Partisan Alignment Increases Voter Turnout: Evidence from Redistricting*

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Abstract

Are individuals more likely to vote when their party dominates election outcomes? Leveraging nationwide voter file data and the redistricting process, we present causal evidence on this question via a longitudinal analysis of individual-level political participation. Tracking turnout before and after a redistricting cycle, where the boundaries of congressional districts change, we observe what happens when registrants experience a shock to the partisan composition of their congressional district. We find a measurable increase in turnout for individuals assigned to districts aligned with their partisan identities as compared to individuals in misaligned districts. An analysis of survey data spanning the districting cycle, as well as evidence from past experimental research, point to the expressive benefits of voting for the winning party as a key mechanism. By demonstrating how districting influences political participation, our findings suggest a new implication of partisan gerrymandering that may clash with other democratic goals.

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"...I can say this — winning's a lot more fun." –Richard M. Nixon in his victory speech in 1968[1]

1 Introduction

Decennial redistricting is among the most contentious political processes in the United States. The state officials tasked with re-drawing electoral district lines face a variety of competing interests, and, depending on the rules laid out in their state's constitution, may have to deal with concerns that are political (protecting incumbent politicians and the seats held by their political party), legal (maintaining districts of equal population and not diluting political representation of minority groups), and practical (maintaining relatively compact districts and respecting natural boundaries). For these reasons, redistricting invariably leads to shifts in the geographical composition of congressional districts and, more often than not, the partisan composition of those districts as well.[2] These changes hold enormous implications for who wins seats in local, state, and federal elections, and how citizens' policy preferences are represented in legislatures.

While scholars have studied at great depth how redistricting affects the partisan composition of legislatures (e.g., Kendall and Stuart 1950; Tufte 1973; King and Browning 1987; Gelman and King 1994; Chen and Rodden 2013; McKee 2013), far fewer have considered how changes in the partisan composition of districts influence voters' behaviors, such as turnout. We take up that question: How does a district's changing partisan composition influence voter turnout? To be precise, does an "alignment" between the partisan composition of the district and an individual's party affiliation increase citizen participation in an election, and does a "misalignment" created by redistricting inhibit subsequent participation by voters?

In this paper, we examine the interplay between a person's partisan identity, partisan context, and voter turnout, evaluating several competing explanations that might link these factors together. From a theoretical perspective, both the *expressive voting hypothesis* and the *elite mobilization hypothesis* imply that turnout increases with partisan alignment (i.e., the voter's partisan identity is aligned with the partisan composition of the district). In the case of *expressive voting*, casting a vote for a winner yields greater expressive benefits, which results in higher turnout. In the case of *elite mobilization*, higher turnout results from high-quality candidates deploying their plentiful

[1] `https://www.nixonfoundation.org/1968/11/victory-speech-1968/`
[2] One exception is states with single at-large districts.

resources to boost turnout among their supporters. The *partisan threat hypothesis*, on the other hand, implies that turnout increases with partisan *misalignment* as potential voters in a misaligned district compete harder for resources and representation due to "threat" from the dominant group.

To distinguish which, if any, of these theoretical perspectives stand up to scrutiny, we estimate the effect of changes in district partisanship on changes in rates of participation for individual voters. We present evidence from a real-world electoral setting and largely avoid the internal and external validity concerns that plague previous work. Our results, based on national voter file data tracking over six million individuals before and after the 2012 redistricting cycle, suggest that partisan alignment has a modest, positive effect on turnout, ruling out the *partisan threat* explanation. We then turn to longitudinal survey data to provide secondary evidence and adjudicate the extent to which mechanisms associated with *expressive voting* and *elite mobilization* are responsible for the observed turnout patterns. This secondary evidence provides support for the *expressive voting* hypothesis.

In using redistricting to understand the link between a district's partisan composition and turnout, we highlight an additional outcome affected by this contentious political process. Participation in elections is a fundamental building block of democracy and is used as a primary indicator of democratic performance (Powell 1982). If the redistricting process nudges some voters to vote or not, then this is important for practitioners of redistricting, scholars of elections, and the legal institutions that permit or sanction certain types of districting schemes to know. Ultimately, our findings indicate that participation is yet another competing interest that redistrictors (and, possibly, courts) should consider when evaluating newly drawn electoral jurisdictions.

2 Voter Turnout and Partisan Context

Early rational choice approaches to voter turnout emphasized voting as a cost-benefit calculation. As understood by Downs (1957), Riker and Ordeshook (1968), and many others, citizens should be motivated to participate when an internal calculus indicates that their vote is likely to influence the election outcome. Subsequent work challenged the empirical validity of the Downsian construct on various dimensions, but most importantly for this study, such an understanding obviates any effect of partisan alignment/misalignment on participation: on average, voters should treat aligned and

misaligned districts the same way in their turnout calculus and *not* vote. Yet, competing theories suggest differential effects depending on the partisan divide within a district. These may be grouped into three broad categories: *expressive voting*, *elite mobilization*, and *partisan threat*.

The *expressive voting hypothesis* is straightforward: the expressive benefit to casting a ballot for a winning candidate is likely greater than the expressive benefit to casting a ballot for a losing candidate. For instance, Ashworth, Geys, and Heyndels (2006) find higher turnout rates in Belgian municipalities with a single dominant party, which they attribute to expressive voting. More generally, some evidence suggests that voters prefer to be a part of the winning team (e.g., Niemi and Bartels 1984; Bartels 1988; Kenney and Rice 1994).[3] A close relative to *expressive voting* is the *voter empowerment hypothesis*. Scholars often cite the empowerment hypothesis when examining the racial and ethnic composition of districts (Gay 2001; Barreto, Segura, and Woods 2004), where being in a district with more same-race citizens is associated with higher turnout (Hayes and McKee 2012; Fraga 2018). Applying this hypothesis to partisanship, citizens whose partisan leanings align with the partisan composition of their district grow politically empowered and more likely to feel effectively represented. Indeed, citizens have greater trust in their representatives and feel more efficacious in places where their party wins and the election was not close (Brunell and Buchler 2009).

While the hypotheses discussed so far are voter-centric, the *elite mobilization hypothesis* focuses on the behavior of officeseekers and their agents. Contact by partisan elites is at the heart of mobilization-based understandings of turnout (Wolfinger and Rosenstone 1980; Rosenstone and Hansen 1993), and empirical evidence suggests campaigns have substantively large effects on turnout in recent elections, especially for targeted groups of voters (Enos and Fowler 2016). Party and candidate contact increases turnout in congressional elections as well (Wielhouwer and Lockerbie 1994; Caldeira, Aage, and Patterson 1990), and may explain higher turnout in close U.S. House elections (Cox and Munger 1989; Jackson 1996).[4] Under this hypothesis, strongly partisan (safe) districts elect representatives who are likely to keep winning in the future and become incumbents. In turn, these incumbents draw on their experience and abundant resources to campaign effectively and to turn out their bases of support (Jacobson and Kernell 1983). Higher-quality incumbent

[3]Others, such as Mutz (1997), are skeptical that voters "have an inherent desire to be on the winning team."
[4]Moskowitz and Schneer (2019) cast doubt on the existence of a causal relationship between competitiveness and turnout in recent U.S. House elections.

candidates will expose their supporters to increased direct voter contact, media advertising, and outside endorsements, boosting co-partisan turnout. In a district where a subset of the same voters comprised a political minority whose party had essentially no chance of winning the election, these outreach efforts would exist to far less a degree or not at all. For the majority group in such districts, campaign targeting should also be facilitated (Oberholzer-Gee and Waldfogel 2005). Because the change in behavior in this theory occurs at the level of party officials, politicians, and campaign staffers — all keenly aware of the composition of the district — elite mobilization theory does not require citizens themselves to be informed about the composition of their districts.

The above hypotheses predict increases in turnout for changes in district composition that align with an individual citizen's partisanship. A final theoretical explanation — "threat" — goes in the opposite direction. If potential voters feel that they must compete harder for resources and representation when they are part of a minority in the district (due to "threat" from the opposing group), then they will be more likely to turn out after shifts in the district that make them a political minority. This theory has primarily been applied in the context of race, where scholars have found evidence for the threat hypothesis at both a macro (Key 1949) and micro level (Enos 2016). The same logic could be applied for party, and while attempts to establish empirical evidence for explicitly *partisan* threat have not been confirmatory so far (Barber and Imai 2014), the notion that potential voters respond to the increased presence of an out-group with higher levels of participation bears further investigation.

Empirical tests to adjudicate which of these processes dominates are fraught with issues of internal and external validity. For one, strategic redistricting (whereby district lines are purposefully drawn to include or exclude voters with certain characteristics) poses a fundamental problem for making firm inferences from cross-sectional studies that focus on the effects of redistricting. Hunt (2018), in an analysis of the impact of redistricting in Florida, finds suggestive evidence that partisan alignment (misalignment) increases (decreases) turnout, but the analytical framework for this paper focuses on a single year and a single state with a highly contentious redistricting process. Other observational studies may suffer from selection problems. For example, if individuals self-select into homogeneous communities with respect to ideology or party (Motyl et al. 2014), or if members of one party sort (Cho, Gimpel, and Hui 2013; Mummolo and Nall 2016), then partisan alignment may correlate with important observed and unobserved voter characteristics that are also related

to turnout. Finally, disaggregating the effects of partisan alignment from the effects of district heterogeneity is also not trivial, as past research has suggested heterogeneity within a district (Kaniovski and Mueller 2006) or neighborhood (Gimpel, Dyck, and Shaw 2004) may have a negative effect on turnout; or alternatively, conflict aversion may depress participation in areas with partisan and ideological diversity (Mutz 2002). Under such a framework, electoral jurisdictions would play no precise role in affecting turnout, except insofar as they reflect the underlying heterogeneity of a community.

While research in a laboratory setting sidesteps many of these problems, it faces other potential stumbling blocks for drawing broader conclusions. On the basis of experimental research, there is reason to suspect that placing voters in a lopsided district aligned with their partisanship may increase their propensity to turn out compared with voters in a misaligned lopsided district. This research finds that individuals are more likely to report their intent to participate in elections and are more likely to participate in simulated elections when they think their preferred choice will win (de Bock 1976; Ansolabehere and Iyengar 1994; Agranov et al. 2018); these findings that align best with the expressive voting hypothesis. However, the extent to which findings from a lab setting extend to voters making real-world decisions is unclear.

We attempt to balance the tradeoffs between internal and external validity by drawing on methodologies that leverage features of the redistricting process that approximate a natural experiment (Dunning 2012; Sekhon and Titiunik 2012). Importantly, we use a longitudinal approach that uses multiple snapshots of an individual's participation before and after a change in district context. This limits the possibility that self-selection or other features tied to the types of individuals who live in a particular partisan context drive our results. Similar approaches have been used to study the impact of racial/ethnic context on voter turnout (Fraga 2016; Keele and White 2018; Henderson, Sekhon, and Titiunik 2016) and the impact of competition on voter turnout (Moskowitz and Schneer 2019). We extend these advances to the study of partisan context, providing increased internal and external validity in our empirical tests with national data probing changes in voter behavior, awareness, and campaign contacts that result from redistricting.

3 Data

As noted above, the first set of explanations suggest that turnout should be higher for individuals voting in districts where their party dominates the district, *ceteris paribus*. The *partisan threat* hypothesis, on the other hand, implies that turnout should be higher in the opposite circumstance: partisans feel threatened when their majority status is eliminated, and they are mobilized to participate. As a first step, we seek to establish the *magnitude* and *direction* of the effect of district partisan composition on voter turnout, adjudicating both between these hypotheses and the possibility of no impact of district partisan alignment. We then investigate the potential *mechanisms* behind the effects we find, further refining our understanding of what motivates individuals to vote.

To study the turnout behavior of individuals across the redistricting process, we use data from Catalist, LLC.[5] Catalist is a data vendor whose primary product is a "unified national voter file," which they compile from numerous state-level and county-level voter lists across the United States. Catalist standardizes the publicly available information from voter lists, such as registration, turnout history, age, residence, gender, and race, and they routinely update the database with new information such as turnout records and changes in registration status.[6] Catalist further supplements the publicly available data from these voter lists with proprietary commercial data. Relevant to our purposes, Catalist tracks the individuals in their unified file across time, even as their registration may lapse or they move addresses.[7] Most of Catalist's clients are progressive organizations, political action committees, and Democratic candidates, but several academic studies use Catalist data (e.g., Ansolabehere and Hersh 2012; Fraga 2016; Hersh and Nall 2016). For this study, we utilize a sample of the Catalist database that contains 6.4 million individuals.[8]

In order to determine if an individual resides in a partisan aligned or misaligned district, we require a measure of the partisan composition of the congressional district. The primary measure of district partisanship we employ is derived from the Cook Political Report's Partisan Voting Index (PVI). The PVI is the average of the mean-deviated two-party vote share from the most recent

[5]See here for basic information on Catalist: `http://www.catalist.us/data/`.
[6]Some of these characteristics (e.g., race/ethnicity) are only available in certain states' voter files.
[7]"[L]ongitudinal analysis of individual-level registration or turnout is a great challenge to researchers wishing to avoid contracting with a third-party organization, despite the public availability of the voter file" (Fraga 2016).
[8]This data set is a product intended for the use of academic researchers.

two presidential elections. On a basic level, the PVI indicates, relative to the average congressional district, how many percentage points more Democratic or Republican a given congressional district is. A PVI of 0 indicates a 50/50 district, D+10 or R+10 represents a 60/40 district that favors the Democratic candidate or Republican candidate, respectively. For purposes of classifying districts as partisan aligned or misaligned, we use the 55/45 threshold.[9] An individual registered as a Republican residing in a D+6 district would be coded as "misaligned," while a registered Republican in an R+6 district would be coded as "aligned."

We also present secondary evidence based on the analysis of survey data. We use data from the 2010-2014 Cooperative Congressional Election Study (CCES) Panel. The 2010-2014 CCES Panel allows us to examine the extent to which voters demonstrate awareness of the partisan composition of their congressional districts as well as whether voters in partisan aligned districts report additional campaign contact. The CCES Panel is a sample of 9,500 respondents who are surveyed during the election season in 2010, 2012, and 2014. This information allows us to examine the mechanisms behind the turnout effects extracted from the voter file.

4 Research Design

Using a panel constructed from the voter files, we evaluate the evidence on whether voters situated in districts with a partisan composition aligned with their partisanship turn out at higher rates than voters in misaligned districts. We conceptualize the "treatment" as occurring when voters reside in a district in which the partisan composition aligns with their individual partisanship. Formally, when an individual i resides in a district matching her party registration in year t and state s, then the binary indicator variable Partisan Alignment$_{ist} = 1$; when this condition is not met, it takes the value 0. Redistricting provides the quasi-experimental variation in treatment. For example, by tracking individual voting behavior in 2008, which is pre-redistricting, and in 2012, which is post-redistricting, we observe how voters respond when placed into new districts through the redistricting process. Some of these voters experience a change in the partisan composition of their district and, thus, their individual partisan alignment. Importantly, we can also restrict the sample so that we only make comparisons between two voters of the same party who reside in the

[9]Districts within the D+5 through R+5 interval are considered competitive. Districts D+6 and "greater" are considered favoring Democrats, and districts R+6 and "greater" are considered favoring Republicans.

same congressional district in the first period.[10] This approach ensures that treatment and control units reside in roughly the same geographic area with the same pre-treatment electoral experience (with respect to congressional elections); their experience differs only insofar as the redistricting process shuffles one into an aligned district and one into a misaligned district.

Perhaps the greatest threat to internal validity when relying on redistricting to provide variation in partisan alignment is the possibility of strategic redistricting. Specifically, one might worry that state legislatures with partisan interests systematically move partisans into or out of a district based on characteristics including propensity to vote. For example, a Democratic legislature might go out of their way to move Republican voters who reside in a competitive district and who have a high propensity to turn out into a strong majority Republican district, while leaving Republican voters with a lower turnout propensity in the original, competitive district. If this were the case, then we might lack a valid comparison group for the individuals placed into the strong majority Republican district. The primary empirical approach that we take is designed to address these concerns. We use "block" fixed effects to ensure that comparisons occur between voters who start in the same district, share a party affiliation, have identical voting histories, and have similar demographic profiles with respect to age, sex, and race. These are the characteristics observable to those drawing district boundaries, so comparing within groups that share these characteristics guards against concerns about strategic redistricting.

To find the effect of competitiveness on turnout using block fixed effects, we estimate the turnout decision in a post-redistricting year as follows:

$$E(\text{Turnout}_{ibst}) = \alpha + \lambda_{st} + \gamma_b + \delta \cdot \text{Partisan Alignment}_{ibst} \quad (1)$$

where α is a constant term, λ_{st} is a state-year fixed effect, γ_b is a block fixed effect, and $\text{Partisan Alignment}_{ist}$ is a binary indicator defined as above. We determine blocks by matching individuals exactly on the following observable characteristics: congressional district pre-redistricting, party registration, Black, Hispanic, Asian, female, age group (18-24, 25-34, 35-44, 45-54, 55-64, and over 65), turnout in 2008, and turnout in 2010.

[10] Building on the framework provided in Sekhon and Titiunik (2012).

We complement this framework with a difference-in-differences approach, in which we take advantage of the over time and across individual variation in the panel data. Consider a reduced form empirical model of the turnout decision:

$$E(\text{Turnout}_{ist}) = \alpha + \lambda_{st} + \delta \cdot \text{Partisan Alignment}_{ist} + \text{Vote Propensity}_i' \cdot \psi \tag{2}$$

where α is a constant term, λ_{st} is a state-year fixed effect, Partisan Alignment$_{ist}$ is a binary indicator defined as above, and Vote Propensity$_i$ is an individual's unobserved underlying tendency to vote.[11] By imposing the assumption that unobserved propensity to vote remains constant over time, then we can let $\gamma_i = \alpha + \text{Vote Propensity}_i' \cdot \psi$ and estimate the model:

$$E(\text{Turnout}_{ist}) = \gamma_i + \lambda_{st} + \delta \cdot \text{Partisan Alignment}_{ist} \tag{3}$$

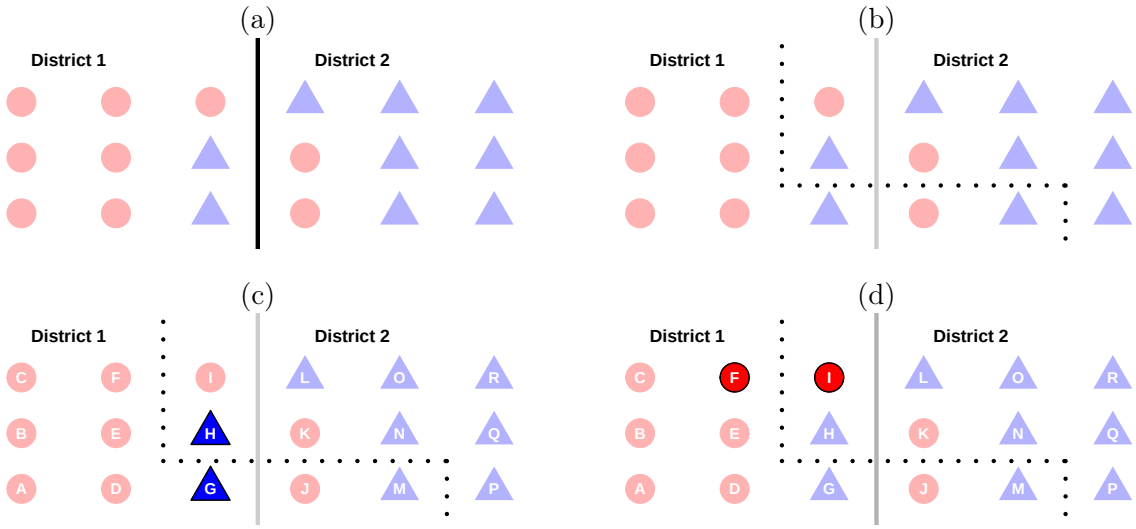
where we identify the effect of residing in a partisan aligned district based upon variation in partisan alignment over time due to redistricting. By taking this approach, we deal explicitly with the critique that the tendency to reside in a partisan aligned district might be correlated with observable and unobservable fixed individual characteristics that also affect turnout. For example, a district comprised primarily of a densely populated urban area with a high concentration of low-income voters might tend towards including many citizens whose party registration matches the partisan composition of their district (possibly boosting turnout) while also having other observable (e.g., socioeconomic status) and unobservable characteristics (e.g., lack of time/political resources) known to lower turnout. If turnout choices systematically vary with these characteristics, then estimates of the effect of individual partisan alignment on turnout would be biased if we did not condition on these variables. Since we cannot possibly measure all potential confounders, we instead employ individual and state-year fixed effects to difference out all time-invariant covariates (both measured and unmeasured) that influence turnout.

We can apply these approaches to make several different types of comparisons. Figure 1 provides a simplified graphical presentation. Figure 1a displays two districts with District 1 comprised of 7/9 Republicans and 2/9 Democrats, and District 2 comprised of 2/9 Republicans and 7/9 Democrats in the pre-redistricting period. For the sake of simplicity, suppose that Republicans (Democrats) in District 1 match on the observable characteristics that comprise a block with the other Republicans (Democrats) in the district. Part b of the figure illustrates the district composition

[11] The state-year fixed effects control for state-specific political conditions in a given election year such as gubernatorial and senatorial elections, changes to election laws, etc.

after redistricting. In this case, the partisan composition of each district remains the same pre- and post-redistricting, but several individual voters switch districts.

Figure 1 – Graphical Representation of the Research Design



First consider the comparison between citizens who experience partisan misalignment with citizens who experience partisan alignment. In this case, we identify individuals who start out (pre-redistricting) in the same, uncompetitive district where the majority of residents have an opposing partisan affiliation. This occurs in Figure 1c, which shows that both voters G and H begin in the pre-redistricting period as misaligned Democrats in a majority Republican district. However, after redistricting occurs, G remains in a misaligned district but H is located in the new District 2, which is aligned with H's partisanship. Thus, in the first period both voters have a treatment status (i.e., partisan alignment) equal to zero; in the second period, G's treatment status remains zero but H, who now resides in a partisan aligned district, has a treatment status equal to one. To estimate the effect of moving from a partisan misaligned district to a partisan aligned district, we can calculate the difference in turnout in the second period, i.e., $\delta_{m,a}^{BFE} = H_2 - G_2$, in which the subscripts on G and H refer to their district in the pre- versus post-redistricting periods and $\delta_{m,a}^{BFE}$ refers to the estimate from the block fixed effects approach of the effect of moving from a partisan misaligned to a partisan aligned district. Alternatively, *if we did not form blocks* based on observable characteristics, we could also calculate a difference-in-differences estimate of $\delta_{m,a}^{DID} = (H_2 - H_1) - (G_2 - G_1)$.[12]

[12]Further, note the link between these two estimates: because in the block fixed effects approach, blocks are formed based upon previous turnout history, we know that by definition $H_1 - G_1 = 0$, which implies that when looking within any one block $\delta^{BFE} = \delta^{DID}$.

The two key features of these approaches are that (1) they account for time-invariant covariates that might be correlated with both partisan alignment and with turnout; and, (2) they make it possible to compare only individuals who begin in the same district and belong to the same party and, through redistricting alone, experience a changed electoral context.

We can also estimate the effects of moving from a partisan aligned district to a partisan misaligned district. Figure 1d illustrates a similar exercise for voters F and I, Republicans who both begin in partisan aligned districts. The block fixed effects estimate is $\delta_{a,m}^{BFE} = F_2 - I_2$ and the difference-in-differences estimate of partisan alignment is provided by $\delta_{a,m}^{DID} = (F_2 - F_1) - (I_2 - I_1)$. Finally, in instances with competitive districts (i.e., not a clear majority of Republican or Democratic voters in a district), then we may also estimate the effects of moving from a competitive district to a partisan aligned district ($\delta_{c,a}$) or the effects of moving from a competitive district to a partisan misaligned district ($\delta_{c,m}$) using a similar approach.

5 Main Results

Our expectation is that partisan alignment matters and, further, that it boosts rather than depresses turnout. That is, we expect that one of the elite mobilization or expressive voting hypotheses (which predict positive effects), rather than the partisan threat hypothesis (negative effects), prevails.

More formally, we are interested in testing the following hypothesis:

$$H_0 : \delta = 0 \qquad \text{(H1a)}$$
$$H_A : \delta \neq 0$$

where δ is either $\delta_{a,m}$ or $\delta_{m,a}$ and we perform a test with the null being that the partisan alignment/misalignment treatment has no effect. Additional evidence of a positive effect of increasing alignment can occur when examining the transition from competitive to aligned or misaligned districts. If moving from a competitive to a partisan aligned district ($\delta_{c,a}$) has a greater effect than moving from a competitive district to a partisan misaligned district ($\delta_{c,m}$), then this pattern helps

confirm our expectations. We therefore test:

$$H_0 : \delta_{c,a} = \delta_{c,m} \tag{H1b}$$
$$H_A : \delta_{c,a} \neq \delta_{c,m}$$

A second order question is whether the effects of partisan alignment/misalignment operate symmetrically; that is, does moving from a partisan aligned to misaligned district have the same magnitude effect as moving from a partisan misaligned to aligned district? Does a move from a competitive to a partisan aligned district have roughly equal magnitude and opposite sign to a move from a competitive to a partisan misaligned district? We test for symmetry in terms of the magnitude of effects:

$$H_0^a : \delta_{m,a} = \delta_{a,m} \text{ and } H_0^b : \delta_{c,a} = -\delta_{c,m} \tag{H2}$$
$$H_A^a : \delta_{m,a} \neq \delta_{a,m} \text{ and } H_A^b : \delta_{c,a} \neq -\delta_{c,m}$$

To test these hypotheses, we devise four different sets of comparisons. In the first comparison, we examine individuals who start in a partisan misaligned district in the first period; in the second period, some remain in a misaligned district and some, through the redistricting process, are placed into a partisan aligned district. In the second comparison, we examine the converse of this scenario. In the first period, all voters reside in a partisan aligned district; however, in the second period, some voters continue in the aligned district, while others are placed in a misaligned district. For the third and fourth scenarios, we instead examine individuals who are in a competitive district in the first period (i.e., one where each party's vote share falls in the ± 5 range). We then study what happens when, in the second period, some voters remain in a competitive district and some are placed into districts with a new partisan composition (in the third scenario a partisan match and in the fourth a partisan mismatch).

Table 1 reports the results from each of these approaches for our preferred model specification, which uses block fixed effects to estimate effects for pooled post-redistricting election years (2012, 2014 and 2016). Panel A includes all districts, whether or not any of the residents of a particular district are shifted into a different partisan context due to redistricting — in effect, in-

cluding individuals in "unredistricted" districts as controls. Panel B instead restricts the sample to pre-redistricting districts where at least some voters end up in a different partisan context post-redistricting; individuals redistricted to a new partisan context are matched with individuals from the same initial district who do not experience a change in partisan context. Table 1 indicates that across all specifications, estimated effects are in the expected direction. Columns 1 and 2 provide the most straight-forward estimates; for these columns, across the years we examine, we observe effect sizes that range from slightly more than a third of a percentage point to a 1.5 percentage point increase in turnout rates attributable to partisan alignment. A 99% confidence interval does not overlap with zero for our estimates of the effect of moving from a misaligned to an aligned district; however, we cannot say the same for the estimates of moving from an aligned to a misaligned district. The direction, magnitude, and significance of these point estimates provide initial evidence supporting Hypothesis H1a.

We also can examine Hypothesis H1b, which indicates a differences in the effects for individuals moving from competitive to aligned districts versus those moving from competitive to misaligned districts. If the effect of the former is larger and we can reject the null of no difference in effects, then this provides additional evidence in support of either the expressive voting or elite mobilization theories. Running this hypothesis test, we can indeed reject the null of no effect for both Panels A and B (at $p \leq 0.05$ and $p \leq 0.01$, respectively). For these specifications, moving from a competitive to an aligned district has a meaningfully different effect on turnout than does moving from a competitive to a misaligned district and, specifically, $\delta_{c,a} \geq \delta_{c,m}$. Overall, then, in each panel, two of three hypothesis tests allow us to reject the null that partisan (mis)alignment has no effect on turnout in favor of the finding that partisan alignment has a positive effect and the finding that partisan misalignment has a negative effect.

Table 1 – Block FE: Individual Regressions of Turnout on Partisan Alignment, Aligned versus Misaligned Districts, All Years with State-Year FEs

	Misaligned to Aligned/ Misaligned	Aligned to Aligned/ Misaligned	Competitive to Competitive/ Aligned	Competitive to Competitive/ Misaligned
	(1)	(2)	(3)	(4)
Panel A: All Districts				
Partisan	0.0149	0.00371	0.00698	
Aligned	(0.00495)	(0.00423)	(0.00785)	
Partisan				-0.0149
Misaligned				(0.00571)
Observations	655716	1083330	578658	551433
R^2	0.057	0.064	0.066	0.065
Panel B: Redistricted				
Partisan	0.0138	0.00519	0.0106	
Aligned	(0.00347)	(0.00374)	(0.00596)	
Partisan				-0.0189
Misaligned				(0.00633)
Observations	471510	820128	538329	511143
R^2	0.434	0.407	0.410	0.443
State-Year FEs	Yes	Yes	Yes	Yes
Block FEs	Yes	Yes	Yes	Yes

Standard errors, clustered at the pre/post redistricting Party-CD level, are in parentheses.
The sample is comprised of contested general elections by a D and R candidate.
Panel B matches observations in treatment group to controls from same first period CD.
All elections in Louisiana are excluded from the sample due to their unusual rules.

To test the symmetry hypothesis (H2), we have two pieces of evidence to examine. First, we can compare the estimates from models 1 and 2 (i.e., examining $\delta_{m,a}$ versus $\delta_{a,m}$). Second, we can compare the magnitudes of the estimates from models 3 and 4 (i.e., examining $\delta_{c,a}$ versus $-\delta_{c,m}$). The results here are more mixed. Comparing the effects from models 1 and 2, we can reject the null of no difference in the estimates for Panel A and for Panel B at $\alpha = 0.10$ but not at $\alpha = 0.05$. Yet when comparing the magnitudes of the estimates from models 3 and 4, we cannot reject the null hypotheses in either panel. Thus, we have only limited evidence that moving from a misaligned to an aligned district has a more pronounced effect than moving in the opposite direction. That said, even though the results are not significant when comparing models 3 and 4, we observe effects of a slightly larger magnitude when moving from a competitive to a misaligned district, which cuts against the notion that moving to an aligned district is uniquely important for turnout. Based on this mixed evidence, we think it is safest to conclude that the magnitude of the effects of alignment versus misalignment are not tremendously different from one another.

In addition to the results in Table 1, we also estimated effects when separating midterm and presidential election years, and using the difference-in-differences approach instead of block fixed effects. We present the raw results of these analyses in the Online Appendix and summarize the effects with regard to our hypotheses in Table 2. The first column in the table indicates whether the tests were performed using turnout data from all election years, midterm election years only (2010 and 2014), or presidential election years only (2008 and 2012 as well as another set of results using 2008 and 2016). The second column of Table 2 indicates the modeling approach: difference in differences (DID) versus block fixed-effects (BFE). The "Right Direction" columns refer to whether or not the sign of the effect is in the hypothesized direction for a given hypothesis. The $p \leq 0.05$ columns refer to whether or not the null hypothesis can be rejected at standard levels of statistical significance.

Across each combination of year and specification, we counted the number of estimates that support Hypotheses 1a and 1b (in the columns labelled Hyp. 1) and the number of estimates that support Hypothesis 2. When we evaluate Hypothesis 1, which states that moving to (away from) partisan aligned districts increases (decreases) turnout, we find that the effects operate in a direction that overall supports either the expressive voting or elite mobilization hypotheses more than three quarters of the time. When formally testing each hypothesis for a given year/specification

Table 2 – Summary of Regressions of Turnout on Partisan Alignment

		Hyp. 1		Hyp. 2	
Year	Spec.	Right Direction	$p \leq 0.05$	Right Direction	$p \leq 0.05$
All Years	BFE	6/6	4/6	4/4	0/4
All Years	DID	6/6	1/6	3/4	1/4
Mid-Term	BFE	5/6	2/6	1/4	0/4
Mid-Term	DID	0/6	0/6	0/4	0/4
Pres.	BFE	8/12	7/12	4/8	0/8
Pres.	DID	12/12	7/12	7/8	0/8

combination, we can reject the null at $p \leq 0.05$ slightly less than half of the time. Looking more closely across years and specifications in Table 2, several patterns emerge worth noting. First, we observe stronger effects of partisan alignment in presidential election years, with notably more mixed results in midterm election years. Second, the results are more likely to allow rejection of the null hypothesis of no effect under the block fixed effects approach as compared to the difference-in-differences approach, with the most notable differences occurring in midterm years.

Initially, we thought that a "learning" effect might explain the larger and more robust effects observed in the presidential election years; in this case, the effects of switching to a new district would be more mobilizing/demobilizing in the first election year after redistricting than in later years. For example, after a redistricting period, candidates might work harder to reach out to new partisans in their district thereby boosting turnout, efforts that are not as strong in subsequent contests. Such a phenomenon would explain larger effects in 2012 than in 2014. However, the results from 2016 do not appear to bear out this pattern. In fact, rather than observing effects in line with 2014 we instead observe effects for 2016 more similar in direction and magnitude to 2012.[13]

Instead, when the House contest coincides with the presidential election campaign cycle we see more substantial effects. Either of two possibilities may be at work. First, complementarities between presidential and House campaigns might be responsible for the larger, positive effects in presidential election years. Second, potential voters may be easier to mobilize in presidential election years due to heightened attention through media coverage and the general perception of higher stakes in presidential election years. We sought to distinguish between these two options by examining whether the effect of alignment was larger in battleground versus non-battleground

[13]Again, the raw results used to build Table 2 may be found in the Online Appendix.

states during presidential elections.[14] However, results here were inconclusive, as we found a slight *positive* effect for battleground states in 2012 and a slight *negative* effect in 2016. It is possible that both of these mechanisms are at work without one necessarily overwhelming the other, but future work should examine the nature of this heterogeneity more fully.

When examining midterm years only, we also discover one specification that might support the partisan threat hypothesis. In Table 2, we see that the difference-in-differences approach, when applied to 2014 turnout only, suggests a decrease in turnout when voters are assigned to misaligned districts. To determine whether this is a mere statistical artifact or if something more meaningful is at work, ideally we would have data from an additional midterm election year. Given that this data is not yet available to us, we cannot say for sure whether the negative effects we observe in this combination of year and specification fit with a larger pattern or not. However, given that we do not observe similar results for the block fixed effects specification for these same years, we do not think we have robust evidence in favor of the partisan threat hypothesis.

We also test whether the observed effects operate symmetrically using these alternative years and specifications. As with our main specification presented in Table 1, we do not find convincing evidence that the effects of alignment differ in magnitude from misalignment. In the Table 2 column labelled "Right Direction" under Hypothesis 2, we count the share of instances in which the effects of alignment are positive and the effects of misalignment are negative. This occurs the majority of the time, with the notable exception of the midterm difference-in-differences approach mentioned above. When we test Hypothesis H2 formally, which compares the magnitudes of the positive versus negative effects, we cannot reject the null in the vast majority of cases. This finding suggests that, for these additional specifications and subsets of the data, we do not have much evidence to suggest that partisan alignment or misalignment operate very differently from one another (i.e., alignment appears to be as mobilizing as misalignment is demobilizing).

Taking all of the evidence presented so far, we appear to be able to reject the null hypothesis of no effect of partisan alignment. Furthermore, most estimates have values consistent with positive effects of partisan alignment on turnout. Though the results are less clear for one type of specification in midterm election years, in the vast majority of our analyses we see results consistent with one of the

[14]We determined battleground status by referring to the classifications made in Enos and Fowler (2016).

two hypotheses (elite mobilization or expressive voting) that predicts a boost in turnout resulting from partisan alignment.

6 Secondary Evidence: Voter Awareness & Campaign Contact

Section 5 provides evidence that assignment to a partisan aligned district leads to a modest increase in turnout as compared to residing in a misaligned district. In this section, we utilize survey data to examine the mechanisms producing our finding and, to the extent possible, adjudicate between the *expressive voting* and *elite mobilization* hypotheses laid out in Section 2. Specifically, survey data allows us to explore whether patterns of voter awareness and self-reported campaign contact coincide with the increases in turnout that we have observed. Are voters aware of their district's partisan composition? Do voters experience more campaign contact when they are situated in a partisan aligned district relative to a misaligned district?

We begin by using data from the 2010-2014 Cooperative Congressional Election Study (CCES) Panel to investigate if citizens are aware of the partisan composition of their congressional districts. The 2010-2014 CCES Panel tracks 9,500 respondents to the 2010 CCES through the 2014 election.[15] In 2012 and 2014, CCES Panel respondents were asked: "How would you describe the new Congressional District you live in?" They could respond: "Most people are Democratic," "Most people are Republican," or "My district is a mix with no single dominant party."[16] We create a perception of district partisanship variable that takes a value of -1 if the respondent states that the district is mostly Republican, 0 if the respondent states that the district is mixed, and 1 if the respondent says the district is mostly Democratic.

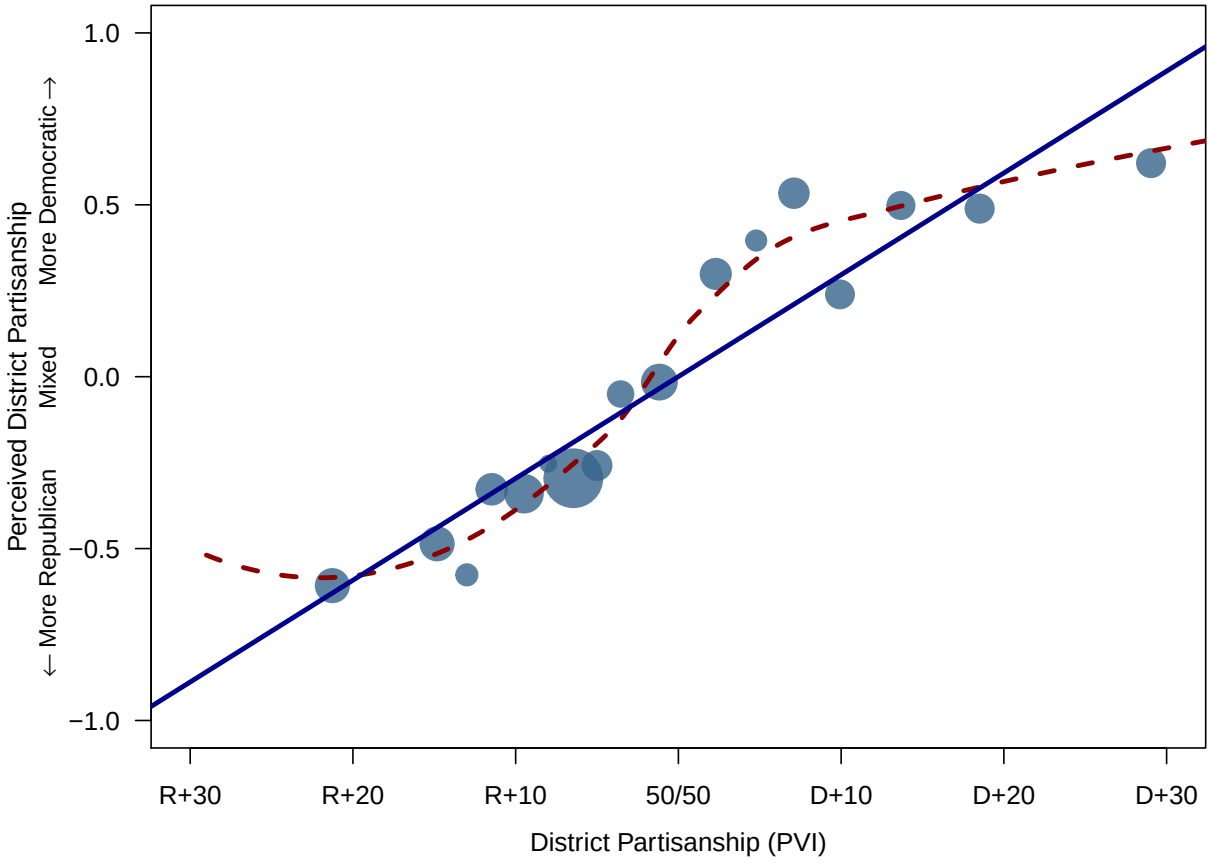
Figure 2 plots respondents' perceptions of their district partisanship in 2012 against a measure of the actual district partisanship (PVI) in 2012. We see that voters are aware of their district's partisanship to an impressive degree: respondents situated in Democratic districts tend to indicate that they are in mostly Democratic districts, those in competitive districts largely indicate that there is a mix, and respondents in heavily-Republican districts correctly indicate that most people in their district are Republicans. On its face, therefore, respondents seem able to infer when they

[15] The 2010 CCES had 55,400 respondents.

[16] As in our analyses using voter file data, we restrict to respondents who did not move throughout the period of the panel. This question is only asked to panel respondents (i.e., it is not included in the CCES Common Content for 2012 or 2014).

are in a circumstance in which their party is likely to win, versus congressional districts in which their party is likely to lose; a key requirement for expressive voting to take place.

Figure 2 – Voters' Perceptions of District Partisanship, 2012



This figure demonstrates that voters are largely aware of their congressional districts' partisan composition. This binned scatterplot is based on tabulations of 2012 data from the 2010-2014 CCES Panel. Each point in the figure corresponds to a local mean and is proportional in size to the number of observations within the locale. The dark blue, solid line is based on a linear regression and the red, dashed line is based on a locally weighted regression.

The analysis in Figure 2 indicates that voters correctly identify the partisan composition of their congressional district. However, such a relationship is not definitive evidence that voters are able to perceive the *changes* in district composition that produce the turnout effects we find above. Perhaps voters (correctly) guess the the partisan composition of their immediate surroundings (due to sociodemographic features of their neighborhood, for instance), and use this information as a proxy for the partisan composition of their congressional districts. Based on our research design in Section 5, variation in congressional district partisanship is induced by changes to district bound-

aries. If our turnout effects are attributable to expressive voting, therefore, voters must also be aware of changes to the partisan composition of their district that result from redistricting.

In Table 3, we conduct a more stringent test of voters' ability to judge their congressional district's partisan composition. While model (1) shows the results for the linear regression in Figure 2, models (2) and (3) account for the partisanship of each respondent's *pre*-redistricting congressional district. In model (2), we include fixed effects for respondents' "old" congressional district. By conditioning on the pre-redistricting congressional district, we can isolate voters' perceptions of their current district partisanship from the partisanship of their previous district. In model (3), we take a different approach with the same objective in mind: we condition on the partisan composition of the pre-redistricting congressional district ("lagged PVI"). While the magnitude of the estimated coefficients from models (2) and (3) is somewhat smaller than the naive estimate from model (1), models (2) and (3) still indicate a statistically (and substantively) significant ability of respondents to perceive their congressional district's partisan composition independent of the partisanship of their previous district.[17] In sum, citizens demonstrate awareness of the partisan composition of their congressional district, even when they are in a "new" partisan circumstance in the first election after redistricting.[18]

Table 3 – Perceived Partisan Composition of District | 2012

	(1)	(2)	(3)
PVI	0.0296	0.0213	0.0205
	(0.0014)	(0.0023)	(0.0029)
Lagged PVI			0.0102
			(0.0029)
Constant	0.0013	-0.0087	0.0019
	(0.0193)	(0.0075)	(0.0192)
Observations	7611	7611	7611
R^2	0.257	0.444	0.264
Old District FEs	No	Yes	No

Standard errors, clustered by congressional district, are in parentheses.

[17] Moving from a 60/40 pro-Republican district (R+10) to a 60/40 pro-Democratic district (D+10) is associated with about a 0.4 increase in perceived district partisanship.

[18] While we focus on perceived district partisanship in 2012, results are extremely similar for perceptions of district partisanship in 2014. See Figure A.1 and Table A.15 in the Online Appendix.

While awareness of the partisan composition of the congressional district is a necessary precondition for individuals to engage in expressive voting, there may be other observable implications of this mechanism. For instance, individuals who engage in expressive voting should also have greater awareness of their party's candidate, that is, their "team leader." In all three years of the 2010-2014 CCES panel, respondents are asked to rate the Democratic and Republican House candidates in their district in terms of competence and personal integrity. Respondents are also asked to place these candidates on an ideological scale.[19] For all three of these questions, respondents can choose the option: "Not sure." We investigate whether individuals situated in partisan aligned districts are better able to make an evaluation of their party's candidate (i.e., less likely to respond "not sure").[20] It is worth noting that, for a given characteristic, candidate, and year, approximately 35-40 percent of all individuals are unable to make an evaluation. Because this question is asked both pre- and post-redistricting, we can examine whether the same individual is more or less likely to evaluate her party's candidate under varying conditions of partisan (mis)alignment.[21] By including individual and state-year fixed effects, we implement a research design similar to our study of turnout reported in Section 5 with many of the same benefits (e.g., protecting against time-invariant confounding).[22]

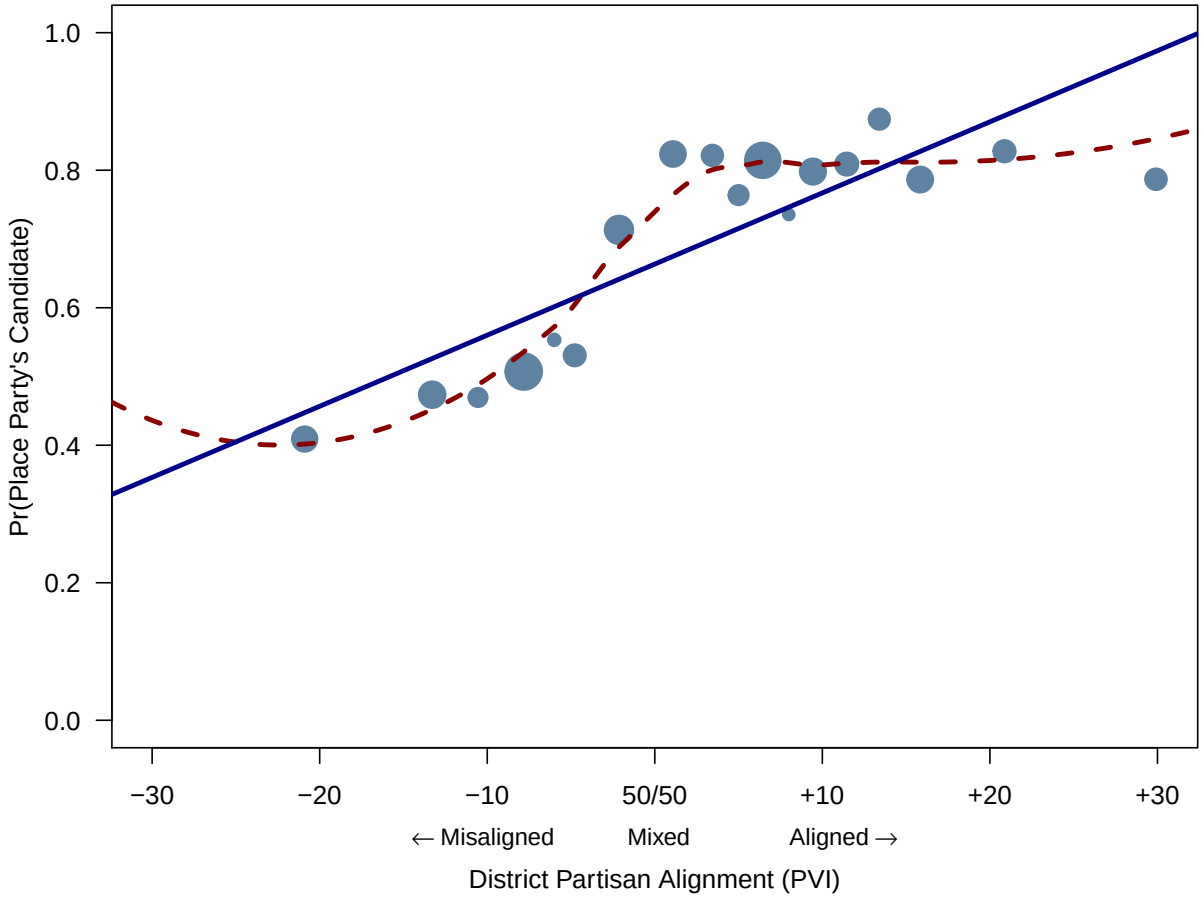
[19]The text of the competence and personal integrity question is as follows: "Please rate the following characteristics of the [Democratic/Republican] candidate [INSERT NAME] for the U.S. House in your district...[Competence / Personal integrity]." Respondents then rate how strong or weak the candidate is on a seven-point scale, or they respond: "Not sure." For placing the candidate on an ideological scale, respondents are asked: "How would you rate each of the following individuals and groups...[INSERT NAME]." Respondents then rate the candidate on a seven-point scale from very liberal to very conservative, or they respond: "Not sure."

[20]In other words, if the respondent makes an evaluation of her party's candidate for a given characteristic in a given year, Evaluation$_{ict}$ is coded = 1 (where i is the index for respondents in the CCES Panel, c is the set of characteristics to be evaluated: {competence, personal integrity, ideology}, and t is the set of years in the CCES Panel: $\{2010, 2012, 2014\}$). If the respondent cannot make an evaluation of her party's candidate and instead responds not sure, $Evaluation_{ict}$ is coded = 0.

[21]The partisan-aligned district variable is coded = 1 if the respondent is in a district aligned with her partisan identity (D+6/R+6 or greater) and coded = 0 otherwise; the competitive district variable is coded = 1 if the respondent is in a district where the PVI is within the interval of R+5 through D+5 and coded = 0 otherwise; and the set of misaligned voters is the reference group for the regression. We define respondents' partisan identities based on their 2010 responses in the CCES Panel. Partisan leaners as well as weak and strong partisans are all included. Non-leaning independents are not included in these analyses.

[22]These results are based on candidate evaluations made in 2010 and 2014. We opt to use 2010 and 2014 because the 2010-2014 CCES Panel does not have candidate evaluations for 2008. As in the previous section, we exclude respondents who experience uncontested races, races between two Democrats or two Republicans, and respondents living in Louisiana due to their unique electoral rules.

Figure 3 – Ability to Place Their Party's Candidate on an Ideological Scale, 2012



This figure demonstrates that voters in congressional districts aligned with their partisanship are better able to place their party's candidate on an ideological scale. This binned scatterplot is based on tabulations of 2012 data from the 2010-2014 CCES Panel. Each point in the figure corresponds to a local mean and is proportional in size to the number of observations (accounting for sampling weights) within the locale. The dark blue, solid line is based on a linear regression and the red, dashed line is based on a locally weighted regression.

We begin by reporting the cross-sectional relationship between the degree of partisan alignment and the probability respondents can place their party's candidate on an ideological scale.[23] Relative to voters residing in misaligned districts, voters in partisan aligned districts have a greater ability to place their party's candidate on an ideological scale. In Table 4, we report the more rigorous test using our panel research design for ideological placement, competence, and integrity. Here the omitted category is a misaligned district. We see that, relative to being situated in a misaligned district, individuals placed in a partisan aligned district are 17 percentage points more likely to make a competence evaluation, 11 percentage points more likely to make a personal integrity evaluation,

[23] While we show the relationship between partisan alignment and ideology for 2012, the patterns are generally similar for other characteristics and other years.

Table 4 – Ability to Evaluate Their Party's Candidate

	(1) Competence	(2) Integrity	(3) Ideology
Partisan-aligned district	0.1728	0.1121	0.1424
	(0.0551)	(0.0524)	(0.0634)
Competitive district	0.0705	0.0084	0.0729
	(0.0510)	(0.0569)	(0.0584)
Observations	10734	10782	10650
R^2	0.069	0.066	0.070
Individual FEs	Yes	Yes	Yes
State-Year FEs	Yes	Yes	Yes

Standard errors, clustered at the pre/post redistricting CD level, are in parentheses. The dependent variable is coded =1 if the respondent is able to make evaluation about their party's candidate.

and 14 percentage points more likely to make an ideological placement. Voters situated in an aligned district have greater awareness of their party's candidate, again supporting the expressive voting hypothesis.

While voters' greater ability to "say something" about their party's candidate (i.e., make an evaluation) accords with expressive voting, it could also be consistent with elite mobilization. Perhaps voters have greater knowledge about their party's candidate directly as a result of the campaign efforts of that candidate. Importantly, the results in Table 4 do not imply that voters' awareness of their party's candidate is higher in competitive districts, which are the places where incentives to raise candidate salience are strongest. Nevertheless, we search for any evidence in support of the elite mobilization hypothesis.

Elite mobilization-based explanations of partisanship tend to focus on voter mobilization and contact. Conveniently, CCES panel respondents report if campaigns contacted them during the election and, if so, the methods through which they received contact.[24] Focusing in particular on this channel of direct voter outreach from campaigns to voters makes sense given that Enos and Fowler (2016) find evidence of very large turnout effects from this mode of campaigning. On the other hand, an abundance of studies suggest that television advertising has minimal or no effect on turnout (Ashworth and Clinton 2007; Huber and Arceneaux 2007; Krasno and Green 2008;

[24]Respondents are asked: "Did a candidate or political campaign organization contact you during the [INSERT YEAR] election?" If respondents answer "yes," they are then asked: "How did these candidates or campaigns contact you...[in person / phone call / email or text message / letter or post card."

Vavreck 2007). As a result, if elite mobilization is responsible for the turnout effects reported in the previous section, it likely manifests via direct voter outreach. Again, we first show the cross-sectional relationship between the degree of partisan alignment and the probability respondents report any contact from a campaign in 2012 in Figure 4.[25] As is clear from both the locally weighted regression and the very flat linear regression, individuals residing in aligned districts do not appear to report greater campaign contact; contact increases slightly in more competitive districts but is relatively lower in both aligned and misaligned districts.[26]

Results from our more rigorous panel research design for the "any" campaign contact outcome as well as the individual methods of contact outcomes are reported in Table 5. For nearly all of the outcomes, being situated in an aligned district relative to a misaligned district seems to have little or no effect on reported campaign contact. With one exception, the estimated coefficients have a substantively small magnitude and are not significant from zero. We do find that being situated in either a partisan aligned district or a competitive district increases the probability of reporting campaign contact via email or text message by about 8 percentage points relative to misaligned districts. While 8 percentage points might at first glance seem like a large effect, given the relatively small turnout effects from most impersonal forms of campaign contact, an 8 percentage point increase in reported email/text message contact likely only translates into a minuscule increase in turnout.[27]

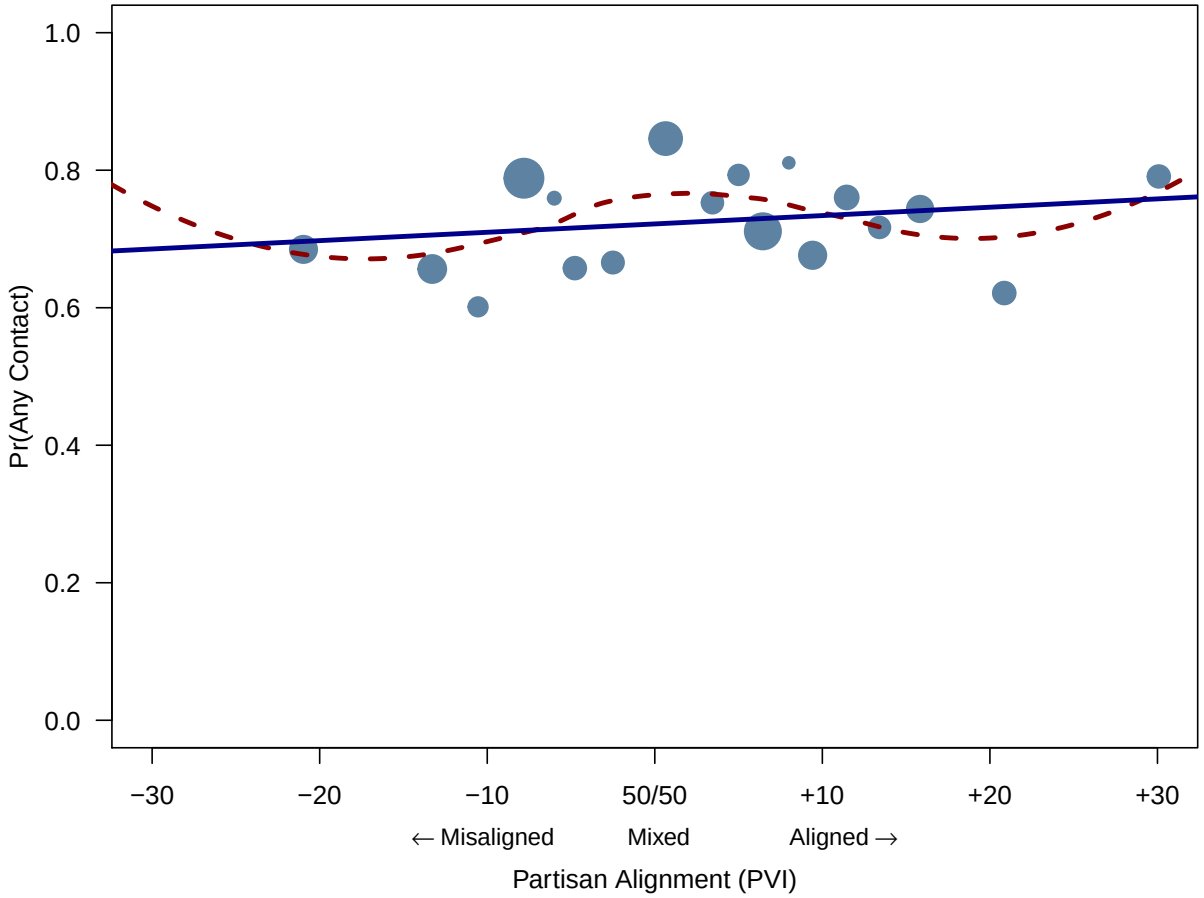
In sum, the analyses of survey data presented in this section provide both corroboratory evidence for the effect of partisan alignment on turnout and indications for which mechanisms likely produce the turnout boost. Voters demonstrate strong awareness of the partisan composition of congressional

[25] We show this relationship for 2010, 2012, and 2014 in the same plot in Figure A.2 in the Online Appendix.

[26] The loess curve begins to increase again in the extreme ends of both aligned and misaligned districts, but very few CCES respondents are in these parts of the distribution.

[27] In a meta-analysis of both published and unpublished experimental studies on turnout, Green, McGrath, and Aronow (2013) finds that most impersonal interventions have substantively small effects on turnout. Unfortunately, there are relatively few studies of the turnout effects of emails and text messages. In the case of email, few studies find positive effects on turnout. The evidence on text messages is sparse, but Malhotra et al. (2011) finds a 0.79 percentage point increase in turnout with a "cold" text message, while Dale and Strauss (2009) reports an extremely large 4.1 percentage point (treatment-on-the-treated) effect on turnout. Green, McGrath, and Aronow (2013) describes the "effectiveness of text messaging [as]...an intriguing anomaly" given that "impersonal tactics...tend to produce weak effects..." Nevertheless, our estimated 8 percentage point increase in reporting email/text message contact would only translate into a 0.3 percentage point increase in turnout, based on an estimated turnout effect of 4.1 percentage points of text messages. Of course, some of the respondents who reported contact via email or text message received emails rather than text messages.

Figure 4 – Any Campaign Contact, 2012



This figure demonstrates that voters in congressional districts aligned with their partisanship do not report substantially more campaign contact than voters in misaligned districts. This binned scatterplot is based on tabulations of 2012 data from the 2010-2014 CCES Panel. Each point in the figure corresponds to a local mean and is proportional in size to the number of observations (accounting for sampling weights) within the locale. The dark blue, solid line is based on a linear regression and the red, dashed line is based on a locally weighted regression.

districts, and are more likely to rate their party's candidate when situated in a partisan aligned district relative to a misaligned district or a competitive district. On the other hand, voters do not consistently report more campaign contact when situated in partisan aligned districts, implying that greater campaign activity is unlikely to be the explanation for increased turnout. Taken together, these findings provide relatively strong support for the expressive voting hypothesis and limited support for the elite mobilization hypothesis.

Table 5 – Reported Campaign Contact

	(1) Any	(2) In-Person	(3) Phone	(4) Mail	(5) Email/Text
Partisan-aligned district	-0.0017	0.0353	-0.0467	0.0519	0.0793
	(0.0452)	(0.0369)	(0.0499)	(0.0609)	(0.0394)
Competitive district	0.0083	0.0253	0.0007	0.0335	0.0799
	(0.0284)	(0.0243)	(0.0313)	(0.0483)	(0.0362)
Observations	12444	12444	12444	12444	12444
R^2	0.060	0.034	0.071	0.036	0.046
Individual FEs	Yes	Yes	Yes	Yes	Yes
State-Year FEs	Yes	Yes	Yes	Yes	Yes

Standard errors, clustered at the pre/post redistricting CD level, are in parentheses.
The dependent variable is coded =1 if the respondent reported campaign contact.

7 Discussion

When analyzed appropriately, the redistricting process approximates a natural experiment that induces considerable variation in the partisan composition of voters' congressional districts. The redrawing of district boundaries allocates some voters into districts aligned with their partisanship and other voters into misaligned districts. Analyzing panel data tracking over 6 million voters pre- and post-redistricting, we determine how turnout changes in response to shifting conditions of partisan (mis)alignment. We find a positive effect of about a 0.3-1.5 percentage point increase in turnout for voters assigned to a partisan aligned district relative to those assigned to a misaligned district. Examining potential mechanisms behind this effect, our analyses of survey data show that voters are highly perceptive of their congressional district's partisan composition, and individuals situated in partisan aligned districts are much more likely to be able to evaluate their party's candidate. However, voters placed in aligned districts, for the most part, do not report significantly more campaign contact relative to voters in misaligned districts. On the whole, evidence from both the voter file and survey data is supportive of the *expressive voting hypothesis*. The limited evidence of additional campaign contact in partisan aligned districts casts doubt on the *elite mobilization hypothesis* as it pertains to generating overall increases in turnout; and, finally, the positive effect of partisan alignment on turnout is at odds with the *partisan threat hypothesis*.

These findings provide a notable update to recent research (Moskowitz and Schneer 2019) that finds no discernible effect of competition on turnout. One possible explanation for this inconsistency

with previous work is that the partisan alignment of districts and voters affects turnout in more subtle ways. Measures of competitiveness account for the closeness of an election outcome, but as elections become less close these measures do not account for the direction that the district is moving from the perspective of individual voters. Our findings suggest that we might observe no overall changes in turnout as the composition of a district moves, for example, from 50/50 to 60/40 Republican, but the levels of turnout between partisans are likely still shifting under the surface, with Republican turnout increasing and Democratic turnout decreasing. We find the most convincing support for this account in the models where we separately study the effects of moving from a competitive district to a partisan aligned district and moving from a competitive district to a partisan misaligned district. In these instances, we find effects with opposite signs, consistent with the account that changes in competition could have near zero effects overall due to effect heterogeneity depending on an individual's partisan alignment.

The potential asymmetry in the effects we find also deserves further attention given its implications for our understanding of voter turnout. If researchers can show convincingly that movements from an aligned to misaligned district have smaller magnitude effects than movement from misaligned to aligned districts, then such a finding might provide some evidence in favor of habit formation as applied to voting (Meredith 2009). The logic here is that partisan alignment might provide an initial boost to turnout that persists due to habit even after a switch to a mismatched districts where the expressive benefits of casting a vote for the winning side no longer exist.

These findings have broader implications for debates about redistricting. A cursory glance at our findings would seem to support research by Brunell and Buchler (2009) and Brunell (2010) that suggests "packing" partisans into uncompetitive, homogeneous districts may improve citizens' perceptions of the representation they receive. Given findings that "packing" is an optimal strategy for those seeking partisan advantage through redistricting (Friedman and Holden 2008), the turnout increases we find with partisan alignment do indeed suggest partisan gerrymandering can yield unexpected benefits. But to whom will these benefits accrue? While courts have struggled to determine a clear standard for partisan gerrymandering (Lowenstein 2006; Stephanopolous and McGhee 2015), understanding turnout effects is important for courts evaluating partisan gerrymandering on basis of free speech or equal protection arguments. If voting is a protected form of speech, and presence in a misaligned district reduces turnout, then partisan gerrymandering systematically

benefiting one party over the other (which cuts to the heart of gerrymandering's aim) may violate this principle.

Clashes in democratic goals also persist when thinking about partisan representation. A previously unappreciated trade-off may exist between state- or national-level election outcomes and congressional election outcomes. Gerrymanders that pack partisans into just a few districts may have the effect of increasing residents' turnout above expected levels. Such a gerrymander would limit the number of congressional seats won by the party, but due to the higher turnout, may also *help* the chances of the "gerrymandered" party in statewide elections. Finally, court cases that evaluate the effects of redistricting often consider the probability of a party or candidate winning an election given different potential changes in district lines. However, the statistical models used in these efforts all assume that turnout does not change as a result of the redistricting process itself. By estimating how partisan context influences turnout, the results of this paper could be useful for evaluating the true impact of a hypothetical districting plan.

The boundaries of electoral districts often determine who gets what in politics. We demonstrate that the partisan consequences of redistricting extend beyond the representation individuals receive, shaping individual involvement in the political process itself. As affective polarization increases and the electorate increasingly views democracy as a clash of identities (Mason 2018; Iyengar et al. 2019), we provide yet another piece of evidence that party shapes political life.

References

Agranov, Marina, Jacob K. Goeree, Julian Romero, and Leeat Yariv. 2018. "What Makes Voters Turn Out: The Effects of Polls and Beliefs." *Journal of the European Economic Association* 16 (3): 825–856.

Ansolabehere, Stephen, and Eitan Hersh. 2012. "Validation: What Big Data Reveal About Survey Misreporting and the Real Electorate." *Political Analysis* 20 (4): 437–459.

Ansolabehere, Stephen, and Shanto Iyengar. 1994. "Of Horseshoes and Horse Races: Experimental Studies of the Impact of Poll Results on Electoral Behavior." *Political Communication* 11 (4): 413–430.

Ashworth, John, Benny Geys, and Bruno Heyndels. 2006. "Everyone Likes a Winner: An Empirical Test of the Effect of Electoral Closeness on Turnout in a Context of Expressive Voting." *Public Choice* 128: 383-405.

Ashworth, Scott, and Joshua D. Clinton. 2007. "Does Advertising Exposure Affect Turnout?" *Quarterly Journal of Political Science* 2 (1): 27–41.

Barber, Michael, and Kosuke Imai. 2014. "Estimating Neighborhood Effects on Turnout from Geocoded Voter Registration Records." Working Paper.

Barreto, Matt A., Gary M. Segura, and Nathan D. Woods. 2004. "The Effects of Overlapping Majority-Minority Districts on Latino Turnout." *American Political Science Review* 98 (1): 65-75.

Bartels, Larry M. 1988. *Presidential Primaries and the Dynamics of Public Choice*. Princeton, NJ: Princeton University Press.

Brunell, Thomas. 2010. *Redistricting and representation: Why competitive elections are bad for America*. Routledge.

Brunell, Thomas L., and Justin Buchler. 2009. "Ideological Representation and Competitive Congressional Elections." *Electoral Studies* 29 (3): 448-457.

Caldeira, Gregory A., R. Clausen Aage, and Samuel C. Patterson. 1990. "Partisan Mobilization and Electoral Participation." *Electoral Studies* 9 (3): 191-204.

Chen, Jowei, and Jonathan Rodden. 2013. "Unintentional Gerrymandering: Political Geography and Electoral Bias in Legislatures." *Quarterly Journal of Political Science* 8 (3): 239–269.

Cho, Wendy K. Tam, James G. Gimpel, and Iris S. Hui. 2013. "Voter Migration and the Geographic Sorting of the American Electorate." *Annals of the Association of American Geographers* 103 (4): 856–870.

Cox, Gary W., and Michael C. Munger. 1989. "Closeness, Expenditures, and Turnout in the 1982 US House Elections." *American Political Science Review* 83 (1): 217–231.

Dale, Allison, and Aaron Strauss. 2009. "Don't Forget to Vote: Text Message Reminders as a Mobilization Tool." *American Journal of Political Science* 53 (4): 787–804.

de Bock, Harold. 1976. "Influence of In-State Election Poll Reports on Candidate Preference in 1972." *Journalism Quarterly* 53 (3): 457–462.

Downs, Anthony. 1957. *An Economic Theory of Democracy*. New York: Harper.

Dunning, Thad. 2012. *Natural Experiments in the Social Sciences: A Design-Based Approach*. New York: Cambridge University Press. Kindle Edition.

Enos, Ryan D. 2016. "What the Demolition of Public Housing Teaches Us about the Impact of Racial Threat on Political Behavior." *American Journal of Political Science* 60 (1). Forthcoming.

Enos, Ryan D., and Anthony Fowler. 2016. "Aggregate Effects of Large-Scale Campaigns on Voter Turnout." *Political Science Research and Methods*. `http://journals.cambridge.org/abstract_S2049847016000212`.

Fraga, Bernard L. 2016. "Redistricting and the Causal Impact of Race on Voter Turnout." *Journal of Politics* 78 (1): 19–34.

Fraga, Bernard L. 2018. *The Turnout Gap: Race, Ethnicity, and Political Inequality in a Diversifying America*. New York: Cambridge University Press.

Friedman, John N, and Richard T Holden. 2008. "Optimal gerrymandering: sometimes pack, but never crack." *The American Economic Review* 98 (1): 113–144.

Gay, Claudine. 2001. "The Effect of Black Congressional Representation on Political Participation." *American Political Science Review* 95 (3): 589–602.

Gelman, Andrew, and Gary King. 1994. "A Unified Method of Evaluating Electoral Systems and Redistricting Plans." *American Journal of Political Science* 38 (2): 514-554.

Gimpel, James G., Joshua J. Dyck, and Daron R. Shaw. 2004. "Registrants, Voters, and Turnout Variability across Neighborhoods." *Political Behavior* 26 (4): 343-375.

Green, Donald P., Mary C. McGrath, and Peter M. Aronow. 2013. "Field Experiments and the Study of Voter Turnout." *Journal of Elections, Public Opinion & Parties* 23 (1): 27–48.

Hayes, Danny, and Seth C McKee. 2012. "The intersection of redistricting, race, and participation." *American Journal of Political Science* 56 (1): 115–130.

Henderson, John A, Jasjeet S Sekhon, and Rocıo Titiunik. 2016. "Cause or Effect? Turnout in Hispanic Majority-Minority Districts." *Political Analysis* 24 (3): 404–412.

Hersh, Eitan, and Clayton Nall. 2016. "The Primacy of Race in the Geography of Income-Based Voting: Evidence from Public Voting Records." *American Journal of Political Science* 60 (2): 289–303.

Huber, Gregory A., and Kevin Arceneaux. 2007. "Identifying the Persuasive Effects of Presidential Advertising." *American Journal of Political Science* 51 (4): 957–977.

Hunt, Charles R. 2018. "When Does Redistricting Matter? Changing Conditions and their Effects on Voter Turnout." *Electoral Studies* 54: 128-138.

Iyengar, Shanto, Yphtach Lelkes, Matthew Levendusky, Neil Malhotra, and Sean J. Westwood. 2019. "The Origins and Consequences of Affective Polarization in the United States." *Annual Review of Political Science* Forthcoming.

Iyer, Sundeep, and Keesha Gaskins. 2012. Redistricting and Congressional Control: A FIrst Look. Technical report Brennan Center for Justice.

Jackson, Robert A. 1996. "The Mobilization of Congressional Electorates." *Legislative Studies Quarterly* 21 (3): 425–445.

Jacobson, Gary C., and Samuel Kernell. 1983. *Strategy and Choice in Congressional Elections*. New Haven, CT: Yale University Press.

Kaniovski, Serguei, and Dennis C. Mueller. 2006. "Community Size, Heterogeneity, and Voter Turnouts." *Public Choice* 129 (3): 399-415.

Keele, Luke J., and Ismail K. White. 2018. "African American Turnout and African American Candidates." *Political Science Research and Methods* Forthcoming.

Kendall, M. G., and A. Stuart. 1950. "The Law of the Cubic Proportion in Election Results." *The British Journal of Sociology* 1 (September): 183-196.

Kenney, Patrick J., and Tom W. Rice. 1994. "The Psychology of Political Momentum." *Political Research Quarterly* 47 (4): 923-938.

Key, V.O. 1949. *Southern Politics in State and Nation*. New York: Vintage.

King, Gary, and Robert X Browning. 1987. "Democratic Representation and Partisan Bias in Congressional Elections." *American Political Science Review* 81 (4): 1251-1273.

Krasno, Jonathan S., and Donald P. Green. 2008. "Do Televised Presidential Ads Increase Voter Turnout? Evidence from a Natural Experiment." *The Journal of Politics* 70 (1): 245–261.

Lowenstein, Daniel H. 2006. "Vieth's Gap: Has the Supreme Court Gone from Bad to Worse on Partisan Gerrymandering?" *Cornell Journal of Law and Public Policy* N:X (January): 101–130.

Malhotra, Neil, Melissa R. Michelson, Todd Rogers, and Ali Adam Valenzuela. 2011. "Text Messages as Mobilization Tools: The Conditional Effect of Habitual Voting and Election Salience." *American Politics Research* 39 (4): 664-681.

Mason, Lilliana. 2018. *Uncivil Agreement: How Politics Became Our Identity*. Chicago: University of Chicago Press.

McKee, Seth C. 2013. "Political Conditions and the Electoral Effects of Redistricting." *American Politics Research* 41 (4): 623-650.

Meredith, Marc. 2009. "Persistence in Political Participation." *Quarterly Journal of Political Science* 4 (3): 187–209.

Moskowitz, Daniel J., and Benjamin Schneer. 2019. "Reevaluating Competition and Turnout in U.S. House Elections." *Quarterly Journal of Political Science* Forthcoming.

Motyl, Matt, Ravi Iyer, Shigihero Oishi, Sophie Trawalter, and Brian A. Nosek. 2014. "How Ideological Migration Geographically Segregates Groups." *Journal of Experimental Social Psychology*. Forthcoming.

Mummolo, Jonathan, and Clayton Nall. 2016. "Why Partisans Don't Sort: The Constraints on Political Segregation." *Journal of Politics* 79 (1): 45-59.

Mutz, Diana C. 1997. "Mechanisms of Momentum: Does Thinking Make It So?" *Journal of Politics* 59 (1): 104-125.

Mutz, Diana C. 2002. "The Consequences of Cross-Cutting Networks for Political Participation." *American Journal of Political Science* 46 (4): 838-855.

Niemi, Richard G., and Larry M. Bartels. 1984. "The Responsiveness of Approval Voting to Political Circumstances." *PS: Political Science & Politics* 17 (3): 571-577.

Oberholzer-Gee, Felix, and Joel Waldfogel. 2005. "Strength in Numbers: Group Size and Political Mobilization." *Journal of Law and Economics* 48 (1): 73-91.

Powell, G. Bingham. 1982. *Contemporary Democracies*. Cambridge, MA: Harvard University Press.

Riker, William H., and Peter C. Ordeshook. 1968. "A Theory of the Calculus of Voting." *American Political Science Review* 62 (1): 25–42.

Rosenstone, Steven J., and John Mark Hansen. 1993. *Mobilization, Participation, and Democracy in America*. Macmillan.

Sekhon, Jasjeet, and Rocío Titiunik. 2012. "When Natural Experiments are Neither Natural Nor Experiments." *American Political Science Review* 106 (1): 35-57.

Stephanopolous, Nicholas O., and Eric M. McGhee. 2015. "Partisan Gerrymandering and the Efficiency Gap." *University of Chicago Law Review* 82: 831-900.

Tufte, Edward R. 1973. "The Relationship between Seats and Votes in Two-Party Systems." *American Political Science Review* 67 (2): 540-554.

Vavreck, Lynn. 2007. "The Exaggerated Effects of Advertising on Turnout: The Dangers of Self-Reports." *Quarterly Journal of Political Science* 2 (4): 325–343.

Wielhouwer, Peter W., and Brad Lockerbie. 1994. "Party Contacting and Political Participation, 1952-90." *American Journal of Political Science* 38 (1): 211-229.

Wolfinger, Raymond E., and Steven J. Rosenstone. 1980. *Who votes?* New Haven: Yale. Raymond E. Wolfinger and Steven J. Rosenstone.; Bibliography: p. 143-150.; Includes index.

Appendix: Supporting Information for

Partisan Alignment Increases Voter Turnout: Evidence from Redistricting

Contents

A.1 Alternative Modeling Strategies, Effect of Partisan Alignment on Turnout

In the main text we explain that we use a block fixed-effects (BFE) approach to model the effect of partisan alignment on voter turnout. In Table 1 we provide estimates demonstrating that partisan alignment increases turnout and partisan misaligment decreases turnout under a variety of comparisons (i.e., aligned versus misaligned and competitive versus aligned/misaligned) and when including all districts in the sample as opposed to just districts that were redistricted. We also include Table 2 in the main text, which provides a summary of our findings under alternative specifications. Below we produce the raw estimates shown in Table 2.

Tables A.1 to A.6 use the same BFE approach as in Table 1, but separate midterm (2010-2014) and presidential (2008-2012 or 2008-2016) election years. As compared to including all years, the results are generally slightly noisier when looking at just a single pre and post year. Examining the effects when moving from misaligned to aligned/misaligned (column 1 in the tables), we observe results that range from essentially zero (in Table A.1) on the low end to 0.0353 on the high end. The results are slightly weaker when examining individuals who move from aligned to aligned/misaligned districts, ranging from -0.0066 on the low end to 0.008 on the high end. Examining movements out of competitive districts serves as another means of assessing our hypotheses. Here, the results fall generally in line with our expectations but with a notable exception of one negative point estimate when moving from competitive to competitive/aligned districts for mid-term years (significant at $p \leq 0.10$). We also observe two of six point estimates that are positive and significant at $p \leq 0.01$. Looking at this subset of the data also speaks to the literature on competitiveness and turnout. The prevalent theme in the literature is that competitiveness leads to higher turnout. Under this framework, we would expect to see negative results for both column 3 and column 4, since each indicates the effect of moving from competitive to uncompetitive districts. Echoing the findings in some other recent research (Moskowitz and Schneer 2019), this straightforward story is not exactly what we observe. Instead, 4 of 6 results for column 3 are positive. Interestingly, the lone negative results are for mid-term years. A plausible explanation for this is that when the competitiveness effect plays a role large enough to outweigh the effects of partisan alignment, it occurs in mid-term years, where House races sit closer to the top of the ticket and therefore have more salience. For individuals redistricted from competitive to misaligned districts (column 4), all six point estimates

suggest a negative effect on turnout, including in midterm years. In some sense, this is not surprising, because in this case the possible effects of competitiveness and of partisan alignment/misalignment should be operating in the same direction to depress turnout. The estimates in column 4 range from -0.0047 on the low end (in terms of magnitude) to -0.0220 (significant at $p \leq 0.01$) on the high end in terms of magnitude.

Table A.1 – Block FE: Individual Regressions of Turnout on Partisan Alignment, Aligned versus Misaligned Districts, Mid-Term Years with State-Year FEs

	Misaligned to Aligned/ Misaligned	Aligned to Aligned/ Misaligned	Competitive to Competitive/ Aligned	Competitive to Competitive/ Misaligned
	(1)	(2)	(3)	(4)
Partisan Aligned	-0.000135	0.00810	-0.00925	
	(0.00432)	(0.00395)	(0.00516)	
Partisan Misaligned				-0.0220
				(0.00479)
Observations	275898	474500	215916	205643
R^2	0.433	0.405	0.424	0.427
State-Year FEs	Yes	Yes	Yes	Yes
Block FEs	Yes	Yes	Yes	Yes

Standard errors, clustered at the pre/post redistricting Party-CD level, are in parentheses.
The sample is comprised of contested general elections by a D and R candidate.
Treatment occurs in second period.
All elections in Louisiana are excluded from the sample due to their unusual rules.

Table A.2 – Block FE: Individual Regressions of Turnout on Partisan Alignment, Aligned versus Misaligned Districts, Mid-Term Years (Redistricted Districts Only) with State-Year FEs

	Misaligned to Aligned/ Misaligned	Aligned to Aligned/ Misaligned	Competitive to Competitive/ Aligned	Competitive to Competitive/ Misaligned
	(1)	(2)	(3)	(4)
Partisan Aligned	0.00550	0.00653	-0.00432	
	(0.00452)	(0.00436)	(0.00550)	
Partisan Misaligned				-0.0220
				(0.00577)
Observations	196609	358385	199210	189814
R^2	0.442	0.413	0.488	0.442
State-Year FEs	Yes	Yes	Yes	Yes
Block FEs	Yes	Yes	Yes	Yes

Standard errors, clustered at the pre/post redistricting Party-CD level, are in parentheses.
The sample is comprised of contested general elections by a D and R candidate.
Treatment occurs in second period.
All elections in Louisiana are excluded from the sample due to their unusual rules.

Table A.3 – Block FE: Individual Regressions of Turnout on Partisan Alignment, Aligned versus Misaligned Districts, Presidential Years (2008 & 2012) with State-Year FEs

	Misaligned to Aligned/ Misaligned	Aligned to Aligned/ Misaligned	Competitive to Competitive/ Aligned	Competitive to Competitive/ Misaligned
	(1)	(2)	(3)	(4)
Partisan Aligned	0.00900	-0.00122	0.00384	
	(0.00313)	(0.00310)	(0.00426)	
Partisan Misaligned				-0.00470
				(0.00427)
Observations	283978	495273	217766	207411
R^2	0.511	0.479	0.502	0.500
State-Year FEs	Yes	Yes	Yes	Yes
Block FEs	Yes	Yes	Yes	Yes

Standard errors, clustered at the pre/post redistricting Party-CD level, are in parentheses.
The sample is comprised of contested general elections by a D and R candidate.
Treatment occurs in second period.
All elections in Louisiana are excluded from the sample due to their unusual rules.

Table A.4 – Block FE: Individual Regressions of Turnout on Partisan Alignment, Aligned versus Misaligned Districts, Presidential Years (2008 & 2012, Redistricted Districts Only) with State-Year FEs

	Misaligned to Aligned/ Misaligned	Aligned to Aligned/ Misaligned	Competitive to Competitive/ Aligned	Competitive to Competitive/ Misaligned
	(1)	(2)	(3)	(4)
Partisan Aligned	0.0103	-0.0000824	0.00168	
	(0.00329)	(0.00334)	(0.00391)	
Partisan Misaligned				-0.0135
				(0.00664)
Observations	209317	357594	203925	192891
R^2	0.529	0.498	0.521	0.599
State-Year FEs	Yes	Yes	Yes	Yes
Block FEs	Yes	Yes	Yes	Yes

Standard errors, clustered at the pre/post redistricting Party-CD level, are in parentheses.
The sample is comprised of contested general elections by a D and R candidate.
Treatment occurs in second period.
All elections in Louisiana are excluded from the sample due to their unusual rules.

Table A.5 – Block FE: Individual Regressions of Turnout on Partisan Alignment, Aligned versus Misaligned Districts, Presidential Years (2008 & 2016) with State-Year FEs

	Misaligned to Aligned/ Misaligned	Aligned to Aligned/ Misaligned	Competitive to Competitive/ Aligned	Competitive to Competitive/ Misaligned
	(1)	(2)	(3)	(4)
Partisan Aligned	0.0353	-0.00660	0.0214	
	(0.00550)	(0.00455)	(0.00816)	
Partisan Misaligned				-0.00742
				(0.00750)
Observations	292183	510944	220329	209465
R^2	0.348	0.312	0.329	0.329
State-Year FEs	Yes	Yes	Yes	Yes
Block FEs	Yes	Yes	Yes	Yes

Standard errors, clustered at the pre/post redistricting Party-CD level, are in parentheses.
The sample is comprised of contested general elections by a D and R candidate.
Treatment occurs in second period.
All elections in Louisiana are excluded from the sample due to their unusual rules.

Table A.6 – Block FE: Individual Regressions of Turnout on Partisan Alignment, Aligned versus Misaligned Districts, Presidential Years (2008 & 2016, Redistricted Districts Only) with State-Year FEs

	Misaligned to Aligned/ Misaligned	Aligned to Aligned/ Misaligned	Competitive to Competitive/ Aligned	Competitive to Competitive/ Misaligned
	(1)	(2)	(3)	(4)
Partisan Aligned	0.0290	-0.00220	0.0218	
	(0.00514)	(0.00502)	(0.00773)	
Partisan Misaligned				-0.0116
				(0.00833)
Observations	226176	407912	203262	192589
R^2	0.362	0.323	0.351	0.389
State-Year FEs	Yes	Yes	Yes	Yes
Block FEs	Yes	Yes	Yes	Yes

Standard errors, clustered at the pre/post redistricting Party-CD level, are in parentheses.
The sample is comprised of contested general elections by a D and R candidate.
Treatment occurs in second period.
All elections in Louisiana are excluded from the sample due to their unusual rules.

Tables A.7 to A.14 use a difference-in-differences approach, either pooling all years or separating midterm and presidential years. In all cases, we separate results for all districts versus redistricted districts only. The difference-in-differences results generally support the narrative advanced in this paper, but do exhibit some notable departures from expectations. Tables A.7 (all districts) and A.8 (redistricted only) report results when pooling all years. Here we observe noisier results in general than under the block fixed effects approach. The combination of the severe sample restrictions (i.e., restricting to only certain types of districts based on levels of competitiveness) and including individual fixed effects is particularly taxing on the data. Nonetheless, 7 of 8 point estimates in these tables are in the hypothesized directions. The largest effect we observe is for movements from competitive to competitive/misaligned districts at -0.0391. By far the biggest departure we observe from our hypotheses occurs in Tables A.9 and A.10, which report results for the difference-in-differences specification in midterm years. In these cases, we observe negative effects across the board. The most puzzling results are those for columns 1 and 2, where we observe slightly negative results for movements between aligned and misaligned districts. That said, only 1 of the 4 point estimates is statistically significant at $p \leq 0.10$. So, it is at least possible to interpret these as primarily null results that reflect noise in the data. The results for movements out of competitive districts in Columns 3 and 4 are more rationalizable. In these cases, the effects of competitiveness may outweigh the effects of partisan alignment for the subset of voters we are examining. Including voters who moved in the opposite directions (i.e., from aligned/misaligned districts to competitive districts) might, due to the idiosyncrasies of these elections attenuate the negative results.

The results for presidential election years are generally much more in line with expectations. Tables A.11 to A.14 report these results.

Table A.7 – Differences in Differences: Individual Regressions of Turnout on Partisan Alignment, Aligned versus Misaligned Districts, All Years with State-Year FEs

	Misaligned to Aligned/ Misaligned	Aligned to Aligned/ Misaligned	Competitive to Competitive/ Aligned	Competitive to Competitive/ Misaligned
	(1)	(2)	(3)	(4)
Partisan Aligned	0.00759	0.00368	-0.0000883	
	(0.00690)	(0.00397)	(0.00412)	
Partisan Misaligned				-0.00669
				(0.00421)
Observations	1092860	1805550	964430	919055
R^2	0.090	0.092	0.093	0.094
State-Year FEs	Yes	Yes	Yes	Yes
Individual FEs	Yes	Yes	Yes	Yes

Standard errors, clustered at the pre/post redistricting Party-CD level, are in parentheses.
The sample is comprised of contested general elections by a D and R candidate.
Treatment occurs in second period.
All elections in Louisiana are excluded from the sample due to their unusual rules.

Table A.8 – Differences in Differences: Individual Regressions of Turnout on Partisan Alignment, Aligned versus Misaligned Districts, All Years with State-Year FEs (Redistricted Districts Only)

	Misaligned to Aligned/ Misaligned	Aligned to Aligned/ Misaligned	Competitive to Competitive/ Aligned	Competitive to Competitive/ Misaligned
	(1)	(2)	(3)	(4)
Partisan Aligned	0.00670	0.00409	0.00255	
	(0.00785)	(0.00449)	(0.00424)	
Partisan Misaligned				-0.0391
				(0.0148)
Observations	785850	1366880	897215	851905
R^2	0.107	0.105	0.095	0.155
State-Year FEs	Yes	Yes	Yes	Yes
Individual FEs	Yes	Yes	Yes	Yes

Standard errors, clustered at the pre/post redistricting Party-CD level, are in parentheses.
The sample is comprised of contested general elections by a D and R candidate.
Treatment occurs in second period.
All elections in Louisiana are excluded from the sample due to their unusual rules.

Table A.9 – Differences in Differences: Individual Regressions of Turnout on Partisan Alignment, Aligned versus Misaligned Districts, Mid-Term Years with State-Year FEs

	Misaligned to Aligned/ Misaligned	Aligned to Aligned/ Misaligned	Competitive to Competitive/ Aligned	Competitive to Competitive/ Misaligned
	(1)	(2)	(3)	(4)
Partisan Aligned	-0.00970	-0.00123	-0.0185	
	(0.00582)	(0.00518)	(0.00489)	
Partisan Misaligned				-0.0140
				(0.00526)
Observations	551796	949000	431832	411286
R^2	0.024	0.022	0.014	0.014
State-Year FEs	Yes	Yes	Yes	Yes
Individual FEs	Yes	Yes	Yes	Yes

Standard errors, clustered at the pre/post redistricting Party-CD level, are in parentheses.
The sample is comprised of contested general elections by a D and R candidate.
Treatment occurs in second period.
All elections in Louisiana are excluded from the sample due to their unusual rules.

Table A.10 – Differences in Differences: Individual Regressions of Turnout on Partisan Alignment, Aligned versus Misaligned Districts, Mid-Term Years with State-Year FEs (Redistricted Districts Only)

	Misaligned to Aligned/ Misaligned	Aligned to Aligned/ Misaligned	Competitive to Competitive/ Aligned	Competitive to Competitive/ Misaligned
	(1)	(2)	(3)	(4)
Partisan Aligned	-0.00974	-0.000333	-0.0242	
	(0.00638)	(0.00577)	(0.00542)	
Partisan Misaligned				-0.0129
				(0.00546)
Observations	393218	716770	398420	379628
R^2	0.026	0.024	0.016	0.015
State-Year FEs	Yes	Yes	Yes	Yes
Individual FEs	Yes	Yes	Yes	Yes

Standard errors, clustered at the pre/post redistricting Party-CD level, are in parentheses.
The sample is comprised of contested general elections by a D and R candidate.
Treatment occurs in second period.
All elections in Louisiana are excluded from the sample due to their unusual rules.

Table A.11 – Differences in Differences: Individual Regressions of Turnout on Partisan Alignment, Aligned versus Misaligned Districts, Presidential Years (2008 & 2012) with State-Year FEs

	Misaligned to Aligned/ Misaligned	Aligned to Aligned/ Misaligned	Competitive to Competitive/ Aligned	Competitive to Competitive/ Misaligned
	(1)	(2)	(3)	(4)
Partisan Aligned	0.0120	0.00392	0.00661	
	(0.00424)	(0.00334)	(0.00371)	
Partisan Misaligned				-0.00261
				(0.00434)
Observations	567956	990546	435532	414822
R^2	0.006	0.005	0.004	0.003
State-Year FEs	Yes	Yes	Yes	Yes
Individual FEs	Yes	Yes	Yes	Yes

Standard errors, clustered at the pre/post redistricting Party-CD level, are in parentheses.
The sample is comprised of contested general elections by a D and R candidate.
Treatment occurs in second period.
All elections in Louisiana are excluded from the sample due to their unusual rules.

Table A.12 – Differences in Differences: Individual Regressions of Turnout on Partisan Alignment, Aligned versus Misaligned Districts, Presidential Years (2008 & 2012, Redistricted Districts Only) with State-Year FEs

	Misaligned to Aligned/ Misaligned	Aligned to Aligned/ Misaligned	Competitive to Competitive/ Aligned	Competitive to Competitive/ Misaligned
	(1)	(2)	(3)	(4)
Partisan Aligned	0.0119	0.00727	0.00697	
	(0.00434)	(0.00335)	(0.00456)	
Partisan Misaligned				-0.0234
				(0.0237)
Observations	418634	715188	407850	385782
R^2	0.005	0.006	0.003	0.013
State-Year FEs	Yes	Yes	Yes	Yes
Individual FEs	Yes	Yes	Yes	Yes

Standard errors, clustered at the pre/post redistricting Party-CD level, are in parentheses.
The sample is comprised of contested general elections by a D and R candidate.
Treatment occurs in second period.
All elections in Louisiana are excluded from the sample due to their unusual rules.

Table A.13 – Differences in Differences: Individual Regressions of Turnout on Partisan Alignment, Aligned versus Misaligned Districts, Presidential Years (2008 & 2016) with State-Year FEs

	Misaligned to Aligned/ Misaligned	Aligned to Aligned/ Misaligned	Competitive to Competitive/ Aligned	Competitive to Competitive/ Misaligned
	(1)	(2)	(3)	(4)
Partisan Aligned	0.0243	0.00865	0.0183	
	(0.00863)	(0.00655)	(0.00633)	
Partisan Misaligned				0.000232
				(0.00634)
Observations	584366	1021888	440658	418930
R^2	0.008	0.011	0.008	0.006
State-Year FEs	Yes	Yes	Yes	Yes
Individual FEs	Yes	Yes	Yes	Yes

Standard errors, clustered at the pre/post redistricting Party-CD level, are in parentheses.
The sample is comprised of contested general elections by a D and R candidate.
Treatment occurs in second period.
All elections in Louisiana are excluded from the sample due to their unusual rules.

Table A.14 – Differences in Differences: Individual Regressions of Turnout on Partisan Alignment, Aligned versus Misaligned Districts, Presidential Years (2008 & 2016, Redistricted Districts Only) with State-Year FEs (Redistricted Districts Only)

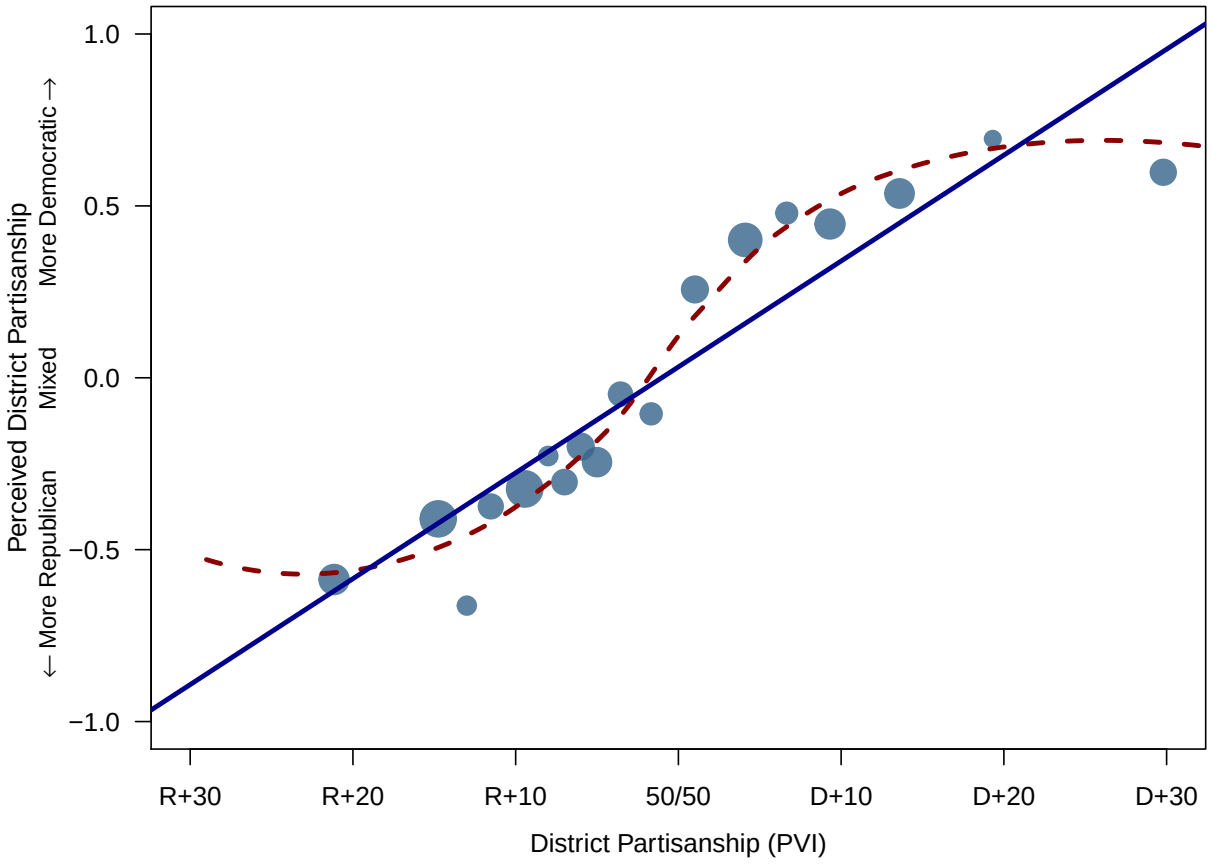
	Misaligned to Aligned/ Misaligned	Aligned to Aligned/ Misaligned	Competitive to Competitive/ Aligned	Competitive to Competitive/ Misaligned
	(1)	(2)	(3)	(4)
Partisan Aligned	0.0214	0.00743	0.0197	
	(0.00818)	(0.00694)	(0.00640)	
Partisan Misaligned				-0.0668
				(0.0420)
Observations	452352	815824	406524	385178
R^2	0.008	0.014	0.010	0.065
State-Year FEs	Yes	Yes	Yes	Yes
Individual FEs	Yes	Yes	Yes	Yes

Standard errors, clustered at the pre/post redistricting Party-CD level, are in parentheses.
The sample is comprised of contested general elections by a D and R candidate.
Treatment occurs in second period.
All elections in Louisiana are excluded from the sample due to their unusual rules.

A.2 Perceptions of District Partisanship

Secondary evidence for expressive voting in the main text takes the form of CCES panel survey results spanning the redistricting cycle. There we choose to focus on results for 2012 perceptions of the partisan composition of districts and self-reported campaign contact in the 2012 election (for the cross-sectional plots). Below we provide results for 2014 perceptions of district partisanship, where we see patterns that are strikingly similar to 2012 perceptions, even after accounting for the partisan composition of individual's pre-redistricting district.

Figure A.1 – Voters' Perceptions of District Partisanship, 2014



This figure demonstrates that voters are largely aware of their congressional districts' partisan composition. This binned scatterplot is based on tabulations of 2014 data from the 2010-2014 CCES Panel. Each point in the figure corresponds to a local mean and is proportional in size to the number of observations within the locale. The dark blue, solid line is based on a linear regression and the red, dashed line is based on a locally weighted regression.

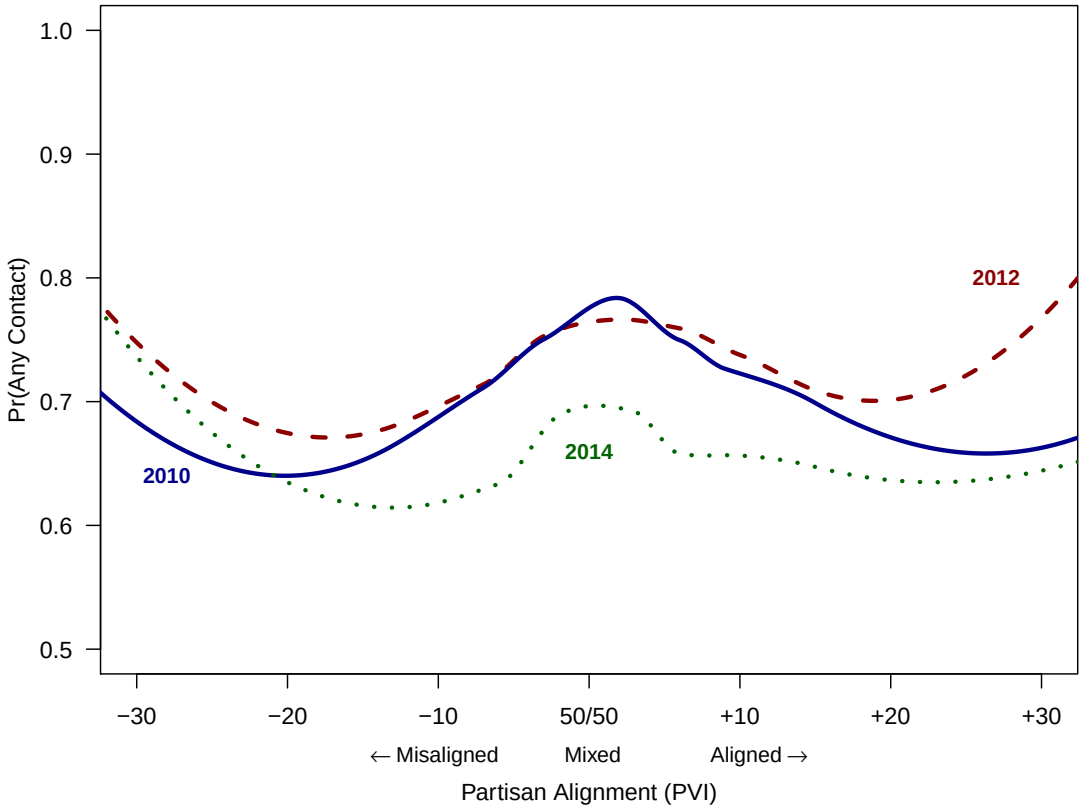
Table A.15 – Perceived Partisan Composition of District | 2014

	(1)	(2)	(3)
PVI	0.0294	0.0227	0.0204
	(0.0018)	(0.0023)	(0.0046)
Lagged PVI			0.0100
			(0.0042)
Constant	0.0100	0.0014	0.0110
	(0.0215)	(0.0074)	(0.0210)
Observations	7647	7647	7647
R^2	0.242	0.463	0.249
Old District FEs	No	Yes	No

Standard errors, clustered by congressional district, are in parentheses.

We find little evidence that campaign contact increases substantially in aligned versus misaligned districts. In the main text, we visually show this evidence for 2012. In Figure A.2, we see that this holds across years.

Figure A.2 – Any Campaign Contact



This figure demonstrates that voters in congressional districts aligned with their partisanship do not report substantially more campaign contact than voters in misaligned districts. Each curve is fit from a locally weighted regression based on CCES Panel data from each respective year.