Campaign Advertising and Voter Turnout: New Evidence for a Stimulation Effect

Ken Goldstein
University of Wisconsin–Madison
Paul Freedman
University of Virginia

Recent controversy over campaign advertising has focused on the effects of negative ads on voters. Proponents of the demobilization hypothesis have argued that negative ads turn off voters and shrink the size of the electorate. We argue that negative campaign charges are just as likely to engage potential voters, leading to a stimulation effect when it comes to turnout. Drawing on a new source of ad-tracking data from the 1996 presidential election, combined with the 1996 National Election Study, we generate estimates of the probability that voters were exposed to positive and negative political advertising. With this new, more precise approach, we find unambiguous evidence that exposure to negative campaign ads actually stimulates voter turnout.

Why do so few Americans vote? What is the impact of campaign advertising? At the intersection of these two important and enduring questions, a heated debate has arisen and a new question has emerged: does negative advertising depress voter turnout? Although some have argued persistently that negative ads have a demobilizing effect, others have found evidence that negativity may serve to stimulate turnout. Clearly, much is at stake, for these questions go to the heart of contemporary concerns about the health of American democracy. They also speak to long-standing questions about how candidate discourse and campaign messages may affect voters. Still, despite a multiplicity of data and an impressive range of methodological approaches, important questions remain.

As others have noted, "Contradictions in a field of study may stem from the diverse and useful methodologies being brought to bear on important new ques-

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tions and, therefore, be a healthy sign . . . Or, contradictions may stem from incomplete models, inaccurate measurements, overgeneralizations from case studies, or inappropriate research designs" (Baumgartner and Leech 1996, 522). It is our contention that the contradictory findings in the literature on negative advertising are due more to the second set of factors than the first. In particular, many of the conclusions on *both* sides of the demobilization debate rest on inadequate data and misspecified models.

We are partial to the stimulation hypothesis and are impressed by the number of studies identified by Lau et al. (1999) showing that negative ads do not demobilize and may in fact mobilize voters. The findings we present here are certainly consistent with this emerging conventional wisdom, but our research design represents a significant advance over past efforts to measure the effects of advertising at the national level. It is critical for scholars to bring to bear on their research questions the best available evidence; therefore, our objective here is also to argue on behalf of a relatively new source of data and a new approach to the challenge of measuring media exposure. Providing firmer empirical evidence for where we actually are in this debate may make it possible for students of advertising and turnout to move in new directions, beyond blunt questions of tone. In our conclusion, we identify some of these new directions.

We begin with a brief summary of the arguments in the debate, including a more specific critique of Ansolabehere, Iyengar, and Simon (1999). We argue that their approach does not, as they claim, solve the problem of relying on respondent recall to estimate exposure. We then introduce a new source of national ad-tracking data, which includes comprehensive information on the tone, targeting, and volume of television advertising in the 1996 presidential election. By merging these tracking data with the 1996 National Election Study, we are able to build a valid and significantly more accurate measure of exposure to campaign advertising. Finally, by including this measure in a model of turnout in the 1996 election, we are able to show that negative advertising clearly has stimulating effects on voter turnout. All else equal, citizens exposed to the greatest number of negative advertisements were actually more likely to vote in 1996, precisely the opposite of what the demobilization hypothesis would predict.

The Controversy

In the opening salvo of the current controversy, Ansolabehere and Iyengar (Ansolabehere et al., 1994; Ansolabehere and Iyengar 1995) undertook a series of carefully designed experiments and found that negative commercials—"attack advertising," as they put it—lead to lower levels of political efficacy and a decreased probability of voting, with particularly strong effects among political independents. The result is an electorate that is smaller and more polarized than it would be were campaign advertising more positive in tone.

Ansolabehere and Iyengar tell a simple but plausible story: as the tone of political debate gets more nasty, Americans are more inclined to turn off and drop out of the political process. A number of scholars, however, have subsequently posed both theoretical and empirical challenges to the demobilization hypothesis (Bartels 1996a; Finkel and Geer 1998; Freedman and Goldstein 1999; Kahn and Kenney 1999; Wattenberg and Brians 1999). It has been suggested, for example, that rather than turning voters away from politics, campaign criticism may actually increase citizens' political engagement by raising issues that are important to voters and sending the message that something significant is at stake in a given election. Negative charges imply that one's vote choice—and one's vote—matters and that citizens should care about the outcome of a race. Moreover, prior work suggests that negative ads may help stimulate voter turnout because they provide a significant amount of information relevant to the voting decision; because such negative information may be given greater weight in political judgments than positive messages; and because negative appeals may produce stronger affective responses, leading to heightened enthusiasm for candidates, greater engagement with the election, and possibly increased motivation to learn more about the candidates (Finkel and Geer 1998; Lau 1985). In short, there are good theoretical reasons to suspect that rather than turning citizens off and demobilizing the electorate, negative advertising actually has an invigorating effect on political participation, enhancing interest and stimulating turnout.

Such theoretical arguments have been supported by recent empirical work. In a comprehensive review of virtually all the relevant research (both published and unpublished), Lau et al. (1999) found that researchers have generally been unable to replicate the finding that negative ads depress turnout. Scholars using a variety of methods, in a variety of years, in a variety of different places, have failed to find any evidence to support the demobilization hypothesis. In fact, four of the most recently published studies show that negative ads may in fact increase turnout (Finkel and Geer 1998; Freedman and Goldstein 1999; Kahn and Kenney 1999; Wattenberg and Brians 1999).

In an apparent response to much of this work—although their immediate critical focus is the work of Wattenberg and Brians (1999)—Ansolabehere and his colleagues again attempted to replicate their experimental findings in the real world. Using data from the 1996 presidential election, the authors reaffirm their earlier finding and unambiguously conclude, quite simply, that "negative advertising demobilizes voters" (Ansolabehere, Iyengar, and Simon 1999, 907). Is the debate now over?

We believe that it is not. Ansolabehere, Iyengar, and Simon (1999) raised critically important problems with Wattenberg and Brians' use of self-reported recall to measure exposure to campaign advertising. However, their proposed solution to the problem fails to provide a valid measure of exposure, thus undermining the validity of their inferences. In this article, we attempt to shed more empirical and theoretical light on a topic that has drawn so much heat.

The Problem of Measuring Media Exposure in the Real World

Gauging exposure to television advertising—like media messages in general—has proved to be a thorny challenge. In the laboratory, of course, measuring exposure is a simple matter, primarily because the researcher is able to *control* exposure as part of the experiment. As soon as one moves outside the lab, the issue becomes more difficult. Most prominent recent studies have relied upon political advertising archives, using a collection of advertisements made during a campaign as a rough proxy for the mix of ads that citizens were likely to have seen (Finkel and Geer 1998; Kahn and Kenney 1999). Finkel and Geer, for example, used information about the kinds of presidential campaign ads produced in a given year to estimate the effects of advertising tone on voter turnout.

Some have criticized this approach by questioning whether archives have complete collections of spots created during particular elections (Jamieson, Waldman and Sherr, 1998). More fundamentally, as Freedman and Goldstein (1999) argued, even if a given archive has a complete collection of all the spots that were *produced*, there is still a critical piece of information missing: how frequently a given spot was *aired*. A spot in an archive that was aired one hundred times is weighted the same as a spot that may have been aired one thousand times, or for that matter, only once. Furthermore, using spots *made* in a particular campaign as a measure of exposure for all voters in the nation—or even in a single state—assumes that in a given election all voters in different markets were exposed to the same volume and mix of advertisements. This is simply not the case. Advertising—no matter the campaign—is purchased at the level of the media market, and there is great variation in the volume of spots aired from market to market.

A final problem with relying on advertising archives is that just as ad buys vary from market to market, exposure to advertising varies with the television viewing habits of individual voters. In any given media market, individuals who watch more television will be more likely to encounter campaign advertisements than those who watch less, particularly if their viewing habits coincide with the broadcasts in which campaign advertisements are most likely to be aired. Without taking this information into account, exposure measures will be inherently flawed.

A second strategy for measuring exposure outside the lab is to rely upon the self-reports of survey respondents. This is the approach taken by Wattenberg and Brians (1999), who used respondent recall in the 1996 NES as an indicator of exposure to negative advertising. Ansolabehere, Iyengar, and Simon (1999) offered a compelling argument against using such self-reports as a measure of exposure by noting that recall is not only unreliable, but is also itself highly correlated with turnout. To avoid using such an error-laden measure, Ansolabehere, Iyengar, and Simon employed a two-stage approach to replicate the find-

ings of Wattenberg and Brians.[1] Specifically, they built an instrument, purged of correlation with turnout, using three variables: the total number of Gross Ratings Points (GRPs) aired in a state (assuming respondents not only will likely be exposed to more ads but to a greater proportion of negative ads in a heavily targeted state); the date of interview (assuming that respondents interviewed closer to Election Day will have been exposed to a greater proportion of negative ads); and day of the week (assuming that viewing patterns vary by day of week; Ansolabehere, Iyengar, and Simon 1999, 902). These variables clearly enable one to build an instrument that is uncorrelated with vote intention. But a fundamental question remains: do they enable one to build an instrument correlated with exposure to negative advertising?

If one examines the component parts of the measure, there are strong reasons to suspect that it is not a valid measure of exposure to negative advertising. First, there are few empirical or theoretical reasons to believe that aggregated GRP totals for a state over the course of the entire campaign are a good measure of individual-level exposure to negative advertising in a particular media market at a particular point during the campaign. Political advertising is bought at the market level. It is often the case that markets in the same state are targeted at dramatically different levels. For example, in 1996, Los Angeles was the most heavily targeted market in the entire country, with over 5,700 spots aired during the course of the election campaign, while residents of San Francisco were targeted with fewer than 400 spots.[2] Therefore, assuming that all voters in California were exposed to the same levels of advertising is simply incorrect.

The way that Ansolabehere, Iyengar, and Simon (1999) sum and average GRPs is also problematic. GRPs are the metric most commonly employed to compare advertising intensities in different markets. Nevertheless, they are a proportional measure (each ratings point represents 1% of the television sets in a market) and cannot be summed and averaged. For instance, a six o'clock news broadcast in New York City might have a four rating, and a six o'clock news broadcast in Albany might have a twelve rating. Even though the rating and the GRPs of an ad broadcast on the Albany news are higher, many more millions of people actually saw the New York City news broadcast and any ad aired on it.

Moreover, the GRP totals that Ansolabehere, Iyengar, and Simon (1999) used measure campaign activity only after Labor Day and thus do not include the significant amount of campaigning that went on in the spring and over the summer. In fact, more than 35% of ads aired during the 1996 election were

[1] Although the presence and coding of particular independent variables is the same, the two papers actually use different dependent variables: Wattenberg and Brians use reported turnout; and Ansolabehere, Iyengar, and Simon use preelection vote intention.

[2] The source for these 1996 ad totals is Campaign Media Analysis Group. These data are described in much greater detail below.

broadcast before Labor Day. Notably, this is also the period during which the Clinton campaign and the DNC had many more spots on the air than the Dole campaign and the RNC.

Yet another problem with the instrument created by Ansolabehere's team is that it assumes that every voter in a particular media market was exposed to the same number of commercials. As we have already noted, this obviously is not the case. No matter how many ads may have been aired in a particular market, if a voter never watched TV, he or she would not have been exposed to any campaign messages over the air. Along these same lines, voters in markets that were targeted by the campaigns at vastly different levels may actually have fairly similar levels of exposure. For example, a heavy TV watcher in Oklahoma City—an area where only 111 ads were aired during the 1996 presidential race—may have had a similar or even lower likelihood of being exposed to negative advertising as a voter who rarely watched television and lived in Cincinnati—a market in which more than 4,300 spots were aired. In short, the instrument contains no information on individual television watching habits.

Finally, Ansolabehere, Iyengar, and Simon assume that the *proportion* of negative ads rises significantly with the volume of total ads (Ansolabehere, Iyengar, and Simon 1999, 902). Empirically, in the 1996 presidential election, this was not the case. There was no relationship between the volume of advertising in a market and the proportion of ads that were "pure" negative. It is only when one combines negative and "contrast" ads, as we do below, that there is a positive correlation with total ad volume.[3]

In sum, when it comes to estimating the effects of negative advertising on voter turnout, the last word has not yet been written. Whatever one's theoretical expectations, better empirical work and improved measures of exposure to ad-

[3]Two final points about the Ansolabehere, Iyengar, and Simon instrument: using date of interview as a proxy for exposure is a dangerous strategy; advertising is not evenly distributed across all markets. Two states could have identical GRP totals but drastically different patterns in the timing of the advertisements. For example, in the 1996 presidential race, Arizona and Illinois had similar GRP totals. The difference was that Illinois ads were aired almost exclusively early in the campaign and Arizona ads were aired only later in the campaign. Therefore, a respondent interviewed in Illinois in September would have had a chance (if he or she watched television at all) of being exposed to the lion's share of the total GRPs for the state for the entire campaign. On the other hand, a respondent interviewed in Arizona in September would have had no chance of being exposed to any of the ads that were eventually aired in the state. While this is an extreme example, there were huge differences in the timing of ads in different states—another fact that makes the use of total GRPs aired suspect.

Finally, there seems to be little if any justification for using the day of the week a respondent was interviewed as part of the exposure instrument. Although television watching does vary by day of the week (as any advertiser on "must-see" Thursday or Monday Night Football knows), it clearly does not do so in a linear fashion. Furthermore, while GRPs and date of interview at least attempt to measure exposure throughout the campaign, there is no clear theoretical rationale for using day of the week interviewed. Is the assumption that someone interviewed on a Wednesday only watched television on Wednesdays throughout the campaign? In short, this indicator has no obvious utility whatsoever.

vertising are clearly needed. In the following section, we describe a new technology that enables us to have detailed information about the tone and targeting of advertising during the course of an actual presidential campaign. Finally, we employ these data to create an alternative measure of exposure to advertising and include this measure in a model of voter turnout.

The Advertising Data

The first step in building a measure of exposure is to gather precise information on the actual distribution of political advertisements broadcast. In the past, the only way to get information on the targeting of television advertising was to go through the arduous process of calling individual stations in selected markets and examining their advertising logs or trying to gather it from campaigns.[4] Fortunately, a new technology now tracks all political advertising activity. Marketed by Campaign Media Analysis Group (CMAG) for political clients, the system monitors the transmissions of the national networks (ABC, CBS, NBC, and Fox) as well as 25 national cable networks (such as CNN, ESPN, and TBS). In addition, the system monitors advertising in the country's top 75 media markets.[5] The system's software recognizes the electronic seams between programming and advertising. When the system does not recognize the unique sound pattern of a particular commercial spot, the storyboard (the full audio and every four seconds of video) is captured and downloaded to the firm's headquarters. Analysts then code the advertisements into particular categories—by product for commercial clients, by candidate or sponsor for political clients—and tag them with unique digital fingerprints. Thereafter, the system automatically recognizes and logs a particular commercial wherever and whenever it airs.[6]

Purchasing these data for strategic campaign use in real time (as early as the day after a commercial has been aired) is extraordinarily expensive, but CMAG has been extremely generous in making the 1996 data available to us for scholarly purposes. For the presidential campaign, CMAG provided the data to us in two-week time periods from April 1 to August 31, and in one-week time periods from September 1 through Election Day. (Another advantage of the CMAG system is that it not only tracks ads after Labor Day but throughout what has become a near-permanent campaign).[7] For each week, the CMAG data con-

[4] Shaw (1999) was able to gather aggregated GRP data for the 1992 and 1996 presidential campaigns, a different approach that precludes differentiating spots by tone in the way we do here.

[5] Although there are over 200 media markets in the United States, over 80% of the population lives in the top 75 markets.

[6] The technology was originally developed by the United States Navy to track Soviet naval vessels, primarily submarines, during the Cold War. It did so by measuring and cataloguing the unique sound patterns of the propellers and screws of Soviet warships.

[7] CMAG only began business in April 1996. In subsequent years, complete year information will be available.

tained information on which advertisements aired how many times and in what markets. Thus, the basic unit of analysis was the number of times a particular commercial spot ran in a particular market during a one- or two-week time period.[8] In addition, CMAG provided storyboards (transcriptions of all the audio and every fourth second of video) for each commercial. Working from the level of the buy, we then aggregated the data by the number of spots by candidate per week in a particular media market.[9]

Advertising in the 1996 Presidential Election

For the presidential race, two research assistants used the storyboards of every ad aired to code each commercial as *positive* or *negative*. The coders were instructed to classify as *positive* all ads that included only statements about the sponsoring candidate, with no explicit challenge or criticism of his opponent. Commercials that contained critical, challenging, or unflattering information about the opponent were subdivided further: ads were categorized as *contrast* spots if they also included positive statements about the sponsor, or as *pure negative* ads if they focused exclusively on negative statements without any positive content about the sponsor.

There was extremely high intercoder reliability. In fact, the coders only disagreed on the coding of three ads out of 148 made, and here the disagreement concerned whether the spots should be coded as contrast or pure negative.[10] The coded tone of each ad was then merged with the CMAG tracking data, to provide a measure of the tone and targeting (when, where, and how many times

[8] The validity of CMAG data from the 1996 presidential election was assessed in a number of different ways. First, we obtained documents from both the Clinton and Dole campaigns on the aggregate levels of spending in each market. These spending totals were consistent with the aggregate spot information by market from the CMAG data. Second, since both campaigns bought the CMAG data, we interviewed staff from both campaigns to see if the reports they were seeing on their own targeting were consistent with what their buys actually were. The staffers reported only a handful of discrepancies out of the tens of thousands of ads aired. In fact, one staffer told us that he trusted the CMAG data more than his own records. Additional validation efforts undertaken with the 2,000 CMAG data afford even more confidence in the data.

[9] The spots-aired metric will only provide misleading information (as will the GRP measure) if campaigns systematically bought cheap time on low-rated shows in particular markets. We do not believe this to have been the case. In 1998, CMAG not only tracked the number of spots aired, but GRPs and expenditures as well. Our analysis and that of Krasno and Seltz (2000) shows that the three measures are correlated almost perfectly. In any case, without detailed survey data on *what* viewers were watching and *when*, spots aired, like GRPs, will provide incomplete information. In the analysis that follows, a combined measure of individual exposure—incorporating information on both what was aired and who was watching—is used. This strategy creates a measure that is more appropriate for individual-level analysis.

[10] These disagreements were decided by the authors. We coded every commercial and were in agreement with the research assistants in each of the other 145 cases. In addition, 110 of the ads were subsequently made available on videotape. When our research assistants coded these, their assessments agreed with their storyboard ratings for 100% of the ads.

aired) for every campaign ad broadcast during the 1996 presidential election in a top-75 media market.

During the 1996 presidential campaign, 162,160 spots were aired on local television in the country's top 75 markets. As Table 1 shows, the DNC and the Clinton-Gore campaign produced almost twice as many television spots (97) as the RNC and the Dole-Kemp campaign (51). More striking, the Democrats out-broadcast their Republican rivals by more than 20,000 spots: 91,432 Clinton-Gore ads were aired versus 70,728 Dole-Kemp spots. The CMAG data also show that virtually all of this advantage was built over the spring and summer when the Clinton campaign was able to use unspent primary funds and Democratic party soft money; at that time the Dole campaign was broke and the RNC failed to come to the defense of its nominee.

Moreover, it is clear from Table 1 that assessments of the tone of the advertising campaign in the aggregate vary dramatically depending on the unit of analysis. Looking at the set of commercials made yields a different picture than does looking at the distribution of spots actually broadcast. These differences are most pronounced in the case of the 1996 Dole spots. For instance, while less than half (47%) of the Dole commercials made were negative in tone, 70% of the spots that actually aired were negative. In contrast, 40% of the Dole spots produced but only 15% of the ads that aired were positive in tone. Thus, to gauge accurately the tone of advertising in a given campaign, one must have information about the nature and number of advertisements actually broadcast.

Table 1 also illustrates the different strategies utilized by the two campaigns. While both sides aired very few ads that were purely positive, the Clinton campaign aired most of its negative messages as contrast spots. While contrast ads by definition do contain some positive information about the sponsor of the ad, it is often overshadowed by a larger amount of negative information. Moreover, it is likely that the negative information tends to be the most memorable. For example, many of the Clinton contrast ads opened with 15 seconds of grainy black-and-white pictures of Newt Gingrich and Bob Dole supposedly vowing to do horrible things to helpless people while ominous music played in the background. This was typically accompanied by a fairly hard-hitting script:

TABLE 1

1996 Campaign Advertising by Candidate and Tone

	Clinton Ads Made	Clinton Ads Aired	Dole Ads Made	Dole Ads Aired
Total Ads (n):	97	91,432	51	70,728
Positive Ads	18%	6%	40%	15%
Pure Negative Ads	23%	28%	47%	70%
Contrast Ads	60%	66%	13%	15%

Narrator: The same old politics: Dole attacks Clinton. (Picture of Bob Dole with big letters over him saying, "Another Dole attack ad") Hold it! President Clinton cuts taxes for millions of working families, proposes tax credits for college. (A color picture of a family of four walking in a park). But Dole/Gingrich tried to raise taxes on 8 million people. Dole voted to raise payroll taxes, social security taxes. The '90 income tax increase. Nine hundred billion dollars in higher taxes. Republicans called him tax collector for the welfare state. (Grainy, slow motion black-and-white pictures of Dole and Gingrich).

Bob Dole: "You're going to see the real Bob Dole out there from now on." (black-and-white picture of Bob Dole speaking).

Narrator: The real Bob Dole, 35 years of higher taxes.

Despite drawing a clear comparison between the two candidates—thereby earning the "contrast" label—such an ad is obviously close to a "pure" negative spot. Indeed, for many purposes the two categories should be considered together, as we do in the analysis that follows.

There was significant heterogeneity in the volume of advertising from market to market in the presidential contest. While each of 11 media markets were targeted with a combined total of more than 4,000 Clinton and Dole spots, 17 markets were targeted with fewer than 250 spots. The five most heavily targeted markets were Cleveland, Albuquerque, Denver, Sacramento, and Los Angeles. Each of these markets had a total of more than 4,700 spots aired by the two campaigns and their party committees during the 1996 campaign. The five markets that received the least attention were Birmingham, Providence, Tulsa, Baltimore, and Rochester. The campaigns and their party committees aired fewer than 100 ads in these markets.

Where spots were aired, there was little variation in the proportion of negative ads. In 31 markets, just under half of the ads aired were negative, while in 20 markets just over half of the ads aired were negative. Still, not all markets were targeted with the same mix of ads. The markets with the greatest proportion of negative ads were Washington, D.C., Richmond, Dallas, Birmingham, and Providence. In each, at least 60% of all advertising was negative in tone. It is worth noting that these markets were also targeted at very low levels by both campaigns (again illustrating the point that pure negative spots are not necessarily most prevalent in high-volume markets.)

An Improved Measure of Advertising Exposure

The CMAG data tell us what was aired, but they contain no measure of exposure at the individual level. They are only the first step in building a better measure of exposure to television advertising. To construct an improved measure, one needs information about two factors: the frequency with which an advertisement is aired in a particular media market, and the quantity of television viewing by a particular respondent (see Freedman and Goldstein 1999). As noted above, even the most avid television watchers will fail to see a cam-

paign ad that is not aired in their media markets. Similarly, living in a media market that is saturated with campaign advertisements will mean little to a respondent who never watches television. Thus, one needs estimates of what was aired and what was watched to estimate accurately levels of advertising exposure.

Fortunately, CMAG provides information about the first factor. For the second, we turn to the 1996 National Election Study (NES). After assigning every 1996 NES respondent to his or her correct media market, we created a measure of television viewing, making use of as much of the available NES instrumentation as possible. The measure includes self-reported viewership of the prime-time shows "Dr. Quinn," "Prime Time Live," "Friends," "E.R.," and "Frazier," as well as questions about the frequency of watching sports events and game shows. Second, since political ads are most often aired on local and national news broadcasts (indeed, much more often than on prime-time entertainment shows), we also included measures of local and national television news viewing habits. (See Appendix for coding details.)[11]

The resulting television-viewing scale runs from zero (for respondents who watched no TV whatsoever) to one (for respondents who watched the greatest amount of television). We used this scale to create our measure of ad exposure, multiplying it by the total number and type of ads aired by or on behalf of each candidate in each market to create a measure for each respondent of the likelihood of being exposed to each candidate's advertising.

This measure, ranging from zero exposure to having seen more than 5,000 total spots (a heavy television watcher in Los Angeles) over the course of the campaign, is of course only an estimate, and most likely an overestimate at that. We have no way of knowing that a given respondent was actually watching television at the time (and on the channel) that a given ad was aired. Moreover, we have no information on the probability that the respondent was actually paying attention when a given commercial was broadcast. Certainly, in an age of easy channel-surfing and volume-muting, this is something that future models should take into account. It is best, therefore, to think of our measure as an upper bound on the number of spots that respondents could have seen and as a measure of *relative* exposure among respondents in our sample. This measure makes it possible to compare different respondents in different markets in terms of their relative exposure to different types of campaign ads.

Analysis

Having created our measure of relative advertising exposure, we now turn to an analysis of voter turnout in the 1996 election, using exposure to negative

[11] Bartels (1996b) as well as Buhr, Crigler, and Just (1996) found that entertainment-television questions such as those included in this scale performed well on the 1995 NES pilot. Nevertheless, we would prefer to have a scale that included a larger battery of questions pertaining to news-viewing. In future work, we will more closely tailor our television-watching questions to the shows on which political advertising is most frequently aired.

information as our primary explanatory variable and self-reported turnout as our outcome measure.[12] We begin with a basic logistic model of self-reported turnout that takes as its starting point the models used by Wattenberg and Brians (1999) and Ansolabehere, Iyengar, and Simon (1999) but adds many of the other standard correlates of voting found in the literature (e.g., Abramson, Aldrich, and Rohde 1999; Rosenstone and Hansen 1993; Wolfinger and Rosenstone 1980). For example, we add measures of mobilization; Senate, House, and presidential race competitiveness; and registration laws.[13]

To assess the impact of campaign advertising, we include in this model our estimates of exposure to various kinds of ads, along with a contextual measure indicating the total number of spots aired in each respondent's media market.[14] This contextual measure controls for differences in total ad buys across markets and serves as a measure of the total volume of advertising.[15]

We compare ads that are positive in tone with those that include negative information about an opponent. That is, we collapse the pure negative and contrast subcategories into a single *negative* category. As we showed earlier, the

[12] As is commonly the case with the NES and other studies, a greater proportion of survey respondents reported having cast a ballot than actually did. For example, less than half of the voting age population in the United States cast ballots in the 1996 contest, but over three in four (77%) of NES respondents reported that they had voted. The reasons for this high level of turnout in the NES include social desirability, mobilizing effects of the preelection interview, and sample coverage (Burden 2000; Traugott and Katosh 1979). NES stopped its voter validation studies in 1992. Of course, for vote overreporting in the NES to bias our results, it would have to be the case that vote overreporting—but not the probability of turnout—were negatively correlated with exposure to negative advertising, something we have no reason to suspect is the case.

[13] Consistent with past findings, we find that turnout increases with education, income, strength of partisanship, age, campaign interest, and reading a daily newspaper. Church attendance, home ownership, and mobilizing contacts from parties all increase the probability of casting a ballot, as does the competitiveness of the Senate race in one's state (but not that of the local House race). Married people are more likely to vote than those who are single, and those who care about the outcome of the race are, not surprisingly, more likely to vote than those who do not. In our model, neither gender nor race has a significant effect on voting once other factors are accounted for. Similarly, efficacy, registration laws in one's state, and length of time at one's current residence have no statistically discernible effects.

[14] Of course, citizens are exposed to advertising not only in the presidential contest, but in Senate, House, gubernatorial, and other down-ballot races. Ideally our model would take into account the volume and tone of all such advertising. Unfortunately, we were only able to obtain targeting information (showing volume by media market and time of broadcast) for these races, but not the storyboards necessary to code the tone of the spots. Future work should take account of the full range of political advertising encountered by citizens. For now, we include preelection competitiveness measures for House and Senate races and believe that we have a well-specified model. Furthermore, to the extent that competitiveness is correlated with more negative advertising in Congressional races (Krasno and Seltz 2000), these measures should serve as useful proxies for the tone of advertising in the races. In any case, because the tone of different races is not correlated and because there is no endogeneity in the targeting of ads (high turnout areas are not the focus of more negative ads), the exclusion of other races should not systematically bias our results.

[15] Our findings are unaffected if we substitute the total number of pure negative, contrast, or combined pure negative and contrast spots for this control measure.

content of contrast and negative spots is often quite similar. (And to the extent that contrast ads are more like positive spots, looking at a single *negative* measure will provide a more conservative estimate of the effects of negativity.) Moreover, it is only when pure negative and contrast spots are combined that there is a relationship between market-level ad volume and negativity, an assumption that is essential to the argument of Ansolabehere, Iyengar, and Simon (1999). Finally, given how our estimates have been derived, including three separate measures of exposure leads to considerable problems of multicollinearity that make interpretation difficult. However, when we substitute individual measures of exposure to negative or contrast ads for this combined measure, the results are similar: alone, both negative and contrast ads appear to mobilize the electorate, with roughly equivalent effects.[16]

What, then, is the effect of campaign advertising on voter turnout? We find that, all else equal, turnout decreases slightly with the overall volume of advertising. However, these decreases are more than offset by the stimulating effects of advertising that contains negative information about a candidate. While positive advertising has no significant effect on turnout, negative ads have a significant and substantial mobilizing effect. (See Table 2 for complete model results.)[17] These findings are robust across a range of specifications and alternative operationalizations.[18]

To put these effects in more concrete terms, imagine an average "baseline" respondent: a white, female, independent, married homeowner who has received no mobilizing contacts from parties or campaigns. Holding all other variables constant at their means, and assuming no exposure to negative advertising whatsoever (a clearly counterfactual assumption for the average citizen), this phantom respondent would have a .761 probability of voting. At an average level of exposure to negative advertising, however, her chances of voting would be .789 (just a hair below the observed probability for all respondents in the

[16] Testing the joint effect of exposure to both categories of negative ads when all three exposure variables are included in the model reveals that the effects are not significantly different from one another and that both variables together are significant at $p < .12$. Thus, whether one includes negative ads as a single category, or as two subcategories in a single model, or looks at the effects of each category separately, the finding is consistent: negative ads have a stimulating effect on turnout.

[17] When it comes to positive ads, our model suggests that if anything they may have a somewhat demobilizing effect. Although we have little confidence in the estimate, given the bland, uninspired content of most positive spots, we would not be surprised at all if their effect was to diminish turnout.

[18] We operationalized exposure in a different way by looking at the ratio of pure negative to positive and contrast ads. Although this is a less useful test of the demobilization and stimulation hypotheses (a hypothetical respondent exposed to a single negative ad and no others is treated the same as someone exposed to 1,000 negative ads and no others), the pattern of results is consistent with our findings: exposure to a high proportion of negative spots—whether as a share of total spots or of positive spots only—has a positive effect on turnout (although one that is significant at $p > .1$). In contrast, exposure to a high proportion of positive spots has no effect at all on turnout. Including contrast ads in the numerator of the proportion yields comparable findings.

TABLE 2

1996 Voter Turnout Logit Estimates

Exposure to Positive Ads	−.316 (.216)
Exposure to Negative/Contrast Ads	.059 (.029)**
Total Advertising in Media Market	−.017 (.008)*
Education	1.948 (.442)***
Income	.009 (.005)*
Female	.222 (.200)
African American	.007 (.315)
Under Age 30	−.309 (.261)
Over Age 65	.739 (.305)**
Married	.561 (.224)**
Home Ownership	.582 (.226)***
Current Residence < 2 years	.131 (.225)
Church Attendance	.802 (.261)***
Strength of Party Identification	1.433 (.320)***
Mobilized by Party	.678 (.254)***
External Efficacy	.506 (.411)
Internal Efficacy	−.156 (.351)
Care Who Wins Election	.673 (.218)***
Campaign Interest	1.608 (.318)***
Newspaper Reading	.093 (.036)***
Registration Laws	−.674 (.442)
Competitiveness of Senate Race	.530 (.300)*
Competitiveness of House Race	−.106 (.303)
Competitiveness of Presidential Race in R's state	.047 (.235)
Constant	−3.652 (.514)***
N	1011
Percent Predicted Correctly	84.3
Null Model	79.0
Log Likelihood	−362.927

***$p < .01$; **$p < .05$; *$p < .10$

top 75 markets). If her exposure to negative ads were increased by one standard deviation (holding positive ad exposure constant at the mean), her turnout probability would rise by just over four points, to .833. An increase of an additional standard deviation leads to a further 3.6-point increase in the probability of turnout, to .869.

In practical terms a single standard deviation could be thought of either as an increase in television watching or an increase in ads aired in the market in which one resides (or some combination of the two). For example, a respondent would be exposed to an additional one standard deviation of negative ads if she increased her television watching by one-fifth in a heavily targeted market such as Los Angeles. Alternatively, if she maintained the same viewing

TABLE 3

Estimated Turnout for Baseline Respondent

	Estimated Turnout
Observed Turnout	79.0
No Neg/Con. Exposure	76.1
Mean Neg/Con. Exposure	78.9
1 SD from Mean	83.3
2 SD from Mean	86.9

habits and moved from a moderately targeted market such as Knoxville to a heavily targeted market such as Albuquerque (where approximately 1,000 more spots were aired) she would be exposed to the same standard deviation increase in exposure to negative ads. In sum, no matter how it comes about, each standard deviation increase in exposure to negative and contrast advertising raises the probability of turnout by three to four percentage points.

Whither demobilization? Given the original Ansolabehere and Iyengar (1995) claim that the effect of negative advertising was most pronounced among political independents, we tested the hypothesis that negative ads might have demobilizing effects for citizens who are less politically engaged. We examined the effects of exposure among respondents who were less partisan, less attentive, less politically informed, and less educated. And we searched for effects that varied by gender, race, age, and region. Yet no matter where we looked, no matter whether we ran separate equations or employed interaction terms, no matter how we specified the model, there was no evidence of any demobilization whatsoever.

Conclusion

In this article we have argued that there is good reason to expect vigorous campaign attacks to stimulate voters: by engaging voters, by raising interest, and by communicating the notion that something important is at stake in the outcome of an election, negative ads (whether they are "contrast" ads or "pure negative" spots) should be more likely to stimulate than depress voter turnout. Taking advantage of a new data source, we were able to test this proposition directly in a presidential race. The CMAG ad tracking data allow us to generate better estimates of what citizens were likely to have been exposed to. To reiterate: without data on the tone, targeting, and volume of what was aired, the best one can do in order to gauge exposure outside the laboratory is to use self-reported exposure to political advertising (a tenuous strategy at best, as Iyengar, Ansolabehere, and Simon showed, and one that is not easy to improve upon, as we have argued here); the alternative is to use respondents' television-

watching habits as a rough proxy for exposure. With the CMAG data, we are able to go several steps beyond this. Not only do we have data on what ads were broadcast how many times *at the level of the media market*, but by merging these data with the 1996 NES we can differentiate among respondents *within* media markets. In short, we have created a new measure of exposure that moves us far beyond what can be done without the ad tracking information.

Although we make no claim that our relative measure of exposure is perfect (in fact, we have tried to identify a number of deficiencies in our approach), we believe that it allows us to examine much more carefully the claims put forward by partisans of the demobilization hypothesis. When we use our estimates of exposure to negative and contrast ads in a model of turnout, we find exposure to negativity actually *stimulates* voter turnout. It does so, we find, without regard to partisanship, information, or attention to the campaign. Across the board, exposure to negative advertising appears to increase the probability that citizens will make it to the polls on Election Day.

Is this the last word on the question of political advertising and voter turnout? We doubt it. Despite our findings and the arguments made here, we suspect that additional questions remain. What next, then, for the study of political advertising? So far, the debate has focused on relatively broad distinctions in the tone of television spots. Even distinguishing between "contrast" and "pure negative" ads leaves us with a fairly blunt instrument. Recent work suggests that citizens may make much more subtle distinctions when viewing political ads, judging some kinds of charges as fair game and others as foul play (Freedman and Lawton 2000; Freedman, Wood, and Lawton 1999; Kahn and Kenney 1999). These distinctions, we suggest, may well matter when it comes to electoral participation and candidate evaluations. Future work should move beyond negative and positive and look more closely at how political ads are perceived by actual voters.

Appendix

Question Wording, Coding, and Variable Descriptions

Voter Turnout. (v961074) Question Wording: "In talking to people about elections we find that a lot of people were not able to vote because they weren't registered, they were sick, or they just didn't have time. How about you, did you vote in the elections this November?" Coding: 1 if yes, 0 if no.

Education. (v960610) Question Wording: "What is the highest grade of school or year of college you have completed?" "Did you get a high school diploma or pass a high school equivalency test?" "What is the highest degree you have earned?" Coding: 0 if 8 grades or less, .167 if 9–12 grades, .334 if high school diploma or equivalent, .501 if some college, .668 if junior or community college degree, .835 if BA-level degree, 1 if advanced degree.

Female. (v960066) Observed by interviewer. Coding: 1 if woman, 0 if man.

African American. (v960067) Observed by interviewer. Coding: 1 if African American, 0 otherwise.

Age. (v960605) Question Wording: "What is the month, day and year of your birth?" Coding: Age in years.

External Efficacy. (v961244, v961245) Question Wording: "Please tell me how much you agree or disagree with these statements. The first is: Public officials don't care much what people like me think." "People like me don't have any say about what the government does." Coding: 0 if agree strongly, .25 if agree somewhat, .5 if neither agree nor disagree, .75 if disagree somewhat, 1 if disagree strongly. Both items summed and re-scaled to zero-one interval.

Internal Efficacy. (v961246) Question Wording: "Sometimes politics and government seem so complicated that a person like me can't really understand what's going on." Coding: 0 if agree strongly, .25 if agree somewhat, .5 if neither agree or disagree, .75 if disagree somewhat, 1 if disagree strongly.

Strength of Party Identification. (v960420) Question Wording: "Generally speaking, do you usually think of yourself as a Republican, a Democrat, an Independent, or what?" (If Republican or Democrat) "Would you call yourself a strong (Republican/Democrat) or not very strong Republican/Democrat?" (If independent, other, or no preference) "Do you think of yourself as closer to the Republican or Democratic party?" Coding: 0 if independent or apolitical, .33 if independent leaning toward a party, .67 if a weak partisan, 1 if a strong partisan.

Care Which Party Wins the Presidential Election. (v960202) Question Wording: "Generally speaking, would you say that you personally care a good deal which party wins the presidential election this fall, or don't you care very much which party wins?" Coding: 0 if don't care very much, 1 if care a good deal.

Campaign Interest. (v960201) Question Wording: "Some people don't pay much attention to political campaigns. How about you? Would you say that you have been very much interested, somewhat interested, or not much interested in the political campaigns so far this year?" Coding: 0 if not much interested, .5 if somewhat interested, 1 if very much interested.

Years at Current Residence. (v960713) Question Wording: "How long have you lived in this (house/condo/apartment)?" Coding: 1 if two years or less, 0 otherwise.

Homeowner. (v960714) Question Wording: "Do you/Does your family own your home, pay rent or what?" Coding: 1 if owner, 0 otherwise.

Mobilization Contact. (v961162) Question Wording: "As you know, the political parties try to talk to as many people as they can to get them to vote for their candidate. Did anyone from one of the political parties call you up or come around and talk to you about the campaign this year?" Coding: 1 if contacted, 0 otherwise.

Voter Registration Closing Date. Source: League of Women Voters. Coding: 1 if election-day or no registration, .5 if registration deadline 1–10 days prior to election day, 0 if registration deadline more than 10 days prior to election day.

Senate Competitiveness. Source: *Congressional Quarterly Weekly*. Coding: 1 if most competitive, .66 if competitive, .33 if less competitive, 0 if uncontested.

House Competitiveness. Source: *Congressional Quarterly Weekly*. Coding: 1 if most competitive, .66 if competitive, .33 if less competitive, 0 if uncontested.

Presidential Competitiveness. Source: PoliticsNow.com. Coding: 1 if most competitive, .5 if moderately competitive, .0 if not competitive.

Television-Watching Scale.Question wording: (v961150 through v961154) "Do you watch ("Friends," "Frazier," "ER," "Prime Time," "Dr. Quinn") every week, most weeks, only occasionally, or not at all?" Coding: 1 if every week, .66 if most weeks, .33 if only occasionally, 0 if never.

Question wording: (v961148 and v961149) "How many times a week do you watch (game shows like "Jeopardy" and "Wheel of Fortune"/sports) per week?" Coding: 1 if more than once a week; .5 if once a week, 0 if never. Primetime and sports items combined in one scale.

Question wording: (v960242) "How many days in the past week did you watch the national network news on TV?"

Question wording: (v960244) "How many days in the past week did you watch the local TV news, for example, "Eyewitness News" or "Action News"? News items combined in a single additive scale, recoded 0-1. Primetime/sports, game show, and news measures combined in a single 0-1 scale.

Likelihood of Exposure to Negative Commercials. Coding: Number of Negative Commercials Broadcast in Market Multiplied by TV Watching Scale.

Likelihood of Exposure to Positive Commercials. Coding: Number of Positive Commercials Broadcast in Market Multiplied by TV Watching Scale.

Likelihood of Exposure to Contrast Commercials. Coding: Number of Contrast Commercials Broadcast in Market Multiplied by TV Watching Scale.

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Ken Goldstein is assistant professor of political science, University of Wisconsin, Madison, WI 53706.

Paul Freedman is assistant professor of political science, University of Virginia, Charlottesville, VA 22903.

[Footnotes]

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