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ORIGINAL PAPER

How Ideology Fuels Affective Polarization

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Abstract Scholars have reached mixed conclusions about the implications of increased political polarization for citizen decision-making. In this paper, we argue that citizens respond to ideological divergence with heightened affective polarization. Using a survey experiment conducted with a nationally representative sample of U.S. citizens, we find that increased ideological differences between political figures produce increasingly polarized affective evaluations, and that these differences are especially large among respondents with stronger ideological commitments and higher levels of political interest. We provide further support for these findings in an observational study of citizens' evaluations of the U.S. Senators from their state. We also find that the polarizing effects of ideological differences can be largely mitigated with biographical information about the public officials, which suggests that the pernicious consequences of ideological polarization can be overcome by focusing on matters other than political disagreement.

Keywords Polarization · Ideology · Electoral competition · Affect

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Introduction

In an era of heightened elite polarization, the public's evaluations of political officials and the policies they endorse have similarly become increasingly polarized. A growing literature documents the gulf in public opinion toward recent presidents George W. Bush (Abramowitz and Stone 2006; Jacobson 2003) and Barack Obama (Jacobson 2011). For instance, during the Obama administration, deeply polarized attitudes toward the president often manifested in challenges to Obama's American citizenship and religious convictions.[1] Not only do republicans and democrats support their own candidates at increasing rates, but partisans also appear to regard public officials from the other party with greater antipathy.

Does the polarization in attitudes toward political officials imply that the public is itself polarized along the same ideological lines as political officials? Or does the polarization toward public officials indicate that the public is simply responding to the political choices that are provided? While some argue that the public is increasingly polarized along party and ideological lines (Abramowitz and Saunders 2008; Bafumi and Shapiro 2009; Baldassarri and Gelman 2008; Mason 2015), others claim that most Americans are fundamentally centrist but provide polarized evaluations of polarized officials (Fiorina et al. 2011; see also Jewitt and Goren 2015; Lupton et al. 2015). Expanding on such research to examine how and when political elites generate polarized evaluations from the public is important for interpreting the consequences of those evaluations.

In this paper, we build on recent research by Iyengar et al. (2012) to study how ideological differences between political figures affect the public's affective orientations toward them. Specifically, we argue that citizens form increasingly polarized evaluations of candidates and officeholders when these political figures support more ideologically divergent policy positions. Because citizens are likely to perceive increased stakes in political outcomes when politicians are highly differentiated on policy (Abramowitz 2010; APSA Committee on Political Parties 1950; Downs 1957), they are motivated to increase their evaluations of their preferred politician while decreasing their evaluations of the opposition politician. Our focus on the *relative* evaluations of political figures contrasts with most existing research on attitudes toward *individual* politicians, and allows us to explore how political context affects political judgment.

We test our argument using a survey experiment conducted with a nationally representative sample of U.S. citizens. Consistent with our hypotheses, we find that increased ideological differences between political candidates produced substantially more polarized evaluations of those candidates. These differences were especially large among more ideologically extreme and politically interested respondents. We see further support for these findings in an observational study of Americans' affective evaluations of their state's U.S. Senators. However, we also find that biographical information about the political figures at hand can largely

[1] See, e.g., Dalia Sussman and Marina Stefar, April 10, 2010, "Obama and the 'Birthers' in the Latest Poll", *New York Times*. Tesler (2012, 2013) further shows how Americans' evaluations of Obama's policy initiatives were polarized by racial attitudes.

mitigate the effects of ideological disagreement on affective polarization. Our results have important implications for how elite polarization affects public assessments of political figures and provide new evidence for how citizen decision-making is influenced by ideological considerations.

Ideological Differences and Affective Polarization

In studying citizens' comparative evaluations of political officials, we follow recent scholarship (e.g., Iyengar et al. 2012; Iyengar and Westwood 2013) that uses the lens of *affective polarization*. In contrast with voting decisions, in which we observe only whether citizens support one candidate over another, affective evaluations not only indicate *which* candidate a citizen prefers (Brody and Page 1973; Lau 1986; Miller et al. 1986), but also characterize the differences in a citizen's affective orientation toward one candidate relative to the other. Low levels of affective polarization suggest that citizens evaluate both candidates similarly,[2] while increased affective polarization indicates greater intensity of preference between the candidates.

Scholars vigorously debate the extent of ideological and partisan polarization among the mass public (e.g., Abramowitz 2010; Bafumi and Shapiro 2009; Baldassarri and Gelman 2008; Fiorina et al. 2011; Jewitt and Goren 2015; Lupton et al. 2015; Mason 2015).[3] We contribute to this literature by studying how ideological differences between political officials shape citizens' affective evaluations of those officials. In particular, we argue that greater ideological differences between competing candidates increase polarization in the public's affective evaluations of the candidates. Our argument builds upon recent work by Abramowitz and Webster (2015) and Iyengar et al. (2012), who study increases in affective polarization towards elites and political parties over the last several decades.[4] Previous research finds that the nature of the choice between candidates affects a wide range of behaviors and attitudes, including turnout decisions (Brody and Page 1973; Plane and Gershtenson 2004; Rogowski 2014), vote choice (Rogowski forthcoming; Vegetti 2014), and opinion formation (Druckman et al. 2013; Garner and Palmer 2011; Thornton 2012). We expect that these dynamics similarly characterize the ways citizens evaluate political officials.

Citizens' affective evaluations may polarize in response to ideological differences between candidates because of the increased stakes associated with the choice

[2] Brody and Page (1973) argue that small or negligible differences in evaluations of competing candidates may be indicative of *indifference* and thus lead these citizens not to vote. However, Brody and Page also show that citizens who fall into this category often resolve their indifference by relying on other evaluative criteria, such as shared partisanship.

[3] For excellent reviews of this literature, see Hetherington (2008), Carsey and Layman (2006), and Fiorina et al. (2008).

[4] These authors implicate difference mechanisms for why affective polarization has increased. Abramowitz and Webster (2015) argues that citizens have prompted increased affective polarization by adopting more extreme ideological preferences, while Iyengar et al. (2012) use social identity theory to argue that citizens are responding to partisan group attachments.

between candidates and citizens' tendencies to use motivated reasoning to support their preferred candidate. As responsible party theorists (APSA Committee on Political Parties 1950) and spatial models of electoral competition (Downs 1957) have long argued, the consequences of electoral outcomes increase as the parties or candidates endorse increasingly distinct programs. Consistent with this expectation, more recent research finds that an increase in the ideological differences between candidates strengthens the connection between ideology and vote choice (Buttice and Stone 2012; Wright and Berkman 1986). Abramowitz (2010) similarly shows that increased party polarization in Congress has increased voter turnout by increasing the stakes associated with partisan control. Extending this logic, the ideological differences between candidates are also likely to influence citizens' evaluations of those candidates by increasing the stakes associated with the choice.

While a wide range of other scholarship studies the correlates of comparative candidate evaluations, this research has not generally focused on how the evaluations may be responsive to ideological differences. For instance, Lavine and Gschwend (2006) show that ideological thinking among citizens increases the use of policy factors in evaluating competing candidates, but do not study how these evaluations are affected by ideological differences between the candidates themselves. Gilens et al. (2007) show that voters have made increasingly policy-oriented evaluations of presidential candidates in recent decades. While they discuss the possibility that the increasing polarization of presidential candidates could explain this trend, they acknowledge that their data "are not especially well-suited" (1167) for testing this possibility. Thus, by focusing explicitly on the relationship between ideological divergence and affective polarization, we extend this body of scholarship and incorporate policy differences into citizens' evaluations of candidates.

Ideological Differences, Candidate Characteristics, and Affective Evaluations

Ideological considerations aside, elite polarization itself is likely sufficient to induce an evaluative response from citizens. For instance, (Druckman et al. 2013) show that citizens form opinions on political issues more confidently and with less reflection when elites are polarized on the issue. Extending their logic to the choice between political candidates, we would expect that citizens use even minimally informative cues about candidate ideology to form affective evaluations of the candidates. However, previous research identifies a range of personal characteristics, including character traits (Druckman 2004; Funk 1997, 1999; Miller 1990; Miller et al. 1986) and group-oriented stereotypes based on candidate race (Valentino et al. 2002), gender (McDermott 1997), and religion (Bolce and DeMaio 1999; McDermott 2009), that also influence citizens' evaluations of political officials.

We expect that these biographical characteristics condition the relationship between ideological divergence and affective evaluations. This argument borrows from a long literature on the role of valence considerations in political evaluations (Ashworth and de Mesquita 2009; Downs 1957; Groseclose 2001; Stokes 1963) in

which citizens are posited to form evaluations based on non-policy considerations when candidates or parties are indistinguishable on the basis of ideology. We argue that ideological divergence exerts a weaker relationship on affective evaluations when the candidates' biographical characteristics are emphasized. This expectation is consistent with recent work on U.S. and European elections that studies the conditional relationships between candidate characteristics and ideology (Buttice and Stone 2012; Clark and Leiter 2014). When citizens receive information *exclusively* about the ideological differences between candidates or parties, this information dominates citizens' evaluative calculus; but when citizens are also presented with information about, for instance, the candidates' backgrounds, political experiences, and social group memberships, citizens incorporate this information into their evaluations and thus the effect of ideological differences attenuates.

To summarize, our argument produces four testable hypotheses about how ideological differences affect evaluations of political officials. First, *increasing ideological differences generate higher levels of affective polarization* vis-à-vis the candidates, possibly by increasing citizens' psychological investment in the choice between candidates. Consistent with this explanation, we hypothesize that two individual-level factors—the strength of ideological commitments and political interest—should condition the relationship between ideological differences and affective polarization. In particular, we expect that ideological differences increase affective polarization at greater rates among individuals with *more ideologically extreme* views and *higher levels of political interest*, as these individuals may be especially likely to engage in motivated reasoning and perceive larger difference between the candidates as a function of their ideological locations. Fourth, we expect that *the effect of ideological differences reduces when citizens also have information about the officials' biographical characteristics*. These hypothesized relationships suggest that the public's evaluations of political officials are sensitive to the ideologies supported by those officials. In the context of elections, these hypotheses describe how the nature of the choice between candidates affects the public's comparative evaluations of the candidates, and thus suggest that the public can be polarized over political candidates while not being ideologically polarized itself. Identifying how ideological differences shape candidate evaluations extends our understanding of how voters incorporate policy considerations in political decision-making. Our account further suggests that the nature of the informational environment influences how citizens respond to ideological differences.

Study Design

We studied the hypotheses outlined above using an online survey of a nationally representative sample of U.S. adults. The survey was administered by Knowledge Networks in 2011, and included 1997 completed interviews.[5] The survey was conducted in three stages. First, each respondent was asked about some background

[5] Based on the number of invitations sent to online panelists, this yielded a response rate of 66.8 %.

political characteristics, including political interest and ideology. Next, respondents were randomized to conditions that manipulated the information they received about the candidates. Respondents in each condition were presented with a hypothetical pair of candidates whose ideological positions were varied. Finally, respondents were asked a short battery of questions regarding their evaluations of the candidates.

Our design closely parallels the experimental framework used in other research on how survey respondents evaluate candidates based on policy positions (Sniderman and Stiglitz 2012; Tomz and Van Houweling 2008). Specifically, we presented respondents with an eleven-point ideological scale, ranging from −5 (extremely liberal) to +5 (extremely conservative). Each point along the scale was labeled numerically, and the ends ("extremely liberal" and "extremely conservative") and the midpoint ("moderate/middle of the road") were labeled with qualitative descriptions. Respondents were asked to place themselves along this ideological continuum with wording from similar questions on the American National Election Studies.[6]

We then presented the respondents with a hypothetical pair of candidates whose ideological positions were represented along this same eleven-point scale. The respondents were told simply that these two candidates were running for Congress in another state. The candidates were either relatively *convergent*, and located at −1 and +1, or relatively *divergent*, and located at −4 and +4. This manipulation varies the clarity of the difference between the candidates' policy positions.[7] This design allows us to avoid identification challenges that arise from differences in how citizens perceive the ideological positions of candidates or the endogeneity between evaluations of candidates and assessments of candidate ideology. The candidates were labeled simply as candidate A and candidate B, where candidate A adopted the more liberal platform relative to candidate B. Our primary analyses focus on comparing how respondents in the *convergent* and *divergent* conditions evaluated the candidates.

To test the hypothesis that biographical information moderates the effects of candidate divergence, we also manipulated whether respondents received additional biographical information about the candidates. The two information prompts are shown in Fig. 1. Respondents who were selected to receive the additional biographical information were shown a short description of the candidates' backgrounds and experiences. Each description was six sentences in length, and detailed the candidates' family lives, current/previous occupation, civic involvement, endorsements, and a short quote from the candidates about the goals they would like to accomplish if elected to office.[8] These brief descriptions contain

[6] Specifically, the question text was as follows: "We hear a lot of talk these days about liberals and conservatives. Here is an eleven-point scale on which the political views that people might hold are arranged, from extremely liberal (−5) to extremely conservative (+5). And, of course, other people have views somewhere in between, at points −4, −3, −2, −1, 0, +1, +2, +3, or +4. What about you—where would you place yourself on this scale?".

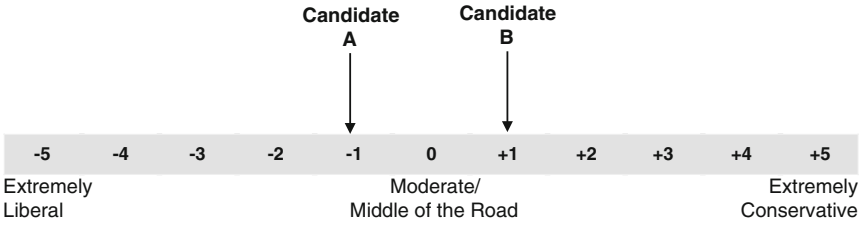
[7] For other research on the importance of ideological distinctions for voter decision-making, see, e.g., Hetherington (2001), Levendusky (2009), and Wright and Berkman (1986).

[8] These biographies were modeled after the descriptions provided by *The Oregonian* for the two candidates running for congress in 2010 for the 3rd congressional district in Washington state. Though these candidates biographies may not necessarily be representative of the average set of congressional candidates, that these candidates ran against each other in a relatively contested race suggests that the descriptions shown to subjects contain a high degree of realism.

(a) Policy Positions Only

Here are the placements of two candidates who are running for Congress in another state, and will remain anonymous.

As the figure shows, a candidate A is located at -1, and is just *slightly* liberal. Candidate B is located at +1, and is just *slightly* conservative.



(b) Policy Positions and Biographical Information

Here are the placements of two candidates who are running for Congress in another state, and will remain anonymous.

Candidate A is a 53-year-old businessman. He has been married for 34 years and has two sons. He earned his college degree in 1974 and then served for ten years in the state legislature. After that, he was a co-founder of the state's public affairs television station. He is a member of the board for the state history museum, and has been endorsed by the International Association of Firefighters, the American Medical Association, and the National Education Association. Recently, he said: "Our economic future CAN be bright. But Congress must fight harder for it. I will."

Candidate B is 32 years old, and is currently a member of the state legislature. Before that, she worked as a senior legislative aide in Congress and in the White House Office of Political Affairs. She is married with no children and has a college degree in communications. She frequently volunteers for elderly care facilities, children's literacy programs, and juvenile detention centers. She is endorsed by the National Federation of Independent Business and the National Rifle Association. She recently said: "I will be an independent voice in Congress to control spending, create jobs, and lower the cost of health care."

As the figure shows, candidate A is located at -1, and is just *slightly* liberal. Candidate B is located at +1, and is just *slightly* conservative.

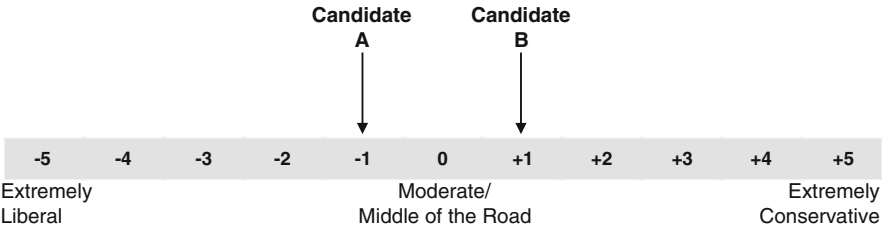


Fig. 1 Experimental conditions

biographical information that previous research has found to be important in voter decision-making, such as gender, marital status, employment history, and political experience. Importantly, neither candidate was designated an incumbent or explicitly associated with either political party, though contemporary levels of party polarization suggest that respondents could have easily made inferences about party affiliation based on the candidates' policy positions or endorsements. By explicitly providing respondents with additional information about the candidates, we test for differences in how the kinds of information made available to citizens—rather than citizens' choices to seek and consume additional information—affected candidate evaluations, thus avoiding endogeneity between candidate evaluations and information consumption. This two-by-two design created four experimental conditions into which respondents were randomized.

After the respondents were presented with the candidates, we gathered the respondents' affective evaluations of the candidates using a standard 101-point feeling thermometer. Respondents were asked to rate both candidates using this thermometer, where larger thermometer ratings indicated more positive evaluations.[9] The average evaluations of the candidates were centered on the middle of the scale, with Candidate B (mean = 53.2, SE = 0.6) rated slightly higher than candidate A (mean = 50.5, SE = 0.6). Following Iyengar et al. (2012), we used the feeling thermometer ratings to construct our key dependent variable, *Affective polarization*, which is the absolute difference in candidate thermometer ratings. Feeling thermometers are multidimensional in nature and could capture a mixture of policy and emotional evaluations from a respondent. Marcus (1988), however, shows that policy positions have no effect on candidate feeling thermometer ratings apart from the emotional response they induce.[10] Further evidence suggests that feeling thermometer measures are comparable to other direct measures of emotional response commonly used in psychology (Marcus et al. 2000, p. 173). Our use of the feeling thermometer to study affective polarization in this way also follows Abramowitz and Webster (2015), Iyengar and Westwood (2013), and Lelkes et al. (2013). Larger values of this variable indicate greater affective polarization in candidate evaluations. The average level of affective polarization was 24.1 (SE = 0.8). We use this dependent variable to test the hypotheses outlined above.

Results

We begin by testing our first hypothesis, which predicted that ideologically divergent candidates would generate higher levels of affective polarization. The data provide clear support for this expectation. The average difference between the

[9] A small percentage of respondents did not provide feeling thermometer ratings, and are thus excluded from the analyses. Fortunately, the patterns of missingness do not appear to be systematically correlated with assignment to treatment ($F = 1.51$, $p = 0.209$). The number of missing responses across each condition ranged from 60 to 79, and thus we have 1725 complete responses.

[10] We note, however, that other scholarship treats affective evaluations as summary indicators of cognitive processes (e.g., Lodge et al. 1989), in which case emotions and political attitudes are largely inseparable.

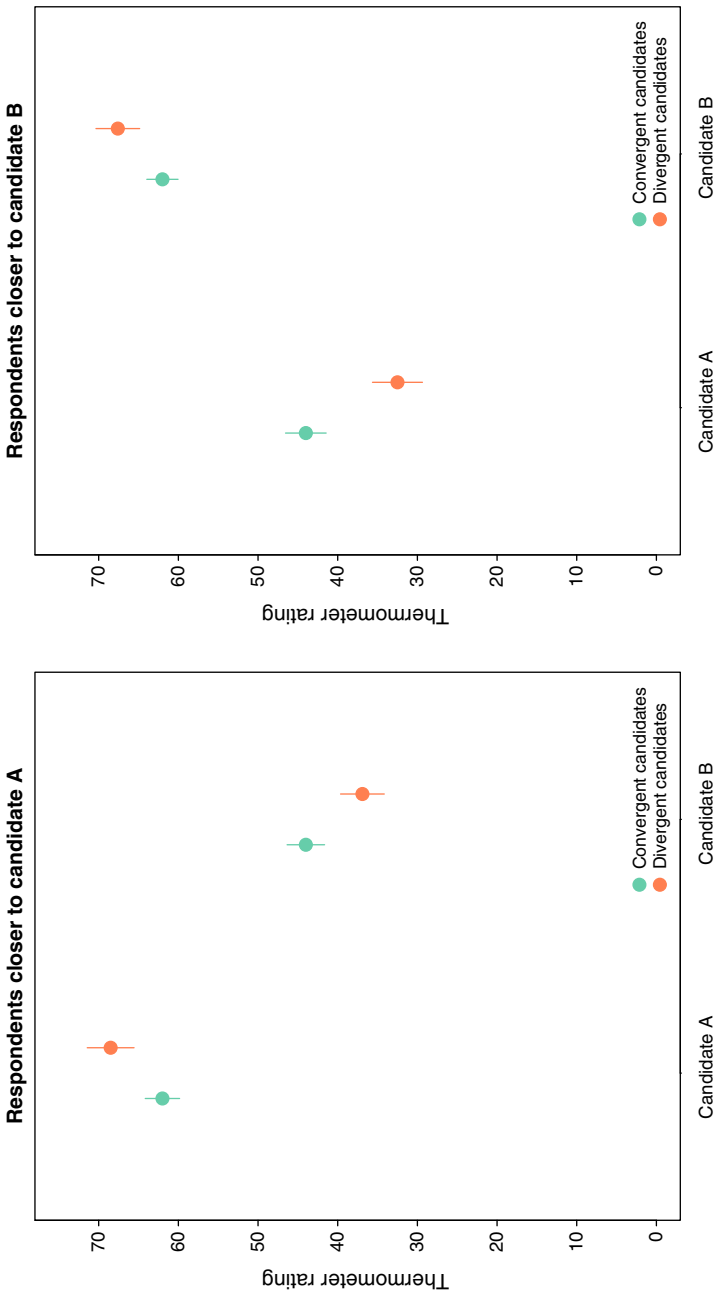


Fig. 2 Candidate divergence and affective evaluations. Each plotted point represents the mean feeling thermometer rating, and the *vertical lines* provide the 95 % confidence intervals. The plot on the *left* shows thermometer ratings for respondents whose ideological self-placements were closer to candidate A's position (self-placement <0), and the plot on the *right* shows thermometer ratings for respondents whose self-placements were closer to candidate B's position (self-placement >0)

feeling thermometer ratings for respondents in the *convergent* condition was 18.1 points (SE = 0.8), compared with an average difference of 29.7 feeling thermometer points (SE = 1.3) among respondents in the *divergent* condition. Thus, the ideologically divergent candidates significantly increased affective polarization (t statistic = 7.71, $p < 0.001$) by 11.6 feeling thermometer points (SE = 1.5), or more than 50 %.

We find that this increased affective polarization is due to both increased affect for a respondent's preferred candidate *and* decreased affect for the opposition candidate. Figure 2 shows the average feeling thermometer ratings for each candidate across the *convergent* and *divergent* treatment groups. Because the candidates' positions in both treatment groups were distributed symmetrically around the midpoint of the ideological scale, we posited that respondents were likely to prefer the candidate whose ideological position was on the same side of the midpoint as their own ideological position.[11] Thus, in the plot on the left, we display the average feeling thermometer ratings among respondents whose ideological locations were more proximate to candidate A. The plot on the right displays the average feeling thermometer ratings of the candidates among respondents whose ideological locations were more proximate to candidate B.[12]

As the plot on the left shows, respondents who were closer to candidate A provided significantly more positive ratings for that candidate in the *divergent* condition than they did in the *convergent* condition. The average rating for candidate A among respondents in the *divergent* condition was 68.5 (SE = 1.5), compared with 62.0 (SE = 1.1) in the *convergent* condition ($t = 3.44$, $p = 0.001$). The respondents that were more proximate to candidate A also provided significantly more negative evaluations of candidate B in the *divergent* condition. The average feeling thermometer rating in the *convergent* condition was 44.0 (SE = 1.2), compared with 36.9 (SE = 1.4) in the *divergent* condition ($t = 3.72$, $p < 0.001$). The plot on the right shows similar patterns when evaluating thermometer ratings among respondents who were more proximate to candidate B. Respondents in the *divergent* condition provided significantly more positive evaluations of the more proximate candidate (mean = 67.6, SE = 1.4) compared to respondents in the *convergent* condition (mean = 62.0, SE = 1.0).[13] Respondents in the *divergent* condition also provided significantly lower ratings of candidate A (mean = 32.5, SE = 1.6) than respondents in the *convergent* condition (mean = 44.0, SE = 1.3).[14] Thus, ideological divergence affected evaluations of both candidates, where respondents in the *divergent* condition gave more positive ratings to the more proximate candidate and more negative ratings to the opponent. This finding differs from the results shown in Fig. 1 of Iyengar et al. (2012), in

[11] This prediction is consistent with both proximity (Downs 1957) and directional Rabinowitz and Macdonald (1989) theories of candidate preference.

[12] For the purposes of this comparison, we omit respondents who placed themselves at the midpoint of the ideological scale, as they would be predicted to be indifferent based on the candidates' ideological locations.

[13] The t statistic for the difference in means is 3.29 ($p = 0.001$).

[14] The t statistic for the difference in means is 5.52 ($p < 0.001$).

which increased partisan polarization over the last several decades was associated with decreased affect toward the out-party among partisans, but did not increase affect toward the in-party.

Our second hypothesis predicts that the effect of ideological divergence is moderated by respondents' ideological commitments. To test this hypothesis, we compare the effects of divergence based on respondents' self-reported ideological locations. We expect to find that the effect of divergence on affective polarization is greater among respondents with more ideologically extreme self-placements than it is among respondents with more moderate self-placements.

Figure 3 displays the treatment effect of candidate divergence (the difference in means in affective polarization) for respondents at each point on the ideological scale. The plotted points are the treatment effects, where increasing positive numbers along the y-axis indicate larger treatment effects. The vertical lines are the 95 % confidence intervals. The dotted horizontal line indicates where the points would fall if there were no treatment effect.

Consistent with expectations, we find that the effect of divergence varies based on respondent ideology, with larger effects among respondents with more extreme ideological locations. For instance, among respondents who placed themselves at −5 along the eleven-point scale, the mean difference in candidate thermometer ratings was 21.6 points (SE = 7.6) in the *convergent* condition, and 54.4 points (SE = 6.6) in the *divergent* condition. Thus, the plotted point for respondents with

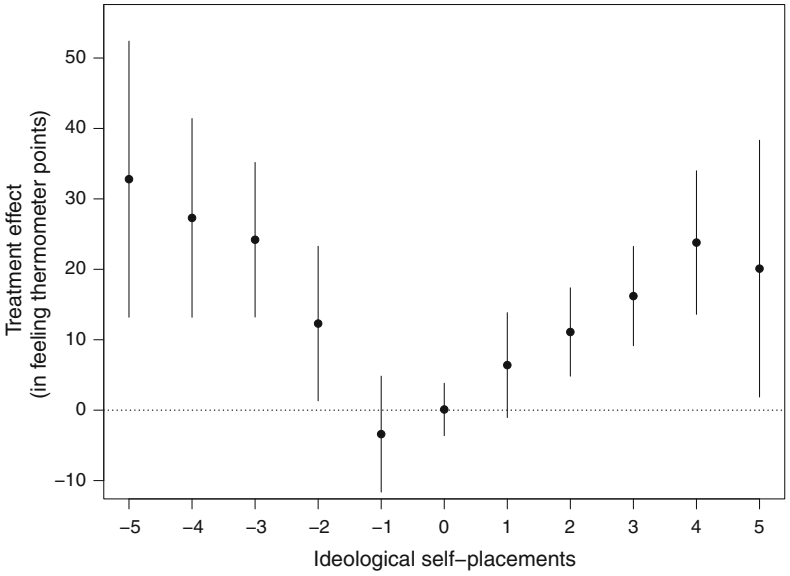


Fig. 3 Effects of ideological divergence across ideological self-placement. The x-axis represents respondent self-placement along an ideological scale that ranges from "very liberal" (−5) to "very conservative" (+5). The *plotted points* represent the difference in affective polarization between respondents in the ideologically divergent and ideologically convergent conditions, where *larger numbers* indicate larger treatment effects. The *vertical lines* are the 95 % confidence intervals associated with these differences

this self-placement corresponds to a treatment effect of 32.8 points (SE = 10.0). The treatment effect generally declines monotonically moving from the left end of the plot toward the center.[15] Ideological divergence had no effect among respondents who placed themselves at the midpoint of the scale; the mean difference in affective polarization was 0.1 points and estimated relatively precisely (SE = 1.9). Moving from the midpoint to the right end of the scale, the treatment effects again monotonically increase among respondents who placed themselves at more ideologically extreme locations. We do find a slight decrease in the magnitude of the treatment effect among respondents who placed themselves at +5 compared with +4, although these differences are themselves not statistically significant.

Our third hypothesis posits that the effects of ideological divergence are greater among individuals with higher levels of political interest, who may be especially likely to engage in motivated reasoning to support their preferred candidate. To test this hypothesis, we distinguish respondents based on their reported levels of political interest.[16] Prior to receiving the treatment, respondents were asked to indicate their level of interest "about what's going on in government and politics." We compare the effects of ideological divergence among respondents who were "extremely interested" or "very interested" (N = 889) to the effects among respondents who reported lower levels of interest (N = 828).[17]

Consistent with hypothesis 3, the data indicate that political interest strongly moderates the effect of candidate positions on affective polarization. Among respondents with high levels of political interest, the average level of affective polarization in the *convergent* condition was 21.4 (SE = 1.2), compared with 38.5 (SE = 1.9) among respondents in the *divergent* condition. Thus, ideological divergence increased affective polarization by 17.1 points (SE = 2.2). The effect of ideological divergence was substantially smaller among respondents with low levels of political interest, as the mean difference in affective polarization increased by only 5.8 points (SE = 1.8). Thus, consistent with our third hypothesis, ideological divergence had a significantly larger effect (t statistic = 3.93, $p < 0.001$) among respondents with high levels of political interest.

We present tests of hypotheses 1 through 3 more formally using linear regression. These results are shown in Table 1. As in the analyses above, the dependent variable in each column is the level of affective polarization. *Ideological divergence* is an indicator for whether respondents were assigned to the ideologically divergent candidates. *Ideological extremism* is a folded version of the eleven-point ideological placement scale, where 0 indicates a respondent who placed herself at the midpoint of the scale, and 5 indicates a respondent who placed herself at either −5 or +5. As

[15] The treatment effect is negative (−3.4) among respondents who self-placed at −1, although this difference is not statistically distinguishable from zero.

[16] Even in the context of this hypothetical election, we find that political interest is strongly associated with the perceived importance of the election outcome. The bivariate correlation between our binary indicator political interest and a binary indicator of the importance of the election outcome is $r = 0.40$. The coefficient for political interest is also positive and statistically significant in a probit regression of the importance of the election outcome on an indicator for the divergent treatment condition, political interest, and the series of control variables shown in Table 1.

[17] Seven respondents did not provide a response for their level of interest.

Table 1 Candidate divergence and affective polarization

Independent variables	(1)	(2)	(3)
Ideological divergence	11.30* (1.47)	−0.22 (1.71)	5.51* (1.78)
Ideological extremism		4.61* (0.57)	
Ideological divergence *x* ideological extremism		5.65* (0.85)	
Political interest			4.24* (1.75)
Ideological divergence *x* political interest			11.79* (2.84)
(Intercept)	10.56 (7.54)	19.03* (6.55)	15.22* (7.26)
N	1714	1714	1706
Controls?	Yes	Yes	Yes

Entries are linear regression coefficients with standard errors in parentheses. The dependent variable is the difference in feeling thermometer ratings between the two candidates, where larger values indicate greater affective polarization. Data are weighted to national population parameters. Independent variables are defined in the text. Controls include partisanship (seven-point scale), ideological self-placement (eleven-point scale), age, race/ethnicity, sex, and education

* $p < 0.05$, two-tailed tests

described above, *Political interest* is an indicator for whether a respondent reported being "extremely interested" or "very interested" in political news and information. We include a full battery of demographic controls (party identification, ideological self-placement, age, education, race, sex, and income).

The first column of Table 1 reports results when affective polarization is regressed on *Ideological divergence*. The results show that assignment to the *divergent* condition significantly increased affective polarization by more 11 points. In column (2), we interacted *Ideological divergence* with *Ideological extremism* to examine how the effect of divergence is moderated by ideological commitments. Consistent with Fig. 3, the coefficient for *Ideological divergence* indicates no differences in affective polarization among respondents who placed themselves at the midpoint of the ideological scale; as the interaction terms show, however, the treatment effects increase among respondents with more ideologically extreme self-placements. Finally, the coefficient for *Ideological divergence* in column (3) indicates that the *divergent* condition increased affective polarization by more than five feeling thermometer points among respondents with low political interest, and the interaction terms show that the effect was more than 11 points larger among respondents with high levels of political interest.[18] All of these results are found when including the demographic and political control variables.[19]

[18] We note that we have also estimated models in which we included both interaction terms in the same model, both for the experimental results discussed here and the observational results presented below. We find consistent results when doing so. The main difference is that the coefficient for the interaction between *Ideological divergence* and *Political interest* in the analysis of the experimental data attenuates from 11.79 to 4.19, and falls just short of statistical significance ($p < 0.117$). Please see Table A.1.

[19] Our results are also robust to include a measure of the strength of partisan identity, measured using a folded version of the seven-point party identification question that ranges from 0 to 3. Please see Table A.2.

The evidence presented thus far provides clear support for hypotheses 1 through 3. Ideological divergence between candidates significantly increases affective polarization, and these effects are stronger among individuals with more extreme ideological commitments and who report greater political interest. These results may be driven by these respondents' increased propensities to engage in motivated reasoning when the candidates are highly distinguished along ideological lines. Additional analyses reported in the supplementary online resource show that ideological divergence significantly increased respondents' certainty in their preferences over candidates and the importance they attributed to their preferred candidate's victory, which extends the findings presented above by suggesting that ideological divergence affects respondents' psychological investment in the candidates and the election outcome.[20] We now evaluate how other aspects of the choice between candidates may moderate the effect of candidate divergence.

How Biographical Information Moderates the Effects of Divergence

We evaluate hypothesis 4 by comparing the effect of ideological divergence on affective polarization on the basis of whether respondents also received biographical information about the candidates. We expect the treatment effect of divergence to be significantly larger in magnitude among respondents who received only the candidates' ideological locations, while we expect the treatment effect was smaller among respondents who received the biographical information along with the candidates' locations.

The data provide strong support for this hypothesis. Among respondents who received only the candidates' ideological locations, the mean level of affective polarization with the *convergent* candidates was 16.5 thermometer points (SE = 1.1), compared with 34.7 points (SE = 1.8) among respondents who were presented with the *divergent* candidates. Thus, the treatment effect of ideological divergence in the absence of additional information is 18.2 feeling thermometer points (SE = 2.2). Among respondents who also received biographical information about the candidates, the mean level of affective polarization with the *convergent* candidates was 19.6 (SE = 1.2), and 24.7 (SE = 1.6) among respondents with the *divergent* candidates. Thus, the treatment effect among respondents who received the information about the candidates' backgrounds and personal lives was 5.1 feeling thermometer points (SE = 2.0).

Figure 4 displays these differences graphically. The plotted points are the mean treatment effects of candidate divergence, shown separately for respondents who did and did not receive the biographical information. The treatment effect was significantly larger among respondents who did not receive the additional biographical information. The difference in these treatment effects is 13.0 feeling thermometer points (SE = 3.0), and indicates that the availability of additional biographical information about political candidates significantly moderates the

[20] Please see Appendix B and Table B.1 for the results of these supplementary analyses.

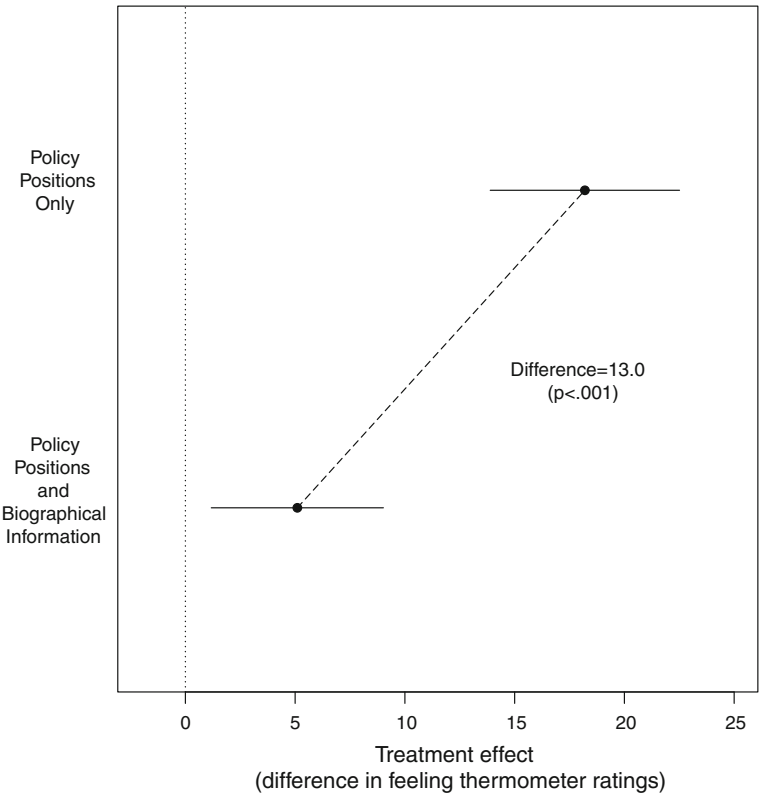


Fig. 4 The moderating effect of biographical information on affective polarization. Plot compares the treatment effects of ideological divergence among respondents who did and did not receive biographical information about the candidates. The *plotted points* are the differences in mean levels of affective polarization, and the *horizontal lines* are the 95 % confidence intervals. The effect of ideological divergence on affective polarization was significantly smaller among respondents who were presented with the biographical information about the candidates

relationship between ideological divergence and affective evaluations (t statistic $= 4.41$, $p < 0.001$).[21]

While the biographical information about the candidates moderates the effect of candidate divergence on affective evaluations, it does not do so by changing respondents' ideological assessments of the candidates. We investigated the possibility that respondents used the candidate background information to make inferences about candidate ideology, but the data provide no evidence that this

[21] We obtain the same patterns when estimating linear regression models similar to those shown in Table 1. The coefficient for the interaction term between ideological divergence and assignment to the biographical information condition is -13.57 (SE $= 2.88$), $p < 0.001$. Please see Table A.3 in the supplementary online resource.

information systematically changed respondents' preferences over candidates.[22] Instead, the additional biographical information reshaped respondents' evaluations of the opposition candidate. The data show that the biographical information significantly moderated the effect of ideological divergence on thermometer ratings for the less proximate candidates. The average treatment effect of ideological divergence on the less proximate candidate's thermometer ratings was −12.0 points (SE = 2.1) among respondents who did not receive the additional biographical information, but −5.1 points (SE = 1.9) among respondents did receive the background information about the candidates. This difference of 7 points (SE = 2.8) is significant at $p = 0.013$. In contrast, while ideological divergence increased thermometer ratings of respondents' more proximate candidate, it did so at similar rates regardless of whether the respondents received the additional biographical information (difference in treatment effects = 3.1, SE = 2.5, $t = 1.23$, $p = 0.219$). Thus, receiving biographical information about competing candidates muted the effects of ideological differences in respondents' evaluations of the candidate they are not inclined to support, and produced more positive—or, perhaps more accurately, less negative—affective evaluations of candidates from respondents who did not share their ideological proclivities.

Why might the introduction of biographical information soften strident differences in candidate evaluations? The candidate biographies may have conveyed impressions of candidate expertise and competence, thus bolstering respondents' evaluations of the less proximate candidate by implying that the candidate would be an effective legislator if elected. To that end, our finding that respondents improved their evaluations of the less proximate candidate when biographical information was presented is consistent with research that shows that voters provide more positive evaluations of candidates when they have more information about them (e.g., Alvarez 1998). Alternatively, the availability of more digestible political cues in the form of biographical information may have led respondents who received that information to place less emphasis on the ideological positions of the candidates (for more on the relative importance of various political cues, see Bullock 2011 and Nicholson 2011). More generally, the availability of the biographical information may more closely mirror the way politics plays out in the real world. Simple survey conditions like the one we presented to respondents who did not receive the biographical information may not offer the most realistic representation of how voters experience politics and evaluate political candidates (Barabas and Jerit 2010; Jerit et al. 2013). In reality, citizens' evaluations of candidates are likely to reflect both ideological and biographical sources of information.

[22] Among respondents who received the biographical information, the effect of candidate divergence on the proportion of respondents who reported a preference for Candidate A was 1.6 % points (SE = 4.6). Among respondents who received only the ideological positions, the effect of candidate divergence was 1.2 % points (SE = 4.8). The difference between these treatment effects is negligible: 0.4 % points (SE = 6.6), with a t statistic of 0.06 and corresponding p value of 0.953.

Extension: Ideological Divergence and Evaluations of U.S. Senators

Though the experiment presented above tested our argument specifically in the context of electoral politics, our argument's implications extend to the public's evaluations of political officials more generally. Thus, we supplemented our experiment with a study of how ideological divergence affects citizens' evaluations of elected political figures. To do so, we used data from the American National Election Study (ANES) and estimates of roll call voting behavior for members of the U.S. Senate. Each state has two senators, and our argument implies that greater ideological divergence in within-state roll call voting patterns is associated with greater affective polarization in how residents evaluate their Senate delegation. We calculated the difference between the DW-NOMINATE scores for each state's Senators that served in the Congress corresponding with the ANES wave, where larger differences indicate higher levels of ideological divergence between the Senators.[23] We merged these measures of ideological divergence with the ANES data.[24]

The ANES asked respondents to provide feeling thermometer ratings of both their Senators in ten waves of the time-series study between 1978 and 2008.[25] Overall, 60.8 % of the ANES respondents (11,629 out of 18,808) provided feeling thermometer ratings of both their Senators, and could thus be included in the analysis.[26] Response sizes ranged from 757 (2004 ANES) to 1451 (1990 ANES). The average level of affective polarization was 17.8 feeling thermometer points, with wide variation (SD = 19.2).

Our statistical analysis parallels the models presented in Table 1. Specifically, we estimate regressions in which the dependent variable is the Senate affective polarization measure described above. Our key independent variable is *Ideological divergence*, based on the difference in DW-NOMINATE scores between a state's Senators. We assume that the DW-NOMINATE scores generally reflect how citizens perceive the voting records of their Senators, but we acknowledge that this is not a direct measure of ideological perceptions. However, we believe that any within-state variation in respondents' perceptions of Senators is likely to produce measurement error rather than systematic bias in our coefficient estimate for *Ideological divergence*. Following our key hypotheses, we also created measures of ideological extremity and political interest. Similar to our analysis of the experimental data, ideological extremity is assessed using a folded version of ANES respondents' self-placements along a seven-point ideological scale, where

[23] We dropped observations in which a state had more than two Senators in the same Congress due to, for instance, resignation or death.

[24] The average level of divergence in DW-NOMINATE estimates was 0.30, and ranged from 0 to 1.19.

[25] These years include: 1978, 1980, 1982, 1986, 1988, 1990, 1992, 1994, 2004, and 2008.

[26] We uncover no evidence that the probability of providing feeling thermometer ratings is associated with the divergence in senators' roll call voting records. We created an indicator for whether each respondent provided a thermometer rating for both of their Senators and used logistic regression to explore its correlates. We find statistically significant evidence that it is associated with political interest, education, age, sex, and race. However, the coefficient for ideological divergence falls far short of statistical significance.

Table 2 Senator voting records and affective polarization

Independent variables	(1)	(2)	(3)
Ideological divergence	13.95* (2.74)	9.23* (2.89)	9.69* (2.60)
Ideological extremism		0.36 (0.32)	
Ideological divergence *x* ideological extremism		4.34* (1.05)	
Political interest			−0.14 (0.70)
Ideological divergence *x* political interest			12.50* (1.89)
Same-party delegation	0.07 (1.26)	0.07 (1.26)	0.16 (1.21)
(Intercept)	6.49* (2.16)	7.38* (2.13)	8.11* (2.11)
N	8614	8614	8090
MSE	18.79	18.70	18.79
Controls?	Yes	Yes	Yes

Entries are linear regression coefficients with standard errors in parentheses. The dependent variable is the difference in feeling thermometer ratings between the two U.S. Senators from the respondent's state, where larger values indicate greater affective polarization. Independent variables are defined in the text. Controls include partisanship (seven-point scale), ideological self-placement (seven-point scale), age, race/ethnicity, sex, and education

* $p < 0.05$, two-tailed tests

larger numbers indicate greater extremity. Political interest is assessed using an indicator for whether respondents said they followed government and public affairs "most of the time."[27] We also include an indicator for whether both Senators represent the same political party, as this could confound the relationship between ideological divergence and affective polarization. Finally, as in Table 1, we also included a full battery of demographic and political controls (age, race/ethnicity, sex, party identification, ideological self-placement, and education). Each model contains indicators for the year the survey was conducted, and standard errors are clustered on state-year.

The results are shown below in Table 2. Column (1) reports results when affective polarization is regressed on *Ideological divergence*, the indicator for whether the state is represented by a same-party Senate delegation, the year indicators, and the demographic controls. The coefficients for *Ideological divergence* are large in magnitude and statistically significant. Based on DW-NOMINATE scores from the 110th Senate, the coefficient estimates indicate that affective polarization is 12–13 points higher when a state is represented by very different Senators (such as David Vitter and Mary Landrieu in Louisiana, for whom *Ideological divergence* was approximately 0.96) than when those Senators compiled highly similar voting records (such as was the case with Susan Collins and Olympia

[27] This corresponds to question number VCF0313, which reads as follows: "Some people seem to follow what's going on in government and public affairs most of the time, whether there's an election going on or not. Others aren't that interested. Would you say you follow what's going on in government and public affairs most of the time, some of the time, only now and then, or hardly at all?" A little more than a quarter (26.4 %) of respondents said they follow government and public affairs "most of the time." Our results are also robust to including these responses as a continuous or four-point interval measure.

Snowe in Maine, whose scores differed by just 0.01). These results provide strong support for hypothesis 1. The coefficient for same-party Senate delegation, however, is small in magnitude and indistinguishable from zero, indicating that the partisan composition of a state's U.S. Senate delegation does not appear to be associated with differences in affective polarization.

The results in column (2) provide strong support for hypothesis 2. The coefficients indicate that while *Ideological divergence* is associated with increased affective polarization among respondents who placed themselves at the midpoint of the ideological scale, the relationship is even stronger among more ideologically extreme respondents. Finally, consistent with hypothesis 3, the results in column (3) demonstrate that political interest conditions the association between *Ideological divergence* and affective polarization. *Ideological divergence* is more strongly associated with affective polarization among more political interested individuals than it is with respondents who reported lower levels of political interest.[28]

We also explored the possibility that political knowledge conditioned responsiveness to Senators' DW-NOMINATE scores. Unlike the survey experiment reported above, where all respondents received equivalent exposure to the candidates' positions, ANES respondents are likely to vary in their exposure to and knowledge of their Senators' voting records. The ANES provides one measure of political knowledge that is available across the entire time period, which is an indicator for whether the respondent correctly identified the party that held control of the U.S. House of Representatives. When estimating the models shown in Table 2 separately for respondents who did and did not answer this question correctly, we find that the main term for *Ideological divergence* is consistently larger in magnitude among respondents who answered correctly, which indicates that these respondents' affective evaluations were more responsive to ideological differences between the Senators. We also find that the moderating influence of political interest was larger among respondents who answered the knowledge question correctly. However, while we continue to find that ideological extremity was an important and statistically significant moderator among people who answered the knowledge questions correctly, it is indistinguishable from zero (and in fact negative) among respondents who did not answer the question correctly.

The results of these analyses support and extend the main findings from the survey experiment; ideological differences between public officials strongly influence how citizens affectively evaluate them. Affective evaluations are not explained simply by the partisan orientations of the political officials, but instead result largely from the relative ideological differences between them. Moreover, the effects of ideological divergence are strongest among the public's more ideologically extreme and politically interested members—voters who are most likely to rely on ideological, policy-based information to make political judgments (Lau and Redlawsk 2001). Thus, we find strong and consistent evidence for the hypotheses offered in this paper in how citizens evaluate both hypothetical political candidates and real-world officeholders.

[28] These results are shown in Table A.4.

Discussion and Conclusion

The results reported in this paper have mixed implications for contemporary discussions about partisan polarization in the United States. First, we demonstrate that citizens are quite responsive to ideology, and ideological extremity in particular. Citizens form affective evaluations of candidates and politicians on the basis of their ideological positions. When candidates or officeholders exhibit similar ideologies, citizens evaluate them similarly. However, as their ideological positions diverge, citizens express more divergent affective opinions about them. Thus, just as voters appear to choose presidential (Jessee 2009) and congressional (Shor and Rogowski forthcoming) candidates on the basis of ideological proximity, the results shown here contribute new evidence about other ways in which ideology affects political judgment.

At the same time, our findings raise the possibility that polarization may reinforce affective evaluations. As candidates or parties diverge, citizens develop increasingly polarized views of them, which then may generate incentives for the candidates or parties to diverge further. This finding could shed light on recent patterns of polarization in the U.S., in which the congressional voting records of Republicans have tracked to the ideological right, and Democrats to the left, in recent decades (McCarty et al. 2006). This dynamic would appear to weaken citizen control over political officials, however: citizens have no obvious way of punishing their "preferred'" party or candidate without supporting the party or candidate on the other side of the ideological spectrum, which may be unlikely (Sniderman and Stiglitz 2012).

The results shown here build upon the findings in Abramowitz and Webster (2015) and Iyengar et al. (2012), who show that affective polarization towards elites and political parties has increased over time. Our experimental results provide causal evidence of this relationship, and our supplementary analysis of attitudes toward U.S. Senators suggests that these relationships extend to evaluations of individual officeholders. When combined, the experimental and observational designs complement each other's weaknesses. For example, survey experiments—divorced as they are from the features of everyday politics—can yield results that should be extended externally with caution (Barabas and Jerit 2010; Jerit et al. 2013). The similar findings obtained using the observational data, however, lend support for a more general interpretation of the results from the experiment.

Several limitations of our analyses raise important questions for further research. First, unfortunately, our analyses do not allow us to identify the effects of ideological divergence on affective polarization independent from differences in voters' levels of utility for the two candidates. Thus, understanding how ideological differences between candidates or political officials induce emotional responses from voters is an important task for additional research. Second, the design of our studies did not allow us to distinguish whether heightened elite polarization might be associated with the use of different decision-making rules by voters. For instance, increased ideological polarization could increase the relevance of which politician is on the same 'side' as the voter rather than the relative proximity between a voter and

an official (for more on this point, see, e.g., Sniderman and Stiglitz 2012). Third, citizens have varying capacities to engage in ideological thinking, and not all respondents may have used the ideological scale presented in the experiment in the same way. Future research could build upon the findings presented here by, for instance, using alternative measures of the ideologies of competing political candidates and evaluating how the ideological differences between them affects citizens' evaluations.

Our results raise some troubling implications with respect to democratic legitimacy. One of the hallmarks of free and fair elections is the absence of mass protests and violence from the losers of electoral contests. Yet, if the George W. Bush and Barack Obama administrations are any indication, Americans are increasingly polarized over their elected leaders (e.g., Jacobson 2006). Opposition to these presidents ran deep among their detractors, while support was strong among their proponents. These patterns suggest that electoral "losers" may question the authority and legitimacy of candidates selected through democratic elections, and are suggestive of the role that ideological extremism may play in undermining democratic government.

Finally, our findings suggest one potential solution for ameliorating the effect of ideological conflict on affective polarization. Namely, discussing issues other than ideological divergence appears to largely mitigate the relationship between divergence and affective evaluations. In the context of the experiment, these issues concerned the personal backgrounds of the candidates seeking office. The biographical information was especially important for improving affective evaluations of the candidates respondents were not inclined to support. Perhaps by focusing less on the fact of ideological conflict itself, and more on the substantive differences that produce the conflict, vigorous contestation over ideas and ideology can occur in less divisive environments and in which even electoral losers provide some level of support for the victorious candidate.

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