

The Impact of Political Advertising on Knowledge, Internet Information Seeking, and Candidate Preference

By Nicholas A. Valentino, Vincent L. Hutchings, and Dmitri Williams

Previous research has suggested that exposure to political advertising is generally informative and may even reduce information gaps between the most and least aware in society, but does not produce large shifts in candidate preference. Drawing on extant models of opinion change, we predicted that the informational benefits of political ads would vary by level of awareness, such that the most aware would experience the largest gains, especially when they are asked to make inferences about issues not explicitly discussed in the ad. Further, we predicted that the most aware would use information in advertisements as a substitute for other kinds of information seeking, while the least aware would be relatively unmotivated to seek out new information, regardless of exposure. Finally, the least aware would be more susceptible to persuasion via ads than the most aware would be. Experimental evidence confirmed these predictions.

Though the 50th anniversary of the first use of televised political advertisements in American campaigns is upon us, debates about the substantive impact and proper role of this unique form of political communication still rage. Recent meta-analyses have identified over 50 scholarly studies involving the impact of advertising on participation (Allen & Burrell, 2002; Lau, Sigelman, Heldman, & Babbit, 1999). Advertising has grown from a tool used exclusively by presidential candidates to an essential element of campaign communication at all levels of government. Consequently, the proportion of campaign-related expenditures by candidates and interest groups dedicated to this form of political communication has risen

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dramatically (West, 1997). As a result, there has been a fundamental shift in the balance of political communication from news to advertising over the last 2 decades. Citizens are now exposed to huge amounts of political advertising every election cycle, but exposure to news has declined over the same period (Bartels & Rahn, 2000; Kern, 1989).

Is all this political advertising a problem for our democracy? Journalists and political pundits have long distrusted political advertising as a public information resource. Joe McGinnis (1969) was one of the first to bemoan the power of ads to reshape the public image of a candidate without delivering much in the way of substantive information. Other observers followed suit, arguing that ads offer little substance upon which to base reasoned judgments, while delivering subtle emotional cues that can change people's feelings about the candidates (Jamieson, 1992). West (1997) also pointed out that the public does not seem to trust ads as a source of useful information.

A substantial body of research also suggests that "negativity" in political communication, including political advertising, breeds cynicism and may discourage voters about the value of participating in politics, leading to demobilization (Ansolabehere & Iyengar, 1995; Cappella & Jamieson, 1997; Patterson, 1994). However, the scholarly debate about this effect is ongoing, with many arguing that negative advertising does not demobilize (Finkel & Geer, 1998) and may even mobilize some individuals under some circumstances (Freedman & Goldstein, 1999; Kahn & Kenney, 1999; Wattenberg & Brians, 1999). Another line of research focuses on the variety of images and stylistic characteristics common in political advertising, which has led to theorizing about the form and function of various message types in evoking emotions and persuading voters (Benoit, 2001; Johnston & Kaid, 2002; Kaid & Johnston, 2001; Kern, 1989).

Finally, significant attention has been paid to the impact of exposure to advertising on levels of campaign information and candidate preference, and these are the foci of our analyses. Several studies have shown the journalistic and popular concern about the vacuous nature of political advertising to be unfounded. The evidence suggests that most advertisements focus on substantive issues (Hofstetter & Zukin, 1979; Joslyn, 1980). Furthermore, advertising appears to be quite effective in conveying candidate-issue stands (Ansolabehere & Iyengar, 1995; Brians & Wattenberg, 1996; Just, Crigler, & Wallach, 1990; Patterson & McClure, 1976; Pfau, Holbert, Szabo, & Kaminski, 2002; West, 1994; Zhao & Chaffee, 1995), boosting the salience of important campaign issues (Atkin & Heald, 1976; Benoit, Hansen, & Holbert, 2002; Holbert, Benoit, Hansen, & Wen, 2002), enhancing general campaign interest and engagement (Pfau, Park, Holbert, & Cho, 2001), and evoking powerful emotions about sponsors and target candidates (Kaid, Leland, & Whitney, 1992; Kern & Just, 1995).

One of Patterson and McClure's (1974) early findings was particularly encouraging: The least politically aware, as indicated by infrequent newspaper readership, seemed to learn more than the most aware from exposure to political advertisements. Among newspaper readers, information gains following exposure to ads were comparatively small. The authors concluded that political ads could reduce knowledge gaps in society, especially because the least politically sophis-

icated are more likely to watch television and are therefore more likely to be exposed to this form of political communication (p. 128).

Finally, there is disagreement in the literature about the persuasive power of political advertising. Early work on campaigns found very little by way of conversion of electoral support from one candidate or party to another (Lazarsfeld, Berelson, & Gaudet, 1944). Subsequent studies have reinforced those earlier conclusions, arguing that campaign advertising has little net impact on candidate preference either at the individual (Patterson & McClure, 1974) or aggregate levels (Finkel, 1993; Gelman & King, 1993). On the other hand, several studies have documented substantial changes in affective evaluations of candidates (Atkin & Heald, 1976) or even candidate preferences, though these effects are moderated by the viewer's party identification (Ansolabehere & Iyengar, 1995; Pfau, Holbert, Szabo, & Kaminski, 2002). Of course, recent history shows us that even small advertising effects could be large enough to decide elections.

We are motivated to revisit some of the previous findings about learning and persuasion in this area for both methodological and theoretical reasons. On the methodological side, much of the previous literature relied on indirect measures of exposure to advertising. Scholars have employed self-reported media use via surveys (Holbert, Benoit, Hansen, & Wen, 2002; Kahn & Kenney, 1999; Wattenberg & Brians, 1999; West, 1994; Zhao & Chaffee, 1995), aggregate data (Finkel & Geer, 1998), or a combination of the two (Freedman & Goldstein, 1999).

Survey-based studies typically rely on items that ask respondents to recall how many, or even which, particular advertisements they saw during the campaign. Such measures face two related problems. First, self-reported recall may be caused by political knowledge. Ansolabehere, Iyengar, and Simon (1999) advanced this argument in their critique of survey-based recall measures to estimate the impact of negative advertisements on turnout. They argued that the use of such measures depends upon two fundamental assumptions: (a) that recall is a valid measure of actual exposure and (b) that recall is not caused by turnout and is unrelated to any omitted predictors of turnout (p. 901). In the first case, many who do not recall seeing ads are likely to have been exposed, and many who do recall seeing ads may simply assume they have been, without any specific memory of an ad. Second, recalling an advertisement is correlated with interest and attention to politics. This may bias estimates most among the least aware because their baseline levels of information are lower, so they have more room to improve. In other words, those who are less politically aware, but still remember seeing political ads, may be a special subset of the least aware. This subset will tend to know more about the candidates despite their overall lack of sophistication. Finally, relying on aggregate data alone is problematic because it obscures individual variation in exposure to particular kinds of ads or even particular campaigns. It also obscures variation in characteristics such as political awareness that might moderate the impact of exposure on learning or candidate preference.

Patterson and McClure (1976) used an innovative measurement technique, asking respondents to keep logs of their media exposure during the campaign and then infer advertising exposure by determining which advertisements were running during the time they had the television turned on. This measure avoids many of the

problems of self-reported recall. However, it does not capture the tendency for some viewers to pay more attention to ads than others (Chaffee & Schleuder, 1986).

A more precise way to measure political advertising exposure is to manipulate it directly, through the use of controlled experiments (Ansolabehere & Iyengar, 1995; Pfau et al., 2002; Pfau et al., 2001). This methodology allows the researcher not only to determine whether exposure to advertising causes changes in dependent variables directly, but also to identify variables that moderate advertising effects. For example, Ansolabehere and Iyengar (1995) found that, although ads are informative, they seemed to inform the most aware and involved respondents just as much or more than they did the least informed, especially after some minimal threshold of exposure was established. In addition, they found that exposure to ads can alter candidate preferences. Furthermore, they found that the least aware are the most persuaded by political advertising. Ansolabehere and Iyengar's findings lead us to speculate about a theoretical basis for revisiting the early claims about advertising's impact on information and candidate preferences.

On the theoretical front we also have reason to question some of the previous claims about the impact of political advertising. At least one widely accepted approach to information processing and opinion change, Zaller's (1992) receive-accept-sample (RAS) model, would predict that the most aware citizens might learn a substantial amount from ads while not changing their preferences, whereas the least aware would learn less but be more susceptible to persuasion. This prediction stands in opposition to the conclusion of previous studies that political ads might level the information playing field by informing the least aware disproportionately. This hope is born out of the observation that political ads, and advertisements in general, are effective because they are simple, repetitive, and emotionally evocative. These characteristics of advertisements, however, do not mean they will be uninformative to those interested in politics. On the contrary, those who are interested will be even more likely to attend to and comprehend any new information presented in this format. Petty and his colleagues discussed a general orientation they labeled "need for cognition," which measures individuals' motivation to learn new things, think, and question the world around them (Cacioppo, Petty, Feinstein, & Jarvis, 1996). Our interest is in a domain-specific form of this orientation, one that involves political objects. We suggest that upon exposure to a political ad, highly politically aware viewers will tend to pay more attention to the information in the ad and add it to their existing store of knowledge about the candidates.

One's existing information store, however, will be positively associated with political awareness, so new information will be less likely to persuade. Those who lack the motivation to pay close attention to political advertisements, on the other hand, might learn only the most clear and simple information from a given ad. They would not tend to extrapolate from a given appeal to make inferences about issues that are not mentioned.¹

¹ It is important to note that the ELM identifies several variables, including the form and source of information that may influence how the information is processed. We have tried to hold these other variables constant in order to test the impact of typical political appeals.

The RAS model also builds on the widely accepted premise that citizens will tend to use whatever information is at hand in order to come to a political decision that is satisfactory, if not ideal (Zaller, 1992, p. 16). Because information seeking in the political domain requires effort, time, and energy, citizens will seek out and think about politics only enough to bring them to a satisfactory decision (Downs, 1957). Citizens are, in other words, “cognitive misers” looking for shortcuts to simplify a complex political information environment full of competing arguments (Simon, 1979). If so, then those least motivated to attend to political information might have a lower demand for substantive details. In fact, many may prefer the simplest of shortcuts, such as cues embedded in a message that focus on candidate personality traits or appeals to social groups (Popkin, 1991). The implication of these ideas for our current exploration of advertising effects is that each citizen requires a particular, and limited, amount of information about politics. Advertisements contain some information, bringing all viewers closer to that ideal point. As a result, we would expect that the demand for political information would be reduced by exposure to ads. Furthermore, this effect should be moderated by awareness: The most aware should have a higher demand for information and should learn more from ads, thereby decreasing future demand (Atkin, Bowen, Nayman, & Sheinkopf, 1973). The least aware should have much lower levels of demand to begin with so additional information seeking should be negligible.

Zaller’s (1992) approach to attitude change also suggests that political awareness moderates the impact of advertising exposure on candidate preferences. Viewers with a broad awareness of politics will be more likely to comprehend and retain the information in a given message, but will be simultaneously unlikely to change their minds as a result (also see Delli Carpini & Keeter, 1996).² The reason is that the most aware would already have made up their minds: Messages consistent with their position would only reinforce their prior choice, whereas messages contrary to their position would be resisted strongly (Kaid & Tedesco, 1999). The least aware have less resistance to the persuasive message—they possess less information with which to counterargue and are less motivated to do so even when they have such information—and would therefore be more likely to change their minds.

Hypotheses

We propose a model of advertising effects that draws on insights from the aforementioned model of opinion change. This approach produces a set of expectations that brings together several divergent conclusions in the political advertising literature. These general expectations can be divided into three hypotheses regarding the impact of campaign advertisements on levels of political information, information seeking, and candidate preference.

First, political ads should increase information about the candidates’ stand on issues. Two types of information acquisition, however, might take place. First, we

² An important exception to this rule maintains that relatively high levels of domain-specific interest can compensate for low levels of general political knowledge (Hutchings, 2003).

expect that subjects should absorb the issue stands that are explicitly discussed in a given ad. In addition, subjects might become more accurate in placing candidates on issues not explicitly discussed in the ad because their existing schemas about the candidates and their parties might become more active in memory. This later type of learning should be concentrated among the most politically aware, because these citizens typically have the greatest motivation to attend to and comprehend the message. The most aware will have the most well-developed political schemas, such that information about one issue will provide clues about the candidate's likely position on others. This leads us to expect an interactive effect of exposure and awareness for accuracy in placing candidates on issues that are not mentioned directly in each ad.

H1: Advertising boosts all respondents' knowledge of the candidate's stands on issues mentioned in the ad, but only the most aware become more accurate about issues not mentioned.

Second, if ads provide citizens with information that is useful for making political decisions, and citizens are cognitive misers, then exposure to advertising may generally reduce further demand for information. However, we expect that this effect should exist primarily among those who learned the most from the ads in the first place, that is, the most aware. The least aware should exhibit consistently low levels of information demand, regardless of exposure.

H2: Exposure to political advertising reduces information seeking, especially among the most aware.

Third, advertising exposure should boost support for the ad's sponsor. This effect should also be moderated by awareness, but in the opposite direction to the one predicted for knowledge. In other words, the most aware should be more resistant to persuasive messages and should therefore exhibit little movement on measures of candidate preference. We expect more movement among the least aware because they are less willing or able to counterargue the message.³

H3: Exposure to political advertising boosts support among the least aware for the sponsor of the ad while leaving the most aware largely unaffected.

Method

Testing these three hypotheses requires an innovative research design. To begin with, one needs a setting in which the exposure of average citizens to realistic political stimuli can be controlled. Additionally, one needs realistic measures of information seeking, campaign learning, and candidate preferences. To

³ Again, Zaller (1992) suggested that the most aware will be less persuaded because they will have already made up their minds strongly, and because any change will be polarizing among Republicans and Democrats.

meet these requirements, we designed an experimental laboratory with several special features.

First, we employed computer-assisted self-interviewing software to reduce interviewer demand and other social desirability biases. Second, we were able to deliver realistic political communication stimuli (television political advertisements) during the interview but with no interaction between subjects and experimenters. Third, we tracked actual online information search behavior noninvasively after exposure to an advertising stimulus.

Participants

Three hundred and twenty adult, nonstudent subjects visited our computer lab during September and October 2000 under the pretext of participating in a “survey of opinions about advertisements and issues in the news these days.” Participants were recruited off the street and from office buildings in a downtown area via flyers offering \$15 for their participation in the study. After giving informed consent, they were seated in front of a computer by one of our lab assistants and began to answer questions programmed with interviewing software (Blaise, Inc.).

The final sample was quite diverse. We were able to interview young and old, men and women, Whites, Blacks, Asians, and Hispanics, wealthy and working-class residents in the area surrounding the University of Michigan campus in Ann Arbor. We interviewed subjects who had little previous experience with the Internet as well as those who had used the Internet frequently. To minimize the possibility that our study would attract only those who were already interested and engaged, our cover story did not mention politics in any way. In the end, our sample contained broad variation in political interest and engagement. The mean level of education and interest in our sample was still higher than that of the national population, as over 50% of the sample had college degrees, while the national average is just over 25% according to the 2000 U.S. Census. Another large bias in the sample is partisanship, with over 64% identifying themselves as Democrats and only 14% identifying as Republicans. However, the distribution of these characteristics across conditions did not vary significantly, so we are confident that the effects we observed can be attributed to exposure to our advertisements.

Design

After a short pretest interview measured interest in politics, media consumption and Internet use, participants were assigned randomly to view a series of three advertisements. One of these ads was a political appeal constructed in our media lab, and the other two were filler ads for commercial products such as automobiles or home improvement outlets. The media lab enabled us to create realistic appeals for candidates Al Gore and candidate George W. Bush. Our ads were sponsored by the major party candidates and highlighted traditional partisan themes such as tax relief, the role of government, appeals to various social groups, and candidate traits.⁴ The final versions of these ads were convincing: Only three

⁴ Actually we designed ads focusing on three different frames: ideology, group appeals, and character. Going into the study, we speculated that group frames might have been more helpful than ideology or character ads in stimulating learning about the candidates, under the assumption that citizens use

participants of the 320 in the sample expressed any doubts during debriefing about whether the ads were real campaign spots.

Measures

After viewing the series of advertisements, respondents continued to answer questions on the computer for about 20 minutes. They were asked about the ads themselves, political issues, candidate knowledge items, and candidate preference. At the end of the survey, participants were told they could visit either or both of the Web pages of the presidential candidates to learn any additional information that interested them. We constructed these sites based on the candidates' actual Web pages. We standardized the information so that the domains and the issues within each domain were organized in exactly the same way for each candidate. For example, on each candidate's page, participants could select information from one of five topics: The candidate's personal background, his stands on issues, his appeals to various groups in society, his feelings about the proper role of government, and the general platform of the candidate's party. Though the specific information on each page was different, we made sure the total amount of information was roughly equivalent across the candidates. Within the "groups" and "issues" pages, there were further links that would provide more information on specific groups and issues. For example, there were 12 issue pages on each candidate's website. The issue headings were identical, but contained each candidate's distinct platform on education, health care, job training, technology, foreign policy, and other issues.

Our innovation in measuring political information searching in this study is worth emphasizing. Prior attempts to measure information search behavior utilized either self-reports of exposure to mass media (e.g., Atkin, 1972) or discussion partners (Huckfeldt & Sprague, 1987), or they employed abstract search tasks of information organized in a rectangular matrix on a computer screen (Huang, 2000). Our technique captured more naturalistic search behavior on the Internet, measuring the sequence of pages visited and the time spent on each. Participants were not aware that we were tracking their behavior, nor did any subject question the authenticity of the candidates' pages. At the end of the study, we had collected a highly detailed, yet rigorously controlled set of information choices made by each respondent.⁵

We developed a number of indicators for measuring respondents' knowledge, their political awareness, and their online information-seeking behavior. First, we constructed an index for measuring respondents' accuracy in placing candidates on the four major issues addressed in each ad. Gore's ad conditions addressed the

group cues to organize political information in memory (Nelson & Kinder, 1995). This prediction was not supported, as all three frames produced nearly identical results. The familiarity of the presidential candidates may have rendered different frames less distinctive to the audience. Therefore, throughout this article we reported pooled results for these three frames. A transcript of all the advertisements is available from the authors upon request.

⁵ Subjects could quit searching at any time after entering the website. After the interview, subjects were fully debriefed, paid, and dismissed. The entire interview took 45 minutes on average.

need for spending on job training, public schools, health care, and general social programs. Respondents were later asked to place Gore on 7-point scales for each of these issues. With regard to job training, for example, participants rated Gore on a scale running from *government should provide job training to workers should be responsible for getting the training they need*. Placing Gore on the lower end of this scale (responding 1, 2, or 3) was considered “correct” for this item. Bush’s ads focused on tax cuts, reforming public schools, cutting government spending, and strengthening private charities. Items for each issue discussed in each candidate’s ad were summed to form a 4-point issue knowledge index. Finally, we constructed a 6-item index to measure knowledge of candidate stands on issues not mentioned in either of the ads. This index was constructed differently than the previous ones, in that a response was considered correct only when it accurately placed both candidates on a given issue. For example, a respondent would need to place Bush on the right side of the abortion scale (5, 6, or 7 on a scale running from 1, *By law, a woman should always be able to obtain an abortion as a matter of personal choice*, to 7, *By law, abortion should never be permitted*) and Gore on the left in order to receive credit for this item. We used this more stringent index of knowledge for these issues because we wanted to make the toughest possible test of the awareness hypothesis outlined above. We expected that only the most highly politically aware participants would be able to make accurate inferences about both candidates on these issues that were not mentioned in a given ad. These issues included attitudes toward juvenile criminals, abortion policy, affirmative action, raising the minimum wage, the death penalty, and welfare programs for the poor.⁶

General political awareness was measured with a battery of items testing institutional knowledge independent of the candidates in the study.⁷ We divided the distribution on this scale at the median (56% of the sample scored 3 or lower on this 5-point scale) so we could compare the effects of advertisements among the most versus the least aware.

A measure of information searching was constructed out of the search task data. Because we were interested primarily in issue-based searching, we employed a targeted measure counting the number of different issue pages, as opposed to pages focusing on groups, party platforms, or other filler pages. Several other measures of information seeking were tested, and all returned exactly the

⁶ For the death penalty item, the correct answer was that both candidates favored the death penalty. We estimated the reliability the candidate knowledge scales using the Kuder-Richardson method of internal consistency. All returned KR coefficients of modest reliability, ranging from .53 for the knowledge of Gore’s positions on issues mentioned in the ad, to .56 for knowledge of candidate placement on issues not mentioned in the ads, to .67 for knowledge of candidate placement on issues in the Bush ad. The relatively low reliability scores are not surprising because these measures are indexes composed of items with varying degrees of difficulty. As such, they are not intended to measure a single general dimension but are instead simply scores of particular knowledge mentioned (or not mentioned) in a particular advertisement.

⁷ Items included the political office of Dennis Hastert, whose responsibility it is to decide if a law is constitutional, how much of a congressional majority is required to override a presidential veto, which party holds a majority in the House, and which party is more conservative.

same pattern of results. Finally, candidate preference was measured with a 5-point scale running from strong support for Gore to strong support for Bush, with respondents indicating undecided placed in the middle category. Respondents who opted to vote for Nader or Buchanan were excluded from this analysis.

Analyses

To determine the effect of advertising exposure, we used analysis of variance using simple contrasts with exposure and awareness entered independently and in interaction with each other, with control variables entered as covariates. Control variables for each model were selected based on the factors that were likely to influence each dependent variable. Because the three dependent variables of interest (knowledge, information seeking, and candidate preference) are conceptually and empirically distinct, we performed separate analyses of variance for each variable.⁸ For the first hypothesis, we entered exposure to an ad (by either Gore or Bush), political awareness, the interaction between the two, and controls for turnout, news consumption, and education. Though we did not hypothesize a difference in the effects of exposure across candidates, we did find one interesting difference between them and so we present and discuss these results separately. For the second hypothesis, we entered exposure to either candidate's ad, awareness, the interaction between the two, and controls for news consumption, turnout, race, Internet use, and education. For the third hypothesis, we entered exposure to either candidate's advertisement, awareness, the interaction between the two, and controls for party identification, ideology, church attendance, and age.

Results

Our first hypothesis stated that, although most respondents should absorb information contained in the ads themselves, the most aware should also become more accurate in placing candidates on other issues. Figure 1 displays the results of our first test. We found mixed support for our expectations. In Panel A, we see that both awareness groups learn information directly relevant to the Bush ads. In addition, the most aware appear to learn the most from these ads, though this difference represented by the interaction between awareness and exposure is statistically insignificant. The main effect of exposure on information is significant in the analysis of variance ($F = 6.02, 1 df, p < .05$). The same pattern holds for Panel B, concerning the Gore ads, though none of the differences we found here were statistically significant.

When we looked at a more difficult test of knowledge, the accuracy of placing both candidates on issues not mentioned in the ads, we found stronger interac-

⁸ Because our two information scales (information about issues contained in the ad versus issues not contained in the ad) are conceptually linked, multiple analysis of covariance (MANCOVA) is appropriate to make sure the impact of awareness and exposure are jointly significant for both scales. We performed this analysis and the results are substantively and statistically identical to those we arrive at in the separate analyses present below.

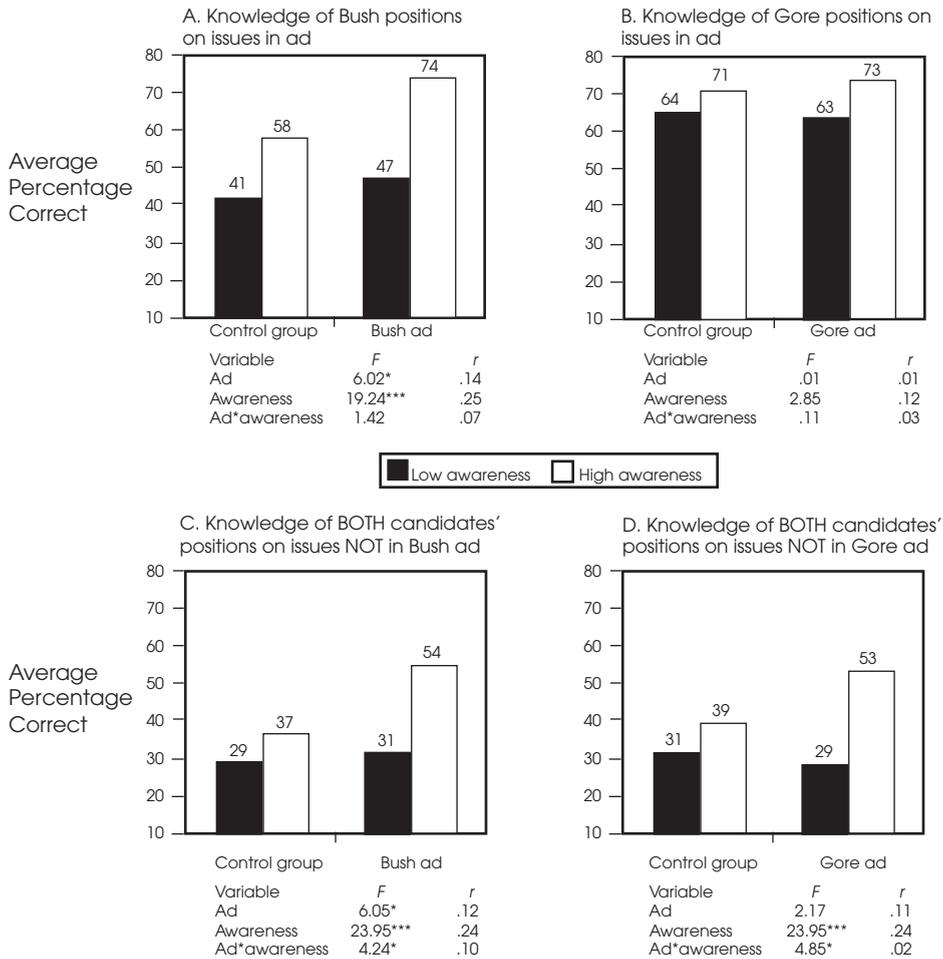


Figure 1. The impact of exposure to candidate ads on knowledge of candidate issue positions, by level of awareness. Bars represent estimated means based on analysis of variance, including covariates for local and national news consumption, intended turnout, and education. All *F*s are based on one degree of freedom. Significance levels are two-tailed.

p* < .05. *p* < .01. ****p* < .001.

tions with awareness. In Panels C and D, the most aware appear much better able than the least aware to use the information in each ad to make inferences about other issues. Both interactions between awareness and exposure are statistically significant in these panels. However, the main effect of exposure is also significant, suggesting that exposure prompted even the least aware to make slightly more accurate placements of the candidates on issues not contained in the ad. Gore's ads, however, did not help the least aware at all in placing candidates on issues not contained in the ad.

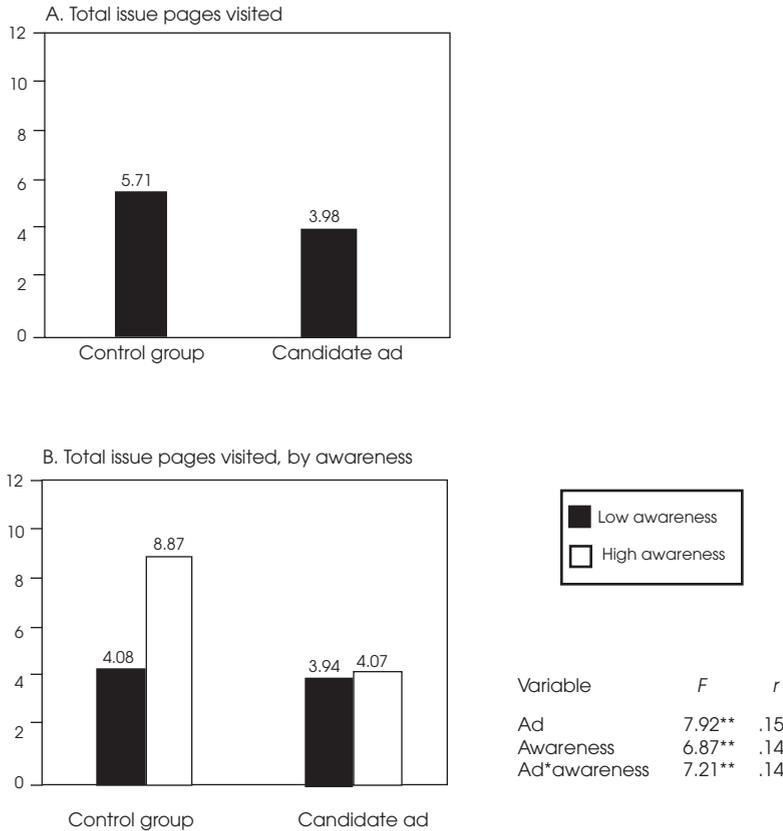


Figure 2. Ad exposure and Internet information seeking. Bars represent estimated means with analysis of variance, including covariates for local and national news consumption, race, intended turnout, education, and prior Internet use. The *F* based on the mean difference in Panel A is 4.24 (1 *df*), effect size = .11, significant at *p* < .05.

***p* < .01.

These results provide fairly consistent support for our first hypothesis: Exposure to political advertising boosts accuracy of information about the candidates along both those dimensions they directly emphasize and on issues that are not mentioned in the ads. Our explanation for the weaker effects of exposure to the Gore ads is simple: Respondents already knew quite a lot about Gore, making it more difficult for any given ad to “teach” them something about Gore that they did not already know. Because baseline levels of knowledge about Bush were lower, ads facilitated a larger gain.

The second hypothesis predicted that exposure to political advertisements would, on average, reduce demands for further information seeking. In Figure 2, we analyzed a measure of information seeking on pages dedicated to the candidates’ issue platforms. Panel A suggests that, on average, those in the control group viewed nearly six different issue pages during their search, whereas those who

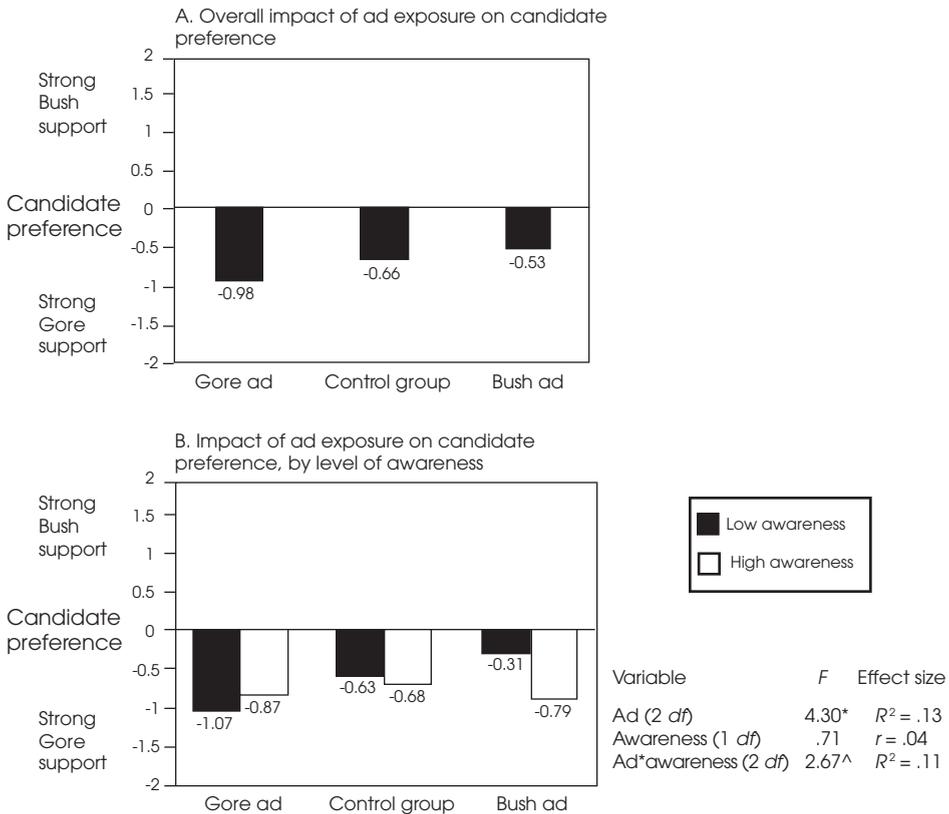


Figure 3. Candidate preference as a function of advertising exposure. Entries are estimated means on the five-point candidate preference scale based on analyses of variance with covariates for age, political awareness, church attendance, party identification, and ideology. Effect size for variables with 1 degree of freedom = r , for variables with 2 degrees of freedom = R^2 . Overall F based on the mean differences in Panel A is 4.85 (2 df), effect size = .14, significant at $p < .01$.

* $p < .05$. ^ $p < .10$, two-tailed.

saw an ad viewed just under four pages ($F = 4.24$, 1 df , $p < .05$). When we broke the previous results down by level of awareness, we found that this substitution effect occurs primarily among the most aware. In Panel B, we observed a very large difference between the least and most aware in the amount of information seeking when no political ad is seen. This difference disappeared, however, among those viewing a political ad. For both measures of information seeking, the interaction between awareness and exposure was statistically significant. In other words, the most aware seek out significantly less information once they are exposed to a political advertisement, whereas the least aware search for less information to begin with and are less affected by exposure in this way.

In our third and final hypothesis, we predicted that advertisements should be most persuasive among the least aware. Figure 3 displays the mean candidate preference scores on a 5-point scale running from -2 (strong support for Gore) to +2 (strong support for Bush), with respondents indicating undecided placed in the middle category, across cells of the design. Given the strong Democratic bias in our sample, the results in Figure 3 are not surprising: The mean respondent, regardless of ad exposure, is solidly in Gore's camp. However, exposure even to just one ad moves the mean level of candidate preference significantly and in a predictable way. In Panel A, support for Gore is maximized among those viewing a Gore ad and minimized among those in the Bush conditions, with those in the control group falling squarely in the middle ($F = 4.85, 2 df, p < .01$).

When we broke down this effect into high and low awareness groups in Panel B, we found strong support for our third hypothesis. Among the least aware, support for Gore dropped substantially across the exposure conditions, from -1.07 in the Gore conditions, to -.63 in the control group, and finally to -.31 in the Bush conditions. Among the most aware, however, support for Gore changed little across the conditions. The main effect for exposure was statistically significant ($F = 4.30, 2 df, p \leq .05$) as was the interaction between exposure and awareness ($F = 2.67, 2 df, p \leq .10$). In other words, the persuasive effect observed in the top panel of the figure is accounted for primarily by preference change among the least aware.

Summary and Conclusion

Some observers have hoped that television advertisements might reduce political knowledge gaps, as a result of the simplified nature of the communication as well as the predominance of less aware citizens in the television audience. Extant theories of opinion formation and change suggest that the impact of advertising on candidate information depends on the type of information measured and the type of citizen exposed. For relatively direct and simple information effects, ads seem to provide substantial benefits for most citizens, especially when information is relatively scarce to begin with. Both highly aware and less aware respondents learned a great deal of new information directly from the Bush advertisements we constructed, although they learned less about Gore, about whom they already knew a lot. When we examined inferences about candidates' positions on issues unmentioned in the advertisement, we found that accuracy increased primarily among those who were most aware to begin with.

This pattern of findings complicates the conventional wisdom about the role of political advertising in reducing knowledge gaps in society, while it confirms some of the ideas about the moderating role of political awareness. Although ads provide some information directly to citizens regardless of their previous levels of political awareness, the most sophisticated may get an additional benefit: The ad activates existing stores of information about the candidates and parties such that accurate inferences about a wide array of issue positions can be made. The least

aware, who do not possess the same constellation of information about political objects, are less able or willing to use the information in political ads to make inferences about other issues. In other words, the biggest informational benefits via exposure to advertising seem to accrue to those citizens who already possess a complex and interconnected web of ideas about politics.

Furthermore, we found that information in political ads may serve as a substitute for other kinds of information seeking among the most aware. This finding is consistent with the notion that citizens are cognitive misers who maintain some general, and limited, demand for political information. At baseline, that demand is higher among the most aware, such that they seek more information about the candidates in the absence of any provided by a political advertisement. Exposure to advertising, however, provides significant amounts of information for this group, rendering information seeking less useful. The most sophisticated, then, may not update their existing knowledge constantly, but do use any new information about politics more efficiently than do the least aware, strengthening existing connections and reaffirming prior knowledge. Information seeking requires effort, and even the most aware will not expend that effort unnecessarily.

The same theoretical approach that predicts larger information gains among the most aware, however, also predicts larger persuasive effects among the least aware. Although there was a significant effect of exposure to our advertisements on candidate preferences in the sample as a whole, that effect was almost entirely located among the least aware. Bush ads pushed these subjects toward Bush, and Gore ads pushed them toward Gore. Our argument here is not that the most aware cannot be persuaded, but that they will have more information to begin with, will be more likely to have taken a firm position regarding their preferred candidate by the time the general election begins, and will therefore be less likely to register a change of preference in response to advertising exposure. We should note that Zaller's (1992) model would suggest that new information that is consistent with the political values of the most aware would push undecided partisans in the direction of the message, but would have little effect on citizens belonging to the opposing party. Though we do not have sufficient cases in this study to test this implication, further analyses of our results do indicate that Democrats were more likely to move toward Gore when exposed to a Gore ad than were Republicans. This is also consistent with Ansolabehere and Iyengar's (1995) findings on the partisan resonance of political advertising.

Of course, all of these predicted effects are contingent upon exposure to political communication in the first place. One of Zaller's (1992) most significant contributions was the realization that awareness itself moderates exposure to new political information. However, in the particular case of political advertising, and especially presidential advertising, exposure may now be ubiquitous across levels of awareness. Although variation in overall exposure certainly exists (Freedman & Goldstein, 1999), even the least aware citizens in large competitive markets are likely to be exposed to a large volume of ads (Kern, 1989). This means that the aggregate impact of advertising in a given election cycle will be less and less restricted to the most aware in our society. Consequently, the findings presented here may well generalize to the population at large.

These findings confirm what current theories would predict about advertising effects. Therefore, one potentially unique benefit of exposure to political advertisements—that they provide a large informational benefit for citizens who are uninterested or uninformed about politics—must be qualified. Those who are less interested and motivated by politics learn a little from ads, whereas those who are inclined to pay attention to ads learn a significant amount about a wide variety of issues. Thus although knowledge gaps for issue domains most often discussed during the campaign may decrease, general knowledge gaps may increase. Meanwhile, advertising seems to persuade the least aware most powerfully, ostensibly because these citizens are looking only for simple decision heuristics, not detailed issue information, upon which to base electoral decisions.

The debate about political advertising to date has focused on whether ads are good or bad for our democracy, and each side has its strong adherents in both the scholarly and lay communities. These results suggest that the benefits of advertising are contingent on the qualities of the audience. Of course, one experiment cannot demonstrate conclusively effects across the full range of political advertising cues, audiences, and candidates that comprise a typical campaign environment. These results should be tested, for example, on a representative sample in order to determine how generalizable they are to the entire population. Though we have tested only a small range of messages from a single campaign, we believe these results are important for the ongoing debate about the potential benefits and dangers of television political advertising in modern democracies.

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