Extreme Recall: Which Politicians Come to Mind?

Gaurav Sood^{*} Daniel Weitzel[†]

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Abstract

How do people understand parties? Using data from two original surveys fielded nearly a decade apart, we shed light on people's mental images of the parties. In the surveys, we asked which politicians immediately come to mind when you think about Republicans (Democrats). People's mental images of parties are a narrow gallery of few prominent national politicians. Nearly 40% of the people struggle to list three politicians. Further, 44% of the mentions are of the last three presidents. People are also likelier to list more extreme politicians. To shed light on the source of these biases, we analyze a decade's worth of national television news data. We find that the media coverage patterns of politicians are similar to the patterns in the survey data. A 10% increase in media mentions is associated with a 2% increase in the number of people recalling the politician.

Keywords: political parties, voters, ideology, recall

^{*}Independent researcher, gsood07@gmail.com

[†]Assistant Professor, Colorado State University, and Senior Research Fellow, University of Vienna, daniel.weitzel@colostate.edu. Institutional Review Board approval was granted under University IRB 5278.

People primarily understand parties in terms of ideology (Noel 2014; Goggin, Henderson and Theodoridis 2020), social groups (Green, Palmquist and Schickler 2004; Ahler and Sood 2018; 2023), and as part of their social identity (Greene 1999; Iyengar, Sood and Lelkes 2012). But these understandings are generally mediated. For instance, people rarely learn about the party's ideology by reading the party's manifesto. Instead, they likely infer it from the positions espoused by the political leaders covered in the news media. Hence, when the leaders change, people's understanding of what the party stands for changes (Fernandez-Vazquez and Somer-Topcu 2019; Bittner 2011). By the same token, Winter (2010) shows a correlation between people's mental images of the party (harking back to Lippmann (1922)) and what percentage of the party's politicians are female. In this paper, we extend this line of inquiry. Leveraging original survey data and a large media corpus, we shed light on the mental images of parties and the potential role of media in shaping these images.

We ask two different samples, nearly a decade apart, which politicians come to mind when they think about the two major parties. A few national politicians frequently covered in the news dominate the imagination. In the January 2024 Lucid survey, for instance, 44% of the mentions are to Donald Trump, Joseph Biden, and Barack Obama, with Donald Trump alone making up almost one-fifth of the mentions. Only one politician of each party's top ten most frequently recalled politicians is not a recent national political office holder— Gavin Newsom for the Democrats and Ron DeSantis for the Republicans; both are active in national politics. Even if you include Governor Nikki Haley and Governor Ron DeSantis, the percentage of mentions of state or local politicians is no more than 12%. Minus them, it is less than 3%. Worryingly, 40% of people cannot list a single state or local politician, even when we explicitly ask them to list state or local politicians who come to mind. The data are consistent with and may even underlie the nationalization of politics (Hopkins 2018).

To shed light on the role of media in the patterns we see, we analyze a decade's worth of television news media data that underlies Kim, Lelkes and McCrain (2022). The data are strongly suggestive. The media data show the same pattern—the same few national politicians who come to people's minds dominate the news coverage. A 10% increase in media mentions is associated with a 2% increase in mentions in our open-ended survey.¹

The findings have important implications for politics. First, the dominance of contemporary national politicians, especially presidents, in people's imagination and the media likely constrains state parties from carving out unique ideological positions optimal for their constituencies. The description of American parties as "hundred party systems" (Brinkley, Polsby and Sullivan 1997) seems archaic (see also Rodden (pg. 36, 2019)), with data more consistent with dramatic nationalization (Hopkins 2018). Second, people may hold national politicians responsible for policies and political outcomes not in their control. Third, party reputations are in the hands of a few national politicians. When combined with research on how elites shape people's understanding of parties (Fernandez-Vazquez and Somer-Topcu 2019; Bittner 2011) and polarization (Ploger 2024), the data suggest enormous power in changing how people think about the parties in the hands of a few politicians. Lastly, and relatedly, the data point to the limits of the theory that presents national parties at the center of politics in the US (Bawn et al. 2012).

Which Politicians Come to Mind?

Which politicians come to mind depends primarily on relevance and availability. One criterion for relevance is importance. The more important you think a political office is, the more likely you are to seek information about the politicians vying for it or who are in that office. For instance, people may think that the governor's office is particularly important because of the power granted to the office. And this fact may underlie why 25% of the people can correctly identify senators, 29% House representatives, and 73% the Governor (Carpini and

 $^{^{1}(1.10^{0.25} - 1) * 100 = 2.02}$, calculation based on Column 3 of Table 5.

Keeter 1993). The impressions about importance likely form early. As Greenstein (2017) reports, most fourth-grade children think the President is the most important individual.

The second criterion is instrumental relevance. A politician responsible for solving the issue people care about is relevant to them. For instance, people may take more interest in local politicians if issues like schools, parks, crime, etc., are important to them. Or they may take more interest in national politicians if national security is top of mind.

Third, people may pay greater attention to politicians of the same race or gender. This may be because politicians of the same race and gender are likelier to care about issues affecting their group Broockman (2013), or because the legislator is likelier to espouse the same issue positions as them, or because people derive some pleasure from seeing coethnics succeed. Whatever the reason, data suggest that women are more aware of women politicians than male politicians (Burns, Schlozman and Verba 2009; Dolan 2011; Verba, Burns and Schlozman 1997).

Availability is the fourth major factor affecting which politicians come to mind. The more you see a politician in the media, the more readily the politician comes to mind when you think about the party (Zaller and Feldman 1992; Tversky and Kahneman 1973). The amount of coverage of a politician is, in turn, a function of politician supply and media demand. Given that all politicians are eager to be in the media, their supply is virtually unconstrained. The only constraint is media hostility. Politicians may be less inclined to appear on shows where they expect a hostile reception. It is also likely that politicians may exert extra effort to be in the media if they have a bill to pass or an election to fight.

Media demand for politicians is a function of audience demand and production costs. Audience demand, in turn, depends on relevance, ideology, and entertainment value. Relevance has at least three aspects. The first is that the audience is likely more interested in news about more prominent national politicians who oversee a larger sphere of activity (similar to what we noted before).² The second pillar is contextual relevance. The audience is likely more interested in the Secretary of State when there is a major ongoing international conflagration than when there isn't one. This point has implications for the data we present later. One of our surveys was launched in the middle of the Republican presidential primary, which likely affected the kinds of politicians covered in the media and, hence, which politicians came to people's minds. Third, and most fundamentally, as local news media outlets have declined, the only politicians in the national news media relevant to the (national) audience are national politicians. Fourthly, there may be a demand for more provocative (ideologically extreme) politicians, as the audience may find them entertaining. Fifthly, the audience likely prefers dramatic coverage with clear heroes and villains. The executive, a person in charge who can be held responsible, is likely easier to dramatize than coverage of legislature with a broader cast of characters and harder to pin down villains and heroes. Lastly, given the demand for ideologically congenial politicians by audiences of media sources with a particular ideological bent, partian channels will likely cover more ideologically congenial politicians (Kim, Lelkes and McCrain 2022). More subtly, we expect conservative media to highlight more extreme Democratic politicians and liberal outlets to highlight more extreme Republican politicians. The practice is similar to issue distancing in ads—highlighting more extreme positions of the other side (Henderson 2013).

Production costs may affect who is covered in subtle but important ways. It is thought that the production costs for episodic news are lower than for thematic news. The dominance of episodic news implies greater coverage of contemporary politicians. Similarly, one reason for the decline in coverage of state and local politicians is likely that production costs are higher.

In all, we conjecture at least four patterns in the kinds of politicians that come to

²See, for instance, Snyder Jr and Strömberg (2010), who show that party leaders are covered more in local newspapers.

people's minds when they think about the parties: we expect people to be

- 1. likelier to recall contemporary politicians than inactive politicians,
- 2. more national politicians than state or local politicians (see also, Hopkins 2018),
- 3. more ideologically extreme politicians than moderate, and
- 4. more politicians in the executive, e.g., the presidency and the governorship than legislators (Greenstein 2017).

We also investigate if there are patterns in the sex and race of the recalled politicians.

Study 1

In November 2013, we recruited 344 survey participants through Amazon's Mechanical Turk (see Berinsky, Huber and Lenz 2012). We asked the respondents, "When you think about the Democratic (Republican) party, which political leader(s) first come to mind? Name up to three." We followed the open-ended question with a multiple-choice question that presented respondents with a list of names and photos of political leaders and asked the respondents, "Is there another political leader that you haven't mentioned already who immediately comes to mind when you think about the Democratic (Republican) party?" For Democrats, the choices were: Joseph Biden, Barney Frank, Bill Clinton, Hillary Clinton, Harry Reid, Ted Kennedy, Franklin Roosevelt, John Kerry, John Kennedy, Nancy Pelosi, Al Gore, and Barack Obama. For Republicans, the choices were: Paul Ryan, John McCain, Paul Rand, Sarah Palin, Ronald Reagan, George W. Bush, John Boehner, Jeb Bush, Michele Bachmann, Ted Cruz, Chris Christie, Marco Rubio, Eric Cantor, Mitt Romney, and Mitch McConnell. The respondents could select one politician per party. We manually reviewed the open-ended responses to normalize the names. Where the response was ambiguous, e.g., Bush than George H. W. Bush or George W. Bush, we tried two things:

- Proportional Allocation. Allocate ambiguous names in proportion to the observed proportion of the unambiguous names. For example, 78% of the unambiguous mentions of Bushes are to George W. Bush, while the rest are to George H. W. Bush. (No one volunteered Jeb Bush.) Hence, we allocated 78% of the ambiguous Bush mentions to George W. Bush and the rest to George H. W. Bush.
- 2. All-to-One Allocation. To test the robustness of our results, we simulate scenarios where we assign all the ambiguous mentions to one person. For instance, we simulate assigning all ambiguous Bush mentions to George W. Bush and George H. W. Bush.

Proportional allocation is the default across Study 1 and 2. However, Figures 1 and 4 plot ambiguous and unambiguous names separately to provide the reader with a clear picture of the data. All the results are robust to how we allocate ambiguous names.

If a respondent put a non-Republican leader when asked about a Republican leader, we ignored that response. We merged the responses with the Database on Ideology, Money in Politics, and Elections (DIME) dataset (Bonica 2013), taking the most recent dynamic ideology data for each politician in each wave. DIME quantifies the ideological position of political candidates and donors based on their contributions (creating a Campaign Finance Score or CF-Score). The rationale behind it is that people donate money based on ideological proximity. One of the advantages of DIME over roll call-based measures is that unlike roll call measures, which are limited to elected legislators, contribution-based measures are available for a wide array of political actors. We manually coded the race and gender of the politicians after consulting official sources. To understand the results, it is helpful to understand the national political context in November 2013. The survey was fielded a year after the 2012 elections. In 2012, President Barack Obama won the presidential election by beating Mitt Romney, the Republican Party retained control of the House of Representatives, with John Boehner continuing as speaker of the House and Nancy Pelosi continuing as minority leader, and the Democratic Party retained control of the Senate, with Senator Harry Reid continuing as the majority leader and Senator Mitch McConnell as the minority leader.

Results

When asked to list up to three politicians who first come to mind when they think about parties, about 15% of the respondents list fewer than three politicians (see Figure SI 1.1 for details). This suggests a shallow pool of politicians, consistent with low levels of political knowledge (Bawn et al. 2012).

Of the politicians that come to mind, the same few national politicians dominate. Just three politicians constitute 57% of the recalled politicians for the Democratic Party and 40% for the Republican Party, with the top politician alone constituting 31% and 16% of the recollections, respectively (see Figure SI 2.1 for the top politicians).

Six of the ten most frequently unambiguously mentioned Democratic politicians were presidents, presidential candidates, or vice presidents—Barack Obama, Bill Clinton, Joe Biden, Jimmy Carter, John F. Kennedy, and John Kerry. Hillary Clinton was also in the top ten. Presidents, presidential candidates, and vice presidents also dominate the Republican Party's top 10, with half of the top ten falling into this category—George W. Bush, Mitt Romney, Ronald Reagan, John McCain, and Sarah Palin. As Figure 1 underscores, the American political parties are, in the minds of the voters, parties of the presidents. Figure SI 2.3 provides further evidence for the predominance of the presidential office in people's minds. More than half of the mentions were of presidents and vice presidents.



Figure 1: Top 20 most frequently recalled politicians in open-ended questions (Study 1).Democratic PartyBRepublican Party

The second notable feature of the data can be easily gleaned from Figures 1 and SI 2.1. It is striking that no state or local Democratic politicians were volunteered by participants in numbers that would push them into double digits. State and local politicians constitute just 6.4% of the total citations. But that is too generous a number. In total, 17 state and local politicians are mentioned, and the most frequently mentioned state and local Republican Party politicians are people with a national profile: Governors Sarah Palin (50 mentions), Chris Christie (48), and Jon Huntsman (6). In all, the data show that people think about political parties in terms of national politicians.

To check whether recalled politicians are more extreme than the party caucus, we created an extremity measure. We instrumented extremity by rescaling the dynamic CF-Score such that 0 represents the most moderate member of either party (technically the most conservative member of the Democratic Party and the most liberal member of the Republican Party), and 1 presents the most extreme member of either party. This linear transformation preserves the interval nature of the scale.

As Figure 2 shows, the recalled politicians are substantially less extreme than the median member of the party's Congressional contingent for the Democrats (extremity of 0.49 vs. 0.67) and minimally more extreme for the Republicans (0.53 vs. 0.51). The average recalled Democrat is exactly one standard deviation (0.18) less extreme than the mean of the Congressional Democratic caucus, while the 0.02 gap between the average recalled Republican and the mean of the Republican caucus is one-seventh of the Congressional standard deviation (0.14).



Figure 2: Ideological distribution of recalled politicians (Study 1).

Note: Linearly scaled most recent dynamic CF-Scores with 0 representing the most moderate politician for either party and 1 representing the most extreme politician of either party. Blue represents Democratic politicians, and red Republican politicians. The dashed lines mark the average extremity scores of the recalled party politicians. The averages for the Republican (mean = 0.51, SD = 0.14) and Democratic (mean =0.67, SD = 0.18) parties in the 113th Congress are shown as solid red and blue lines, respectively. Congress average is calculated for all DIME entries for the House in the 2012 cycle and the Senate in the 2008, 2010, and 2012 cycles.

Further, more extreme politicians are further at the top of people's minds. As Table 1 shows, people recall more extreme politicians earlier. The average difference between being recalled first and last is one-quarter of the extremity scale.³ For comparison, the difference

³Replacing extremity measures with perceived extremity leaves the signs of the coefficients

between Nancy Pelosi and John McCain is .25 on the same scale.

	1	2
	Ideological Extremity	Ideological Extremity
(Intercept)	0.32^{***}	0.20***
	(0.01)	(0.02)
Recall Order	0.28^{***}	0.43^{***}
	(0.02)	(0.03)
Republican		0.27^{***}
		(0.03)
Recall Order*Republican		-0.33^{***}
		(0.03)
Num. obs.	1879	1879
\mathbb{R}^2 (full model)	0.11	0.16

Table 1: Relationship between Recall Order and Extremity in Study 1

***p < 0.001; **p < 0.01; *p < 0.05

Next, we checked if people are more likely to recall more extreme partisans of the main opposing party than co-partisans. As Figure 3 shows, contrary to our prediction, both Democrats and Republicans are somewhat likelier to recall more extreme co-partisan political leaders.

To further explore extremity, executive, and recency biases, we exploited the closedended responses. We estimated a model that predicted whether or not a politician was selected given their ideological extremity, race, and political position. Since ideology estimates only exist for a few non-contemporaneous politicians, we had to estimate models for extremity and recency separately.

As Table 2 shows, there is a large executive bias, with presidents recalled most frequently. There is also a weak bias toward recalling contemporaneous politicians (see Column 3).

unchanged (see Appendix SI 3).

	1	2	3
	Selected	Selected	Selected
(Intercept)	0.10***	0.16***	0.05^{*}
	(0.01)	(0.02)	(0.02)
Extremity	-0.05^{***}	-0.09***	· · · ·
-	(0.01)	(0.02)	
Contemporaneous	~ /	· · /	0.04^{**}
-			(0.01)
Race: White		0.07^{**}	0.09***
		(0.02)	(0.02)
Gender: Male		-0.05^{***}	-0.05^{***}
		(0.01)	(0.01)
Most recent office		· · /	· · · ·
Ref: President			
Vice President		-0.11^{***}	-0.09^{***}
		(0.01)	(0.01)
House		-0.10^{***}	-0.10^{***}
		(0.01)	(0.01)
Governor		-0.06^{***}	-0.06^{***}
		(0.01)	(0.01)
Senate		-0.05^{***}	-0.05^{***}
		(0.01)	(0.01)
Num. obs.	7935	7935	9315
Num. groups: Respondents	345	345	345

 Table 2: Predicting what kinds of politicians are selected in closed-ended questions (Study 1).

 1
 2
 3

***p < 0.001; **p < 0.01; *p < 0.05

Figure 3: Ideological extremity of recalled politicians by the partisanship of the respondent and politician (Study 1).



Note: Dependent variable is linearly scaled most recent dynamic CF-Score with 0 representing the most moderate politician of either party and 1 representing the most extreme politician of either party. Interaction between political parties of the recalled politicians and self-declared partias ship of respondents. The Y-axis range covers 1/4th of the range of the dependent variable, the same as in Figure 6.

Study 2

In January 2024, we interviewed 730 respondents recruited through Lucid (see Coppock and McClellan 2019). We again asked the respondents, "When you think about the Democratic (Republican) party, which political leader(s) first come to mind? Name up to three." As before, we followed the open-ended question with a closed-ended one asking the respondents

to pick "any other political leaders that immediately come to mind when you think about the Democratic (Republican) party?" from a list. Unlike Study 1, where we let respondents pick only one politician, this time, we let the respondents choose as many politicians as they wished. The list presented was a deliberate mix that varied along all the potential dimensions of bias we conjecture: recent and not so recent, male and female, white and non-white, executive and non-executive, and more and less extreme. For Democrats, the list contained Joseph Biden, Bill Clinton, Hillary Clinton, John F. Kennedy, Nancy Pelosi, Barack Obama, Kamala Harris, Elizabeth Warren, Bernie Sanders, Alexandria Ocasio-Cortez, Dianne Feinstein, John Lewis, Ilhan Omar, Joe Manchin, and Tulsi Gabbard. For Republicans, the list included John McCain, Ronald Reagan, George W. Bush, Ted Cruz, Mitch McConnell, Mitt Romney, Michele Bachmann, Lindsey Graham, Newt Gingrich, Nikki Haley, Mike Pence, Donald Trump, Richard Nixon, Lisa Murkowski, and Greg Abbott. The respondents could select as many additional politicians as they wanted from the list. Much later in the survey, after asking people some sociodemographic questions, we asked half the respondents which state or local politicians come to mind when they think about the parties.

We processed the open-ended responses in the same way as we did in Study 1. And like before, we joined the politician data to the DIME dataset to get the recent most CF-Scores, DW-Nominate, office, and other sociodemographic characteristics of the politicians (Bonica 2023).

To aid the interpretation of the results, it helps to know the political context of when the survey was fielded. The survey was fielded in January 2024, in the middle of the Republican presidential primary. The leading contenders were Donald Trump, Ron DeSantis, and Nikki Haley. For the Democratic Party, the current president, Joseph Biden, was running for reelection.

Results

Nearly 55% of the people list fewer than three politicians, with roughly 10% failing to name a single politician in response to the open-ended question (see Figure SI 1.2). The numbers are consistent with low levels of political knowledge (Bawn et al. 2012). However, the numbers are substantially higher than in Study 1. We believe the reason lies in Amazon Mechanical Turk workers being less inclined to leave anything missing lest their wages be garnished. In this case, it implies listing politicians that don't immediately come to mind. Hence, we think the Lucid data provides a more accurate picture.

More strikingly and consistent with Study 1, as Figure 4 shows, people mention the same few national politicians. (Figure SI 2.2 shows the entire distribution of recalled politicians.) More precisely, the president, vice president, ex-presidents, and presidential candidates dominate people's images of the parties. Just three politicians—President Joseph Biden (35.7%), President Barack Obama (15.7%), and Vice President Kamala Harris (13.8%)— make up 62.5% of the recalled politicians for the Democratic Party. For the Republican Party, the top three politicians constitute 55.4% of the mentions. Former president Donald Trump (37.6%) is the most frequently recalled, followed by his top two opponents in the Republican primaries, Governor Ron DeSantis (11.4%) and Nikki Haley (6.4%). Looking beyond the top three, eleven of the top fifteen Democratic Party politicians are presidents, vice presidents, or prominent presidential candidates. For the Republican Party, eight out of fifteen fall into this category. As Figure SI 2.4 underscores, the American political parties are, in the minds of the voters, parties of presidents.

Politicians not in national politics, e.g., governors, mayors, state legislators, etc., virtually never come to people's minds unprompted. Only two governors, Gavin Newsom and Gretchen Whitmer, are in the top 25 for the Democratic Party, and both are mentioned by fewer than 3% of the respondents. (Governor Newsom debated Governor DeSantis on Fox News roughly a month before the survey, and both Governor Newsom and Governor



Figure 4: Top 20 most frequently recalled politicians in open-ended questions (Study 2).

Whitmer were frequently mentioned as potential contenders for the Democratic national ticket.) For the Republican Party, once again, only two governors, Governor Ron DeSantis (who was running in the presidential primary) and Governor Greg Abbott, make it to the top 25. But to give context, Governor Abbott was mentioned less frequently than the ousted House representative George Santos. Even when we explicitly asked people if any state or local politicians came to mind, as we did near the end of the survey, more than 40% of the people could not list even one state or local politician (see Figure SI 1.3).

Aside from a strong bias toward the presidency, there was a strong recency bias in who came to mind. Old party stalwarts like John F. Kennedy (1.7%), Jimmy Carter (1.1%), Theodore Roosevelt (0.7%), and Ronald Reagan (5%) rarely came to mind. Only 5.9% recalled someone named Bush, with George W. Bush and George H. W. Bush explicitly mentioned 1.5% and 0.04% of the time, respectively; Jeb Bush was never mentioned. At the tail end of the distribution were Abraham Lincoln (0.1%) and Richard Nixon (0.09%).

To understand how extreme the recalled politicians were, we constructed a set of

politicians that included all the members of Congress who had won a race for a House seat since 2020 and a Senate seat since 2015. We find that politicians that come to mind are, on average, more extreme than the Congressional mean (see Figure 5). The Congressional mean on the extremity scale (rescaled CF-Score) is around 0.61 for the Democratic Party (XX in the House and XX in the Senate) and 0.4 for the Republican Party (XX in the House and XX in the Senate). Compare this to a mean of .82 for the recalled politicians, with the mean for the Democratic politicians being 0.83 and the mean for the Republican politicians being 0.84. To put these numbers in perspective, the standard deviation for the Republican and Democratic members of Congress is 0.14 and 0.16, respectively.



Figure 5: Ideological distribution of recalled politicians (Study 2).

Note: Linearly scaled most recent dynamic CF-Scores with 0 representing the most moderate politician for both parties and 1 representing the most extreme politician of either party. Blue represents Democratic politicians, and red Republican politicians. The dashed lines mark the average extremity scores of the recalled party politicians. The averages for the Republican (mean = 0.4, SD = 0.11) and Democratic (mean =0.61, SD = 0.14) parties in the 118th Congress are shown as solid red and blue lines, respectively. Congress average is calculated for all DIME entries for the House in the 2020 cycle and the Senate in the 2016, 2018, and 2020 cycles.

The above analysis understates the extremity bias. Like Study 1, ideologically extreme politicians are also mentioned earlier. As Table 3 shows, politicians mentioned earlier are

more ideologically extreme. The difference between the first and the third spot is 0.10 units on the rescaled CF-Score scale. For comparison, this gap is roughly as large as the one between Mitch McConnell (1.099) and John McCain (1.205), Ted Cruz (1.528) and Donald Trump (1.633), Ilhan Omar (-1.247) and Bernie Sanders (-1.358) or Nancy Pelosi (-1.072) and Barack Obama (-1.202). However, as the second column in Table 3 shows, the tendency to recall more extreme politicians earlier is concentrated among recollections of Republican politicians.

Table 3: Relationship between Recall Order and Extremity in Study 2				
1	2			
Ideological Extremity	Ideological Extremity			
0.76^{***}	0.82^{***}			
(0.01)	(0.00)			
0.11^{***}	0.02^{***}			
(0.01)	(0.00)			
	-0.13^{***}			
	(0.01)			
	0.20***			
	(0.01)			
2960	2960			
0.10	0.19			
	2960 0.10			

***p < 0.001; **p < 0.01; *p < 0.05

One of our hypotheses is that people recall more extreme politicians of the other party than their party. We investigated this by interacting with the partisanship of the survey respondents with the party affiliation of the politician. As Figure 6 shows, consistent with Study 1, there is a faint pattern of people tending to recall more extreme politicians of the party they belong to.

Lastly, we look at the gender and racial biases by comparing the percentage of men and white politicians recalled to their respective shares in Congress. About 80% of the recollections are of male politicians, while just about 72% of the 118th Congress is male. (The House has 71% men and the Senate 75%.) As Table SI 2.2 shows, there is a gender Figure 6: Ideological extremity of recalled politicians by the partisanship of the respondent and politician (Study 2).



Note: Linearly scaled most recent dynamic CF-Scores with 0 representing the most moderate politician for both parties and 1 representing the most extreme politician of either party. Interaction between the political party of the politician and partial partial parts of respondents. The Y-axis range is identical to Figure 3 and covers 1/4th of the range of the dependent variable.

bias in who recalls whom. Male survey participants are approximately 3% less likely to name a female politician than female participants. Respondents are also significantly more likely to name female politicians for the Democratic Party than the Republican Party (see Figure SI 2.5). Moving to race, 79% of the politicians who come to mind are White, compared to 75% in Congress.

Closed-ended questions provide another way to shed light on the different biases in

recall. We can use the list of 15 politicians per party presented in the survey and investigate what attributes of these politicians explain selection by the respondents. Unlike Study 1, as Table 4 suggests, people pick more extreme politicians. As column 2 shows, when we control for some aspects of the politicians, like gender, recency, race, and most recent office of the politicians, the size of the coefficient for extremity goes down. Consistent with Study 1, more recent politicians are more likely to be selected. In line with results from the openended responses and Study 1, presidents are much more likely to be selected than governors, members of Congress, vice presidents, or Secretary of State. Across all our analyses, we find a robust association between recency, executive office, and recall. However, we cannot make causal claims like, people chose a particular politician because the politician was more extreme. For one, lurking variables (Joiner 1981) can explain the correlations.

Media Representation

We suspect the biases in people's recollections are founded in media representations. We do not have a direct test that gets at the causal mechanism, but media data can help clarify whether there are grounds for investigating this more closely. So, we end our empirical section by analyzing a decade's worth (2010–2021) of news video data from CNN, Fox News, and MSNBC Kim, Lelkes and McCrain (2022). The study uses data from Stanford Cable TV News Analyzer.⁴

The Stanford Cable TV News Analyzer only includes data on politicians "with at least 10 hours of screen time by August 2020 (cumulative)."⁵ To help contextualize concerns

⁴For more details about the data collection methods, see https://tvnews.stanfor d.edu/.

⁵The total screen time of politicians in Kim, Lelkes and McCrain (2022) is less than 10 hours in some cases. We believe the likely reason is that the study doesn't have the full

	1	2
	Selected	Selected
(Intercept)	0.38***	0.74^{***}
	(0.01)	(0.01)
Extremity	0.17^{***}	0.10***
	(0.01)	(0.01)
Race: White		-0.02
		(0.01)
Contemporaneous		0.06^{***}
		(0.01)
Most recent office		
Ref: President		
Governor		-0.50^{***}
		(0.01)
House		-0.55^{***}
		(0.01)
Sec. of State		-0.02
		(0.02)
Senate		-0.41^{***}
		(0.01)
Vice President		-0.15^{***}
		(0.01)
Num. obs.	18325	18325
Num. groups: Respondents	733	733

Table 4: Predicting what kinds of politicians are selected in closed-ended questions (Study 2).

***p < 0.001; **p < 0.01; *p < 0.05

about selection bias, 10 hours of screen time over ten years (or an hour a year) across all the main cable news channels is a low bar, but only 304 politicians clear the bar. Of the politicians who clear the bar, consistent with other research (Sood and Weitzel 2020), there is again a very sharp skew (see Figure 7). For instance, nearly 15% of the references are to Donald Trump alone. And top 20 politicians make up well over 40% of the references. If you extrapolate this kind of power law beyond the politicians we have data for, the coverage of missing politicians is likely to amount to no more than a small percentage of the total coverage.

The politicians who receive the most media coverage are a familiar bunch. The right panel in Figure 7 as well as Figure SI 7.1 show a similar pattern as to our open-ended survey responses. National politicians, especially from the executive branch, but primarily presidents, vice presidents, and presidential candidates, constitute a vast majority of the politicians covered in the media.⁶ Donald Trump, Barack Obama, Bill Clinton, Hillary Clinton, and Joe Biden dominated the media coverage over the last decade. It is, therefore, not surprising that they also dominate the minds of our survey participants.

We combine the media data from Kim, Lelkes and McCrain (2022) with the aggregated survey responses from our Study 1^7 to examine the relationship between recall and media mentions of politicians in the months prior to the survey. In Figure 8, we plot the logged total number of times a politician was recalled against the logged screen time (in seconds) in 2013.

We further investigate the relationship between screen time and survey recall in Tadataset.

⁶See also https://gojiberries.io/2014/07/08/liberal-bias-in-pol itician-references-in-news/ that comes to the same conclusion using a different dataset.

⁷The media data ends in 2021 and hence is not available for Study 2.



Figure 7: Frequency and share of coverage of politicians across national cable news media.

Note: Coverage of politicians across Fox, CNN, and MSNBC between 2010–2021.



Figure 8: Relationship between coverage time and recall in 2013.

Note: Relationship between the logged total number of times a politician was recalled in Study 1 and logged total screen time (in seconds) for a politician on Fox, CNN, and MSNBC in 2013.

ble 5. The outcome variable in all three models is the logged total number of mentions of a politician in the open-ended questions in Study 1. In total, 107 different politicians were mentioned. Of those, 89 were male, 18 were female, 98 were white, and nine were non-white. 45 were Democrats, 60 were Republicans, 76 were contemporaneous politicians, and 31 were not. In Model 1 we regress the logged total number of mentions of a politician in Study 1 on the logged total screen time they had in 2013. The relationship seen in Figure 8 is confirmed, there is a positive and statistically significant relationship between screen time and recall. In Model 2, we control for gender, race, recent office, party, and whether a politician is contemporaneous or not. The relationship between recall and screen time remains robust to the inclusion of these controls. We can also see that there is no statistically significant difference in the recall of male and female, white and non-white politicians, and Democratic and Republican politicians. Presidents dominate recall-all other officeholders are recalled less. In Model 3, we add our extremity measure based on DIME. Ideology data is not available for all politicians mentioned in the news, hence we lose 25 politicians. The key result, more screen time associated with higher recall, however, is robust across all models. The results are also mostly robust to removing the outlier, President Obama (see SI 5.4), except that female politicians are more likely to be recalled.

Note that the media data we use has a minimum screen time requirement. Only politicians who were covered for more than 10 hours in total are included in the data. Not all politicians mentioned in the open-ended responses of our survey meet this threshold. In Table 5, we had set the screen time for these missing politicians at ten hours. In Table SI 6.5 we estimate the model without these politicians, the results are robust. The coefficient for screen time is larger, and there is no statistically significant difference between presidents and vice presidents anymore.

Discussion

A few recent national politicians, primarily presidents, ex-presidents, and prominent presidential candidates, come immediately to mind when people think about the parties. Very few people voluntarily name a state or local politician. Even when we explicitly ask people to name a state or local politician, more than 40% of the people cannot name one. Lastly, people recall politicians who are somewhat more extreme than the median party member in Congress. Parallelly, the same few national politicians dominate national news media. These facts suggest that the patterns in people's associations between parties and politicians are rooted in media coverage and availability biases.

The implications for politics are profound. The American political system has nominally independent party organizations in each state (Mayhew 2014). This structure is useful as parties in each state can pick optimal positions for the state rather than being defined by one national position. For instance, as Shor and McCarty (2011) show, the California Democratic Party is to the left of the Texas Democratic Party. However, if a few national politicians dominate people's mental images of the parties, people may mistake the national leaders' position for that of the state party. This may, in turn, help explain (or be a consequence of) the observed trend of nationalization in gubernatorial elections (Sievert and McKee 2019; Amlani and Algara 2021) and state legislative elections (Rogers 2023).

A more dramatic potential consequence of a few politicians dominating people's images may lie in parties being vulnerable to being hijacked by a politician. One way to think about the positions held by these national political leaders is that they reflect the positions of the supporters or party elites. In a democracy, it is reasonable to ascribe the positions of the party leaders to their supporters based on the simplistic idea that why else would people be supporting the leaders? However, as research has shown, this is a misleading heuristic. As Lenz (2013), etc., show, people's policy positions adapt to take positions of the leaders they trust rather than constrain the positions that leaders take. Further, personality-driven political coverage in the media has loosened many of the constraints created by party elites. In a first-past-the-post system, parties can also elect leaders that reflect the minority. For instance, Donald Trump was the *minority* winner of the 2016 Republican presidential primary. But once elected, Donald Trump likely affected not just the Republican Party positions, but also how the public understood the Republican Party.

Lastly, there are limitations to our data. For one, people's images of the parties are likely shaped by more than elected politicians, politically appointed government officials, and party leaders. For instance, Sean Hannity, Rush Limbaugh, David Limbaugh, etc., are neither official spokespersons for the party or elected officials nor work in the government. But people's understanding of the issues the Republican Party thinks are important and the positions it advocates may stem from what they say in the media. To get at that, rather than asking which politicians come to mind, we may want to ask which *people* come to mind when you think about a party. Beyond this, we need more research to more carefully look at the antecedents of these mental images and their consequences.

	1	2	3
	Mentions, log	Mentions, log	Mentions, log
Intercept	0.19	2.06***	3.02**
	(0.29)	(0.54)	(0.80)
Screen time 2013 (log)	0.18^{***}	0.21^{***}	0.21^{***}
	(0.04)	(0.04)	(0.04)
Extremity, scaled			-0.23
			(0.78)
Most recent office			
Ref: President			
Governor		-2.43^{***}	-3.28^{***}
		(0.52)	(0.73)
Representative		-2.31^{***}	-3.20^{***}
		(0.52)	(0.72)
Secretary		-1.10^{*}	-1.59^{**}
		(0.91)	(1.17)
Senator		-2.62^{***}	-3.63^{***}
		(0.48)	(0.66)
Vice-President		-0.64	-1.74
		(0.73)	(0.87)
Other		-2.61^{***}	-4.09^{**}
		(0.55)	(1.17)
Gender: Female		0.10	0.21
		(0.37)	(0.40)
Race: Non-White		-0.38	-0.23
		(0.47)	(0.56)
Party			
<i>Ref: Democratic</i>			
Other		-0.59	
		(0.98)	
Republican		0.26	0.38
		(0.29)	(0.34)
Non-contemporaneous		-0.62	-0.38
		(0.36)	(0.49)
\mathbb{R}^2	0.17	0.43	0.50
Num. obs.	105	105	80

Table 5: Predicting recall based on screen time in 2013

***p < 0.001; **p < 0.01; *p < 0.05

Note: Linear regression with logged total number of mentions of politician in open-ended survey responses in Study 1 as the outcome. 48 politicians did not meet the minimum 10h screen time to be included. For these individuals we set 10h as the minimum value. In Table SI 6.5 we estimate the models without these politicians and results remain robust. For 25 politicians we do not have an idealogy measure from DIME. Therefore, we estimate the screen time and extremity model separately in Column 3.

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Supporting Information

SI 1 Number of Recalled Politicians



Figure SI 1.1: Number of politicians recalled in open-ended questions in Study 1



Figure SI 1.2: Number of politicians recalled in open-ended questions in Study 2

	Mean	Median	Std. Dev.	Ν
Open, all	2.10	2	1.01	998
Closed, all	7.38	7	3.72	1300
Open, state and local	0.97	1	1.15	857

 Table SI 1.1: Descriptive statistics of recall in Study 2



Figure SI 1.3: Number of state and local politicians recalled in open-ended questions in Study 2



Number of recalled politicians in the close-ended question

Figure SI 1.4: Number of politicians recalled in close-ended questions in Study 2

SI 2 Who is Recalled?



Figure SI 2.1: Frequency of politicians that come to mind when people think about the parties in the open-ended questions in Study 1



Figure SI 2.2: Frequency of politicians in the open-ended questions in Study 2



Figure SI 2.3: Office of politicians named in open-ended responses in Study 1 *Note:* Office classification is based on the office listed in Bonica (2023). The most recent office is used. For Rick Santorum, we used his presidential campaign. Hillary Clinton (Federal Admin.) and John McCain (Senator) were classified based on their last office and not the presidential campaign.



Figure SI 2.4: Office of politicians named in open-ended responses in Study 2 Office classification is based on the office listed in Bonica (2023). Offices were added for Jim Danner, Pete Aguilar, Andrew Johnson, Ross Perot, and Marianne Williamson.



SI 2.1 Gender of the Recalled Politician

Figure SI 2.5: Gender of politicians named in open-ended responses in Study 2

Female Politician Mentioned
0.21***
(0.01)
-0.03^{**}
(0.01)
0.02
(0.05)
3296
0.00

***p < 0.001; **p < 0.01; *p < 0.05.

Table SI 2.2: Gender effects on selection of politician

Estimated is a linear probability model with a binary outcome. 1 indicates that a female politician was named, 0 a male. The model includes clustered standard errors for each respondent.

SI 3 Perceived Extremity (Study 1)

After eliciting the list of politicians who come to mind, we asked respondents to rate, on a seven-point semantic scale, going from Very Conservative to Very Liberal, how liberal or conservative each recalled political leader is. We rescaled the responses to range from 0 (most moderate) to 1 (most extreme). Unlike the table in the main text, we rescaled recall order linearly so that 0 reflects the 1st position and 1 the 3rd. Once again, we see that more extreme leaders are recalled earlier and that people are likelier to recall more moderate members of the opposing party than their own party.

	Perceived Extremity		
	(1)	(2)	
Constant	0.790***	0.858***	
	(0.007)	(0.010)	
Out Party	· · · ·	-0.104^{***}	
		(0.012)	
Recall Order		-0.058^{***}	
		(0.013)	
Out Party x Recall Order		0.048***	
		(0.019)	
Observations	1,715	1,715	
Akaike Inf. Crit.	-977.095	-1,077.039	
Bayesian Inf. Crit.	-960.754	-1,044.356	
Note:	*p<0.1; **p<0).05; ***p<0.01	

Table SI 3.3: Perceived Extremity of Recalled Politicians

SI 4 Top 50 Politicians In The Media



Figure SI 4.1: Top 50 most frequently covered politicians in the news media.

	Model 1	Model 2	Model 3
Intercept	0.29	1.98***	2.91**
	(0.28)	(0.57)	(0.86)
Screen time 2013 (log)	0.15^{***}	0.20***	0.21^{***}
	(0.04)	(0.04)	(0.05)
Extremity, scaled			0.28
			(0.81)
Most recent office			
Ref: President			
Governor		-2.20^{***}	-3.15^{***}
		(0.60)	(0.82)
Representative		-2.13^{***}	-3.15^{***}
		(0.56)	(0.81)
Secretary		-1.79^{*}	-2.91^{*}
		(0.86)	(1.11)
Senator		-2.48^{***}	-3.66^{***}
		(0.52)	(0.76)
Vice-President		-0.51	-1.69
		(0.76)	(0.93)
Other		-2.46^{***}	-4.00^{**}
		(0.58)	(1.24)
Party		()	× ,
Ref: Democratic			
Other		-0.60	
		(1.01)	
Republican		0.19	0.15
1		(0.29)	(0.37)
Gender: Female		0.23	0.22
		(0.37)	(0.42)
Race: Non-White		-0.38	-0.27
		(0.50)	(0.61)
Non-contemporaneous		-0.52	-0.38
Ŧ		(0.38)	(0.52)
\mathbb{R}^2	0.13	0.36	0.42
Adj. \mathbb{R}^2	0.12	0.28	0.32
Num. obs.	106	106	81

SI 5 Replicating Table 5 without Obama

***p < 0.001; **p < 0.01; *p < 0.05

 Table SI 5.4:
 Predicting recall based on screen time in 2013 – without Obama

	V	Vith Obam	a	Wi	thout Oba	ma
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Intercept	-6.64^{***}	-5.85^{**}	-6.61^{**}	-6.39^{***}	-6.04^{**}	-6.87^{***}
	(1.33)	(1.87)	(1.99)	(1.45)	(1.83)	(1.94)
Screen time $2013 (\log)$	0.88***	1.01***	1.03***	0.85^{***}	1.11***	1.14***
	(0.14)	(0.16)	(0.17)	(0.15)	(0.16)	(0.17)
Extremity, Scaled			0.25			0.61
			(0.80)			(0.80)
Most recent office						
Ref: President						
Governor		-1.48	-0.98		-2.03^{*}	-1.63
		(0.88)	(0.94)		(0.91)	(0.97)
Representative		-1.90^{*}	-1.23		-2.57^{**}	-2.02^{*}
		(0.79)	(0.90)		(0.86)	(0.97)
Secretary		-2.94^{**}	-2.45^{*}		-3.79^{***}	-3.39^{**}
		(0.98)	(1.05)		(1.07)	(1.14)
Senator		-2.64^{**}	-2.16^{*}		-3.36^{***}	-2.99^{**}
		(0.77)	(0.85)		(0.85)	(0.93)
Vice-President		-0.84	-0.65		-1.53	-1.37
		(1.03)	(1.06)		(1.07)	(1.10)
Other		-3.69^{***}	-2.70		-4.33^{***}	-3.36^{*}
		(0.93)	(1.55)		(0.97)	(1.55)
Gender: Female		0.89^{*}	0.72		0.93^{*}	0.72
		(0.42)	(0.47)		(0.41)	(0.45)
Race: Non-White		-0.54	-0.33		-0.27	-0.03
		(0.51)	(0.57)		(0.52)	(0.57)
Party: Republican		-0.19	-0.39		-0.32	-0.58
		(0.36)	(0.40)		(0.35)	(0.40)
Non-contemporaneous		0.26	0.76		0.09	0.52
		(0.52)	(0.62)		(0.51)	(0.62)
\mathbb{R}^2	0.41	0.66	0.67	0.35	0.65	0.66
$\operatorname{Adj.} \mathbb{R}^2$	0.40	0.58	0.57	0.34	0.56	0.56
Num. obs.	60	60	55	59	59	54

SI 6 Replicating Table 5 without 10 hours imputation

***p < 0.001; **p < 0.01; *p < 0.05

Table SI 6.5: Predicting recall based on screen time in 2013 – only politicians with more than 10
hours

SI 7 Screen time and ideology



Figure SI 7.1: Screen time and ideology scores.



Figure SI 7.2: Predicted values for screen time and ideology by political party



Figure SI 7.3: Most frequently covered politicians in the news media.

SI 8 Relationship between ideology of respondents and CF score of recalled politicians in Study 2

In order to test whether individual ideology or extremity explains the ideology or extremity of recalled politicians, we conduct two analyses with our Study 2 data. First, we examine the relationship graphically. The top panel in Figure SI 8.1 plots the ideology of respondents in Wave 2 against the original dynamic DIME CF Score for the politicians that they recalled (up to three politicians per respondent). In the top half of the plot are the ideological positions of the recalled Republican politicians, in the bottom half the recalled Democratic politicians. There is only a minimal difference between the average recalled CF score position of politicians recalled by very liberal and very conservative individuals.

The lower panel compares two extremity measures. For the politicians, we use the proportional allocation extremity measure used in the manuscript. For the survey respondents, we construct a new measure based on their response to the seven point ideology measure. Moderates are at 0 and very ideological (either "Very liberal" or "Very conservative") individuals are at 1. In between, we allocate somewhat ideological respondents ("Somewhat liberal" or " Somewhat conservative") to 0.33 and distinct ideological respondents ("Liberal" or "Conservative") to 0.67. The relationship between individual extremity and the extremity of recalled politicians seems to be constant, there are no differences among the respondents across the four extremity groups.

We further investigate this relationship in our Study 2 data with linear regression models in Table SI 8.6. The dependent variable in model 1 is based on the dynamic CF scores of the recalled politicians. The independent variable is the respondent's ideology on a seven point ideology scale from very liberal to very conservative. The reference category is very liberal, and the only statistically significant difference exists between very liberal and very conservative individuals. Across all other ideology groups, there are no differences. In



Relationship between individual ideology and ideology of recalled politicians

Figure SI 8.1: Relationship between ideology of respondents and CF score of politicians.

model 2 the dependent variable is the extremity measure used in the manuscript and the independent variable is the extremity measure for individuals described earlier. Here we can see that an individual's extremity does not explain the extremity of politicians that they have recalled.

Table 51 8.0: Relationshi	p between ideology and	extremity
	1	2
	Dynamic CF Score	Extremity
(Intercept)	0.02	0.84^{***}
	(0.03)	(0.00)
Respondent's Ideology		. ,
Ref: Very Liberal		
Liberal	-0.03	
	(0.04)	
Somewhat liberal	0.07	
	(0.05)	
Moderate	0.04	
	(0.04)	
Conservative	0.07	
	(0.04)	
Somewhat conservative	0.05	
	(0.04)	
Very conservative	0.13**	
·	(0.05)	
Respondent's Extremity	· · · ·	
Ref: Moderate		
Somewhat Ideological		0.00
-		(0.00)
Distinct Ideological		-0.01
-		(0.00)
Very Ideological		0.00
· .		(0.00)
Num. obs.	2952	2960
\mathbb{R}^2 (full model)	0.00	0.00

Table SI 8.6:	Relationship between ideology a	and extremity
	1	2
	Dynamic CF Scor	re Extremity

***p < 0.001; **p < 0.01; *p < 0.05

 $\it Note:$ Linear regression models with standard errors clustered by respondents.