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To cite this article: Kathleen Searles, Erika Franklin Fowler, Travis N. Ridout, Patricia Strach & Katherine Zuber (2017): The Effects of Men's and Women's Voices in Political Advertising, Journal of Political Marketing, DOI: [10.1080/15377857.2017.1330723](https://doi.org/10.1080/15377857.2017.1330723)

To link to this article: <http://dx.doi.org/10.1080/15377857.2017.1330723>



Accepted author version posted online: 24 May 2017.
Published online: 24 May 2017.



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The Effects of Men’s and Women’s Voices in Political Advertising

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Campaigns disproportionately choose men to voice their political ads, but it is not clear that men’s voices are more credible or better able to persuade an audience. We employ experimental data and novel survey data to test theoretical expectations about the circumstances under which men’s and women’s voices might be more or less effective, specifically looking at how gender association of the ad issues and gender of the message recipient shape the effectiveness of the ad. We find that men’s voices are not universally more effective than women’s voices and under some circumstances may even be less effective.

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KEYWORDS gender, political advertising, voice-over

About two-thirds of the political ads that aired in 2010 and 2012 used a man to voice the ad (Strach et al. 2015). But is this an effective strategy? On the one hand, using men to voice ads may be a smart choice if men's voices are simply more effective than women's voices in political advertising. On the other hand, if men's voices are not more effective and instead are a legacy of stereotypes that permeate campaigns (Huddy and Terkildsen 1993a, 1993b; Dittmar 2015), the supply of voice-over talent, and even policy making (Swers 2013), it may be time to reconsider the dominant practice. In this research, we examine the relative effectiveness of men's and women's voices in political advertising, and we explore the circumstances under which men's voices or women's voices may be more effective.

This study is important for several reasons: It is among the first to bring an analysis of voice to political advertising; it advances theory, proposing the circumstances under which men's and women's voices are more likely to matter; and it uses innovative data, both experimental and observational, to speak to the question of whether men's or women's voices are more effective in political advertising. Although we cannot measure people's vote choices directly, we can measure several precursors to persuasion—what campaigners ultimately hope to achieve—including the credibility of the message and the favorability of the candidate. Taken together, our observational and experimental findings make a compelling case that the way advertisers privilege men's voices in political advertising is more a result of gender stereotyping than effective campaign strategy. Indeed, we find that women's voices can be more effective than men's voices under certain circumstances.

PERSUASION, VOICE, AND GENDER

Political advertising can affect voters' choices and ultimately who wins elections. Experimental (Chang 2001; Valentino, Hutchings, and Williams 2004) and observational (Goldstein and Freedman 2000; Johnston, Hagen, and Jamieson 2004) evidence suggest that ads matter even if the effects sizes are small and short-lived. The lack of congruence between political districts and media markets makes it difficult to isolate effects (Althaus, Cizmar, and Gimpel 2009); however, aggregate data suggest that political ads increase vote share for the candidate sponsor (Shaw 1999, 2006).

Political advertising is most effective when citizens lack in-depth policy information about candidates running for office. For many voters, campaign ads themselves are a significant source of information (Freedman, Franz, and Goldstein 2004), providing cues that help in decision making (Koch 2002; Matland and King 2002; King and Matland 2003; Dolan 2005; Johns and

Shephard 2007; Olivola and Todorov 2010; Hayes 2011). Cues are particularly important when voters lack time and incentive to engage in a more thorough information search (Hovland and Weiss 1951; Watts and McGuire 1964; Lupia and McCubbins 1998; Druckman 2001). Voters may rely on a candidate's ascriptive attributes (sex) and physical characteristics (attractiveness, weight, height, facial shape) along with ascriptive characteristics of their family as heuristics for evaluation (Little et al. 2007; Lenz and Lawson 2011; Porter and Wood 2016). But the scholarly focus on candidates' physical characteristics has obscured the potential significance of another element of campaign advertising, namely, voice.

Although voice is rarely studied in the context of political advertising, there is considerable research on the topic from the field of marketing. One consistent finding is that men's voices are used more often in commercial advertising than women's voices. Men's voices are even prominent when women are featured as the main characters in a commercial (Dominick and Rauch 1972; Bretl and Cantor 1988; Bartsch et al. 2000) and are used to urge viewers to buy a product (Marecek et al. 1978). The only time women announcers are more likely to appear than men is in commercials featuring domestic products such as food, cleaning products, and cosmetics (Bartsch et al. 2000). Despite a slight decrease in the use of men voice-overs in the 1990s (down from 90% in 1989 to 71% in 1998), the reluctance to use women to voice ads has not changed significantly over time (Bartsch et al. 2000). Indeed, a recent study of television advertising found that men performed 80% of ad voice-overs between 2008 and 2012 (Pedelty and Kuecker 2014).

Overreliance on men's voices may be attributed to men's dominance of the voice-over industry. "It's the only business where you hear, 'Oh, we don't hire women,'" said Joan Baker, a highly regarded voice-over artist (Robb 2015). This reluctance to hire women as voice-over announcers stems from the belief among ad professionals that men's voices are more authoritative (and therefore more convincing) than women's voices. According to a leading advertising agency spokesman in the 1970s, "a man knows what he's talking about and has automatic credibility on TV" (Marecek et al. 1978). More recently, a marketing consultant (Gilmartin 2011) referred to "scientific evidence on how the brain functions" to suggest that the gender of the voice-over announcer conditions people's responses to a television commercial: "For example, male voices are seen as more knowledgeable when describing technical attributes of a product, while female voices are seen as more knowledgeable when describing a product with references to love, relationships[,] and caring. **MARKETING IMPLICATION:** Choose the voice to match the content and delivery style of a product message" (emphasis in the original).¹

Recent research has shown that the disproportionate use of men's voices extends to political advertising as well. Indeed, an analysis of

electioneering ads aired between January 1 and Election Day in 2010 and 2012 revealed that 45.6% of the ads used solely a man voice-over, whereas only 20.1% of ads used solely a woman voice-over (Strach et al. 2015). Only 7.0% of the ads leading up to the 2010 and 2012 elections used both men and women voice-overs, while the remaining 27.3% employed no voice-over at all. As in product advertising, this disparity in political advertising may be an artifact of men's dominance of the voice-over industry, the limited supply of voice-over talent—according to Stone (2008), there are only a few dozen voice-over artists who narrate the majority of political ads in the United States—as well as the belief that men's voices convey authority. “As an industry, we have a hard time changing over from standard practice,” said one Democratic media consultant about the use of men's voices in political advertising (Pathé 2016). Similarly, GOP ad-maker Ben Burger said, “We've fallen into habit on that. But I don't think those are rules that are etched,” (Pathé 2016). Is this habitual reliance on men's voices an effective strategy? We seek to find out.

The Role of Credibility

The reliance on men to voice ads may be particularly important if the gender of the voice-over announcer has an impact on the effectiveness of an ad. Although existing research does not tackle this question directly, we use the body of research to build theoretical expectations about when and why gender and voice are likely to matter for an ad's credibility, which is a key predictor of message effectiveness. Credibility depends on both the speaker's trustworthiness and expertise (Hovland, Janis, and Kelley 1953; Berlo, Lemert, and Mertz 1969; Dholakia and Sternthal 1977). Voice may act as a cue, conveying to a listener that a speaker is knowledgeable about a topic or shares a common interest with the listener (Lupia 1992). Credibility therefore depends both on the features of the ad and the characteristics of the audience.

One important feature of the ad that may influence credibility is the issue domain (Lupia 2013). Research suggests that men and women may be perceived as having expertise in different policy domains (Huddy and Terkildsen 1993a; Huddy and Terkildsen 1993b; Kahn 1996; Sapiro 1981; Dittmar 2015). Gender issue ownership is based on the reputation men and women have for handling political problems (Campbell et al. 1960). Much like party issue ownership, where parties are rewarded for campaigning on issues they are perceived as owning (Petrocik 1989; Ansolabehere and Iyengar 1994), the reputation of men and women on a particular policy issue can make them more or less credible in that domain (Strach and Sapiro 2011, but see Brooks 2013). Iyengar et al. (1997) even suggest that women ought to campaign only on traditionally feminine issues, such as childcare. Consistent with this advice, Republican ad-maker Bok Kish has said that he would use a woman's voice-over to talk about education or breast cancer (Pathé 2016).

Second, the perceived credibility of a man's or woman's voice may depend on the audience. Listeners may discern credibility through similarity to or perceptions of common interest with the man or woman speaking. Alternatively, audience members may draw conclusions grounded in gender stereotypes (Wallston and O'Leary 1981; Deaux 1985; Kenton 1989; Armstrong and McAdams 2009). For example, since men are perceived to have more expertise in politics (Huddy and Terkildsen 1993a; 1993b), they may be perceived as more credible senders of political messages.

An additional line of research suggests that perceptions of credibility may also depend on the pitch of the speaker's voice. Men's voices with a lower pitch are rated more positively (Helfrich and Weidenbecher 2011; Tigue et al. 2012) and are perceived to be more trustworthy than higher-pitched men's voices among both men and women (Robinson and McArthur 1982; Klofstad, Anderson, and Peters 2012). Low-pitched voices are associated with favorable personality traits as well, including honesty, strength, and integrity (Klofstad, Anderson, and Peters 2012; Tigue et al. 2012). Moreover, when the pitch of a voice is manipulated, researchers have found deeper voices—whether a woman's or a man's—are more effective in conveying political messages (Klofstad, Anderson, and Peters 2012). This research suggests receivers are naturally inclined to look to voice for cues regarding credibility.

Current research leads us to believe there may be differences in the perceived credibility—and thus effectiveness—of men's and women's voices. In addition to credibility, other indicators of effectiveness are also likely to be affected by voice, including how informative an ad is, how much an ad grabs one's attention, and how favorable the candidate is perceived to be (Hallahan 1999). This leads to our overarching research question: Do men's and women's voices differ in their effectiveness? And if so, how?

Although existing research suggests that there may be differences in how effective men's and women's voices are, it also suggests that the gender of the voice-over announcer, interacting with other factors, may condition an ad's effectiveness. Thus, we test for the conditions under which men's and women's voices might be more credible, making an ad more effective. We consider both the issue content of an ad and the audience it targets.

ISSUES

There are two sets of considerations that can help us understand the conditions under which men's and women's voices are more or less credible and thus more or less effective. The first set stems from studies in marketing that consistently show higher evaluations of a product when the gender image of a product is congruent with the gender of the presenter (Kanungo and Pang 1973; Kahle and Homer 1985; Misra and Beatty 1990). To facilitate credibility, congruence theory implies that it is important for advertisers to determine

relevant attributes of a product (e.g., whether it is predominantly masculine or feminine), before selecting a spokesperson, model, or voice-over to endorse it. Specifically, ads are more effective and consumers respond more favorably when men introduce (or are featured using) male-gendered-type products and women introduce (or are featured using) female-gendered-type products (but see Debevec and Iyer 1986). For example, men and women are more receptive to masculine products such as cars when promoted by a man and to feminine products such as sofas when promoted by a woman (Kanungo and Pang 1973). A recent survey of the literature finds “that, in general, gender stereotyping in advertising still exists and is prevalent in many countries around the world,” (Grau and Zotos 2016).

In the political realm, congruence theory may also be used to explain when a man or woman’s voice is more credible in a campaign advertisement. However, in this case the relevant attribute of the product—or candidate—is the issue. One ad-maker suggests that men tend to narrate ads with national security messages, but women’s voices are more likely to be employed when the ad focuses on community security and families (Pathé 2016).

Although not all issues are gendered, scholars consider some to be feminine and others masculine. There is, however, some debate about how to make this characterization. Feminine concerns (or “women’s issues”) tend to include issues that women care most about (Shapiro and Mahajan 1986; Kaufmann and Petrocik 1999; Schaffner 2005) or are most affected by (Swers 1998) or that women are perceived to be better at handling (Huddy and Terkildsen 1993a; Lawless 2004; see also Reingold and Swers 2011). Congruence theory would suggest that an ad about childcare—typically considered a feminine issue—would be more credible when voiced by a woman because women may be seen as more trustworthy and as having more expertise on that issue than men. Moreover, experimental evidence suggests that gender associations of the issue influence information processing too (Ditonto, Hamilton, and Redlawsk 2013). In general, the audience should perceive an ad as more credible when the gender of the voice-over announcer and the gender association of the issue are consistent. Such ads should ultimately be more effective for candidates. Thus, we hypothesize the following:

H1: Men’s voices are more effective for masculine issues.

H2: Women’s voices are more effective for feminine issues.

AUDIENCE

The relationship between source and receiver (audience) may also matter. Sanbonmatsu (2002) shows that individuals have a “baseline gender preference” for men or women political candidates based on gender stereotypes, and women are more likely to prefer women candidates.

Research on homophily—or the degree to which receivers perceive themselves to be similar to a source—suggests that increased similarity between audience and source results in more persuasion (McCroskey, Hamilton, and Weiner 1974; Wheelless 1974). Underlying this relationship is the observation that people are more attracted to people who are like them (Bailenson et al. 2004): Men feel affinity for other men while women feel affinity for other women (O'Keefe 1990; Pornpitakpan 2004). Moreover, credibility is likely when receivers believe speakers share their interests (Lupia 1994; Lupia 2015). As such, ads may be more effective when the gender of the announcer, a message conveyed through voice, and the gender of the viewer are the same. Thus, we hypothesize the following:

H3: Men's voices are more effective among men.

H4: Women's voices are more effective among women.

INTERACTION OF ISSUE AND AUDIENCE

What happens when the gender of the voice-over announcer, the gendered association of the issue, and/or the gender of the message receiver align? In light of our earlier expectations, such ads might be particularly effective given the perceived credibility of the speaker. Little research speaks to the gender alignment of all three factors, but some research shows the effectiveness of aligning the gender association of the product with the gender of the purchaser. For example, when Alreck, Settle, and Belch (1982) ran an experiment promoting a neutral product (soap) as masculine (Tiger) and feminine (Rainbow), they found that women preferred the soap with a feminine name. With respect to political advertising, men may find an ad about a masculine issue voiced by a man as quite credible, but a woman may see the same ad and decide that it is about something irrelevant to her. Thus, the effects of aligning the gender of the issue with the gender of the voice may differ by the gender of the audience. We hypothesize the following:

H5: Men's voices in ads with masculine issues are more effective to men than women.

H6: Women's voices in ads with feminine issues are more effective to women than men.

EXPERIMENTAL TEST

Experimental Stimuli and Procedures

We designed a 2 × 2 experiment in which voice (man and woman) and issue type (masculine and feminine) were manipulated. One woman and one man

each voiced two scripts, which discussed a different issue for a fictional candidate, Tim Smith (see Appendix). Participants were directed, “We now want you to watch a political ad from [Republican/Democrat] Tim Smith.” We incorporate partisanship into the introductory sentence rather than use a partisan cue in the ad itself because political ads rarely explicitly mention party (Doherty and Anderson 2004). There are two features of the stimulus that allow us methodological leverage. First, we match the partisanship of the candidate to the partisanship of the participant to ensure that any effects of voice are related to traits owned by gender rather than party ownership. In the case of true independent voters (e.g., not leaning toward one party or another), we randomly assigned them to hear about a Republican or Democratic candidate. We choose to focus on the effects of gender within party based on research suggesting that the effects of gender stereotypes in campaign ads are conditional on partisanship, with party stereotypes trumping gender stereotypes (Hayes 2011). Similarly, Krupnikov and Bauer (2014) find that voters were more likely to punish women candidates for “going negative” when they were from the out-party. Second, we use only a man candidate to ensure that we have enough power to detect results and because the majority of political candidates in the United States are men. This is not to say that gender of the candidate is unimportant: Indeed, the prevailing wisdom from ad-makers is that men’s voices are used in ads for women candidates to ensure that the two are distinguishable (Pathé 2016). To offset any concerns, we supplement these experimental results with a survey replication that takes into account the partisanship of the ad sponsor and respondent. Still, we encourage researchers to investigate the effects of partisanship and candidate gender in future studies.

The images in both the masculine and feminine versions of the ad were the same, as were the introduction and the closing statement. But the issues mentioned by the voice-over announcer varied. In the masculine-issue version, the announcer mentions “supporting workers by keeping good paying jobs here at home,” “ensuring Americans get ahead by cutting taxes,” and “securing our national defense through a strong military.” In the feminine-issue version, the announcer mentions “supporting families by providing access [to] affordable childcare,” “ensuring Americans get quality education,” and “improving the quality of life for our seniors.”

Before writing the script, we identified issue areas based on existing theory and empirical evidence. Theoretical standards suggest that masculine and feminine issues can be defined by the areas in which men and women are *thought to be* more competent (Dolan 2014; Hayes and Lawless 2016). For example, women may be uniquely qualified to address feminine issues “because [these issues] seek to achieve equality for women, address women’s special needs, such as women’s health care concerns or childcare; or they confront issues with which women have traditionally been concerned in their role as caregivers, such as education or the protection of children” (Swers

2002, p. 10). Likewise, men are viewed as more competent in stereotypical masculine issues, such as the economy, military crises, or crime. There are three issue areas the literature identifies as feminine—childcare, education, and seniors (Shapiro and Mahajan 1986; Huddy and Terkildsen 1993a,b; Chaney, Alvarez, and Nagler 1998; Swers 1998; Sanbonmatsu 2002; Herrnson et al. 2003; Schaffner 2005; Sapiro et al. 2009; Dittmar 2015)—and three issue areas the literature defines as masculine—jobs/trade, taxes, and national defense (Huddy and Terkildsen 1993a,b; Wilcox, Hewitt, and Alsop 1996; Lawless 2004; Schaffner 2005; Sonbanmatsu; Dittmar 2015; Hayes and Lawless 2016).

Drawing from these issue areas, we then wrote a masculine-issue and feminine-issue version of the script and hired a professional videographer to create four ads (two issue types by two voice-overs). The ad, which is positive, begins with aerial video of a rolling wheat field and then transitions into a still image of congressional candidate Tim Smith. It features images of a couple leaving for work, a teacher in a classroom, a construction worker, veterans in a parade, and soldiers coming home. After some additional scenes of happy families, the ad ends with the same picture of candidate Smith and the message, “Smith for Congress is responsible for the content of this advertising.” The ad is backed by uplifting music. Although the images and music are the same in all versions of the ad, the visual text does differ in order to emphasize masculine or feminine issues. In the masculine version of the ad, the words “good paying jobs,” “cutting taxes,” and “strong military” appear on screen. In the feminine version, the words “affordable childcare,” “quality education,” and “helping seniors” appear on screen.

The survey experiment was programmed using Qualtrics, and a sample of 3,655 online participants was obtained from Survey Sampling International. The survey was in the field from October 27 to November 7, 2016. The sample closely resembled the population of the United States on key demographics. In terms of gender, 51.4% were female; in terms of race and ethnicity, 68.8% reported being white, 11.9% reported being African American, 7.6% reported being Hispanic/Latino, and 3.4% reported being Asian. Many respondents reported being multiple races/ethnicities. Overall, for instance, 12.3% of respondents reported a Hispanic/Latino background. Forty-three percent of respondents were Democrats, 25% were Republicans, and 32% were independents or reported no preference. Research demonstrates that estimates obtained from opt-in Internet panels are just as accurate as estimates obtained from telephone surveys using a national random digit dialing (RDD) sample of cell and landlines (Ansolabehere and Schaffner 2010), and for our purposes here, we are more concerned about randomization than perfect representation of the national population.

Participants in the study first answered pretreatment questions, including queries on their impressions of the presidential candidates and parties and their exposure to various news stories. We also asked their partisanship upfront in order to match respondents with an ad ascribed to their partisan

leaning (true independents were randomized to either Democrat or Republican). Participants were then randomly assigned to view one of the four political ads. After watching the ad, participants were asked to assess the candidate and the ad on several attributes using a 1-to-7 scale that ranged from “strongly disagree” to “strongly agree.” Participants rated their favorability toward the candidate, and the ad was rated on its credibility, the extent to which the respondent learned something, and the extent to which the ad got the respondent’s attention.

Measures and Method of Analysis

To tap the effectiveness of the ads, we primarily focus on ad credibility, which, as discussed at length above, is a primary predictor of ad effectiveness (Hovland, Janis, and Kelley 1953; Berlo, Lemert, and Mertz 1969; Dholakia and Sternthal 1977). We capture additional attitudes toward the ad common to the literature on ad effectiveness, including how informative and attention-grabbing viewers perceived the ad, as well as favorability toward the candidate (Ducoffe 1995; Hallahan 1999; Brackett and Carr 2001).² All questions are measured on a 7-point scale where 7 is strongly agree and 1 is strongly disagree. We examined respondents’ assessments of candidate “favorability” ($M = 4.94$, $SD = 1.25$) along with assessments of how informative ($M = 4.77$, $SD = 1.45$), attention-grabbing ($M = 4.82$, $SD = 1.51$), and credible ($M = 4.82$, $SD = 1.35$) the ad was.

Predictors of ad effectiveness included whether a respondent was assigned to an ad featuring a woman’s voice (or man’s voice), whether the respondent was assigned to an ad featuring a feminine issue (or masculine issue), and the interaction between the gender of the voice-over announcer and issue type. Because participants were randomly assigned to treatment conditions, control variables are not included in the models. The unit of analysis is the individual respondent. We estimate two-way analysis of variance (ANOVA) models for each of the outcome variables for the entire sample and then separately by gender.

Results

Our overarching research question was whether there was any difference in the effectiveness of men’s and women’s voices. We begin with our experimental results. Table 1 shows mean values of the four outcomes of interest (how attention-grabbing the ad was, its credibility and informativeness, and candidate favorability) varying two factors (voice and issue). Although the differences across treatments are not stark, in all four instances the woman voice-over combined with the masculine issue scores lowest.

Table 2 shows results from a two-way ANOVA predicting each of the four outcomes of interest, again by voice and issue.

TABLE 1 Means by Treatment Group

Voice-over	Issue	Attention	Credibility	Learned	Favorability
Man	Masculine	4.88	4.86	4.77	4.99
Man	Feminine	4.86	4.81	4.83	4.96
Woman	Masculine	4.74	4.78	4.70	4.84
Woman	Feminine	4.81	4.82	4.77	4.97

We find a main effect of the gender of the voice-over announcer on how attention-grabbing the ad was and candidate favorability at $p < .10$, with participants evaluating the man voice-over announcer more highly. But voice did not help to explain respondents' assessments of the ad's credibility or how much they learned from the ad. There were no main effects of the issue—whether masculine or feminine—on any of the four dependent variables, but there was one interactive effect: The interaction of voice and issue helps to explain candidate favorability. Specifically, pairwise comparisons show that a man's voice with a masculine issue results in higher favorability than a woman's voice with the masculine issue. Moreover, a woman's voice with a feminine issue leads to higher favorability than a woman's voice with a masculine issue. When there was disjuncture between the voice and issue, the man's voice outperformed the woman's voice.

TABLE 2 ANOVA Results for Voice and Issue on Attitudes Toward Ad and Candidate

Outcome	Voice	Issue	Voice × Issue
Ad is attention-grabbing	$F(1, 3654) = 3.82^*$	$F(1, 3654) = 0.20$	$F(1, 3654) = 0.95$
Ad is credible	$F(1, 3654) = 0.76$	$F(1, 3654) = 0.01$	$F(1, 3654) = 1.16$
Learned from ad	$F(1, 3652) = 2.00$	$F(1, 3652) = 1.59$	$F(1, 3652) = 0.02$
Candidate favorability	$F(1, 3654) = 3.20^*$	$F(1, 3654) = 1.51$	$F(1, 3654) = 4.00^{**}$
Follow-up contrasts for voice and issue on attitudes toward ad and candidate			
Outcome	Effect ¹	<i>t</i> test	<i>p</i> value
Ad is attention-grabbing	V		
	1 vs. 0	1.95	.051
Ad is credible Learned from ad Candidate favorability	I		
	1 vs 0	1.79	.074
	VI		
	(0 1) vs. (0 0)	-2.28	.022
	(1 0) vs. (0 1)	2.14	.033
	(1 1) vs. (0 1)	2.68	.007

Note. * $p < .1$. ** $p < .05$. *** $p < .01$. Each row represents a two-way analysis of variance (ANOVA) modeled for outcome variable.

¹V = main effect for voice; I = main effect for issue; VI = significant interaction between voice and issue. Entries are significant results of the pairwise contrasts for any significant main effect where for issue 0 = feminine issue and 1 = masculine issue and for voice 0 = woman's voice and 1 = man's voice. For brevity, only significant two-way contrasts are included.

In short, it seems that congruence between the gender of the voice-over announcer and the gender associations of the issue results in higher candidate favorability than when there is a disjuncture between the two. These results offer some support of hypotheses 1 and 2 and lend some credence to the idea of voice and issue congruency.

We also examined the idea that the gender of the respondent influenced the effectiveness of the ad. Table 3 displays results from two-way ANOVA models estimated separately for men participants (the three columns to the left) and women participants (the three columns to the right). Our third and fourth hypotheses speak to congruency between voice and audience, specifically, that men's voices should be more effective among men and women's voices should be more effective among women. Our fifth and sixth hypotheses also address congruency by asking whether men prefer men's voices for masculine issues and vice versa.

For men viewers (hypotheses 3 and 5), what stands out most is the lack of significant coefficients. For most outcomes, neither issue nor voice has a significant impact. The one exception is that the gender of the voice-over announcer explains variation in how attention-grabbing men find the ad, $F(1, 1769) = 3.33$. Men rated the ad featuring the man voice-over announcer more highly than the ad featuring the woman voice-over announcer, but the gender of the voice-over announcer could not help explain how informative the ad was, assessments of its credibility, or candidate favorability.

Turning to women viewers, we see that the gender of the voice-over announcer fails to explain variation in the four dependent variables (hypothesis 4). However, the gender associations of the issue do matter both for how attention-grabbing the ad is and for candidate favorability, with the ad featuring masculine issues rated lower—and the candidate sponsor rated lower—than when the ad featured feminine issues. At least by some measures, then, feminine issues appear to speak to women more than masculine issues do. We also find some evidence that issue–voice congruence is a successful strategy among women viewers (hypothesis 6). The ad that featured a man's voice and masculine issues was ranked as more attention-grabbing than the ad featuring a woman's voice and masculine issues. Moreover, the ad that featured a woman's voice discussing feminine issues was more attention-grabbing than the ad with a woman's voice discussing masculine issues. Although this interaction only explained variance in the attention-grabbing measure, it does provide some further evidence for the success of the issue–voice congruence.

Our experimental data offer some support for hypotheses 1, 2, and 6, suggesting that issue and voice congruence matter, particularly for women. However, it is the largely null findings for voice that are perhaps most interesting given current ad-making practices. Our results suggest that men's voices, while perhaps more attention-grabbing among men, are not more

TABLE 3 ANOVA Results for Voice and Issue on Attitudes Toward Ads and Candidate by Gender of the Respondent

Outcome	Men			Women		
	Voice	Issue	Voice x Issue	Voice	Issue	Voice x Issue
Ad is attention-grabbing	$F(1, 1769) = 3.33^*$	$F(1, 1769) = 1.02$	$F(1, 1796) = 0.08$	$F(1, 1873) = 1.12$	$F(1, 1873) = 3.05^*$	$F(1, 1873) = 2.75^*$
Ad is credible	$F(1, 1769) = 0.00$	$F(1, 1769) = 1.02$	$F(1, 1769) = 0.40$	$F(1, 1873) = 1.30$	$F(1, 1873) = 0.94$	$F(1, 1873) = 0.69$
Learned from ad	$F(1, 1767) = 0.26$	$F(1, 1767) = 0.06$	$F(1, 1767) = 0.74$	$F(1, 1873) = 2.30$	$F(1, 1873) = 2.50$	$F(1, 1873) = 1.38$
Candidate favorability	$F(1, 1769) = 0.83$	$F(1, 1769) = 0.01$	$F(1, 1767) = 1.58$	$F(1, 1870) = 2.53$	$F(1, 1870) = 2.93^*$	$F(1, 1870) = 2.28$
Follow-up contrasts for voice and issue on attitudes toward ad and candidate						
Outcome	Men			Women		
	Effect ¹	<i>t</i> test	<i>p</i> value	Effect ¹	<i>t</i> test	<i>p</i> value
Ad is attention-grabbing	V	1.98	.047	I	-1.75	.081
	1 vs 0			1 vs 0		
				VI		
Ad is credible	ns			(0 1) vs (0 0)	-2.43	.015
	ns			(1 0) vs (0 1)	1.97	.049
	ns			(1 1) vs (0 1)	1.92	.055
Learned from ad	ns			ns		
	ns			ns		
	ns			I		
Candidate favorability				1 vs 0	-1.71	.087

Note. $*p < .1$. $**p < .05$. $***p < .01$. Three columns to the left are two-way analyses of variance (ANOVAs) modeled for men's responses only; three columns to the right are two-way ANOVAs modeled for women's responses only.

¹V = main effect for voice; I = main effect for issue; VI = significant interaction between voice and issue; ns = relationship not significant.

Entries are significant results of the pairwise contrasts for any significant main effect where for issue 0 = feminine issue and 1 = masculine issue and for voice 0 = woman's voice and 1 = man's voice. For brevity, only significant two-way contrasts are included.

effective across the board. In fact, when paired with feminine issues they are less effective than women's voices. When we leverage an experimental design to isolate the effects of voice conditioned on the gender of the viewer and the gender association of the issue, the data are clear: There is no reason for ad-makers to make men's voices the default.

SURVEY REPLICATION

Survey Data and Methods

To replicate our experimental findings, we draw on a second set of survey data from Ace Metrix, a commercial firm that in 2012 tested nearly every ad aired in that year's presidential campaign sponsored by candidates, parties, and groups. For each of more than 300 unique ads aired in 2012, a nationally representative Internet sample of 500 respondents were asked to access a survey URL provided by Ace Metrix within 24 to 48 hours of the ad first airing. Survey respondents viewed each ad online and then used a slider to report their reactions to the ad on a 100-point scale. Several attributes of the ad were then evaluated, but we focused on three: the ad's credibility ("I find this commercial credible," $M = 52.95$, $SD = 33.03$), how much it grabbed the respondent's attention ("The ad got my attention," $M = 59.96$, $SD = 31.05$), as well as the extent to which respondents agreed with the following statement: "I learned something" ($M = 51.03$; $SD = 31.99$). These items are identical to three of the items used in the survey experiment.

The final data set contains 81,720 respondents who answered questions on one to five political ads. These data also give us information on respondent-level characteristics, including age (34.3% were 18–35 years; 31.2% were 36–49, and 34.6% were 50+), education ($M = 13.9$ years of education, $SD = 2.9$), gender (47.96% male; 52.04% female), income (36.34% less than \$40k, 35.31% \$40–75k, and 28.35% more than \$75k), and a proxy measure of partisanship created from past voting behavior (35.5% vote for more Democrats than Republicans, 28.16% vote for both parties in roughly equal amounts, and 36.34% vote for more Republicans than Democrats).

Coders from the Wesleyan Media Project identified the issues mentioned in each of the ads (Fowler, Franz and Ridout 2017), and then we assigned each of these issues as masculine or feminine, using the results from four Pew surveys that were fielded in September 2010, January 2011, December 2011, and March 2012 as a guide. If at least 60% of respondents across the surveys who mentioned the issue were men, we labeled it as masculine. If at least 60% of respondents who mentioned the issue were women, we labeled it as feminine. The remaining issues were classified as non-gendered. Most of the classifications, which are listed in Table 1 in Strach et al. (2015), have face validity and match the issues identified as gendered in the literature on stereotypes.³

Results

We now turn our attention to survey data in an attempt to replicate our experimental findings in the real world. We used the Ace Metrix survey data to estimate an ordinary least squares regression model (clustering on respondent) predicting three dependent variables: the perceived credibility of the ad, how attention-grabbing the ad was, and the extent to which individuals learned from the ad. These three dependent variables tap the same three ad evaluations measured in our experiment. We also estimated these three models separately for men and for women.

The first model contains several key predictors, including the gender of the voice-over announcer,⁴ indicators of whether the issue or issues mentioned in the ad were masculine or not, and the gender of the respondent. Because we were interested in how the impact of voice varies under various conditions, our models included interactions between the gender of the voice-over announcer and whether the issue was masculine or not. Beyond the tightly controlled comparisons we are able to make using the experimental data above, this model allows us to test for whether men's or women's voices were better in certain kinds of ads or with certain types of audiences in an actual campaign environment. Because these data are real-world and not experimental, our model also contains several controls, whose coding is listed in the Appendix.

The findings, reported in Table 4, are largely consistent with our experimental findings in finding little evidence that men's voices are more effective across the board. There was no significant relationship between the gender of the voice-over announcer, on the one hand, and evaluations of the ad's credibility, its ability to grab one's attention, or how informative it was, on the other hand. We did, however, find an effect of the gender associations of the issue, as respondents found masculine issues to be significantly less attention-grabbing and less likely to promote learning than feminine and neutral issues.

Our survey results also lend support to the idea that congruence between issue and voice-over is smart strategy. An ad about a masculine issue and voiced by a man is significantly more attention-grabbing and is rated as more credible and informative than an ad about a masculine issue that is voiced by a woman. This idea of matching voice with the gender associations of the issue was also supported in some of our experimental findings. But when it comes to attention to the ad and whether one learned from the ad, then there is one combination that is not as successful. Figures 1, 2, and 3 show the predicted levels of attention, credibility, and informativeness for each combination of voice and issue. Ads featuring women's voices in combination with masculine issues were ranked significantly lower on their ability to grab one's attention and on their informativeness.

Turning to the model estimates split by the gender of the respondent (Table 5), we see largely a rehash of our findings when both genders are

TABLE 4 Predictors of Campaign Ad Evaluations

	Attention	Credibility	Learning
Man VO	-0.186 (0.362)	0.246 (0.369)	0.477 (0.378)
Masculine issue	-2.321*** (0.435)	-0.0331 (0.450)	-2.330*** (0.452)
Man VO * masculine issue	2.998*** (0.508)	1.037** (0.526)	2.959*** (0.529)
Tone: Promote	-0.789** (0.400)	2.540*** (0.403)	-0.00387 (0.409)
Tone: Attack	1.887*** (0.303)	0.940*** (0.301)	1.584*** (0.309)
Sponsor: Pty/coord	1.521** (0.682)	2.497*** (0.690)	-0.618 (0.704)
Sponsor: IG	3.759*** (0.300)	3.278*** (0.304)	1.704*** (0.312)
Policy-focused	1.693*** (0.428)	2.752*** (0.434)	2.027*** (0.446)
Personal and policy	1.711*** (0.485)	2.987*** (0.489)	2.093*** (0.504)
Economic ad	-0.687** (0.269)	-0.648** (0.272)	-1.852*** (0.277)
Partisanship matches sponsor	5.245*** (0.0694)	8.510*** (0.0727)	5.659*** (0.0726)
Partisan strength	0.870*** (0.129)	0.364*** (0.123)	-0.130 (0.131)
Male respondent	-0.00239 (0.272)	1.178*** (0.263)	0.0309 (0.282)
Education	-0.338*** (0.0527)	-0.376*** (0.0513)	-0.599*** (0.0556)
Age 36–49	-1.676*** (0.336)	-1.630*** (0.326)	-3.858*** (0.349)
Age 50+	-2.132*** (0.324)	-2.605*** (0.315)	-7.790*** (0.337)
Income < \$40 K	-0.485 (0.357)	0.184 (0.345)	0.0381 (0.371)
Income \$40–70 K	0.780** (0.336)	1.148*** (0.325)	1.112*** (0.349)
Days to election	0.0632*** (0.00545)	0.0531*** (0.00543)	0.0569*** (0.00570)
Days to election (squared)	-0.000203*** (2.02e-05)	-0.000203*** (2.08e-05)	-0.000153*** (2.12e-05)
Constant	58.18*** (1.078)	50.84*** (1.061)	57.74*** (1.132)
Observations	67,475	67,475	67,475
R-squared	0.108	0.222	0.122

Note. Robust standard errors in parentheses.

*** $p < .01$. ** $p < .05$. * $p < .1$.

VO = voice-over; Pty/coord = party, coordinated; IG = interest group.

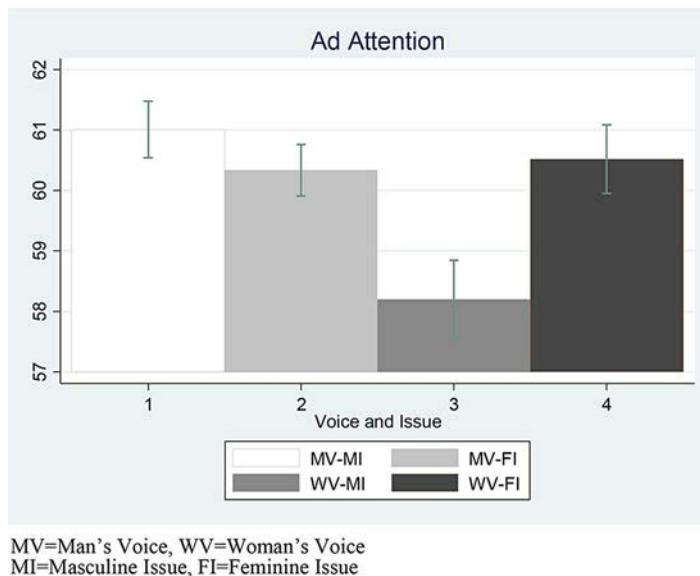
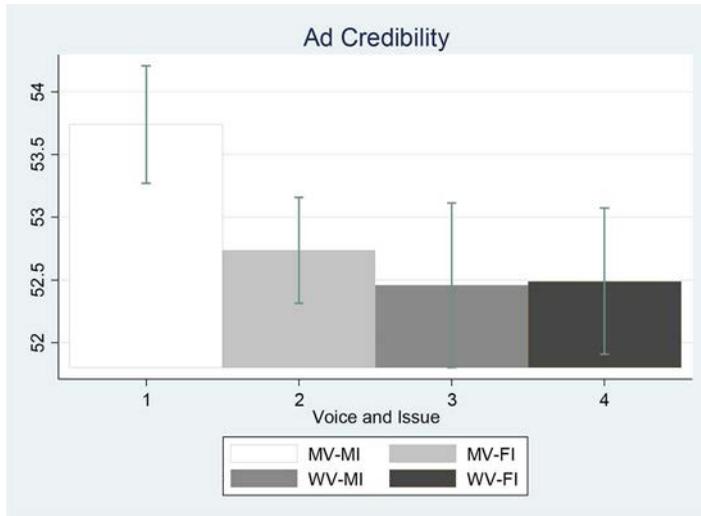


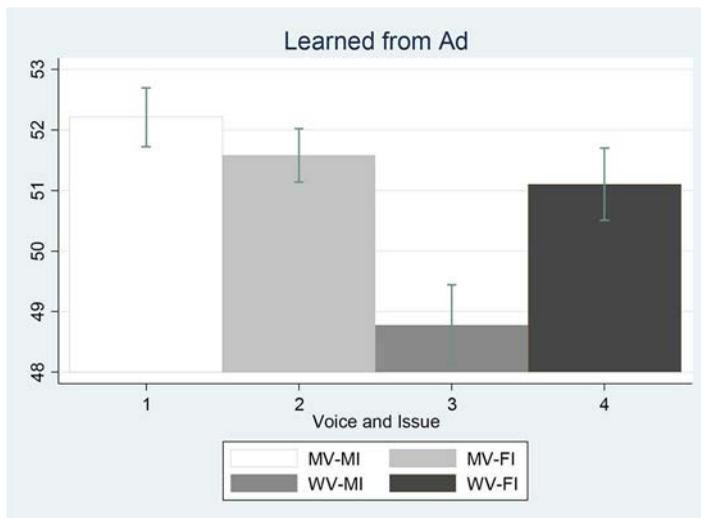
FIGURE 1 Attention to ad by voice and issue. MV = man's voice; WV = woman's voice; MI = masculine issue; FI = feminine issue.



MV=Man's Voice, WV=Woman's Voice
MI=Masculine Issue, FI=Feminine Issue

FIGURE 2 Credibility of ad by voice and issue. MV = man's voice; WV = woman's voice; MI = masculine issue; FI = feminine issue.

combined. The gender of the voice-over announcer is an insignificant predictor of all three of our dependent variables, regardless of whether we are examining male or female respondents. What is more, both men and women reported that ads mentioning masculine issues were less attention-grabbing



MV=Man's Voice, WV=Woman's Voice
MI=Masculine Issue, FI=Feminine Issue

FIGURE 3 Informativeness of ad by voice and issue. MV = man's voice; WV = woman's voice; MI = masculine issue; FI = feminine issue.

TABLE 5 Predictors of Campaign Ad Evaluations by Gender of Respondents

	Men				Women				
	Attention	Credibility	Learning	Attention	Credibility	Learning	Attention	Credibility	Learning
Man VO	0.0563 (0.532)	0.522 (0.547)	0.354 (0.557)	-0.374 (0.492)	0.0440 (0.499)				0.648 (0.512)
Masculine issue	-2.556*** (0.638)	-0.194 (0.664)	-2.538*** (0.663)	-2.092*** (0.593)	0.123 (0.611)				-2.106*** (0.616)
Man VO * masculine issue	3.536*** (0.744)	0.888 (0.774)	3.550*** (0.776)	2.459*** (0.694)	1.136 (0.714)				2.346*** (0.721)
Tone: Promote	-0.917 (0.584)	2.613*** (0.595)	0.314 (0.601)	-0.647 (0.549)	2.496*** (0.545)				-0.304 (0.557)
Tone: Attack	2.065*** (0.441)	1.771*** (0.448)	2.213*** (0.456)	1.699*** (0.416)	0.140 (0.405)				0.957** (0.419)
Sponsor: Pty/coord	0.847 (0.990)	2.004** (0.989)	-1.502 (1.028)	2.137** (0.940)	2.932*** (0.961)				0.211 (0.965)
Sponsor: IG	3.386*** (0.437)	2.751*** (0.451)	0.974** (0.459)	4.158*** (0.412)	3.817*** (0.410)				2.451*** (0.424)
Policy focused	2.383*** (0.621)	2.827*** (0.630)	2.096*** (0.648)	1.027* (0.588)	2.688*** (0.597)				1.983*** (0.613)
Personal and policy	2.958*** (0.705)	3.226*** (0.710)	3.096*** (0.733)	0.515 (0.667)	2.763*** (0.672)				1.147* (0.693)
Economic ad	-0.874** (0.391)	-0.527 (0.400)	-2.003*** (0.403)	-0.516 (0.371)	-0.781** (0.370)				-1.737*** (0.380)
Partisanship matches sponsor	5.523*** (0.104)	8.817*** (0.109)	5.813*** (0.108)	4.994*** (0.0931)	8.232*** (0.0973)				5.519*** (0.0973)
Partisan strength	1.056*** (0.190)	0.612*** (0.183)	0.0687 (0.196)	0.713*** (0.174)	0.146 (0.164)				-0.299* (0.175)
Education	-0.449*** (0.0780)	-0.427*** (0.0771)	-0.701*** (0.0835)	-0.210*** (0.0715)	-0.295*** (0.0685)				-0.465*** (0.0742)
Age 36-49	-2.903*** (0.496)	-2.886*** (0.489)	-5.324*** (0.525)	-0.478 (0.455)	-0.416 (0.437)				-2.425*** (0.465)
Age 50+	-4.147*** (0.470)	-4.818*** (0.461)	-10.17*** (0.492)	-0.0556 (0.446)	-0.360 (0.431)				-5.340*** (0.461)
Income < \$40 K	-1.127** (0.532)	-0.284 (0.515)	-0.303 (0.558)	0.141 (0.481)	0.680 (0.463)				0.415 (0.494)
Income \$40-70 K	0.444 (0.495)	1.206** (0.483)	1.385*** (0.520)	1.100** (0.457)	1.111** (0.438)				0.862* (0.467)
Days to election	0.0529*** (0.00785)	0.0405*** (0.00793)	0.0420*** (0.00831)	0.0737*** (0.00754)	0.0659*** (0.00742)				0.0720*** (0.00782)
Days to election (squared)	-0.000164*** (2.91e-05)	-0.000154*** (3.06e-05)	-0.000107*** (3.08e-05)	-0.000243*** (2.80e-05)	-0.000251*** (2.83e-05)				-0.000199*** (2.92e-05)
Constant	60.63*** (1.577)	53.69*** (1.574)	60.84*** (1.679)	55.40*** (1.470)	48.64*** (1.432)				54.13*** (1.522)
Observations	32,695	32,695	32,695	34,780	34,780				34,780
R-squared	0.116	0.224	0.129	0.103	0.222				0.118

Note. Robust standard errors in parentheses.

*** $p < .01$. ** $p < .05$. * $p < .1$.

VO = voice-over; Pty/coord = party, coordinated; IG = interest group.

and led to less learning than ads mentioning feminine issues. Finally, both men and women respondents reported that matching the gender of the voice-over announcer with the gender associations of the issue resulted in higher viewer attention and more informative ads.

These survey-based findings add nuance to our understanding of voice in campaign advertisements. By and large, the findings from both approaches are consistent, and they suggest two things. First, the evidence that using a man to voice a political ad, which is the dominant practice in the United States even today, is thin. We did find in the experiment that men's voices were more attention-grabbing and were associated with higher candidate favorability, but there was no difference in the perceived credibility or informativeness of men's and women's voices in the experiment. Moreover, the survey data reveal no significant differences in the effectiveness of men's and women's voices. A blanket rule that a campaign should use a man to voice its ads seems unwarranted. That said, our research does suggest that there are certain times when a campaign might wisely choose to use a man or woman to voice its ads. Namely, when the issue is a feminine one, a woman's voice may be more effective in terms of its ability to grab a voter's attention and incite voter learning. And masculine issues appear to be effective among men on those same outcomes. Congruency between issue and voice, then, seems to be smart campaign strategy.

Third, our results suggest that one particular type of discontinuity—pairing a woman's voice with a masculine issue—is particularly ineffective. The survey results show that the woman-voice/masculine-issue combination scored significantly lower on its ability to capture a viewer's attention and its ability to inform. And, although the differences are not large, this same combination of voice and issue scored lowest on all four dependent variables in our experiment.

CONCLUSION

Men's voices dominate commercial and political advertising, but are they more effective? Our findings, which come from both an experimental and an observational study, provide little evidence that employing men as voice-over announcers as a blanket strategy is a smart approach. Moreover, pursuing congruence between voice and the issue—that is, matching a man's voice with a masculine issue and matching a woman's voice with a feminine issue—seems to be more effective, at least in terms of the ad's ability to grab viewers' attention and engender favorability toward the candidate. When it comes to credibility in particular, there remains one condition in which a man's voice might be particularly important: when the issue is a masculine one. Both our survey and experimental data hinted that the combination of a woman's voice a masculine issue was the least effective of all four conditions.

Of course, there is another way in which gender enters the equation in the real world that we did not consider in this research: through the gender of the candidate. Perhaps ads are even more effective when the gender of the candidate, issue, announcer, and viewer align, although we leave it to future research to investigate this possibility.

To this day, men serve as voice-over announcers in the majority of campaign ads. The persistence of this disparity may reflect outdated assumptions about the ability of men's voices to be more effective because they convey authority and persuasiveness. Or it may reflect a reluctance of ad-makers to employ women's voices with masculine issues, a reluctance that is grounded in at least some empirical evidence. Still, given our findings, defaulting to a man's voice strikes us as poor campaign strategy. Even the ad-makers seem to think so. According to Democratic strategist Jon Vogel, "A lot of people still do use men, but I don't think it's any more effective," (Pathé 2016). Using a man or woman to voice an ad should be a carefully considered choice, one that depends on the gender associations of the issue and the audience to which one wants to appeal.

NOTES

1. The idea that voice conveys emotions is supported in the literature: In studies on voice interfaces, such as those used in car GPS systems, researchers find improved outcomes when people heard an emotional voice that matched their own feelings (Nass et al. 2005). Whether or not women's voices are more effective at conveying emotionality remains an unanswered question.

2. Participants were also asked to evaluate the candidate on the extent to which he is a fighter, the extent to which he cares, and the extent to which they would seek more information about him. They also were asked to evaluate the ad on whether they connected with the message and agreed with the main point.

3. Three classifications based on the Pew surveys struck us as different from what is proposed in the stereotypes literature: terrorism as a feminine issue, the recession/stimulus as a feminine issue, and race relations/civil rights as a masculine issue. To ensure that our findings were robust, we reclassified these three issues as neutral instead of gendered and re-estimated the models reported in this section with these different classifications. Our substantive findings were robust. The only change was that the man voice-over/masculine issue interaction was a positive and significant predictor of credibility whereas in the original model that interaction was not a significant predictor of credibility.

4. Announcers are either woman (including woman or woman and man announcer) or man announcer only.

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DATA AND MEASURES APPENDIX

I. Ad Scripts

Masculine Issues Version	Feminine Issues Version
Working together, we can get our country moving forward again. [Sunrise and/or rolling plains]	
Tim Smith is running for Congress because he thinks we can do better. [Candidate]	
Supporting workers by keeping good paying jobs here at home [Individuals—at least one man and one woman parent aged—leaving for work]	Supporting families by providing access affordable childcare [Individuals—at least one man and one woman parent aged—leaving for work]
And ensuring Americans get ahead by cutting taxes. [Teacher in classroom followed by construction workers]	And ensuring Americans get quality education. [Teacher in classroom followed by construction workers]
Securing our national defense through a strong military. [Parade footage of veterans]	Improving the quality of life for our seniors. [Parade footage of veterans]
The American dream is working hard, seeing the fruits of your labor. [American flag waving]	
And passing that down to the next generation. [Picture of family/families]	
This November, vote Smith. Smith for Congress is responsible for the content of this advertisement. [Picture of candidate]	

II. Survey Experiment Question Wording

We now want you to watch a political ad from [Republican/Democrat] Tim Smith. [SHOW ONE OF 4 RANDOMIZED ADS]

Please rate how much you agree or disagree with the following statements about Tim Smith [1-to-7 scale running from “strongly disagree” to “strongly agree”]:

I have a favorable view of Tim Smith.

Tim Smith is a fighter.

Tim Smith cares about people like me.

I would seek out more information about Tim Smith.

Please rate how much you agree or disagree with the following statements about the ad [1-to-7 scale running from “strongly disagree” to “strongly agree”]:

This commercial is credible.

I learned something.

I personally connect to what this commercial is saying.

I agree with the main point.

The ad got my attention.

III. Question Wording and Variable Coding (Ace Metrix Data)^a

(Intercoder reliability measures are reported in parentheses where appropriate: % agreement, kappa, Krippendorff's alpha).

Gender of Voice-over: Is there someone doing a voice-over (narrating the ad) separate from a candidate? 1 = woman or woman and man voice-over announcer, 0 = man voice-over announcer. **Democrat:** 1 = ad favors Democrat, 0 = ad favors Republican or Independent.

Independent: 1 = independent, 0 = not independent.

Man candidate: 1 = man, 0 = woman.

Party ad: 1 = party-sponsored ad, 0 = not party-sponsored ad (93.32%, $\kappa = 0.85$, $\alpha = 0.85$).

Coordinated ad: 1 = ad sponsored by party and candidate, 0 = noncoordinated ad (93.32%, $\kappa = 0.85$, $\alpha = 0.85$).

Ad tone: “In your judgment, is the primary purpose of the ad to promote a specific candidate, attack a candidate, or contrast the candidates?” Positive ad: 1 = positive ad, 0 = not a positive ad; contrast ad: 1 = contrast ad, 0 = not a contrast ad; negative ad: 1 = negative ad, 0 = not negative ad (88.26%, $\kappa = .82$, $\alpha = .82$).

Substance: “In your judgment, is the primary focus of the ad personal characteristics of either candidate or policy matters?” Personal ad: 1 = primarily about candidate's personal characteristics, 0 = not primarily about candidate's personal characteristics; policy ad: 1 = primary about policy issues, 0 = not primarily about policy issues; personal and policy ad: 1 = about both personal and policy issues, 0 = otherwise (62.75%, $\kappa = 0.39$, $\alpha = 0.39$).

Year 2010: 1 = 2010, 0 = 2012.

Masculine issue: 1 = deficit/budget/debt, race relations/civil rights, energy policy, government ethics/scandal, government regulations, corporate fraud, and Wall Street, 0 = otherwise.

Feminine issue: 1 = recession/economic stimulus, housing/subprime mortgages, economic disparity/income inequality, abortion, moral/family/religious values, childcare, health care, social security, women's health, terrorism, 0 = otherwise.

Democratic vote: Percentage of Obama's two party vote in 2008 or 2012.

Economic ad: Coded 1 if any of the following issues are mentioned, 0 otherwise: economy (generic reference), taxes, deficit/budget/debt, government spending, recession/economic stimulus, minimum wage, farming, business, union, employment/jobs, poverty, trade/globalization, housing/subprime mortgages, economic disparity/income inequality.

Partisanship: 1-to-7 scale indicating frequency of reported voting for one party over another, ranging from "I always vote Democrat" to "I always vote Republican" with "I vote for about the same number of Republicans and Democrats" at 4.

Strength of partisanship: Folded partisanship scale.

Education: 10 = GED or high school education, 14 = some college or two-year degree, 16 = four-year degree, 18 = master's, professional, or graduate degree.

Female respondent: 1 = female, 0 = male.

Age 30–49: 1 = age 30–49, 0 = otherwise.

Age 50+: 1 = age 50 or older, 0 = otherwise.

Income < \$40 K: 1 = income less than \$40,000 per year, 0 = otherwise.

Income \$40–\$70 K: 1 = income between \$40,000 and \$70,000 per year, 0 = otherwise.

Days to election: Number of days between respondent's interview and Election Day.

Days to election (squared): Square of number of days between respondent's interview and Election Day.

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