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The Changing Nature of Political Debate Consumption: Social Media, Multitasking, and Knowledge Acquisition

JEFFREY A. GOTTFRIED, BRUCE W. HARDY, R. LANCE HOLBERT,
KENNETH M. WINNEG, and KATHLEEN HALL JAMIESON

This study examines the influence of debate viewing-social media multitasking on campaign knowledge during the 2012 presidential election. Results from three waves of a national cross-sectional survey of U.S. adults conducted during and after the 2012 presidential election suggest that social networking site (SNS) use overall correlates with increased knowledge of campaign issues and facts above and beyond the use of other sources of news media. In addition, watching a debate with or without simultaneous social media engagement is better for knowledge generation than not viewing a debate at all, but the effect of debate viewing is dulled when simultaneously engaging in social media multitasking. The debate viewing-social media multitasking effect is moderated by candidate preference, with differential learning occurring largely for knowledge that is favorable to one's preferred candidate.

Keywords debates, multitasking, political knowledge, social media

When “Big Bird,” “binders full of women,” and “horses and bayonets” were uttered in the 2012 presidential debates, social media lit up. The mention of funding cuts affecting Elmo’s large yellow friend elicited 17,000 tweets per minute during that debate while “PBS,” the channel hosting *Sesame Street*, hit 10,000 tweets per minute. “Big Bird” was also the fourth highest-rising search term on Google during that debate (Bingham, 2012). “Binders” and “binders full of women” peaked at 40,000 tweets per minute (Stenovec, 2012), while U.S. President Barack Obama’s “bayonet” comment garnered 105,767 (out of a total of 6.5 million) (Krieg, 2012).

Political communication scholarship has focused on a wide range of democratic outcomes stemming from debate consumption, from issue salience to vote choice

Jeffrey A. Gottfried is Research Associate, Pew Research Center. Bruce W. Hardy is Assistant Professor, Department of Strategic Communication, School of Media and Communication, Temple University and Distinguished Research Fellow, Annenberg Public Policy Center (APPC), University of Pennsylvania. R. Lance Holbert is Professor and Chair, Department of Strategic Communication, School of Media and Communication, Temple University, and Distinguished Research Fellow, Annenberg Public Policy Center (APPC), University of Pennsylvania. Kenneth M. Winneg is Managing Director of Survey Research, Annenberg Public Policy Center of the University of Pennsylvania. Kathleen Hall Jamieson is Elizabeth Ware Packard Professor of Communication, Annenberg School for Communication and Walter and Leonore Annenberg Director, Annenberg Public Policy Center at the University of Pennsylvania.

Address correspondence to Jeffrey A. Gottfried, Ph.D., Pew Research Center, 1615 L Street NW, Suite 800, Washington, D.C. 20036. E-mail: jgottfried@pewresearch.org

(Benoit, Hansen, & Verser, 2003). One of the central variables addressed is the acquisition of political knowledge. It has long been shown (Chaffee, 1978; Feldman & Price, 2008) that citizens learn about candidates and their issue stances from debate viewing. As a result, there is widespread, though not universal (Holbrook, 1996), agreement among political communication scholars that debates inform the electorate.

Mounting evidence that the new media environment is altering how citizens engage political debates invites a reconsideration of how debate learning takes place. Therefore, this study examines the impact of social media multitasking during the 2012 U.S. presidential debates on audience's acquisition of knowledge of campaign issues and facts. After all, more than 10 million tweets were produced during the first 2012 U.S. presidential debate, a significant spike in activity for this social media outlet (Stern, 2012). Moreover, Twitter studies have suggested substantial increases in viewers' engagement when a TV show airs, resulting in a "new form of inter-audience discussion" (Lochrie & Coulton, 2012, p. 729) through "second screen" interactions (Mukherjee & Jansen, 2015).

Scholars need to understand the normative implications of this development (Althaus, 2012). While political debate viewing in the pre-social media era could have been undertaken while engaging additional communicative acts, such multitasking has not been addressed systematically in the literature. Unlike the more traditional forms of multitasking, debates and social media are two simultaneous live streams of information about the same event—providing information about the live event as it occurs.

This study treats the use of social media during political debate viewing as one form of media multitasking (Wang & Tchernev, 2012), a phenomenon that has been explored widely in relation to knowledge acquisition by communication (Wang, Irwin, Cooper, & Srivastava, 2015) and education-based (Lin, Robertson, & Lee, 2009; Moreno & Mayer, 1999) scholarship. The multitasking literature has also focused on likeminded concepts such as information processing (Zhang, Jeong, & Fishbein, 2010) and comprehension (Jeong & Hwang, 2012). Utilizing insights from the media multitasking literature, this study addresses the role of social media activity engaged during a debate as a moderator of the relationship between political debate viewing and knowledge.

We start our study by asking whether using social networking sites (SNSs) during the 2012 presidential election correlates with increased knowledge of campaign issues and facts above and beyond the use of other sources of news media. Given that social media are used in conjunction with other information streams (Gil de Zúñiga, Jung, & Valenzuela, 2012), we are interested in how, if at all, simultaneous engagement with these two sources of campaign information affects knowledge. And finally, we look at how viewers' political predispositions might influence the relationship between multitasking and debate knowledge acquisition (Benoit, McKinney, & Holbert, 2001). The results invite some cautions about the possible normative effects of debate viewing in the social media age (Althaus, 2012).

Social Networking Sites And Campaign Knowledge

Use of social media is widespread. In 2013, about two-thirds of U.S. adults used Facebook (Mitchell, Kiley, Gottfried, & Guskin, 2013), the second most visited website in the world (behind Google), according to website traffic monitor Alexa.com.¹ On Facebook, more than one billion users communicate with one another, post comments, and "follow" their "friends." On the eighth most visited website in the world, Twitter, hundreds of millions of subscribers post "tweets" of up to 140 characters often annotated with a hashtag (#)

“specifying the topic or intended audience” (Conover et al., 2011, p. 89).^{2,3} With such a large number of users, social networking sites have increasingly drawn the interest of political communication scholars (Conover et al., 2011; Towner, 2013).

Whether campaign knowledge is generated as a result of engaging with this source during an election is a largely unexplored and unsettled topic. While some have shown that Internet use and online news consumption are positively and significantly associated with gains in political knowledge (Drew & Weaver, 2006; Eveland, Seo, & Marton, 2002; Groshek & Dimitrova, 2011; Kenski & Stroud, 2006; Xenos & Moy, 2007), fewer have examined whether SNSs in particular foster civic learning. Instead many have focused on the content of SNSs. Kwak, Lee, Park, and Moon (2010), for example, found that in July 2009, a majority (56%) of 41.7 million captured tweets were related to breaking headline news.

In 2015, the Pew Research Center found that 41% of U.S. adults consume news on Facebook and 10% draw news from Twitter (Barthel, Shearer, Gottfried, & Mitchell, 2015). On SNSs, users are often exposed to news incidentally (Mitchell et al., 2013). In one study looking specifically at the relationship between use and knowledge, though, Dimitrova, Shehata, Strömbäck, and Nord (2014) found no evidence that social networking site use correlated with increased political knowledge. Thus we ask:

RQ1: Did the use of SNSs during the 2012 presidential election increase users’ knowledge of campaign issues and facts above and beyond the use of other sources of news media?

Political Debate Viewing and Political Knowledge

While modern-day political debates are far removed from the academic ideal in format and structure (Jamieson & Birdsell, 1988; Zarefsky, 1992), they remain media events that attract large audiences that are geographically, psychographically, and politically diverse (Kenski & Jamieson, 2011; Kenski & Stroud, 2005; McKinney & Carlin, 2004). Even as political communication scholarship is stressing a weakening of media effects in an age of selective exposure, attention, and perception (Bennett & Iyengar, 2008, 2010), political debates remain influential (Benoit, 2014).

Political debates provide an opportunity for citizens to see and listen to opposing candidates, side-by-side, and in an extended time format that affords an opportunity for knowledge gain (Hart & Jarvis, 1997). The finding that debate viewing fosters learning is long-lived. Benoit and colleagues (2003) report a mean weighted effect size of .256 in their meta-analysis of 19 studies ($N = 7,202$) that analyzed the influence of debate viewing on voter political knowledge. Research has also found a similar effect size for the 2012 election presidential general election debates (Gottfried, Hardy, Winneg, & Jamieson, 2014).

Debate Viewing-Social Media Multitasking

During the first 2008 debate between Barack Obama and John McCain, Diakopoulos and Shamma (2010) developed a novel analytical methodology and visualization of Twitter activity and concluded that “the overall sentiment of the debate was negative and that tweeters tended to favor Obama over McCain” (p. 1198). In the same view, Shamma, Kennedy, and Churchill (2010) developed a tool using Twitter data surrounding the 2008 presidential debates to create a data-driven table of contents generator for archiving media events. Unsurprisingly, this initial research focused on communication

basics (frequency, valence) while trying to develop some initial concepts and methodological tools of interest for future research.

Building on efforts undertaken during the 2008 U.S. election, recently published works have focused on Twitter activity during the 2012 U.S. presidential debates (Freelon & Karpf, 2015; Hawthorne, Houston, & McKinney, 2013; Houston, Hawthorne, Spialek, Greenwood, & McKinney, 2013; Houston, McKinney, Hawthorne, & Spialek, 2013; Thorson, Hawthorne, Swasy, & McKinney, 2015) and the campaigns themselves (Neuman, Guggenheim, Mo Jang, & Bae, 2014; Vargo, Guo, McCombs, & Shaw, 2014). The study of social media use during political debates has also garnered the attention of scholars outside the United States (Elmer, 2013; Heo, Park, Kim, & Park, 2015; Larsson & Moe, 2011). Much of this research has concentrated on communication fundamentals (frequency of candidate and issue mentions; Hawthorne et al., 2013) and the influence of this communicative activity on traditional debate viewing outcomes (candidate evaluations, evaluations of debates and debate performance; Houston, Hawthorne et al., 2013; McKinney, Houston, & Hawthorne, 2014). Overall, the debate-specific works are a natural extension of traditional political debate research, but have not yet made sense of the communication dynamics emerging from social media engagement.

While existing work devoted to the study of Twitter is of clear importance, it needs to be balanced with assessments of debate viewing-social media multitasking that moves beyond the artificial constraint of a single type of social media activity.⁴ After empirical insights are provided concerning a general level of debate viewing-social media multitasking, subsequent research can focus on specific types of engagement. With a desire to offer a general understanding of debate viewing-social media multitasking, broadly defined, we pose the following question:

RQ2: What percentage of citizens engaged in debate viewing-social media multitasking during the 2012 presidential debates?

The most relevant research to date to the current study is Houston, McKinney et al.'s (2013) focus on simultaneous debate viewing-Twitter activity and its effects on political knowledge. While arguing that tweeting during a political debate could either enhance or diminish knowledge generation, these researchers find within-debate tweeting strengthening political debates' ability to educate a citizenry. Among 141 participants, results revealed that high tweeters garnered more debate-specific knowledge than did those engaging in moderate and low levels of the same activity. Because the findings come from a convenience sample of undergraduate students who watched the debates in "classrooms or other university space" (Houston, McKinney et al., 2013, p. 558), population inferences need to be made with great caution. By contrast, the study we report later relies on a national cross-sectional survey of U.S. adults.

While existing research concerning debate viewing-social media multitasking has presented limited evidence of knowledge gain (Houston, McKinney et al., 2013), the media multitasking literature suggests this activity interferes with knowledge acquisition (Armstrong, Boiarsky, & Mares, 1991; Armstrong & Chung, 2000; Bowman, Levine, Waite, & Gendron, 2010; Gilbert, Tafari, & Malone, 1993; Ophir, Nass, & Wagner, 2009). On the assumption that humans have limited cognitive capacities (Kahneman, 1973; Lang, 2000), several media scenarios posit that multitasking taxes mental abilities and negatively affects learning (Jeong & Hwang, 2012; Jeong, Hwang, & Fishbein, 2010; Pool, Koolstra, & van der Voort, 2003a, 2003b; Pool, van der Voort, Beentjes, & Koolstra, 2000; Wang et al., 2012). Jeong and Hwang (2015) stress studies of this kind focus on the concept of capacity interference, a situation in which "two or more information sources [are] competing for cognitive resources" (p. 2). Walter Shapiro, for example, assumes this capacity interference effect when he urges, "As

much as humanly possible, look up from your computers and actually watch what is happening” (Shapiro, 2012, n.p.). Although citizens may perceive benefits from debate viewing-social media multitasking (Rosen, 2008), the preponderance of evidence points to social media activity of this kind diminishing debate viewing’s positive impact on political knowledge acquisition. As a result, we posit that social media engagement during a debate moderates the relationship between debate viewing and knowledge generation. More specifically, the following hypothesis is offered:

H1: Multitasking serves as a moderator of the relationship between debate viewing and debate-specific knowledge gain, with citizens who report engaging in debate viewing-social media multitasking retaining lower levels of debate-specific knowledge gain than those citizens who consumed a political debate in isolation of social media.

Method

The data for this study came from the Annenberg Public Policy Center’s (APPC) Institutions of Democracy 2012 Political Knowledge Survey, a six-wave national cross-sectional telephone survey of U.S. adults. The analysis of the first research question relies on data from Wave 5, since we asked about general SNS use in that wave. The remaining analyses use data from the two waves conducted immediately following the second and third presidential debates (Waves 3 and 4). Each wave is a fresh cross-sectional sample. Wave 3 was fielded between October 17 and 23, 2012, Wave 4 between October 24 and 29, 2012, and Wave 5 between November 7 and 18, 2012. Under contract to the APPC, SSRS completed a total of 1,233 interviews for Wave 3, 1,248 for Wave 4, and 1,216 for Wave 5 with randomly selected adults contacted through random-digit dialing (RDD) of both cell phones (Wave 3: $N = 422$; Wave 4: $N = 430$; Wave 5: $N = 422$) and landline telephones (Wave 3: $N = 811$; Wave 4: $N = 818$; Wave 5: $N = 794$). We oversampled households in battleground states; 53.0% of the sample ($N = 653$) in Wave 3, 49.1% of the sample ($N = 613$) in Wave 4, and 49.0% of the sample ($N = 596$) in Wave 5 reside in a battleground state.⁵

Live interviews were conducted using computer-assisted telephone interviewing (CATI) software. In households reached by landline, an adult was selected at random based on their age (or most recent birthday). The questionnaire was delivered in Spanish for those who selected that option. Non-responsive phone numbers were contacted up to six times, and in cases where initial attempts were met with soft refusal (e.g., abrupt hang-ups), refusal-conversion attempts were made.⁶

Dependent Variables

Campaign Knowledge. In Wave 5, subjects were asked a total of 30 knowledge questions about candidate stances and background facts of the 2012 presidential election. See [Appendix A](#) for the question wording of the 30 items, their correct answers, and the percentage of the sample answering each item correctly. Each item was first coded to indicate whether a respondent answered it correctly or not.⁷ An index was then created to indicate the percentage of total items answered correctly ($mean = 45.8\%$; $SD = 14.3$).

Debate Knowledge. Respondents were asked a series of knowledge questions about content discussed in the second and third presidential debates. In Wave 3, respondents were asked 17 items about content from the second presidential debate, and respondents in Wave 4 were asked six items about content from the third presidential debate.⁸ All six of

the items asked in Wave 4 were asked in Wave 3. See [Appendix B](#) for these items, their correct answers, and the percentage of the sample answering each item correctly. Unlike the items in Wave 5, the items asked in Wave 3 and Wave 4 are not general campaign knowledge questions, but questions about content specifically discussed in the two debates. Again, each item was first coded to indicate whether it was answered correctly. Indices were then created of the percentage of items answered correctly about the second presidential debate from Wave 3 ($mean = 53.2\%$; $SD = 17.63$) and the third presidential debate from Wave 4 ($mean = 51.4\%$; $SD = 21.58$).⁹

Independent Variables

SNS Use: In Wave 5, respondents were asked whether they actively use SNS sites: “Do you ever use social networking sites such as Twitter or Facebook?” A majority of respondents (52.1%) indicated that they use SNSs.¹⁰ It should be noted that throughout this article we are not attempting to isolate users who actively seek out political information on SNSs. The assumption made is that SNSs have become a source of political information and being on an SNS increases the likelihood of exposure to political information, be it from active seeking of or incidental exposure to political content.¹¹

Debate Viewership. Respondents were asked in Wave 3 how much of the second presidential debate they watched, and respondents in Wave 4 were asked how much of the third presidential debate they watched. These two measures range from 0 (none) to 3 (all) (Wave 3: $mean = 1.73$, $SD = 1.25$; Wave 4: $mean = 1.48$; $SD = 1.27$).

Debate Viewership While Following SNSs or Not. In both waves, respondents who reported viewing at least one of the presidential/vice-presidential debates were asked the following: “[For ANY of the debates you watched], while the [debate was/debates were] going on, were you following other people’s reaction to the [debate/debates] on a social networking site, such as Twitter or Facebook, or not?” In each wave, multitaskers are those who answered yes to this question and reported watching the second debate in Wave 3 and those who reported watching the third debate in Wave 4.

Two variables were constructed for each debate to reflect the amount of the debate viewing among those who multitask with SNS and those who do not. One variable indicates the amount of the debate watched among those who multitasked and the second indicates the amount of the debate watched among those who did not multitask with SNS. Both range from 0 (none) to 3 (all of the debate watched). Thus, those who did not multitask had a value of zero in the multitaskers measure, and those who did multitask had a value of zero in the non-multitaskers measure. In addition, those who did not watch the debate at all retained a value of zero in both variables, making non-debate watchers the reference group for the analyses.

In addition to this question, respondents who followed social media during any of the debates they watched were also asked if they had posted their own reactions. This behavior is perhaps a much more involved form of multitasking. However, statistical analyses did not provide evidence to suggest that the multitasking results in this article differed between those who were following SNS and posting their own reactions and those not posting their own reactions. Thus, we only use the more inclusive variable that indicates whether they were following SNSs at all while debate viewing.

Analyses

For the first research question, a multiple linear regression was modeled that predicts the Wave 5 campaign knowledge index from SNS use. The second research question relies on distribution of SNS debate multitasking independent variables. For H1, multiple linear regression models were created to predict debate knowledge from the amount of debate viewing while following an SNS or not. *F*-tests were conducted to test whether the coefficients for debate viewing among those following SNSs and among those not following SNSs were significantly different. In addition to the independent variables already discussed, all models control for traditional news media consumption, online news consumption, amount of Internet use, how closely respondents followed the presidential campaign, basic campaign knowledge, residence in a battleground state, political party identification, political ideology, and years of education, race, gender, and age.^{12,13,14,15,16,17,18}

Results

Even after controlling for traditional media use, Internet use, online news consumption, closely following the election, and demographics, those who used SNSs were significantly more knowledgeable than non-users about candidate stances and background facts of the 2012 presidential election (see Table 1), with 2.4% more questions correctly answered in Wave 5 ($p < .01$). SNSs go above and beyond other sources of campaign information, both traditional and new, in informing users.

Table 1
SNS use on total campaign knowledge of the 2012 presidential election

	b	Std err
SNS User	2.44**	0.89
Traditional News Consumption	0.80**	0.26
Online News Consumption	3.49***	0.89
Closely Follow	2.26***	0.50
Internet Use	-0.58	0.47
Lives in Battleground State	0.54	0.74
Republican	-2.54**	0.97
Democrat	4.78***	0.93
Conservative	-3.21***	0.35
Education (years)	1.06***	0.17
Hispanic	-3.03*	1.51
Black	-1.90	1.32
Female	-3.35***	0.75
Age	0.08**	0.03
Constant	26.90	
<i>N</i>	1,046	
<i>R</i> ²	.31	

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

Source: Annenberg Public Policy Center's Institutions of Democracy 2012 Political Knowledge Survey.

Our second research question asked to what extent is debate-social media multitasking occurring. Overall, 21.6% of those who reported watching at least some of the second presidential debate and nearly the same percentage of those who watched at least some of the third presidential debate (21.7%) also reported watching at least one debate while following people's reactions on an SNS. Thus, a fairly large percentage of debate viewers are multitasking with this other stream of information about the debates.

In addition, we also assess whether this multitasking behavior during debate viewing varied across demographic groups. Table 2 shows the extent to which different demographic groups reported watching at least some of the two debates, as well as the percentage of debate viewers in each group that reported multitasking. One clear difference is that older age cohorts are much less likely to have been multitasking with social media during the debate. In both waves, debate viewers 50 years of age or older reported multitasking at much lower rates than those younger age groups. For the third debate, 10.3% of viewers at least 50 years of age reported that they had multitasked, compared to 24.2% of 34- to 49-year-old debate viewers and 44.0% of 18- to 29-year-old debate viewers. There is also evidence in the third, but not second, presidential debate, that females and non-Whites are more likely to engage in the debate-social media multitasking.

Table 2
Rate of debate viewership and debate-social media multitasking

	Second Presidential Debate—Wave 3		Third Presidential Debate—Wave 4	
	% Watched Debate	% of Debate Viewers Who Multitasked	% Watched Debate	% of Debate Viewers Who Multitasked
Total	74.0	21.6	65.9	21.7
Male	76.2	20.1	64.1	16.4
Female	71.9	23.2	67.7	26.4
18–34 years old	70.4	36.8	52.8	44.0
35–49 years old	71.1	33.2	61.9	25.2
50+ years old	77.7	8.2	76.3	10.3
H.S. Education or Less	67.4	18.5	54.1	21.7
Some College Education	73.8	27.1	69.8	21.4
College Degree	82.3	21.5	77.7	21.9
White	72.8	19.7	65.0	16.7
Non-White	77.2	26.7	68.3	34.1

Source: Annenberg Public Policy Center's Institutions of Democracy 2012 Political Knowledge Survey.

Table 3

Effect of watching the second and third presidential debates while following SNSs or not on knowledge of candidate stands and background facts discussed in those debates

	Second Presidential Debate—Wave 3		Third Presidential Debate—Wave 4	
	b	Std err	b	Std err
Amount of Debate Watched—Followed SNSs	1.52*	0.60	2.97***	0.76
Amount of Debate Watched—Did Not Follow SNSs	3.08***	0.43	4.45***	0.52
Traditional News Consumption	0.03	0.29	0.52	0.39
Online News Consumption	1.42	1.01	2.02	1.28
Closely Follow	3.80***	0.65	3.96***	0.83
Internet Use	0.82	0.49	0.21	0.62
Basic Campaign Knowledge	5.79***	0.68	4.81***	0.96
Lives in Battleground State	−0.44	0.83	0.12	1.07
Republican	−1.22	1.09	3.50*	1.42
Democrat	1.81	1.05	−2.32	1.36
Conservative	−1.25***	0.39	0.25	0.52
Education (years)	0.64***	0.19	0.60*	0.25
Hispanic	−1.66	1.72	0.18	1.93
Black	−1.11	1.45	−0.58	1.98
Female	−4.08***	0.84	−2.95**	1.11
Age	−0.07*	0.03	−0.06	0.04
Constant	26.54		17.89	
N	1,074		1,095	
R ²	.35		.27	

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

Source: Annenberg Public Policy Center's Institutions of Democracy 2012 Political Knowledge Survey.

We find no evidence of differences in multitasking by level of education. In part due to these differences in rates of debate-social media multitasking across various groups, these demographics, along with the many other controls, are included in the tests of the hypotheses.

Table 3 presents the models testing H1, which predicts that levels of debate-based knowledge will be lower for those watching the debate while following an SNS than among those debate viewers not following SNSs. For both debates, the models show that the debate-based knowledge of both those who watched while following an SNS and those who watched without SNS exposure increased (Second Presidential Debate: Followed SNS: $b = 1.52$, $p < .05$, Did Not Follow SNS: $b = 3.08$, $p < .001$; Third Presidential Debate: Followed SNS: $b = 2.97$, $p < .001$, Did Not Follow SNS: $b = 4.45$, $p < .001$). Thus, debate viewership increased accurate knowledge of the content discussed in that debate regardless of whether the debate viewers were simultaneously following people's reactions to the debate or not.

While the knowledge level of both groups increased, the rates of increase differed (see Figures 1 and 2). For both debates, those who watched the debate and were not following SNSs gained knowledge at a greater rate than those who were following SNSs; the coefficients for debate viewing among those who did not follow SNSs were significantly greater than that for those who were following (Second Presidential

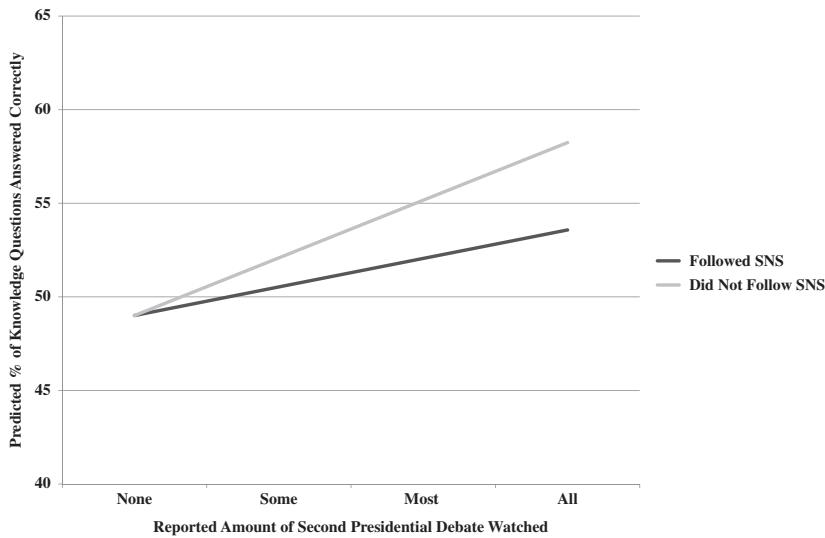


Figure 1. Effect of watching the second presidential debate while following an SNS or not on knowledge of content discussed in the debate.

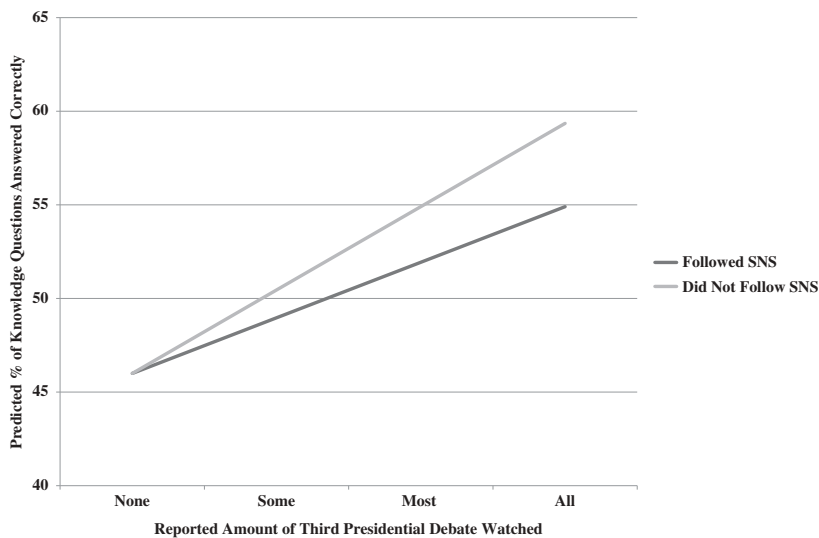


Figure 2. Effect of watching the third presidential debate while following an SNS or not on knowledge of content discussed in the debate.

Debate: $F = 8.82$, $p < .01$; Third Presidential Debate: $F = 4.50$, $p < .05$). Those who watched all of the second presidential debate and reported following SNSs answered 4.6% more questions correctly than those who did not watch that debate, while those who watched all of the debate but were not following SNSs answered 9.2% more questions correctly than those who did not watch any of the debate. Similarly, those who watched all of the third presidential debate while following SNSs answered 8.9% more questions correctly than those who did not watch that debate, whereas those who watched all of the debate but were not following SNSs answered 13.4% more questions than those who did not watch any of that debate. While the knowledge levels of both those who were multitasking and who were not increased, those who were following others' reactions or issuing their own on SNSs learned at a lower rate.

Post Hoc Analyses

Finally, we wanted to get a better understanding of how viewers' political perceptions influence the magnitude of the effect reported in the test of the first hypothesis. Specifically, we examined whether the debate-SNS multitasking effect is moderated by candidate preference. To explore this phenomenon, indices were established to measure debate knowledge that is favorable to each candidate, indicating the percentage of favorable candidate knowledge items answered correctly. The 17 knowledge items from the second presidential debate in Wave 3 were categorized into those in which the correct answer either favored Barack Obama (and/or undercut the Mitt Romney candidacy) or Romney (and/or undercut the Obama candidacy). For example, correct knowledge of the inaccuracy of the claim that Barack Obama has repeatedly apologized for America while in foreign countries would be favorable knowledge for Obama. Six questions favored Obama, five favored Romney, and six were deemed to not clearly favor one or the other (and thus were not included in either index).¹⁹ A favorable candidate knowledge item is one in which the correct answer favored a particular candidate within the 2012 campaign narrative or undercut his opponent. Indices were only able to be created for the second presidential debate due to the number of knowledge questions asked. Two linear regression models were run for each of the two measures, one among respondents who preferred Obama over Romney and one among those more favorable to Romney.²⁰ Like the first hypothesis, F -tests were conducted to test whether the coefficients differed among those following SNSs and those not.

Starting with Romney favorable knowledge, we find that among individuals favoring Obama, neither those who were following SNSs nor those who were not gained knowledge from watching the debate (see Table 4). Alternatively, among those favoring Romney, both those who were following SNSs ($b = 3.02$, $p < .05$) and those who were not ($b = 5.15$, $p < .001$) gained knowledge from viewing; those who were following SNSs, though, learned at a depressed rate compared to those who were not ($F = 3.58$, $p < .06$). Those more favorable toward Romney who watched all of the second presidential debate while following SNSs answered 9.1% more questions correctly than those who did not watch any of that debate, whereas those who watched all of the debate but were not following SNSs answered 15.5% more questions correctly. Predicted values for the favorable Romney debate knowledge are presented in Figure 3.

The results for the favorable Obama debate knowledge tell a similar story (see Table 4). Among those more favorably disposed to Romney than Obama, both those who were not following SNSs ($b = 3.68$, $p < .001$) and those who were ($b = 2.36$, $p < .05$) gained knowledge. However, there was no significant difference between the two groups.

Table 4
Effect of watching the second presidential debate while following SNSs or not on favorable debate knowledge of each candidate

	Debate Knowledge Favorable of Obama			Debate Knowledge Favorable of Romney		
	Respondents more favorable of Obama		Respondents more favorable of Romney	Respondents more favorable of Obama		Respondents more favorable of Romney
	b	Std err	b	Std err	b	Std err
Amount of Debate Watched—Followed SNSs	1.37	1.21	2.36*	1.18	0.57	1.19
Amount of Debate Watched—Did Not Follow SNSs	3.88***	0.89	3.68***	0.83	1.09	0.87
Traditional News Consumption	0.68	0.58	0.61	0.58	-0.34	0.57
Online News Consumption	2.98	2.12	-2.17	1.94	-1.70	2.07
Closely Follow	5.58***	1.22	0.51	1.62	2.32	1.20
Internet Use	0.44	1.00	0.37	0.98	0.74	0.98
Basic Campaign Knowledge	5.85***	1.30	0.98	1.64	0.47	1.28
Lives in Battleground State	1.12	1.70	-2.60	1.64	-4.24*	1.66
Republican	-9.59*	3.80	-0.66	1.73	0.95	3.72
Democrat	1.89	1.83	-7.52	3.93	-3.41	1.79
Conservative	-2.95***	0.79	-1.69	0.93	0.34	0.77
Education (years)	1.30***	0.38	0.08	0.38	0.53	0.37
Hispanic	-2.51	3.13	-1.81	3.95	0.17	3.06
Black	-4.31	2.26	28.00**	10.55	-2.38	2.22
Female	-1.29	1.72	-4.17*	1.66	-4.99*	1.68
Age	-0.12	0.06	-0.29***	0.07	-0.11	0.06
Constant	25.51		56.94		27.39	
N	545		468		545	
R ²	.37		.14		.09	

* $p < .05$. ** $p < .01$. *** $p < .001$.
Source: Annenberg Public Policy Center's Institutions of Democracy 2012 Political Knowledge Survey.

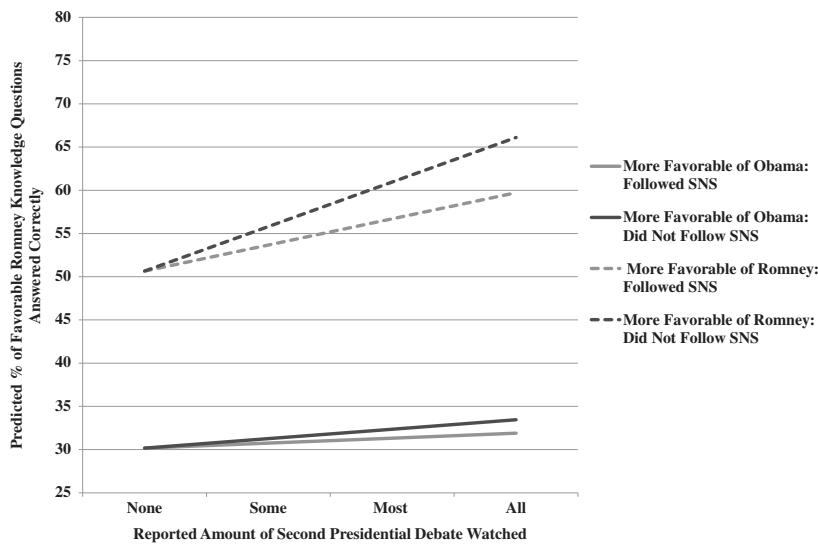


Figure 3. Effect of watching the second presidential debate while following an SNS or not favorable Romney debate knowledge.

Alternatively, there is a difference in the rate of learning among those more favorable toward Obama ($F = 5.59, p < .05$); there is no evidence to suggest that those who watched the debate while following SNSs gained knowledge, whereas those who watched all of the debate and were not following SNSs answered 11.6% more questions correctly than those who did not watch the debate. Predicted values for the favorable Obama debate knowledge are presented in Figure 4. Overall, these findings suggest that multitasking while watching debates ironically depresses learning predominantly about the candidate that they support.

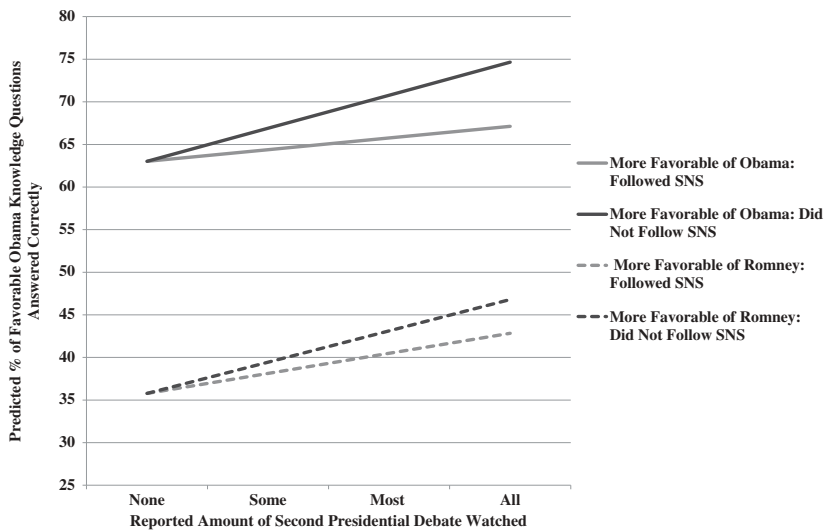


Figure 4. Effect of watching the second presidential debate while following an SNS or not favorable Obama debate knowledge.

Discussion

The evidence provided in this study supports the normative value of viewing presidential debates. Overall, debate viewing in 2012 increased citizen knowledge about both candidates and their issue positions. However, this bit of good news requires some qualification. While watching a debate *with or without* simultaneous social media engagement is better than not viewing a debate at all, the effect of debate viewing is dulled when simultaneously engaging in social media multitasking. Were social media use during debates to become more pervasive in subsequent election cycles, this phenomenon could erode the positive effects of debate viewing.

Furthermore, our post hoc analyses suggest that the moderating effect of media multitasking is a function of candidate preference with differential learning appearing only for the preferred candidates. Concerning knowledge benefiting the Obama candidacy, the moderating effect of SNSs appears only for respondents who rated Obama more favorably than Romney. This same relationship holds when we look at knowledge advantageous to the Romney bid where SNSs depressed learning of his supporters but not Obama's. This curious finding calls for future research because the expectation would be that people are more likely to retain ideologically congruent information regardless of media multitasking, but have a harder time with dissonant information.

Limitations to the Study

While the use of surveys affords high external validity and generalizability, we recognize the concerns about self-reported media measures (Prior, 2009, 2012). We also recognize that our knowledge batteries used as dependent variables are collected days after the initial debate viewing, creating a lag between exposure and measurement. Furthermore, we only study debate knowledge of the second and third debate and not the first debate, which Holbrook (1999) found to have the greatest impact on learning. That said, since we are looking at the direct effect of debate viewing on political knowledge of information that we know was presented in the second and third debate, over-reported media consumption and lagged measurement would suggest that the magnitudes of the effects found in our analyses are lower than the true effect sizes. Overall, then, the effects that we find are likely stronger than what was found due to the errors around self-reports.

The blunt measure of debate-social media multitasking is another limitation to this study. It is operationalized as a dichotomous assessment that asked respondents if they multitasked during any of the debates that they watched. Future research should address the frequency and magnitude of debate viewing-social media multitasking. In addition, neither considerations of whether the SNS use was passive or active nor were specific types of multitasking activities measured in great detail. Future research should parse out more extensively the types of behaviors and the levels of engagement while multitasking.

We do not provide a systematic content analysis of the content of the debates nor the content of the SNS discussion surrounding the debates. Insight into such content may explain the contradictory findings between Houston, McKinney, et al. (2013) study and what is reported here. The students in Houston, McKinney, et al. (2013) study were "provided a unique hashtag to use with their tweets during the debate so that these tweets could be tracked and collected" (p. 552). The prior knowledge that their tweets were being collected by a researcher affiliated with their university combined with the closed discussion sphere of the unique hashtag may have motivated the students to provide very conscientious and thoughtful tweets as opposed to the more open, organic, and potentially much more passive SNS discussion that occurred naturally during the debates. The SNS discussion that happens during

the debates may be flooded with “seasonal discussants” (Hardy & Scheufele, 2009). Hardy and Scheufele (2009) found that large mediated campaign events, like debates, attract discussion from those who may neither be politically sophisticated nor normally engage in political discussion. Such “seasonal discussants” may bring confusion instead of clarification to the larger discussion.

Considerations for Future Research

Political communication as a field should start integrating the multitasking literature into theory building and hypothesis testing. This is a rich body of research that can inform the study of political communication, and many direct effects may be conditional on multitasking given its prevalence (Brasel & Gips, 2011). Future research on debate viewing-social media multitasking would be well served by focusing on the various dimensions of task relations (task hierarchy, task switching, task relevance, shared modality, task contiguity; see Wang et al., 2015). Indeed, Jeong and Hwang (2015) stress the need to focus on not just capacity interference, but also structural interference, when addressing the topic of media multitasking effects. When the general phenomenon of multitasking is broken into its more basic elements, specific studies come into view. For example, in relation to task hierarchy, it may be important to assess the effects of a shifting in dominance of debate viewing versus social media during the course of a debate. Some individuals may treat debate viewing as primary throughout the multitasking experience, others may give more weight to their social media engagement during the latter stages of the media event, and still others may oscillate in task dominance throughout the media experience. These varied acts of exposure and attention have the ability to produce differential effects. For task contiguity, research could be conducted on whether engaging a political debate and social media through the same media device (a laptop computer) produces distinct results relative to using separate devices to consume the former (debate through a television) versus the latter (social media through a smartphone). Building on the current study, the most immediate way to produce new knowledge on debate viewing-social media multitasking is to isolate and assess the specific task relation dimensions.

Of course, the study of media multitasking in the context of politics should not be relegated to political debate effects. It would not take anyone long to generate a lengthy list of political media multitasking activities (listening to NPR while reading a newspaper; scrolling through BBC News on a smartphone while watching the nightly news; consuming a political candidate’s website while listening to a politically oriented podcast). Additional research is needed to determine what multitasking behaviors are most prominent within the citizenry and to isolate the relative normative concerns or opportunities associated with specific multitasking scenarios (Althaus, 2012). Researchers need to be creative in developing quality methods to observe and analyze these potentially complex communicative activities (Holbert & Bucy, 2011). Only then can this line of research claim to be “interpretable, cumulative, and socially significant” (Bennett & Iyengar, 2008, p. 709).

In summary, we find that debate viewing, with or without SNS multitasking, is positively related to knowledge of campaign-specific information that was offered during the debates. The rate of learning is lessened by the presence of SNS multitasking. Those who watched the debate without using social media learned more than those who multitasked. However, a recent study by Thorson and colleagues (2015) found that social media use during debate watching produced more sustained viewing. If debate viewing and SNS multitasking causes viewers to watch more of the debates but debate viewing and SNS multitasking lessens learning from the debates, the

question becomes is there an overall net gain in knowledge acquisition? This question invites future research in this area.

Supplemental Material

Supplemental data for this article can be accessed on the publisher's website at <http://dx.doi.org/10.1080/10584609.2016.1154120>.

Notes

1. <http://www.alexa.com/siteinfo/facebook.com>
2. <http://www.alexa.com/siteinfo/twitter.com>
3. Though hashtags are now recognized by Facebook, they were not prior to 2013.
4. We caution of studies focusing solely on Twitter being generalized to all social media. Twitter is just one SNS, one that has a much smaller user base than others (see Holcomb, Gottfried, & Mitchell, 2013). We echo Neuman and colleagues (2014) in that researchers should be guarded against the treatment of Twitter-based findings as generalizable to all of social media, as they find differential effects for unique types of social media engagement. Thus, in the analyses in this article, we do not single out special social media sites.
5. These percentages are not weighted; every other raw percentage in this article is weighted by national population parameters. Battleground states are Colorado, Florida, Iowa, Michigan, Nevada, New Hampshire, North Carolina, Pennsylvania, Ohio, Virginia, and Wisconsin. The total share of adults residing in these states is 28.9% based on the 2012 March Supplement of the U.S. Census Bureau's Current Population Survey (CPS).
6. Accounting for design effects produced by survey weights, the margin of error is $\pm 3.7\%$ for Wave 3, $\pm 3.6\%$ for Wave 4, and $\pm 3.7\%$ for Wave 5. The response rate was 13% for Wave 3, 11% for Wave 4, and 17% for Wave 5. Response rate uses the standard American Association for Public Opinion Research (AAPOR) Response Rate 3 (RR3) formula.
7. "Don't know" responses were coded as not correct; refusals were coded as missing.
8. To make sure that the appropriate debate knowledge items were included, a textual analysis of the debate transcripts was matched against all questions asked in Wave 3 and Wave 4. Thus, only questions that were addressed in the debates were included, leaving a much smaller corpus of knowledge items of the total knowledge items asked. If a question was not reasonably addressed in the debate, it was not included.
9. The knowledge items asked were intended specifically to aggregate into indices. These knowledge items are not necessarily expected to intercorrelate highly (Streiner, 2003). This is especially true as difficulty levels vary, when knowledge is potentially based in affect (Price, 1999), and when knowledge covers a range of topics. Traditional assessments of reliability should not apply here. For those interested, the KR-20 reliability measures for the indices in the three waves are: Wave 5 = .65; Wave 3 = .60; Wave 4 = .17. We recognize that the reliability measure for the fourth-wave debate items is below standards, which partially may be due to fewer items than in the other waves. Thus, there are limitations for the Wave 4 items to be characterized as a scale. That said, even with the lower reliability, the Wave 4 debate results are similar to those found in Wave 3. Similar measures have been employed by studies that analyze the impact of communication during presidential elections (Chaffee, Zhao, & Leshner, 1994; Eveland, Hayes, Shah, & Kwak, 2005; Feldman & Price, 2008).
10. In the survey, we asked respondents whether they use SNSs, and did not ask the specific SNS they use. While one could theoretically argue that the magnitudes of the relationships vary between SNSs, it is beyond the scope of this article. This article analyzes how the use of social networking sites overall affected knowledge during the 2012 presidential election. It should be

noted, though, that there is large overlap between the users of these sites (Holcomb, Gottfried, & Mitchell, 2013).

11. The assumption that SNSs have become a source of political information is somewhat illuminated in a 2013 report from the Pew Research Center (Mitchell et al., 2013). This report noted that 67% of Facebook users who are on Facebook an hour or more a day get news on the site. Of those who report getting news on Facebook, 55% reported getting news about national government and politics, and a fair number mentioned getting news about other politically related issues such as health and medicine (46%), local government and politics (44%), international news (39%), science and technology (37%), and business (31%). In addition, the report shows that most of these Facebook users are not seeking out news on the site, but are incidentally exposed to it when on the site for other reasons.
12. An index of traditional news media consumption was created by averaging five items of the days/week that individuals watch local news, broadcast national nightly news, their most frequently watched cable news channel, listened to talk radio, or read a newspaper. The index ranges from 0 (no traditional news media consumption) to 7 (a lot of traditional news media consumption) (Wave 3: *mean* = 3.14, *SD* = 1.68; Wave 4: *mean* = 2.97, *SD* = 1.69; Wave 5: *mean* = 3.01, *SD* = 1.71).
13. Respondents were asked, "During the general election campaign, where did you get most of your information about the 2012 presidential campaign online?" If respondents indicated that they do not go online for political information, they were coded as not consuming news online. Otherwise they were coded as consuming news online; 65.8% of respondents in Wave 3, 64.4% of respondents in Wave 4, and 63.0% of respondents in Wave 5 indicated consuming news online.
14. Respondents were asked, "On an average day, how many hours a day do you spend online? Please include time spent on a desktop, laptop, smartphone, or tablet." The number of hours were split at quartiles to the closest hour, creating a 3-point scale ranging from 0 (does not go online), 1 (one hour or less but greater than zero), 2 (greater than one hour but up to three hours), and 3 (greater than three hours) (Wave 3: *mean* = 1.57, *SD* = 1.09; Wave 4: *mean* = 1.56, *SD* = 1.08; Wave 5: *mean* = 1.57, *SD* = 1.05). The inclusion of both amount of Internet use and online news consumption necessary to account for the potential confounding relationship of there being knowledge gaps between Internet and non-Internet users (Bonfadelli, 2002).
15. Respondents were asked, "How closely did you follow the 2012 presidential campaign?" on a scale ranging from 1 (not too closely) to 4 (very closely) (Wave 3: *mean* = 3.31, *SD* = 0.89; Wave 4: *mean* = 3.26, *SD* = 0.96; Wave 5: *mean* = 3.31, *SD* = 0.93).
16. Basic campaign knowledge was measured with two items that asked respondents to name the current vice president of the United States and the Republican vice-presidential candidate. A 3-point scale ranging from 0 to 2 correct answers was created (Wave 3: *mean* = 1.45, *SD* = 0.80; Wave 4: *mean* = 1.47, *SD* = 0.76). Only the models from Waves 3 and 4 control for this. The model from Wave 5 does not control for basic campaign knowledge because these questions were not asked in that wave.
17. The question wording for political ideology is, "Generally speaking, would you describe your political views as very conservative, somewhat conservative, moderate, somewhat liberal, or very liberal?"
18. For a demographic breakdown of each Wave, see Appendix C.
19. Each item was coded to indicate whether a respondent answered it accurately. Two indices were created, one that indicated the percentage of items that favored Obama answered correctly (*mean* = 56.3%; *SD* = 24.9) and one for the percentage that favored Romney answered correctly (*mean* = 42.7%; *SD* = 25.2). This analysis was not performed for the third presidential debate because there were too few knowledge items asked of that debate.
20. Favorability of one candidate over the other is based on a favorability measure of both candidates ranging from 0 to 10 in Wave 3. The measure for Romney was subtracted from the Obama measure. Those who have a rating of -10 to -1 were more favorable of Romney than Obama, and 1 to 10 were more favorable of Obama. A total of 41.3% of the sample is more favorable toward Romney, 52.9% is more favorable toward Obama, and 5.8% did not favor one over the other.

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Appendix A: 2012 Campaign Knowledge Questions Asked in Wave 5

Question	Correct Answer	% Correct
1 Which candidate favored building the Keystone Pipeline without delay? Barack Obama, Mitt Romney, both, or neither?	Romney	41.5%
2 Which candidate would nominate U.S. Supreme Court justices who would overturn <i>Roe v. Wade</i> , the Supreme Court decision legalizing abortion? Barack Obama, Mitt Romney, both, or neither?	Romney	55.9%
3 Which candidate mentioned binders of women in one of the presidential debates? Barack Obama, Mitt Romney, both, or neither?	Romney	53.3%
4 Which candidate stated the U.S. military has fewer horses and bayonets in one of the presidential debates? Barack Obama, Mitt Romney, both, or neither?	Obama	44.0%
5 Under the Affordable Care Act, which some refer to as Obamacare, over the next 10 years, 716 billion dollars will be cut from benefits seniors receive. How accurate do you think that statement is? Would you say it is very accurate, somewhat accurate, not too accurate, or not accurate at all?	Not Accurate	39.8%
6 Barack Obama has dropped all work requirements for individuals receiving welfare. How accurate do you think that statement is? Would you say it is very accurate, somewhat accurate, not too accurate, or not accurate at all?	Not Accurate	46.4%
7 While in foreign countries, Barack Obama has repeatedly apologized for America. How accurate do you think that statement is? Would you say it is very accurate, somewhat accurate, not too accurate, or not accurate at all?	Not Accurate	32.5%
8 Mitt Romney said that as president he will work to make abortion illegal in all circumstances. How accurate do you think that statement is? Would you say it is very accurate, somewhat accurate, not too accurate, or not accurate at all?	Not Accurate	41.0%
9 While Mitt Romney was in charge of its day-to-day operations, Bain Capital outsourced jobs to other countries. How accurate do you think that statement is? Would you say it is very accurate, somewhat accurate, not too accurate, or not accurate at all?	Not Accurate	22.0%

(Continued)

Question	Correct Answer	% Correct
10 Barack Obama is adding four billion dollars to the national debt every day. How accurate do you think that statement is? Would you say it is very accurate, somewhat accurate, not too accurate, or not accurate at all?	Not Accurate	36.3%
11 The Affordable Care Act, which some refer to as Obamacare, includes "death panels" that will ration health care to those in their final months of life. How accurate do you think that statement is? Would you say it is very accurate, somewhat accurate, not too accurate, or not accurate at all?	Not Accurate	39.3%
12 Barack Obama supports a United Nations treaty that would ban guns in the United States. How accurate do you think that statement is? Would you say it is very accurate, somewhat accurate, not too accurate, or not accurate at all?	Not Accurate	40.4%
13 The current Romney-Ryan plan would increase Medicare costs for current seniors by more than six thousand dollars a year. How accurate do you think that statement is? Would you say it is very accurate, somewhat accurate, not too accurate, or not accurate at all?	Not Accurate	41.9%
14 Chrysler, which is now owned by Fiat, plans to eliminate U.S. jobs by moving Jeep production from the U.S. to China. How accurate do you think that statement is? Would you say it is very accurate, somewhat accurate, not too accurate, or not accurate at all?	Not Accurate	38.2%
15 President Obama promised that the stimulus would reduce the jobless rate to 5.6%. How accurate do you think that statement is? Would you say it is very accurate, somewhat accurate, not too accurate, or not accurate at all?	Not Accurate	29.7%
16 Under President Obama, middle-class Americans are earning less than they were before Obama was elected. How accurate do you think that statement is? Would you say it is very accurate, somewhat accurate, not too accurate, or not accurate at all?	Accurate	61.8%
17 Barack Obama has added about as much national debt as all earlier 43 presidents combined. How accurate do you think that statement is? Would you say it is very accurate, somewhat accurate, not too accurate, or not accurate at all?	Not Accurate	36.8%

(Continued)

Question	Correct Answer	% Correct
18 Governor Romney's job creation record in Massachusetts was worse than that of most of the other governors at the time. How accurate do you think that statement is? Would you say it is very accurate, somewhat accurate, not too accurate, or not accurate at all?	Accurate	39.8%
19 Most of Barack Obama's stimulus money went to his friends, special interests, and to companies that went bankrupt. How accurate do you think that statement is? Would you say it is very accurate, somewhat accurate, not too accurate, or not accurate at all?	Not Accurate	48.3%
20 Governor Mitt Romney's plan will raise taxes on middle-class families by up to two thousand dollars a year. How accurate do you think that statement is? Would you say it is very accurate, somewhat accurate, not too accurate, or not accurate at all?	Not Accurate	36.7%
21 Twenty-three million Americans who want to work cannot currently find full-time jobs. How accurate do you think that statement is? Would you say it is very accurate, somewhat accurate, not too accurate, or not accurate at all?	Accurate	78.0%
22 President Obama's national gun ban would outlaw common rifles. How accurate do you think that statement is? Would you say it is very accurate, somewhat accurate, not too accurate, or not accurate at all?	Not Accurate	43.3%
23 While at a private fundraiser, Governor Romney said 47% of Americans won't vote for him because they are dependent on government and unwilling to take responsibility for their own lives. How accurate do you think that statement is? Would you say it is very accurate, somewhat accurate, not too accurate, or not accurate at all?	Accurate	72.0%
24 Governor Romney proposed transferring responsibility now held by the Federal Emergency Management Administration, also known as FEMA, back to state and local government. How accurate do you think that statement is? Would you say it is very accurate, somewhat accurate, not too accurate, or not accurate at all?	Accurate	67.2%
25 Governor Romney will give a tax break to millionaires while raising taxes on the middle class. How accurate do you think that statement is? Would you say it is very accurate, somewhat accurate, not too accurate, or not accurate at all?	Not Accurate	40.7%

(Continued)

Question	Correct Answer	% Correct
26 Barack Obama will raise taxes by four thousand dollars on middle-class families. How accurate do you think that statement is? Would you say it is very accurate, somewhat accurate, not too accurate, or not accurate at all?	Not Accurate	45.2%
27 Mitt Romney said it was tragic that President Obama was bringing home troops from Iraq. How accurate do you think that statement is? Would you say it is very accurate, somewhat accurate, not too accurate, or not accurate at all?	Not Accurate	36.4%
28 While in a Muslim country, President Obama said that America is not a Christian nation. How accurate do you think that statement is? Would you say it is very accurate, somewhat accurate, not too accurate, or not accurate at all?	Not Accurate	44.3%
29 In a second term, Barack Obama will cut military jobs substantially. How accurate do you think that statement is? Would you say it is very accurate, somewhat accurate, not too accurate, or not accurate at all?	Not Accurate	36.5%
30 Mitt Romney would have repealed the Affordable Care Act, also known as Obamacare. How accurate do you think that statement is? Would you say it is very accurate, somewhat accurate, not too accurate, or not accurate at all?	Accurate	84.0%

Appendix B: Knowledge Questions About Content Discussed in the Second and Third Presidential Debates

Question	Correct Answer	% Correct Wave 3	% Correct Wave 4
1 Mitt Romney's tax plan will increase the deficit by over four and a half trillion dollars. How accurate do you think that statement is? Would you say it is very accurate, somewhat accurate, not too accurate, or not accurate at all?	Not Accurate	46.9%	45.1%
2 Which candidate has promised to increase military spending? Barack Obama, Mitt Romney, both, or neither?	Mitt Romney	58.1%	58.7%
3 Mitt Romney has investments in Chinese companies. How accurate do you think that statement is? Would you say it is very accurate, somewhat accurate, not too accurate, or not accurate at all?	Accurate	77.3%	73.8%
4 Governor Romney wanted to take Detroit auto manufacturers into bankruptcy without providing any form of federal aid. How accurate do you think that statement is? Would you say it is very accurate, somewhat accurate, not too accurate, or not accurate at all?	Not Accurate	24.2%	36.0%
5 Which candidate favors branding China as a currency manipulator and imposing tariffs on Chinese goods? Barack Obama, Mitt Romney, both, or neither?	Mitt Romney	58.0%	58.4%
6 While in foreign countries, Barack Obama has repeatedly apologized for America. How accurate do you think that statement is? Would you say it is very accurate, somewhat accurate, not too accurate, or not accurate at all?	Not Accurate	30.9%	36.7%
7 No new jobs have been created as a result of the stimulus, which was passed in the first year of Obama's presidency. How accurate do you think that statement is? Would you say it is very accurate, somewhat accurate, not too accurate, or not accurate at all?	Not Accurate	56.7%	—

(Continued)

Question	Correct Answer	% Correct Wave 3	% Correct Wave 4
8 In early October, the Bureau of Labor Statistics announced that the national unemployment rate dropped below 8%. How accurate do you think that statement is? Would you say it is very accurate, somewhat accurate, not too accurate, or not accurate at all?	Accurate	65.5%	—
9 Which candidate proposes raising federal income taxes on households earning 250 thousand dollars or more per year? Barack Obama, Mitt Romney, both, or neither?	Barack Obama	57.9%	—
10 Which candidate says he will keep the Bush tax cuts in place permanently? Barack Obama, Mitt Romney, both, or neither?	Mitt Romney	55.3%	—
11 Which candidate favors building the Keystone Pipeline without delay? Barack Obama, Mitt Romney, both, or neither?	Mitt Romney	65.5%	—
12 Which candidate supports the Dream Act, which provides a path to permanent residence status for young undocumented immigrants who were brought to this country illegally as children? Barack Obama, Mitt Romney, both, or neither?	Barack Obama	73.6%	—
13 Which candidate favors eliminating funding for the Public Broadcasting Service, also known as PBS? Barack Obama, Mitt Romney, both, or neither?	Mitt Romney	72.9%	—
14 The Obama administration cut banks out as the middlemen in the student loan program and put the money saved back into student loans. How accurate do you think that statement is? Would you say it is very accurate, somewhat accurate, not too accurate, or not accurate at all?	Accurate	63.2%	—
15 While Mitt Romney was in charge of its day-to-day operations, Bain Capital outsourced jobs to other countries. How accurate do you think that statement is? Would you say it is very accurate, somewhat accurate, not too accurate, or not accurate at all?	Not Accurate	19.8%	—

(Continued)

Question	Correct Answer	% Correct Wave 3	% Correct Wave 4
16 Has oil production on federal lands increased, decreased, or stayed the same under President Obama?	Increased	30.3%	—
17 Which candidate would push for passage of the assault weapons ban? Barack Obama, Mitt Romney, both, or neither?	Barack Obama	49.2%	—

Appendix C: Demographic Breakdown of Each Wave

	Wave 3	Wave 4	Wave 5
Republican	25.7%	22.6%	22.6%
Democrat	33.6%	34.5%	34.1%
Conservative (mean)	3.15	3.27	3.22
Years of Education (mean)	13.81	13.83	13.74
Hispanic	12.4%	13.5%	14.3%
Black	12.4%	13.4%	12.8%
Female	51.4%	51.7%	51.3%
Age (mean)	47.78	47.15	47.49

Note. All means and frequencies are weighted by national population parameters.

Source: Annenberg Public Policy Center's Institutions of Democracy 2012 Political Knowledge Survey.