The role of political extremists in electoral campaigns

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Working paper

Abstract

Do politicians set the agenda during campaigns? Do politicians make voters extremists, or do extreme voters make politicians extreme? Past research has offered an explanation to the agenda setting process during campaigns. This theoretical suggestion consist of voters blindly following the views of their preferred politician. However, past research is short of situating the origin of politicians' views. In this study, I formulate the *Downstream extremism* theory, a novel explanation to why past theories offer an incomplete explanation to the agenda-setting process during campaigns. I argue that political elites take cues from extremist voters, who then give cues to moderate voters. Electoral campaigns are the mechanism by which politicians receive feedback from extremists. To empirically demonstrate this, I use the case of the 2020 US Presidential debate. By taking advantage of the randomness of the content of the debate, I am able to causally estimate the effect of the debate on the expressed sentiment of Twitter users. My findings confirm my expectation that extremists respond more to campaigns than moderates.

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The ignorance of one voter in a democracy impairs the security of all.

John F. Kennedy, Vanderbilt University (1963)

It is important to bear in mind that political campaigns are designed by the same people who sell toothpaste and cars.

Noam Chomsky (2005)

On January 6th 2021, the United States Capitol was violently attacked by mostly Republican extremists. Political scientists and media pundits have informally offered explanations to why citizens blatantly violated the most important institution of their country. The most compelling argument is that Donald Trump's rhetoric during and after the campaign inflamed his extreme supporters, ultimately leading to the insurrection. Outside of the United States, extreme political ideologies have also led to numerous human tragedies as much from the right than from the left (Midlarsky 2011; Van Prooijen, Krouwel, and Pollet 2015). These events offer anecdotal evidence to why it is crucial to understand the political behavior of extremists. The study of extremists presents important challenges since very little binds both sides of the ideological spectrum. Most political scientists will either focus on the extreme right or the extreme left. This void leaves a lack in understanding the implications of extremist political behavior as an entity for our society, institutions and social relations.

The discipline of political science lacks evidence on whether politicians shape the beliefs of their extreme supporters, like conventional wisdom leads us to believe, or if extremists shape the beliefs of politicians. In this article, I argue that the direction of this causal relationship is the latter. I offer insight to address this theoretical lacunae in which I introduce the *Downstream Extremism* theory, a novel interpretation of the role of extremists in agenda-setting and cue-taking during campaigns. I demonstrate how extremists play the role of cue-givers for politicians, who in turn signal policy positions to the rest of the electorate. I propose a new

step in the bi-dimensional position-taking process where the electorate 'follows their leader' (Lenz 2013; Agadjanian 2020; Broockman and Butler 2017). Indeed, scholars have shown that voters blindly adopt views that align with their preferred politician. The underlying assumption is that political ideas originate from politicians and are then transfer to the electorate. I argue that ideas do not originate from politicians, but from political extremists. Although most voters do in fact follow their leader, extremists do not, since leaders follow them.

Following my theory, extremists' engagement with campaigns is a key driver for how candidates will form their political beliefs. To that end, I empirically evaluate the heterogeneous effects of campaign events based on political ideology. I posit that extremists are more responsive to campaign events than moderates, offering new insights to the importance of campaigns for the formation of political attitudes. To test this, I use the case of the 2020 Presidential debate to estimate a Regression-discontinuity-in-time model using Twitter data.

How do larger responses to campaign events demonstrate that politicians listen to extremists? I consider responses to campaigns not as a passive action, but as a feedback mechanism. The output, or the extremists' response to campaign events, is the input for politicians. Why is that? First, we know that politicians seek out information. They are not lone wolves in the political ecosystem. They are surrounded with media pundits and campaign and policy professionals to inform themselves. For decades, these actors have primarily been exposed to mainstream news media as their main source of information. However, since the advent of social media, ordinary voters have raised to prominence for expressing their political views online. Such individuals suddenly have their ideas directly voiced to politicians. A large proportion of these are in fact political extremists (Clark 2021). Why do political elites have an increased exposure to extremist views? Research in psychology demonstrates that extreme voters have social traits that distinguish them from moderates in such ways that make them much more noticeable in the social sphere. They are shown to be ideologically inflexible (Zmigrod, Rentfrow, and Robbins 2020), vocal on social media (Hong 2013) and very confident (Fernbach et al. 2013; Prooijen and Krouwel 2019; Brandt, Evans, and Crawford 2015). In this article, I empirically demonstrate extremists' outspokenness by measuring their response to campaign events, hereby the 2020 US Presidential debate . I use data from Twitter to estimate

a regression-discontinuity-in-time model to measure if extremists respond more strongly to the debate than moderates. I show that extremists do in fact express their sentiment more strongly than moderates.

Elite cue-taking and Opinion formation

Scholars have provided numerous theories to explain the origin of mass political attitudes. The most compelling theory is proposed by Lenz (2013) who argues that voters blindly adopt the opinions of their preferred party or politician. This theory puts aside cognitive and psychological factors to explain the heterogeneity of opinion formation. Indeed, opinions are not developed on a individual level dependent of social context. Instead, the formation of opinions can be reduced to a causal flow going from political elites to voters. I illustrate an oversimplified version of this flow in Figure 1.

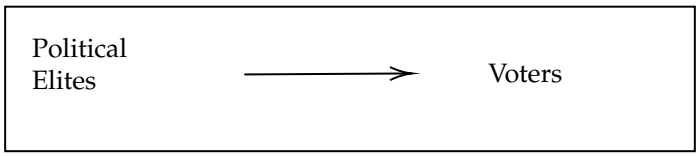


Figure 1: *Follow the leader* theory

The main implication of the causal flow is that the relationship is bi-dimensional. This bi-dimensionality is based on two unsatisfactory assumptions of the theory. First, the theory assumes all voters fit in a homogeneous block. All voters have balanced levels of political interest, education, income, etc. They respond to political elites similarly regardless of context and individual-level characteristics. I find this assumption to be unconvincing because it simply cannot be true. For decades, political scientists have segmented the electorate to explore heterogeneous effects based on a series of psychological, physiological and context-level factors. We have empirically demonstrated that groups based on race/ethnicity, gender, ideology and income voter differently in different contexts. For example, Barberá et al. (2019) evaluate agenda setting efforts of different types of voters, namely attentive citizens (Aldrich et al. 1995; Arnold 1990), party supporters (Egan 2013; Kastellec et al. 2015) and the general public (Downs et al. 1957).

The second theoretical assumption is that political beliefs and opinions originate from political elites. There is no mention of where politicians get their information from. They are completely responsible for crafting, designing and articulating their policy positions to the public. Politicians do not consume politics in the same way voters do. This assumption is unsatisfying because politicians engage with politics in ways similar to voters. First, politicians are personally present on social media and have the potential to be exposed to the same content than ordinary voters. Second, this assumption considers politicians as actors who have a different relationship with the political world. Although they do have different motives than voters, political elites also seek to learn and are exposed to exogenous stimuli which might persuade them. Politicians also have personal social media account, listen to podcasts, YouTube videos and cable news, as ordinary voters do. Therefore, we should consider political elites as vulnerable to persuasion as voters.

Downstream extremism theory

To respond to the unsatisfactory assumptions underlying the *follow the leader* theory, I propose the *Downstream Extremism* theory. My theory contributes in two ways. First, I explain how different types of voters take different roles in the opinion formation ecosystem. I argue that extremists and moderates should be considered as separate groups, where extremists give cues to political elites and moderates take cues from political elites. Second, I explain how political elites inform their views. Contrary to what is previously assumed, politicians do not independently construct their opinions. Rather, politicians are informed by extremists. I argue that extremists have the most important voice during campaigns, thus are able to reach the ears of politicians. In turn, politicians most receive feedback from extremists, therefore incorporating their views in their narrative.

I illustrate my theory in Figure 2. There are four actors in this specified opinion formation ecosystem. I first include political extremists as the most extreme voters. These voters are from

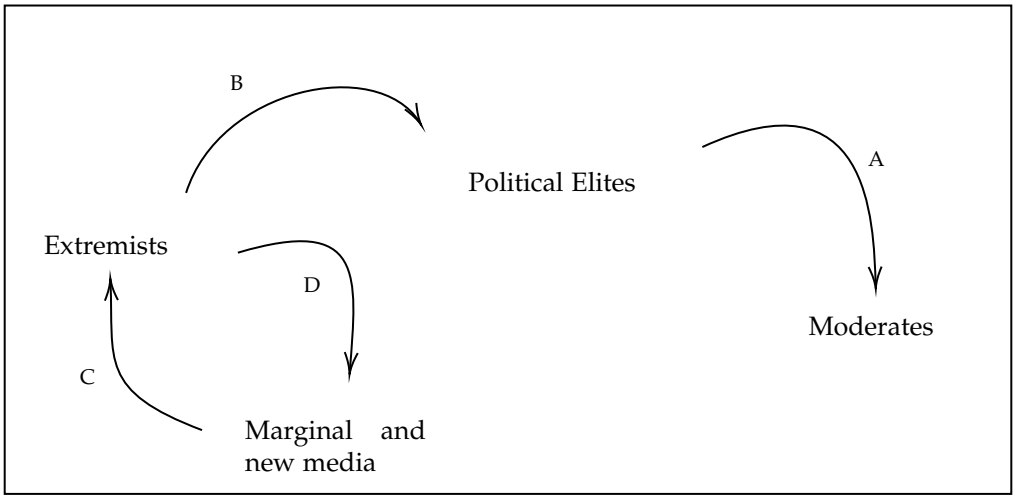


Figure 2: Opinion formation ecosystem under the Downstream Extremism theory

both sides of the ideological spectrum. I specify extremism on the bi-dimensional ideological axis from left to right [1]. The second actor is marginal and new media. I argue that extremists consume information from marginal and new types of media. These types include podcasts, online blogs, YouTube channels, Reddit and Facebook groups. For example, we can consider figures such as Cenk Uygur from The Young Turks and Alex Jones from Infowars as part of the marginal media ecosystem. Finally, I include political elites and moderates who come from the original specification of the *follow the leader* theory. However, I do not consider the electorate as a homogeneous block. Instead, I reduce the group strictly to moderates. Political elites include politicians, but also consultants, campaign workers and other actors directly surrounding politicians.

I argue that opinions, political beliefs and policy positions flow from marginal media to extremists, then to political elites and finally moderates. First, extremists and marginal media find themselves in a constant exchange of information as denoted by *C* and *D*. Their relationship is endogenous because extremists are not only consumers of marginal media, but many are in fact part of it. They therefore feed off each other which ultimately forms what we may call 'extremists political ideas'.

In relation *B*, I argue that extremists convey their opinions to political elites. Research has

1. I avoid defining extremists on the vertical axis. The second axis is often ambiguous to interpret, leaving it difficult to conceptualize for sorting extremists.

shown that extremists are extremely confident in the political beliefs (Kruglanski et al. 2006; Prooijen and Krouwel 2019), outspoken, intellectually sophisticated and have a certain level of social influence (Sidanius 1988). Moreover, Jacobson and Carson (2004) shows that primary electorates, those who decide of the candidates to be represented at the general election, are much more partisan and extreme than the median voter. The authority that extremists hold has especially grown in the age of social media. Politicians now have direct access to extremist ideas on Twitter and Facebook, replacing conventional modes of political learning. In the next section, I explain that campaigns are the main driver for extremists to convey their ideas to politicians. Thus, extremists act as cue givers when politicians seek to understand how they can satisfy the needs of voters.

Finally, relation A conveys the original relationship from the *follow the leader* theory. We see that if we only consider these two actors, our understanding of opinion formation is incomplete. Here, the ideas that politicians form based on extremists' feedback is internalized by moderates who, as the theory states, blindly follows their preferred politician. Political moderates are often characterized with the tendency to avoid social censorship and express higher levels of low self-esteem (Van Hiel and Mervielde 2003). It is worth noting that extremists and moderates are not publicly identified as such. This implies that political elites are unable to tell the difference between extremists and moderates. Politicians do not taking cues from extremists deliberately. They take cues because extremists are outspoken, influential and confident.

The main implication of my proposed theory is that politicians do not set the agenda, but extremists and marginal media do. Is it therefore crucial to study the political behavior and attitudes of extremists because, *down the line*, the rest of the electorate will adopt their views.

Campaign effects

In this section, I how campaigns are the main driver for extremists to convey their ideas to politicians.

Past scholarship

Scholarly research on campaign effects in political science is not only substantial, but unsuitably disparate. Scholars have tackled the importance of political campaigns in many different ways. Political scientists explored its effects on vote choice, political attitudes and emotions looking at door-to-door canvassing (Gerber and Green 2000), endorsements (Lau and Redlawsk 2001, Brox and Shaw 2006) and advertisements (Shaw 1999, Huber and Arceneaux 2007). Although the high attention given to the empirical study of campaigns may be seen as promising, it resulted in an ambiguous impression academics have about campaigns. While many argue that campaigns are an effective instrument for persuasion (Panagopoulos 2012; Peterson 2009), recent research has ultimately found effects to be rather minimal and inconsequential in the grander context of political behavioral formation (Kalla and Broockman 2018; Brady, Johnston, and Sides 2006).

Hillygus (2010) argues that given the complexity of campaign effects, future avenues of research should study its heterogeneity. Indeed, voters engage in dynamic decision making processes which can be complex to understand under a static model. However, past attempts of electoral analysis has focused on the disaggregation of independent variables at the expense of the disaggregation of the dependent variable. Past work has estimated the effect of multiple campaign events, such as debates, scandals or campaign rallies, on vote choice and political attitudes. This work largely ignores the disaggregation of campaign effects on an individual level. In other words, how are campaign effects internalized by different segments of the electorate?

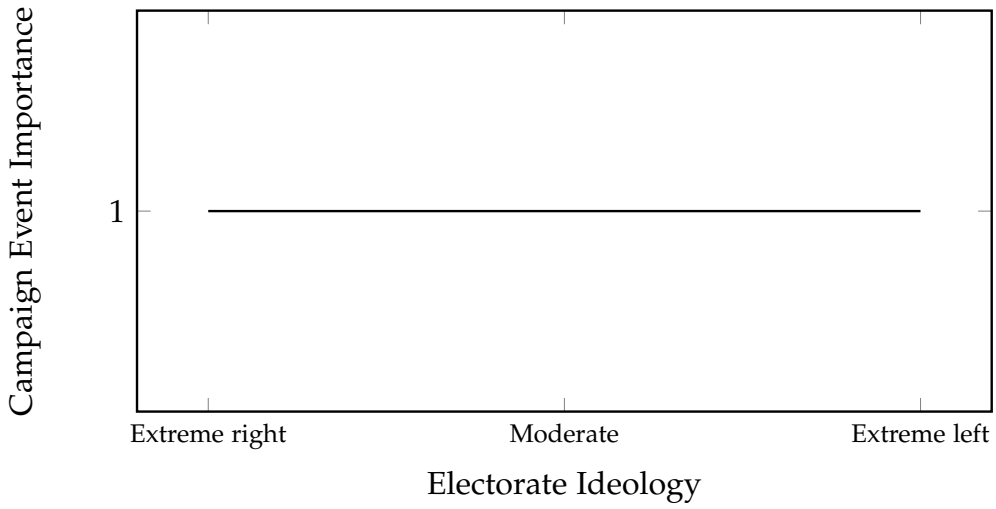
The role of campaigns in the Downstream extremism theory

What role do campaigns play in the opinion formation ecosystem? Given their access to a plethora of ideas and opinions on social media, I argue that political elites use their campaign to receive feedback on policy positions. Moreover, the feedback is biased in favor of extremists since they are highly confident when voicing their opinions.

Past research has assumed a linear relationship between the importance given to campaigns

and the ideology of the electorate. This relationship is illustrated below in Figure 3. We see that extreme right-wing and left-wing voters give as much importance to campaign events than moderates.

Figure 3: Prior expectation of campaign effects



My explanation for why past work has often failed to identify significant campaign effects (Kalla and Broockman 2018) is because of the *follow the leader* effect. Political moderates absorb and internalize what politicians say, so any campaign event might seem meaningless since there is no discontinuity in attitudes. Moderates rationalize the views of their preferred politician, whether it be before or after the campaign. For there to be significant campaign effects, we should see significant changes in the position-taking of politicians when the campaign starts, which very rarely occurs.

My theory posits that political extremist give more importance to campaign events than moderates, explaining why political elites internalize their views. I illustrate my theoretical predictions in Figure 4. I expect extreme right-wing and left-wing voters to respond much more to campaign events than moderates, hence the u-shaped curve.

Figure 4: Posterior expectation of campaign effects

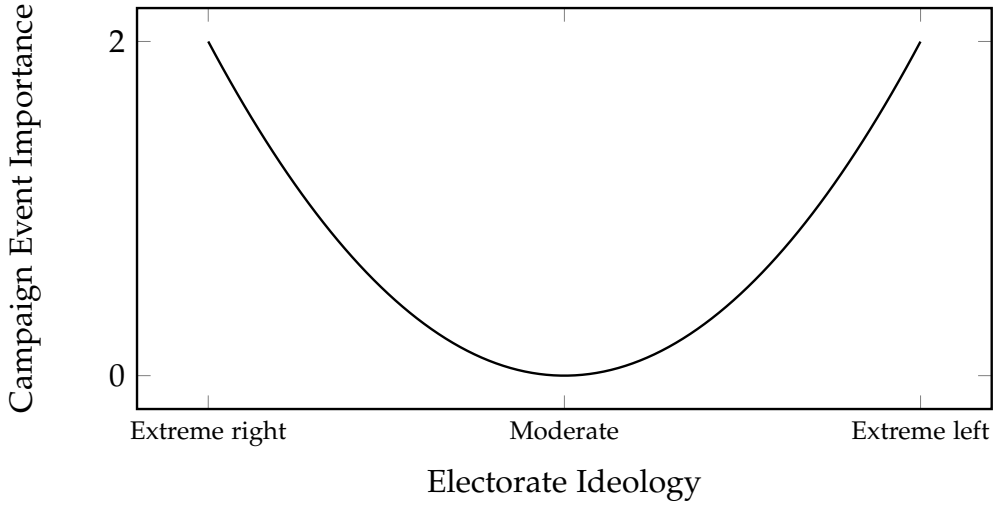
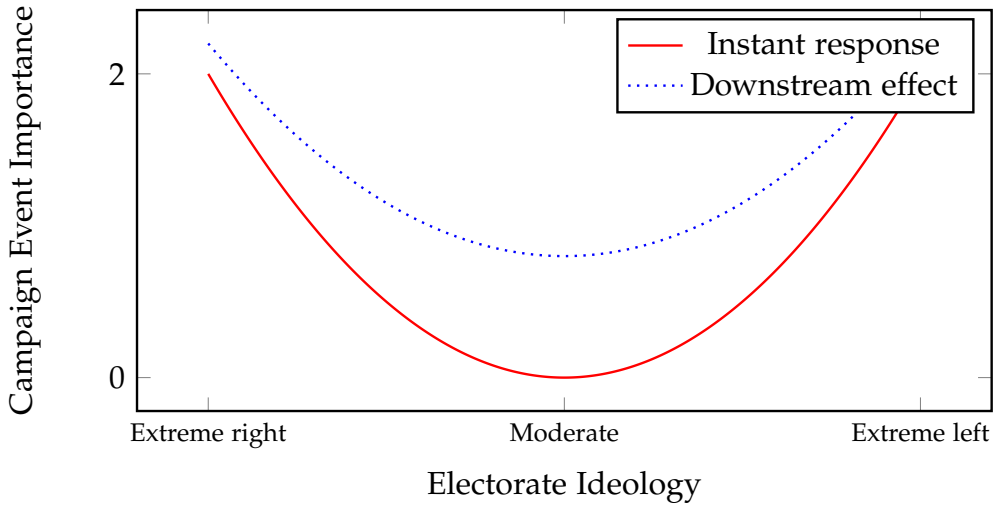


Figure 5 shows the downstream effect of the opinions of extremists on the opinions of the rest of the electorate. I posit that the large and important responses of ideological extremists disseminates to the rest of the electorate. Even if immediate effects of campaigns might only be important for the small population segment of extremists, they later become important for the rest of the population. We can think of the effects to be lagged in time. The red line plots the relationship between the importance given to campaigns and the political ideology of the voter. The dotted line illustrates the relationship after the responses of extremists disseminates into the electorate. We can notice how the u-shape is flatter and has a higher constant than the red curve, indicating how political moderates now view these events with more importance than before. The main implication of this theory is that any response held by extremists will down the line be internalized by the entire voting population.

Finally, I illustrate in Figure 6 the role campaigns take in the flow of opinion formation. This figure summarize the main argument of my theory. It conveys the logical flow where each step has a chain reaction to the next. The first step of the flow causes the second, the second causes the third and the third causes the fourth step. It show the downstream effect of extremists' response to campaigns on the political attitudes of moderates. In the next section,

Figure 5: Downstream effect of extremists' attitudes

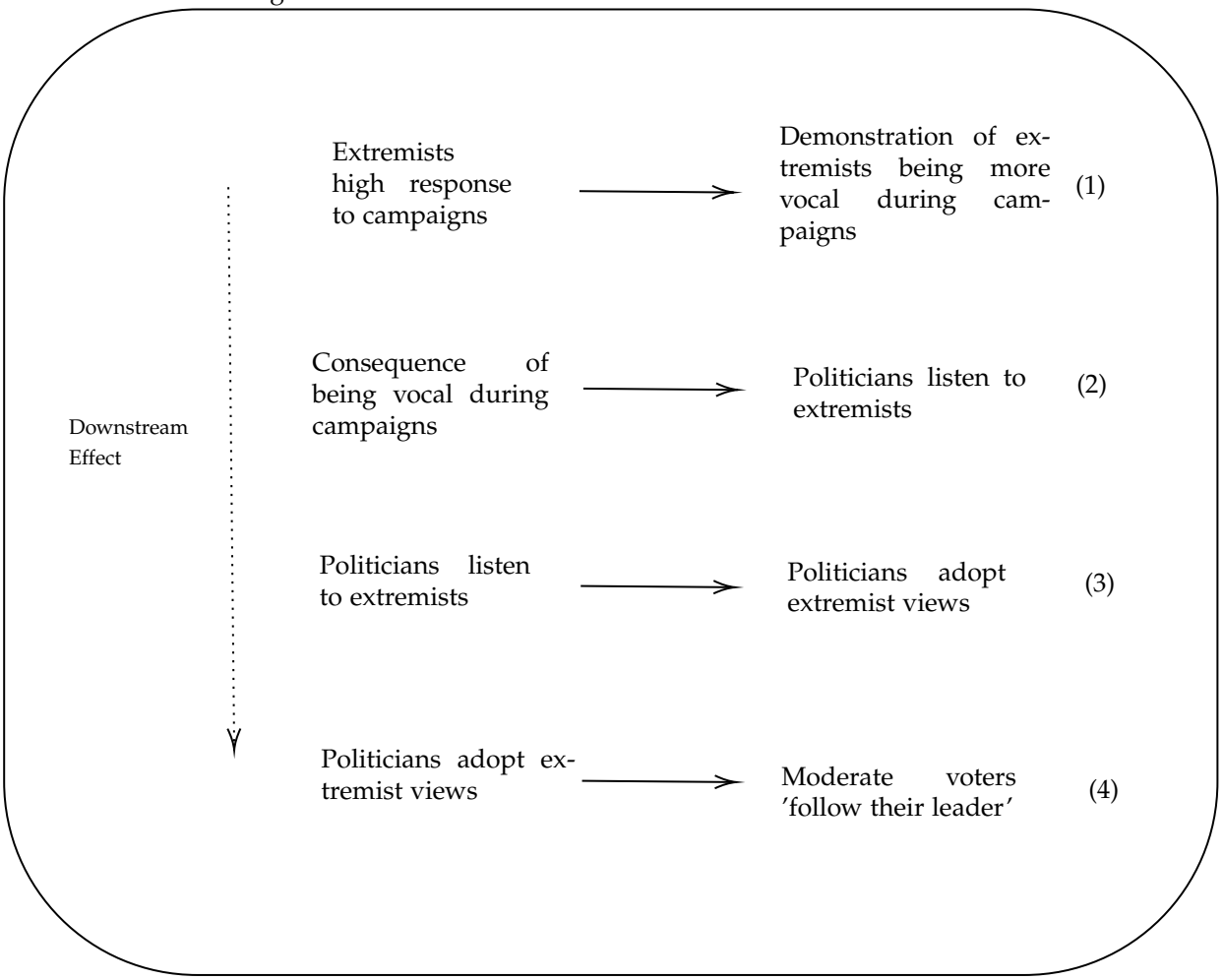


I empirically demonstrate the first step, in which political extremists respond to campaigns to a greater extent than moderates.

I identify two potential objections that might be addressed to my theory. First, if political elites take cues from extremists, then their preferred policies should also be extreme. How does this theory explain moderate politicians? To this, I respond that we do not know what moderate policy position-taking actually resembles. I think that political elites are in fact never moderates. Some are simply more extreme than others, giving the impression of moderation. In reality, we should expect moderate politicians to, for example, favor conservative policies on some issues, and liberal policies on others. This expectation is almost never fulfilled, therefore showing how rare true moderate politicians are.

Second, does this theory contradict the Median voter theory which states that politicians converge to the center of the ideological spectrum? The logic of my theory has grown to be valid during recent years in the age of social media. Political elites are capable of consuming extremist ideas and opinions, whereas they used to strategize based on factors closer to their playing field, such as directly responding to their opponent. These older strategies indeed led to politicians converging to the median. However, we recently have seen the rise of more

Figure 6: Downstream effect of extremists' attitudes



extreme political elites gaining power. This phenomena is an indication of how the current context allows politicians at the extremity of the ideological spectrum to be competitive during campaigns.

Empirical Strategy

In this study, I test the first step of the logical flow outlined in Figure 6, that is whether political extremists respond more to campaigns than moderates. My demonstration of the validity of the first step gives legitimacy and precedence to the rest of the theory. If extremists do in fact respond more to campaigns than moderates, their feedback trickles down to the rest of the

electorate as my theory predicts.

I measure the size of the response of extremists and moderates to the first Presidential debate during the 2020 American presidential election. The debate occurred on September 29th, 2020 in which Donald Trump and Joe Biden exchanged words under the moderation of Chris Wallace.

To do so, I estimate a Regression-Discontinuity-in-Time (RDiT) model using Twitter data (Hausman and Rapson 2018). I collect all tweets posted between approximately 1 hour before the start of the debate and 1 hour after the debate (Chen, Deb, and Ferrara 2020). Tweets were collected from keyword search based on pre-identified terms related to American politics. Although it is impossible to verify if each tweet collected is about the debate, I assume that tweets related to politics posted in the United States the day of the Presidential debate are related to the event.

Drawing from the Unexpected Event during Survey design from Muñoz, Falcó-Gimeno, and Hernández (2020), I propose a novel empirical method to estimate the causal effect of the start of the debate on the expressed sentiment by Twitter users captured by their respective tweets. The objective is to estimate how important did the Twitterverse judge the debate. The RDiT model measures the jump in sentiment caused by the debate. This method is ideally suited for the goal of this study since it directly measures the importance given to the debate. To that end, large effects demonstrate a large response.

The empirical goal is to measure whether political extremists respond to the debate more than moderates. To do so, I pre-identify the ideological heterogeneity of Twitter users in my sample. I follow the Bayesian Spatial Following model proposed by Barberá (2015) to infer the ideology of Twitter users. This method allows me to identify precise ideal points of -4 to +4, where lower scores are given to Republicans and higher scores to Democrats. To distinguish the response of extremists from moderates, I estimate a total of 10 RDiT models. Each model bins Twitter users within intervals of 0.5 of their ideological scores. For example, I estimate a model for users with a score of 1 to 1.5, another model for users with a score of 1.5 to 2, and so

on. Setting the bin at a 0.5 interval is ideal since it allows me to estimate enough heterogeneity in ideology while reaching statistical power in each model.

It is important to describe how my proposed measure speaks to whether campaign events *matter*. Scholars have studied campaign effects to know whether they are effective in persuading voters. To measure persuasion, scholars either focus on behavioral outcomes or attitudes and emotions. My proposed method measures how *important* Twitter users find the debate. The larger the jump in sentiment when the debate starts, the more importance is given to the debate. I draw a parallel between the electorate viewing an event as important and whether the event mattered. In other words, a large response to the debate essentially means that the debate mattered for the electorate.

On the causal validity of the RDiT

The timing of debates is not random. This non-randomness may present a threat to validity of the Regression-discontinuity-in-time, as the cutoff point must be determined randomly. I argue that although debates are not random, the RDiT can still make a valid causal inference. Although the debate itself is not random, the content of the debate is. Therefore, any response to the debate is completely unexpected, thus can be interpreted as random. In order to discount the possibility of making a causal inference with observational data, the question one must ask is if individuals are able to influence the assignment variable. If so, what is the nature of this control? Although the debate is not random, Twitter users cannot predict what will happen during the debate. The response of Twitter users are instantaneous, meaning they are reacting to the event as it happens. For example, Twitter users cannot respond to the comment on the Proud Boys from President Donald Trump before the debate started. My intent is not to estimate the effect of the debate on the sentiment of Twitter users, but to estimate the effect of the *content* of the event on sentiment.

Outcome Measurement

To measure how important did the electorate view the debate, I estimate the difference in the sentiment score right before and at the start the debate. The sentiment of tweets is measured on an individual level. Each tweet's sentiment is measured with the Valence Aware Dictionary and Sentiment Reasoner (VADER) from Hutto and Gilbert 2014. The sentiment score of a tweet is obtained by summing up the intensity of each word with a dictionary method. Sentiment scores range from -1 for negative tweets to +1 for positive tweets.

Identification Strategy

To estimate the effect of the debate on sentiment, I estimate a Regression-Discontinuity-in-time model (Hausman and Rapson 2018). Following Imbens and Lemieux (2008), I specify the RDiT as a local linear regression with a first-order polynomial. I do not use high-order polynominals given the possibility of forcing an artificial discontinuity at the cut-off point and over-fitting (Gelman and Zelizer 2015; Gelman and Imbens 2019). I use the `rdrobust` statistical software package to estimate the model and compute the optimal bandwidth that minimizes the mean-squared error of the regression (Calonico, Cattaneo, and Titiunik 2015).

$$y_{it} = \alpha + \beta_{RDD}\ debate_{it} + \beta_1\ minute_{it} + \epsilon_{it} \tag{1}$$

In this model, the outcome y_{it} refers to the sentiment score of Tweet i at minute t. The start of the debate is defined by $debate_{it}$ which is a binary variable equal to 1 for tweets after 9:20 PM (Eastern), the beginning of the debate, and 0 for tweets before 9:20 PM. Finally, $minute_{it}$ is the time of the tweet of the measured in minutes on September 29th, 2020. The discontinuity is sharp given the the running variable of time completely determines $debate_{it}$ (Anderson 2014). The assumption is all tweets posted exactly after 9:20 PM are in response to the debate. Even if the debate officially started at 9:00 PM, I set the discontinuity twenty minutes later for two reasons. First, the timestamp of tweets are slightly late because of the time-lag induced by the API when collecting the data. Second, I allow for a few minutes after the start to let viewers respond to the content, as it is hard to react to the content before at least a few minutes of debating.

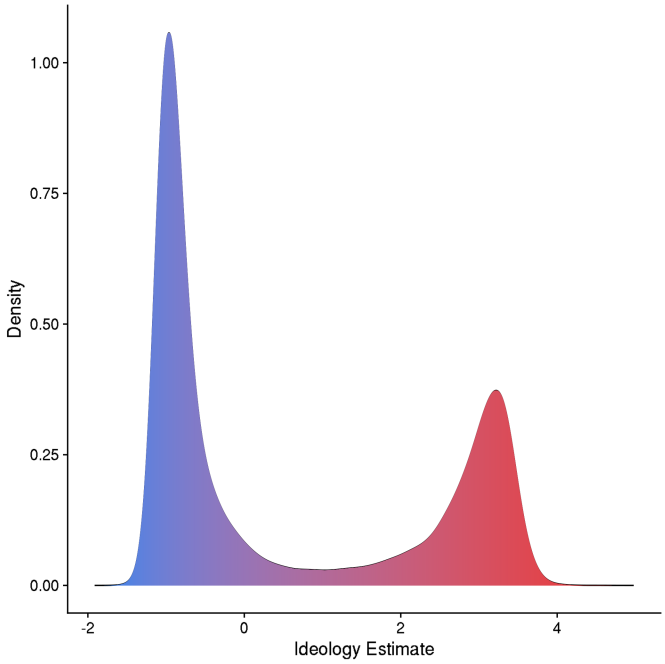


Figure 7: **Density Plot of ideal point estimates.** Ideal points were estimated using the `tweetscores` statistical software package developed by Barberá (2015). Negative values are given to Republican users. Positive values are given to Democrat users.

Results

Tweets collected were posted online on September 29th, 2020 from 7 PM EST until 12:00 AM EST. Figure 7 illustrates a density plot of the ideology of all Twitter users. We see that the data is biased to the extreme, with much more users on the extreme right. If we consider ideology to be symmetrical, where -1 is the equivalent of 1 but for Republicans, the data has an over-representation of extreme right-wing users. This asymmetry may cause biased estimates given my goal of estimating the effects for extremists on both sides of the spectrum. Indeed, the models for the extreme left might be low-powered compared to the models for the extreme right. There are very few users who have a point estimate below -2, whereas there are many users with point estimates between 2 and 4.

I estimate ten Regression-Discontinuity-in-time models. One model is estimated for each 0.5 interval on the ideological scale. This specification allows me to estimate different models

for political extremists and moderates and compare the coefficients. Following my theoretical expectations, the absolute value of the coefficient for extremists should be larger than for moderates.

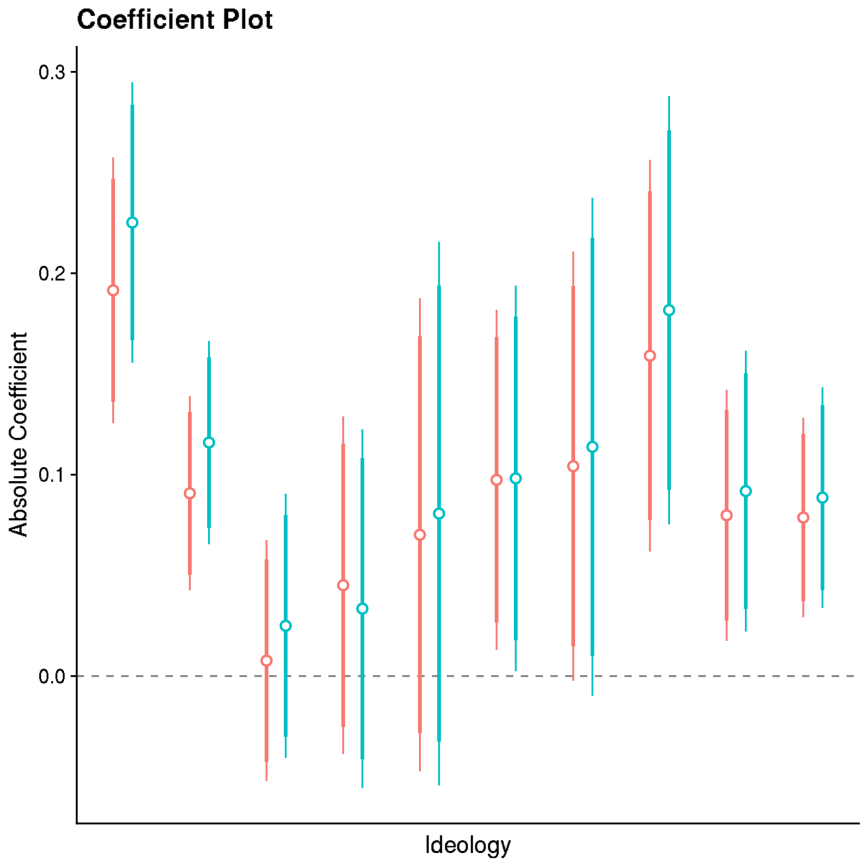


Figure 8: **Coefficient Plot of RDiT models.** The models are specified with local linear regression. Effect sizes are in absolute terms. Red coefficients are the conventional estimates and blue coefficients are the robust estimates. Effects on the left of the x-axis are models estimated on Democrat Twitter users, and effects on the right of the x-axis for Republican users. Models were estimated using the `rdrobust` statistical software package developed by Calonico, Cattaneo, and Titiunik (2015).

I plot the coefficients for each model in Figure 8. Red coefficients are the conventional RDiT estimates and blue coefficients are the robust estimates. The x-axis goes from left for extreme left-wing Twitter users to right for extreme right-wing users. We see that the effect sizes are larger on the extremes than in the middle, confirming my expectation that extremists respond more to campaign events than moderates. There are two outlier groups on the far right. My estimates show that these groups respond much less to the debate. Although this result might

invalidate my theory, I argue that these groups are not representative of extreme right-wing voters. I expect these groups to be mostly comprised of bots, as they are drastically more conservative than average right-wing users. In fact, users in these groups do not have their equivalent on the left side. The lack of equivalency in distribution density lends to the idea that these users are 'too extreme' to be true.

I illustrate an example of the discontinuity in Figure 9. This plot illustrates the effect of the debate on sentiment expressed by the most extreme left-wing group with ideal points between -1.5 and 1. To give meaning to these scores, Twitter users who fit in this interval include the median House Democrat, Barack Obama and the Human Rights Campaign, the largest LGBTQ civil rights organization in the US (Barberá 2015). The plot demonstrates a clear cutoff in sentiment at the start of the debate. Furthermore, we see that the discontinuity is not artificially created by the local polynomial. Data points are significantly higher before the cutoff than after.

Discussion and Conclusion

The rise of extremist politicians and media figures have preoccupied the state of American politics for the last several years. Not only have they set a new tone for the state of this country, but they have also changed the lives of many. On January 6th 2021, some American citizens have lost their lives at the sacrifice of their radical behavior. However, we have yet to know the origin of extremist ideas. Do politicians make voters extremist, or the voters make politicians extremist?

In this article, I propose the *Downstream extremism* theory, a novel interpretation of the role of extreme voters in opinion formation. I theorize that extremists act as cue-givers to political elites, who in turn give cues to the rest of the electorate. Extremists are able to give cues to politicians because they are very vocal during campaigns. Their voice is hear by campaigns, contrary to the voice of moderates. Thus, extremists ideas have set the agenda given the downstream effect of their behavior during electoral campaigns.

I empirically demonstrate the extremists do in fact respond more to campaigns than mod-

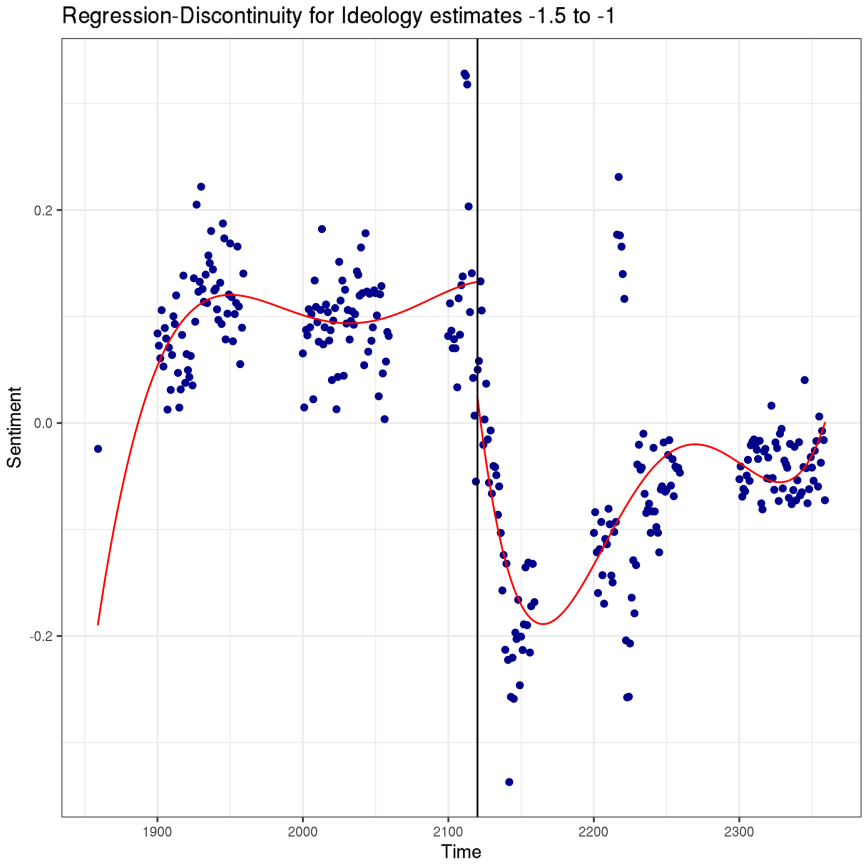


Figure 9: **Regression-Discontinuity Plot.** The cut-off point is at 21:20, the start of the debate. This model is estimated for all Twitter users with a ideal point score ranging from -1.5 to 1. Plot was created using the `rdrobust` statistical software package developed by Calonico, Cattaneo, and Titiunik (2015).

erates. By using the case of the 2020 Presidential election debate opposing Joe Biden and Donald Trump, I estimate the effect of the debate on the expressed sentiment of Twitter users. This method offers new insights on how to make causal inferences using textual data.

In future work, I plan to offer empirical evidence of the other steps underlying my theory. Specifically, I plan to show how the outspokenness of extremists during campaigns determines the position-taking of politicians during campaigns. Indeed, I only demonstrate in this article that extremists respond more to campaigns. I do not move beyond the first step in the theory as shown in Figure 6.

References

Agadjanian, Alexander. 2020. When do partisans stop following the leader? *Political Communication*, 1–19.

Aldrich, John H, et al. 1995. *Why parties?: the origin and transformation of political parties in america.* University of Chicago Press.

Anderson, Michael L. 2014. Subways, strikes, and slowdowns: the impacts of public transit on traffic congestion. *American Economic Review* 104 (9): 2763–96.

Arnold, R. 1990. Douglas. *The Logic of Congressional Action.*

Barberá, Pablo. 2015. Birds of the same feather tweet together: bayesian ideal point estimation using twitter data. *Political analysis* 23 (1): 76–91.

Barberá, Pablo, Andreu Casas, Jonathan Nagler, Patrick J Egan, Richard Bonneau, John T Jost, and Joshua A Tucker. 2019. Who leads? who follows? measuring issue attention and agenda setting by legislators and the mass public using social media data. *American Political Science Review* 113 (4): 883–901.

Brady, Henry E, Richard Johnston, and John Sides. 2006. The study of political campaigns. *Capturing campaign effects*, 1–26.

Brandt, Mark J, Anthony M Evans, and Jarret T Crawford. 2015. The unthinking or confident extremist? political extremists are more likely than moderates to reject experimenter-generated anchors. *Psychological Science* 26 (2): 189–202.

Broockman, David E, and Daniel M Butler. 2017. The causal effects of elite position-taking on voter attitudes: field experiments with elite communication. *American Journal of Political Science* 61 (1): 208–221.

Brox, Brian J, and Daron R Shaw. 2006. Political parties, american campaigns and effects on outcomes. *Handbook of Party Politics*, 146–159.

Calonico, Sebastian, Matias D Cattaneo, and Rocio Titiunik. 2015. Rdrobust: an r package for robust nonparametric inference in regression-discontinuity designs. *R J.* 7 (1): 38.

Chen, Emily, Ashok Deb, and Emilio Ferrara. 2020. #election2020: the first public twitter dataset on the 2020 us presidential election. *arXiv preprint arXiv:2010.00600.*

Clark, Cory J. 2021. How we empower political extremists. *Psychology Today.*

Downs, Anthony, et al. 1957. An economic theory of democracy.

Egan, Patrick J. 2013. *Partisan priorities: how issue ownership drives and distorts american politics.* Cambridge University Press.

Fernbach, Philip M, Todd Rogers, Craig R Fox, and Steven A Sloman. 2013. Political extremism is supported by an illusion of understanding. *Psychological science* 24 (6): 939–946.

Gelman, Andrew, and Guido Imbens. 2019. Why high-order polynomials should not be used in regression discontinuity designs. *Journal of Business & Economic Statistics* 37 (3): 447–456.

Gelman, Andrew, and Adam Zelizer. 2015. Evidence on the deleterious impact of sustained use of polynomial regression on causal inference. *Research & Politics* 2 (1): 2053168015569830.

Gerber, Alan S, and Donald P Green. 2000. The effects of canvassing, telephone calls, and direct mail on voter turnout: a field experiment. *American political science review*, 653–663.

Hausman, Catherine, and David S Rapson. 2018. Regression discontinuity in time: considerations for empirical applications. *Annual Review of Resource Economics* 10:533–552.

Hillygus, D Sunshine. 2010. Campaign effects on vote choice. *The Oxford Handbook of American elections and political behavior*, 326–345.

Hong, Sounman. 2013. Who benefits from twitter? social media and political competition in the us house of representatives. *Government Information Quarterly* 30 (4): 464–472.

Huber, Gregory A, and Kevin Arceneaux. 2007. Identifying the persuasive effects of presidential advertising. *American Journal of Political Science* 51 (4): 957–977.

Hutto, Clayton, and Eric Gilbert. 2014. Vader: a parsimonious rule-based model for sentiment analysis of social media text. In *Proceedings of the international aaai conference on web and social media*, vol. 8. 1.

Imbens, Guido W, and Thomas Lemieux. 2008. Regression discontinuity designs: a guide to practice. *Journal of econometrics* 142 (2): 615–635.

Jacobson, Gary C, and Jamie L Carson. 2004. *The politics of congressional elections.* Rowman & Littlefield.

Kalla, Joshua L, and David E Broockman. 2018. The minimal persuasive effects of campaign contact in general elections: evidence from 49 field experiments. *American Political Science Review* 112 (1): 148–166.

Kastellec, Jonathan P, Jeffrey R Lax, Michael Malecki, and Justin H Phillips. 2015. Polarizing the electoral connection: partisan representation in supreme court confirmation politics. *The journal of politics* 77 (3): 787–804.

Kruglanski, Arie W, Antonio Pierro, Lucia Mannetti, and Eraldo De Grada. 2006. Groups as epistemic providers: need for closure and the unfolding of group-centrism. *Psychological review* 113 (1): 84.

Lau, Richard R, and David P Redlawsk. 2001. Advantages and disadvantages of cognitive heuristics in political decision making. *American Journal of Political Science*, 951–971.

Lenz, Gabriel S. 2013. *Follow the leader?: how voters respond to politicians' policies and performance.* University of Chicago Press.

Midlarsky, Manus I. 2011. *Origins of political extremism: mass violence in the twentieth century and beyond.* Cambridge University Press.

Muñoz, Jordi, Albert Falcó-Gimeno, and Enrique Hernández. 2020. Unexpected event during survey design: promise and pitfalls for causal inference. *Political Analysis* 28 (2): 186–206.

Panagopoulos, Costas. 2012. Campaign context and preference dynamics in us presidential elections. *Journal of Elections, Public Opinion and Parties* 22 (2): 123–137.

Peterson, David AM. 2009. Campaign learning and vote determinants. *American Journal of Political Science* 53 (2): 445–460.

Prooijen, Jan-Willem van, and André PM Krouwel. 2019. Psychological features of extreme political ideologies. *Current Directions in Psychological Science* 28 (2): 159–163.

Shaw, Daron R. 1999. The effect of tv ads and candidate appearances on statewide presidential votes, 1988-96. *American Political Science Review*, 345–361.

Sidanius, Jim. 1988. Political sophistication and political deviance: a structural equation examination of context theory. *Journal of Personality and Social Psychology* 55 (1): 37.

Van Hiel, Alain, and Ivan Mervielde. 2003. The measurement of cognitive complexity and its relationship with political extremism. *Political Psychology* 24 (4): 781–801.

Van Prooijen, Jan-Willem, André PM Krouwel, and Thomas V Pollet. 2015. Political extremism predicts belief in conspiracy theories. *Social Psychological and Personality Science* 6 (5): 570–578.

Zmigrod, Leor, Peter Jason Rentfrow, and Trevor W Robbins. 2020. The partisan mind: is extreme political partisanship related to cognitive inflexibility? *Journal of Experimental Psychology: General* 149 (3): 407.