Appealing to the Base or to the Moveable Middle? Incumbents' Partisan Messaging Before the 2016 U.S. Congressional Elections

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Introduction

Political polarization has been widely discussed in political communication research and the popular press for over half a century (see, e.g., Sunstein, 2001). Polarized politicians are sorted into clear camps, and they have little overlap with the other groups, making it hard for them to establish common ground from which to govern[1]. The general sense is that partisanship is increasing (see, e.g., Andris et al., 2015; Baldassarri & Gelman, 2008; Brady & Han, 2006; Poole & Rosenthal, 1984), meaning that politicians are more effectively sorting themselves into non-overlapping groups. The gap between parties may be large or small, nearly always creating problems for multi-party governance (Jesuit & Williams, 2017). As parties become more extreme, however, the inter-party gap both widens and worsens.

In this paper, we examine the dynamics of the inter-party gap, focusing particularly on the nature of partisan communications of incumbent members of Congress during the 2016 U.S. election cycle. We formally test hypotheses rooted in campaign-related theories—the median voter theorem in particular—that predict various strategies for partisan or non-partisan messaging. We use #polar scores (Hemphill, Culotta, & Heston, 2016) to measure the partisanship of tweets posted by incumbents in Congress and then use mixed effect models to examine the relationships between party, time, and race competitiveness on the degree of partisanship expressed by candidates. #Polar scores are a polarization measure that relies on the hashtags used by members of Congress to estimate individuals' positions on a liberal-conservative spectrum, and they show that politicians effectively sort themselves into parties through their hashtag use. By analyzing how #polar scores change over time and vary between parties, we are able to analyze how candidates adjust their partisan signals during the lead up to an election.

We found that Democrats and Republicans exhibit different partisanship signalling patterns in the lead up to the 2016 elections: Democrats decreased their partisanship as the election neared, and Republicans stayed consistent in their messaging. Democrats essentially followed the "median voter" (Downs, 1957) playbook while Republicans' used Twitter to activate and reinforce (Lazarsfeld, Berelson, & Gaudet, 1948) their base.

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[1] It's important to remember that polarization is a measure of how political actors sort themselves or how ideologically consistent they are, not how extreme they are (Pew Research Center, 2014).

Related Work

Political Polarization

From 1972 to 2008, Democrats and Republicans among the general public both moved further to, respectively, the left and right of "ideologically center," effectively widening the gap between each party's average member. Over the same period, moderates positioned at the center of the ideological spectrum dropped from 35 to 27 percent of the American voting public (Abramowitz & Fiorina, 2013). Simultaneously, party loyalty, measured by the percentage of Democrats and Republicans voting along straight-ticket lines, has consistently increased from the 1970s (Baldassarri & Gelman, 2008). In 2016, for example, exit polls show that 89 percent of Democrats and 90 percent of Republicans voted for, respectively, Clinton and Trump (Huang, Jacoby, Strickland, & Lai, 2016). Some argue that the American electorate is no more polarized today than historically (Fiorina & Abrams, 2008; Fiorina, Abrams, & Pope, 2011; Jensen et al., 2012). Rather, it is better "sorted," meaning that party affiliation and ideology are now more strongly affiliated (Fiorina et al., 2011; Levendusky, 2010).

Polarization is, in part, a function of shifts in political marketing as politicians attempt to reframe the policy agenda and their own political positions in ways that eventually filter into the traditional media (Shapiro & Hemphill, 2017). This process has been occurring over an extended period of time with some analyses of congressional language over 130 years revealing higher levels of ideological polarization in the past (Jensen et al., 2012)[2]. However, after controlling for finite-sample and other previously ignored biases, Gentzkow et al. (2016) show that partisan language has in fact significantly increased since the early 1990s. In that study, they analyze Congressional speeches and argue that the specific type of language used within each party has grown increasingly distinct from the opposite party when communicating about virtually the same topics. The original #polar score study (Hemphill et al., 2016) reveals that these distinctions are clear on Twitter as well in that parties use distinctly different hashtags even when discussing the same issue (e.g., #getcovered versus #trainwreck when talking about the Affordable Care Act). One aspect of the power of a particular message is its resonance with a particular community (Schudson, 1989). Additionally, the impacts of partisan messages (those that clearly belong to one party) on audiences is still unclear. Research does show that politicians are attempting to reach and engage with particular audiences (Hemsley, Stromer-Galley, Semaan, & Tanupabrungsun, 2018; Kreiss, 2016), and it follows that their partisanship is part of overall messaging strategy.

In sum, polarization is not new, but the effects of nuanced language differences are a more recent phenomenon. In addition, research does not yet explain the relationship between the political campaign cycle and the short-term patterns of polarized messages used by American politicians. Assuming that such patterns of polarized message use play a large role in politicians' campaign strategies, it is necessary to expand upon and integrate novel forms of communication into our understanding of polarization.

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[2] This is consistent with how key policy topics have been identified in congressional press statements via Bayesian inference, shown elsewhere in Grimmer (2010) and Quinn et al. (2010).

Campaign Strategies

Campaign Strategies before Social Media

Literature on campaigns and party strategy offer explanations about why politicians select certain partisan messages over others. Some theories about campaign strategy aim to understand how voters make decisions and how party loyalty and unity help lawmakers appeal to voters. The relationship between party loyalty, party unity, and voters' choice offer viable explanations for why politicians would invoke varying degrees of partisanship while campaigning for office. Here we provide a brief overview of the literature on these relationships.

We turn first to literature about how people decide to vote in elections. Initially, Lazarsfeld, Berelson, and Gaudet's (1948) panel study to understand how people decided to vote in presidential elections revealed that three variables together—religion, socio-economic class, and place of residence—reliably predicted votes. This "index of political predisposition (IPP) accounts for much of the variation in vote predictions and is clearly beyond campaigners' control. Yet, other aspects of the public can be also acknowledged such as the role of party loyalty (Downs, 1957; Schoenberger, 1969). Schoenberger's (1969) study of the 1964 presidential election—in which Barry Goldwater (Republican) ran unsuccessfully against Lyndon Johnson (Democrat), the incumbent—focuses on one the most lopsided election in U.S. history given Goldwater's vote share of only 38.5%. For Schoenberger, this exceptional election was the basis for understanding how presidential races influence down-ticket campaign strategies. Goldwater was wildly unpopular as a candidate, and his lack of popularity presented down-ticket Republicans with a strategic choice: dissociate themselves from the top of the ticket, or fall in line. He found that candidates who withheld support for Goldwater, whether initially or not until late in the race, benefited from their choices, demonstrating that party unity and loyalty is not always an ideal choice for candidates. Downs (1957) assumes party loyalty, but Schoenberger (1969) suggests that partisan messages—i.e. indicators of party loyalty—provide varying benefits to candidates depending on their party's presidential nominee.

The benefits to candidates of partisan messages are also a function of voter's perceptions of their party. Given that two categories of voters must be attended to by candidates—base voters and swing voters (Cox & McCubbins, 1986)—campaigns may have strategic reasons to avoid highlighting party loyalty, or even party affiliation. Based on televised advertisements in Congressional elections between 1998 and 2008, Neiheisel and Niebler (2013) found that candidates running where voters are predisposed to their party emphasize their own party affiliations while candidates in open races (i.e. where there is no incumbent) are less likely to advertise their party affiliations. Meanwhile, party unity—the percentage of the time individual politicians voted with their party's majority—has been on the rise. Roberts and Smith (2003) showed that during the 1980's and 1990's, party unity increased in both parties. As well, Rohde (1991) argued that increased partisanship resulted from political reforms in the 1960's and 1970's and changes to the electorate, claiming that the reforms newly-elected Democrats pushed through the House had weakened committee chairs and strengthened the majority party. This shift meant that aligning one's self with the party was useful for future political gain, namely accessing leadership positions and the institutional authority and resources they afford (Matthew E. Glassman, 2016). Meanwhile, the electorate also began to change. For instance, the Voting Rights Act added many Black voters to the electorate, and they tended to favor Democrats, ensuring that Democrats who wanted to be re-elected aligned themselves well with this reformulated party. Candidates that opted to eschew voting along party lines would have faced lost electoral support and any opportunities for future leadership roles in the House.

It is tempting to assume that a campaign's primary function is to convince voters to change their minds—to move people from "undecided" to "decided" or from "Democrat" to "Republican". However, Lazarsfeld, Berelson, and Gaudet (1948) showed that campaign propaganda were far more effective at reinforcing and activating voters' choices than converting them. Activation, where campaign messaging triggers voters to make decisions based on their existing predispositions, prompting undecided people to make decisions is more common that conversion. In sum, campaign effects, party loyalty, and polarization predict that candidates will align themselves with their party when the top of the ticket is popular and when the party's message appeals to the predispositions of voters. Reasonable strategies that emphasize reinforcement and activation could produce partisan or polarized messaging. Yet, when focusing on voters who are not predisposed to support a particular candidate, a different messaging strategy is required. It is at this point that Downs's median voter theorem must be recognized given its predictions about how politicians will communicate in order to appeal to voters with potential to convert.

The median voter theorem suggests that a majority voting mechanism will result in the outcome preferred by the median voter. The theorem relies on three main assumptions:

1. Voter's preferences are single-peaked;
2. Preferences are measured in a single-dimension; and
3. Only two candidates are running.

These assumptions mean that voters have just one point on a spectrum (e.g., conservative vs liberal) at which they are most satisfied, and, as the outcome gets further from that point on the spectrum, they become consistently less satisfied. Most voters vote in line with their predispositions (Lazarsfeld et al., 1948),[3] but in some cases their predispositions may not consistently match the messages that they are receiving from candidates that they are expected to support. For example, attempts to automatically classify candidates' text using automated text-analysis software indicate that, for presidential campaigns, Romney and Obama both invoked language styles of both parties in the days and weeks leading up to the 2012 election, representing a sharp contrast in Obama's communication style in 2008 (Hart & Lind, 2013). The similarities between the candidates' language made the distinction between them less obvious.

According to Downs (1957), and in line with updates to this line of inquiry (e.g., Cormack, 2016), the median voter theorem argues that

1. Politicians will communicate in ways that will attract support from large swaths of the public; i.e., politicians will primarily emphasize those issues that the majority of the public, represented by the median voter, agrees is important; and
2. Politicians will communicate in ways which differentiate themselves from members of the opposite party in order to provide a clear distinction when it comes time for individuals to vote; i.e. politicians will take positions that are different from their opponents'.

Following Downs, we predict that, as the election nears, politicians will adjust their rhetorical strategies to appeal to the median voter; i.e. any movement toward the center would still leave candidates more appealing to more extreme voters of their party than their opponent. 65% of "changers" (those who changed their intentions during the year) perceived no significant distinction between candidates, as did

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[3] 70% of the time, according to Lazarsfeld et al. and colleagues (1948).

46% of "constant voters" (who did not change their votes) (Lazarsfeld et al., 1948), meaning there is room for candidates to establish a distinction between themselves and alternatives.

Campaign Strategies on Social Media

Social media is an increasingly important source of political news for Americans (Mitchell, Gottfried, Barthel, & Shearer, 2016). There is also a relationship between politicians' Twitter feeds and mainstream media's political news coverage (Conway, Kenski, & Wang, 2015; Shapiro & Hemphill, 2017), suggesting that Twitter use can influence electoral politics by impacting which issues and actors receive media attention. After all, the audience for politicians' tweets are not just their constituents but also journalists and the public. Interviews with campaign staffers highlight the importance of political journalists as targets of campaign messages (Kreiss, 2016)[4]. Politicians and candidates recognize the strategic importance of social media for appealing to individual constituencies and raising their individual profiles and even turn to paid consultants to help craft their online messaging strategies (Howard, 2005). Further, between parties, there is little variation in social media adoption (Chi & Yang, 2011; Shapiro & Hemphill, 2017; Vergeer & Hermans, 2013; Williams & Gulati, 2010). We also know that Congress is getting more sophisticated in its Twitter use. Early studies discovered that most tweets served information purposes (Golbeck, Grimes, & Rogers, 2010; Hemphill, Otterbacher, & Shapiro, 2013), and more recent studies show that policy positions and constituent communication are increasingly common (M. E. Glassman, Straus, & Shogan, 2013; Jacob R. Straus, Williams, Shogan, & Glassman, 2014; Zhang, Stromer-Galley, et al., 2017).

With regard to social media's roles in election campaigns specifically,[5] a comparative study of Twitter use during Dutch and British elections found close alignment between parties' communication strategies and their members' Twitter use (Graham et al., (2014). British politicians, especially, used Twitter as a broadcast medium in which they made policy statements and attacked their opponents; however, they interacted little with their constituents. Other studies comparing the EU, Korea, and U.S. (Otterbacher, Shapiro, & Hemphill, 2013) and the U.S. alone (M. E. Glassman, Straus, & Shogan, 2009; Hemsley et al., 2018; Mergel, 2012) found similarly low levels of constituent interaction. This suggests that tweets are analogous to other one-way campaign communication approaches such as websites and television and print ads. Existing research also suggests that campaigns do change their messaging strategies overtime, specifically increasing their calls to action and reducing their persuasive messages as elections near (Zhang, Tanupabrungsun, et al., 2017); though in general campaigns did not use Twitter for get out the vote campaigns or fundraising (Frechette & Ancu, 2017). They also use Twitter's affordances, such as mentions, to specify audiences for their content (Hemsley et al., 2018).

Incumbents engage online in issues discussions readily (Druckman, Hennessy, Kifer, & Parkin, 2009) and enjoy wide advantages in large part because of the press coverage they have already received while serving in office (Prior, 2006). However, whether they are in the minority or majority party still matters. When Congress is popular, majority party incumbents enjoy stronger advantages, and the race is essentially theirs to lose (Jones, 2010). This can lead to decreases in messaging over all as candidates avoid saying things that may hurt their chances. During the time period we analyzed, Gallup estimated

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[4] Politicians are also engaged in many forms of political communication at once on Twitter: press outreach, agenda setting, constituent engagement, issue debate, for instance. We recognize that active campaign messaging is not the only, or even necessarily the primary, purpose of tweets. This does not diminish their utility for examining partisanship before elections, however.
[5] See, for example, (e.g., Borondo, Morales, Losada, & Benito, 2012; Enli & Skogerbø, 2013; Graham, Jackson, & Broersma, 2014; Groshek & Al-Rawi, 2013; Johansson, 2016; LaMarre & Suzuki-Lambrecht, 2013; Larsson & Moe, 2012).

Congressional approval between 18-20% (Gallup, n.d.) suggesting that minority party incumbents (Democrats) enjoyed advantages because they could position themselves against Congress. As well, increased polarization coupled with low approval increases risk of vote loss for majority party candidates, meaning that polarization is more dangerous when approval is low (as it was in 2016) (Jones, 2010). In a study of campaign websites, candidates in competitive races were less likely to link to their party's sites; Druckman et al. argue the lower likelihood of party links results because candidates in tight races want to control visitors' attention and their messaging rather than letting the party distract them (2011). On Twitter, politicians can similarly control connections to their party by including or excluding party links from their descriptions and tweets.

Congress and Its Audiences

The impact of Congress's social media use depends in part on the audience of their messages, and one's understanding of his/her audience certainly influences how social media tools might be used. Researchers found that Congress assumes its social media audience is more politically engaged (Williams & Gulati, 2010) and that they consider campaign websites, Facebook pages, and Twitter feeds effective tools for communicating with voters (Druckman, Kifer, & Parkin, 2017a). Little work has been done to examine who follows politicians, but the extant research suggests that followers are opinion leaders (Karlsen, 2015) or at least people who are more politically engaged than most voters (Norris & Curtice, 2008). Research also shows that Congress's Twitter use impacts mainstream media coverage of political issues (Shapiro & Hemphill, 2017). Together, the research on the likely audiences and impacts of congressional Twitter use suggest multiple routes through which messages can reach voters, and some of those paths are more direct than others. We study the tweets Congress posts and assume they use these tweets to present a more or less partisan image; we then measure how partisan their tweets make them appear. We assume that however the partisan image reaches voters, they will be able to recognize it.

Hypotheses

Based on the theories and prior work discussed above, we generate four specific hypotheses for testing.

First, we tested Downs' median voter theorem (1957) which suggests that politicians should reduce their partisanship near elections in order to attract voters near the middle of the spectrum:

H_1: As the election nears, politicians will communicate in less polarized ways.

The stark partisan divides on social media (Mergel, 2012; Smith et al., 2011) suggest that it would be a good place to reach those already predisposed to a lawmaker's message—to accomplish activation and reinforcement—rather than to reach the "other side". If social media is a good predictor of activation and reinforcement and not conversion, then we would expect to see *more* rather than *less* partisanship as the election nears which leads to our second hypothesis:

H_2: As the election nears, politicians will communicate in more polarized ways.

Given the literature on presidential elections, incumbency, and polarization (e.g., Jones, 2010; Schoenberger, 1969), we expect in-party candidates to adopt less extreme polarization strategies in order

to counter the effects of low Congressional approval and an unpopular presidential candidate. This leads us to a third hypothesis:

> H_3: Majority party incumbents (Republicans) will exhibit lower polarization scores than minority party incumbents (Democrats).

Finally, we expect that candidates in close races will adopt less extreme polarization strategies as they attempt to avoid being defined solely by their party affiliation:

> H_4: Candidates in close races will exhibit lower polarization scores.

In summary, prior literature leads us to contrary predictions about how polarized politicians will be in their messaging, but that Republicans will exhibit somewhat less polarization as the in-party. We turn now to the methods we employed to test these predictions.

Method

We collected 25,483 tweets posted by 458 official Twitter accounts for members of Congress and used those tweets to calculate weekly measures of polarization (#polar scores) over the last nine weeks of the campaign. By "official" accounts we mean those that are paid for with public funds. Because they are publicly funded, official accounts are not supposed to support re-election efforts but rather serve as official communication channels for the office. This affords us an opportunity to study the partisanship in official communication and also provides a more conservative measure of partisan behavior by members of Congress. We then ran mixed effects regression models to predict those #polar scores; we used party, time, and margin of victory as fixed effects[6].

Sample and measures

To collect Twitter handles, we used a crowd-sourced list of official Twitter accounts for members of Congress from the @unitedstates project[7]. We then used purpletag (Culotta & Hemphill, 2016) to collect tweets and calculate #polar scores—estimates of politicians' positions on a liberal-conservative spectrum based on the hashtags they include in their tweets—for all the Twitter accounts available for members of Congress as of November 2016[8].

To calculate #polar scores, each hashtag is first scored, and then the scores of all hashtags a user posts are summed to create a user's #polar score. For instance, #doyourjob and #gunviolence were the most liberal tags used during the period, and betterway and #utpol were the most conservative. We calculated #polar scores for each user for each day and analyzed their changes over time by averaging scores over each of the nine weeks in our sample. Among users, Rep. Donald Norcross (D-NJ) and Rep. Paul Ryan (R-WI) were the most liberal and conservative, respectively. #Polar scores are centered around zero where negative scores are liberal and positive scores are conservative. This scaling recognizes and

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[6] Both our data (in CSV format) and our analysis (as an R file) are available in supplementary materials.
[7] https://github.com/unitedstates/congress-legislators

[8] Because we collected data in 2017, some members of Congress had deleted their tweets or accounts, meaning that our dataset is missing some tweets that were posted during the period we analyzed. Accounts or tweets were deleted for different reasons (e.g., lost re-election campaign, won but was nominated to Trump's cabinet, tweet contained a typo).

builds on other polarization measures using negative-to-positive, liberal-to-conservative scales. These include DW-NOMINATE (Carroll et al., 2011; Lewis & Poole, 2004; Poole & Rosenthal, 1985) and variants using campaign finance data (Bonica, 2013, 2014), which is crucially connected to candidates' supporters and affiliated interest groups (Barber & McCarty, 2013)[9].

We used election results data from BallotPedia ("Election results, 2016 - Ballotpedia," n.d.) and individual state's election records to construct measures of race competitiveness (Cox and Munger's (1989) closeness measure). Our outcome and predictor measures are listed in Table 1.

Table 1. Measures included in linear mixed-effects models		
Variable	**Type**	**Operationalization**
abs	outcome	Absolute value of the average partisanship of the member of Congress's Twitter feed for a particular week (i.e., absolute value of its #polar score)
handle	predictor	Twitter handle associated with the member of Congress's account
party (Republican)	predictor	1 = Republican; 0 = Democratic
week	predictor	Number of the week where 1 = week following Labor Day
margin of victory	predictor	Ratio of votes separating the winner and the runner-up to sum of votes both candidates received

We analyzed the tweets posted by 458 accounts associated with members of Congress (259 Republicans and 199 Democrats); these accounts comprise the set of verifiable accounts that were active during the period we examined. Unlike standard calculations of #polar scores, we made one modification to the way #polar scores are usually calculated: we generated hashtag scores based on the entire 9-week period, and then used those scores to calculate scores for individual users. Hashtags' scores change over time as different users adopt them and their attention to issues varies. #Polar scores default calculations use one-day and one-week time windows over which to measure a hashtag's use. We instead set the time window to the entire period from Labor Day to Election Day. By calculating just one score per hashtag based on its use during the whole time period, we effectively held the issues constant. Weeks run Monday - Sunday and began on September 5, 2016 (Labor Day).

Analysis approach

Linear mixed models were used to analyze the effect of party and week on #polar scores. We used R (R Core Team, 2016) and *lme4* (Bates, Mächler, Bolker, & Walker, 2015) to analyze the relationships between time, party, margin, and partisanship. We used a mixed model approach instead of a linear model because #polar score and handle are interdependent (i.e., how partisan a person's messages are depends in part on properties of the person, e.g., the state he represents, his prior partisanship), and thus, we expected variation in both party and handle to influence partisanship over time. All models were

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[9] Tausanovitch and Warshaw's (2017) crucial meta-analysis of these measures of candidates' ideological orientations, suggests that unobserved incentives and contexts are likely impacting these measures differently. Without disputing this finding, it should be stated explicitly that #polar scores are in fact highly correlated with DW-NOMINATE (Hemphill, Culotta, & Heston, 2016).

fit using maximum likelihood estimation. For fixed effects, we included *week*, *party*, and *margin*. For random effects, we included intercepts for Twitter *handles* and by-handle random slopes for *week*, allowing us to assume that handles may start with different #polar scores and that handles may respond to time differently. Regarding response to time, for instance, events like polls may occur during the time period in some jurisdictions but not in others, triggering a different response from handles with new polling information. We visually inspected residual plots and used *p*-values from likelihood ratio tests of the full model compared with other models to evaluate the significance of the variables in question[10]. Equation 1 shows formula for the final model:

$$Y \ = \ \beta_0 + \ \beta_1 P + \beta_2 W + \ \beta_3(P : W) + \ \beta_4 M \ + \ \Sigma_h \ (\theta_h + \eta_h * W)1[H = h] + \ e \quad (1)$$

Where θ_h are the random intercepts and η_h are the random slopes for each handle.
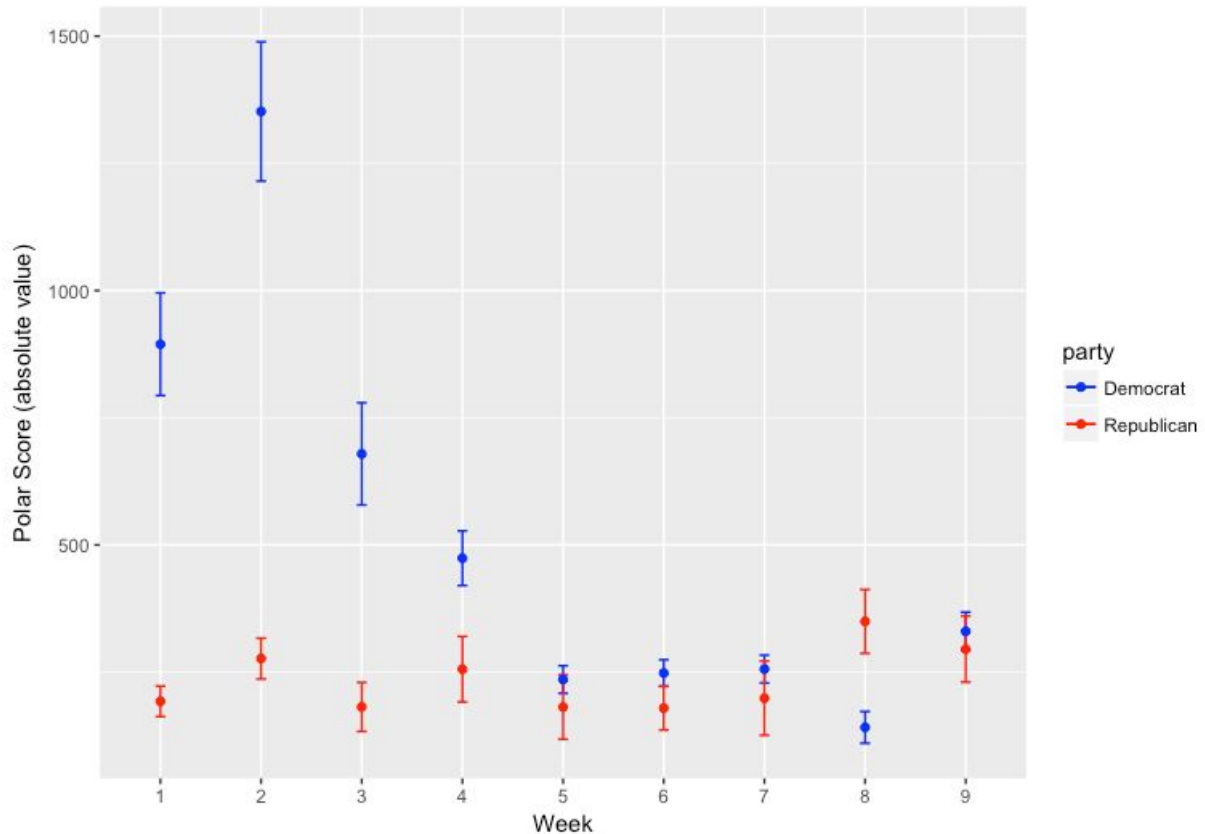
Results

Descriptive Statistics

Figure 1 shows each party's average #polar scores for each week. This figure highlights how Republicans exhibited more variation within their party, while Democrats exhibited more variation from week to week. It also makes clear that week 2 was an outlier for Democrats[11] and that most communication by members of each party was partisan (i.e. primarily falling well only above or below the 0-line).

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[10] With fewer predictors (e.g., party alone), without random effects. The results of all models are available in the supplementary materials.

[11] Democrats had average scores that were nearly two- and three-times as large during week 2 as the other weeks. During week 2, the most polarized tags among Democrats were #closetheloophole (-59), #gunvote (-37), #doyourjob (-35), and #noflynobuy (-31). The Congressional Record shows that House Democrats made multiple attempts to bring gun-related legislation to the floor on the 14th (e.g., Rep. Lawrence on H.R. 1217, and Rep. Matt Cartwright [D-PA] on H.R. 1076). The large #polar scores for that week resulted from the Democrats' coordinated efforts to message around gun control legislation on the 14th. Our data include 300 tweets with the #GunVote hashtag on the 14th alone. Not all of those tweets were posted by Democrats, but the vast majority were.

Figure 1. #Polar scores (absolute value) over time for each party

Regression Results

To evaluate our hypotheses, we ran linear mixed-effects models predicting the partisanship of messages using combinations of party, time, and Twitter handle. The results of our overall model are available in Table 2 and indicate that partisanship decreased over time (β = -117.29, p < 0.001). In order to examine the precise interaction between party and week, we present the results for models for, separately, Republicans and Democrats in Table 3 as well. Democrats' messages grew significantly less partisan as the election drew near (β = -110.01, p < 0.001) while Republicans' partisanship did not change significantly (β = 2.82, p = 0.522).

We also checked for influential individuals and outliers using Cook's distance measures. Though we did find outliers by this measure, removing them (individually or as a group) did not change the significance or direction of the results in the overall model.

	Overall Model	Republicans	Democrats
Fixed Effects			
Week	-117.29*** (9.32)	2.82 (4.40)	-110.01*** (12.99)
Party (Republican)	-878.60*** (95.63)		
Week * Party	125.10*** (12.56		
Constant	1048.39*** (71.5)	184.90*** (31.66)	1024.49*** (100.39)
Random Effects			
Handle	324614.337	148321.009	487027.641
Handle, week	779050.872	154608.219	1640134.598
Resdual	-0.827	1.00	-1.00
R^2	0.689	0.777	0.604
Table 2. Results of linear mixed model regressions predicting #Polar scores (absolute value)			

Hypothesis Testing Results

H_1: Less Partisanship as Election Nears

Our results indicate that overall, Congress exhibits less partisanship as the election nears (for "week", β = -117.29, p < 0.001), but most of that effect is driven by less partisanship among Democrats. Nonetheless, we find support for H_1 both overall and among Democrats.

H_2: More Partisanship as Election Nears

Only Republicans exhibited more partisan messaging as the election neared. Democrats' polarization decreased over the same period. Therefore, we find support for H_2 only among Republicans.

H_3: Lower Partisanship among Republicans

Compared to Democrats, Republicans were less polarized throughout the time period. Even as Democrats became less polarized and Republicans became more so, Republicans still exhibited lower scores. Therefore, we find support for H_3.

H_4: Lower Scores in Close Races

We measured race competitiveness or closeness with a margin of victory calculation. Including margin of victory in the models did not improve their performance. However, in the models that include margin, we

found no significant relationship between margin and partisanship (β = 0.65, *p* = 0.577). Therefore, we do not find support for H$_4$.

Discussion

We set out to understand whether legislators were appealing to (a) voters in their respective bases or (b) voters near the middle of the political spectrum. Based on prior work about the median voter (Downs, 1957), activation, conversion, and reinforcement (Lazarsfeld et al., 1948), and polarization (Jones, 2010; Schoenberger, 1969), we generated hypotheses about the changes in polarization that would appear over time as well as the differences that would be visible between parties. We found that Democrats and Republicans behaved differently throughout the 9-week period before the election. Specifically, Democrats began the period quite polarized in their rhetoric but moved toward the middle as the election neared. Republicans started the period near the center and finished it virtually unchanged. These findings reveal a number of novel distinctions between the parties and confirm the impacts of time and race competitiveness on a politician's messaging strategy.

First, we recognize that time was a significant predictor of messaging for both parties and throughout the period. According to the median voter theorem (Downs, 1957), candidates should attempt to appeal to voters near the middle of the political spectrum in order to capture the votes of all people more extreme than they are in one direction and those who are less extreme than their opponent in the other. Democrats' messaging behaviors indicate that this model provides a reasonable explanation of their strategy. The margin of victory in races, our measure of closeness or race competitiveness, was not a strong predictor, indicating that messaging in close races was not different from messaging in likely victories. Candidates did not appear to downplay their party affiliations or to appear less partisan in an effort to appeal to centrists.

For a median voter or centrist appeal to work, candidates must convert at least some voters from the other party. Lazarsfeld and colleagues (1948) suggest that this is quite difficult, even when voters face choosing an extreme candidate within their own party. This difficulty partially explains how Republicans' pattern of starting with low polarization but becoming increasingly polarized over time could be an effective election campaign strategy. That is, by selecting a low baseline position, Republicans made appeals consistent with the attitudes of centrist voters, potentially capturing those that could be easily converted. Meanwhile, by increasing their polarization over time, they effectively appealed to existing partisans and likely activated them—i.e., convinced them to vote at all—just in time for the election.

Alternatively, Republicans may have chosen a less extreme messaging strategy because they led an unpopular Congress and had an unpopular presidential candidate at the top of their ticket (Andrews, Katz, & Patel, 2016). Both of those features of the election indicate much greater risk to Republicans of losing voters relative to Democrats. The election was Republicans' to lose (Jones, 2010), and downplaying one's party affiliation is common in close races (Druckman et al., 2011).

Given the widespread use of social media for constituent communication, and the increasing importance of Twitter especially (e.g., Conway et al., 2015; Groshek & Al-Rawi, 2013; Williams & Gulati, 2010), one might assume that 2016 was a unique election for social media. Our findings indicate that the behaviors legislators exhibited on Twitter can be explained with existing campaign messaging theories—2016 was not so special that we could not have predicted how legislators communicated, despite the presence of candidate Trump in the Twittersphere. Druckman, Kifer, and Parkin (2017b) found similar results when studying web site strategy during the same period, arguing that web campaigning was also relatively

stable given the technological and political change occurring. The bottom line is that though Trump was an outsized presence on social media and in political news, he didn't meaningfully impact others' online communication strategies. Yet, while the use of Twitter in 2016 may not reveal new messaging strategies, it does clarify differences in strategies between the major parties: Democrats were more aggressively partisan at the outset but moved to the middle over time while Republicans were modest in their partisanship at the outset and mostly remained so.

Future work could examine the effectiveness of these strategies in a number of ways. First, and building off of Glassman (Matthew E. Glassman, 2016) and Roberts and Smith (2003), one could focus on the efforts of aspiring party leaders specifically, examining whether they are more likely to align with their party's majority until reaching a leadership position, at which time they may attempt to move the party into relatively new directions. These sorts of behavioral shifts by elected officials are are an important mechanism in moving the median voter over time. Alternatively or perhaps in parallel, one could also focus on the risks relating to in-party and out-party dynamics as described by Jones (2010), particularly how polarization facilitates or inhibits non-incumbents from getting elected. A third avenue of future work could focus on the impact of a growing concern about social media use by our elected officials: the dissemination of falsehoods and negative campaign messages by political figures. Negative campaign messages have been shown to increase incivility among Twitter users (Hopp & Vargo, 2017), while false stories are widely disseminated and readily accepted via social media (Allcott & Gentzkow, 2017).

Specific to our findings, future work may include challengers' messages, and/or campaign accounts, and predictors for additional features of the election such as early voting policies and whether the election is a primary, a midterm, or a presidential election. For instance, in states with early voting and large vote-by-mail efforts, the specific timing of election day may be a less powerful predictor of behaviors. The legislative activities that occur during the period under analysis also influence what messages are sent, and future work could examine the relationship between specific legislative incidents (e.g., roll call votes, floor debates) and campaign messaging. Our results indicated, for instance, that Democrats were particularly partisan during the second week of the period we examined when the House debated gun control legislation. We did not see a similar spike in partisanship among Republicans that week despite their opposition during the floor debate. This difference indicates a possible area of research in political communication and social media that compares the partisanship of messages in different media—for instance, do legislators use Twitter for more polarized communication than they do for their floor speeches or press releases? Do challengers use more *conversion* approaches than *activation* or *reinforcement*? Differences in the use of these platforms would indicate audience-specific strategies worthy of further scrutiny. Twitter and related social media are increasingly powerful tools for politicians to communicate directly with the public and with the press. Our results suggest that the two major parties in the U.S. use different messaging strategies near elections, and research is just beginning to explain the impacts of social media strategies on political outcomes.

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