

TELEVISED POLITICAL ADS AND VOTER TURNOUT: A THEORY OF ASYMMETRIC PARTISAN MOBILIZATION

Jowei Chen¹ and Kyle A. Dropp²

How does the partisan balance of Democratic and Republican political advertisements aired locally affect voter turnout? We develop a theory of asymmetric partisan mobilization and demonstrate empirically that Democratic presidential ads in 2008 and 2012 increased Democratic turnout and decreased Republican turnout, while GOP-sponsored presidential ads stimulated Republican turnout and demobilized Democrats. An original time-series precinct-level dataset spanning three presidential elections and individual level data from the 2004 National Annenberg Election Study demonstrate that null and mixed findings in previous studies can be explained by mobilization of some voter subgroups and demobilization among others.

¹Assistant Professor, University of Michigan, jowei@umich.edu

²Corresponding Author - PhD candidate, Department of Political Science, Stanford University, dropp@stanford.edu

Televised advertising is an omnipresent feature of modern-day political campaigns. Ad spending has risen exponentially in the past two decades, with ad buys topping \$2.5 billion in 2008,³ and scholars anticipate the rise to continue in the aftermath of the Supreme Court's decision in the *Citizens United* case. Our analysis leverages unprecedented differences in the balance of Democratic and Republican ad spending throughout the 2008 general elections using a time-series precinct-level data set. We investigate a novel substantive question: how does the partisan balance of televised political advertisements impact voter turnout?

Past studies have produced mixed and divergent results regarding the effect of advertising on voter mobilization. Observational studies mainly have found a positive relationship [Franz, 2007, Freedman et al., 2004, Geer, 2006, Goldstein and Freedman, 2002, Hillygus, 2005], experimental studies have shown that negative ads can decrease turnout levels [Ansolabehere and Iyengar, 1995, Ansolabehere et al., 1994, 1999, Lau et al., 1999], and a third series of studies argues that political ads have a minimal impact on turnout. [Ashworth and Clinton, 2007, Clinton and Lapinski, 2004, Krasno and Green, 2008].

Together, these divergent findings suggest that campaign advertising's effect is not identical for all voters, thus presenting an important research puzzle: Why are some voters mobilized by ads, while others are demobilized? We develop a theory of asymmetric partisan mobilization that builds upon psychological research on decision-making.

To test our theory, we compile a time series precinct level database containing presidential voting returns and geographic boundary files at the precinct level for more than 30 states. Consistent with our theory, the original time series precinct level data demonstrates that exposure to Democratic presidential ads in 2008 and 2012 mobilized Democrats and demobilized Republicans, while GOP-sponsored presidential ads increased Republican turnout and

³<http://thecaucus.blogs.nytimes.com/2008/12/02/about-26-billion-spent-on-political-ads-in-2008/>

demobilized Democrats. GOP turnout in a heavily Republican precinct receiving a moderate treatment of ads disproportionately sponsored by John McCain will be 2.2 percentage points higher compared with a similar voting district receiving mainly Democratic ads. On the other hand, Democratic turnout in a left-leaning voting district exposed to mainly McCain ads will be 2.5 percentage points lower than a similar precinct exposed to nearly all Barack Obama-sponsored messages.⁴ The results are strongest in non-battleground states receiving spillover from contested states, reducing the possibility that campaigns are strategically targeting areas where they can expect to influence turnout.

Furthermore, individual level survey and experimental data demonstrates that these findings hold for exposure to both positive and negative campaign messages. Analyses of the 2004 National Annenberg Election Study (NAES) and a series of political advertising dial test experiments support our theory and complement the main findings. We merge Wisconsin Advertising Project data with the NAES survey data and harness the random timing of interviews within media markets. These models demonstrate that exposure to campaign ads among NAES respondents causes voters to perceive the sponsoring party's candidate more favorably while perceiving the opposition party's candidate less favorably. Our results illustrate that the impact of such one-sided flows is contingent on voter partisanship, not ad tone, and we present micro-level dial test evidence using advertisements from the 2012 presidential election that voters process negative and positive ads similarly.

This paper makes a series of contributions to the vast political advertising literature. First, we develop and test a theory of asymmetric partisan mobilization. We explain that ads sponsored by Democrats mobilize co-partisans and demobilize Republicans, while GOP-sponsored ads drive Republican turnout and demobilize Democrats. Second, and related,

⁴See Figure 4 on Page 32

we address the debate over divergent findings in observational studies of political advertising. Our original time-series precinct-level data demonstrates that null findings in previous observational studies can be explained by mobilization among the ad sponsor's co-partisans and demobilization among opposed voters. Third, we introduce two original precinct level, time-series datasets spanning three presidential election cycles, which allows us to isolate advertising's effect on various subgroups such as Democrats and Republicans for contemporary elections. The dataset will enable future scholars to study media effects or election administration policies in unusually detailed ways.

THE CONDITIONAL EFFECTS OF POLITICAL ADVERTISING

Past studies of voter mobilization have produced mixed results regarding the effect of televised political advertising on turnout. On one hand, scholars have argued that exposure to campaign advertising boosts turnout by providing voters with vital campaign information and by heightening voters' interest in an election [Franz, 2007, Freedman et al., 2004, Geer, 2006, Goldstein and Freedman, 2002, Hillygus, 2005] By contrast, experimental studies have shown that negative ads shrink the electorate by angering voters and increasing their cynicism about the electoral process [Ansolabehere and Iyengar, 1995, Ansolabehere et al., 1994, 1999, Lau et al., 1999]. Finally, a third series of studies finds that political ads have a minimal impact on turnout, arguing that ads are one of many stimuli in campaigns, that voters recognize the importance of elections in lieu of advertising and that impersonal communications forms such as TV advertising are less impactful [Ashworth and Clinton, 2007, Clinton and Lapinski, 2004, Krasno and Green, 2008].

Together, these past divergent findings suggest that campaign advertising's effect is not identical for all voters, thus presenting an important research puzzle: Why are some voters

mobilized by ads, while others are demobilized? Previous studies have discussed or found evidence for divergent advertising effects across voter subgroups [Ansolabehere and Iyengar, 1995, Hillygus, 2005, Krasno and Green, 2008, Krupnikov, 2011, Vavreck and Green, 2007].⁵ Krupnikov [2011], for example, finds that negativity demobilizes only when the person is exposed to it after selecting a preferred candidate and when the negativity concerns the selected candidate [Krupnikov, 2011].

These cumulative findings and insights from other literatures suggest the possibility that individual turnout decisions in response to political ads may hinge on partisan considerations. In the next section, we address this possibility by developing a new theory to explain how campaign advertising affects voter turnout in an *asymmetric partisan fashion*.

A THEORY OF ASYMMETRIC PARTISAN MOBILIZATION

This paper introduces a theory that clarifies how partisan voters respond to campaign messaging. Overall, we argue that the impact of advertising on voter turnout depends on both the partisan balance of the message flow and the partisanship of the voter. This section

⁵ Hillygus [2005] finds that political advertising’s estimated effect varies with the voters’ prior intention of voting. Specifically, Hillygus [2005] discusses the possibility that campaign messages may mobilize some but demobilize others, resulting in no net effect: “Aggregate analyses may mute campaign effects because some individuals might be deciding to vote while others are simultaneously deciding not to vote” [Hillygus, 2005, p. 52].

Vavreck and Green [2007] find that *Rock the Vote* ads are effective in boosting turnout within a targeted audience – young adults – while exerting only a mild impact among voters in other age groups.

In *Going Negative*, Ansolabehere and Iyengar [1995] show that negative ads may mobilize some voters while demobilizing others. They find that Democrats are more receptive to positive advertising while Republicans are more receptive to negative appeals: “Our experiments demonstrate that how one reacts to negative and positive advertising depends on one’s views of government” [Ansolabehere and Iyengar, 1995, p. 1033 eBook].

Krasno and Green [2008] similarly argue that advertising may produce zero aggregate effect on turnout because “individuals may move in opposite directions that essentially cancel each other out, leaving the impression of no net effect.” [Krasno and Green, 2008, p. 247-48].

describes psychological research on decision-making, then discusses the political science science literature on campaign messaging and finally details our predictions for the conditional impact of campaign messages.

Psychological research has shown that an individual's decision process contains two distinct stages: differentiation and consolidation [Svenson, 1992]. During differentiation, a decision maker gathers information, considers alternatives and makes a selection [Svenson, 1992, p.143]. During consolidation, an individual weighs the costs and benefits to implementing a selection [Busemeyer and Townsend, 1993] and then either implements or fails to implement an action [Gollwitzer, 1996]. Individuals pay attention to new information even after making an initial selection [Frey and Rosch, 1984] and there are myriad opportunities for persuasion throughout the process: "post-decision external events and outcomes and internal changes in the decision maker himself or herself could suggest that another decision would have been better" [Svenson, 1992, p.144].

The decision process described above is particularly relevant to voter choice during political campaigns because differentiation and consolidation may span many months, voters may have limited information about numerous alternatives, many voters hear two-sided message flows, and voters face a direct cost to implement their decision by going to the ballot box [Krupnikov, 2011].

In recent campaigns, an unprecedented number of voters have been exposed to one-sided message flows from their favored side or from the other side. How do partisans react to messages from their favored side compared with messages from the other side? While most scholars agree that voters are likely to accept one-sided information flows that support their political predispositions, or basic beliefs, the academic literature has yielded divergent findings on how voters respond to messages from the other side. Some scholars have found that

partisans ignore or resist messages from the other side. Zaller [1992] argues that voters accept (and internalize) messages consistent with their political predispositions, but resist messages that are inconsistent with their basic beliefs.⁶ Since Zaller argues that voters make decisions by weighing supporting and opposing considerations, messages from the other party will not be considered and will be less influential in partisans' voting decisions.

By contrast, some scholars have argued that partisans process messages from the other side and that these messages reinforce and energize their views [Arceneaux and Kolodny, 2009, Campbell et al., 1980, Lau and Redlawsk, 2001]. As early as The American Voter, scholars have observed that partisanship serves as “a perceptual screen through which the individual tends to see what is favorable to his partisan orientation” [Campbell et al., 1980, p. 133]. Similarly, Arceneaux and Kolodny [2009] find that voters use endorsement messages from the other side as negative voting cues. Specifically, Republicans who see a liberal interest group endorse a Democratic candidate are more likely to vote against that candidate than are voters who see no endorsement message.

Neither view fully captures the impact of one-sided message flows. We build on previous psychological and political science research to argue that one-sided flows from the other side can persuade voters by affecting their cost-benefit analysis. Zaller [1992] has argued that only politically sophisticated voters internalize or resist campaign messages based on alignment with their partisan values; less sophisticated voters are likely to accept message flows regardless of the source [Zaller, 1992, p. 24]. Therefore, previous scholars may have underestimated the persuasiveness of one-sided messages from the other side.

⁶Political predispositions are stable, individual-level traits that regulate the acceptance or non-acceptance of the political communications the person receives [Zaller, 1992, p. 22]

Our theory predicts that the impact of advertising on voter turnout depends on both the partisan balance of the message flow and the partisanship of the voter. The utility an individual receives from voting is a function of the perceived difference between the candidates [Riker and Ordeshook, 1968], and the partisan balance of messaging either expands or reduces voters' perceived difference between the alternatives. Exposure to one-sided ad flows sponsored by a co-partisan (i.e., Democratic sponsor and Democratic voter) strengthens the voters' preference for the chosen candidate. Meanwhile, exposure to ads sponsored by the opposite party (i.e., Republican sponsor and Democratic voter) slightly weakens the voter's preference for his chosen candidate and therefore reduces the perceived distance between the candidates. We assume that Democratic (Republican) voters initially prefer the Democratic (Republican) candidate.

Consider a Democrat residing in a media market that receives a one-sided flow of Democratic ads. The messages are internalized because they are aligned with the individual's political predispositions, improve this individual's impression of the Democratic candidate and strengthen his preference for the Democrat over the Republican. Overall, the one-sided flow of ads sponsored by a co-partisan accentuates differences between alternatives and provides added incentive to vote.

Now consider that same Democrat who resides in a market that receives a one-sided flow of Republican ads. These messages will be partially but not fully resisted based on the voter's political predispositions and political sophistication [Zaller, 1992]. The uncontested flow of ads sponsored by the other party may decrease the favorability of the Democratic candidate and increase the favorability of the Republican. This reduction in the perceived difference between the candidates concomitantly reduces the utility one gains from voting.

Finally, consider a Democrat who receives a two-sided, balanced flow of Republican and Democratic campaign ads. The Democrat will tend to accept messages consonant with his political views but partially reject those messages inconsistent with his partisanship. This will result in minor changes in the perceived distance between candidates and a negligible effect on voter turnout levels.

The reverse holds for GOP voters. Viewing Democratic ads weakens their preference for the GOP candidate, viewing Republican ads strengthens their preference for the Republican and a two-sided message flow likely has a minimal impact.

Our theory builds on and extends Zaller [1992] and Krupnikov [2011] by examining how the partisan dynamics of advertising can mobilize or demobilize voters. Krupnikov (2011) finds that advertising in campaigns is demobilizing in two situations: 1) if an individual is exposed to negativity after selecting a candidate and 2) if the negativity is about his selected alternative. We build upon this logic by arguing one-sided message flows sponsored by one's selected alternative will mobilize voters. However, unilateral message flows sponsored by someone other than their selected candidate demobilize voters and two-sided message flows have a minimal impact on turnout.

EXPLOITING MEDIA MARKET SPILLOVERS

Krasno and Green [2008] examine the impact of televised political ads on voter turnout using a natural experiment created by the idiosyncratic shapes of media markets in the United States. Televised political ads generally are aired at the designated market area (DMA), which do not strictly follow state boundaries. These spillovers lead to significant intrastate variation in advertising treatments - residents in one media market may be exposed to thousands of ads while those in a neighboring media market in the same state may see

none. This approach offers analytical advantages over models that pool across states, as it controls for the competitiveness of a state and other statewide contests.

Their main models regress voter turnout on media exposure, past turnout and other campaign-related variables. Contrary to previous observational studies that find a positive link between ad exposure and turnout [Franz, 2007, Geer, 2006], the authors demonstrate that political advertisements exert no impact on turnout: “Our analysis of the natural experiment created by these circumstances [markets spilling over into multiple states] reveals that television advertising by the presidential candidates during the general election had a minimal effect on voter turnout in 2000. Even taking into account the huge expenditures on TV, presidential ads account for only a fraction of the turnout differential in battleground and non-battleground states” [Krasno and Green, 2008, p. 258]. Their findings are robust to an array of statistical checks.

The foregoing analysis extends the natural experiment that Krasno and Green exploit in two important ways. First, their unit of analysis is the media market by state while we use voting precincts as our unit. Thus, we have tens of thousands of observations compared with 128 in their analysis. Second, we incorporate precinct-level covariates such as partisanship and underlying voter characteristics into our models.

DATA & VARIABLES

We merge together voting precinct-level time series election data, measures of advertising exposure, voting district and designated market area (DMA) shape files and Census demographic data. This section details each source in turn.

Elections data. We collected voting precinct level 2004 and 2008 election returns from individual states. The data contains the total number of votes cast, along with raw vote

counts by presidential candidate.⁷ We matched across election cycles manually and then merged the voting precinct datasets with 2010 U.S. Census voting district boundary files. This merge provided spatial locations and augmented the file with basic demographics such as population and voting age population.⁸ We obtained 2010 voting district boundary files from the U.S. Census Bureau and obtained 2007 designated market area shape files produced by the Nielsen Company.⁹

We attempted to collect precinct level data for the entire country and include only states where 2004 and 2008 shape files and election returns were available. The cumulative data file contains election returns for the following states: Delaware, Georgia, Idaho, Illinois, Indiana, Kansas, Minnesota, North Carolina, New Hampshire, Oklahoma, South Carolina, Vermont and Wisconsin. States in the cumulative file met the following inclusion conditions: they had historical precinct level election returns from 2004 and 2008, they contained two or more designated market areas (DMAs), at least one DMA received a significant amount of per capita ad spending in 2008, and a regression of November 2008 turnout on November 2004 explained at least half of the overall variance.¹⁰

We independently obtained voting precinct level 2008 and 2012 election returns from Catalist, a national voter file database. The data contains the total number of votes cast and party registration figures.¹¹ We obtained precinct level data for the 31 states with party registration and then linked the election returns with designated market area shape files. We included states that had precinct level election returns from 2008 and 2012, contained two

⁷Variables include total votes cast and raw vote counts for John Kerry, George W. Bush, Barack Obama and John McCain.

⁸Precinct level data for most states in the country can be found at the Harvard Election Data Archive (<http://projects.iq.harvard.edu/eda/>)

⁹Voting districts were assigned to a single designated market area based on a spatial overlay and join.

¹⁰States with lower r-squared measures likely experienced re-precincting or precinct consolidation between 2004 and 2010.

¹¹We use party registration figures as our measure of precinct partisanship.

or more designated market areas, and included at least one DMA that received a significant amount of advertising in 2012.¹²

Media exposure. The main political advertising exposure measure is per capita presidential ad spending across the approximately 200 designated market areas in 2008.¹³ We constructed separate measures for Republican, Democratic and overall spending per capita, along with the fraction of Republican sponsored advertising as a proportion of total spending, as shown in Table 1 on Page 28.¹⁴ There is a clear right skew in the data: most media markets receive little to no advertising while a number of markets in key battleground states receive enormous treatments of political advertising. Markets such as Philadelphia attracted spending of more than \$5 per resident during the 2008 campaign. Figure 1 on Page 27 illustrates that there is tremendous variation in the partisan balance of ads across media markets in 2008.

[Figure 1 about here]

¹²The main political advertising exposure measure is total ad spending across the top 103 designated market areas in 2012. Political advertising exposure data come from Kantar Media during the 2012 election cycle and cover the period September 1, 2012 to November 30, 2012. We constructed separate measures for Republican, Democratic and overall political advertising spending. See the next subsection for a fuller discussion of our media exposure variable.

¹³Political advertising exposure data come from the Campaign Media Analysis Group during the 2008 election cycle and cover the period April 3, 2008 to November 5, 2008. The data were reported on this Web site <http://elections.nytimes.com/2008/president/advertising/index.html>. The Wisconsin Advertising Project will release a broader set of ad frequency data following the 2012 general election. Our measure is highly correlated with the 2008 Presidential election data released from the Wisconsin Advertising Project.

¹⁴Total advertising spending, as reported in the New York Times, was divided by the number of voting age residents in a designated market area. We multiplied this ratio by 1,000 to create a measure of ad spending per 1,000 voting age residents in a precinct. Our dataset includes spending by Barack Obama, John McCain and the Republican National Committee. Out of the \$450 million spent on televised advertising between April 3, 2008 and November 5, 2008, Barack Obama, John McCain and the Republican National Committee account for \$398 million, or 88 %. The Obama campaign spent \$236 million, compared with \$126 million for the McCain campaign and \$36 million for the Republican National Committee. Spending by the Democratic National Committee was negligible (\$600,000).

Previous measures of ad exposure in the literature have included survey self-reports of exposure, the total number of ads purchased in a market and Gross Ratings Points (GRPs).¹⁵ Our measure, per capita spending, is highly correlated with GRPs and advertising counts.¹⁶

[Table 1 about here]

RESEARCH DESIGN

Our research design leverages intrastate variation in ad volume resulting from media markets that cross state borders [Krasno and Green, 2008]. Above and beyond that, residents in many non-competitive states such as Illinois or South Carolina receive advertising treatments because they live in a media market spanning multiple states.¹⁷

We illustrate this high intrastate variation using Illinois as an example. Illinois has not been a battleground state since 1988, when George H.W. Bush beat Michael Dukakis by two percentage points.¹⁸ Yet, it receives massive and heterogeneous political advertising treatments across its 10,000+ voting precincts because it borders battleground states such as Indiana, Iowa, Missouri and Wisconsin.

Figure 2 displays spillover at the DMA level in Illinois in 2008. The left panel displays the variation in political advertising spending throughout the 2008 presidential contest. The darkest green markets receive the highest overall ad spending. Markets in Illinois that bordered battleground states received significant political advertising treatments. Five DMAs

¹⁵One GRP is equal to 1 percent of the viewing audience; therefore, 10,000 GRPs is equivalent to each person in the market viewing the ad 100 times.

¹⁶During the 2004 presidential race, the correlation between per capita ad spending and Gross Ratings Points was 0.58 and the correlation between per capita spending and total ads counts was 0.58. We have replicated Krasno and Green [2008] with the per capita measure and reach similar conclusions about the impact of ads on voter turnout.

¹⁷For example, Charlotte is in North Carolina & South Carolina, Davenport is in Iowa & Illinois, and Philadelphia is in Delaware, New Jersey & Pennsylvania.

¹⁸Democrats received 62% of the vote in 2008, 55% in 2004, 55% in 2000, 54% in 1996 and 49% in the three-way contest in 1992.

received at least \$1 million dollars in TV ad spending: Chicago, Davenport, Evansville, Paducah, and St. Louis. On the other hand, Peoria-Bloomington and Champaign/Springfield, which are located in the state's interior, received negligible ad spending.

[Figure 2 about here]

The right panel in Figure 2 illustrates the variation in treatments measured by the partisan balance between Republican and Democratic ad spending. Markets shaded red received all or nearly all Republican sponsored ads, markets shaded blue received a one-sided flow of Democratic ads, and markets shaded purple received approximately equal numbers of Republican and Democratic ads.

For example, Democrats campaigned intensely in Indiana and sponsored more than three quarters of ads in markets such as Chicago (100% Dem), Evansville (75% Dem) and Terre Haute (79% Dem); the two parties spent about the same amount of money in markets bordering Missouri, such as Paducah (53% Dem) and St. Louis (52% Dem). Finally, Republican ads inundated markets bordering Iowa and northern Missouri, such as Davenport (11% Dem) and Quincy (31% Dem).

The precinct-level elections data presents thousands of cases for the analysis. In the St. Louis market alone, 745 Illinois voting precincts received ads intended for Missourians, while in the Davenport market, 448 voting precincts in Illinois saw ads aimed at Iowans.

The pattern of overlapping media markets exhibited in Illinois generalizes to the entire country, as shown in Panel A of Figure 3 on Page 30. DMAs that span across states are shaded gray, while markets wholly contained within a single state are shaded white.

[Figure 3 about here]

Panel B of Figure 3 displays the variation in ad volume for the continental United States. Darker areas received more advertising spending in 2008. While ad spending is concentrated

in battleground states such as Colorado, Ohio and Pennsylvania, markets within states receive dramatically different volumes of advertising.

Finally, Panel C of Figure 3 displays the striking amount of variation in the partisan balance, the relative ratio of Democratic and Republican political advertisements aired locally, across the Continental United States.

MODELS

This section tests our theory of asymmetric partisan mobilization with three sets of least squares models. The main models regress voter turnout on precinct level partisanship, political advertising exposure, interactions of partisanship and ad exposure and a few controls.

The primary model specification is

$$T_{08i} = \alpha + \beta_1 * T_{04i} + \beta_2 * bushshare_i + \beta_3 * Dpc_i + \beta_4 * Rpc_i + \beta_5 * (bushshare_i * Dpc_i) + \beta_6 * (bushshare_i * Rpc_i) + u_i$$

where T_{08i} refers to the 2008 voter turnout rate in voting precinct i , T_{04i} is previous presidential voter turnout, $bushshare_i$ is the percent of total votes received by George W. Bush in the 2004 election, Dpc_i is per capita ad spending by the Obama campaign in the market in 2008, Rpc_i is per capita ad spending by the McCain campaign, $bushshare_i * Dpc_i$ is an interaction term capturing the impact of Democratic ad spending as a function of the underlying partisanship of a precinct, $bushshare_i * Rpc_i$ is an interaction term capturing the impact of Republican ad spending as a function of the underlying partisanship of a precinct, and u_i represents unexplained causes of 2008 voter turnout.

Our theory predicts that the coefficients on b_5 , the interaction term coefficient, will be negative, indicating that Democratic ads boost turnout in Democratic precincts but decrease

turnout in Republican strongholds. Alternatively, we expect that b_6 will be positive, indicating that Republican ads boost turnout in Republican precincts but decrease turnout in Democratic districts.

Columns 1 & 2 in Table 2 on Page 31 offer strong support for our theory. In Model 1, which includes all states with party registration, the interaction terms are both significant, in the predicted direction and substantively important.¹⁹ The results are stronger still for Model 2, which contains only battleground states receiving spillover ad treatments.

[Table 2 about here]

The impact of political ad spending on voter turnout is contingent on the underlying partisanship of a district. Consider a highly Republican district receiving a moderate advertising treatment where Republicans sponsor 75% of all ads.²⁰ Overall turnout will be 2.2 percentage points **higher** in this precinct compared with a precinct with similar partisanship that receives 75% Democratic ads (.612 versus .591). Nearly unilateral Republican ad flows boost Republican turnout in GOP districts.

Now consider a very Democratic precinct exposed to a moderate advertising treatment where Democrats sponsor 75% of ads.²¹ Voter turnout will be 2.5 percentage points higher (.577 versus .552) in this district compared with one receiving 75% of ads sponsored by Republicans, or out-partisans.

Figure 4 on Page 32 presents a graphical display of the relationship between precinct partisanship, voter turnout, ad volume and the ratio of Democratic to Republican expenditures for precincts that receive low, moderate and high volumes of advertising.

¹⁹We have included candidate visits by DMA for Barack Obama, Joseph Biden, John McCain and Sarah Palin as independent variables in separate models. We do not report these coefficients because the inclusion of the visits variable does not impact the main coefficients.

²⁰Exact characteristics: Bush vote is .75, median 2004 voter turnout, ad spending is \$2 per capita.

²¹Exact characteristics: Bush vote is .25, median 2004 voter turnout, ad spending is \$2 per capita.

[Figure 4 about here]

The left panel displays the relationship for a market that receives a low level of ad spending, and the five lines represent different ratios of Democratic to Republican ad spending. Overall, turnout in Democratic precincts - areas with a low Bush voteshare - is slightly higher when nearly all ads are sponsored by Democrats compared with when most ads are sponsored by Republicans. Conversely, turnout in Republican precincts - areas with a high Bush voteshare - is slightly lower when nearly all ads are sponsored by Democrats compared with when most ads are sponsored by Republicans. The effect sizes are magnified dramatically in the middle panel, which represents a moderate ad volume treatment, and the far right panel, which illustrates a large ad volume treatment. In fact, in the right panel, turnout in Republican precincts (Bush share = .75) is approximately 10 percentage points higher when residents only receive Republican ads, compared with the opposite extreme. Effects sizes are slightly smaller but still substantively important in Democratic precincts.

The second set of models provides a direct test of whether the ratio of Democratic to Republican ads affects turnout. This model specification is

$$T_{08i} = \alpha + \beta_1 * T_{04i} + \beta_2 * bushshare_i + \beta_3 * adrepshare_i + \beta_4 * (bushshare_i * adrepshare_i) + u_i$$

where $adrepshare_i$ is the proportion of total advertising spending in a designated market area that is purchased by Republicans, with an added interaction term between the 2004 Republican vote share and the proportion of total ads purchased by the GOP presidential candidate. The results from Models 3 & 4 in Table 2 mimic those of the previous specifications - Democrats are mobilized by Democratic ad spending in left-leaning areas, while Republicans are mobilized by GOP spending in Republican areas.

Models 5 & 6 in Table 2 provide a direct test of whether Democratic and Republican televised political ads affect turnout among partisans. The two model specifications are

$$\text{Obama}_i = \alpha + \beta_1 * \text{Kerry}_i + \beta_2 * \text{Dpc}_i + \beta_3 * \text{Rpc}_i + u_i$$

$$\text{McCain}_i = \alpha + \beta_1 * \text{Bush}_i + \beta_2 * \text{Dpc}_i + \beta_3 * \text{Rpc}_i + u_i$$

where Obama_i is the proportion of voting age residents who cast a ballot for Barack Obama in 2008 and Kerry_i is the proportion of voting age residents who cast a ballot for John F. Kerry in 2004. McCain_i is the proportion of voting age residents who cast a ballot for John McCain in 2008 and Bush_i is the proportion of voting age residents who cast a ballot for George W. Bush in 2004.

The number of votes received by Obama increases when there is more Democratic ad spending and decreases significantly when there is more GOP spending. Similarly, the number of votes received by McCain increases when there is more Republican ad spending and decreases significantly when there is more Democratic spending. These models provide another demonstration that the frequency of Democratic and Republican ads in a market affects voter turnout across both parties.

Columns 1 & 2 in Table 3 replicate the first set of models using election returns from 2012 rather than 2008 and provide additional support for our theory. In Model 1, which includes all states, the interaction terms are both significant, in the expected direction and larger than the main effect of political advertising. The results are significantly stronger still for Model 2, which contains only battleground states receiving spillover ad treatments.²² The impact of political ad spending on voter turnout is contingent on the underlying partisanship of a district. Consider a highly Republican district receiving a moderate advertising treatment

²²These non-battleground states include Arizona, Delaware, Kentucky, Massachusetts, Maryland, Nebraska, New Jersey, South Carolina and Wyoming. The battleground states include Colorado, Florida, Iowa, North Carolina, Ohio and Pennsylvania.

where Republicans sponsor 60% of all ads. Overall turnout will be 2.8 percentage points higher in this precinct compared with a precinct with similar partisanship that receives 40% Democratic ads. Nearly unilateral Republican ad flows boost Republican turnout in GOP districts. Now consider a very Democratic precinct exposed to a moderate advertising treatment where Democrats sponsor 60% of ads. Voter turnout will be 1.4 percentage points higher in this district compared with one receiving 60% of ads sponsored by Republicans, or out-partisans.

Models 3 & 4 in Table 3 directly test whether the ratio of Democratic to Republican ads influences turnout. The results are highly similar to Models 3 & 4 in Table 2 and particularly strong in non-battleground states that receive advertising spillovers. In Model 4, for example, Democrats are mobilized by Democratic ad spending in left-leaning areas, whereas Republicans are mobilized by GOP spending in Republican areas.²³

The results from the Models in Tables 2 & 3 illustrate that turnout is contingent on voter partisanship and the partisan balance of advertising flows.²⁴

²³The results in Table 3 are slightly less consistent than those obtained in 2. One explanation for this is that there was significantly less variation in the the adrephare variable. Mitt Romney spent between 35% and 65% of total ad dollars in nearly all of the markets.

²⁴ The aggregate level analyses presented above do not distinguish between the impact of positive and negative advertisements. We address this in a number of ways. First, the next section presents extensive individual level data merged with detailed Wisconsin Advertising Project frequencies. Second, micro-level evidence from a separate 1,200 person political advertising experiment administered in Spring 2012 demonstrates that partisans react similarly to both positive and negative ads.

Respondents watched a series of political advertisements and used a dial to rate how favorably they felt toward the sponsor. Partisan viewers rapidly move away from the default position and they exhibit similar patterns of movement for both positive and negative advertisements. Iyengar, Jackman and Hahn (2008) conducted dial tests during 2006 U.S. Senate elections and obtained similar results: “These summaries of the data strongly suggest that partisan reaction to the partisan source of particulars ads is the most politically interesting feature of the data...negative ads are shown in Figure 12 with the black line, and generate trajectories in polarization that are generally indistinguishable from positive ads sent by the same partisan sponsor” (Iyengar, Jackman and Hahn 2008, p 18-19). Overall, these findings give us confidence that partisans’ reactions to political ads do not differ as a consequence of the message tone.

INDIVIDUAL LEVEL DATA - ANNENBERG SURVEY

What is the individual-level mechanism by which campaign ads mobilize a candidate's partisan supporters while demobilizing opposition voters? The foundational premise of our theory is that exposure to ads sponsored by a co-partisan causes a viewer to perceive the sponsoring candidate more favorably. This section directly tests this micro-foundational theory by exploiting the random temporal variation in a national, cross-sectional survey.

From October 2003 to November 2004, the National Annenberg Election Survey (NAES) interviewed a cross-sectional, random sample of U.S. adults, with interviews occurring on 399 different dates. We obtained information on the date of each interview and the media market (DMA) in which each interviewee resides. We then merged this survey information with Wisconsin Advertising Project data on presidential campaign ads that aired in each media market and on each date during February 2003 to November 2004. We analyze how each interviewee's assessments of the two presidential candidates, George W. Bush and John Kerry, were affected by the partisan balance of campaign ads that aired locally during the 30 days prior to the interview.

Key Variables. The NAES asked respondents to rate Bush and Kerry independently on a scale of zero to 10, with higher ratings indicating a more favorable assessment of each politician.²⁵ Using an ordered logit model, we regress the favorability rating of each politician onto the number and partisan balance of presidential ads that aired in the interviewee's DMA during the previous 30 days, including the day of the interview. For each presidential ad, Wisconsin Advertising Project researchers coded the party that sponsored the ad and identified whether the ad's tone constituted a negative attack on the opposing candidate.

²⁵The NAES asks respondents: "On a scale of zero to 10, how would you rate George W. Bush?" Zero means very unfavorable, and 10 means very favorable. Five means you do not feel favorable or unfavorable. Of course you can use any number between zero and 10. An analogous question is asked regarding John Kerry.

For each NAES interviewee, we counted the number of negative and non-negative ads that each of the two parties sponsored locally during the previous 30 days.²⁶

Methodological Issues. An important methodological concern arises in inferring the causal direction of the relationship between campaign ads and assessments of candidates: Parties strategically target their campaign ads to particular DMA markets and at particular times on the basis of electoral considerations, which may correlate with the pre-existing candidate preferences of viewers in each DMA. We take the following steps to overcome this concern:

First, we include DMA fixed effects in our models in order to compare respondents within the same DMA who were interviewed at different times and, therefore, had likely viewed a different set of ads during the previous 30 days. Hence, the premise behind this empirical approach is that the ads viewed by a May 2004 respondent might be meaningfully different than the ads viewed by a June 2004 interviewee from the same DMA. Even though partisan ads are strategically targeted across DMA's and across time, the fact that a particular NAES respondent was interviewed in May rather than in June is due to random chance. Therefore, variation in potential ad exposure among the NAES respondents within any particular DMA is random.

Figure 5 on Page 34 illustrates an example of such variation by plotting the partisan balance of ads aired in the Tampa DMA on each of the 250 days prior to the November 2004 election. The plot reveals, for example, that ads during mid March and late May tilted Republican, whereas ads during late June and July were heavily Democratic. Late August and early September brought another spike in Republican ads, while most days during the month before the November election had a fairly even partisan balance in ads. Hence, even

²⁶We created separate variables counting the number of ads that each of the two parties sponsored during the previous 60 and 100 days. The coefficients for variables in these models are slightly smaller but, in general, still statistically significant.

a single DMA can experience significant variation in the partisan balance of televised ads, depending on which day a NAES respondent was interviewed.

[Figure 5 about here]

Additionally, our models control for each NAES respondents' partisan identification and self-reported political ideology, which should strongly affect respondents' favorability ratings of Bush and Kerry. The NAES asked the partisan identification and ideology questions without reference to any particular candidate or political campaign, so we expect respondents' answers to these questions to be less influenced by recently viewed campaign ads. Finally, we control for the number of days until the election, as we expect that voters solidify their perceptions of the two candidates as the election draws closer. Our main ordered logit model is:

$$\text{logit}[Bush\text{favorability}_i] = \begin{cases} \alpha + \beta_1(NegativeDemAds_i) + \beta_2(NonNegativeDemAds_i) \\ +\beta_3(NegativeGOPAds_i) + \beta_4(NonNegativeGOPAds_i) \\ +\beta_5(DaysBeforeElection_i) \\ +\gamma_1(DMA_i) + \gamma_2(Partisanship_i) + \gamma_3(Ideology_i) \end{cases}$$

where $NegativeDemAds_i$ is a count of Negative ads sponsored by Obama in the previous 30 days in the markets, $DaysBeforeElection_i$ is the number of days before the election, and DMA_i represents fixed effects for the media market in which the respondent resides. There are similar count variables for Non-negative Democratic Ads ($NonNegativeDemAds_i$), Negative GOP ads ($NegativeGOPAds_i$), Non-negative GOP ads ($NonNegativeGOPAds_i$), along with fixed effects for Partisanship ($Partisanship_i$) and Ideology ($Ideology_i$). We estimate a similar model to predict respondents' favorability ratings of John Kerry, and a third

model predicts each respondents' difference in favorability ratings of Bush and Kerry, as displayed in Table 4 on Page 35.

Results. Estimates from Table 4 on Page 35 empirically support our theory's premise that partisan ads have asymmetric effects on voter assessments of candidates - exposure to Republican ads increases the Republican candidate's favorability and decreases the Democratic candidate's perceived favorability. The first two columns in Table 4 predict Bush favorability ratings. The airing of 2,000 Republican ads in a market typically boosts Bush favorability by two points (on a 10 point scale), while a similar airing of Democratic ads reduces Bush favorability by one point. Models 3 & 4 predict Kerry favorability, while Models 5 & 6 predict the difference in favorability between Bush and Kerry.²⁷

The airing of both Democratic attack ads and non-negative ads significantly increases voters' favorability ratings of Kerry and decreases their rating of Bush. Meanwhile, both Republican negative ads and non-negative ads have the opposite effects, increasing voters' rating of Bush while decreasing their rating of Kerry. In fact, for each party, there is no statistical difference between the effect of a negative ad and the effect of a non-negative ad. Together, these results illustrate that regardless of the negative or positive tone of a campaign ad, the partisan sponsor of the ad determines the ad's effect on voter assessments of candidates.

[Table 4 about here]

Models 7 through 10 in Table 5 on Page 5 display regressions for Republicans and Democrats, respectively, that generally support the precinct level findings and the previously discussed Annenberg tables. The first two models examine the relationship between ad exposure and Bush favorability among Republicans and Democrats, respectively, while the latter two

²⁷Thresholds for each of the models appear in an online appendix.

models regress Kerry favorability on ad exposure. Model 7, for example, regresses Bush favorability on political ad exposure for Republicans and suggests that Republicans who view Democratic ads have less favorable opinions of Bush while those exposed to Republican ads have more favorable opinions. Similarly, Model 10 shows that Democrats who view Democratic ads hold more sanguine views of Kerry and have more negative opinions of Bush.

[Table 5 about here]

The final sets of models, displayed in Columns 11-13 of Table 5, show that one-sided flows of GOP ads improved Bush's favorability rating, depressed Kerry's rating, and resulted in a significant increase in the favorability difference between the two candidates among partisans. Democratic ad flows have the opposite effect, resulting in lower Bush ratings and higher favorability for Kerry.

These micro-foundational dynamics of voter assessments help to explain the theoretical mechanism driving the asymmetric partisan turnout effects we find at the aggregated precinct level. Voters who view ads sponsored by their preferred candidate respond by preferring the candidate even more intensely, thus increasing their motivation to turn out in November. But partisan voters who view ads sponsored by the opposing party's campaign become slightly more indifferent between the two candidates, thus weakening their motivation to turn out and vote. Hence, advertising's effect on turnout is conditional on whether the party sponsoring the ad is aligned with the voter's own partisanship.

CONCLUSION

This paper makes four contributions to the study of political advertising and voter behavior. First, our theory and empirical results help to resolve a persistent research puzzle in

the literature concerning the seemingly inconsistent effects of negative ads on voter demobilization. While previous research had identified the possibility of decreased turnout as a consequence of negative advertising [Ansolabehere et al., 1999], evidence for this hypothesis has been generally mixed in studies that examine voters aggregated across the ideological spectrum [Lau et al., 2007]. Our theory and empirical results provide an explanation for these mixed findings: Political advertisements generally have a partisan tone, and thus they cause asymmetric partisan effects on turnout. An Obama-funded ad, for example, will generally mobilize core Democrats while demobilizing Republicans, so the net effect on aggregate turnout across the entire electorate is nebulous. At the individual level, the turnout effect depends on the partisan identity of the viewer, as well as the partisanship of the ad sponsor. Our geographic, precinct-level data produces robust evidence for our theory by isolating the effect of partisan ads within heavily Democratic and heavily Republican precincts.

Hence, our paper's second contribution is to qualify the previous literature's argument that political ads may stimulate voter turnout (e.g., Goldstein and Freedman 2002; Hillygus 2005). Our theory of asymmetric partisan mobilization qualifies this previous argument by explaining why ads mobilize voters only when there is a partisan congruence between the voter and the party that sponsors the ad. Our precinct-level and individual-level data confirm our theory's hypothesis, demonstrating that Republican ads stimulate turnout only among Republican voters by strengthening their preference for the Republican candidate over the Democratic candidate. Conversely, Democratic ads mobilize turnout only among Democratic voters by strengthening their preference for the Democratic candidate over the Republican opponent. Moreover, these partisan effects on turnout occur regardless of whether or not the ad is negative in tone. In summary, it is the partisanship of the viewer and the partisanship

of the ad's sponsor, not the tone of the ad, that determines whether the ad stimulates or depresses turnout.

Third, our theoretical logic and empirical findings help to explain how political advertisements are strategically targeted to partisan voters even though ads cannot be geographically targeted within a single media market (DMA). From the strategic perspective of a candidate, any turnout demobilization caused by an advertisement must necessarily be targeted to one's partisan opponents in order to maximize electoral effectiveness. Demobilizing one's own partisan base would be self-defeating, while decreasing turnout among persuadable or swing voters would have only limited or mixed electoral impact. But the need for such targeting creates a logistic puzzle for campaigns, as television advertisements cannot be targeted at a level lower than the DMA. Because of the geographic size of and political heterogeneity within most DMA's, targeting ads at the DMA level is generally an overly blunt method of reaching a target partisan audience.

Instead, our theory and empirical findings suggest that voters' partisan biases serve as the filter that allows for campaign ads to produce their intended targeted effects. The precincts we examine include areas treated with predominantly McCain ads, predominantly Obama ads, a balance of McCain and Obama ads, and no advertising at all. We find that for both parties, ads mobilized primarily partisan supporters, while the demobilizing effects of ads were generally confined to opposite-party voters. Hence, our findings suggest that presidential ads during 2008 performed such partisan targeting quite effectively, even though most DMA's include a heterogeneous balance of both Republican and Democratic neighborhoods.

Finally, we have articulated and explored a new set of research questions that emerge from the recently changing dynamics of campaign ad targeting. Traditionally, in past presidential

elections, the two major political parties have generally targeted their advertising resources to the same battleground states, and thus the same set of media markets. But the historic 2008 campaign witnessed the introduction of a new geographic divergence in the television advertising strategies of the major presidential candidates, due in part to Obama's strategic focus on mobilizing core Democratic areas. The Obama and McCain campaigns targeted divergent sets of DMA's with their advertising budgets, resulting in significant variation in the partisan balance of campaign ads across DMA's. Hence, as Figure 5 illustrates, some media markets with significant ad volumes saw a predominantly Democratic balance of ads, while other markets were inundated with a heavily Republican balance of ads.

This recent important shift in the geography of partisan advertising strategies motivates a new research agenda for scholars of campaigns and voting: How does exposure to a partisan imbalance of political ads affect voters assessments of candidates, and how does it affect their motivation to vote? Our theory of asymmetric partisan mobilization, corroborated by our precinct-level results comparing 2008 and 2004 turnout, explains why the partisan balance of ads airing in a media market determines whether advertising has a positive or negative effect on voter turnout. We show that a local inundation of ads can mobilize voters if the partisanship of the ads' sponsor matches the partisanship of the voters. But regardless of their positive or negative tone, advertisements aired by a political party can demobilize turnout among the opposite party's voters. Hence, the dynamics of the historic 2008 election compels scholars of political campaigns to renew focus on partisanship in the study of advertising's effect on voter participation.

FIGURE 1

Histogram of Partisan Balance in Campaign Ad Spending

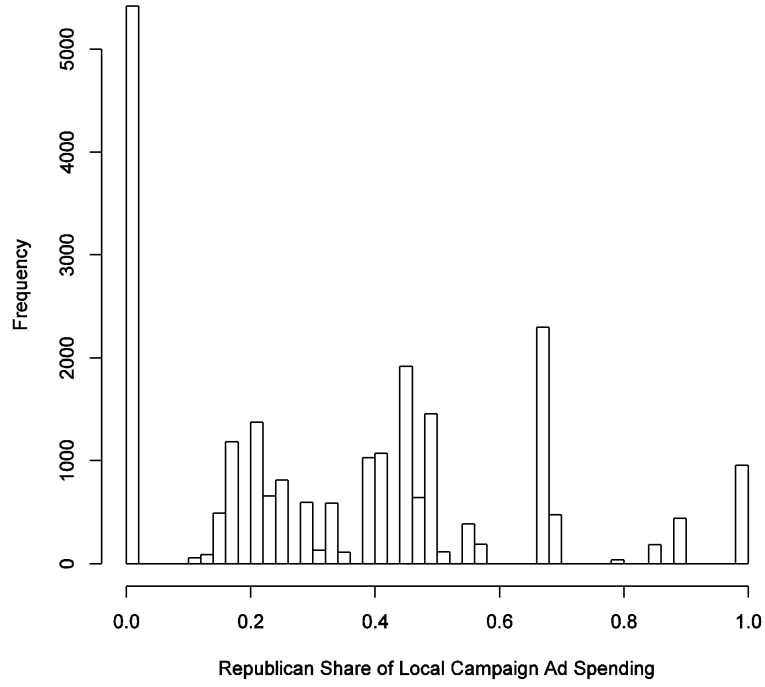


TABLE 1. Descriptive Statistics for media exposure variables

	Min.	1st Q	Mean	3rd Q	Max
Total spending (\$ per capita)	0	0	1.26	2.61	7.03
GOP spending (\$ per capita)	0	0	0.7	1.2	4.64
Dem spending (\$ per capita)	0	0	0.93	1.45	3.21
Partisan Balance (% Rep ads)	0	0.15	0.38	0.5	1

FIGURE 2. Variation in ad volume and partisan balance. The left panel displays variation in advertising volume in Illinois. Darker green areas have higher advertising expenditures per capita. The right panel displays variation in the balance of Republican and Democratic advertisements aired locally. Darker red areas have nearly all Republican ads, darker blue areas have nearly all Democratic ads and purple ads have a roughly even number of Republican and Democratic ads.

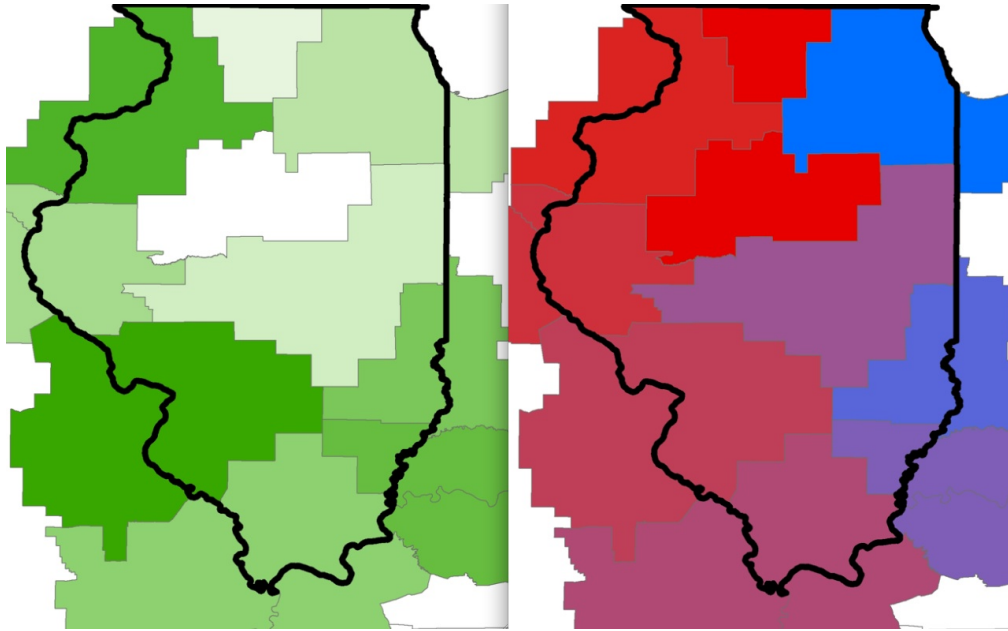
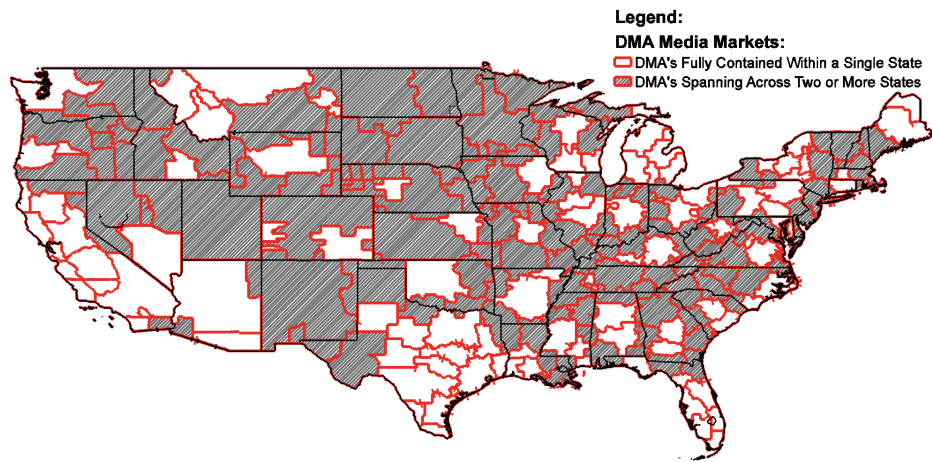
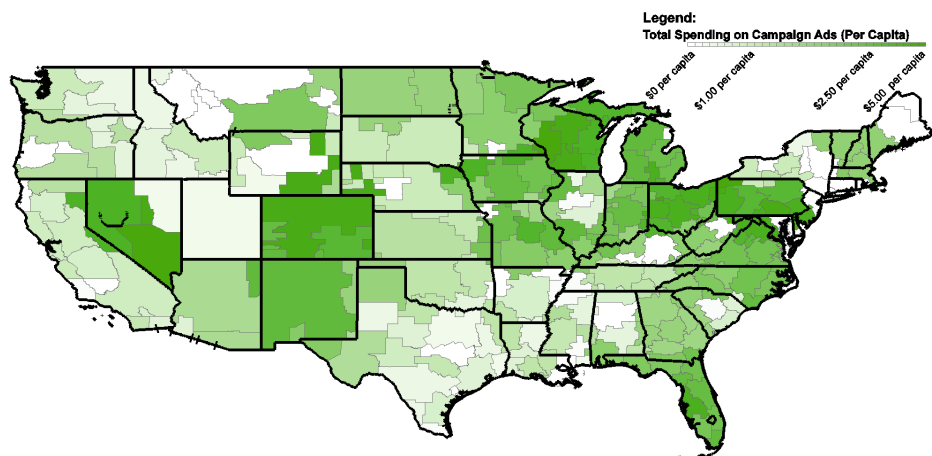


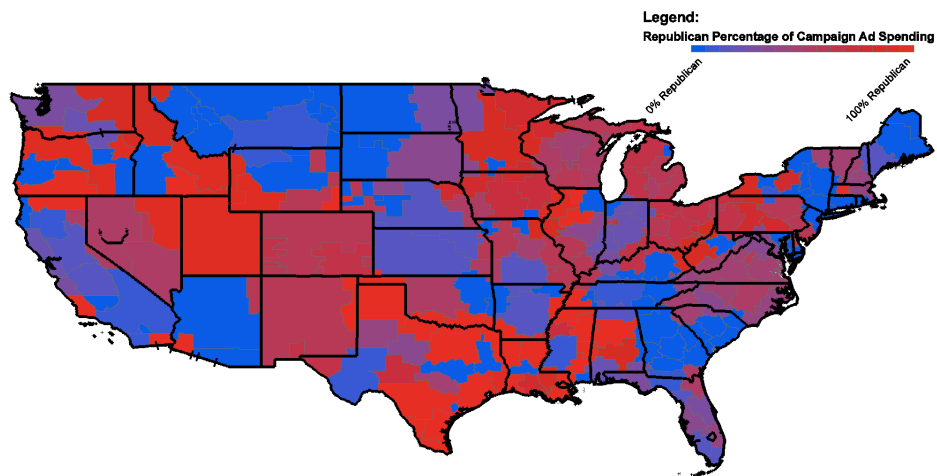
FIGURE 3. Political Advertising Figures for 2008



(A) Media market overlap - United States. The shading indicates whether a DMA crosses state boundaries



(B) Variation in ad volume across media markets (DMAs)



(c) Partisan balance in advertising across media markets (DMAs).

TABLE 2. Estimates of precinct level turnout

	(1)	(2)	(3)	(4)	(5)	(6)
	All	Non battleground	All	Non battle	All	All
	DV = Turnout 08 %		DV = Turnout 08 %		McCain %	Obama %
Turnout '04	0.8412 *	0.8292 *	0.8485 *	0.8345 *		
	(0.0028)	(0.0032)	(0.0035)	(0.0040)		
Bush '04 %	0.0694 *	0.0777 *	-0.0359 *	-0.0147	0.9305 *	
	(0.0032)	(0.0034)	(0.0095)	(0.0149)	(0.0023)	
Kerry '04 %						0.9253 *
						(0.0030)
Dem Ads (per capita)	0.0227 *	0.0192 *			-0.0084 *	0.0083 *
	(0.0036)	(0.0046)			(0.0009)	(0.0009)
GOP Ads (per capita)	-0.0158 *	-0.0116 *			0.0032 *	-0.0074 *
	(0.0040)	(0.0048)			(0.0010)	(0.0011)
Bush '04 % * Dem Ads	-0.0473 *	-0.0378 *				
	(0.0061)	(0.0085)				
Bush '04 % * GOP Ads	0.0333 *	0.0234 *				
	(0.0072)	(0.0092)				
% Ads sponsored by GOP			-0.0732 *	-0.0665 *		
			(0.0122)	(0.0155)		
Bush '04 % *			0.1619 *	0.1392 *		
% Ads sponsored by GOP			(0.0201)	(0.0276)		
Constant	0.1067 *	0.1083 *	0.1513 *	0.1515 *	-0.0010	0.0987 *
	(0.0037)	(0.0039)	(0.0064)	(0.0085)	(0.0021)	(0.0022)
<i>N</i>	27,855	22,822	15,095	11,477	27,855	27,855
adj. <i>R</i> ²	0.8912	0.8986	0.8667	0.8584	0.8795	0.8901
Resid. sd	2.0507	2.0586	1.7223	1.6486	1.4775	1.5046

Standard errors in parentheses

* indicates significance at $p < 0.05$

FIGURE 4. Voter turnout, precinct partisanship, ad volume and partisan balance in advertising

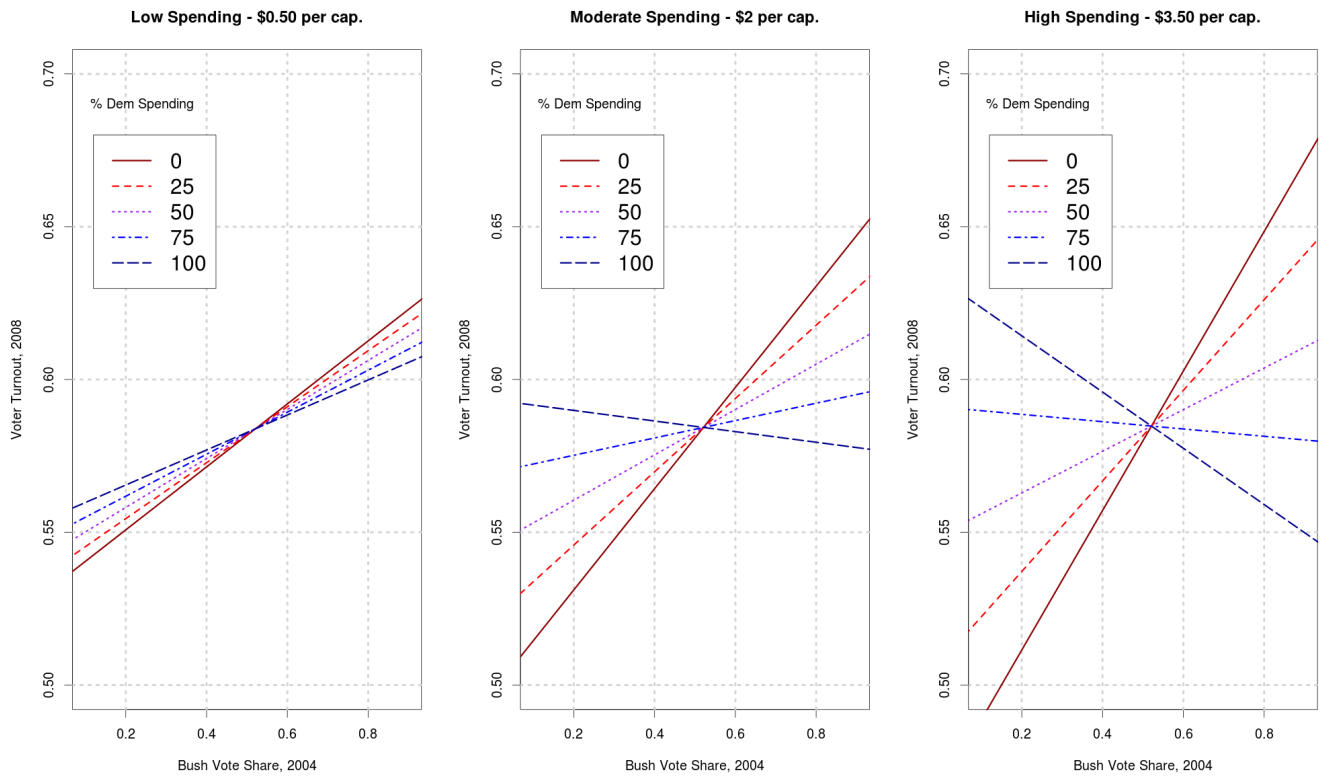


TABLE 3. Estimates of 2012 precinct level turnout

	(1)	(2)	(3)	(4)
	All	Non battleground	All	Non battleground
	DV = Turnout 08 %		DV = Turnout 08 %	
Turnout '08	0.9129 *	0.8677 *	0.3094 *	0.2851 *
	(0.0026)	(0.0046)	(0.0042)	(0.0096)
% Republican Voters	0.0156 *	0.0154 *	0.0497 *	-0.0471 *
	(0.0014)	(0.0020)	(0.0051)	(0.0075)
Dem Ads (per capita)	-0.0001	0.0351 *		
	(0.0013)	(0.0072)		
GOP Ads (per capita)	0.0026 *	-0.0252 *		
	(0.0012)	(0.0058)		
% Republican Voters *	-0.0070 *	-0.0834 *		
Dem Ads	(0.0024)	(0.0119)		
% Republican Voters	0.0075 *	0.0670 *		
GOP Ads	(0.0022)	(0.0096)		
% Ads Sponsored by GOP			0.0225 *	-0.0412 *
			(0.0049)	(0.0064)
% Republican Voters *			-0.0069	0.1510 *
% Ads Sponsored by GOP			(0.0093)	(0.0133)
Constant	0.0495 *	0.0785 *	0.5004 *	0.5599 *
	(0.0018)	(0.0029)	(0.0042)	(0.0066)
N	39220	12078	39220	12078
R^2	0.8300	0.8360	0.4006	0.4254
adj. R^2	0.8299	0.8359	0.4004	0.4249
Resid. sd	1.1145	1.1065	0.9872	0.9798

Standard errors in parentheses

* indicates significance at $p < 0.05$

FIGURE 5

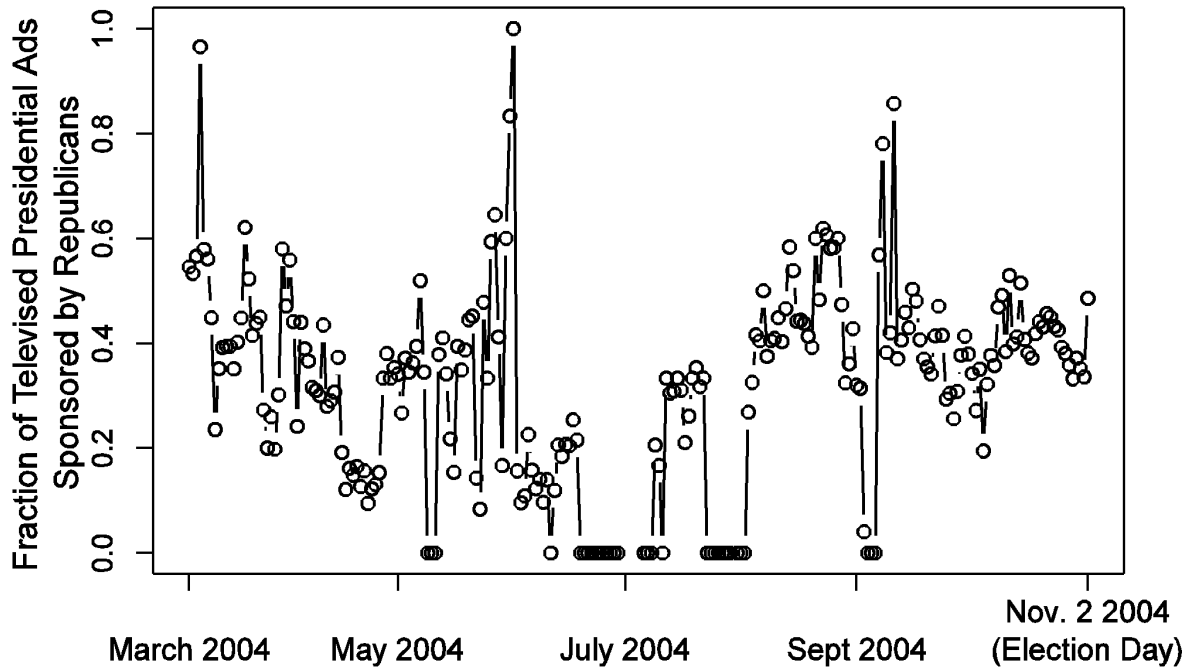
**Partisan Balance of Presidential Ads in Tampa, Florida
(March to November, 2004)**

TABLE 4. Estimates for proportional odds logistic regressions using individual level data from the 2004 Annenberg survey.

	(1)	(2)	(3)	(4)	(5)	(6)
	Bush favorability		Kerry favorability		Bush - Kerry fav	
Dem Ads (per 1,000 ads)	-0.102*		0.129*		-0.116*	
	(0.035)		(0.034)		(0.033)	
GOP Ads (per 1,000 ads)	0.258*		-0.240*		0.250*	
	(0.052)		(0.050)		(0.049)	
Dem Negative Ads		-0.149*		0.155*		-0.150*
		(0.069)		(0.068)		(0.067)
Dem NonNeg Ads		-0.093*		0.128*		-0.112*
		(0.037)		(0.038)		(0.036)
GOP Neg Ads		0.279*		-0.276*		0.286*
		(0.062)		(0.062)		(0.061)
GOP Non Neg Ads		0.266*		-0.190*		0.207*
		(0.079)		(0.077)		(0.077)
Self-identified Republican	3.331*	3.321*	-2.842*	-2.842*	3.713*	3.713*
	(0.033)	(0.033)	(0.032)	(0.032)	(0.036)	(0.036)
Number of Cases	35,688	35,688	35,688	35,688	35,688	35,688
Residual Deviance	121886	121885	132396	132394	166305	166303
AIC	122112	122115	132622	132624	166551	166553

All Ads variables are for ads aired locally in the previous 30 days.

All models contain fixed effect for Designated Market Area and self-reported ideology.

The models exclude respondents who identify themselves as Independent, along with respondents who say they are politically moderate.

See online appendix for thresholds for Models 1-6

Standard errors in parentheses * indicates significance at $p < 0.05$

TABLE 5. Estimates for series of proportional odds logistic regressions.

Sample	(7)		(8)		(9)		(10)		(11)		(12)		(13)	
	Bush fav		Dem		Kerry fav		Dem		Bush		Kerry		Bush-Kerry	
	GOP	Dem	GOP	Dem	GOP	Dem	GOP	Dem	GOP	Dem	GOP	Dem	GOP	Dem
Dem Ads (per 1,000 ads)	-0.149*	-0.167*	0.085	0.135*										
	(0.047)	(0.051)	(0.048)	(0.050)										
GOP Ads (per 1,000 ads)	0.400*	.356*	-0.196*	-0.191*										
	(0.071)	(.077)	(0.071)	(0.076)										
% GOP ads									0.510*	-0.811*			0.716*	
									(0.242)	(.237)			(.232)	
Self-identified Republican									3.642	-3.336			4.059	
									(0.073)	(0.070)			(0.078)	
Number of Cases	19,633	16,055	18,460	15,134					8,290	8,175			8,158	
Residual Deviance	60635	59968	69678	59311					27893	31087			39489	
AIC	60859	60192	69902	59535					28033	31227			39649	

All Ads variables are for ads aired locally in the previous 30 days.

All models contain fixed effect for Designated Market Area and self-reported ideology.

Models 7 & 8 include Republicans (and Democrats) who answered the Bush favorability item

Models 9 & 10 include Republicans (and Democrats) who answered the Kerry favorability item

Models 11 - 13 include respondents in DMAs with 1,000+ ads aired locally in the past 30 days

Model 11 contains partisans who answered the Bush item; Model 12 contains partisans who

answered the Kerry item; Model 13 contains partisans who answered both items.

See online appendix for thresholds for Models 7-13

Standard errors in parentheses * indicates significance at $p < 0.05$

REFERENCES

- S. Ansolabehere and S. Iyengar. *Going negative: How political advertising shrinks and polarizes the electorate*. New York: Free Press, 1995.
- S. Ansolabehere, S. Iyengar, A. Simon, and N. Valentino. Does attack advertising demobilize the electorate? *American Political Science Review*, page 829838, 1994.
- S. D. Ansolabehere, S. Iyengar, and A. Simon. Replicating experiments using aggregate and survey data: The case of negative advertising and turnout. *American Political Science Review*, page 901909, 1999.
- Kevin Arceneaux and Robin Kolodny. Educating the least informed: Group endorsements in a grassroots campaign. *American Journal of Political Science*, 53(4):755–770, October 2009.
- S. Ashworth and J. D. Clinton. Does advertising exposure affect turnout? *Quarterly Journal of Political Science*, 2(1):2741, 2007.
- J. R. Busemeyer and J. T. Townsend. Decision field theory: a dynamic-cognitive approach to decision making in an uncertain environment. *Psychological review*, 100(3):432, 1993.
- A. Campbell, P. Converse, W. Miller, and D. Stokes. *The american voter*. University of Chicago Press, 1980.
- S. Chaiken and A. H. Eagly. Heuristic and systematic information processing within and. *Unintended thought*, 212, 1989.
- J. D. Clinton and J. S. Lapinski. Targeted advertising and voter turnout: An experimental study of the 2000 presidential election. *Journal of Politics*, 66(1):6996, 2004.
- A. Downs. An economic theory of political action in a democracy. *The Journal of Political Economy*, 65(2):135150, 1957.
- M. M. Franz. *Campaign advertising and American democracy*. Temple Univ Pr, 2007.
- P. Freedman, M. Franz, and K. Goldstein. Campaign advertising and democratic citizenship. *American Journal of Political Science*, 48(4):723741, 2004.
- D. Frey and M. Rosch. Information seeking after decisions. *Personality and Social Psychology Bulletin*, 10(1):9198, 1984.
- J. G. Geer. *In defense of negativity: Attack ads in presidential campaigns*. University of Chicago Press, 2006.
- K. Goldstein and P. Freedman. Campaign advertising and voter turnout: New evidence for a stimulation effect. *Journal of Politics*, 64(3):721740, 2002.
- P. M. Gollwitzer. The volitional benefits of planning. *The psychology of action: Linking cognition and motivation to behavior*, 13:287312, 1996.
- D. S. Hillygus. Campaign effects and the dynamics of turnout intention in election 2000. *Journal of Politics*, 67(1):5068, 2005.
- J. S. Krasno and D. P. Green. Do televised presidential ads increase voter turnout? evidence from a natural experiment. *The Journal of Politics*, 70(01):245261, 2008.
- Y. Krupnikov. When does negativity demobilize? tracing the conditional effect of negative campaigning on voter turnout. *American Journal of Political Science*, 2011.
- R. R. Lau, L. Sigelman, C. Heldman, and P. Babbitt. The effects of negative political advertisements: A meta-analytic assessment. *American Political Science Review*, page 851875, 1999.
- R. R. Lau, L. Sigelman, and I. B. Rovner. The effects of negative political campaigns: a meta-analytic reassessment. *Journal of Politics*, 69(4):11761209, 2007.

- Richard R. Lau and David P. Redlawsk. Advantages and disadvantages of cognitive heuristics in political decision making. *American Journal of Political Science*, 45(4):951–971, October 2001.
- S. Orbell and P. Sheeran. Motivational and volitional processes in action initiation: A field study of the role of implementation intentions¹. *Journal of Applied Social Psychology*, 30(4):780797, 2000.
- W. H. Riker and P. C. Ordeshook. A theory of the calculus of voting. *The American Political Science Review*, 62(1):25–42, 1968.
- O. Svenson. Differentiation and consolidation theory of human decision making: A frame of reference for the study of pre-and post-decision processes. *Acta Psychologica*, 80(1-3):143168, 1992.
- L. Vavreck and D. P. Green. The targeting & mobilization effects OF television advertising. In *Conference on The Changing Media and Political Accountability*, 2007.
- J. Zaller. *The nature and origins of mass opinion*. Cambridge University Press, 1992.