The only question is *how often* it is the case that the minority side of a given issue is intense enough to overcome the majority? The majority is numerically advantaged by

definition. Are minorities often intense enough that politicians are better off taking the minority position on issues?

While the idea that intensity can advantage a minority view is prominent in the literature, systematic evidence has been elusive. This is owing in part to the fact that there is no commonly accepted measure of intensity, and that existing measures do not map clearly on to the issues under consideration. In this paper I use a conjoint experiment embedded in Nationscape (Tausanovitch et al., 2019), a large-scale survey of the American electorate, to evaluate the prevalence of intense minorities on 44 prominent political issues in the United States. The conjoint estimates allow me to compare survey marginals- a simple measure of preferences- to the effect that policies have on choices when there are competing policy considerations at stake. This is the same method used in Sides, Tausanovitch, and Vavreck (2022).

I show that across these 44 issues there is not a single case where the measure incorporating intensity disagrees with the simple survey marginal. In fact the correlation between survey marginals and conjoint effects is extremely high. At least when it comes to voting behavior, differences in intensity among different segments of the general public cannot explain counter-majoritarian behavior by legislators.

This results holds true not only nationally, but within each American state, the context where Lax and Phillips (2012) demonstrate a democratic deficit. Although some cases can be found where the survey marginal disagrees with the conjoint effect, these are extremely close. These few cases often occur in very small states where statistical noise is the likely culprit. But even in these small states, the relationship between marginals and conjoint effects is very high.

Not all American elections occur among the general electorate. In addition to winning general elections American politicians usually need to win their party's nomination contest. I examine whether there are minorities intense enough to overwhelm majority preferences within each party. I find that this is never true for Democrats for the issues under study.

Within the Republican party however, there are a few case where minorities feel intensely enough that politicians stand to gain votes by supporting the less popular view. Most notably, a substantial majority is outweighed by a very intense minority that wants to ban abortion. This is an important exception to the rule. When it comes to abortion, Republicans stand to win primary elections by *opposing* the large majority of Republican voters who are against blanket abortion bans.

Once again these national results for each party are closely mirrored within each of the fifty states.

These results show that preference intensity cannot account for the bulk of examples of policy incongruence that exist in American politics, at least not without bringing other features of the political system into the analysis. However the few exceptions that exist are important ones.

Existing Work

It is not hard to come by examples of government policies or legislator actions that conflict with the majority preference of the relevant constituencies. Hill (2022) shows that for the better part of 30 years clear majorities in the United States have favored greater regulation of guns, greater protection of the environment, and less affirmative action in hiring. In all three cases the government failed to enact the policy supported by the majority. Americans are perennially in favor of raising corporate taxes, instituting national healthcare, and requiring voter identification cards, but government policy does not follow suit. And the list goes on.

Of course, part of the reason the United States does not have majoritarian policymaking is that it doesn't have majoritarian institutions. The Constitution requires agreement between both chambers of Congress and the president in order to pass bills into law, and each chamber of Congress adds its own layer of procedural hurdles. Even so, the lack of majoritarianism persists at the level of the votes of individual legislators, who cast votes inconsistent with majority opinion in their districts. It's not uncommon that states or the federal government

proactively pass laws that contradict majority opinion, in which case the disconnect between legislators and constituents must be large enough to overcome the aforementioned procedural hurdles.

There have been many attempts in the research literature to explain this gap in representation. Lax and Phillips (2012) find that salience and institutional factors are important, but that they leave most of the variation unexplained. Many works blame polarization (e.g. Bafumi and Herron, 2010), but this is tautological for my purposes: if polarization refers to a disconnect between the public and their representatives, then this is exactly what I seek to explain (Hill and Tausanovitch, 2015). Some work shows that the pool of available candidates is unrepresentative, or blames the candidate nomination process (e.g. Hall, 2019). There are voluminous literatures that lay blame on voter incompetence and/or interest group influence (e.g. Achen and Bartels, 2017; Hacker and Pierson, 2010).

What makes preference intensity such a compelling explanation for counter-majoritarian outcomes is that it follows from widely accepted facts. For any given issue, there are some voters who care more and others who care less. Voters do not always choose the candidate who lines up with them on more issues. Given these two facts, we should expect voters to be more likely to choose candidates based on the issues they care more about. And it follows from this that legislators should pay more heed to the preferences of voters who care more about a given issue in order to earn their vote.

Put more formally, if preference intensity is heterogenous (some voters care more than others), and voting is probabilistic (voters don't choose perfectly), then the position of the median voter is no longer the equilibrium convergence point for candidates in a two candidate election with spatial voters. Instead, candidates will choose a point that is closer to the more intense voters, because the elasticity of their votes with respect to the underlying policy space is greater. Candidates will listen to the voters who are more likely to reward them with votes (Coughlin and Nitzan, 1981; Banks and Duggan, 2005; Hill, 2022).

Many works in political science have made the claim that preference intensity is one of the

primary reasons that candidate positions differ from majority preferences. This claim was made systematically by Fiorina (1974). It is a frequent refrain in the most well known work on voting decisions in the United States Congress (Kingdon, 1989; Arnold, 1990). And it has been revived recently by Hill (2022), who focuses explicitly on the claim that differences in intensity cause counter-majoritarian outcomes.

Despite a compelling theory and a storied place in the literature, accounting for preference intensity has never become a standard practice in empirical studies of representation or voting behavior. There have been many studies showing policy favoring various groups (e.g. Bishin, 2009; Krosnick, 1990), but few that try to systematically incorporate intensity into a study of representation. This is probably due to difficulties in measuring intensity and mapping those measures onto the relevant public policy questions.

The current study builds on the recent literature in conjoint analysis (Hainmueller, Hopkins, and Yamamoto, 2014). Simple survey marginals capture how many people support a given policy. Conjoint analysis captures the effect of an attribute on a choice. In this case, the attribute is a policy. The conjoint effect is a product both of the number of people who support the policy outcome and the intensity of their preferences (Abramson, Koçak, and Magazinnik, 2022). Whereas the survey marginal captures support in a vacuum, the conjoint effect captures the degree to which a policy affects choices in a multi-faceted choice setting where the policy must be weighed against other policies.

The next section explains the methods and data in greater detail.

Data and Method

Conjoint analysis is an increasingly popular method in political science that is typically used as a more credible measure of preferences. However as Abramson, Koçak, and Magazinnik (2022) point out, the method can be ill-suited to this use case because it captures both the prevalence of a certain view and its intensity, and as a result the method can lead to an inaccurate measure of majority opinion. This is exactly the feature that I will exploit here.

A conjoint experiment presents a respondent with a choice and randomly varies multiple features of that choice at once. The experiments included in Nationscape randomly select two to four policies, and randomly assign either the affirmative version of the policy or the negation to one of two different sets. Respondents are asked to choose the set they prefer. If one set contains "Ban assault rifles" then the other contains "Do not ban assault rifles." If one contains "Build a wall on the southern border" the other contains "Do not build a wall on the southern border" and so on. If the experiment contains both of these policies (assault rifle ban and build a wall) then the respondent will sometimes face a situation where they can only achieve their preferred outcome on one policy or the other. Appendix A shows an example of what this experiment could look like to a respondent.

In a typical conjoint analysis the estimand is the Average Marginal Component Effect. The AMCE measures the effect of the attribute, in this case a policy, on the outcome, in this case the choice of set. If more respondents support the affirmative version of a policy, say "Ban assault rifles," then we expect the AMCE for the affirmative version to be greater. If respondents who support the affirmative version of the policy have more intense preferences than opponents, this would also lead the effect to be greater. The AMCE can be thought of as the elasticity of choices with respect to policies.

There are 52 possible attributes in the experiment, of which 44 are policy attributes[1]. In order to compare AMCEs to simple survey marginals, each possible attribute comes from a corresponding policy question asked separately. In a grid format, respondents are asked to report whether they agree or disagree with a series of policies. For instance they would see "Ban assault rifles" in the grid, with the option to agree, disagree, or say "don't know."

Policies that posed the possibility of logical contradictions were not allowed to occur in the same conjoint experiment. For instance "never permit abortion" cannot coincide with "permit late term abortion," so these policies never occurred together. Appendix C shows

[1]The remaining 8 attributes involve the demographic traits of elected officials. These attributes are not used in the current paper, but do not affect the conclusions drawn because like all other attributes they are independently randomly assigned.

that these logical restrictions can be safely ignored in our analysis given the large number of policies.

Data for this study come from Nationscape, a project that ran weekly general population online surveys in the United States from July 2019 to January 2021. The data includes 494,169 responses, averaging 6,335 responses per week over the course of the survey. Nationscape meets benchmarks similar to those used by the Pew Research Center for the quality of survey samples (Tausanovitch et al., 2019).

The claims in this paper pivot on whether the conjoint experiments used capture preference intensity over policies in a manner that is applicable to real elections. The measure has strong face validity. Like a real election, it confronts voters with a choice, and allows for the possibility that some facets of that choice matter more to voters than others. In this way, it maps neatly onto spatial voting theory. Using the same underlying data, recent work has shown that some of the issues that voters care most about were also the most prevalent issues in a recent presidential election, and that voters care more about the issues on which they agree with their party (Sides, Tausanovitch, and Vavreck, 2022).

The policies included in this experiment were chosen to (1) reflect active issues in American politics circa 2019 and (2) include diverse issues with many different levels of extremity. Table 1 shows one way of accounting for the policy areas covered by the experiment, and the number of possible attributes in each area. There are of course many possible ways to categorize these issues. The issues themselves are listed in alphabetical order in Table 2 of the results section.

Table 1: Policy areas included in the experiment

Policy Area	Number of Attributes
Abortion	5
Environmental Regulation	4
Gun Control	5
Health	4
Immigration and Border Security	8
Labor	4
Taxes	4
Other	10

Results

How do simple survey marginals compare to AMCEs from conjoint experiments when it comes to policy? The difference between these two quantities tells us whether the balance of intensity favors the majority or minority side of a policy. Simple survey marginals indicate the proportion of people who agree with a policy. The AMCE measures the proportion of people who will switch their vote on the basis of that policy, and in which direction, albeit in an idealized setting.

Table 2 lists every policy attribute included in the experiment. Recall that each policy has two forms: an affirmative form and a negation. The form used here is the form that I have deemed the "liberal" direction. So for instance the policy "Allow transgender people to serve in the military" is something that people on the left of the political spectrum favor unambiguously, so that is the form used in the table. Building a wall on the southern border is a conservative policy so "Do not build a wall on the southern border" is used below. The column "Effect" lists the AMCE for the liberal direction of this attribute. A negative effect indicates that respondents are less likely to choose the set including the liberal version of the policy, whereas a positive effect indicates a greater likelihood of choosing such a set. "Margin" is the percent of all respondents in favor of the liberal version of this attribute, not including those who decline to state their view. Appendix B lists the affirmative version and the negation for every policy.

As Table 2 shows, the conjoint experiments encapsulate a diverse set of policies. These policies vary widely in terms of how many people support them, and how much effect they have on choices in the conjoint experiments.

Figure 1 illustrates the main result of this paper. It is a scatterplot of the estimates contained in Table 2. The y-axis is the AMCE for the liberal version of each policy ("Effect") and the y-axis is the margin in favor of the policy ("Margin"). The blue line is a LOESS curve fitting the data.

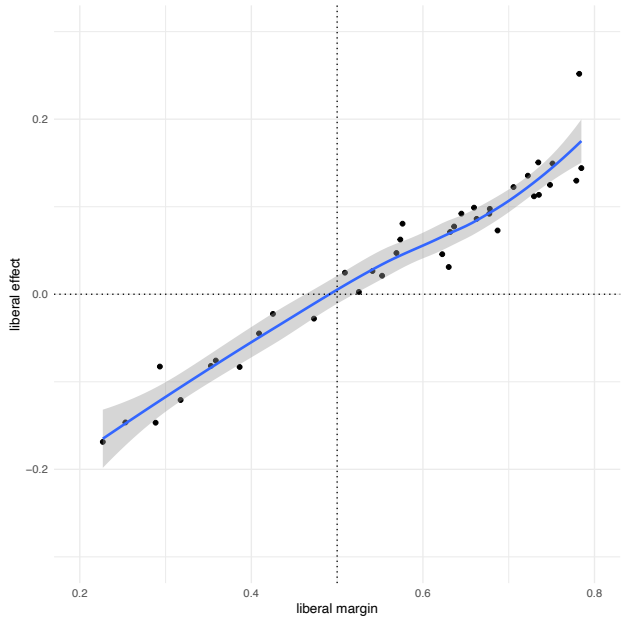
The most notable feature of Figure 1 is the incredibly tight relationship between margins

Table 2: Policies

Policy (Liberal Version)	Effect	Margin
Allow transgender people to serve in the military	0.11	73%
Ban all guns	-0.17	23%
Ban assault rifles	0.09	66%
Cap carbon emissions to combat climate change	0.14	78%
Create a path to citizenship for all undocumented immigrants	0.10	66%
Create a path to citizenship for undocumented immigrants brought here as children	0.17	82%
Create a public government registry of gun ownership	0.07	69%
Do not allow employers to decline coverage of abortions in insurance plans	0.03	54%
Do not allow people to work in unionized workplaces without paying union dues	-0.04	41%
Do not allow the display of the Ten Commandments in public schools and courthouses	-0.08	35%
Do not ban people from predominantly Muslim countries from entering the United States	0.11	74%
Do not build a wall on the southern border	0.05	57%
Do not cut taxes for families making less than $100,000	-0.18	16%
Do not deport all undocumented immigrants	0.08	58%
Do not limit trade with other countries	0.03	63%
Do not provide tax-funded vouchers to be used for private or religious schools	0.02	55%
Do not remove barriers to domestic oil and gas drilling	0.02	51%
Do not require a waiting period and ultrasound before an abortion can be obtained	-0.03	47%
Do not require proof of citizenship or legal residence to wire money to another country from the USA	-0.08	36%
Do not separate children from their parents when parents can be prosecuted for illegal entry into the US	0.25	78%
Do not shift from a more family-based to a more merit-based immigration system	-0.02	43%
Enact a Green New Deal	0.05	62%
Enact Medicare-for-All	0.08	64%
Ensure that all students can graduate from state colleges debt free	0.12	71%
Grant reparations payments to the descendants of slaves	-0.12	32%
Guarantee jobs for all Americans	0.15	73%
Impeach President Trump	0.00	53%
Keep estate tax	-0.08	29%
Legalize marijuana	0.10	68%
Limit gun magazines to 10 bullets	0.07	63%
Make a large-scale investment in technology to protect the environment	0.15	81%
Permit abortion	0.12	75%
Permit abortion in cases other than rape, incest, or when the woman's life is in danger	0.09	68%
Permit late term abortion	-0.15	29%
Provide government-run health insurance to all Americans	0.09	64%
Provide the option to purchase government-run insurance to all Americans	0.13	78%
Raise taxes on families making over $250,000	0.06	57%
Raise taxes on families making over $600,000	0.15	75%
Raise the minimum wage to $15/hour	0.14	72%
Reduce the size of the US military	-0.15	25%
Require background checks for all gun purchases	0.24	92%
Require companies to provide 12 weeks of paid maternity leave for employees	0.17	81%
Subsidize health insurance for lower income people not receiving Medicare or Medicaid	0.16	81%
Withdraw military support for the state of Israel	-0.08	39%

and AMCEs, with a correlation of 0.98. This tells us that whatever imbalance in intensity exists between supporters and opponents of these policies is remarkably consistent. Also notable is the fact that no points occur in the bottom right or top left quadrant of the graph. This tells us that when majorities support a policy, the AMCE is always positive, and when majorities oppose a policy, the AMCE is always negative. When the margin is exactly split, the LOESS curve passes very close to an AMCE of 0. In other words, the vote-maximizing policy is always the majoritarian one.

Figure 1: The Impact of 44 Liberal Policy Outcomes (AMCEs) Compared to the Share of Voters Supporting the Liberal Side



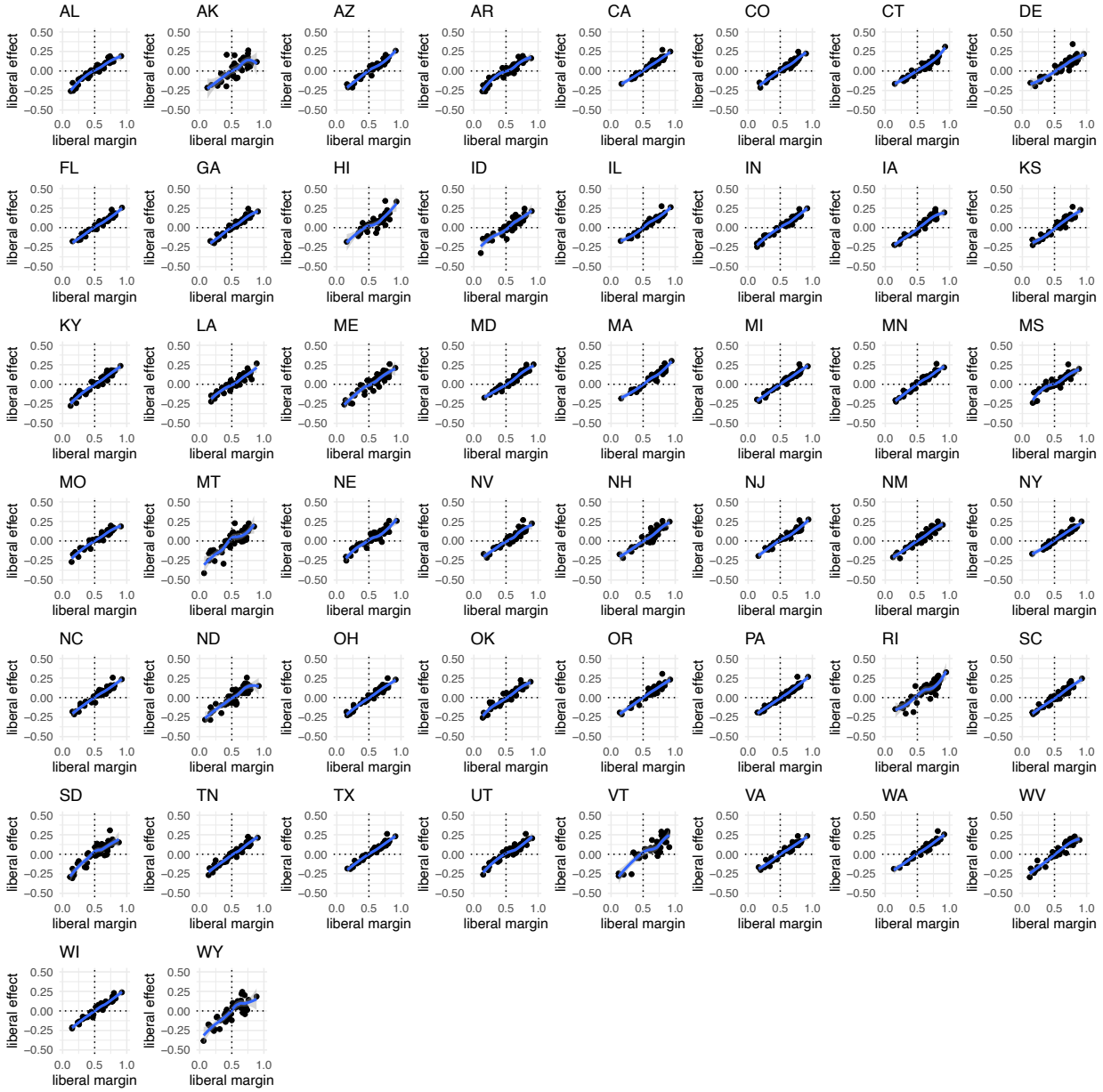
The figure shows the relationship between the estimated conjoint effect and the margin supporting the liberal side of a given policy. The dashed lines indicate a margin of 50% and an effect of 0.

At the national level, knowing what people care about adds remarkably little information about the vote maximizing policy once we know how many people support a policy and how many people oppose it. However there is no guarantee that this result will hold within all the politically relevant units within the United States. Fortunately the size of the Nationscape dataset allows me to reproduce these analysis at lower levels of aggregation.

Figure 2 extends the previous result to all 50 US states. In the median state, the correlation between conjoint effects and survey margins is 0.96. Only 8 states have correlations below 0.9, and all of these are in states smaller than 2 million people, with sample sizes of less than 2,000 for the 44 policy items examined. Even so, only 1 state, Alaska, has a correlation below 0.8, in this case 0.76, and it has the third smallest sample size, with only 840 respondents. In Appendix D I conduct a simulation to assess the effect of sample size on this correlation. In short these results are exactly what we would expect if the true correlation was upwards of 0.9 in every state.

In the smallest states some points occur in the off-diagonal quadrants. These are most likely due to statistical noise. Overall the remarkably tight relationship means that few points are far from the regression line. In the medium and large states, the relationship looks very similar to that in the nation as a whole.

Figure 2: The Impact of 44 Liberal Policy Outcomes (AMCEs) Compared to the Share of Voters Supporting the Liberal Side in Every U.S. State



The figure shows the relationship between the estimated conjoint effect and the margin supporting the liberal side of a given policy in all 50 states.

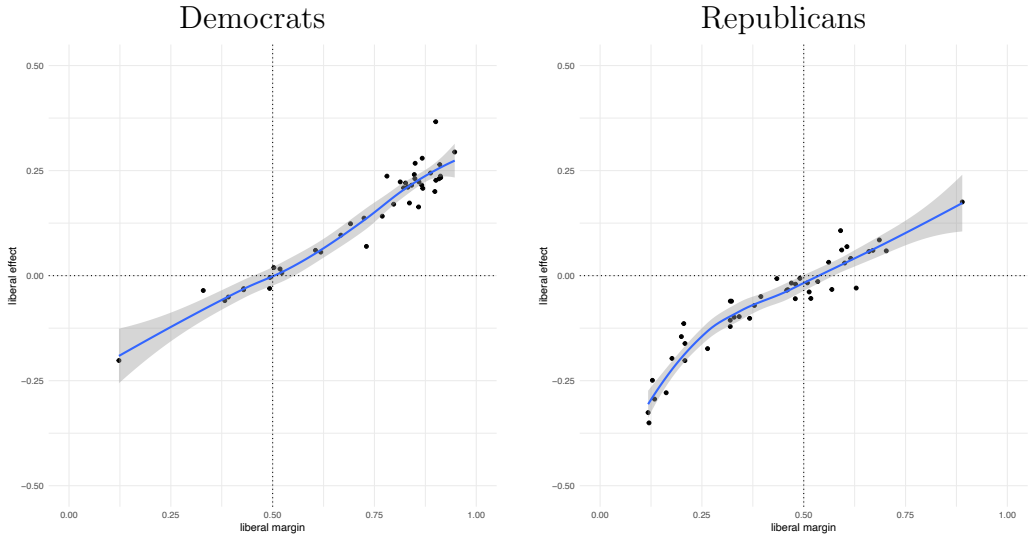
My results so far pertain to general elections at the national and state level. But politicians in the United States are usually elected in two stages. In most cases the nominating stage prioritizes the preferences of co-partisan voters. In a typical party primary, voters from each party choose their own candidates. Although these elections often feature multiple candidates, we can again ask if there are cases where the minority side of the issue has more intense preferences, and therefore gives politicians an incentive to hew to their preferences. We will see that there are some cases of this.

Figure 3 repeats the scatterplot used in Figure 1, but this time uses only respondents who identify with a particular party. The left panel shows the results for Democrats, and the right panel shows the results for Republicans. The relationship is again quite strong. Among Democrats, the correlation between margins and conjoint effects is 0.96. Among Republicans it is 0.94. Among Democrats there are again no points in the top left and bottom right quadrants, indicating that the vote maximizing position is always the position of the majority. However among Republicans there are six points in the bottom right quadrant, indicating cases where majorities support the liberal side of the policy in question, but electoral incentives favor the minority side, driven by a difference in intensity.

It is worth examining these six cases in detail. Table 3 lists the six policies along with the margin in favor of the liberal position and the conjoint effect. In four out of the six cases, the majorities in question are less than 55%. In close cases it takes only a small disparity in intensity to create a small advantage for the minority side of the question. For instance, 51% of Republicans support limiting trade with other countries. However when that policy is included in a set support for that set declines 2% relative to the other set. This indicates that Republicans who oppose limiting trade care about the issue more than Republican who support limiting trade, but the disparity is small.

51% of Republicans support creating a public registry of gun owners, but Republicans select sets of policies that include this policy only 48% of the time. 53% support allowing transgender people to serve in the military, but this policy is selected only 49.5% of the time.

Figure 3: The Impact of 44 Liberal Policy Outcomes (AMCEs) Compared to the Share of Voters Supporting the Liberal Side By Party



These figure shows the relationship between the estimated conjoint effects and the margin supporting the liberal side of a given policy for Democrats and Republicans, respectively.

These issues are split close to 50-50 and the corresponding AMCEs are close to 0, suggesting that neither side of the issue is strongly advantaged.

The other three policies are more notable. A clear majority of Republicans, 57%, do not support banning people from predominantly Muslim countries from entering the United States. However sets including the policy of banning immigration from Muslim countries are more likely to be chosen by 3 percentage points. 52% of Republicans think that abortion should be permitted for reasons other than rape, incest, or danger to the mother's life. This is a bare majority, but in terms of actual choices the advantage is 5% in the other direction. Most notably, fully 63% of Republicans are against banning abortion outright. And yet there does not appear to be an electoral advantage of taking this position. Supporters of banning abortion have more intense preferences, and this leads to a 3 percentage point advantage for sets of policies that include banning abortion.

Although there are very few issues where the greater intensity by the minority side causes it to have an electoral advantage, banning abortion and President Trump's proposed ban

Table 3: Counter-Majoritarian Policies in the Republican Party

Policy	Margin	Effect
Allow transgender people to serve in the military	53%	-0.01
Create a public government registry of gun ownership	51%	-0.04
Do not ban people from predominantly Muslim countries from entering the United States	57%	-0.03
Limit trade with other countries	51%	-0.02
Permit abortion in cases other than rape, incest, or when the woman's life is in danger	52%	-0.05
Permit abortion under some circumstances	63%	-0.03

on Muslim immigrants are two clear examples. Even though most Republicans are against restricting immigration from Muslim countries, the electoral incentive within the Republican party supports it. And even though a large majority is against banning abortion entirely, this issue strongly sways the choices of voters who support banning abortion. The effect is enough to overcome a 26-point advantage in numbers held by the majority who support minimal abortion rights.

Figure 4 extends the previous results to Democrats to all 50 US states. Unlike the case of Republicans, in every state these results bear strong resemblance to the national results.

Figure 5 extends the results for Republicans to all 50 states. Once again, the correlation between margins and AMCEs is very strong. The lowest correlation is 0.94, even given the noisiness of results in small states. However the median number of policies in the bottom right quadrant is 4. In 38 states this includes banning abortion, and in 38 states it includes banning immigration from countries with large Muslim populations. In every state some of these 44 policies are vote-maximizing among Republicans even though they are opposed by a majority.

In short, intensity can advantage the minority view within parties for a small number of issues on which the minority side of the issue is particularly intense. Among the policies examined here, all of these examples come from the Republican party. This may be due to the fact that there are more issues in this data that are closely contested among Republicans than there are issues that are closely contested among Democrats.

Figure 4: The Impact of 44 Liberal Policy Outcomes (AMCEs) Compared to the Share of Voters Supporting the Liberal Side in Every U.S. State, Democrats Only

The figure shows the relationship between the estimated conjoint effect and the margin supporting the liberal side of a given policy among Democrats in all 50 states.

Figure 5: The Impact of 44 Liberal Policy Outcomes (AMCEs) Compared to the Share of Voters Supporting the Liberal Side in Every U.S. State, Republicans Only

The figure shows the relationship between the estimated conjoint effect and the margin supporting the liberal side of a given policy among Republicans in all 50 states.

2 Conclusion

When it comes to the 44 policy items examined here, there is no case where the intensity of the minority overcomes the numerical advantage of the majority among the general population. Among Democrats there are also no examples of this. Only in the Republican party are there a few cases where a policy might "win" in the set of voter choices even though only a minority of Republicans support that policy. The best examples of this are banning abortion and banning immigration from predominantly Muslim countries, which are unpopular even among Republicans but supported by an intense minority of them.

Nonetheless, the pattern is one in which intensity rarely strongly favors the minority side. This is a blow to the theory that differences in intensity are one of the main causes of counter-majoritarian outcomes and counter-majoritarian behavior by elected officials. The evidence contradicts this idea at both the national and the state levels. The relationship is so strong that we may reasonably speculate that it generalizes to other levels of government.

It remains for further research to discover whether there are other important cases where intensity might lead to different outcomes than preferences alone. It also remains to be shown whether these cases result in different behavior by politicians. Other important areas for future research are assessing whether intensity is endogenous to signals from elites, and evaluating whether intensity can have a greater effect on political outcomes through channels such as turnout and interest group activities.

When it comes to methodology, this work eases, but does not entirely erase, the fear raised by Abramson, Koçak, and Magazinnik (2022): that conjoint effects distort majority preferences. This is demonstrably true in theory, but does not appear to be often true in practice. Nonetheless the cases where estimated conjoint effects arrive at the wrong majority preference may be important ones.

To the extent that there are a small number of policies that are affected by differences in intensity, these policies could nonetheless be very important and represent large impacts on representation. A clear example here is support for banning abortion among Republicans.

Republicans may safely adopt the position that abortion should be banned among their larger primary electorate, even though upwards of 60% of Republican voters oppose it. The intense preferences of pro-life Republicans translate into a greater number of votes. Although this is not a good general election position, policy is not all that drives election outcomes. Winning a primary may result in a winning candidate that disagrees with 79% of the general election voters, in this case.

Far from a nail in the coffin of research on intensity and representation, this estimates in this paper point in some potentially fruitful directions. The overall intensity of preferences varies tremendously across different policies and issue areas. Which issues become central to our politics? Which issues are subject to electoral politics, and which belong to a less public-facing process? Separating high intensity from low intensity issues may help us understand when we should see electoral mechanisms driving government decision-making, and when we should see political processes that are dominated by interest groups and elite ideology.

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A Conjoint Experiment Example

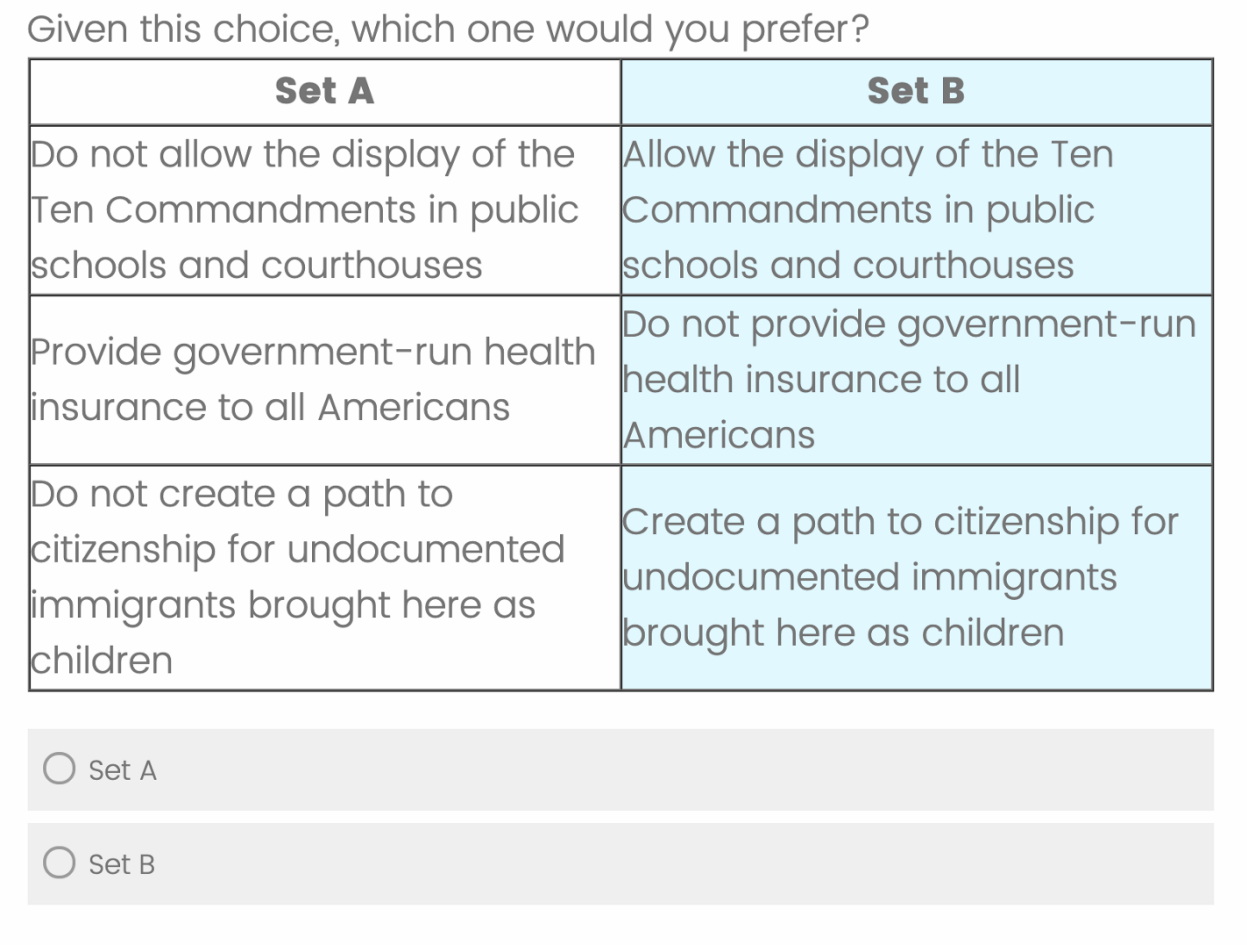
The section of Nationscape with that contains the conjoint experiment questions is introduced with the following prefatory text:

> You are almost done! For the last exercise we are going to show you two sets of outcomes – we call them A and B. We want you to choose the one that you prefer. We realize that neither set may perfectly reflect your preferences. If this happens just pick the set that comes closest to your views even if it isn't perfect. Assume the only difference between set A and B are the things listed on the page – everything else is the same.
>
> This is the last page of the survey!

The first question says "The following table displays two sets of political outcomes. Given this choice, which one would you prefer?" The nine subsequent questions ask simply "Given this choice, which one would you prefer?"

Figure 6 shows an example of how the conjoint experiment might appear to a respondent.

Figure 6: Example of the conjoint experiment with three policies.



Four of 44 items are randomly assigned to each experiment. Matches are deleted, and policies are redrawn if three or more policies match between the two sets. This results in an experiment with between two and four non-matching attributes.

B Survey Items

Table 4 contains the complete list of policy items that appeared in the conjoint experiment. When items were asked separately, respondents were simply asked to agree or disagree with the "Affirmative policy." Conjoint items pitted the affirmative versions of the policy and the negation against one another.

Table 4: Policy Items

Affirmative policy	**Negation**
Never permit abortion	Permit abortion
Permit abortion in cases other than rape, incest, or when the woman's life is in danger	Do not permit abortion in cases other than rape, incest, or when the woman's life is in danger
Permit late term abortion	Do not permit late-term abortion
Provide government-run health insurance to all Americans	Do not provide government-run health insurance to all Americans
Provide the option to purchase government-run insurance to all Americans	Do not Provide the option to purchase government-run insurance to all Americans
Subsidize health insurance for lower income people not receiving Medicare or Medicaid	Do not subsidize health insurance for lower income people not receiving Medicare or Medicaid
Create a path to citizenship for all undocumented immigrants	Do not create a path to citizenship for all undocumented immigrants
Create a path to citizenship for undocumented immigrants brought here as children	Do not create a path to citizenship for undocumented immigrants brought here as children
Deport all undocumented immigrants	Do not deport all undocumented immigrants
Ban all guns	Do not ban all guns
Ban assault rifles	Do not ban assault rifles
Limit gun magazines to 10 bullets	Do not limit gun magazines to 10 bullets
Cap carbon emissions to combat climate change	Do not cap carbon emissions to combat climate change
Build a wall on the southern border	Do not build a wall on the southern border
Make a large-scale investment in technology to protect the environment	Do not make a large-scale investment in technology to protect the environment
Require background checks for all gun purchases	Do not broaden circumstances that require background checks for gun purchases
Cut taxes for families making less than $100,000	Do not cut taxes for families making less than $100,000
Eliminate estate tax	Keep estate tax
Raise taxes on families making over $600,000	Do not raise taxes on families making over $600,000
Ensure that all students can graduate from state colleges debt free	Do not ensure that all students can graduate from state colleges debt free
Require a waiting period and ultrasound before an abortion can be obtained	Do not require a waiting period and ultrasound before an abortion can be obtained
Limit trade with other countries	Do not limit trade with other countries
Raise the minimum wage to $15/hour	Do not raise the minimum wage to $15/hour
Grant reparations payments to the descendants of slaves	Do not grant reparations payments to the descendants of slaves
Ban people from predominantly Muslim countries from entering the United States	Do not ban people from predominantly Muslim countries from entering the United States
Require companies to provide 12 weeks of paid maternity leave for employees	Do not require companies to provide 12 weeks of paid maternity leave for employees
Withdraw military support for the state of Israel	Do not withdraw military support for the state of Israel
Legalize marijuana	Do not legalize marijuana
Allow employers to decline coverage of abortions in insurance plans	Do not allow employers to decline coverage of abortions in insurance plans
Create a public government registry of gun ownership	Do not create a public government registry of gun ownership
Separate children from their parents when parents can be prosecuted for illegal entry into the US	Do not separate children from their parents when parents can be prosecuted for illegal entry into the US
Allow transgender people to serve in the military	Do not allow transgender people to serve in the military
Require proof of citizenship or legal residence to wire money to another country from the USA	Do not require proof of citizenship or legal residence to wire money to another country from the USA
Guarantee jobs for all Americans	Do not guarantee jobs for all Americans
Reduce the size of the US military	Do not reduce the size of the US military
Allow people to work in unionized workplaces without paying union dues	Do not allow people to work in unionized workplaces without paying union dues
Provide tax-funded vouchers to be used for private or religious schools	Do not provide tax-funded vouchers to be used for private or religious schools
Impeach President Trump	Do not impeach President Trump
Enact a Green New Deal	Do not enact a Green New Deal
Enact Medicare-for-All	Do not enact Medicare-For-All
Shift from a more family-based to a more merit-based immigration system	Do not shift from a more family-based to a more merit-based immigration system
Raise taxes on families making over $250,000	Do not raise taxes on families making over $250,000
Remove barriers to domestic oil and gas drilling	Do not remove barriers to domestic oil and gas drilling
Allow the display of the Ten Commandments in public schools and courthouses	Do not allow the display of the Ten Commandments in public schools and courthouses

C Impact of Restrictions on Estimates

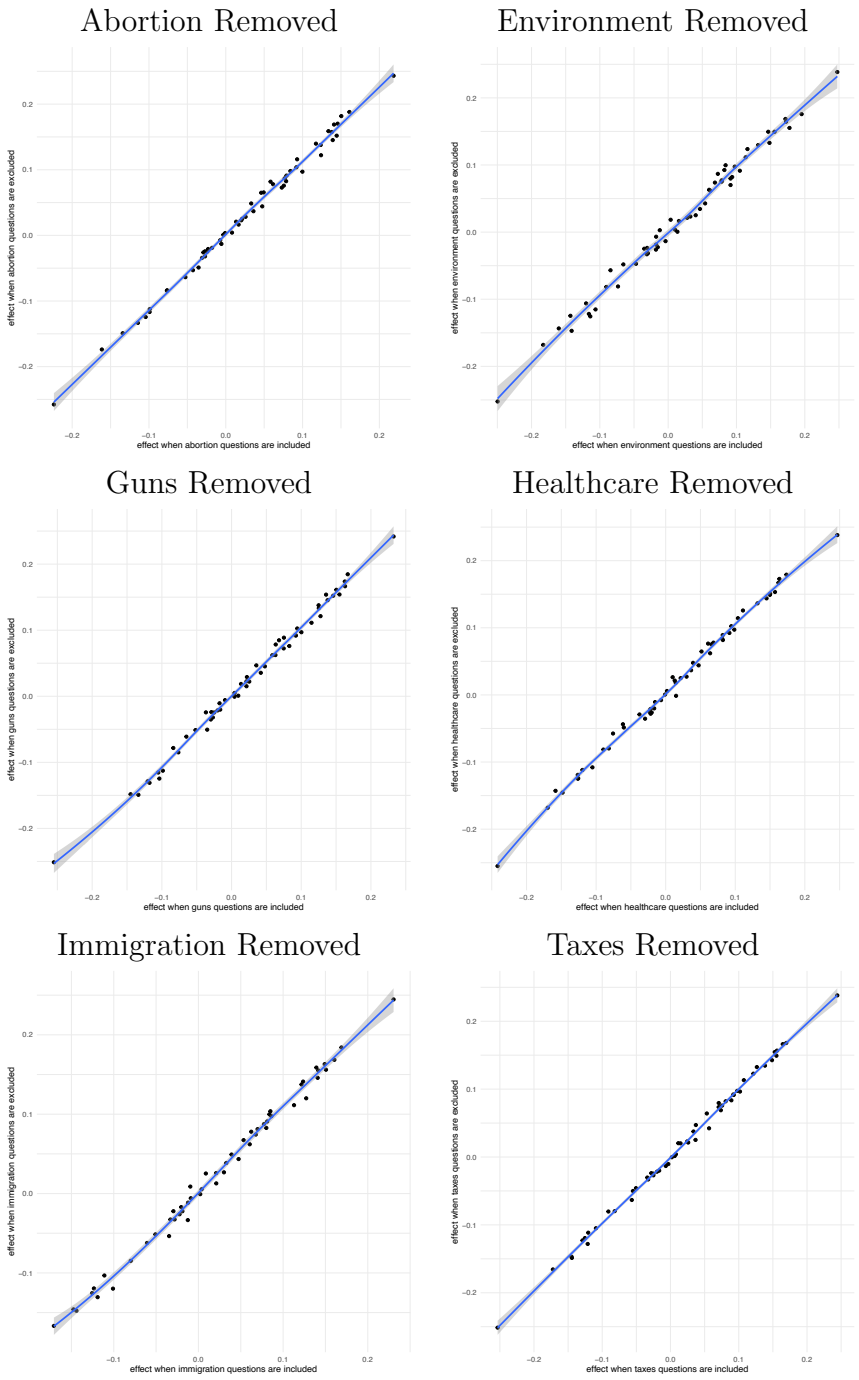
There are six sets of important logical restrictions that were included in the conjoint experiments. Abortion items were not allowed to appear with other abortion items. This precluded the possibility that "ban abortion" would appear alongside "permit late term abortion," for example. The same type of restriction was applied to environmental items, gun items, healthcare items, immigration items and tax items.

These restriction raise the possibility that the estimates in this paper are not apples-to-apples comparisons. For instance, if we compare to the AMCE for impeaching Trump to the AMCE for permitting late term abortion, the former can appear alongside "ban abortion," but the latter cannot. If there are spillover effects of other items, then the comparison is no longer valid.

To test this, for each set of items with restrictions I calculate all AMCEs when every experiment including one of these items is removed. So for instance I calculate the AMCEs for all non-abortion items, excluding any experiments that included abortion items. I then compare these to the AMCEs for these same items when experiments containing abortion items are not excluded. If there are spillovers effects from the excluded items, then the AMCEs will be altered significantly.

The results are shown in Figure 7 for each of the six types of restricted in items. In all cases removing experiments containing the items in question has virtually no effect on the resulting estimates.

Figure 7: Analysis of AMCEs with experiments including restricted items removed



The figure shows the correlation between the AMCEs calculated with and without the restricted item sets.

D Power Analysis

In order to evaluate the power of the state-by-state analysis, I sampled the full national data with replacement at various sample sizes, with 100 replications for each sample size. For each replication I calculated (1) the correlation between the margins and the conjoint AMCEs as well as (2) the number of points that occur in the off-diagonal of the scatterplot. Table 5 shows the results.

The sample size of 1,000 is close to those of the smallest states in Nationscape such as Alaska, North Dakota, and Wyoming. These states have populations of less than 1 million people. States of population around 2 million (Nebraska, New Mexico) have sample sizes around 2,000. Medium size states like Maryland, Massachusetts and Washington have populations in the 5-10 million range and sample sizes around 10,000 whereas the largest states (Texas, California, and Florida) have sample sizes of 30-50,000. The entire sample includes 494,169 respondents.

The results show that the correlation between margins and conjoint AMCEs is greater than 0.95 for sample sizes greater than 5,000. In the smallest states the correlation dips below 0.9. This is exactly what happens in the analysis of smaller states. As a result I conclude that these lower correlations are most likely due to measurement error.

The number of off-diagonal points is an important quantity in the analysis, because these points can explain counter-majoritarian outcomes, the goal of the theory I am testing. However this is a sensitive statistic. A point that barely crosses over one axis becomes an "off-diagonal point." In small samples this occurs often, and it is not until quite large sample sizes that it becomes more common to find no such point than to find at least one. At the state-level, each individual case of an off-dimensional point should be taken with a grain of salt. Finding multiple such points in larger states is meaningful, but this is not what I find, except when the analysis is restricted to Republicans.

Table 5: Power Analysis Results

sample size	1,000	2,000	5,000	10,000	100,000	494,169
mean correlation	0.85	0.91	0.95	0.96	0.98	0.98
mean off-diagonals	4.7	3.3	2.2	1.2	0.4	0.4