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Cumulative and Long-Term Campaign Advertising Effects on Trust and Talk

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Abstract

Most studies of political advertising have failed to consider that advertising effects may build up across multiple election seasons or extend past Election Day. This study investigates the short-term and long-term effects of both same-cycle and multi-cycle exposure to campaign advertising on political and social trust and modes of political talk. Using survey data and campaign advertising data, we test the effects of ad volume and ad negativity. We find effects of both same-cycle and cumulative exposure to advertising. Some are fleeting effects, but the majority of them are sustained or sleeper effects, emerging long after the campaign has ended. These results suggest that scholars should extend their focus beyond same-cycle effects measured during or just after a single campaign.

A great deal of scholarly attention has been focused on understanding the effects of campaign advertising on a wide range of attitudes and behaviors. Central to this undertaking has been the core question of whether modern political campaigns, in general, and political advertising, in particular, are "good" or "bad" for democracy. In addition to the debate about the normative consequences of modern campaigns, there has also been significant disagreement about how best to measure advertising effects—in the lab, with observational data, or taking advantage of natural experimental conditions

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(Arceneaux, 2010; Goldstein & Ridout, 2004). Still, no matter the approach, whether one uses observational work and believes that campaigns improve democracy or whether one uses experimental studies and holds that campaigns are harming our polity, almost all of the scholarly work has missed a major empirical and theoretical point. Specifically, in focusing solely on immediate and short-term effects of political ads, scholars have overlooked the potential cumulative and long-lasting effects, influences that may linger past the end of a campaign or accumulate over the course of multiple election cycles.

It is somewhat surprising that scholars have largely focused on the effects of one campaign's worth of ads on attitudes at one particular time, Election Day, as if the citizenry immediately forgets the torrent of political messages it encountered. Given that campaign activity is repeatedly concentrated in particular battleground states and focused on those who consume particular types of programming (Ridout, Franz, Goldstein, & Feltus, 2012), the focus on the immediate may be providing an incomplete picture of the broader effects of advertising.

For example, with current approaches, a citizen in a state such as Florida, the target of immense advertising barrages for the last four presidential elections as well as a series of competitive state-wide contests, goes into a study—no matter the type—with his or her ad exposure "counter" reset to zero. Is it theoretically reasonable and empirically accurate to assume that the "cache is cleared" before each election or that the effects do not linger past Election Day into the months that follow? Consider the Indianapolis and Dayton markets in 2008. While both received heavy advertising in the presidential race, such high levels of campaign activity were unusual for Indianapolis (located in a state that had not been competitive since the 1964 presidential contest) and common in Dayton (located in a state that is a perennial presidential battleground and had also been home to competitive Senate and gubernatorial races in recent years). Did longtime residents of these two markets have the same experience of this campaign and parallel response when exposed to its messages in the short and long term? Or did previous heavy doses of political advertising temper or exacerbate its effects on the denizens of Dayton?

As these questions imply, whether one believes the influence of political advertising is beneficial or deleterious to core democratic competencies, researchers should examine the possibility of cumulative and long-term effects. The reason they have not, of course, is the challenges associated with designing a study that would be able to measure these effects and differentiate between immediate impact, cumulative influence, and delayed effects that emerge after the election. In other words, while we may celebrate or lament effects observed immediately after an election, the more consequential influence of campaign ads may be their impact on future behavior. If truly consequential, they should also be detectable once the hurly-burly of the campaign has ended.

Figure 1
Possible combinations of time scale of exposure measurement and effects found

		Time scale of effects found		
		Short-term only (fleeting)	Both short-term and long-term (sustained)	Long-term only (surfacing)
Time scale of exposure measurement	Same-cycle	Most campaign ad research focused here		
	Cumulative			

Investigating the short-term and long-term effects of both same-cycle and multi-cycle exposure to campaign advertising on a range of attitudes and behaviors requires data that allow estimation of advertising exposure over multiple election cycles and allow estimation of short-term and long-term effects. Accordingly, we examine ad effects in the 2004 campaign cycle, combining information on the content and precise targeting of advertising in 2000, 2002, and 2004, with a panel survey collected just after—and 9 months following—Election Day 2004.

Given the prominent debates in the discipline about the effects of ad tone (Ansolabehere & Iyengar, 1995; Freedman & Goldstein, 1999; Kahn & Kenney, 1999; Krupnikov, 2011), we also focus on whether the short- or long-term effects of campaign ads are due more to their tone (negative or positive) or their sheer volume. Across a range of political attitudes and behaviors, we test whether campaign ads lead to normatively desirable or undesirable outcomes, and whether it is the amount of exposure or the tone of the content that shapes these democratically consequential effects on a long-term or cumulative basis.

Campaign Ads, Long-Term, and Cumulative Effects

By and large, election research has focused on short-term effects within a single election cycle, ignoring the possibility of effects extending or emerging in the long term or even accumulating across election cycles. Figure 1 illustrates the argument we are making. The columns indicate the time scale of possible ad effects, whether short term only (fleeting), both short term and long term (sustained), or long term only (surfacing). The rows indicate the time over which exposure to advertising is measured within the same cycle or considered cumulatively over several election cycles. Thus, there are six possible research designs when we combine both the time scale of effects found and the time over which advertising is measured.

Virtually all extant research focuses on only one of these boxes, examining short-term effects of same-cycle ad exposure. Our research, by contrast, examines ad effects in all six categories, allowing us to identify both cumulative and long-term effects.

Timing of Exposure and Effects

One-shot, time-specific studies may not capture the full effects of advertising—positive or negative. Advertising effects likely vary based on the outcome in question, and there are strong theoretical reasons to expect that the potential effects of exposure to campaign advertising may accumulate over multiple campaign cycles and become most visible after the ritual of the campaign is over. This may be especially true when we move beyond attitudes and behaviors related to specific campaigns, such as evaluations of candidates, vote preference, and propensity to turnout—the typical dependent variables in studies of campaign effects—and instead turn to more general attitudes toward this political system and political behaviors. We will focus here on four normatively important, but underexamined outcomes: trust in politicians, social trust, political talk, and cross-cutting political talk.

Long-term effects. Most research is not designed to test whether political ad effects last beyond the election. As noted above, campaign effects may be fleeting or they may be sustained, remaining for months or years. A few studies have addressed this question directly and found fleeting effects, including Gerber, Gimpel, Green, and Shaw (2011), who observed that the impact of exposure to radio ads on persuasion is strong but short lived. Hill, Lo, Vavreck, and Zaller (2013) as well as Sides and Vavreck (2013) found a fairly rapid decay of advertising influence on vote choice. Of course, both of these studies are documenting fleeting effects on persuasion, not the types of democratic outcomes that are the focus of our work here. Attitudes toward the political system and behaviors like political talk clearly persist beyond Election Day, and there is theoretical support for why this might be the case. Models of public opinion, such as Zaller's (1992), suggest that attitudes at any moment are averages of sampled considerations. Although one is more likely to sample recently acquired considerations, distant considerations—perhaps those acquired in previous election campaigns—may also shape opinions.

Sleeper effects. Another possibility is the presence of long-term effects when short-term effects are absent—a delayed or emergent effect, sometimes called a "sleeper effect"—where campaign influence is not immediately detectable but arises over time because of initial suppression (Lariscy & Tinkham, 1999). In psychology and communication, sleeper effects are thought to emerge because source credibility effects are short term (Kelman & Hovland, 1953). That is, message features that warrant discounting, such as a disreputable source, are forgotten, but the information contained in the

message is not. Meta-analyses confirm that cues producing strong initial discounting eroded over time. The increase in effects was "stronger when recipients of discounting cues had higher ability or motivation to think about the message" (Kumkale & Albarracín, 2004). This characterizes many campaign contexts in which messages that are initially discounted eventually come to color later thoughts and actions.

Cumulative effects. Just as it is possible that effects occur over a longer time scale than is usually examined, it is also possible that the exposure necessary to create these effects occurs over an extended amount of time. As Norris, Curtice, Sanders, Scammell, and Semetko (1999) note, there exists "an important distinction between cumulative and campaign-specific effects [. . .] Cumulative media effects are due to repeated exposure to television and the press in the assumption that [media] habits have a diffuse influence on our values and opinions on the long-term socialization process" (p. 12). If the long-term effects we hypothesize above do not return to a baseline level before the next round of advertising starts, then the effects of advertising on trust and talk should cumulate. Given the length of campaigns in the United States nowadays—and the ubiquity of advertising—this seems a distinct possibility. Therefore, we may need to measure exposure to campaign ads over multiple years to see certain types of effects that emerge from repeated campaign contact, both long or short lived. These types of effects—whether short term or long term, immediate or sleeper, same-cycle or cumulative—may come to shape attitudes and beliefs both within and across elections, such as political and social trust as well as norms of expression and tolerance for divergent views.

Effects on Trust and Talk

Trust. Trust in government and fellow citizens is thought to underlie civic participation and the health of democracy (Brehm & Rahn, 1997; Coleman, 1990; Eveland & Shah, 2003; Rahn, Brehm, & Carlson, 1999; Sullivan & Transue, 1999; Zmerli & Newton, 2008). But some posit a negative impact of political advertising and of negative advertising in particular on trust and other attitudes about the political system (Pinkleton, Um, & Austin, 2002; Yoon, Pinkleton & Ko, 2005). For example, Ansolabehere and Iyengar (1995) find that advertising takes a toll on citizens' sense of efficacy, potentially increasing cynicism and reducing their interest in electoral processes. Lau, Sigelman, and Rovner (2007), who conducted a meta-analysis of previous studies on the effects of negative political advertising, find suggestive evidence that exposure to negative advertising lowers people's trust in government. Jackson, Mondak, and Huckfeldt (2009) find no evidence that negativity decreases trust, while Kahn and Kenney (1999) state that negativity is particularly likely to have detrimental effects on candidate evaluations when

campaigns degenerate into heated and hostile exchanges. A large volume of negative messages may initiate a spiral of cynicism (Cappella & Jamieson, 1997) about government and politicians. Government officials are the explicit targets of many ads, which often highlight their questionable voting records, their personal failings, and their apparent cronyism and corruption (Benoit, 1999).

In addition to these potentially negative effects on trust in politicians, political advertising may also erode generalized trust in others. Indeed, campaign strategists use time-tested techniques that rely on creating social mistrust, such as "othering" minority groups (Hutchings & Jardina, 2009). Many of these messages assign problems in society, either implicitly or explicitly, to an untrustworthy social group on the other side of the political spectrum. Recent political ad campaigns have targeted many different social groups, including immigrants, gun owners, social assistance recipients, union members, and corporate executives. These ads are negative toward members of the social group in question, but can be either positive or negative in tone toward a candidate. Thus, both the sheer volume of ads and the negativity of ads may affect social trust.

Talk. Political talk is an important behavior in American democracy. The mere expression of political ideas may positively influence a person's readiness to act as a citizen (Pingree, 2007). Moreover, people learn about candidates' stances on the issues from both media and talk (Hardy & Scheufele, 2009). Indeed, research testing the communication mediation model has found that the volume and negativity of advertising exposure can influence patterns of news consumption, with the former increasing information seeking and the latter decreasing it (Shah et al., 2007). This, in turn, influences political talk and ultimately participation. But, these effects have only been considered in the short term and may change direction when we consider the buildup of ad exposure over several campaign cycles.

Exposure to opposing perspectives through political talk is considered critical for deliberation but is not necessarily consonant with participation (Huckfeldt, Johnson, & Sprague, 2004; Mutz, 2006). Research has found that cross-cutting exposure increases awareness and knowledge of reasons on both sides of an issue, fostering political tolerance (Mutz, 2002). Yet, people tend to avoid it. It is well established that individuals seek homophily, that is, like-minded people and like-minded talk (Wyatt, Katz, & Kim, 2000). Family and friends tend to provide "safe" discussion partners, especially if one seeks to avoid disagreement. The workplace, where individuals are less able to self-select their associates, is the primary location where people encounter divergent viewpoints. Some have linked such exposure to disagreement with decreased participation and increased ambivalence (Huckfeldt et al., 2004; Mutz, 2006).

With the long term in mind—on both the right-hand side (cumulative volume of advertising) and the left-hand side (the duration of effects)—we examine whether the effects of campaign ads are a product of same-cycle exposure to advertising, cumulative exposure over several cycles, or both. In other words, does one season of exposure have different effects than many seasons of exposure? We also examine whether effects of campaign ads are fleeting, emergent, or sustained. In other words, are effects visible only in the short term or the long term, or in both time frames? These questions examine some of the deepest, albeit untested, concerns about the effects of political advertising on democratically consequential outcomes.

Method

We used Campaign Media Analysis Group (CMAG) data from the 2000, 2002, and 2004 election campaigns made available by the University of Wisconsin Advertising Project, in combination with national panel survey data collected during and after the 2004 election season. We use these two data sets to create a measure of people's exposure to advertising, incorporating information on both what was aired and what was watched (Freedman & Goldstein, 1999; Ridout, Shah, Goldstein, & Franz, 2004).

Data

Campaign advertising data. CMAG data provide detailed information about the airing of every political ad in the nation's top 75 markets (over 80% of the nation's population) during the 2000 election season and top 100 markets during the 2002 and 2004 election seasons (over 86% of the nation's population). To provide some sense of the scope of these data, in the 2000 election season, almost 1 million political television ads aired in the country's top 75 markets, whereas during the 2004 election season, roughly 1.5 million political ads aired in the country's top 100 markets. Because the ad data did not cover some smaller media markets in 2000, 2002, and 2004, we exclude respondents living in those markets from our models.

Each ad that was broadcast was tagged for where and when it aired (i.e., in what local market, on which station, and during which program), and was coded for features such as the tone of the ad, the sponsoring party, the contested office, and other features important for analysis of particular races. For this study, campaign ads from presidential, gubernatorial, Senate and House races, and from all sponsors, including candidates, parties, and independent groups, were used to generate estimates of exposure.

Individual-level data for 2004 election. Individual-level data for the 2004 election season came from a three-wave national panel survey

administered by Synovate in February 2002, November 2004, and June/July 2005. The baseline wave was collected as part of DDB Needham's 2002 Life Style Study (though we do not use those baseline data beyond measures of orientations and demographic controls in this research). The 2002 Life Style Study used stratified quota sampling. First, a large number of people were contacted by mail and asked whether they would agree to participate in periodic surveys for small incentives. Next, a sample was drawn to reflect the characteristics of the population, including household size and income, population density of city of residence, and age of respondent, within each of the nine Census divisions. This sample was then adjusted to account for expected differences in return rates according to demographic characteristics of respondents, including race, gender, and marital status, with more surveys mailed to those likely to respond at lower rates. Of the 5,000 surveys mailed, 3,580 usable responses were received (response rate = 71.6%). This sampling method has been found to yield data that are highly comparable with data collected by means of conventional probability sampling (Putnam, 2000).

Custom surveys were developed for the November 2004 and June/July 2005 recontact waves. The 2,450 surveys mailed in November 2004 generated 1,484 completed responses (response rate = 60.1%, retention rate = 41.5%), and the 1,446 surveys mailed in June/July 2005 produced 1,080 completed responses (response rate = 74.4%, retention rate = 72.7%).

Measures

Seven types of measures were created from these data: (1) criterion variables of trust and talk measured immediately after the 2004 election and also several months following the election (summer 2005); (2) measures of individual campaign advertising exposure and the "attack" ratio of that exposure for the 2004 election; (3) measures of individuals' cumulative campaign advertising exposure and the "attack" ratio of that exposure for the 2000, 2002, and 2004 elections; (4) a measure of television news viewing; (5) contextual variables; (6) orientation variables; and (7) standard demographic variables. Item wordings and descriptive statistics for all measures are included the Supplementary Appendix.

Outcome measures. Campaign advertising effects were examined on several civic attitudes and behaviors. Attitudinal outcomes were trust in politicians and social trust. Trust in politicians measured trust in elected officials and the election process, and social trust measured generalized trust in others. Behavioral outcomes were political talk and cross-cutting political talk. Political talk measured frequency of talking about politics with family, friends,

coworkers, those who hold agreeable views, and those who hold disagreeable views. Cross-cutting talk isolated frequency of talking about politics with those who hold disagreeable views.[1] Outcomes were assessed immediately after the election and several months later (summer 2005).

Exposure to campaign advertisements. Campaign advertising data were merged with the 2004 geo-coded national panel survey data to create measures of individual ad exposure. From these data, measures of same-cycle campaign ad exposure and cumulative campaign ad exposure were generated, along with estimates of the negativity of that exposure.

Same-cycle campaign ad exposure was calculated by combining measures of the content-specific ads that aired in particular media markets during particular types of television programming with measures of respondents' self-reported television viewing patterns. For each of the available media markets, the number of campaign ads for all electoral contests aired by either Republican or Democratic candidates during the election cycle was counted.

Each ad was coded as a positive, negative, or contrast ad. Positive ads contained only favorable statements about the sponsoring candidate, with an absence of criticism of the opponent. Negative ads featured only critical commentary about the opponent with no positive statements about the sponsor apart from sponsorship acknowledgement. Contrast ads combined favorable statements about the sponsor with criticism of the opponent. An independent coder content-analyzed a random sample of 481 ads (from the over 7,000 ads total) and achieved a 96.3% rate of agreement with the original coding with high reliability (Cohen's kappa = 0.93) (see Goldstein & Freedman, 2002). We then used specific measures of respondents' viewing patterns of particular television genres to estimate the frequency and tone of their advertising exposure in their local market (Ridout et al., 2004).

By combining data on how many times each of these content-coded campaign ads aired in each media market with data on how often respondents watched six particular types of programming, our measure of campaign ad exposure captures the maximum possible number of ads to which each respondent might potentially have been exposed. Specifically, this individual-level campaign ad exposure measure was calculated for each respondent as follows:

$$\text{Exposure to political ads} = \sum_{i=1}^{6}\left(\text{Market Ad Frequency}_i \times \text{Viewing Time}_i\right)$$

where i represents each of the six television program types, *Market Ad Frequency*$_i$ represents the total number of ads placed in each program type in

[1]For models predicting frequency of cross-cutting political talk, frequency of agreeable talk at the time of the election was included as a control.

each respondent's media market, and *Viewing Time*$_i$ denotes the amount of time a respondent spent consuming each of the six program types.

We measured ad negativity through the ratio of exposure to attack advertising to exposure to all advertising experienced by each person (the Supplementary Appendix provides details on this and all other independent and dependent variables). Constructing this variable as a ratio also had the virtue of reducing potential multicollinearity among campaign advertising measures.

Cumulative campaign ad exposure was then constructed by calculating individual ad exposure by election in the manner detailed above and then simply adding the estimated exposure frequency across three elections. This is based on the established stability in gratification seeking and consumption patterns among television viewers (Hawkins, Reynolds, & Pingree, 1999; Rosenstein & Grant, 1997). Cumulative exposure was measured as the sum of exposure to ads that aired during the 2000, 2002, and 2004 elections. Cumulative negativity of the election environment was measured as a ratio of estimated attack ad exposure to total campaign ad exposure, just as it was for the election-specific estimate, though exposure estimates were summed across three elections. Thus, the cumulative negativity ratio experienced by each respondent was computed by dividing the individual estimate of the total number of attack ads seen across all years by the individual estimate of the total number of ads seen across all years. This measure estimates the proportion of all the ads seen by the respondent over the last three election cycles that were attack ads.

Television news exposure. Because our measures of campaign ad exposure were constructed based on respondents' television viewing, a different indicator of television exposure was also included as a control variable. Television news exposure was measured as the number of days per week respondents watched various categories of news.

Contextual variables. Contextual variables included home ownership and residence in a presidential battleground state. Residence in a battleground state was determined based on whether respondents resided in one of the states that appeared on the Bush and Gore campaigns' lists of battleground states in 2000 and on the Bush and Kerry campaigns' lists in 2004 (as cited in Shaw, 2006, pp. 64 and 66). Models predicting effects of same-cycle ad exposure controlled for 2004 battleground states, and models predicting effects of cumulative ad exposure controlled for 2000 and 2004 battleground states.

Orientation variables. Measures of conservative ideology, religiosity, and political interest were included in each model.

Demographics. Measures of age, gender, race, marital status, income, and level of education were included as demographic control variables in each model.

Analysis. Ordinary least squares regressions were used to examine the relationship between political ad exposure, negativity of that exposure, and the outcome variables measured just after the 2004 election (short-term effects) and again several months later (long-term effects).[2] Following these tests for effects of same-cycle exposure, we turn to tests of cumulative exposure to ads aired in 2000, 2002, and 2004 to examine aggregated influence across election cycles.

Results

Our results, reported in Table 1 through Table 4, show that both long-term ad effects and cumulative ad effects are common. Table 1 speaks specifically to the impact of ad exposure on trust in politicians. We find first that exposure to ads aired in 2004 negatively influences trust in politicians measured 9 months later in 2005. Moreover, exposure to ads aired in 2000, 2002, and 2004 negatively influences trust measured in 2005. The effect of this cumulative ad exposure, in fact, is almost as large as the impact of same-cycle ad exposure, judging from the size of the coefficients. This suggests that same-cycle ad exposure is driving these effects because cumulative exposure is not a better predictor of trust in politicians than exposure in 2004. Interestingly, although we failed to find any short-term effects of overall ad exposure, we did find short-term effects of negativity such that exposure to a higher ratio of negative ads positively influences trust in politicians at the time of the election.[3]

Table 2 reveals a similar pattern of exposure to advertising on social trust. There are long-term negative impacts of ad exposure on levels of social trust, and this is true if we take into account cumulative advertising from 2000 to 2004 or just those ads aired in 2004. Again, cumulative ad exposure does not add much beyond ad exposure in 2004. Also, as with trust in politicians, there is a short-term positive impact of ad negativity on social trust.

Turning to political talk, we find in Table 3, both short-term and long-term effects of advertising exposure on the extent to which people engage in political talk. Both the volume of advertising to which one was exposed in the previous election cycle and one's level of ad exposure since 2000 have a positive impact on people's engagement in political talk, although the influence of ad exposure since 2000 only crosses the threshold of significance at the time of the election. Ad exposure, then, seems to encourage political talk. This relationship is highlighted again in Table 4, where we find that cumulative ad exposure, but not same-cycle ad exposure, positively influences

[2]Because the dependent variables were ordinal, we reestimated all models using ordered logistic regression. By and large, our substantive conclusions were the same, regardless of the method of estimation. Any differences are footnoted in the results.

[3]Ordered logistic regression results also showed a significant positive long-term effect of same-cycle ad negativity on trust in politicians.

Table 1
Effects of Campaign Ad Exposure on Trust in Politicians

Predictors	Short-term effects, November 2004						Long-term effects, June/July 2005					
	b (*SE*)	β	*p*	b (*SE*)	β	*P*	b (*SE*)	β	*p*	b (*SE*)	β	*p*
Age	0.01 (.00)	0.08	.02	0.01 (.00)	0.07	.04	0.01 (.00)	0.09	.02	0.01 (.00)	0.09	.03
Male	−0.18 (.08)	−0.07	.03	−0.18 (.08)	−0.07	.03	0.04 (.09)	0.02	.65	0.03 (.10)	0.01	.78
White	0.08 (.09)	0.03	.35	0.09 (.09)	0.03	.31	0.09 (.10)	0.03	.37	0.08 (.11)	0.03	.45
Married	0.14 (.09)	0.05	.12	0.13 (.09)	0.05	.18	−0.01 (.10)	−0.00	.95	0.00 (.11)	0.00	1.00
Income	0.00 (.00)	0.02	.65	−0.00 (.00)	−0.00	.91	0.00 (.00)	0.06	.16	0.00 (.00)	0.06	.21
Education	0.04 (.02)	0.08	.02	0.06 (.02)	0.11	.00	0.02 (.02)	0.04	.31	0.02 (.02)	0.04	.31
Homeownership	−0.14 (.11)	−0.05	.19	−0.07 (.11)	−0.02	.51	−0.14 (.12)	−0.05	.22	−0.15 (.12)	−0.05	.22
Battleground 04	0.05 (.11)	0.02	.64	–	–	–	0.05 (.12)	0.02	.66	–	–	–
Battleground 00 or 04	–	–	–	0.21 (.10)	0.08	.04	–	–	–	0.19 (.11)	0.07	.09
Conservative ideology	0.10 (.04)	0.08	.02	0.11 (.05)	0.08	.02	0.02 (.05)	0.02	.72	0.02 (.05)	0.02	.69
Ideological strength	0.06 (.06)	0.03	.31	0.03 (.06)	0.02	.62	0.08 (.07)	0.05	.24	0.08 (.07)	0.04	.28
Religiosity	0.03 (.02)	0.04	.16	0.04 (.03)	0.05	.14	0.06 (.03)	0.09	.02	0.06 (.03)	0.08	.04
Political interest	0.07 (.03)	0.09	.01	0.06 (.03)	0.07	.03	0.07 (.03)	0.09	.02	0.07 (.03)	0.09	.02
Television news exposure	−0.03 (.02)	−0.05	.13	−0.03 (.02)	−0.05	.16	−0.01 (.02)	−0.03	.49	−0.01 (.02)	−0.02	.53
Same-cycle ad frequency	−0.00 (.00)	−0.01	.74	–	–	–	**−0.00 (.00)**	**−0.07**	**.06**	–	–	–
Same-cycle ad negativity	**0.36 (.20)**	**0.06**	**.08**	–	–	–	0.37 (.23)	0.07	.10	–	–	–
Cumulative ad frequency	–	–	–	−0.00 (.00)	−0.00	.93	–	–	–	**−0.00 (.00)**	**−0.07**	**.08**
Cumulative ad negativity	–	–	–	0.24 (.39)	0.02	.53	–	–	–	0.05 (.44)	0.01	.91
Adjusted R^2	0.03			0.04			0.03			0.02		
N	1153			1050			866			785		

Note. Cumulative ad frequency and negativity are measured using exposure to 2000, 2002, and 2004 campaign ads. Unstandardized coefficients that appear as 0.00 are small numbers that round to zero; however, even small coefficients can denote substantive effects, as the range of total volume of campaign ads is large.
Bold entries are significant at p <.10.

Table 2
Effects of Campaign Ad Exposure on Social Trust

Predictors	Short-term effects, November 2004						Long-term effects, June/July 2005					
	b (*SE*)	β	*p*	b (*SE*)	β	*p*	b (*SE*)	β	*p*	b (*SE*)	β	*p*
Age	0.02 (.00)	0.28	.00	0.02 (.00)	0.26	.00	0.01 (.00)	0.21	.00	0.01 (.00)	0.20	.00
Male	−0.23 (.06)	−0.11	.00	−0.20 (.06)	−0.10	.00	−0.19 (.07)	−0.09	.01	−0.18 (.08)	−0.08	.02
White	0.30 (.07)	0.13	.00	0.30 (.07)	0.13	.00	0.21 (.08)	0.09	.01	0.25 (.09)	0.10	.00
Married	0.17 (.07)	0.08	.01	0.16 (.07)	0.08	.02	0.14 (.08)	0.06	.09	0.15 (.09)	0.07	.08
Income	0.00 (.00)	0.10	.00	0.00 (.00)	0.08	.02	0.00 (.00)	0.05	.21	0.00 (.00)	0.05	.23
Education	0.04 (.01)	0.10	.00	0.05 (.01)	0.11	.00	0.07 (.02)	0.15	.00	0.07 (.02)	0.16	.00
Homeownership	−0.11 (.08)	−0.04	.18	−0.08 (.08)	−0.03	.35	−0.11 (.10)	−0.04	.26	−0.12 (.10)	−0.05	.24
Battleground 04	−0.01 (.08)	−0.00	.89	–	–	–	0.09 (.10)	0.04	.35	–	–	–
Battleground 00 or 04	–	–	–	0.16 (.07)	0.07	.03	–	–	–	0.20 (.09)	0.09	.02
Conservative ideology	−0.09 (.03)	−0.09	.01	−0.10 (.04)	−0.10	.00	−0.06 (.04)	−0.05	.15	−0.07 (.04)	−0.06	.12
Ideological strength	0.03 (.05)	0.02	.56	0.04 (.05)	0.02	.45	0.00 (.06)	0.00	.95	0.01 (.06)	0.01	.86
Religiosity	0.04 (.02)	0.06	.04	0.05 (.02)	0.09	.00	0.03 (.02)	0.05	.12	0.03 (.02)	0.05	.19
Political interest	0.07 (.02)	0.11	.00	0.06 (.02)	0.09	.00	0.09 (.02)	0.14	.00	0.09 (.02)	0.13	.00
Television news exposure	0.00 (.01)	0.00	.93	−0.00 (.01)	−0.00	.92	0.01 (.02)	0.02	.48	0.01 (.02)	0.03	.42
Same-cycle ad frequency	−0.00 (.00)	−0.03	.32	–	–	–	**−0.00 (.00)**	**−0.10**	**.01**	–	–	–
Same-cycle ad negativity	**0.27 (.16)**	**0.06**	**.09**	–	–	–	0.18 (.18)	0.04	.32	–	–	–
Cumulative ad frequency	–	–	–	−0.00 (.00)	−0.03	.41	–	–	–	**−0.00 (.00)**	**−0.09**	**.02**
Cumulative ad negativity	–	–	–	−0.30 (.29)	−0.04	.30	–	–	–	−0.28 (.36)	−0.03	.44
Adjusted R^2	0.16			0.15			0.12			0.12		
N	1152			1049			867			786		

Note. Cumulative ad frequency and negativity are measured using exposure to 2000, 2002, and 2004 campaign ads. Unstandardized coefficients that appear as 0.00 are small numbers that round to zero; however, even small coefficients can denote substantive effects, as the range of total volume of campaign ads is large.
Bold entries are significant at $p < .10$.

Table 3
Effects of Campaign Ad Exposure on Political Talk

Predictors	Short-term effects, November 2004						Long-term effects, June/July 2005					
	b (*SE*)	β	*p*	b (*SE*)	β	*p*	b (*SE*)	β	*p*	b (*SE*)	β	*p*
Age	−0.02 (.00)	−0.17	.00	−0.02 (.00)	−0.17	.00	−0.01 (.00)	−0.08	.02	−0.01 (.00)	−0.09	.02
Male	0.13 (.10)	0.03	.21	0.11 (.11)	0.03	.30	0.31 (.12)	0.08	.01	0.28 (.13)	0.08	.03
White	0.25 (.12)	0.06	.03	0.23 (.12)	0.05	.06	−0.05 (.14)	−0.01	.74	−0.06 (.15)	−0.01	.68
Married	0.21 (.12)	0.05	.08	0.22 (.12)	0.06	.07	0.12 (.14)	0.03	.39	0.18 (.15)	0.05	.21
Income	0.00 (.00)	0.09	.01	0.00 (.00)	0.09	.01	0.00 (.00)	0.09	.02	0.00 (.00)	0.07	.07
Education	0.10 (.02)	0.12	.00	0.11 (.03)	0.13	.00	0.04 (.03)	0.05	.16	0.04 (.03)	0.05	.17
Homeownership	0.21 (.14)	0.05	.13	0.23 (.14)	0.05	.12	0.14 (.16)	0.03	.40	0.23 (.17)	0.05	.17
Battleground 04	0.12 (.14)	0.03	.40	–	–	–	−0.18 (.16)	−0.04	.27	–	–	–
Battleground 00 or 04	–	–	–	0.08 (.13)	0.02	.52	–	–	–	0.02 (.15)	0.00	.92
Conservative ideology	−0.18 (.06)	−0.09	.00	−0.15 (.06)	−0.08	.01	−0.16 (.07)	−0.09	.02	−0.14 (.07)	−0.07	.05
Ideological strength	0.11 (.08)	0.04	.18	0.06 (.08)	0.02	.49	0.20 (.09)	0.07	.04	0.20 (.10)	0.08	.04
Religiosity	0.04 (.03)	0.03	.26	0.04 (.03)	0.03	.29	0.01 (.04)	0.01	.80	0.00 (.04)	0.00	.91
Political interest	0.23 (.03)	0.20	.00	0.25 (.03)	0.22	.00	0.30 (.04)	0.26	.00	0.31 (.04)	0.27	.00
Television news exposure	0.18 (.02)	0.22	.00	0.18 (.03)	0.22	.00	0.12 (.03)	0.14	.00	0.12 (.03)	0.14	.00
Same-cycle ad frequency	**0.00 (.00)**	**0.08**	**.01**	–	–	–	**0.00 (.00)**	**0.07**	**.05**	–	–	–
Same-cycle ad negativity	0.02 (.26)	0.00	.95	–	–	–	−0.21 (.31)	−0.02	.49	–	–	–
Cumulative ad frequency	–	–	–	**0.00 (.00)**	**0.06**	**.04**	–	–	–	0.00 (.00)	0.06	.10
Cumulative ad negativity	–	–	–	0.46 (.51)	0.03	.37	–	–	–	−0.63 (.61)	−0.04	.30
Adjusted R^2	0.21			0.22			0.17			0.17		
N	1151			1048			860			779		

Note. Cumulative ad frequency and negativity are measured using exposure to 2000, 2002, and 2004 campaign ads. Unstandardized coefficients that appear as 0.00 are small numbers that round to zero; however, even small coefficients can denote substantive effects, as the range of total volume of campaign ads is large.
Bold entries are significant at $p < .10$.

Table 4
Effects of Campaign Ad Exposure on Cross-Cutting Political Talk

Predictors	Short-term effects, November 2004						Long-term effects, June/July 2005					
	b (*SE*)	β	*p*	b (*SE*)	β	*p*	b (*SE*)	β	*p*	b (*SE*)	β	*p*
Age	−0.01 (.00)	−0.09	0.00	−0.01 (.00)	−0.08	0.00	−0.01 (.00)	−0.08	0.02	−0.01 (.00)	−0.08	0.03
Male	0.22 (.10)	0.05	0.03	0.17 (.11)	0.04	0.12	0.26 (.12)	0.07	0.04	0.23 (.13)	0.06	0.07
White	0.22 (.11)	0.05	0.05	0.24 (.12)	0.05	0.04	0.00 (.14)	0.00	0.98	0.03 (.15)	0.01	0.85
Married	−0.20 (.11)	−0.05	0.07	−0.12 (.12)	−0.03	0.30	−0.08 (.14)	−0.02	0.55	−0.00 (.14)	−0.00	0.98
Income	0.00 (.00)	0.07	0.02	0.00 (.00)	0.07	0.03	0.00 (.00)	0.08	0.03	0.00 (.00)	0.06	0.15
Education	−0.00 (.02)	−0.00	0.91	0.01 (.02)	0.01	0.69	−0.03 (.03)	−0.04	0.28	−0.04 (.03)	−0.05	0.18
Homeownership	−0.06 (.13)	−0.01	0.65	−0.12 (.14)	−0.02	0.39	0.04 (.16)	0.01	0.81	0.13 (.17)	0.03	0.45
Battleground 04	0.11 (.14)	0.02	0.42	–	–	–	−0.29 (.17)	−0.07	0.08	–	–	–
Battleground 00 or 04	–	–	–	−0.06 (.13)	−0.01	0.64	–	–	–	−0.15 (.15)	−0.04	0.32
Conservative ideology	−0.03 (.06)	−0.02	0.57	0.01 (.06)	0.01	0.87	−0.13 (.07)	−0.07	0.05	−0.13 (.07)	−0.07	0.08
Ideological strength	−0.06 (.08)	−0.02	0.48	−0.12 (.08)	−0.04	0.14	0.09 (.09)	0.03	0.36	0.12 (.10)	0.05	0.21
Religiosity	−0.05 (.03)	−0.05	0.07	−0.08 (.03)	−0.06	0.01	−0.04 (.04)	−0.04	0.23	−0.06 (.04)	−0.06	0.12
Political interest	0.06 (.03)	0.04	0.09	0.07 (.03)	0.05	0.05	0.17 (.04)	0.15	0.00	0.17 (.04)	0.15	0.00
Agreeable political talk	0.51 (.02)	0.56	0.00	0.51 (.03)	0.56	0.00	0.25 (.03)	0.31	0.00	0.27 (.03)	0.32	0.00
Television news exposure	0.06 (.02)	0.06	0.02	0.04 (.03)	0.04	0.10	0.06 (.03)	0.07	0.04	0.04 (.03)	0.05	0.15
Same-cycle ad frequency	0.00 (.00)	0.02	0.49	–	–	–	0.00 (.00)	0.06	0.12	–	–	–
Same-cycle ad negativity	0.29 (.26)	0.03	0.27	–	–	–	−0.33 (.31)	−0.04	0.28	–	–	–
Cumulative ad frequency	–	–	–	**0.00 (.00)**	**0.06**	**0.02**	–	–	–	**0.00 (.00)**	**0.08**	**0.04**
Cumulative ad negativity	–	–	–	0.44 (.49)	0.03	0.37	–	–	–	−0.99 (.61)	−0.07	0.10
Adjusted R^2	0.40			0.40			0.20			0.20		
N	1127			1025			846			767		

Note. Cumulative ad frequency and negativity are measured using exposure to 2000, 2002, and 2004 campaign ads. Unstandardized coefficients that appear as 0.00 are small numbers that round to zero; however, even small coefficients can denote substantive effects, as the range of total volume of campaign ads is large.
Bold entries are significant at $p < .10$.

Figure 2
Effects of campaign advertising exposure on trust. Trust in politicians and social trust are measured on a 6-point scale (ranging from 1 to 6)

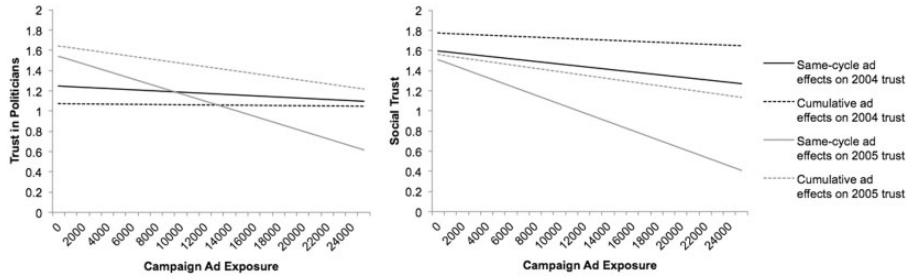
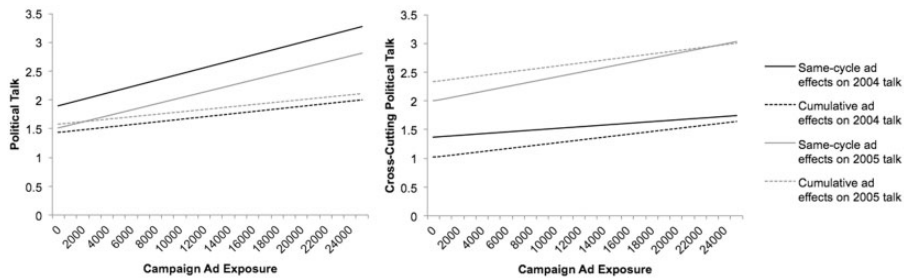


Figure 3
Effects of campaign advertising exposure on talk. Frequency of political talk and cross-cutting talk are measured on an 8-point scale (ranging from 1 to 8)



levels of cross-cutting political talk, both in the short and long term, suggesting that high doses of ad exposure across election cycles spurs such conversation.[4]

Looking across these findings, there was evidence of a "sleeper effect" with regard to the trust outcomes. That is, the impact of advertising on social trust and trust in politicians was not apparent at the time of the 2004 election but had arisen by the following summer. By contrast, the effects of advertising on political talk were sustained effects. That is, the effects arose immediately and were still present several months later. These findings are illustrated in Figures 2 and 3, which show the predicted value of each dependent variable over the range of same-cycle campaign ad exposure in our sample, holding the values of all other variables at zero.

[4]Ordered logistic regression results also showed a significant negative long-term effect of cumulative ad negativity on cross-cutting political talk.

Although we did find some evidence of fleeting effects of the negativity of exposure on trust, interestingly, we found no fleeting effects of overall ad exposure that were immediately visible but then faded over time. As a whole, our results suggest that campaigns can have lasting effects on the attitudes and behaviors of those exposed to political advertising.

Discussion

Previous scholarly work on the effect of political advertising has failed to consider the possibility that message effects may build up across multiple election seasons or extend well past Election Day, focusing instead on same-cycle campaign effects in the short term. In this study, we look beyond measures of electoral turnout to consider effects on political and social trust and various modes of public-spirited talk, allowing us to examine whether the effects of political advertising appear immediately or emerge after some time. Our approach was to examine the combined effect of multiple campaigns on short- and long-term outcomes, which allows us to address normative questions about whether the influence of political advertising is beneficial or deleterious to core democratic competencies.

First, regarding overall exposure, we found that while larger doses of political advertising may encourage political talk in the long term, they may also be a source of cynicism about politics and mistrust about fellow citizens. And, importantly, such effects of exposure to campaign advertising were not always visible immediately after an election, but rather emerged in the months that followed the end of the campaign ritual—a "sleeper effect." We not only found effects of both exposures to campaign ads aired in that same election cycle, but also when assessed by measures of cumulative advertising exposure across cycles.

Second, regarding the tone of exposure, our findings generally supported volume of advertising as driving the majority of effects on trust and talk. Still, we did find a positive fleeting effect of the ratio of negativity on both political and social trust at the time of the election. While this may seem surprising, at first, we believe this finding may be related to the "truth telling" that is characteristic of attack and contrast ads (Geer, 2006). In the long run, however, overall exposure to campaign ads may diminish faith in elected officials to the degree that they fail to deliver on their promises or underperform on economic expectations (MacKuen, Erikson, & Stimson, 1992). Future research needs to explore these possibilities.

Our findings as a whole speak to the importance of considering alternative models of political advertising effects when examining how campaigns influence citizens' attitudes and behaviors. It is not sufficient to take an immediate,

postelection measure of ad effects and then assume the slate is wiped clean. Cumulative and long-term effects are both observable and meaningful.

This study also speaks to the growing need for more longitudinal and panel analyses in media effects and political communication research. Many of the questions we should be asking about the effects of mass communication cannot be addressed with standard cross-sectional analyses or by looking at effects immediately after an intervention or campaign. We know that individuals engage in reflection and elaboration about some of the media content they encounter long after they have consumed it. Conversely, we also know that some message features that warrant discounting of information, such as its coming from a disreputable source, are forgotten during later reflection, while the information contained in the message is retained. Yet, we rarely consider these longer-term aspects—both cumulative exposure over several election cycles and effects that emerge well after Election Day. If the findings here are any indication, it may be that the impact of ads becomes more apparent with a little distance in time.

The findings are also increasingly relevant given the increasing degree to which campaigns target their advertising (Ridout et al., 2012). As campaigns become better at using data to spend their advertising budgets efficiently, advertising exposure will be observed even less equally across particular individuals who are deemed to be valuable targets. In other words, not only will some states like Ohio or Florida attract more advertising, but certain individuals in those states will be targeted year after year and receive increasingly high doses of political advertising. Thus, the effects of advertising, which we have shown can be cumulative over election cycles and erupt long after the election is over, will become increasingly concentrated in some locations and on certain individuals. Future research must recognize this possibility.

Supplementary Data

Supplementary Data are available at IJPOR online.

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