SOCIAL SCIENCES

Persistent polarization: The unexpected durability of political animosity around US elections

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The scholarly literature suggests that, as elections approach, political tensions intensify, and, as they pass, tensions return to pre-election levels. Using a massive new dataset of 66,000 interviews (cross-sectional and panel), we find that animosities are durable and consistent over the course of the 2022 US election. Individuals with more exposure to the campaign tend to be more polarized, and this sentiment endures post-election. Contrary to expectations, partisans who voted for the winning candidate are no less polarized post-election than those on the losing side. In closing, we note that the durability of polarization has important implications not only for our understanding of the scope of partisan divides but also for efforts designed to ameliorate polarization.

INTRODUCTION

For well over a century, scholars have widely accepted that elections based on universal suffrage facilitate collective decision-making and enhance social cohesion (*1*, *2*). Recent research in political science, however, points to a less sanguine view of electoral competition. Multiple studies show that elections act as short-term polarizing events that intensify the animosity between political parties in the pre-election period, with animosity toward the opposing party then cooling off in the aftermath of an election (*3*, *4*). Election salience, this work argues, activates partisan identities.

Here, we test the activation hypothesis using a large-scale dataset (66,000 interviews administered in weekly cross sections) that allows us to compare both within-person and between-person changes in the strength of partisan identity and polarization over the course of the 2022 campaign. We are also able to assess the effects of campaigns on two other important downstream attitudes: support for democratic norm violations and support for political violence. We then test two alternative explanations for changes in polarization over time. First, we assess the extent to which changes in animosity toward the opposing party occur primarily among respondents with greater levels of exposure to the campaign. Second, we assess if the post-election declines in polarization are attributable to a weakened sense of identity threat among partisans who voted for the winning party or candidate. Last, we investigate the validity of our identifying assumption of as-if random assignment of the survey interview date, which lends additional support to our results.

Despite the growth of election denialism and the prevalence of extremely polarized and divisive campaigns, we find no evidence that measures of partisan animosity—the constellation of attitudes related to interparty hostility, support for political violence, and antidemocratic attitudes—either ramped up immediately before the US 2022 election or declined in the aftermath. The state of American politics is such that out-party animus appears to be stable and "locked in." Citizens no longer recover from campaigns and elections; instead, they maintain their high levels of affective polarization—the tendency for political party members to harbor distrust and aversion toward members of the opposing party—and do not walk back their support for violations of basic democratic norms or the use of political violence (although overall levels of support for political violence remain low). We show that this finding is durable and not a result of a ceiling effect—most voters have ample room to express animosity above current levels.

While our main result is at odds with the extant literature, in one important respect, our findings converge with previous works in political science investigating the effects of campaigning on polarization (*5*–*7*). Specifically, we find that voters who live in areas with heightened levels of campaigning are substantially more polarized. However, the effects of exposure to the campaign remain constant over time. Voters with higher and lower levels of exposure remain at their respective levels of polarization before, during, and well after the conclusion of the campaign.

The long-term stability of partisan animus and other indicators of affective polarization suggests that the partisan divide is ingrained in voters' minds and thus not susceptible to "period effects." As we discuss in the closing section, this result implies that any downstream spillover effects of political animosity—such as maintaining social distance from political opponents (*8*) and actively discriminating against out-partisans (*9*)—are also likely to remain fixed over time. While there is some evidence of the temporal stability of affective polarization (*10*), the data we present here show that standard indicators of partisan animosity remain stable and exhibit no fluctuations whatsoever in the period before or after national elections.

In what follows, we describe alternative theoretical rationales for expecting either an ebb and flow or steady state in partisan affect over the course of the campaign. We also suggest that the dominant finding of change in partisan affect attributable to election salience is questionable due to methodological limitations of extant research. Next, we present our main result that standard indicators of partisan affect remain stable over the course of the 2022 campaign and our ancillary results concerning the two potential explanations for campaign-related changes in partisan affect. In keeping with expectations, we find that the sheer volume of campaigning encountered by respondents does exacerbate the level of polarization but not the rate of change over time. Contrary to expectations, we find no evidence in favor of the status threat hypothesis; partisans on the winning side are no less polarized and no less likely to exhibit post-election reductions in out-party animus. We end the Results section by carrying out a series of robustness tests that confirm the underlying stability

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of partisan affect. Last, in closing, we consider the substantive implications of our findings for the study of contemporary American politics.

COMPETING THEORETICAL FRAMEWORKS

Why partisan animosity should respond to elections

Current theory and evidence suggest that, as elections draw near and campaigning reaches a fever pitch, affective polarization increases (*5*, *11*), only to recede in the days and weeks following the election (*12*). One explanation for this pattern is the negative tone of modern campaigns. In the pre-election period, politicians often highlight policy disagreements and social cleavages (*13*) while generally seeking to "criticize and embarrass their opponents" (*14*) and paint the other side as corrupt, incompetent, or extreme (*13*, *15*).

Another explanation is that campaigns reinforce voters' party identification (*16*, *17*). Furthermore, a recurring finding from the campaign effect literature in the post-television era (dating back to the 1950s) is that exposure to campaign messages and events hardens voters' partisanship, thereby strengthening party-line voting (*18*–*21*). As noted in one paper, "Presidential campaigns exert centripetal pressures within political parties, rallying the base and inducing party loyalty. This had happened in 2012, 2008, and many prior elections. In 2016, it happened again as Democrats rallied to Clinton and Republicans belatedly but clearly rallied to Trump" [(*22*), page 153]. Because partisanship is often closely associated with other social cleavages, it is not unexpected that political campaigns can also increase ethnic and religious intolerance (*3*) and, in some cases, even encourage acts of political violence and domestic terrorism (*23*, *24*) [although see (*25*)].

Given the prevalence of negative campaigning (especially candidates' reliance on messages attacking their opponents), we would expect partisan animosity to increase in the lead-up to the 2022 US election and decline following the election. We would also expect geographical variation in the applicability of the "surge and decline" pattern. Specifically, we expect that heightened pre-election increases in partisan animosity in more highly competitive races characterized by higher volumes of campaign activity, news coverage, and advertising (*11*, *26*).

Exposure to campaign communication is not the only mediating variable that can explain the rise and fall of partisan animus before and after elections. An alternative explanation, derived from a social identity theory (*27*), concerns partisans' sense of status threat. In periods of uncertainty, such as in the period before a close election, people tend to more strongly identify with social groups (*28*), and stronger identifiers are more likely to display partisan animosity.

Elections also evoke threats to group status and material interests (*29*, *30*). Under conditions of threat, individuals typically react defensively by increasing in-group favoritism or out-group denigration [e.g., (*31*–*33*)]. Hence, we expect animus to increase among both Democrats and Republicans in the period before the election. However, we expect that any decline in animus will be asymmetric. Election losers may still feel threat and uncertainty after the election and out-group animus will either remain unchanged or increased after the election (*34*), while we should observe a drop in animus among election winners.

There are different approaches to defining election winners and losers in the context of the 2022 midterm. One takes pre-election expectations into account. During midterm elections, the party of the incumbent president typically loses a large number of seats in the legislature. Against this baseline, Republicans massively underperformed in 2022, and the forecasted "red wave" did not materialize: Republicans lost seats in the Senate and won a very narrow majority in the House. Democrats lost 9 seats in the House, which is notably less than the historical average loss of 26 seats for the president's party since 1946. Following the election, stories such as "How Republicans lost despite winning the popular vote" (*35*) were abundant. Consistent with this reasoning (and the winner/loser gap literature), Democrats became markedly more confident in the election outcomes, while Republicans became less confident after the 2022 election (*36*).

As an alternative approach, we also define winners and losers on the basis of the actual outcomes in specific races (gubernatorial and Senate races) for the 2022 election. We find no evidence for the winner/loser hypothesis when differentiating between the different race outcomes. Likewise, we also analyze the 2020 election cycle, where the winners and losers can be more clearly defined. We find no asymmetry in partisan affect post-election and no evidence for the winner/loser hypothesis when looking at the Senate and gubernatorial races. These results appear in the Supplementary Materials.

In summary, we have specified two alternative accounts for the observed rise and fall of partisan animus over the course of political campaigns. One possibility is the priming of voters' partisan identity that results from partisans' exposure to the campaign. The alternative mechanism is changes in group threat that make partisans on the winning and losing side of the election exhibit differing over-time trajectories.

Why partisan animosity should remain stable

While there is a sound theoretical basis (and extensive evidence) for anticipating that election salience will intensify political animosity, there are also good reasons for expecting these short-term effects to have diminished in recent years, at least in the United States, as American politics have become "calcified" (*37*). First, campaigns are essentially permanent, meaning that partisanship is continuously primed, and the salience of politics rarely subsides (*38*). Once reaching saturation levels, the psychological effects of negative advertising should flatline (*39*). Voters are not citizen accountants who tabulate the overall number of campaign messages from elites they are exposed to before forming an attitude (*40*); instead, they tend to update negative and positive feelings about politicians and political parties in response to the flow of elite messaging, which, at a certain point, pushes the individual effect of a campaign to near zero (when they have maximized negativity). The latest work shows that the total volume of campaign ads has little effect on voter attitudes but that a large difference in the volume of campaign ads between candidates has a small effect (*41*).

American elections have also become highly nationalized. Partisan animosity at the state and individual levels vary, but as we show here, this variation cues off national trends. While the average level of partisan animosity varies between states (the intercept of a simple model), the change observed over time within each state (the slope) is not significant and is comparable across states. Underlying this nationalization of political campaigns are overlapping phenomena that directly affect partisan animosity levels. First, coverage of national news now overwhelms local news coverage because of the slow death of print media (*42*) and the centralization of television news (*43*). Stories focusing on local issues and nonpartisan

decision-making have been replaced by a steady stream of news reports highlighting polarized national issues (*44*). Second, not only do local candidates now link their campaigns to national politics, but their messages also reach geographical areas well beyond the boundaries of the constituency in question. This was particularly true in 2022, when control of the House and Senate hung in the balance. Campaigns advertise widely, and many legislators, particularly from competitive regions, receive most of their campaign donations from citizens living outside their state. Overall, while the salience of elections once varied markedly across the country, at present, the strength of the signal is more geographically uniform.

Third, there is evidence that the level of partisan animus remains fairly stable, even during contentious times. For instance, affective polarization did not increase during the COVID-19 pandemic (*45*) or before and after the especially contentious and divisive 2016 presidential election (*10*). In line with the political socialization literature, this could be a function of the closing gap between adults and pre-adults in the level of out-party animus (*46*) and is found in other domains, such as immigration attitudes (*47*). Recent scholarship has shown that, in data pooled over 1980 to 2016, affective polarization did not increase as the election drew near (*48*).

In summary, recent changes in the strategy and conduct of American political campaigns have increased the scope and reach of political campaigns. Voters' sense of partisanship is therefore constantly activated, and this effect extends well beyond the boundaries of individual election constituencies. The upshot is that markers of affective polarization will remain relatively stable over the course of the campaign.

Limitations of extant research

In addition to the competing reasons for anticipating either change or stability in partisan animosity, there are limitations to the evidence documenting short-term effects. Most notably, with one exception (*4*), the extant research has examined only substantial time periods before (*5*, *11*) or after (*12*, *49*) the election—but not both. One paper (*50*) did examine periods before and after the election but only focused on a 7-day period, when election salience is at its peak, and relied on a relatively small sample ($n = 1120$). As the relationship is assumed to follow a nonlinear U curve with salience increasing in the lead-up to the election and receding following the election (*4*), we need observations both before and after the election to fully model the change over time. We summarize the design limitations of prior works in Table 1.

Second, the evidence on short-term change is limited to measures of partisan identity and affective polarization. While both are central to the concept of partisan animosity (*51*), they may not be causally related to other, potentially more problematic, components (*52*), such as support for democratic norm violations and support for political violence. No study to date has investigated the effect of election salience on the propensity to support democratic norm violations and advocate for political violence.

Third, previous studies relied on data obtained from ongoing national survey studies such as the American National Election Studies (ANES) and the National Annenberg Election Survey (NAES). While these data offer the advantage of enabling comparisons across multiple election years, they are notably constrained when it comes to the number of observations available for each day within the specified time frame, particularly in the immediate proximity of the election. For example, in the week prior to the 2020 election, the ANES data include fewer than 30 observations per day, and in the 5 days following the election, the ANES data have only two observations in total. Given that the period surrounding an election is pivotal for understanding the impact of election salience, these studies yield limited evidence concerning the effects of election salience on voter attitudes.

Table 1. Overview of election salience research Note: Window is measured in number of days. ctrys, countries.

Study	Pre/post	*N*	Country	Window	Type of study	Results
Grant, Mockabee, and Monson (2010)	Pre	2455	United States	119	Cross-sectional	Increase party identification accessibility pre-election
Sood and Iyengar (2016) NAES 2000	Pre	10,398	United States	~300	Cross-sectional	Increased animosity pre-election
Sood and Iyengar (2016) NAES 2004	Pre	7950	United States	~300	Cross-sectional	Increased animosity pre-election
Bassan-Nygate and Weiss (2022)	Pre	4486	Israel	44	Cross-sectional	Increased animosity pre-election
Singh and Thornton (2024)	Pre	17,001	United States	68	Cross-sectional and panel	Increased affective polarization to candidate pre-election
Michelitch and Utych (2018)	Pre/post	464,171	86 ctrys	~365	Cross-sectional	Increased then decreased partisanship
Sheffer (2020)	Pre/post	1120	Canada	7 and 7	Panel	Decreased partisanship
Singh and Thornton (2019)	Post	127,327	46 ctrys	~400	Cross-sectional	Decreased partisanship post-election
Hernández, Anduiza, and Rico (2021)	Post	111,242	42 ctrys		Cross-sectional	Decreased animosity post-election

Fourth, election contexts matter. Parties, elections, and systems of government vary widely, as do the extent to which citizens are attached to or affiliated with parties. Hence, it is important to differentiate between temporal and spatial variation in animosity. Indicators of animosity exhibit clear variations both between and within countries (*6*, *53*, *54*). However, these differences may reflect the specific institutions and the entrenched political landscape of these areas. For instance, several states are consistently characterized as battleground states, experiencing continuous political conflict at both the state and national level.

Therefore, a general model likely averages over important differences between nations. To show this, we conduct a new analysis of the largest dataset on election salience and partisanship (*4*). We find large country-level differences when the data are disaggregated and analyzed at the country level. For the sake of consistency and comparability, we use an interrupted time series (ITS) analysis approach where we look at national trends in attitudes after elections, although the results are substantively similar when using the original modeling approach (see Supplementary Materials A.1). Because of data sparsity in the original dataset of 86 countries, we could estimate pre- and post-election slopes only for a subset of 51 countries. Our analysis in Fig. 1A shows the inconsistent effect of salience post-election. While many countries exhibited the negative relationship between post-election salience and partisanship (21 of the 51 countries or ~41%), a substantial portion of countries (12 of the 51 countries or ~24%) produced a null result, i.e., a total change in predicted probability of partisanship post-election as less than 0.05. Last, 18 of the 51 countries or ~35% displayed a positive change post-election. Figure 1B suggests that there is no consistent effect across countries, with a relatively normal distribution of test statistics that cluster below standard levels of statistical significance. This is consistent with evidence that election salience only relates to partisanship in systems with less permanent party systems (*4*). These divergent patterns underscore the necessity of considering the sociopolitical dynamics within individual countries. Furthermore, these data are now 20 years old, and partisanship, at least in the United States, has become far more salient (*55*) and potentially more stable in recent years. While we acknowledge previous findings of an average election salience effect, we argue that cross-national results obscure substantial heterogeneity and overstate the scope of these effects.

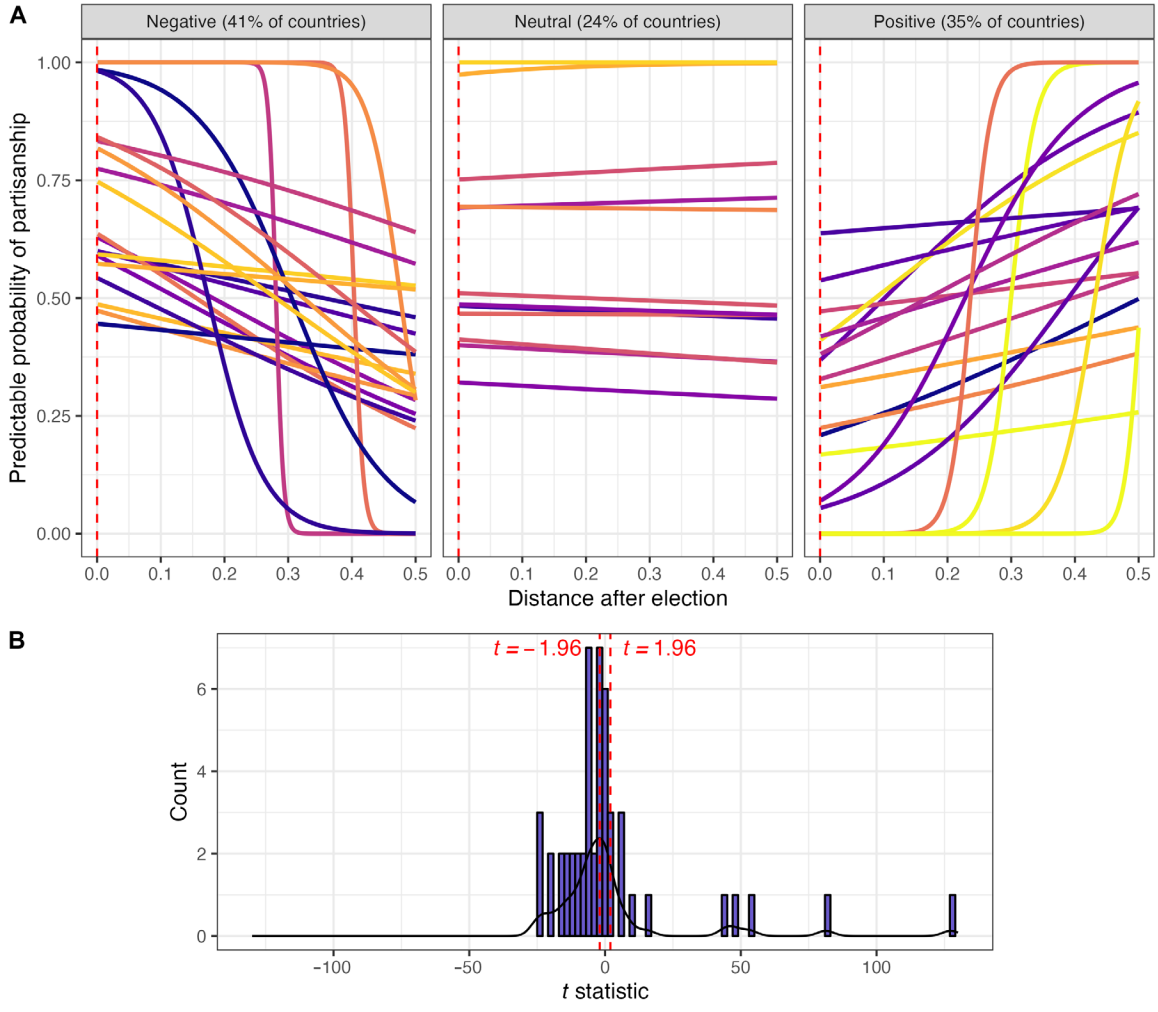

Fig. 1. Effect of election salience by country. (**A**) Country differences in predicted probabilities of identifying as a partisan as a function of proximity to an election. Figure based on ITS models. (**B**) Histogram with a density curve of *t* statistics for changes in slope by country following an election.

Last, we note that, to the best of our knowledge, no study has examined if exposure to campaigns, the key mechanism underpinning the phenomenon under investigation, moderates the election salience effect. The combination of the US federalist system and a large sample size allows us to do precisely that. Conducting a within-country analysis in the United States enables us to investigate specific mechanisms that cross-national data cannot adequately address. This approach allows for a more nuanced understanding of how campaign exposure influences voter behavior and attitudes, thereby making a substantial contribution to the literature on election salience.

RESULTS

Contrary to the literature, we find that the level of partisan animosity was unaffected by temporal proximity to the 2022 election. Instead of the expected surge and decline pattern surrounding the election, we find that the indicators of *affective polarization* remain consistently and durably high (see Fig. 2). While the feeling thermometer measure of *affective polarization* was elevated in the pre-election period ($m = 54$ versus $m = 51$ for post-election), this effect, although relatively small ($\beta_{Std} = -0.074$, 95% confidence interval (CI) [−0.136, −0.011]), was statistically significant ($P = 0.021$). As Election Day approached, however, *affective polarization* remained

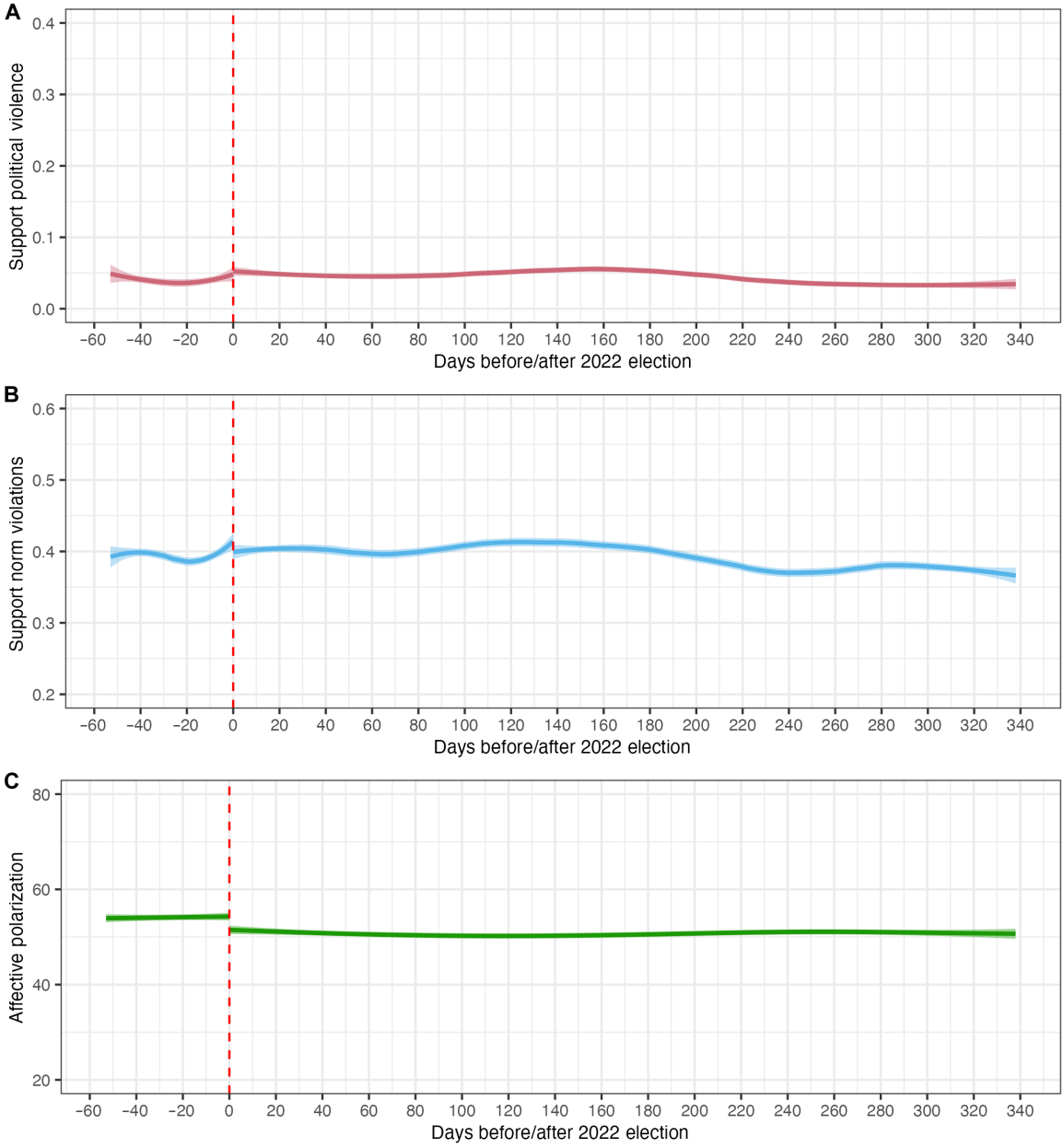

Fig. 2. Effect of distance to/after election. Figure based on the loess models. For the figure based on ordinary least squares (OLS) ITS models, see fig. S1. (**A**) Effect of *election salience* on *support for political violence*. (**B**) Effect of *election salience* on *support for antidemocratic norms*. (**C**) Effect of *election salience* on *affective polarization*.

remarkably stable, with no substantial variation observed (β_{Std} = −0.002, 95% CI [−0.041, 0.037], P = 0.92). Following the election, there was no significant decline in *affective polarization* with each passing day (β_{Std} = −0.031, 95% CI [−0.096, 0.034], P = 0.350).

Similarly, we observed no significant difference in *support for norm violations* pre- to post-election (β_{Std} = −0.011, 95% CI [−0.076, 0.054], P = 0.746). *Support for democratic norm violations* increased very slightly but steadily from the pre- to the post-election, from a low of 0.40 in September to a high of 0.42 in March (β_{Std} = 0.070, 95% CI [0.028, 0.113], P = 0.001). However, the slopes of the lines in the pre- and post-election periods were nearly identical, and the interaction term was small and nonsignificant (β_{Std} = −0.055, 95% CI [−0.120, 0.011], P = 0.102).

Last, and consistent with the results noted above, the mean *political violence* score barely moved from 0.05 (on a 0 to 1 scale) in the pre-election period to 0.06 post-election but was not significant (β_{Std} = 0.055, 95% CI [−0.005, 0.116], P = 0.071). Over the pre-election period, as the election drew nearer, *support for electoral violence* remained relatively constant, only slightly increasing (β_{Std} = 0.039, 95% CI [−0.001, 0.078]), although this was not significant (P = 0.051). Following the election, *support for political violence* decreased gradually, at a rate of one-thousandth of a percent per day (β_{Std} = −0.043, 95% CI [−0.104, 0.019]). However, this slope difference was neither significant (P = 0.172) nor substantively meaningful. (See table S1 for full tabular results and table S2 for results with multiple comparison corrections.)

For all three outcome variables, equivalence tests found the difference in slopes both before and after the election to be statistically equivalent to zero. Furthermore, the results from the full, quadratic, and cubic models are all substantively similar to the linear model (see tables S3 to S5), which provides further confidence in the robustness of our findings.

Mechanisms

We turn next to the stipulated explanatory mechanisms. We test the anticipated effects of campaign exposure by first comparing respondents living in states with zero, one, or two contests for the positions of US senator or governor for the 2022 election as more races imply more campaigning (see Fig. 3).

Contrary to the salience prediction, voters in states with two statewide races were less affectively polarized than those with only one statewide race (β_{Std} = −0.090, 95% CI [−0.125, −0.056], P < 0.001). Exposure to statewide races did affect support for norm violations in the expected direction; residents of states with two statewide races were more supportive of norm violations than those exposed to only one statewide race (β_{Std} = 0.061, 95% CI [0.025, 0.096], P < 0.001).

People living in states with two races were slightly more supportive of partisan violence than those living in states with one race (β_{Std} = 0.080, 95% CI [0.046, 0.114], P < 0.001). Contrary to expectations, however, people living in states with no statewide races proved slightly more supportive of partisan violence than those living in states with one race, although this difference was not statistically significant (β_{Std} = 0.053, 95% CI [−0.011, 0.118], P = 0.106).

The trends observed across different periods were similar within each outcome and never significantly differed from one another. That is, the three-way interaction between the time variable, the post-election dummy, and the number of statewide elections was not significant in any models. We additionally tested if there were significant variation in partisan animosity between states with gubernatorial elections and those with senatorial elections. We found no significant differences by *type of race* (i.e., gubernatorial or senatorial; see table S6). Multiple comparison corrections do not affect the results (see table S7).

Turning to electoral competitiveness, the results for *affective polarization* proved consistent with expectations. Out-party animus was significantly (and substantively) higher in competitive states measured with the continuous *Cook Partisan Voting Index (PVI)* (β_{Std} = −0.047, 95% CI [−0.063, −0.031], P < 0.001). For instance, respondents living in the most competitive states registered a thermometer difference of 56, while those in the least competitive states registered a score of 44. Somewhat unexpectedly, support for electoral violence (β_{Std} = 0.019, 95% CI [0.004, 0.035], P = 0.016) and violation of democratic norms (β_{Std} = 0.017, 95% CI [0.001, 0.033], P = 0.042) were slightly (but significantly) lower in states that were more competitive.

Electoral competitiveness, however, did not moderate the effects of proximity to the election. In Fig. 4, we repeat this analysis but within each tertile of state competitiveness. Although the graph reveals some slight differences in the time trends, no clear pattern emerges, and the three-way interaction between the time variable, post-election dummy, and statewide *PVI* was never significant (see table S8). Multiple comparison corrections do not affect the results (see table S9). We can replicate this analysis with *district competitiveness*, although the respondent's congressional district was only available starting 28 October 2022. These results show that the effects of the time variable are no different across levels of *district competitiveness* either.

To examine the degree to which post-election status anxiety varies between supporters of the winning and losing party, we first consider the winner/loser status at the national level, with Democrats being designated as the winners (because they surpassed expectations for 2022) and Republicans as the losers (because they underperformed expectations). While we anticipated a decrease in *out-party animosity* among the winning party's supporters and either no change or an increase among the losing party's supporters post-election, we found no change in *out-party animus* post-election for supporters of either party. Moreover, no increased status threat was experienced by either side leading up to the election as *out-party animosity* remained stable for both parties. The same outcomes are observed when winners and losers are defined by whether or not their party identity matched that of the winner of their Senate and gubernatorial elections, providing further evidence for our claim that *out-party animus* in America is deeply rooted and unaffected by the short-term contextual changes surrounding elections. (These trends can be visualized in figs. S5 to S7.)

Panel replication

Because our respondents could be reinterviewed 3 weeks after their initial interview, we conducted a secondary analysis as a robustness test by subsetting individuals who underwent interviews both before and after the election and incorporating a fixed effect by a respondent. In the lead-up to the election, our analysis found no significant effect of *date of interview* on individuals' *affective polarization* (β_{Std} = 0.044, 95% CI [−0.018, 0.105], P = 0.168), *support for norm violations* (β_{Std} = −0.029, 95% CI [−0.095, 0.037], P = 0.390), or *support for political violence* (β_{Std} = 0.059, 95% CI [−0.008, 0.126], P = 0.082). We note that, while coefficients are approaching significance, after multiple comparison correction, those coefficients are no longer

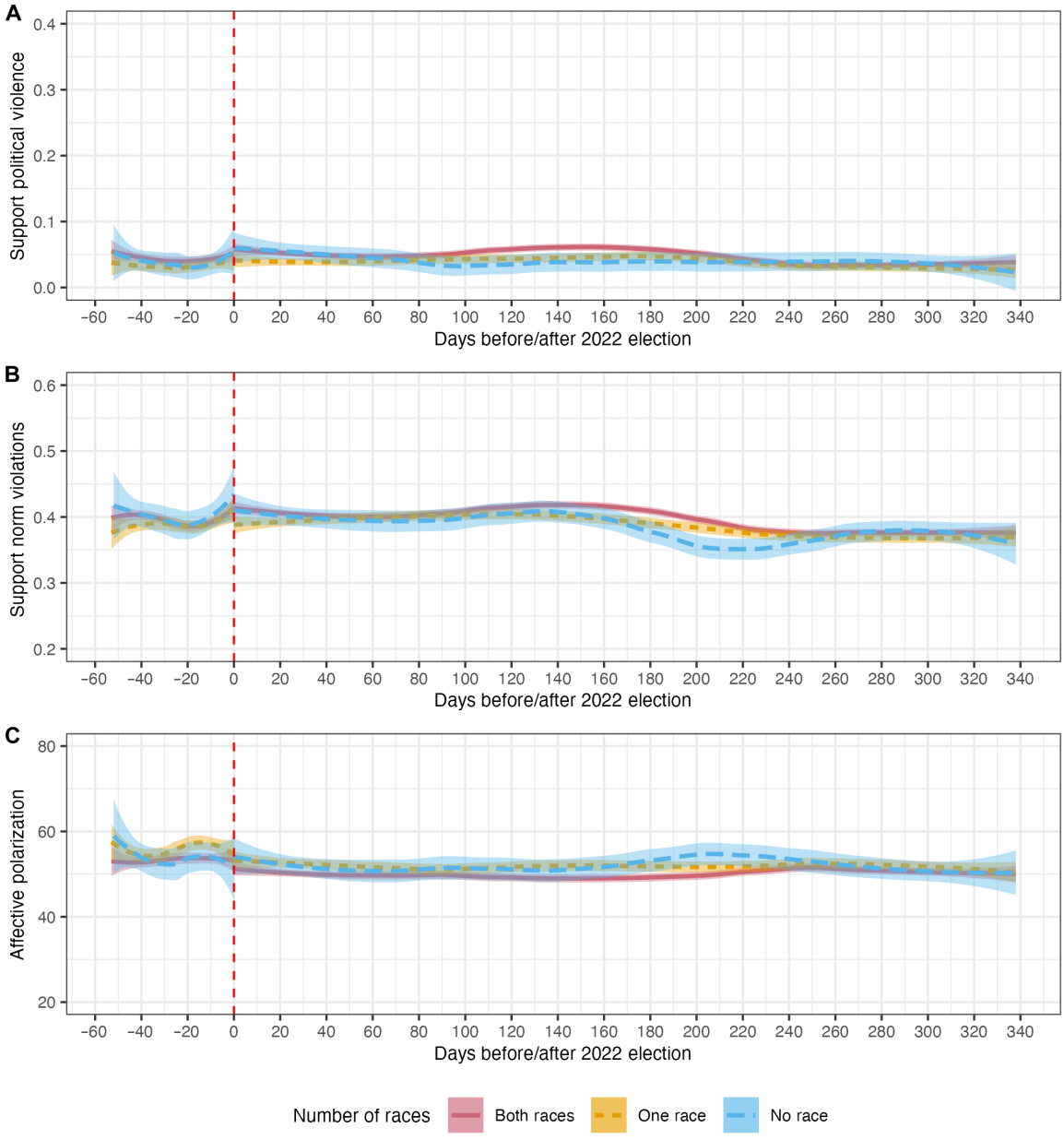

Fig. 3. Effect of number of races. Figure based on the loess models. For the figure based on OLS ITS models, see fig. S3. (**A**) Effect of *election salience* on *support for political violence* by *number of races*. (**B**) Effect of *election salience* on *support for antidemocratic norms* by *number of races*. (**C**) Effect of *election salience* on *affective polarization* by *number of races*.

even marginally significant. Similarly, following the election, we observed no substantive change in *affective polarization* ($\beta_{Std} = -0.053$, 95% CI [−0.146, 0.040], $P = 0.260$), *support for norm violations* ($\beta_{Std} = 0.077$, 95% CI [−0.017, 0.171], $P = 0.109$), and *support for violence* ($\beta_{Std} = -0.088$, 95% CI [−0.209, 0.032], $P = 0.151$). See table S10 for complete results. In short, there is no evidence at all of a rise and fall over time in the measures of partisan animus.

Robustness: Support for the identifying assumption

As with all naturally occurring treatments, it is possible that the treatment was administered in a way that makes our assumption of quasi-random assignment (of the survey date) implausible [see (*56*)]. Following a past work that assumes as-if random assignment of election surveys (*49*), we test if several potential confounders predict the number of days between the election and the date on which a respondent was surveyed. These results consistently show insignificant and trivial associations between the *date of the survey* and potential individual-level confounders (*age, gender, education*, and *political identity*). Furthermore, no relationship was found between the *survey date* and the *location (state)* of the respondent (see tables S11 and S12).

Last, as a placebo test, we replicated the main analysis but treated each day in the analysis as the pseudo-election. The patterns in attitudes around Election Day are, we find, no different than what we

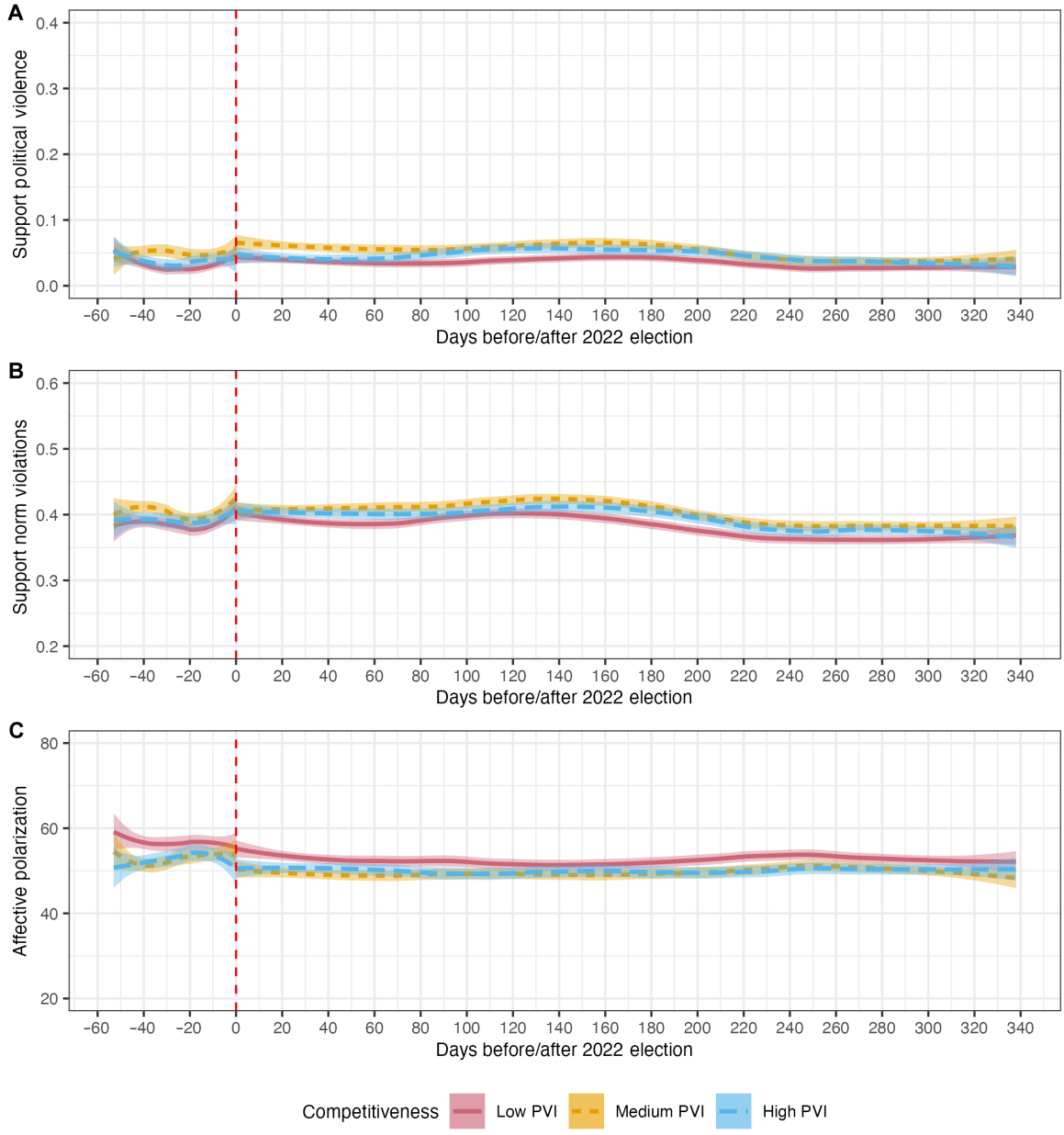

Fig. 4. Effect of competitiveness. Figure based on the loess models. For the figure based on OLS ITS models, see fig. S4. A lower PVI indicates a more competitive state. (**A**) Effect of *election salience* on *support for political violence* by *competitiveness*. (**B**) Effect of *election salience* on *support for antidemocratic norms* by *competitiveness*. (**C**) Effect of *election salience* on *affective polarization* by *competitiveness*.

observe when looking at differences around random cut points (see fig. S8).

Robustness: 2020 election analysis using Nationscape data

As an additional robustness check, we analyzed the 2019 to 2021 Nationscape data to determine if our observed null effects were consistent across different datasets, different elections, and different kinds of elections (presidential and midterm). Unlike the 2022 election, the 2020 election had clearly defined winners and losers as the Democratic Party won control of the presidency, the House, and the Senate. Although the Nationscape data lack variables for measuring *support for democratic norms* or *political violence*, it includes measures of favorability toward political parties on a four-point scale, enabling an assessment of *affective polarization* by proxy (*57*). Using the same modeling strategy, we found evidence consistent with our main findings: *Affective polarization* neither increased in the lead-up to the 2020 election (β_{Std} = 0.007, 95% CI [−0.026, 0.041], P = 0.672) nor receded following the election (β_{Std} = 0.006, 95% CI [−0.040, 0.052], P = 0.806). Furthermore, in terms of the winner/loser hypothesis, we find no asymmetry in partisan affect post-election and no difference in partisan affect when looking at the Senate and gubernatorial races. Despite focusing on a different election, a different kind of election, and using a smaller scale for *affective polarization*, the consistency of these null effects supports

the conclusions drawn throughout the study (see table S13 for tabular results and fig. S9).

DISCUSSION

Political polarization has evolved into a stable feature of American society in highly politicized and apolitical settings alike (*9*, *10*). Furthermore, partisan animus is ingrained and not merely a short-term response to electoral campaigns. Three different indicators of partisan animosity proved generally unresponsive to temporal variations associated with the occurrence of elections.

While we do find that voters more exposed to the campaign were more polarized, the differences between these groups remained constant over time. We infer that an equilibrium level of animosity had already been reached before the onset of the 2022 campaign; in other words, the differences in polarization between partisans with more or less exposure to the 2022 campaign were "baked in," perhaps as a result of exposure to multiple campaigns over decades.

While our results differ from many previous studies, as we noted at the outset, there is a sound theoretical basis for expecting a weakened time trend in the current era, at least in the United States. Modern political campaigns are essentially continuous streams of communication, and the salience of politics rarely subsides (*38*, *58*). Also, the fact that campaigns are highly nationalized (with the same issues and themes playing out across the country) makes for a uniform national treatment (*44*). In short, while the salience of elections once varied markedly across state lines, these geographical variations occur on a much reduced scale today. Furthermore, our results align with contemporary research that finds affective polarization based on partisanship to be unaffected by election salience (*48*). While one study found an increase in affective polarization based on evaluations of the candidates (*48*), we are unable to test this finding with our present data. Last, our results are limited to the United States at a particular point in time. While others have found evidence in favor of the election salience effect, on average, across countries prior and before the age of hyperpolarization, as we show in Fig. 1, there is substantial variation between countries. The United States is an outlier in many ways however.

In addition, our expectations about asymmetries between election winners and losers did not bear out. However, the 2022 election, wherein Republicans massively underperformed but did not actually lose the House, may not be the best context for this hypothesis. We also do not find any asymmetry when the winner/loser status is defined at the race level (both gubernatorial and Senate races) or when we look at the 2020 election using the Nationscape data.

While our results are based on high-quality opt-in surveys, respondents to these surveys tend to be more very politically engaged and therefore have more crystallized attitudes (*59*). Somewhat reassuringly, our (null) findings are similar across levels of respondents' political interests. Furthermore, one could argue that our results generalize to the part of the electorate that will participate in elections. Nonetheless, modern public opinion research faces unique challenges in recruiting and measuring the attitudes of hard-to-reach populations.

Partisan animosity does vary across states and political constituencies, but as we show here, this variation cues off national trends. States have varying baseline levels of partisan animosity, but changes over time are consistent and not substantively different across states. Last, there is evidence that the level of partisan animus is durable and remains fairly stable, even during contentious times (*10*, *45*).

We recognize that it is challenging to argue for a null result, but our design is especially well equipped to detect even minute exposure effects (Cohen's $d = 0.04$). We obtained consistent null findings across three related measures of partisan animosity—affective polarization, support for norm violations, and support for political violence. These nonresults cry out for further theorizing and research on the complex interplay between political context and partisan attitudes. The evidence reported here is limited to the 2022 midterm election and the 2020 presidential election and may not be representative of all elections. In some 2022 gubernatorial/state races, instances of partisan crossover voting were observed, potentially exerting an impact on political competition. Notably, in states such as Pennsylvania and Georgia, the phenomenon of voters aligning with the opposition for at least one office appeared to influence the electoral dynamics. Perhaps, the stability of partisan sentiment we observed may not apply to louder presidential elections. With that said, our findings do align with a past work that shows affective polarization remaining stable after the 2016 presidential election (*10*).

In closing, we note that, for defenders of American democracy, our results arguably provide some grounds for optimism as they suggest that efforts by opportunistic candidates to stoke animus and division during campaigns are likely to prove ineffective, particularly when the rhetoric encourages partisans to violate established norms or turn to violence. On the other hand, political animosity has become such a durable feature of public life that it no longer "cools off" in the aftermath of contentious political campaigns. The implications of such entrenched polarization could be ominous.

MATERIALS AND METHODS

We investigate the effect of election salience—operationalized as the number of days before/after the 2022 election—on three measures of partisan animosity: *support for political violence, support for norm violations*, and the standard feeling thermometer measure of *affective polarization*—the difference between the in-party thermometer score and the out-party thermometer score. Of the three outcomes, we expect *affective polarization* to be the most responsive to electoral closeness as recent research has shown that, while short-term interventions may reduce *affective polarization*, they do not affect support for *democratic norms* (*52*), let alone *support for violence*.

We use date of survey interview, which we assume is quasi-randomly assigned, to assess the impact of *election proximity* (*48*, *49*, *60*). Leveraging the fact that each respondent's interview date was randomly assigned, we can interpret the effects of time from election as causal (*61*). We also test the plausibility of this identifying assumption in supplementary analyses. In addition, as a number of respondents were interviewed more than once, we can look at within-person changes in partisan animosity, which effectively controls for stable individual-level differences and ameliorates concerns related to differential nonresponse (*62*).

We operationalize respondents' exposure to the campaign with two indicators. First, we compare residents living in states with and without statewide contests (races for US senator and governor); our expectation is that the former group will be exposed to higher levels

of campaigning. Second, we use the 2022 Cook Report's statewide *PVI* as an indicator of electoral closeness (*63*). The *Cook PVI* gauges the degree to which a state tends to favor either the Democratic or Republican Party relative to the rest of the country. The PVI is calculated by comparing the percentage point difference between the Democratic and Republican presidential candidates' average performance in the state over the past two presidential elections with the national average percentage point difference between the two parties over the same period. For the sake of visualization and to avoid imposing strong linearity assumptions (*64*), we trichotomize the measure into tertiles, although results are no different when we treat the measure as continuous.

The sample

The individual-level cross-sectional data were collected from the YouGov Panel by the Polarization Research Lab (*65*). YouGov surveyed a total of 66,000 respondents between 16 September 2022 and 12 October 2023, covering the time both before and after the 2022 election. Respondents were eligible to be reinterviewed 3 weeks after their initial interview. This means that, for a subset of our sample, we have observations from the same individuals before and after the election (13,491 observations over 4436 respondents). This research was approved by the Ethics Committees at Stanford University, University of Pennsylvania, and Dartmouth College.

The mean age of respondents was 50.8 (SD = 17.8), with 53.8% female and 50.5% Democrats, 31.1% Republicans, and 18.4% Independents (pure independents were excluded from the sample and leaners were coded as partisans). Because of item-level nonresponse and exclusion of pure independents, the effective sample size was 54,331. For the complete set of sample descriptive statistics, see table S14.

Measures of partisan animus

Affective polarization

We measure *affective polarization* as the difference in in-party and out-party feeling thermometer scores ranging from 0 to 100. While the measure is negatively skewed, only 5.1% of people are at the maximum of the measure.

Support for norm violations

A five-item battery was used to measure *support for norm violations*. The items covered support for in-party politicians ignoring out-party judicial rulings favoring the out-party, support for in-party politicians reducing the number of polling stations in out-party-dominated areas, support for an in-party president circumventing Congress, support for censoring media sources that spend more time criticizing the in-party than the out-party, and loyalty to the party over the Constitution in the context of contested elections (Cronbach's $\alpha = 0.79$). A composite measure of *support for norm violations* was created using a unidimensional item response theory (IRT) model. For the exact wording of items and model statistics of the IRT model, see Supplementary Materials B.2. Only roughly 2% of individuals were at the minimum scale value, and the measure closely follows a normal distribution with a minor positive skew.

Support for political violence

Support for political violence was measured using (up to) five items. We use an adaptive index that begins with tolerance for nonviolent crime and then builds to support for murder. The first item was about vandalism targeting out-party signs, the second about an assault on an out-party protester, the third about arson at an opposing party headquarters, the fourth about assault with a deadly weapon on an out-party protester, and the fifth about the murder of an out-party member. For the exact wording of items, see Supplementary Materials B.3. The items were asked iteratively, meaning respondents only saw the subsequent items when they selected the "support" or "strongly support" response options for the previous item. Accordingly, a respondent who opposes violence in the first question will not be presented with the subsequent questions, and only persons who respond supportively to each successive question will see the full set of questions. The items were dichotomized such that support or strongly support responses were coded as 1 and all other responses were coded as 0. The composite score summed the dichotomized items. The composite score mean was 0.05 (SD = 0.18). While most individuals were at the scale minimum, 8.4% of individuals scored higher than the minimum and almost 3% were at the maximum of the scale.

Modeling strategy

To determine the effect of election salience on the three dependent variables—*support for political violence*, *support for norm violations*, and *affective polarization*—we run a series of ITS models. As with previous studies, time to an election is used as a measure of *election salience*. To further illustrate that time from election is a valid measure of *election salience*, fig. S10 uses Google Trends search results to show that interest in both the 2020 and 2022 elections substantially increased in the month before the election, with interest levels remaining high for a couple weeks afterward, before eventually returning to pre-election levels.

For each dependent variable, we use an algorithm that identifies the optimal bandwidth choice for regression discontinuity designs (*66*). This resulted in a bandwidth of 75, 67, and 87 days for *affective polarization*, *support for norm violations*, and *support for political violence*, respectively, and with an equal numbers of days pre-/post-election. The main specification (see Eq. 1) includes a dummy variable indicating if the interview took place pre- or post-election (β_1), a variable that indicates closeness to the election in days (β_2), and the interaction between the two terms (β_3); d_i denotes the distance in days before/after the election, and ϵ_i is the error term. Our primary quantity of interest is the interaction term, which represents the change in the slope following the election, although we are also interested in the main effect of the election and days before/after election. We expect the slope of the regression line to increase as the election approaches and decrease afterward.

Power analyses show that our models are more than sufficiently powered both in terms of the ITS design and for interaction effects (see Supplementary Materials B.5). In the main text, we present loess plots of the data before and after the election, which minimize any parametric assumptions we make about the data. We also conduct a number of additional analyses that make different parametric assumptions, including a quadratic model and a cubic model. To test ancillary hypotheses, we repeat these analyses but only among cases that vary in terms of electoral context or campaign attentiveness. Each model was run both with and without controls, and the results are substantively similar. For this paper, we report standardized coefficients (β_{Std}), but the unstandardized coefficients can be derived from our replication materials

$$\hat{Y} = \alpha + \beta_1 election + \beta_2 d_i + \beta_3 election * d_i + \epsilon_i \quad (1)$$

Supplementary Materials

This PDF file includes:

Supplementary Text
Figs. S1 to S10
Tables S1 to S15

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Acknowledgments: We thank R. Carlin, D. Hopkins, S. Messing, J. McCrain, and E. Peterson for helpful feedback. **Funding:** This work was supported by the Carnegie Corporation of New York, the William and Flora Hewlett Foundation, the Institute for Humane Studies at George

Mason University, John S. and James L. Knight Foundation, Charles Koch Foundation, Templeton World Charity Foundation, and New Pluralists. **Author contributions:** N.F., S.I., Y.L., and S.J.W. conceptualized the research study. S.I., Y.L., and S.J.W. collected the data. N.F. analyzed the data, created visualizations, and drafted the Supplementary Materials. N.F. and Y.L. wrote the first draft of the manuscript. N.F., S.I., Y.L., and S.J.W. edited the manuscript. **Competing interests:** The authors declare that they have no competing interests. **Data and materials availability:** All data needed to evaluate the conclusions in the paper are present in the paper and/or the Supplementary Materials. All data and scripts needed to replicate the results and conclusions in the paper can be found at https://doi.org/10.7910/DVN/WAIING.

Submitted 13 November 2023
Accepted 31 July 2024
Published 4 September 2024
10.1126/sciadv.adm9198