# Issue Salience and Political Stereotypes

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## Issue Salience and Political Stereotypes

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#### **Abstract**

US voters exaggerate the differences in attitudes held by Republicans and Democrats on a range of socioeconomic and political issues, and higher perceived polarization is associated with greater political engagement and affective polarization. In this paper, we examine the role of issue salience in driving beliefs about political attitudes. We find that a model of political stereotypes, where distortions are stronger for issues that are more salient to voters, captures important qualitative and quantitative features of the data. First, perceived partisan differences are larger on issues that individuals consider more important. To attach a causal interpretation to this link, we show that the end of the Cold War in 1991, which shifted US voters' attention away from external threats, increased perceived, relative to actual, partisan differences on domestic issues. Second, issue salience increases the tendency to over-weigh extreme types. The increase in perceived polarization post 1991 was stronger for issues with more stereotypical partisan differences. Finally, the reverse pattern occurred after the terrorist attacks in 2001, when attention swung back towards external threats. We discuss other mechanisms, which may be at work but fail to match important features of the data. Our results highlight how beliefs about political groups can shift even when the underlying partisan differences change little, with important social and political consequences.

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#### 1 Introduction

Recent changes in the political landscape of Europe and the US have sparked a heated debate across social sciences about the causes of — actual and perceived — polarization, and renewed interest in understanding its impact on political and social outcomes.<sup>1</sup> Beliefs about others' political attitudes are substantially mis-calibrated, and perceptions of partisan differences systematically exaggerated (Westfall et al., 2015; Bordalo et al., 2016; Homola et al., 2016; Ahler and Sood, 2020). In turn, perceptions of larger partisan differences are strongly associated with higher voter turnout and political engagement (Westfall et al., 2015). Moreover, perceived partisan differences may spill-over into political attitudes, inducing individuals to adopt more extreme positions themselves and creating a link between perceived and actual polarization (Bonomi et al., 2020). Distorted beliefs about the other party may even reduce social cohesion — a process known as "affective polarization," which has been associated with an increase in social conflict.<sup>2</sup>

What drives the distortions in beliefs about other people's political attitudes? Some pieces that help solve the puzzle have been documented. On the one hand, beliefs are influenced by individual characteristics: voters who more strongly identify with one party are more likely to exaggerate partisan differences (Westfall et al., 2015). On the other hand, belief distortions are not divorced from reality, but reflect, at least in part, actual differences in party positions: individuals exaggerate partisan differences more on issues where extreme attitudes are more stereotypical of each party (Bordalo et al., 2016). These facts suggest that beliefs may depend on both individual and issue characteristics, but leave out a central insight in political science: individuals are not equally interested in different issues. Instead, individuals tend to devote more attention to, be better informed about, and be politically more swayed by issues that they find important or salient (Dennison, 2019). Since issue salience changes over time and across people, it may influence the process of belief distortions among voters, with, in turn, important political and social implications. To our knowledge, these dynamics have not been examined systematically.

In this paper, we study the role of issue salience on beliefs about others' political attitudes. We begin by documenting two stylized facts about perceived polarization in the American electorate, using nationally representative survey data from the American National Election Studies (ANES). First, we document that the salience of an issue for an individual strongly predicts her exaggeration of partisan differences on that issue. We show that the gap between perceived and actual differences is *larger* on issues that respondents consider more important and pressing for the country. In other words, individuals' perceptions are worse calibrated on dimensions that are *more* salient to them, regardless of the strength of their partisan affiliation and other demographic

<sup>&</sup>lt;sup>1</sup>For the US, some authors have argued that the overall distribution of ideology has not changed much since the 1970s (Fiorina et al., 2006; Fiorina and Abrams, 2008; Bertrand and Kamenica, 2018; Desmet and Wacziarg, 2020), while others have emphasized that ideological differences between partisans have dramatically increased (Abramowitz and Saunders, 2008; Iyengar et al., 2012; Mason, 2014; Gentzkow, 2016; Abramowitz, 2018; Boxell et al., 2020b; Wu, 2020).

<sup>&</sup>lt;sup>2</sup>For an in-depth review of the causes and the consequences of affective polarization see Iyengar et al. (2018).

characteristics. Second, to highlight the implications of issue salience for political behavior, we document that both political engagement and affective polarization are, to a large extent, associated with perceptions of partisan differences on the most salient issues.<sup>3</sup> In other words, issue salience predicts not only belief distortions but also individuals' political behavior and attitudes towards others.

We next formally assess the role of issue salience in belief distortions by embedding it in a model that allows for distortions to come from individual characteristics such as partisanship as well as political stereotypes (Bordalo et al., 2016). Stereotypical beliefs about a group emphasize the group's distinctive or representative types, namely those types that are not shared with other groups, and de-emphasize types that are common across groups. It leads to an overweighting of extreme types and thus an exaggeration of true differences across groups, consistent with the patterns we observe in the data and in line with the representativeness heuristic (Kahneman and Tversky, 1972; Gennaioli and Shleifer, 2010). Because individuals are more attentive to salient issues, we allow — in line with evidence on sensorial perception — issue salience to modulate the strength of stereotyping. In other words, the natural tendency to stereotype and to focus on more extreme and distinctive types can be stronger for salient issues. On the contrary, for less salient issues, differences across groups may be less noticed or accessible, and stereotyping gets diluted.

Our framework generates testable predictions about the link between the true partisan distributions of attitudes on issues, the salience of those issues, and beliefs. We start by showing that shocks to issue salience change beliefs about partisan differences. To attach a causal interpretation to this link, we exploit a major shock to issue salience: the 1991 end of the Cold War. From the American perspective, the dissolution of the Soviet Union and the collapse of the Communist regimes in Eastern Europe represented a dramatic and unexpected reduction in the salience of external threats. We find that the share of American voters who considered national defense related issues as more pressing sharply decreased after 1991. Conversely, the share of Americans who viewed domestic issues, such as social welfare and race relations, as most pressing nearly doubled after 1991, moving from 45 to almost 80 percent in less than 4 years. Consistent with the model's predictions, as external threats faded away with the end of the Cold War, exaggeration of beliefs on partisan differences dropped on external issues such as defense spending, and increased on domestic ones. Both patterns are statistically and quantitatively significant, and are driven by movement in beliefs about the attitudes of party members, rather than by changes in actual partisan differences. After 1991, perceptions of average partisan differences (relative to the

<sup>&</sup>lt;sup>3</sup>Consistent with the literature, we refer to affective polarization as the difference in how warmly an individual feels towards her own party relative to the other party (Gentzkow, 2016; Iyengar et al., 2018; Mason, 2014).

<sup>&</sup>lt;sup>4</sup>For instance, while wealthy individuals are more prevalent among Republicans than among Democrats, only an estimated 2% of Republicans earn more than \$250,000 per year. Yet, individuals believe that this share is much higher — in one survey, the average stated share was above 30% (Ahler and Sood, 2018).

<sup>&</sup>lt;sup>5</sup>Our assumption is motivated by the evidence that exogenously directing attention to a stimulus, such as size or brightness, causes differences along that dimension to be perceived as larger, while differences in other, relatively neglected dimensions are judged to be smaller (Nosofsky, 1988).

actual partisan differences) fell by about 25% on external issues and rose by more than 15% on domestic ones.

We then show that the channel through which issue salience impacts beliefs is the modulation of the strength of stereotyping. We exploit two complementary, but distinct sources of variation. First, we exploit the Cold War shock to issue salience: the domestic issues where extreme attitudes were more representative of the respective parties before 1991 — and thus where the latent stereotyping distortions were stronger — experienced a significantly larger increase in belief distortions once their salience increased after 1991. Second, leveraging within issue variation in beliefs across individuals, we show that the interaction of self-reported issue salience and representativeness of extreme attitudes significantly predicts individuals' belief distortions. These patterns hold across a variety of subsamples (including independent voters) and specifications (including exploiting only within-individual across-issue over-time variation). Moreover, we show that such salience-modulated stereotyping is *local*, consistent with a cognitive based mechanism: political attitudes of others who are demographically closer disproportionately shape the perceived (stereotypical) partisan differences.

Our findings are not specific to the end of the Cold War, but apply more broadly. We observe the exact opposite patterns after 2001, when the salience of external threats re-emerged after the September 11th terrorist attacks and the subsequent Afghanistan and Iraq wars. Holding constant actual partisan differences, we show that not only did Americans shift their attention away from domestic issues and towards external ones after 2001, but also they significantly lowered (raised) perceived partisan differences on domestic (external) issues.

To better assess the magnitude of the reported mechanisms, we estimate the model on the basis of the dynamics of aggregate beliefs around the Cold War shock. We estimate the belief distortion parameter, which captures the strength of stereotyping, to be around 0.3 for non-salient issues and 0.4 for salient issues. Thus, results reveal a strong role for changes in issue salience, which in our data modulates belief distortions by up to 35%. Moreover, the calibrated model performs well out of sample, both in predicting beliefs after the September 11th shock and in explaining within-respondent variation in beliefs as a function of (individual-specific) issue salience. Remarkably, the range of estimated values is comparable to those obtained in other, distinct settings, including laboratory evidence on beliefs about gender ability (Bordalo et al., 2019a). This suggests that the same underlying cognitive mechanism identified in other domains may account for a sizable part of the biases observed in the political context as well.

Taken together, our evidence indicates that beliefs about partisan differences (at least partially) reflect stereotyping modulated by issue salience. The fact that beliefs are more strongly distorted towards stereotypical extremes — as predicted by the actual partisan distributions — for issues that are salient provides a novel, individual-level test of the stereotyping mechanism. However, given that beliefs are inherently equilibrium outcomes shaped both by voters' cognitive processing and by politicians and media's messages, our framework can also be interpreted as reflecting

successful political entrepreneurs or media outlets communicating effective messages on partisan differences.<sup>6</sup> Shocks to issue salience due to the end of the Cold War might have been accompanied by supply side responses in which party leaders or the partisan media took more extreme positions on domestic issues, as parties sought to establish new dividing lines (Glaeser et al., 2005; Baumgartner and Jones, 2010; Iyengar and Kinder, 2010). The truth is likely somewhere in between. Yet, our evidence suggests that for political persuasion to be successful, it should be aligned with and catered to voters' latent stereotypes.

Our results offer two broader insights into the drivers of perceived polarization. First, beliefs about political groups can shift dramatically even when the underlying fundamentals change little, if issue salience changes. Perhaps surprisingly, the malleability of beliefs we document is most pronounced among partisans who do not strongly identify with their party, and holds even for independent voters. The link between beliefs about political attitudes and voting turnout raises the possibility that belief distortions are strongest among swing voters, who often decide electoral outcomes.

Second, and related, the historical context of the end of the Cold War also indicates that the sudden appearance of an "external threat" can unite a country, as citizens perceive each other as more similar — a mechanism that social scientists have long speculated about.<sup>7</sup> In this paper, we show that the removal of a common threat can have the opposite effect, inducing citizens to perceive each other as further apart on a variety of domestic issues, ultimately undermining social cohesion in the country. Importantly, as we demonstrate, the appearance or disappearance of external threats needs not change the *actual* underlying political attitudes and ideology among citizens in order to create shifts to national unity and citizens' beliefs about each other. Yet, if domestic issues become more salient at a time when actual polarization also increases, the perception of polarization can rise dramatically through a multiplier effect induced by the increase in issue salience.

Our paper contributes to the recent, growing literature that studies beliefs in the context of politics and identity.<sup>8</sup> Closest to our paper, Bonomi et al. (2020) present a model where issue salience and group identification are derived from actual differences across voters. In their model, not only individuals stereotype the resulting groups (as in our framework), but also they "slant" their attitudes towards those of the average member of their in-group, as in social identity theory (Tajfel and Turner, 1979). Our analysis abstracts from the channel that connects beliefs to prefer-

<sup>&</sup>lt;sup>6</sup>To the extent that one could interpret our results as capturing political entrepreneurs' effective political messaging, our work is related to the literature on the supply side drivers of belief distortions (e.g., Carmines and Stimson, 1989, Bullock, 2011, and Murphy and Shleifer, 2004).

<sup>&</sup>lt;sup>7</sup>For the US, Levendusky (2018) finds that priming common identity reduces affective political polarization, while Boxell et al. (2020a) show that affective polarization has not increased during the COVID-19 pandemic. Similarly, Depetris-Chauvin et al. (2020) find that victories in national football tournament in sub-Saharan Africa increased national identity and decreased specific ethnic identities.

<sup>&</sup>lt;sup>8</sup>A series of papers have documented theoretically and empirically that individuals tend to identify with groups that have higher socioeconomic status (Shayo, 2009; Grossman and Helpman, 2019; Atkin et al., 2020). See also Shayo (2020) for a review of this literature.

ences (through social identification), which can generate significant political realignments as those experienced by Western countries in recent decades (Piketty, 2018). Instead, we highlight the malleability of beliefs to changes in issue salience, and their interaction with latent stereotypes. In a different context, Fouka et al. (2020) show that Mexican immigration to the US between 1970 and 2010 reduced prejudice and improved attitudes of native whites towards African Americans, by raising the salience of nativity, relative to race, as the key feature that defines in- and outgroup boundaries in the society. We complement this work by emphasizing the implication of stereotype-based belief distortions for beliefs about political groups. We demonstrate that shifts in issue salience have the potential to induce substantial changes in perceptions of other political groups as salience exacerbates stereotyping, and they have significant implications for political behaviors. As such, our analysis provides new insight into the potential value, but also the challenges, to political entrepreneurs who try to manipulate issue salience.<sup>9</sup>

Other frameworks have been proposed to explain beliefs about political groups. One hypothesis for distortion in beliefs is rational inattention (Matèjka and Tabellini, 2019). The fact that distortions are larger for more salient topics is hard to reconcile with a rational inattention mechanism, in which voters would be better informed about issues that are important to them. Related, voters could choose to learn more about — and thus perceive larger partisan differences in — the topics that are salient to them. In these models, issue salience is an independent source of information acquisition and polarization perceptions. Crucially, however, they cannot account for the fact that issue salience works through increasing the strength of stereotyping and the focus on extreme, representative types within each party.

An alternative framework, more generally related to motivated reasoning and affective politics, is that beliefs about political groups may be motivated by individuals' preferences (Benabou and Tirole, 2016), so that more extreme positions are attributed to members of a group that is disliked (Iyengar et al., 2018). Yet, this framework cannot account for the role of issue salience in driving belief distortions, particularly the impact of a common shock such as the end of the Cold War on perceived polarization on specific issues. Moreover, we find that salience-induced distortions in beliefs about partisan differences are quantitatively similar between strong and weak partisans, and if anything more pronounced among the latter. These considerations suggest that, even though individual characteristics and motivated beliefs driven by partisan identity can shape individuals' view about partisan differences, these channels are likely orthogonal to stereotyping and issue salience that we consider in this paper.

The rest of the paper is organized as follows. In Section 2, we describe the data and present stylized facts on US individuals' beliefs about partisan differences. In Section 3, we lay out a model of political stereotypes motivated by these stylized facts, and derive the three predictions that guide our empirical analysis. In Section 4, we document that the end of the Cold War triggered

<sup>&</sup>lt;sup>9</sup>In this respect, we complement Enke (2020), who highlights the cultural and moral foundations of political attitudes, focusing on cross-sectional variation and long-run trends.

an abrupt change to issue salience among American voters. In Section 5, we map the predictions of the model to the data, and present our key empirical findings. Section 6 discusses various issues regarding internal and external validity. Section 7 concludes.

### 2 Perceived partisan differences: data and stylized facts

We use the American National Election Studies (ANES) to measure citizens' own political attitudes, their perception of partisan differences, as well as the salience over various socioeconomic issues. Section 2.1 describes the ANES and introduces the survey questions that we use. Next, Section 2.2 revisits two stylized facts on individuals' beliefs about political attitudes, namely that perceptions of partisan differences are exaggerated and that they predict political behavior. In this section we also show that these patterns are driven by respondents' beliefs about issues that are most salient to them.

#### 2.1 The American National Election Studies (ANES)

The ANES is a nationally representative survey on public opinion and political participation in the United States, conducted since 1948 by the University of Michigan every two years until 2004, and every four years afterwards. It is widely considered the "gold standard" for data on political views and ideology in the US (Gentzkow, 2016), and has long been used in political science and political economy. Surveys are mostly run using face-to-face interviews in respondents' homes — a feature that guarantees data quality. The ANES asks questions on demographics, party affiliation, strength of partisanship, political engagement, ideology, and political attitudes. Also, and crucially for our purposes, since the early 1980s it has consistently elicited respondents' beliefs about political attitudes held by the Democratic and the Republican parties on a range of socioeconomic and political issues.

For most of the paper, we focus on the period between 1980 and 2000, which allows us to examine the effect of the end of the Cold War on perceived partisan differences. <sup>11</sup> Between 1,275 and 2,300 individuals were surveyed in each wave, yielding a total of more than 20,000 respondents. In order to compare actual and perceived partisan positions across issues, our baseline analysis is focused on the subsample of ANES respondents who self-identify as either Republicans or as Democrats. <sup>12</sup> During our sample period, Democrats and Republicans account for, respectively, around 40% and 25% of respondents (see Appendix Figure A.1), so this restriction reduces the

<sup>&</sup>lt;sup>10</sup>More details on ANES sampling methodology can be found here: http://www.electionstudies.org/wp-content/uploads/2018/04/nes012492.pdf.

<sup>&</sup>lt;sup>11</sup>In Section 6, we extend the time horizon to 2004, in order to include the survey conducted after the terrorist attacks of September 11, 2001.

<sup>&</sup>lt;sup>12</sup>However, as documented in the appendix, results are robust to including individuals who identify as Independents. Implicitly, our sample also restricts to respondents whose individual characteristics and ideology (including beliefs on party positions across issues) are available.

number of respondents per survey wave to the range of 600-1,200 for a total of approximately 10,500 respondents.

We focus on the six socioeconomic and political issues for which the ANES elicits both own attitudes and beliefs on the attitudes of Democrats and Republicans. These are: (1) defense spending; (2) whether the government should actively provide job-related aid; (3) whether the government should do more or less to help African Americans and other minorities; (4) whether government spending on items such as health and education should be increased or decreased; (5) whether men and women should have equal roles in society; and (6) a broadly defined liberal vs. conservative scale. Respondents can answer on a scale of 1 (most liberal) to 7 (most conservative). The exact wording of questions asked to infer respondents' own positions is presented in Table 1, and remained largely unchanged throughout the survey waves that we focus on.

Introducing some formal notation that will be useful when presenting the model below, we denote by p(x|g,j) the share of members of party  $g \in \{D,R\}$  (for Democrats and Republicans) who hold position  $x \in X = \{1,\ldots,7\}$  on issue j. The average position of party g on issue j is denoted  $\overline{x}_{gj} = \sum_{x \in X} x \cdot p(x|g,j)$ , with  $\overline{x}_{Rj} > \overline{x}_{Dj}$  for all issues j in all survey waves. For each issue-year, we then construct a measure of the true partisan differences for each of the corresponding issues j as  $\overline{x}_{Rj} - \overline{x}_{Dj}$ .

After the questions on "where would you place yourself on this scale" for each of the six issues described above, respondents are then asked about their beliefs about the average positions of the Democratic and Republican Parties for each of these attitudinal dimensions. The questions read:

- 1 Where would you place the Republican Party? [on a scale of 1-7]
- 2 Where would you place the Democratic Party? [on a scale of 1-7]

For every issue and survey wave, we construct a measure of each respondent's beliefs about partisan differences by taking the difference between her beliefs about the position of the Republican Party and her beliefs about the position of the Democratic Party. We also measure the average perceived polarization on each issue, denoted  $\hat{x}_{Rj} - \hat{x}_{Dj}$  (where  $\hat{x}_{gj}$  denotes the average perception of party g's position on issue j). Average perceived partisan differences are positive since, in line with true differences, the Republican Party is perceived to be more conservative than the Democratic Party across all issues.

Following previous work (Boxell et al., 2018; Westfall et al., 2015), we interpret responses to questions 1 and 2 above as reflecting respondents' beliefs about the average member of either political party. We acknowledge that these questions do not specifically ask about party members, but rather about the parties as a whole. If beliefs about party members' position differ from re-

<sup>&</sup>lt;sup>13</sup>Appendix Table A.1 presents the survey waves for which questions on these issues were asked. In related work, Westfall et al. (2015) consider the following four additional issues: (1) cooperation with Russia; (2) urban unrest; (3) rights of the accused; and (4) school busing. Since these questions are available only for pre-1990 years, we do not include them in our analysis.

spondents' beliefs about the position of the party, there might be a wedge between our measure of beliefs about partisan differences and our proxy for actual partisan distance. Unless this gap were to vary across issues and change differentially over time, this should not affect the interpretation of our empirical results. More importantly, our results suggest that belief distortions are driven by the relative prevalence of members with given positions across parties, so that views about Democrats depend systematically on the distribution of Republicans. Such a structure is not easily reconciled with respondents anchoring their answers on a different, yet unbiased, moment of the party distributions.

We construct a measure of issue salience at the respondent level, relying on a specific question that asks to list (up to) the three most important problems facing the country, and to then identify the single most pressing one. The exact question wording is as follows: (1) "What do you think are the most important problems facing the country?" (up to three issues are recorded); and (2) "Of those problems you have mentioned, what would you say is the single most important one?" These questions are open-ended in the raw data, and the ANES assigns responses to a number of categories. We match each category to one of the issues for which we have data on beliefs about parties' positions. In this process we have to omit the broad "liberal-conservative" issue, for which no corresponding category exists in the ANES classification. When considering the most important problem question, we are thus left with five issues: (1) defense spending; (2) aid to African Americans; (3) government spending (e.g. on social welfare programs); (4) job aid (e.g. unemployment compensations); and (5) women's role and rights.

Finally, we construct a measure of affective polarization as in Gentzkow (2016) by taking the difference in feeling thermometers towards own and towards the other party, as reported by respondents.<sup>15</sup>

#### 2.2 Stylized facts about perceived partisan differences

We now revisit two key stylized facts about perceived partisan differences, and show that in each case issue salience is a key factor. First, perceptions of partisan differences increase with the actual average difference in partisans' positions, but significantly exaggerate them (Westfall et al., 2015; Bordalo et al., 2016). We show that individuals exaggerate partisan differences significantly more on issues that are salient to them. Second, individuals who perceive larger partisan differences are more likely to engage in political activities, including voting, making political contributions, and working for a political campaign (Westfall et al., 2015). Interestingly, the same holds for affective polarization: individuals who perceive larger partisan differences also dislike the other party more. Moreover, we show that the link between individuals' beliefs and their political engage-

 $<sup>^{14}</sup>$ See Section 6 for a detailed discussion of how potential mis-measurement might threaten our empirical strategy.

<sup>&</sup>lt;sup>15</sup>Feeling thermometers range from 0 to 100 with higher (resp. lower) values referring to warmer (resp. cooler) feelings. We rescale them so that they range from 0 to 1 in order to make the interpretation of results more comparable to that on political engagement.

ment and their affective polarization is driven by perceived polarization on the issues that they consider as most salient.

Perceived partisan differences exaggerate actual differences, especially on salient issues. Table 2 presents summary statistics on actual and perceived partisan differences at the issue level (Panels A and B), as well as on the difference between the two (Panel C).<sup>16</sup> On average, the actual difference between Republicans and Democrats is approximately 1 point (on a 7-point scale) for domestic issues, and around 0.7 unit for defense spending. Perceived differences are almost twice as large — ranging from 1.1 (for women's role in Column 7) to 2.1 (for the broad liberal-conservative issue in Column 3), with an average of 1.7.<sup>17</sup> Figure 1 illustrates the results, plotting perceived differences versus actual differences at the issue-year level. Consistent with Bordalo et al. (2016) and Westfall et al. (2015), perceived differences correlate with but strongly exaggerate actual differences.

To assess the role of issue salience on beliefs, we estimate individual-level regressions of perceived partisan differences on a given issue against an indicator for whether the respondent identifies that issue as the most important problem facing the country at the time of the interview. Table 3 shows that the correlation between perceived partisan differences and issue salience is positive, statistically significant, and quantitatively large: perceived partisan differences are 0.3 units, or 16%, higher on the most important issue compared to those on the other issues (Column 1). This relationship remains unchanged when including survey wave and individual fixed effects (Column 2). In Column 3, we control for respondents' position on the issue as well as for the actual average difference between Republicans and Democrats on that issue. The magnitude of the coefficient falls by almost one third, suggesting parties are actually more polarized on salient issues, but remains statistically and quantitatively significant. Also, the respondent's own position plays a small role in driving belief distortions. Column 4 further augments the set of controls by including issue fixed effects.

Finally, in Column 5, we control for issue × year fixed effects, and the coefficient remains nearly unchanged. Together with the individual fixed effects, this specification only exploits variations in issue salience *within* respondent *within* a given year, netting out the average perceived salience of the corresponding issues during that particular year. In other words, the positive association between issue salience and perceived partisan differences is not driven by changes in issue salience common to all respondents, such as shifts in politicians' policy platform, or extreme political messages tailored to the most salient socioeconomic issues. Holding these (potential) "supply side"

<sup>&</sup>lt;sup>16</sup>Appendix Table A.2 presents more detailed summary statistics on the distribution of respondents' position on each issue, before and after 1991.

<sup>&</sup>lt;sup>17</sup>As noted also in Gentzkow (2016), actual and perceived partisan differences on the role of women in the society are rather small, probably due to the fact that both Democrats and Republicans hold relatively liberal views on this issue.

<sup>&</sup>lt;sup>18</sup>Due to data limitation, we can only evaluate the impact of issue salience, measured in terms of its ranking, and not based on a continuous measure of salience. Our conjecture is that a ranking-based indicator, as the one constructed here, is likely to provide a lower bound for the effects of issue salience on beliefs about partisan differences.

factors fixed, respondents who happen to consider one issue as more pressing perceive larger partisan differences on that issue, compared to other respondents who perceive another issue as more pressing during the same year.

Taken together, the evidence presented here indicates that individuals exaggerate perceived partisan differences more on issues that are *more* salient to them. Moreover, these distortions are unlikely to arise exclusively from the strategic behavior of politicians. We return to this issue in Section 6.1.

**Perceived partisan differences on salient issues predict political behavior** We now turn to the link between individuals' beliefs about partisan differences and, respectively, political engagement and affective polarization.

In Columns 1 and 2 of Table 4, the dependent variable is a dummy equal to one if a respondent reports any of the following political behaviors: voted in the last election, plans to vote in the next election, made any political contribution during the past electoral campaign, and worked or was actively involved in political activities like canvassing in the past electoral campaign. In Columns 3 and 4, the outcome is instead affective polarization reported by the respondent, captured by the thermometer towards own and opposing party.<sup>19</sup>

Panel A documents that perceived partisan differences are strongly correlated with political behavior. Consistent with Westfall et al. (2015), this holds even after controlling for respondents' own political attitudes. According to our estimates, an individual at the 75th percentile of perceived partisan differences is nearly 10 percentage points more likely than an individual at the 25th percentile to take any political action. These magnitudes are large when compared to other drivers of political engagement. For instance, Leighley and Nagler (1992) find that African Americans are between 4% and 10% more likely to vote relative to whites, whereas women are up to 1.5% more likely to vote than men. In Columns 3 and 4, we document that perceived partisan differences are also strongly associated with affective polarization. One standard deviation increase in perceived partisan differences increases affective polarization by .066, or 20% relative to the sample mean. These magnitudes are in line with those found in Levendusky (2018), who documents that priming American identity to US respondents reduces their degree of affective polarization by around 25%. Interestingly, both political engagement and affective polarization are increasing (respectively, decreasing) in the distance between own position and the perceived position of the other (respectively, own) party (see Appendix Table A.3).

Next, we ask if issue salience amplifies the relationship between perceived polarization and

<sup>&</sup>lt;sup>19</sup>After controlling for perceived partisan differences, the relationship between affective polarization and political behavior documented in Mason (2014) is no longer statistically significant and becomes quantitatively small. This pattern suggests that beliefs being a common driver of both variables.

<sup>&</sup>lt;sup>20</sup>To directly compare the magnitude of coefficients in Columns 3 and 4 to those in Columns 1 and 2, note that an increase in perceived partisan difference equal to its interquartile range (1.46) would raise affective polarization by 9.6 percentage points.

political behavior. We proceed in two steps. First, we show that respondents' political engagement is strongly predicted by their perceived polarization on issues that are most salient to them (Table 4, Panel B). Second, we run a horse race between the most salient issue and a randomly selected non-salient issue (Table 4, Panel C). Notably, the explanatory power of beliefs on the most salient issue remains quantitatively large and statistically significant. Instead, once we account for demographics and other individual characteristics, perceived polarization on non-salient issues seems to play a marginal role for either political engagement or affective polarization.

Finally, in Panel D of Table 4, we quantify the disproportionate impact of salient issues on political behavior, documenting that partisan differences perceived on a salient issue have 1.5 to 3 times *greater* impact on political engagement and affective polarization, as compared to the same difference on a non-salient issue.

In sum, the set of stylized facts presented here suggest that issue salience is a key driver of exaggerated beliefs about partisan differences, as well as the association between perceived polarization and political behavior. Motivated by these facts, we introduce in Section 3 a conceptual framework that accounts for voters' inaccurate beliefs where distortions depend on group stereotypes, issue salience, and the interaction between the two. The model generates testable predictions, which we then take to the data in Section 5.

## 3 Political stereotypes and issue salience

Motivated by the stylized facts presented in the previous section, we now consider a model on perceived partisan differences that incorporates stereotyping and issue salience.

Starting with Kahneman and Tversky (1972), a growing body of work points to systematic departures from the benchmark of statistically optimal beliefs, from simple probabilistic judgments to the formation of expectations. According to Tversky and Kahneman (1983), probabilistic judgments overweigh information that comes easily to mind, which can entail departures from the rational benchmark. Similarly, assessments of social groups are driven by disproportionate accessibility of certain group elements. These assessments often reflect the use of the representativeness heuristic, whereby a type is easily recalled (and thus perceived as likely) if it is representative, namely if it is more likely in that group than in a relevant comparison group (Gennaioli and Shleifer, 2010; Bordalo et al., 2016). In this section we embed the idea of issue salience in the model of stereotypes in Bordalo et al. (2016), and describe testable predictions about the type and extent of distortions that arise, which we later take to the data.

There are two political groups,  $g \in \{D, R\}$  for Democrats and Republicans, and issues are indexed by j. Individuals' beliefs about the positions of members of party g on issue j are distorted by putting too much weight on those positions that are more representative of g. Formally, the

representativeness of position x for group g on issue j, relative to the comparison group -g, is:

$$R(x,g,j) = \frac{p(x|g,j)}{p(x|-g,j)} \tag{1}$$

The extent to which beliefs inflate positions that are highly representative for a group on an issue j depends on the issue's salience  $\sigma_j$ . Stereotypical beliefs about g on issue j satisfy:

$$\frac{\hat{p}(x|g,j)}{\hat{p}(x'|g,j)} = \frac{p(x|g,j)}{p(x'|g,j)} \cdot \left[ \frac{R(x,g,j)}{R(x',g,j)} \right]^{\frac{\sigma_j}{\sum_l \sigma_l}}.$$
 (2)

Equation (2) has two key features. First, beliefs  $\hat{p}(x|g,j)$  are anchored to the true distribution p(x|g,j), but exaggerate the prevalence of types that are representative of g relative to -g, i.e. types with relatively high R(x,g,j). While the comparison group -g is not directly observed, the survey setting strongly suggests that Democrats are compared to Republicans and vice-versa. Two main reasons support this view. First, subjects are asked about both Republicans and Democrats throughout the survey. Second, given the two-party system in the US, asking subjects to think about one party naturally cues the comparison with the other party.

The second feature of Equation (2) is that the strength of representativeness distortions is itself modulated by issue salience,  $\sigma_j$ . The more attentive a subject is to the issue at hand, the more accessible the representative positions and the stronger the stereotypes. For less salient issues, attention is less engaged and no type is disproportionately accessible. Issue salience is normalized in Equation (2), to capture an attention externality across issues (similar to the attention externality documented in sensorial perception (Nosofsky, 2009)): the more attention is engaged in one issue, the less is engaged in a different issue, so that the strength of stereotypes is negatively correlated across issues. Normalizing issue salience is also empirically convenient since the survey data measures rank, not absolute, issue importance.

According to Equation (2), the observed believed average position of group *g* on issue *j* is then:

$$\widehat{x}_{g,j} = \sum_{x \in X} x \cdot \widehat{p}(x|g,j), \qquad (3)$$

This belief can then be compared to the average perception about party g's position on issue j obtained from the survey data (for which we use the same notation).

To see how beliefs are distorted, recall that higher position values are associated with Republican attitudes. Consider the case where the distributions of positions for Republicans and Democrats exhibit a monotonic likelihood ratio property, such that R(x, R, j) increases with the level x. This implies that the most extreme right wing position is most overweighted in beliefs about Republicans, while the most extreme left wing position is most overweighted in beliefs about Democrats. As a result, on average, beliefs about Republicans move to the right, and those

about Democrats move to the left. In this case, stereotypes about the parties exaggerate true average differences,

$$\widehat{x}_{Rj} - \widehat{x}_{Dj} \ge x_{Rj} - x_{Dj}$$

and the inequality is strict for  $\sigma_j > 0$ . This "kernel of truth" property is consistent with the exaggeration documented in Figure 1 and in Table 2, and yields further distinctive testable hypotheses.

To derive these predictions, it is useful to express distortions in beliefs directly in terms of the representativeness of types, which is measurable from the actual distribution of partisan attitudes. To do that, we define the representativeness of the "Republican tail" as:

$$LR_{Rj} = \frac{\sum_{x=6,7} p(x|R,j)}{\sum_{x=6,7} p(x|D,j)}$$
(4)

where LR stands for the likelihood ratio (an equivalent definition can be easily constructed for the "Democratic tail"). Then, following Bordalo et al. (2016) (Proposition 4), we expand Equation (3) when p(x|g,j) is close to p(x|-g,j) for all x (and moreover  $\frac{p(x|R,j)}{p(x|D,j)} \approx LR_{Rj}$  for x=6,7) to find:

$$\widehat{x}_{Rj} - \widehat{x}_{Dj} \approx x_{Rj} - x_{Dj} + \lambda_j \frac{\sigma_j}{\sum_l \sigma_l} \left( L R_{Rj} - 1 \right)$$
 (5)

where  $\lambda_j$  is a positive constant. Because conservative positions are representative of the Republican party,  $LR_{Rj} > 1$ , stereotypes exaggerate true differences across groups. The extent of exaggeration depends both on how representative extreme positions are, and on how salient the issue is. Relative to Bordalo et al. (2016), the role of issue salience in Equation (5) entails the following two predictions:

**Prediction 1** Controlling for true differences, perceived partisan differences on issue j increase in the salience of issue j and decrease in the salience of issue -j.

This prediction concerns how perceived partisan differences shift as the salience of the corresponding issue changes, independently of changes in the actual distributions of partisan positions. It also highlights the externalities across issues, whereby a change in the salience of one issue shapes beliefs about parties' positions along other issues. Because in the data we only observe salience ranking, we are not able to separately identify these two comparative statics.

**Prediction 2** Controlling for true differences, perceived partisan differences on issue j depend more strongly on the representativeness of tail positions when the salience of issue j increases.

According to this prediction, issue salience amplifies belief distortions by increasing the attention devoted to representative types of each party. In other words, issue salience and partisan representativeness are *complementary* in enlarging perceived partisan differences.

Our empirical approach to test these predictions leverages an exogenous shock to issue salience, to which we turn next.

#### 4 Issue salience and the end of the Cold War

In this section, we describe the main source of variation that we exploit to test the model's predictions regarding the salience of issues. We use the end of the Cold War as a shock that rapidly and dramatically changed the salience of external and domestic socioeconomic issues among American voters.

The Cold War (1946 - 1991) was a period of immense geopolitical tension between the Eastern Bloc (Soviet Union and its satellite states) and the Western Bloc (the United States and its allies). Although the two superpowers never directly fought during the Cold War, many crisis episodes pushed the world to the edge of mass conflict and likely destruction: from the Berlin Blockade (1948-1949), to the Korean War (1959-1953), the Suez crisis and the repression of the Hungarian Uprising (1956), the Cuban missile crisis (1962), the crushing of the Prague Spring (1968), and the Euromissiles crisis (1977-1987).<sup>21</sup>

The Cold War came unexpectedly, and broadly peacefully, to an end between 1989 and 1991, following Soviet leader Gorbachev's liberalization initiatives and refusal to use Soviet troops to bolster the faltering Warsaw Pact regimes, as had occurred in the past. The result was a wave of revolutions in 1989 that peacefully (with the exception of the Romanian Revolution) overthrew all of the Communist regimes of Central and Eastern Europe, epitomized by the fall of the Berlin Wall. The Communist Party of the Soviet Union itself lost control following an abortive coup attempt in August 1991. This episode led to the formal dissolution of the USSR in December 1991, the collapse of Communist regimes in other countries, and an official end of the Cold War era. The year of 1991 represents a particular watershed moment in the reduction of external threats for the United States. The Strategic Arms Limitation Treaty was signed, President George H.W. Bush announced the withdrawal of thousands of tactical weapons and strategic missiles, and President Mikhail Gorbachev announced similar initiatives, indicating that the Soviet Union would suspend nuclear testing.

**Perceived external threats decline after 1991** The imminence of external threats during the Cold War and the dramatic removal of such threats in 1991 were widely felt in measures of public

<sup>&</sup>lt;sup>21</sup>Two particular incidents mark peaks of intensity of the Cold War era. In August 1953, the Soviet Union tested its first hydrogen bomb. Although not as powerful as the bomb tested by the United States nine months earlier, it had a key advantage that it was a deployable weapon, small enough to be dropped from an airplane. John Foster Dulles, then Secretary of State of the United States, addressing the United Nations soon after said that "Physical scientists have now found means which, if they are developed, can wipe life off the surface of this planet." In the early 1980s, the threat of nuclear conflicts became large and salient: the nuclear weapons' design shifted from war-deterrence to war-fighting, the nuclear arms race between the Soviet Union and the United States accelerated since 1980, and communication between the two superpowers almost completely broke down.

discourse, consistent with a dramatic shift in the salience of external issues.

In what follows we provide two examples on public discourse. First, we consider the "Doomsday Clock": a measure created by the Bulletin of the Atomic Scientists at the dawn of the Cold War in 1947 to indicate their perception of the intensity of threats to humanity. The decision to move (or to leave in place) the minute hand of the Doomsday Clock is made every year by the Bulletin. The dotted line in the top panel of Figure 2 presents the Clock's minutes to midnight from 1947 to 2000. In 1991, the Bulletin reset the Doomsday Clock from 10 to 17 minutes until midnight, together with the following announcement:

The clock is in a new region because we feel the world has entered a new era. Never before has the Board of Directors moved the minute hand so far at one time. Conceived at the dawn of the Cold War, the Clock was designed with a 15-minute range. John A. Simpson, one of the Bulletin's founders, says that a 15 minute scale was all anyone thought would be needed in their lifetimes. ... [The reset] reflects a conviction that the world was changing in fundamental and positive ways. ... The Cold War is over. The 40-year-long East-West nuclear arms race has ended. The world has entered a new post-Cold War era.

Second, we turn to media coverage of the Cold War. The solid line in the top panel of Figure 2 reports the number of articles that mentioned the words Soviet, Russia, or Communist published on the *New York Times* between 1980 and 1995. One observes an abrupt decrease after 1991, as the frequency of Soviet related articles dropped by almost half. This decrease is even starker for articles published on the front page of the newspaper. While it is difficult to distinguish the specific sentiment portrayed in these articles from simple keyword queries, the lower frequency of Soviet related articles clearly reflects a sudden and drastic decrease in the salience of the threat of a foreign power.

Importantly, the decrease in the external threats was felt among US citizens as well. Using ANES data, we demonstrate that external threats did indeed become perceived as less prominent after 1991 by Americans. In the bottom panel of Figure 2, we plot the share of ANES respondents who considered external threats and diplomatic issues as the most pressing ones facing the US at the moment when they answered the survey, between 1980 and 1996. During the 1980s, around 25% of respondents perceived external threats and related issues as most pressing. This share abruptly dropped below 5% in the 1992 survey, immediately after the end of the Cold War.<sup>22</sup> This pattern resembles that from the shifts in Doomsday Clock minutes to midnight and from the share of articles on the *New York Times* covering the Soviet threats (see the top panel of Figure 2).

In contrast, the perceived salience of domestic socioeconomic issues — aid to African Americans, government spending on social welfare programs, job aid, and women's role and rights —

<sup>&</sup>lt;sup>22</sup>An almost identical pattern is observed if we focus on the share of respondents who consider external threats among the top 2 most pressing issues facing the US, as shown in Appendix Figure A.2.

grew immediately after the end of the Cold War. Figure 3 shows that while about 45% of respondents perceived domestic issues as most pressing prior to 1991, such share jumped to 75% in 1992 right after the end of the Cold War. The timing and magnitude of this increase echo that of the drop in the salience of external and diplomatic issues. As the salience of external threats decreased with the end of the Cold War, salience of the domestic counterparts rose.

Taken together, the evidence presented in this section indicates that the end of the Cold War induced a substantial decrease in the salience of external issues among US citizens. In our empirical analysis, we exploit this shock to test how changes in issue salience affect the exaggeration of beliefs about partisan differences.

#### 5 Results

In this section, we test the predictions of the model presented in Section 3. First, we show that distortions in beliefs reflect the excess weight put on representative tails (Section 5.1). Second, we document that issue salience amplifies belief distortions (Section 5.2). Third, we test the main prediction of the model, and show that the strength of representativeness increases in issue salience (Section 5.3).

#### 5.1 Belief distortions and representativeness of tail positions

According to Prediction 1, the exaggeration of partisan differences increases in the representativeness of each party's extreme positions, *ceteris paribus*. Formally, from Equation (5) we obtain an expression of the form:

$$\widehat{x}_{R,j,it} - \widehat{x}_{D,j,it} = x_{R,j,t} - x_{D,j,t} + \beta \cdot LR_{j,t} + u_{j,it}$$
(6)

where  $\widehat{x}_{g,j,it}$  is the belief about the average position of party g on issue j held by respondent i in year t.<sup>23</sup> Testing Prediction 1 amounts to examining whether  $\beta > 0$ . In our regression analysis, we measure true differences,  $x_{R,j,t} - x_{D,j,t}$ , using the difference between average positions reported by partisan ANES respondents, and we define tail representativeness as:

$$LR_{j,t} = \frac{\sum_{x=6,7} p(x|R,j)}{\sum_{x=6,7} p(x|D,j)} \cdot \frac{\sum_{x=1,2} p(x|D,j)}{\sum_{x=1,2} p(x|R,j)}$$

That is, tail representativeness is the product of the representativeness of the conservative tail for Republicans times the representativeness of the liberal tail for Democrats, which entails a symmetric role for both tails in driving belief distortions. The measures of the average likelihood ratios

 $<sup>^{23}</sup>$ In Equation (5), beliefs exaggerate actual differences provided that partisan tails are disproportionately representative, and are thus a function of  $LR_j - 1$ . This level shifter does not affect either the identifying relationship between tail representativeness and beliefs or the interpretation of coefficients estimated from Equation (6).

are reported in Table 5, Column 1. In the Appendix, we show that results are robust to focusing on representativeness of each tail separately.<sup>24</sup>

To estimate Equation (6), we exploit two sources of variation in tail partisan likelihood ratios: first, across issues at a specific point in time  $(\overline{LR_j})$ ; second, within issues over time  $(LR_{j,t})$ . To operationalize the cross-issue variation, we start from the definition of representativeness given by  $LR_{j,t}$ , and construct an issue-level measure of representativeness given each issue's average tail representativeness between 1980 and 1990,  $\overline{LR_j} = avg_{t<1991}LR_{j,t}$ . Notably, this measure only exploits variation across issues before the end of the Cold War in 1991. The advantage of this specification is two-fold. First, while the contemporaneous measure of  $LR_{j,t}$  combines both crossissue and over-time variation, it is more susceptible to measurement error in the distribution of political attitudes. Second, even when there is variation in actual positions over time, respondents' beliefs may be slow-moving and adjust with a lag. To demonstrate the robustness of the results, we present estimation using both issue-level likelihood ratios (pre-1991 averages) and the contemporaneous measures.

To minimize concerns about large changes in attitudinal distributions, we restrict attention to the period between 1980 and 2000. Also, to align our empirical analysis to the model, we omit defense spending and focus only on domestic issues, which experience similar salience shocks over this period. Finally, to ease interpretation, we standardize our measures of representativeness,  $\overline{LR_j}$  and  $LR_{j,t}$ , by subtracting their means and dividing by their standard deviations. Thus,  $\beta$  in Equation (6) can be interpreted as the effect of one standard deviation change in the likelihood ratio on beliefs about partisan differences.

Results are reported in Table 6. Panel A leverages variation in issues' average tail representativeness ( $\overline{LR_j}$ ), while Panel B relies on cross-issue-over-time variation in tail partisan likelihood ratio ( $LR_{j,t}$ ). Column 1 shows that beliefs about partisan differences reflect actual differences. Adding our measures of representativeness in Column 2 yields our main result: beliefs are significantly and positively associated with the representativeness of tail positions, in line with Prediction 1. Moreover, the coefficient of actual differences falls relative to Column 1. This indicates that, not only beliefs exaggerate actual differences, but also, they do so by emphasizing tail positions — a pattern consistent with the context dependent nature of stereotypes. These results are remarkably robust: we obtain similar coefficients with both empirical strategies (Panels A and B), and irrespective of controlling for year and individual fixed effects (Column 3), as well as for individual respondents' positions on each issue in a given year (Column 4). In other words, we obtain strong evidence for stereotyping even using within-subject variation across issues.<sup>25</sup>

In sum, these results provide evidence for stereotyping of political groups, complementing

<sup>&</sup>lt;sup>24</sup>Note that Equation (6) assumes that variation in tail representativeness is independent from variation in the salience of issues. While this condition might not hold in the data, Equation (6) nonetheless provides a useful first pass to the data, exploring whether belief distortions are linked to the likelihood ratio of tail positions.

<sup>&</sup>lt;sup>25</sup>These results are also robust to alternative constructions of the average likelihood ratios, for example, using years between 1980 and 2000 that span the entire sample (Appendix Table A.4).

evidence by Bordalo et al. (2016). Stereotypes reflect overweighting of each party's extreme types, and the extent of overweighting is shaped by the representativeness of those types relative to the other party.

#### 5.2 Belief distortions and issue salience

We now turn to Prediction 2: all else equal, exaggerations of partisan differences are increasing in issue salience. Formally, from Equation (5), we obtain an expression of the form:

$$\widehat{x}_{R,j,it} - \widehat{x}_{D,j,it} = x_{R,j,t} - x_{D,j,t} + \gamma \cdot \frac{\sigma_{j,it}}{\sum_{l} \sigma_{l,it}} + u_{j,it}$$

$$(7)$$

where  $\frac{\sigma_{j,it}}{\sum_l \sigma_{l,it}}$  is the (relative) salience of issue j for respondent i at time t, and  $\gamma$  captures the average partisan representativeness across issues.

When estimating Equation (7), we implement a strategy akin to an event study design: we exploit the fact that the end of the Cold War in 1991 induced a sudden drop in the salience of external and diplomatic issues, and a corresponding rise in the salience of domestic, socioeconomic issues (see Section 4).<sup>26</sup> According to Prediction 2, controlling for actual differences, perceived partisan differences on issues related to external threats (i.e. defense spending) should fall, while those on domestic issues should rise after 1991.<sup>27</sup> Since the end of the Cold War was a shock common to all Americans,  $\frac{\sigma_{j,it}}{\sum_{l} \sigma_{l,it}}$  can be simply captured using *Post-1991*, a dummy equal to 1 for survey years strictly greater than 1991. We test whether  $\gamma > 0$  for domestic issues, and  $\gamma < 0$  for defense spending.

We start by visually inspecting whether perceived partisan differences changed as issue salience shifted at the end of the Cold War. Figure 4, top panel, presents the trends in actual and perceived partisan differences on defense spending, between 1984 and 1996, normalized by their 1984 value. The bottom panel plots the equivalent for domestic issues. While there was only a minor decrease in actual partisan difference (dotted line) on defense spending right after the end of the Cold War, the perceived partisan difference (solid line) on this issue experienced a substantial drop. Conversely, there was a moderate increase in actual partisan differences in attitudes among domestic issues, from an average of 1.0 just before the end of the Cold War to 1.3 immediately after the end of the Cold War. However, relative to the modest increase in actual partisan differences, perceived partisan differences on domestic issues increased much more noticeably, rising from 1.6 just before to 2.2 immediately after the Cold War ended.

<sup>&</sup>lt;sup>26</sup>The event study design does not allow us to rule out temporal shocks that occurred at the same time when the Cold War ended that could shift perceived partisan differences through channels other than changes in issue salience. Nonetheless, by narrowing the analysis to a short window just around the period surrounding the end of the Cold War, we remove some of the secular trend in perceived partisan differences over a slightly longer time horizon. In Section 6, we present placebo tests using break years other than 1991.

<sup>&</sup>lt;sup>27</sup>We group all domestic issues together because the salience shock we exploit is at the level between domestic and external issues, rather than within domestic issues.

Table 7 presents the corresponding regression results. We separately examine perceived partisan differences regarding the external issue (i.e. defense spending; Column 1), and regarding all domestic socioeconomic issues (pooled together in Column 2; for each of the 5 individual issues in Columns 3-7). Panel A presents regression estimates that regress beliefs on actual partisan differences alone, where we document that beliefs about partisan differences are strongly correlated with actual differences, with coefficients ranging between 0.5 and 1.4 depending on the issues. Panel B adds the indicator of whether the survey was conducted after 1991. Finally, Panel C controls for individual covariates, including partisanship and individual position on each issue.

Consistent with Prediction 2, Panel B shows that issue salience has a remarkable impact on beliefs: perceived partisan differences decreased substantially for defense spending right after 1991, while simultaneously increasing for all domestic issues. The *Post-1991* indicator is statistically different from zero and economically large for all topics except women's role in society. Panel C confirms that the coefficients are robust to the inclusion of individual controls.<sup>28</sup> The changes in perceived partisan differences after 1991 are sizable. Relative to pre-1991 means, and accounting for changes in actual differences, perceived differences increase by approximately 11% for domestic issues and decline by 30% for the external issue.

We conclude this section by stressing the symmetry between these results and those obtained in Table 3, where, relying on a different source of variation, we find that individuals perceive larger partisan differences — above and beyond actual ones — on issues that are more salient to them. Notably, the individual level measure of salience exploited in Table 3 allows us to control for any time-varying issue characteristic, including possible "supply side" reactions to issue salience. At the same time, the exogenous nature of the Cold War shock exploited in Table 7 reduces concerns of endogeneity and reverse causation, such as the possibility that individuals consider an issue more salient because they hold more distorted beliefs on that issue in the first place.

#### 5.3 Complementarity between representativeness and issue salience

Finally, we turn to the main prediction of the model, and examine whether issue salience shapes beliefs by modulating the strength of stereotyping. We focus on domestic issues, and investigate the extent to which issue salience and partisan representativeness are *complementary* in distorting beliefs about partisan differences. We proceed by estimating two separate regressions.

First, we rely on a specification of the form:

$$\widehat{x}_{R,j,it} - \widehat{x}_{D,j,it} = x_{R,j,t} - x_{D,j,t} + \delta \cdot \sigma_{j,it} \times \overline{LR}_j + u_{j,it}$$
(8)

where  $\sigma_{j,it}$  is issue j's salience, and  $\overline{LR_j}$  is issues j's average tail representativeness. In this case, Prediction 3 corresponds to the parametric restriction that  $\delta > 0$ . As before, we estimate Equation

<sup>&</sup>lt;sup>28</sup>The pattern we document here is robust to considering only the three survey waves before and after 1991 (correspondingly, from 1986 to 1996), as shown in Appendix Table A.5.

(8) by combining variation in issue salience over time with variation in the representativeness of parties' tail positions across issues at a given time.

Table 8 presents the first set of results. As in previous tables, we start by regressing beliefs on actual differences (Column 1). Then, in Column 2, we augment this specification by adding the key, model-predicted interaction of salience and representativeness. This term combines cross-sectional variation in representativeness before 1991, using the standardized measure  $\overline{LR}_j$  from Section 5.1, with over-time variation in issue salience due to the end of the Cold War. In line with the model, belief distortions driven by representativeness are larger on issues that are more salient. As domestic issues became more salient after the end of the Cold War, exaggeration of partisan differences increased *more* on issues where differences were *more* representative to begin with. These results are robust to adding the main effects of salience and representativeness (Column 3) as well as controls for individual positions (Column 4).

In Column 5, we conduct a "horserace" exercise, comparing the relative importance of tail likelihood ratio to that of differences in means in shifting perceived partisan differences after 1991. While the estimated coefficient on tail likelihood ratio interacted with the Post-1991 dummy remains largely unchanged, the interaction between mean partisan differences and the Post-1991 dummy is *no* longer statistically and economically significant.<sup>29</sup> This demonstrates the special role of the tail of the distribution in capturing representativeness, as predicted by the stereotyping model.

The magnitude of the coefficient on the interaction between  $\overline{LR_j}$  and the Post-1991 dummy is substantial. According to our preferred specification in Column 4, one standard deviation increase in  $\overline{LR_j}$  is associated with a 0.063 increase in perceived partisan difference after 1991. Given that average perceived partisan differences increased from 1.624 to 2.003 during the 1980-2000 period, the cross-issue likelihood ratios can explain around 20% of the underlying variation.

In Appendix Table A.6, we exploit *within* individual salience of issues over time, and interact  $\overline{LR}_j$  with an indicator equal to one if the individual considers an issue the most important one in a given year. Not only are our results robust to using this, within-individual source of variation, but their magnitude is also larger than in our baseline analysis. In particular, according to our most preferred specification, reported in Column 4, when comparing the most salient issue for an individual to the other issues, one standard deviation increase in  $\overline{LR}_j$  is associated with a 0.28 point higher perceived partisan difference.

The second strategy to test Prediction 3 exploits over time variation in both salience and representativeness. Specifically, we estimate the relationship between beliefs about partisan differences and partisan representativeness before and after the end of the Cold War. We split the sample period in two — 1980-1990 and 1992-2000 — and compute the average likelihood ratio for each issue before  $(\overline{LR_{j,Pre}})$  and after  $(\overline{LR_{j,Post}})$  the end of the Cold War. Then, for each sub-period, we

<sup>&</sup>lt;sup>29</sup>For this exercise, in order to ensure comparability between coefficients, we standardized the mean partisan differences (as we did with the average likelihood ratio).

estimate regression specifications of the form:

$$\widehat{x}_{R,j,it} - \widehat{x}_{D,j,it} = x_{R,j,t} - x_{D,j,t} + \beta_T \cdot \overline{LR}_{j,T} + u_{j,it}$$
(9)

where T = Pre, Post. Note that this is a more power demanding test than that in Table 8, since the period-specific associations are identified out of 5 different issues, and are compared against a relatively short window of time.

Table 9 shows that representativeness shapes perceived partisan differences across all domestic issues (consistent with Table 6), but its role is significantly stronger in the period after the end of the Cold War. The bottom of Table 9 also reports the p-value for a t-test of equality of coefficients: as it appears, the difference between coefficients in Columns 1 and 2, where we only include the average likelihood ratio and actual differences, is statistically significant at the 1% level. Columns 3 and 4 augment the previous specification by including respondents' own attitudes on the corresponding issues, while Columns 5 and 6 include survey year and individual respondents fixed effects. Results remain unchanged: the coefficient on the likelihood ratio after 1991 is almost twice as large as that for the pre-1991 years.<sup>30</sup>

Taken together, these results provide strong evidence that beliefs about partisan differences are shaped by representativeness-based stereotyping, and that the strength of stereotyping is (positively) modulated by the salience of issues.

Local influences on representativeness To the extent that individuals have more opportunities to observe and form impressions on others who are closer to them (in terms of demographics, for example), then partisan representativeness could be formed more strongly based on subpopulation more "local" to a particular individual. We examine such local representativeness by separately constructing, for each survey respondent, the tail likelihood ratios based on individuals that shares her gender and age category ("own") and individuals who do not ("other"). We replicate our baseline specification as in specification (8), but decompose the likelihood ratios. Results, presented in Appendix Table A.7, show that the perceived partisan differences are shaped substantially more by partisan representativeness among "local" population, as compared by that among the rest of the population. This is consistent with local inference as individuals are forming their stereotyping and representativeness heuristics.

<sup>&</sup>lt;sup>30</sup>We find that the increase in the perception of partisan differences (net of actual differences) after the end of the Cold War is stronger among respondents in the younger cohorts (see Appendix Figure A.3). Individuals born after 1970 spent the majority of their formative years after the end of the Cold War; for these individuals, the focus on national unity and external threats may be less fervent to begin with. In contrast, for older cohorts, who grew up during the peak of the Cold War, the mindset of external threats of the Soviet regime may have been more entrenched, and even the formal end of the Cold War may have not been enough to generate a substantial shift in issue salience for them.

#### 6 Discussion

In this section, we first discuss the internal validity of our results, presenting several robustness tests and describing the evidence on the role of the political supply side in driving beliefs. We then turn to external validity, examining the impact on beliefs of another shock to issue salience, and calibrating the model to assess its performance.

#### 6.1 Internal validity

**Robustness** Our baseline analysis relies on the assumption that people take into account the full contemporaneous distributions of both parties. Here we show that our results are also robust to various additional specifications. We focus on the full specification, Equation (8), whereby the salience of an issue complements how stereotypical the tails are is driving beliefs about partisan differences. In the Appendix, we relax this assumption by: (i) using lagged (rather than contemporaneous) actual differences in attitudes across parties; (ii) replacing the average position of party members with the mode; (iii) constructing actual partisan differences by restricting the samples to respondents who identify as "strong partisans" or by extending the sample to respondents who identify as leaning Democrat of Republican; (iv) dropping respondents with extreme beliefs and restricting the analysis to the winsorized belief distribution; (v) zooming closer to the sample around the 1991 threshold, using respondents from 1980-1994;<sup>31</sup> (vi) imputing missing perceived partisan differences for certain year and issue combinations, either using values from the closest observation prior or post the missing year; (vii) trimming extreme perceived partisan differences; (viii) experimenting with alternative ways to construct the likelihood ratios, using different definitions of tail attitudes; and (ix) weighing the regression by issues' corresponding relative salience. We also show that results are unchanged when including survey year, issue, and individual fixed effects, thereby only exploiting within-individual across-issue over-time variation, absorbing any temporal differences in party compositions.<sup>32</sup> Appendix Figure A.6 and Tables A.8, A.9, and A.10 show that results are robust to these specifications, reflecting stability of stereotypical tails, which are mainly populated by strong partisans.

We also show that results on the impact of the Cold War shock on beliefs do not arise from

<sup>&</sup>lt;sup>31</sup>The baseline results are also robust to excluding the observations in 1994, ruling out the possibility that the introduction of Fox News network and New York Times across the country, as well as the Gingrich's "Republican Revoliution" in 1994 could affect the identified effects (George and Waldfogel, 2006; DellaVigna and Kaplan, 2007).

<sup>&</sup>lt;sup>32</sup>One may still be concerned that the compositional differences could affect the overall magnitudes if there is substantial underlying temporal heterogeneity across people in different parties and with different demographic characteristics. In Appendix Figure A.4, we plot the share of the sample who are male, white, Christian, college graduates, married, and aged 65 or above, among Republicans and Democrats throughout the period of 1980 to 2000. One can see that there is no strong secular trend in changes of partisan compositions during this period. Even though the share of partisans with a college degree raises over time, this upward trend is not differential between Democrats and Republicans, and, more importantly, we do not observe noticeable trend break in partisan composition right after the end of the Cold War. Moreover, as shown in Appendix Figure A.5, there is little evidence of partisan heterogeneity in perceived issue salience during the period of 1980 to 2000.

underlying trends. We conduct a set of placebo tests where we replace the end of the Cold War to years other than 1991 during the sampling period. As show in Appendix Figures A.7 and Table A.11, the impact on perceived partisan differences is evident only for 1991, and not other years.

Supply side response In our empirical analysis, we assume that ANES respondents answer questions about beliefs on political parties while thinking about attitudes of the average party member (Zaller, 1992). As noted in the Introduction, beliefs on partisan differences are equilbrium outcomes of voters and various political actors. Hence, our results are amenable to two different interpretations, and the reality likely reflects a combination of both. On the one hand, our estimates can capture voters' direct cognitive biases driven and amplified by salience-moderated stereotyping. On the other hand, they may partly reflect the behavior of political entrepreneurs or media who are able to communicate effective messages on partisan differences. Importantly, our results indicate that messages of party leaders and the media would to some extent align with, or cater to, voters' underlying stereotyping tendencies (Murphy and Shleifer, 2004; Glaeser et al., 2005).

While we cannot pin down which of the two interpretations dominates, we provide several pieces of evidence that may shed light on the roles played by voters' cognitive biases and political actors' strategic actions. In Section 2 we showed that, at the individual level, the relationship between issue salience and beliefs about partisan differences holds also when controlling for any time varying, unobservable issue characteristic (see Table 3, Column 5). These issue specific trends can include the set of strategic messages delivered by politicians or the media, who might choose to adopt more extreme positions on issues that voters view as more important. In other words, our baseline analysis control for supply side variations that may affect all voters homogeneously.

Of course, different people may listen to different politicians or respond to same political messages differently. Our results are unchanged when focusing on partisans who either do or do not strongly identify with their party (Table A.8, Column 6). Individuals who strongly identify with their party hold more extreme positions relative to the average party member, and should thus be closer to party elites.<sup>33</sup> Moreover, our results are robust to including independent voters (Appendix Table A.9), who are less likely to be captured by a partisan biased political discourse. Furthermore, if we do look at a plausible supply side shock, namely the roll out of Fox News Network after 1996 (DellaVigna and Kaplan, 2007), we do not detect any further increase in the strength of stereotyping (Appendix Table A.11).<sup>34</sup>

<sup>&</sup>lt;sup>33</sup>In our sample, strong partisan Republicans have an average position (across all six issues) of 4.93, while Republicans who do not define themselves as strong partisans, report an average position of 4.45. Similarly, the average position among Democrats is 3.38 for strong partisans and 3.73 for non-strong partisans.

<sup>&</sup>lt;sup>34</sup>Appendix Table A.12 compares the feelings of ANES respondents towards party members with those towards parties in the two years for which this was possible (1980 and 1982), and shows that the two are quantitatively very similar. This observation suggests that beliefs about the party and about its members might be quantitatively close.

**Alternative mechanisms** We now consider whether other mechanisms that generate distorted beliefs can explain the evidence presented above. We focus on two prominent classes of models. First, as advocated by Westfall et al. (2015), bias in beliefs about political groups could be driven by hostility towards the "other" group, whose members might be perceived as competitors. Given that respondents prefer their own position, assigning a more extreme position to the other party may further lower their views of the latter. This mechanism is often defined as "affective politics," or affective polarization (Iyengar et al., 2018), and is consistent with the literature on motivated beliefs. Such framework might be consistent with our evidence, in line with Prediction (2), that individuals perceive bigger partisan differences on issues that they consider as more important. However, proxies for the strength of this mechanism, such as the strength of partisan affiliation or own attitude in an issue, have little explanatory power for the exaggeration of partisan differences. More importantly, motivated beliefs and affective politics are not consistent with the context dependence of beliefs highlighted in Prediction (1) and Table 7, whereby beliefs about a group exaggerate differences relative to another group. Similarly, these alternative forces do not predict the complementarity of tail representativeness with issue salience (Prediction (3) and Table 8).

Second, belief distortion about political groups might result from a rational inattention mechanism, as in Matèjka and Tabellini (2019). This framework predicts that individuals hold more accurate beliefs on issues that are more important to them. In Matèjka and Tabellini (2019), individuals with more extreme positions on an issue care more about it, and should therefore be better informed. This is not the case in our data. In fact, using individuals' own assessment of issue salience, we find that individuals' beliefs are more distorted precisely on issues that are most salient to them (Section 2.2, Table 3) or when predicting issue salience with exogenous shocks (Tables 7 and 8). However, our results relate to Matèjka and Tabellini (2019) in the following sense: individuals do perceive larger differences across parties on issues that are more important to them. The key difference is that in our model, as in the data, perceiving larger differences makes beliefs more, not less, distorted.

A third, and related possibility, concerns salience-induced information acquisition. If individuals are uninformed about the issues that they consider unimportant and hence guess the partisan positions to be more likely in the middle (thus shrink the perceived partisan differences), as they acquire more information on the issue, their perceived partisan differences would increase accordingly as beliefs on members of each party move away from the middle. If individuals are more likely to acquire information on issues that they consider most important, we could test whether our baseline results are driven by this mechanism by dropping from the analyses, for each respondent, the belief dimension on the issue they consider most important. Results, presented in Appendix Table A.13, show that the baseline estimates are barely altered.

#### 6.2 External validity

Our central empirical exercise focuses on the shock to issue salience brought about by the end of the Cold War in 1991. Yet, the conceptual framework and the underlying psychological underpinning ought to apply beyond this particular episode. We now assess the external validity of our results in two ways. First, we examine the impact of a different shock — the September 11, 2001 terrorist attacks — to Americans' beliefs about partisan differences. Second, we calibrate the model using our baseline data, compare the estimated model parameters with those obtained in other non-political contexts, and then assess the model's ability to quantitatively account for belief distortions out of sample.

The 9/11 terrorist attacks The September 11, 2001 terrorist attacks and the subsequent wars in Afghanistan and Iraq marked the beginning of an "anti-terrorism era". We show that these events significantly raised the salience of external threats (in this case, terrorism), and directly affected issue salience on external relative to domestic issues among Americans in opposite directions relative to what occurred after 1991. Figure 3 documents that the share of respondents who considered external threats as the most pressing issue facing the US rose precisely after 2001. Conversely, the share of respondents who regarded domestic social welfare and race related issues (the two largest domestic issues mentioned by ANES respondents) as pressing began to decrease sharply after 2001.<sup>35</sup> Interestingly, both trends reverse the pattern that had begun right after the end of the Cold War in 1991. Hence, after 2001, the relative salience of external threats increased while that of domestic issues decreased.

In Table 10, we test how perceived partisan differences changed after 2001, zooming in on a relatively narrow window of sample before and after the 2001 period.<sup>36</sup> In Column 1, we focus on the external issue (i.e. defense spending), whose salience increased after 2001. Perceived partisan differences on defense spending sharply increased after 2001, and the magnitude of such increase becomes even larger once we account for the actual change in partisan differences on defense spending (Column 2). Next, Columns 3 and 4 turn to domestic socioeconomic issues, pooling them together, after 2001. Contrary to Columns 1 and 2, perceived partisan differences on domestic issues decreased after 2001, consistent with the model's prediction, as their salience dropped.

These results indicate that after 2001, as an opposite shock to issue salience relative to the end of the Cold War hit the US, perceived partisan differences shifted abruptly, and in the correspondingly opposite directions. Moreover, changes in perceived partisan differences after 2001 are larger among the issues that are more partisan representative (proxied by higher partisan likelihood ratios). These patterns, again consistent with the predictions of the model, suggest that the forces

<sup>&</sup>lt;sup>35</sup>These trends are almost identical when including all non-external issues among the domestic socioeconomic issues used to produce Figure 3.

<sup>&</sup>lt;sup>36</sup>As noted above, to avoid any possible effect coming from the elections of Barack Obama and Donald Trump on perceived partisan differences, we omit survey years after 2004. Our findings are robust to considering as "pre-period" either only post-1996 years or the whole decade between 1990 and 2000.

highlighted in the conceptual framework and documented in the aftermath of the Cold War are likely to operate in many other contexts.

**Model calibration** Previous sections documented that beliefs about partisan differences are distorted by the representativeness of tail positions, to an extent that increases in the salience of the issue, in line with our model. We perform a calibration exercise to assess how well the model explains observed beliefs, and to quantify the role of salience in driving distortions.

We adopt a simplified version of the model, where issue salience takes only two values,  $\sigma_H$  and  $\sigma_L$ , with  $\sigma_H > \sigma_L > 0$ . For each issue-year observation, we compute the beliefs entailed by the vector  $(\sigma_H, \sigma_L)$  noting that external issues (defense spending) were salient prior to 1991 but not afterwards, while the reverse holds for domestic issues. This generates a cross-section of belief distortions across salient and non-salient issues in a given year as well as changes in the average belief distortions on each issue over time, before and after 1991. Importantly, the assumption that issue salience can take only two values implies that changes in salience over time and across issues are constrained to be the same.

We first pin down the parameters to match the observed average beliefs across external and domestic issues in the period 1980 to 2000. The values obtained are informative about the importance of both stereotyping, through the average distortion  $\frac{\sigma_H + \sigma_L}{2}$ , and salience, through the relative change  $\frac{\sigma_H}{\sigma_L} - 1$ . We then assess the model's performance in two out-of-sample tests. First, we compare the model's predictions to actual beliefs about partisan differences across domestic and external issues after the terrorist attacks of September 11, 2001, when the salience of external threats increased again (Figure 3). Second, we assess the extent to which the high-low salience parameters account for the differential distortions of beliefs within individual respondents across issues that are salient or not to them.

For each vector  $(\sigma_L, \sigma_H)$  in a grid  $[0, \sigma_{max}] \times [0, \sigma_{max}]$  we generate model-predicted beliefs for each party g's average position on each issue j and year t using Equations (2) and (3):

$$\tilde{x}_{g,j,t}(\sigma_{j,t}) = \sum_{x \in \{1,\dots,7\}} x \cdot p(x|g,j) \left[ \frac{p(x|g,j)}{p(x|-g,j)} \right]^{\sigma_{ij}} \frac{1}{Z_{g,j,t}}$$

where  $\sigma_{j,t} = \sigma_H$  for salient issues, i.e. for j = external, t < 1991 and for j = domestic, t > 1991, and  $\sigma(j,t) = \sigma_L$  otherwise. We then pick parameters  $\sigma_H^*$ ,  $\sigma_L^*$  that minimize the error in the predicted partisan differences across issues and over time:

$$(\sigma_H^*, \sigma_L^*) = \operatorname{argmin}_{\sigma_H, \sigma_L} \sum_{j,t} \left[ \left( \tilde{x}_{R,jt}(\sigma_{j,t}) - \tilde{x}_{D,jt}(\sigma_{j,t}) \right) - \left( \hat{x}_{R,jt} - \hat{x}_{D,jt} \right) \right]^2$$
(10)

where  $\hat{x}_{g,jt}$  are the beliefs elicited in the survey. In (10), we do not account for the issue "women's

role", because there is only one data point post 1991.<sup>37</sup> We obtain

$$\sigma_L^* = 0.30, \quad \sigma_H^* = 0.41$$
 (11)

These parameters are positive and tightly estimated. Figure 5 shows how the loss function varies with  $\sigma_L$  and  $\sigma_H$ , when the other parameter is re-optimized at each point. Given our estimation process, the two parameters are pinned down independently. This is reflected in the fact that for the allowed range of  $\sigma_L$ , the optimal  $\sigma_H$  is constant and equal to 0.41, while for the corresponding range of  $\sigma_H$  the optimal  $\sigma_L$  is constant and equal to 0.3. These parameters generate significant distortions in beliefs. While the raw data show an average exaggeration of partisan differences of 0.79 units across all issue-year observations (Table A.2), the calibration suggests an average exaggeration of 0.76 units.

Importantly, these parameters are close in magnitude to those estimated in different settings and using different methodologies. In experiments that elicited ability in trivia questions on different topics, as well as beliefs about ability genders, Bordalo et al. (2019a) document a similar exaggeration of cross group differences and obtain a median estimate of 0.32; using surveyed expectations of a variety of macroeconomic and financial variables by professional forecasters, Bordalo et al. (2020) find a median estimate of 0.50, while using surveyed expectations of equity analysts about earnings growth, Bordalo et al. (2019b) find an estimate of 1.<sup>38</sup> This suggests that, despite the specific features of political beliefs, the extent of stereotyping may be quantitatively similar across settings, and capture a large share of the systematic distortions observed in our data.

The parameters reported in (11) reveal an important role for issue salience, with  $\sigma_H^*$  being about 37% larger than  $\sigma_L^*$ . Accordingly, the calibration predicts substantial belief distortions, and substantially more exaggeration under high salience than under low salience. While the average exaggeration of partisan differences across all issues-year observations is 0.76, this masks significant variation in salience and representativeness of the tails. The relative contribution of each can be estimated using these parameters. Average exaggeration would drop to 0.64 units if all issues were low-salience, and would climb to 0.88 units if all issues were high-salience. Furthermore, keeping all else equal, if all issues had low salience with the lowest likelihood ratio for the conservative tail in our sample the average exaggeration would be 0.24; conversely, if all issues had high salience issue with the highest likelihood ratio in our sample the average exaggeration would be 1.18 — from nearly accurate beliefs to more than doubling the difference across groups.<sup>39</sup>

<sup>&</sup>lt;sup>37</sup>As noted in Gentzkow (2016) and Baldassarri and Park (2020) among others, this issue is special also in that both Democrats and Republicans hold substantially more liberal positions and the actual distance between parties (and partisans) is significantly smaller than for other issues (see also Table 2).

<sup>&</sup>lt;sup>38</sup>While here we simulate beliefs based on true distributions, following Equation (2) in the model above, Bordalo et al. (2019a) pin down the distortion parameter by matching the amplification of average differences across groups, and Bordalo et al. (2020, 2019b) match the average revision of forecasts and forecast errors.

<sup>&</sup>lt;sup>39</sup>The observation with lowest tail likelihood ratio in our sample is Defense Spending in 1990 (where LR = 1.05). The

In sum, our analysis entails large and predictable distortions in beliefs on the basis of features of the environment (representativeness of tails and issue salience) that are arguably not specific to the particular political judgment task at hand.

**Model performance** The estimates in (11) suggest that issue salience has a large effect on beliefs about parties' positions, and reinforces the idea that swings in beliefs can arise even in the absence of any changes in fundamentals (i.e. actual attitudes by party members). However, because salience is not measured quantitatively, one may wonder whether the current calibration has predictive power out of sample. We address this issue as follows: by restricting issue salience to just two levels, the model makes clear predictions for changes in salience in any other setting. We now assess the performance of this simple model out of sample by comparing the model's predictions to the data, focusing on years not used in the calibration.

First, we consider how beliefs about partisan differences change after 2001, leveraging the fact that perceptions of external threats increased dramatically after the terrorist attacks of September 11, 2001, as reflected by ANES respondents' reports of the most pressing issue for the country. Second, we consider how beliefs of individual respondents vary across issues that they consider the most salient or not. We compute predicted beliefs on partisan differences after 2001 and compare them to actual beliefs, under three models: (*i*) the rational model; (*ii*) a model with constant strength of stereotyping  $\sigma$  calibrated with the same data as (11); and (*iii*) the model with parameters specified in (11). The entailed (constant) salience parameter in model (*ii*) is  $\sigma = 0.36$ , which, unsurprisingly, is close to the average salience in (11).

We start by assessing the importance of the overall level of stereotyping. The model of stereotyping with constant salience reduces the mean squared error attained by the rational model by 68% when predicting beliefs post-2001, and by 61% when predicting the average individual level beliefs as a function of individual level issue salience. Next, we assess the importance of issue salience. The calibrated model (11) further reduces the mean squared error attained by the constant salience model by another 56% for the post 2001 data and by another 15% for the individual salience data.

These results indicate that the calibrated model with variable salience provides a good quantitative match to beliefs after 2001. The performance of the model is particularly good to match the renewed focus and distortions on parties' positions on defense spending, significantly improving on the model with constant salience. Faced with a clear external threat, belief distortions of respondents went back to their pre-1991 levels. This suggests that levels of distortions in similar situations can be predicted more broadly.

Finally, the model has good predictive power for within-individual differential stereotyping as a function of issue salience, even though all individuals were pooled and individual differences (other than the "most important issue") were not taken into account. This suggests that a high-low

observation with highest tail likelihood ratio in our sample is Government Spending in 2000 (where LR = 10.08).

view of issue salience is a useful, tractable approach to circumvent the lack of direct quantitative measurement of issue salience.

#### 7 Conclusion

Individuals' beliefs about partisan differences are severely mis-calibrated, and yet they help predict political behavior. In this paper, we use nationally representative survey data from the US to show that issue salience plays a key role both in accounting for exaggeration of partisan differences and in linking beliefs to political behavior. Building on these stylized facts, we develop a model where the extent to which individuals stereotype partisan political attitudes on an issue increases in the salience of the issue.

We provide evidence consistent with these predictions by exploiting the shock to issue salience — away from external and towards domestic issues — induced by the end of the Cold War in 1991. We also rely on a similar shock in the opposite direction, namely the terrorist attacks of September 11, 2001 and the subsequent wars in Afghanistan and Iraq. Calibrating the model on the basis of the Cold War shock yields estimates that are in the ball park of stereotypical distortions measured in lab experiments. Several related pieces of evidence further support the notion that the cognitive mechanism of salience-modulated stereotyping plays an important role in driving beliefs about political attitudes.

Our results raise several questions. First, they raise the possibility that there is a downside to individuals being engaged and attentive to the political process, in the form of more extreme beliefs and stronger affective polarization. Second, they shed some light on the process by which political entrepreneurs shape the public debate, by suggesting that successful political messaging needs to cater to existing, possibly latent, stereotypes — including, and perhaps particularly, those of weak partisans or independent voters.

Third, our results suggest that issue salience is often shaped by major, dramatic events, such as the sudden end of the Cold War, the 9/11 attacks or the COVID-19 pandemic. These events have the potential to significantly affect beliefs about partisan differences, even if the reality on the ground has not changed. The extent to which such beliefs causally affect political behavior, and in turn affect one's own political attitudes, remain important questions for future work.

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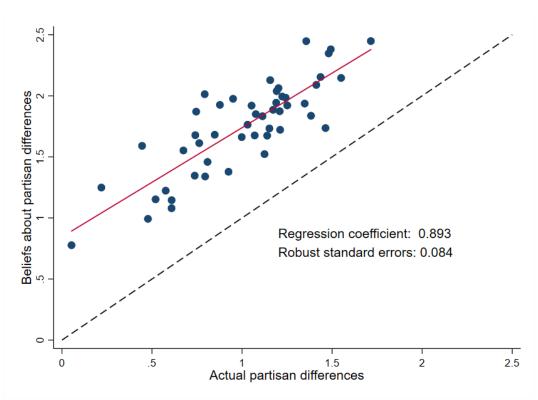
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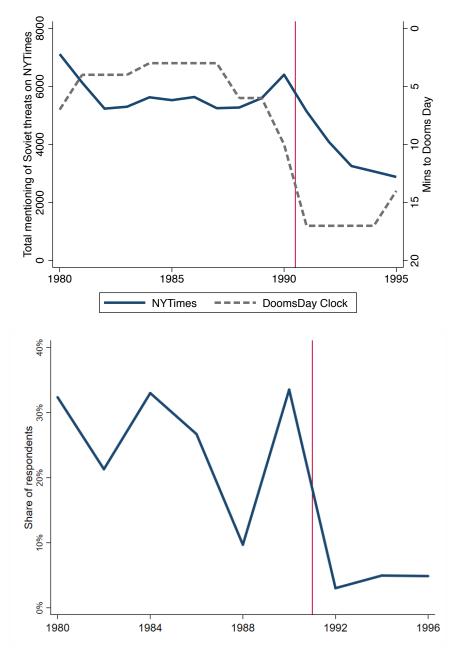
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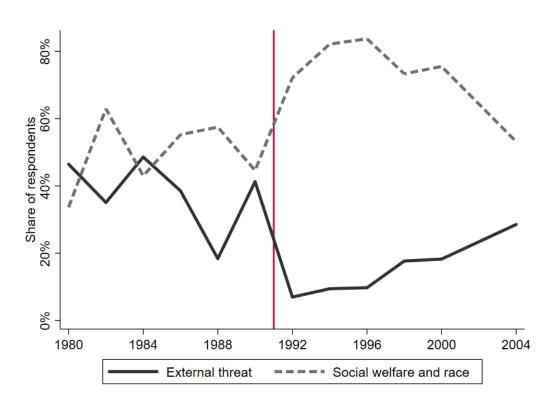
## Figures and Tables



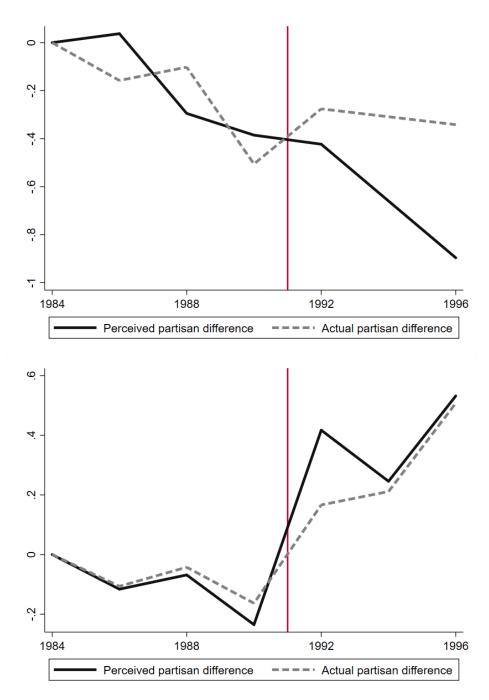
**Figure 1:** This figure plots, for each issue-year, the actual differences in mean attitudes between ANES respondents who identify as Democrats and those who identify as Republicans (x-axis), against the corresponding perceived partisan differences (y-axis). Regression coefficient (without additional controls) is shown as well as the corresponding robust standard errors.



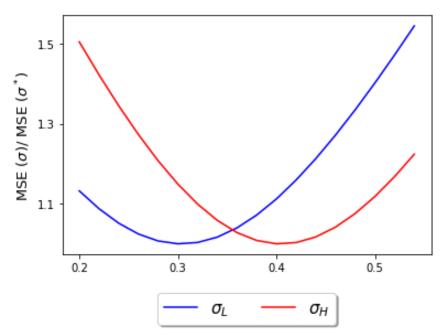
**Figure 2:** Top panel: end of the Cold War and external threats, measured by the total number of times Soviet Union, Russia, or Communist were mentioned on the *New York Times*, and the minutes to midnight according to DoomsDay Clock (created by the Bulletin of the Atomic Scientists). Bottom panel: perceived external threats, measured by the proportion of people who claim external threats and diplomatic issues are the most pressing issue facing the US at the moment of the survey, according to the ANES. The sample is restricted to ANES respondents during the 1980 and 2000 waves who are either Republicans or Democrats.



**Figure 3:** Proportion of respondents who consider external threats and diplomatic issues as the most pressing issue facing the US at the moment of the survey, and the proportion of respondents who consider domestic issues such as social welfare and race as most pressing. The sample is restricted to ANES respondents during the 1980 and 2004 waves who are either Republicans or Democrats.



**Figure 4:** Perceived differences between Democrats and Republicans, versus actual differences during the same period: on the issue of defense spending (top panel), and on domestic issues (bottom panel). For domestic issues, we aggregate across the 5 domestic issues, weighing the issues according to their corresponding pre-1990 partisan likelihood ratios at both tails of the attitudinal distribution. The sample is restricted to ANES respondents during the 1980 and 2000 waves who are either Republicans or Democrats. Actual and perceived partisan differences are normalized by their 1984 level.



**Figure 5:** Model calibration loss function.

 Table 1: ANES questions on socioeconomic and political attitudes

Issue	Question wording	Most liberal response	Mot conservative response
Liberal vs Conservative	We hear a lot of talk these days about liberals and conservatives.  Here is a 7-point scale on which the political views that people might hold are arranged from extremely liberal to extremely conservative.  Where would you place yourself on this scale, or haven't you thought much about this?	Extremely liberal	Extremely conservative
Government spending	Some people think the government should provide fewer services, even in areas such as health and education in order to reduce spending. Suppose these people are at one end of the scale at point 1. Other people feel it is important for the government to provide many more services even if it means an increase in spending. Suppose these people are at the other end, at point 7. And of course, some other people have opinions somewhere in between at points 2, 3, 4, 5, or 6. Where would you place yourself on this scale, or haven't you thought much about this?	Government provides many more services, increase spending a lot	Government provides many fewer services, reduce spending a lot
Defense spending	Some people believe that we should spend much less money for defense. Others feel that defense spending should be greatly increased. Where would you place yourself on this scale, or haven't you thought much about this?	Greatly decrease defense spending	Greatly increase defense spending
Job aid	Some people feel the government in Washington should see to it that every person has a job and a good standard of living. Others think government should just let each person get ahead on their own. Where would you place yourself on this scale, or haven't you thought much about this?	Government should make sure every person has a job and a good standard of living	Government should let each person get ahead on their own
Aid to African Americans	Some people feel that the government in Washington should make every effort to improve the social and economic position of African Americans. others feel that the government should not make any special effort to help African Americans because they should help themselves. Where would you place yourself on this scale, or haven't you thought much about this?	Government should help African Americans	African Americans should help themselves
Women's rights	Recently there has been a lot of talk about women's rights. Some people feel that women should have an equal role with men in running business, industry, and government. Others feel that women's place is in the home. Where would you place yourself on this scale, or haven't you thought much about this?	Women and men should have an equal role	Women's place is in the home

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**Table 2:** Actual and perceived differences in political attitudes

		Perceive	ed differences b	etween Democr	ats and Rep	ublicans	
Issues:	Defense spending	Domestic issues (pooled)	Liberal vs. conservative	Government aid	Job spending	Aid to African Americans	Women's role
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: Actual atti	tudes						
Republicans	4.415	4.685	5.033	4.562	5.043	4.939	2.887
Democrats	3.704	3.599	3.742	3.369	3.808	4.098	2.588
Difference	0.711	1.086	1.291	1.192	1.235	0.840	0.299
Panel B: Perceived a	attitudes						
Republicans	5.160	4.857	5.188	4.768	5.057	4.791	3.905
Democrats	3.570	3.062	3.115	2.904	3.204	3.195	2.891
Difference	1.591	1.795	1.291	1.864	1.853	1.596	1.014
Panel C: Beliefs exa	ggeration						
Exaggeration	0.879	0.709	0.782	0.671	0.618	0.756	0.715
Exaggeration (%)	123.0%	65.3%	60.5%	56.3%	50.0%	90.0%	239%
Observations	7,718	32,110	8,061	9,214	5,769	5,230	3,836

Notes: the table reports the actual attitudes (Panel A) of Republicans and Democrats, and beliefs about the attitudes (Panel B) of the Republican and the Democratic Party on each of the issues reported at the top of each column. "Difference" refers to the partisan difference in (actual or perceived) attitudes. Panel C reports the exaggeration of the difference in Panel B relative to Panel A, both on the ANES numerical scale (1 to 7) and in percent (relative to actual differences). "Domestic issues pooled" in Column 2 refers to the average among the five domestic issues reported in Columns 3 to 7.

**Table 3:** Perceived partisan differences and issue importance

Variables:	Beliefs about partisan differences					
	(1)	(2)	(3)	(4)	(5)	
Most important problem	0.270*** (0.045)	0.245*** (0.044)	0.083* (0.045)	0.104** (0.045)	0.103** (0.047)	
Observations	27,038	26,568	26,568	26,568	26,568	
Year FE Individual FE Controls Issue FE		X X	X X X	X X X X	X X	
Issue $\times$ year FE					X	

Notes: *Most important problem* is a dummy equal to 1 if respondent answered that the issue was the "most important problem facing the country" in the corresponding year. Controls in Columns 3-5 include individual attitudes, and the actual differences between the Democratic and Republican Parties on the corresponding issue. Robust standard errors, clustered at the individual level, in parentheses. The sample is restricted to ANES respondents during the 1980 and 2000 waves who are either Republicans or Democrats. \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1.

Table 4: Perceived partisan differences, political engagement, and affective polarization

Variables:		engagement n: 0.71)	Affective polarization (mean: 0.33)	
	(1)	(2)	(3)	(4)
Panel A: Perceived differences (average)				
Perceived differences	0.075*** (0.005)	0.073*** (0.005)	0.066*** (0.003)	0.066*** (0.003)
Panel B: Perceived differences on most impo	ortant issue	s (MIP)		
Perceived differences on MIP	0.043*** (0.007)	0.021*** (0.007)	0.055*** (0.006)	0.042*** (0.006)
Panel C: Perceived differences on MIP vs no	on-MIP			
Perceived differences on MIP  Perceived differences on non-MIP	0.037*** (0.008) 0.020***	0.019*** (0.007) 0.007	0.046*** (0.006) 0.029***	0.035*** (0.006) 0.027***
Panel D: Quantitative decomposition: perce	(0.008)	(0.007) ences on MIP	(0.007) vs non-MIP	(0.006)
Average ratio (MIP/no-MIP) of associated perceived differences	2.134	3.01	1.803	1.491
Year FE Individual Controls	Х	X X	X	X X

Notes: the dependent variable in columns 1 and 2, Political engagement, is a dummy equal to 1 if the respondent reported any of the following political behaviors: voted in the last election, plans to vote in the next election, made any political contribution during the past electoral campaign, and worked or was actively involved in political activities like canvassing etc. in the past electoral campaign. The dependent variable in columns 3 and 4, Affective polarization, is the difference in the feeling thermometer expressed by the respondent towards own party minus the feeling thermometer expressed towards the other party. In Panel A, the regressor of interest is the perceived difference between Democrats and Republicans, averaged across all issues, standardized by subtracting its mean and dividing through its standard deviation, Perceived differences. In Panel B, the regressor of interest is the perceived difference between Democrats and Republicans on the most important issue for the individual, standardized by subtracting its mean and dividing through its standard deviation. In Panel C, regressions include both the perceived differences on the most important issue and the perceived difference on one of the other remaining issues, randomly selected. Panel D reports the average of the ratio MIP/no-MIP of associated predicted perceived differences. Predicted values are obtained by interacting actual perceived difference with the coefficient on either regressor reported in Panel C of the corresponding column. All regressions control for survey year fixed effects. Columns 2 and 4 also include political attitudes (partisanship, a dummy for being a strong partisan, and average individual's reported position across issues) and demographic characteristics (race, age, age squared, education, gender, marital status, religion). Robust standard errors, clustered at the individual level, in parentheses. The sample is restricted to ANES respondents during the 1980 and 2000 waves who are either Republicans or Democrats, for whom all controls are available, and both political engagement and affective polarization can be constructed (N=9,689). In Panels B and C, the sample is further restricted to respondents with non-missing values for the most important issue question (N=3,358). \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1.

**Table 5:** Likelihood ratios between parties

		Likelihood ratios		
Issues	Both tails [1-2, 6-7]	Conservative tail [6-7]	Liberal tail [1-2]	% Respondents considered as most important problem
	(1)	(2)	(3)	(4)
All	13.79	2.769	4.086	
Liberal-Conservative	37.82	4.518	7.729	
Government Spending	11.33	3.567	3.122	14.6
Job aid	7.935	2.539	3.14	13.8
Defense spending	5.001	1.563	3.157	5.4
Aid to African Americans	7.200	1.697	4.159	0.5
Women's role	1.406	1.236	1.126	0.4

Notes: The first three columns refer to the likelihood ratio constructed as described in the main text averaged over the period 1980 to 1990: Column 1 focuses on both the liberal and conservative tails of the attitudinal distribution; Column 2 focuses on just the conservative tail; and Column 3 focuses on just the liberal tail. The last column reports the share of respondents mentioning the corresponding issues as the "most important problem facing this country." As the likelihood ratio, the most important issue indicators are averaged between 1980 and 1990. A residual category for any other response not included in the main issue categories reported here is not shown for brevity. The sample is restricted to ANES respondents during the 1980 and 2000 waves who are either Republicans or Democrats.

**Table 6:** Issues' partisan representativeness and perceived partisan differences

	Belief	s about part	isan differe	ences
	(1)	(2)	(3)	(4)
Panel A: Pre-1991 ave	rage			
Actual differences	0.956***	0.849***	0.671***	0.716***
	(0.035)	(0.042)	(0.043)	(0.044)
LR		0.066***	0.060***	0.064***
		(0.015)	(0.015)	(0.014)
Panel B: Contempora	neous			
Actual differences	0.956***	0.846***	0.724***	0.774***
	(0.035)	(0.039)	(0.040)	(0.042)
LR		0.065***	0.053***	0.053***
		(0.015)	(0.016)	(0.016)
Observations	31,074	30,334	30,334	30,334
Year FE		Χ	X	X
Individual FE		X	Χ	Χ
Individual position				X

Notes: The dependent variable is the difference in respondents' beliefs about the position held by the Republican and the Democratic Party on a given issue (excluding "defense spending") in a given year. The sample is restricted to years 1980 to 2000 and to respondents who self-identify as either Republicans or Democrats. LR is the pre-1991 average (resp. contemporaneous) likelihood ratio on each issue in Panel A (resp. Panel B). Column 1 includes only average partisan differences; Column 2 adds LR; Column 3 replicates Column 2 by also including year and individual fixed effects; Column 4 adds the position held by respondents on each issue in each year. Robust standard errors clustered at the individual level in parentheses. \*\*\*\* p < 0.01, \*\*\* p < 0.05, \*\* p < 0.1.

**Table 7:** Perceived partisan differences

		Beliefs abo	out differences b	etween Democ	rats and R	epublicans	
Issues:	Defense spending	Domestic issues (pooled)	Liberal vs. conservative	Government aid	Job aid	Aid to African Americans	Women's role
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: Perceived v	s. actual diffe	erences					
Actual differences	1.404***	0.956***	1.190***	0.834***	0.658**	0.449*	0.527***
	(0.161)	(0.035)	(0.123)	(0.135)	(0.325)	(0.242)	(0.179)
Panel B: Before and a	after 1991						
Actual differences	1.095***	0.898***	0.639***	0.740***	0.557*	-0.077	0.469**
	(0.171)	(0.035)	(0.229)	(0.146)	(0.326)	(0.314)	(0.228)
Post-1991	-0.309***	0.104***	0.280***	0.089*	0.140**	0.221***	0.045
	(0.056)	(0.036)	(0.100)	(0.051)	(0.057)	(0.083)	(0.109)
Panel C: Before and	after 1991, coi	ntrol for individual o	characteristics				
Actual differences	0.935***	0.975***	0.579***	0.846***	0.487	-0.283	0.422*
	(0.167)	(0.036)	(0.219)	(0.146)	(0.321)	(0.303)	(0.112)
Post-1991	-0.334***	0.075**	0.245**	0.062	0.132**	0.313***	0.034
	(0.054)	(0.035)	(0.096)	(0.051)	(0.056)	(0.081)	(0.107)
Observations	7,644	30,871	7,990	9,133	5,756	5,210	2,782

Notes: the dependent variable is the difference in respondents' beliefs about the position held by the Republican and the Democratic Party on a given issue (reported at the top of each column) in a given year. Pooled (Domestic) in Column 2 refers to the five domestic issues in Columns 3 to 7. The sample is restricted to years 1980 to 2000 and to respondents who self-identify as either Republicans or Democrats. *POST-1991* is a dummy equal to 1 for survey years strictly greater than 1990, and Actual differences is the difference in average reported position of Democrats and Republicans. Panel C replicates Panel B by including also a number of individual controls (individual position on the issue; a dummy equal to 1 if the respondent is a Democrat; a dummy equal to 1 if the respondent is male; a dummy equal to 1 if the respondent is white; age; age squared; and a dummy equal to 1 if the respondent identifies as a "strong partisan"). Standard errors clustered at the individual level in parentheses. \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1.

Table 8: Increased perceived partisan differences and issues' likelihood ratios

Variables:	Beliefs about partisan differences					
	(1)	(2)	(3)	(4)	(5)	
Actual differences	0.956*** (0.035)	0.885*** (0.037)	0.750*** (0.042)	0.784*** (0.043)	0.259*** (0.016)	
LR × Post-1991		0.100*** (0.020)	0.067*** (0.024)	0.063** (0.024)	0.056* (0.018)	
LR			0.053*** (0.018)	0.058*** (0.018)	0.059*** (0.018)	
Post-1991			0.128*** (0.036)	0.126*** (0.036)	0.122*** (0.038)	
Actual differences × Post-1991					0.013 (0.032)	
Observations	31,074	31,074	31,074	31,074	30,334	
Individual Position				X	X	

Notes: The dependent variable is the difference in respondents' beliefs about the position held by the Republican and the Democratic Party on a given issue (excluding "defense spending") in a given year. The sample is restricted to years 1980 to 2000 and to respondents who self-identify as either Republicans or Democrats. LR is the pre-1991 average likelihood ratio on each issue; Post-1991 is an indicator equal to 1 for survey years greater than 1990. Robust standard errors clustered at the individual level in parentheses. \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1.

Table 9: Perceived partisan differences and contemporaneous likelihood ratios

Variables:	Beliefs about partisan differences								
	Pre-1991	Post-1991	Pre-1991	Post-1991	Pre-1991	Post-1991			
	(1)	(2)	(3)	(4)	(5)	(6)			
$LR_t$	0.179***	0.247***	0.038**	0.098***	0.043**	0.101***			
	(0.016)	(0.019)	(0.019)	(0.024)	(0.019)	(0.024)			
p-value on t-test	0.	006	0.	049	0.058				
Observations	18,885	12,189	18,401	11,933	18,401	11,933			
R-squared	0.006	0.012	0.521	0.597	0.521	0.597			
Year FE			Χ	Χ	Χ	X			
Individual FE			X	X	X	X			
Actual differences			X	X	X	X			
Own attitudes					X	X			

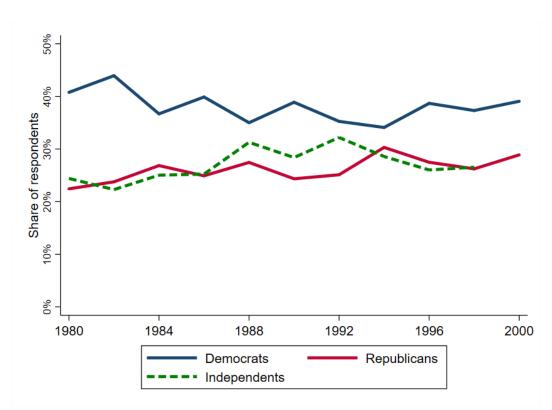
Notes: The dependent variable is the difference in respondents' beliefs about the position held by the Republican and the Democratic Party on a given issue (excluding "defense spending") in a given year. Columns 1, 3, and 5 restrict to survey waves conducted prior to 1992; Columns 2, 4, and 6 restrict to survey waves conducted after 1990.  $LR_t$  is the average likelihood ratio — the share of Republicans stating position 6 or 7 relative to the share of Democrats stating position 6 or 7, times the share of Democrats stating position 1 or 2 relative to the share of Republicans stating position 1 or 2, averaged over years prior to 1990 (Columns 1, 3, and 5) or after 1990 (Columns 2, 4, and 6) — constructed over the relevant time period (pre 1992 in Columns 1, 3, and 5; post 1990 in Columns 2, 4, and 6). "P-value on t-test" presents the p-values of t-tests of the null hypothesis that the coefficients on  $LR_t$  are different for the pre-1991 and post-1991 periods. The sample is restricted to ANES respondents during the 1980 and 2000 waves who are either Republicans or Democrats. Robust standard errors, clustered at the individual level, in parentheses. \*\*\* p < 0.01, \*\* p < 0.05, \*\* p < 0.1.

**Table 10:** Perceived partisan differences after 2000

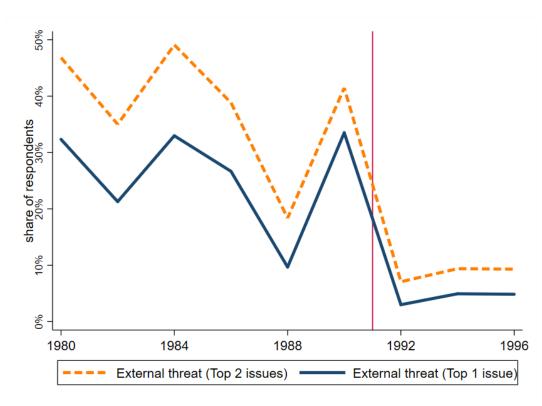
Variables:	Beliefs about partisan differences						
	Defense spending		Domestic	Domestic issues (pooled)			
	(1)	(2)	(3)	(4)			
Post-2000	0.697*** (0.091)	1.253*** (0.237)	-0.053 (0.055)	-0.159*** (0.055)			
Actual differences		-0.399 (0.404)		1.278*** (0.023)			
Observations	8,544	8,036	26,100	26,100			

Notes: *Domestic issues (pooled)* is a z-score index of perceived partisan differences on 5 domestic socioeconomic issues: liberal vs. conservative; government aid; job spending; aid to African Americans; and women's role. *Post-2000* is an indicator equals to 1 if year > 2000. *Actual difference* is the actual difference in the average stated position between Republicans and Democrats. The sample is restricted to ANES respondents during the 1990 and 2004 waves who are either Republicans or Democrats. Robust standard errors, clustered at the individual level, in parentheses. \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1.

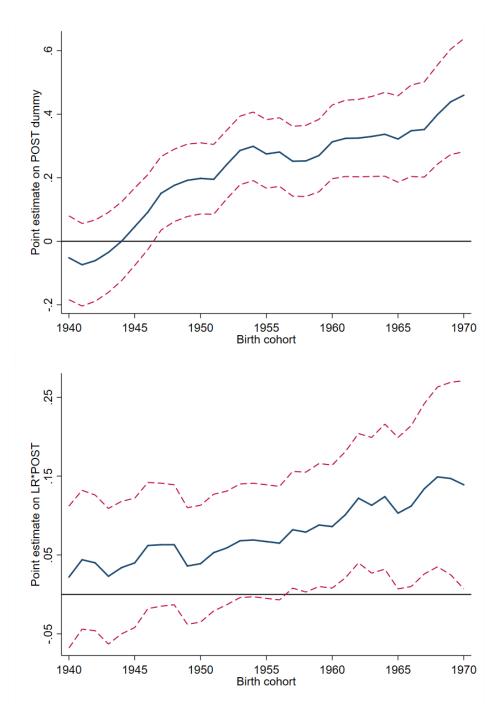
## ONLINE APPENDIX (NOT FOR PUBLICATION)



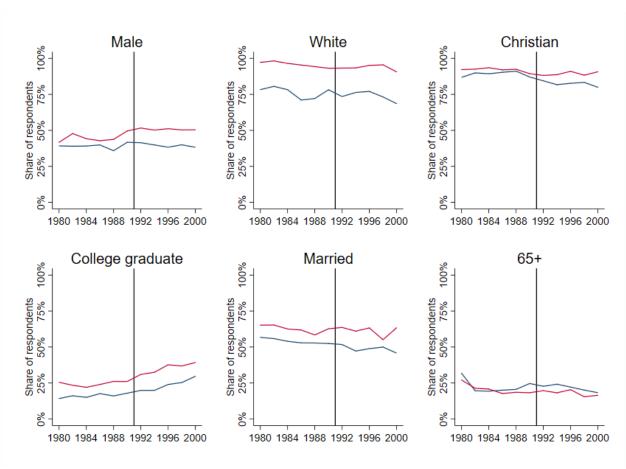
**Figure A.1:** The figure plots the share of survey respondents who identify as Democrats (blue, solid line), Republicans (red, solid line), or Independents (green, dotted line). For 2000, no answer was recorded for Independents, as the ANES only asked respondents whether they identified with either of the two main parties.



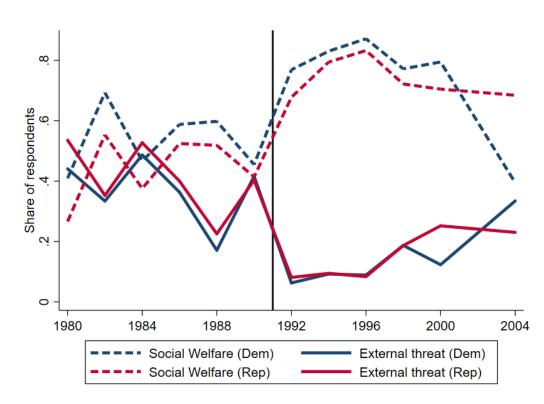
**Figure A.2:** The figure replicates Figure 3, bottom panel, in the main text considering the share of respondents who claim external threats and diplomatic issues are the first or second most pressing issue facing the US at the moment of the survey. The sample is restricted to ANES respondents during the 1980 and 2000 waves who are either Republicans or Democrats.



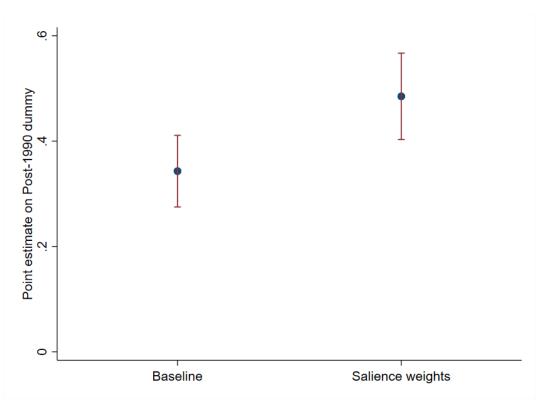
**Figure A.3:** Heterogeneous changes in perceived partisan differences after the end of the Cold War, by birth cohorts. Top panel plots the coefficients on Post-1990 indicator, estimated from subsamples of birth cohorts from 1940 to 1970 with a -10 to +10 moving window. Bottom panel plots the coefficients on LR×Post-1990, estimated from subsamples of birth cohorts from 1940 to 1970 with a -10 to +10 moving window. The sample is restricted to ANES respondents during the 1980 and 2000 waves who are either Republicans or Democrats.



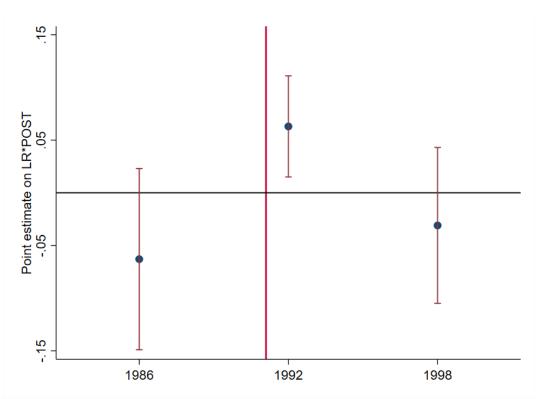
**Figure A.4:** The figure plots the share of party respondents (blue line for Democrats and red line for Republicans) with a given socioeconomic or cultural characteristic. The vertical black line corresponds to the end of the Cold War in 1991.



**Figure A.5:** Proportion of respondents, separately for Democrats and Republicans, who consider external threats and diplomatic issues as the most pressing issue facing the US at the moment of the survey, and the proportion of respondents who consider domestic issues such as social welfare and race as most pressing. The sample is restricted to the ANES respondents during the 1980 and 2000 waves who are either Republicans or Democrats.



**Figure A.6:** The figure plots regression coefficients (with 95% confidence intervals) on the Post-1991 dummy for a specification where the dependent variable is the perceived partisan differences on domestic issues in each survey year between 1980 and 2000. The first dot on the left plots estimates the baseline, unweighted; the second dot estimates weighted regressions with "salience weights" constructed as follows. For each survey year, the salience weight on defense spending is given by the share of survey respondents who view that issue as the "most important problem" facing the country in that year. All domestic issues are then given a weight equal to 1 minus the salience weight attached to defense spending.



**Figure A.7:** The figure plots coefficients (with corresponding 95% confidence intervals) reported in Appendix Table A.11, Columns 1 to 3, where perceived partisan differences (on domestic issues) are regressed against the interaction between different time dummies and the pre-1991 average likelihood ratio. All regressions also control for actual average differences, individual respondents' position on the issue, as well as for issue, individual, and year fixed effects. The first (third) dot plots the coefficient on the pre-1991 average likelihood ratio and a dummy equal to 1 for survey years greater than 1984 (1996). The second dot corresponds to the baseline estimated coefficient reported in Column 4 of Table 8.

**Table A.1:** Issues available by survey year

Issue	1980	1982	1984	1986	1988	1990	1992	1994	1996	1998	2000
Liberal-Conservative	Χ	Х	Χ	Χ	Х	Х	Χ	Х	Χ	Χ	X
Government Spending	X	X	X	X	X	X	X	X	X	X	X
Job Aid	X	X	X		X		X	X	X	X	X
Defense Spending	X	X	X	X	X	X	X		X		X
Aid to African Americans	X	X	X		X		X	X	X	X	X
Women's Role	X	X			X					X	

Table A.2: Actual and perceived attitudes: summary statistics

Issues:	Defense spending	Domestic issues (pooled)	Liberal vs. conservative	Government spending	Job aid	Aid to African Americans	Women's role
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: Pre-1991							
Actual attitudes							
Republicans	4.463	4.578	4.951	4.462	4.993	4.820	3.008
Democrats	3.718	3.596	3.814	3.324	3.768	4.025	2.778
Partisan difference	0.745	0.982	1.136	1.138	1.225	0.796	0.231
Perceived attitudes							
Republicans	5.284	4.773	5.095	4.725	4.974	4.747	3.946
Democrats	3.559	3.113	3.241	2.940	3.188	3.210	2.974
Partisan difference	1.725	1.660	1.853	1.785	1.786	1.537	1.102
Exaggeration	0.980	0.667	0.717	0.646	0.561	0.741	0.741
Panel B: Post-1991							
Actual attitudes							
Republicans	4.311	4.853	5.142	4.689	5.107	5.238	2.489
Democrats	3.674	3.606	3.647	3.428	3.859	4.285	1.969
Partisan difference	0.637	1.247	1.495	1.261	1.247	0.953	0.520
Perceived attitudes							
Republicans	4.893	4.795	5.311	4.823	5.164	4.904	3.771
Democrats	3.594	2.962	2.948	2.858	3.226	3.158	2.618
Partisan difference	1.299	1.833	2.363	1.965	1.938	1.746	1.153
Exaggeration	0.661	0.738	0.868	0.704	0.691	0.793	0.633

Notes: Panel A (resp. Panel B) reports average actual and perceived positions on each issue (in each column) for both the Republican and the Democratic Party, as well as the difference between the two (*Partisan differences*), for surveys conducted between 1980 and 1990 (resp. between 1992 and 2000) included. Actual positions are calculated by taking the average of the reported position across respondents of either party. Perceived positions are constructed by averaging individuals' beliefs about the position of either party. *Exaggeration* at the bottom of both Panels A and B refers to the difference between perceived and actual average partisan differences. Each column refers to an individual issue, except for Column 2 (*Domestic issues (pooled)*), which pools together all issues other than *Defense spending*.

Table A.3: Difference between own position and perceived party positions

	Political e	ngagement	Affective polarization		
	(1)	(2)	(3)	(4)	
Perceived position of other party - own position	0.043*** (0.006)	0.019*** (0.006)	0.107*** (0.004)	0.080*** (0.004)	
Perceived position of own party - own position	-0.076*** (0.006)	-0.037*** (0.006)	-0.036*** (0.004)	-0.031*** (0.004)	
Observations Year FE Individual Controls	9,689 X	9,689 X X	9,689 X	9,689 X X	

Notes: the dependent variable in columns 1 and 2, Political engagement, is a dummy equal to 1 if the respondent reported any of the following political behaviors: voted in the last election, plans to vote in the next election, made any political contribution during the past electoral campaign, and worked or was actively involved in political activities like canvassing etc. in the past electoral campaign. The dependent variable in columns 3 and 4, Affective polarization, is the difference in the feeling thermometer expressed by the respondent towards own party minus the feeling thermometer expressed towards the other party. All regressions control for survey year fixed effects. Columns 2 and 4 also include political attitudes (partisanship, a dummy for being a strong partisan, and average individual's reported position across issues) and demographic characteristics (race, age, age squared, education, gender, marital status, religion). Robust standard errors, clustered at the individual level, in parentheses. The sample is restricted to ANES respondents during the 1980 and 2000 waves who are either Republicans or Democrats, for whom all controls are available, and both political engagement and affective polarization can be constructed. \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1.

Table A.4: Robustness: issues' partisan representativeness and perceived partisan differences

	Belief	Beliefs about partisan differences						
	(1)	(2)	(3)	(4)				
Panel A: Pre-1991 ave	rage							
LR	0.220*** (0.012)	0.173*** (0.012)	0.060*** (0.015)	0.064*** (0.014)				
Actual differences			0.671*** (0.043)	0.716*** (0.044)				
Panel B: 1980-2000 av	erage							
LR	0.206*** (0.012)	0.159*** (0.012)	0.053*** (0.014)	0.055*** (0.014)				
Actual differences			0.692*** (0.041)	0.739*** (0.043)				
Observations Year FE Individual FE Individual position	31,074	30,334 X X	30,334 X X	30,334 X X X				

Notes: The dependent variable is the difference in respondents' beliefs about the position held by the Republican and the Democratic Party on a given issue (excluding "defense spending") in a given year. The sample is restricted to years 1980 to 2000 and to respondents who self-identify as either Republicans or Democrats. LR is the pre-1991 average (resp. 1980-2000 average) likelihood ratio on each issue in Panel A (resp. Panel B). Column 1 includes no controls; Column 2 adds survey year and individual fixed effects; Column 3 further includes average differences on each issue in a given year as reported by respondents in the ANES survey; Column 4 adds the position held by respondents on each issue in each year. Robust standard errors clustered at the individual level in parentheses. \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1.

**Table A.5:** Robustness: perceived partisan differences after 1991

	Beliefs about differences between Democrats and Republicans								
Issues:	Defense spending	Domestic issues (pooled)	Liberal vs. conservative	Government aid	Job spending	Aid to African Americans			
	(1)	(2)	(3)	(4)	(5)	(6)			
Panel A: No controls	3								
Post-1991	-0.436***	0.520***	0.605***	0.344***	0.245***	0.334***			
	(0.062)	(0.045)	(0.066)	(0.060)	(0.085)	(0.087)			
Panel B: Control for	actual partisa	n differences							
Post-1991	-0.392***	0.109**	0.382***	0.073	0.278***	0.368			
	(0.064)	(0.052)	(0.134)	(0.085)	(0.099)	(0.615)			
Actual differences	0.747***	1.025***	0.505*	1.280***	-0.460	-0.116			
	(0.227)	(0.054)	(0.263)	(0.282)	(0.790)	(2.051)			
Panel C: Control for	individual ch	aracteristics							
Post-1991	-0.387***	0.084*	0.358***	0.067	0.290***	0.345			
	(0.062)	(0.051)	(0.130)	(0.084)	(0.098)	(0.596)			
Actual differences	0.939***	1.112***	0.425*	1.310***	-0.470	0.017			
	(0.220)	(0.055)	(0.251)	(0.277)	(0.776)	(1.984)			
Observations	4,795	16,786	5,141	5,628	2,856	2,269			

Notes: the dependent variable is the difference in beliefs about the position of Republicans and Democrats on a given issue (reported at the top of each column) in a given year. Pooled (Domestic) in Column 2 refers to the five domestic issues in Columns 3 to 6. The sample is restricted to the 3 years before and the 3 years after the end of the Cold War, i.e. 1986, 1988, 1990, 1992, 1994, and 1996. The issue of women's role in the society was asked only in 1998 for the post-period, and so cannot be included in this exercise. *POST-1991* is a dummy equal to 1 for survey years strictly greater than 1990. Panel A includes no controls; Panel B includes the difference in average reported position of Democrats and Republicans. Panel C further includes a number of individual controls (individual position on the issue; a dummy equal to 1 if the respondent is a Democrat; a dummy equal to 1 if the respondent is male; a dummy equal to 1 if the respondent is white; age; age squared; and a dummy equal to 1 if the respondent identifies as a "strong partisan"). Standard errors clustered at the individual level in parentheses. \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1.

Table A.6: Increased perceived partisan differences and issues' likelihood ratios: most important issues

Variables:	Beliefs	Beliefs about partisan differences					
	(1)	(2)	(3)	(4)			
Actual differences	0.849*** (0.039)	0.834*** (0.040)	0.724*** (0.067)	0.750*** (0.068)			
$LR \times MIP$		0.239*** (0.071)	0.265*** (0.097)	0.280*** (0.097)			
LR			0.051** (0.023)	0.058** (0.023)			
MIP			-0.068 (0.068)	-0.073 (0.068)			
Observations Individual Position	20,499	20,499	20,499	20,499 X			

Notes: The dependent variable is the difference in respondents' beliefs about the position held by the Republican and the Democratic Party on a given issue (excluding "defense spending") in a given year. The sample is restricted to years 1980 to 2000 and to respondents who self-identify as either Republicans or Democrats, and who report non-missing MIP. LR is the pre-1991 average likelihood ratio on each issue; MIP is a dummy equal to 1 if an issue is considered the most important problem facing the country for the respondent in the year of the interview. Robust standard errors clustered at the individual level in parentheses. \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1.

**Table A.7:** Local influence on representativeness

Variables:	Stereotyping of own vs. other demographic types					
	(1)	(2)	(3)	(4)	(5)	(6)
Actual differences	0.957***	0.884***	0.747***	0.781***	0.782***	
LR (Own) × Post-1991	(0.035)	(0.037) 0.129***	(0.042) 0.120***	(0.043) 0.123***	(0.043) 0.103**	0.125***
LR (Other) $\times$ Post-1991		(0.031) -0.017 (0.032)	(0.041) -0.042 (0.041)	(0.041) -0.049 (0.041)	(0.040) -0.029 (0.041)	(0.040) -0.039 (0.041)
LR (Own)		(0.032)	0.014 (0.027)	0.015 (0.026)	0.022 (0.026)	-0.016 (0.027)
LR (Other)			0.041 (0.027)	0.045*	0.037 (0.027)	0.064**
Post-1991			0.129*** (0.036)	0.126*** (0.036)	0.127*** (0.036)	0.119*** (0.036)
Actual differences (Own)			,	,	,	0.501*** (0.053)
Actual differences (Other)						0.296*** (0.059)
Observations	31,056	31,056	31,056	31,056	31,056	31,056
R-squared	0.020	0.021	0.022	0.023	0.024	0.025
Control for own attitudes Control for gender Control for age				X	X X X	X X X

**Notes:** The dependent variable is the difference in respondents' beliefs about the position held by the Republican and the Democratic Party on a given issue (excluding "defense spending") in a given year. The sample is restricted to years 1980 to 2000 and to respondents who self-identify as either Republicans or Democrats. LR is the pre-1991 average likelihood ratio on each issue for two groups (own and other); Post-1991 is an indicator equal to 1 for survey years greater than 1990. Robust standard errors clustered at the individual level in parentheses. Significance levels: \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1

Table A.8: Robustness: alternative sample and specifications

Variables:	Beliefs about partisan differences								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
LR×Post-1991	0.063** (0.024)	0.117*** (0.030)	0.073** (0.034)	0.113*** (0.027)	0.096*** (0.025)	0.075*** (0.023)	0.181*** (0.020)	0.069*** (0.020)	0.074*** (0.026)
Observations	31,074	25,572	15,032	27,195	31,074	31,074	40,037	27,942	30,334
Sample Actual differences	Baseline Baseline	1980-1994 Baseline	1986-1994 Baseline	Baseline Lagged	Baseline Mode	Baseline Strong partisan	Impute missing Baseline	Windsorized Baseline	Baseline Baseline

Notes: Column 1 replicates the baseline specification (reported in Column 4 of Table 8); Column 2 (resp. 3) restricts attention to the 1980-1994 (resp. 1986-1994) period; Column 4 (resp. 5) replaces actual average partisan differences with lagged ones (resp. the mode); Column 6 constructs average actual partisan differences using only strong partisans; Column 7 replaces missing values for beliefs about partisan differences by imputing those in the previous non-missing years; Column 8 trims the top and bottom 5% of perceived partisan differences; Column 9 replicates the specification in Column 1 by also controlling for year, individual, and issue fixed effects. Robust standard errors, clustered at the individual level, in parentheses. \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1.

Table A.9: Robustness: independent respondents

Variables:	Beliefs about partisan differences						
	(1)	(2)	(3)	(4)			
LR×Post-1991	0.063** (0.024)	0.092*** (0.024)	0.096*** (0.026)	0.058** (0.023)			
Observations	31,074	39,773	35,141	34,966			
Sample	Baseline	Baseline + Indep.	Baseline + R-leaning Indep.	Baseline + D-leaning Indep.			

Notes: Column 1 reports all results of Table 8 in the main text. Columns 2-4 replicate Column 1, adding to the baseline sample of respondents, respectively, Independents leaning towards the Republican Party, the Democratic Party, and to both parties. Robust standard errors, clustered at the individual level, in parentheses. \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1.

Table A.10: Decomposition of partisan likelihood ratios

Variables:	Beliefs about partisan differences				
	(1)	(2)	(3)		
LR(both)×Post-1991	0.063** (0.024)				
LR(conservative)×Post-1991		0.068*** (0.025)			
LR(liberal)×Post-1991			0.066*** (0.024)		
Observations	31,074	31,074	31,074		

Notes: This table shows results re-estimating the baseline specification (Table 8, Column 4), using different subsamples and different likelihood ratio definitions. Post-1991 is an indicator equal to 1 for survey years strictly greater than 1990. LR(both) is the share of Republicans stating position 6 or 7 relative to the share of Democrats stating position 6 or 7, times the share of Democrats stating position 1 or 2 relative to the share of Republicans stating position 1 or 2, averaged over all years between 1980 to 1990. LR(conservative) is the share of Republicans stating position 6 or 7 relative to the share of Democrats stating position 6 or 7, averaged over all years between 1980 to 1990. LR(liberal) is the share of Democrats stating position 1 or 2 relative to the share of Republicans stating position 1 or 2, averaged over all years between 1980 to 1990. Robust standard errors, clustered at the individual level, in parentheses. The sample is restricted to ANES respondents during the 1980 and 2000 waves who are either Republicans or Democrats. \*\*\* p < 0.01, \*\*p < 0.05, \* p < 0.1.

Table A.11: Robustness: placebo end of the Cold War timing

Variables:	Beliefs about partisan differences					
	(1)	(2)	(3)	(4)		
LR×Post-1991	0.063** (0.024)			0.080*** (0.029)		
LR×Post-1984		-0.063 (0.043)		-0.042 (0.044)		
LR×Post-1996			-0.031 (0.037)	-0.075* (0.042)		
Observations	31,074	31,074	31,074	31,074		

Notes: The dependent variable is the perceived difference between Republicans and Democrats, which is constructed as described in the main text. LR is the share of Republicans stating position 6 or 7 relative to the share of Democrats stating position 6 or 7, times the share of Democrats stating position 1 or 2 relative to the share of Republicans stating position 1 or 2, averaged over all years between 1980 to 1990. Column 1 replicates the most preferred specification reported in Column 4 of Table 8. Columns 2 and 3 interact the LR with a dummy equal to 1 for years greater than 1984 and 1996 respectively. Column 4 includes the interactions between LR and all three year dummies. Robust standard errors, clustered at the individual level, in parentheses. \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1.

**Table A.12:** Sentiments towards party vs. party members

	Survey elicited sentiments towards							
	Democrats	Democratic Party	Difference	Republicans	Republican Party	Difference		
	(1)	(2)	(3)	(4)	(5)	(6)		
1980	67.18	64.11	3.076 [4.689]	59.71	57.07	2.636 [3.735]		
1982	68.18	66.62	1.558 [3.230]	56.21	53.52	2.691 [5.098]		

Notes: The table reports the average feeling thermometer towards Democrats and Republicans in Columns 1 and 4, and towards the Democratic and the Republican Party in Columns 2 and 5. Columns 3 and 6 test the null hypothesis of equality of means, with the t-statistic reported in square brackets. The sample is restricted to respondents who self-identified as either Republicans or Democrats, and who answered to all four feeling thermometer questions. The number of observation is 836 for 1980 and 908 for 1982. Source: ANES survey waves in 1980 and 1982.

Table A.13: Robustness: drop most important issues

Variables:	I	Beliefs about partisan differences				
	(1)	(2)	(3)	(4)	(5)	
Actual differences	0.320*** (0.012)	0.295*** (0.013)	0.247*** (0.014)	0.260*** (0.015)	0.257*** (0.016)	
LR × Post-1991		0.102*** (0.020)	0.066*** (0.025)	0.062** (0.025)	0.057* (0.031)	
LR			0.056*** (0.018)	0.061*** (0.018)	0.062*** (0.018)	
Post-1991			0.135*** (0.037)	0.132*** (0.037)	0.129*** (0.038)	
Actual differences × Post-1991					0.009 (0.033)	
Observations	29,141	29,141	29,141	29,141	29,141	

*Notes:* The dependent variable is the difference in respondents' beliefs about the position held by the Republican and the Democratic Party on a given issue (excluding "defense spending") in a given year. The sample is restricted to years 1980 to 2000 and to respondents who self-identify as either Republicans or Democrats. The table restricts attention to issues that were not considered by respondents the most important problem for the country in the year of the interview. LR is the pre-1991 average likelihood ratio on each issue; Post-1991 is an indicator equal to 1 for survey years greater than 1990. Robust standard errors clustered at the individual level in parentheses. Significance levels: \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1