

ORIGINAL ARTICLE

What Is Second Screening? Exploring Motivations of Second Screen Use and Its Effect on Online Political Participation

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This study focuses on second screening for news, a hybrid media process that combines watching news on television and a second, web-connected screen (i.e., smart-phone, laptop). Based on U.S.-national, 2-wave panel data, the paper (a) examines people's motivations to engage in second screen use, and then (b) advances the relationship between second screening and online political behaviors. Discussing and pursuing further information are both central motivations for second screen use. Furthermore, results suggest second screening for news is a significant predictor of online political participation and a key link between TV news and political engagement as this relationship is fully mediated. The study advances theoretically and empirically ways in which an informed public opinion may partake of a more engaged democracy.

Keywords: Second Screen Use, Second Screening, Motivations for Second Screen Use, Social Media, TV News, Online Political Participation.

doi:10.1111/jcom.12174

Second screening is a trending new media use that embodies one aspect of a phenomenon known as hybrid media (Chadwick, 2013) and highlights the ubiquity of social media and connectedness in modern life. Second screeners use a digital device (i.e., smart phone or laptop) while watching television to access the Internet and social network sites in order to obtain more information about or discuss the program they are watching. This virtual collocation unifies traditional media and online networks, but its effects have not largely been studied. Little is known about the motivations to engage in second screening. Even less explored is the use of second screening in the

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context of news. What are the effects of engaging in such behavior for democratic outcomes such as online political participation? This study represents an attempt to fill this gap by examining evidence based on two-wave U.S. national panel data.

Because it is tied to immediacy, second screening has been widely used by audiences during breaking news, live coverage, political debates, and campaigns (Giglietto & Selva, 2014; Pew Research Center for the People and the Press, 2012; Wohn & Na, 2011). This popular and news-related use is the focus of our study. Previous studies have shown news consumption through socially networked and computer-mediated spaces positively relates to political and civic participation (Rojas & Gil de Zúñiga, 2010; Shah et al., 2007), and may benefit the democratic process as a whole, at least in regards to mobilization. As second screening involves both news consumption and discussion, the act seems particularly positioned to lead to political participation as it fits well the *communication mediation model* (McLeod, Scheufele, & Moy, 1999) and the *cognitive mediation model* (Eveland, 2004). Although based in different processes, these theoretical accounts suggest that news consumption, discussion, and mental elaboration upon information individuals consume or discuss play critical roles in the path from news media use to political participation. In that vein, we suggest that when viewers second screen for news, this activity complements TV consumption by better contextualizing the information they consume, enriching their experience with others as they discuss it, and ultimately, leading citizens to political participatory behaviors within online arenas.

In short, and based on national two-wave panel data, this study sheds light on political outcomes of modern media use by examining the relationships between news media consumption, second screening, and online political action. Results indicate that second screening for news may conduit people's political engagement online.

In the next section, we review the existing literature following this structure: First, we lay out the theoretical foundations tested here. Next, we define second screening for news and explain the motivations for engaging in this activity, taking into account uses and gratifications (U&G) and multitasking. The following sections tie second screening for news to different forms of news media consumption, and finally, to our dependent variable: online political participation.

Second screening as a communicative mediating process

Recent research demonstrates that media effects on participatory politics are largely mediated through interpersonal discussion about public affairs, and that the different platforms people use to consume media also matter in this process (Yoo & Gil de Zúñiga, 2014). In line with this research, this study combines the perspectives of both the communication mediation model (McLeod et al., 1999; Shah et al., 2007) and the cognitive mediation model (Eveland, 2004; Eveland, Shah, & Kwak, 2003). According to this strand of literature, individuals' news consumption leads to participatory behaviors by means of discussing with others or just reflecting upon the information to which people were exposed. This mediation process is particularly strong for information seeking and expression via the Internet and social media (Gil de Zúñiga,

Molyneux, & Zheng, 2014). Despite findings that suggest negative cognitive effects of second screening or multitasking in general (Van Cauwenberge, Schaap, & van Roy, 2014), we suggest that the purposeful use of second screening for information follow-up and discussion while exposed to news on TV enhances individuals' political engagement online.

The communication mediation model identifies informational media use and political discussion as important arbiters between orientations and participatory behaviors (McLeod *et al.*, 1999; Shah *et al.*, 2007). The model moves away from traditional direct media effects by incorporating the effects interpersonal communication, more closely reflecting the role of media in public life. So while previous work looking at direct effects from television (Putnam, 2000) on participatory behaviors has found negative associations, we argue that those models don't entirely reflect the complex and prosocial communication reality, in which people process information through discussion.

Second screening combines information and discussion, and the combination of these processes may lead to elaboration, another key mediator along the path from news consumption to political participation. The cognitive mediation model (Eveland, 2001; Eveland *et al.*, 2003) incorporates self-reflection and information processing behaviors into the processes of learning and understanding news media. This is particularly important in regards to second screening, since studies on multitasking have shown negative effects on cognition from relevant or irrelevant second screening use (Van Cauwenberge *et al.*, 2014), which differ from the purposive act on which we focus.

We theorize that second screening, to the extent that it involves additional news consumption, discussion, and, at least sometimes, elaboration, represents a set of interrelated behaviors that conduits the influence of news media to online political action.

Defining second screening for news

Second screening is a process in which individuals watching television use an additional electronic device or "screen" to access the Internet or social networking sites to obtain more information about the program or event they are watching or to discuss it in real time. For the purposes of this study, we are only concerned with TV viewers who second screen during news (operationalized as news, election coverage, and political speeches or debates). The immediate nature of second screening, coupled with the live aspect of news, prompts TV viewers to seek information, orientation, and discussion in social media sites via a second screen. It is through this computer-mediated collocation that, we theorize, second screening may lead to online political participation.

Not surprisingly, of the few studies focused on second screen use, content is often the focus (Anstead & O'Loughlin, 2011; Wohn & Na, 2011). These studies, as well as findings by survey research organizations, point to the rise of second screening. A report from Nielsen (2012) showed that between 36 and 44% of people age 35–64

used tablets to get more information about the program they were currently watching. Political debates seem poised to spur second screening—in fact, 1 in 10 people second screened during the first debate between Mitt Romney and President Barack Obama (Pew Research Center for the People and the Press, 2012). In part based on the findings summarized here, we carefully constructed a measure of second screen use that encompassed this trend in news-specific contexts.

For some, emerging media use trends like second screening have raised concerns about humans' cognitive capability to effectively handle more than one task. Multitasking scholarship like multiple resource theory (Wickens, 2002) and thread cognition (Salvucci & Taatgen, 2008) highlight our restricted cognitive ability to process information when engaging in two or more activities at once. Yet, multiple tasks can be processed effectively in parallel so long as they do not use the same brain resource (Wickens, 2002) (e.g., listening to music and reading a newspaper). The cognitive cost of second screening may manifest in difficulties with factual recall and news comprehension (Van Cauwenberge *et al.*, 2014). While knowledge has been tied to participatory behaviors (Delli Carpini & Keeter, 1993), we seek to explore the role of second screening as a facilitator of news contextualization, discussion, and elaboration, rather than basic knowledge retention (Jung, Kim, & Gil de Zúñiga, 2011).

Motivations for second screening

Despite the risk of negative cognitive effects, second screening offers the opportunity to enhance attention to TV programs as well as promote discussion among users. People appear willing to risk the cognitive cost of multitasking in exchange for extra information and discussion, even if the central TV message may be diminished (Wang & Tchernev, 2012). Wang and Tchernev (2012) also posit that motivations of second screening, like those of multitasking in general, go beyond cognition. They find television viewers feel gratified by multitasking because it fulfills different needs. While the use of secondary devices may pull direct attention from television, the connection does propel involvement, online discussion, and social connection (Fitzgerald & Clarke, 2012).

Motivations for news consumption, multitasking, and second screening viewing may also be viewed in light of U&G, which aims to understand what needs multiple media and news sources fulfill (Wang & Tchernev, 2012). Audiences use multiple media to obtain more information (Diddi & LaRose, 2006), to confirm their opinions about the world, and to talk with others (Weeks & Holbert, 2013). In this context, socially driven activities, such as obtaining more information and accessing discussion, link audience motivation and news consumption (Lee, 2013), even over multiple platforms.

Rooted in literature on multitasking as well as U&G, this study identifies two distinct motivations for second screening during news—information seeking and discussion. Although related concepts, motivations to get informed and motivations to discuss with others are distinguishable (Cho, Gil de Zúñiga, Rojas, & Shah, 2003).¹

These attributes have also been found in content analyses of second screening events. Tweets sent out during TV programs indicate people used Twitter to post and share additional information related to the event or program (Giglietto & Selva, 2014; Wohn & Na, 2011). Wohn and Na (2011) also found that users of Twitter who second screened took advantage of the various interactive affordances of Twitter, like @replies, retweets, and #hashtags, to engage in discussion. Second screeners use social media platforms for supplementary information and to participate in a networked discussion about a TV program.

To explore these motivations, we ask: What demographic and antecedent characteristics in Wave 1 of the data collection (W^1) may explain motivations for people to second screen during news events at a later time, Wave 2 of the data collection (W^2)—RQ1a? And what demographic and antecedent characteristics (W^1) may explain second screening for news behavior (W^2)—RQ1b?

News consumption and second screening for news

Second screening combines two types of media consumption—TV news and digital media, usually socially networked or web spaces. However, the relationship between other forms of news media consumption and second screening is unknown. We suggest that newspaper and radio consumption, screen-less mediums, are unlikely to lead to second screening. Accordingly, we anticipate a negative relationship between newspaper/radio news consumption (W^1) and second screening for news (W^2)—H1a. On the other hand, since second screening by definition involves TV news consumption, we anticipate a positive relationship between TV news consumption (W^1) and second screening for news (W^2)—H1b.

As such, people who second screen may be seeking information outside of traditional media like newspapers, radio, or television. Whether second screeners turn to the web, a common platform for citizen journalism (Holton, Coddington, & Gil de Zúñiga, 2013; Kaufhold, Valenzuela, & Gil de Zúñiga, 2010), or to social network sites, where they may be exposed to a range of news from various sources, they are obtaining additional information. We suggest that these computer-mediated forms of news consumption—whether citizen journalism or social media use for news—will relate to second screening because those who second screen are accessing additional information. They will obtain it from all available sources, especially those available online via a readily available second screen. We hypothesize a positive relationship between social media use for news consumption (W^1) and second screening for news (W^2)—H1c, as well as between citizen journalism news consumption (W^1) and second screening for news (W^2)—H2d. Providing evidence of associations between more established forms of media use for news and second screening for news further builds the case for our hypothesized positive relationship between second screen use for news and online political participation.

Online political participation

Researchers who study political participation, originally defined as voting and working for political parties (Conway, 1985), now provide a more inclusive repertoire

of behaviors aimed at influencing government action. Other activities scholars now identify as political participation include working for the community, attending a protest (Verba, Schlozman, & Brady, 1995), making a campaign contribution, and writing a letter to a politician or to the editor of a newspaper (Shah, Cho, Eveland, & Kwak, 2005). Taking into account the interactivity of Web 2.0, scholars like Chadwick and Howard (2008) explicate these technological principles for their relevance to politics. As they suggest, the Internet is a platform for political discourse that offers new ways for citizens to participate in public affairs. Because this study examines second screening, which inherently involves Internet connectivity and online activities, we focus on online forms of political participation. We expand previously measured behaviors to include creating an online petition or signing up online to volunteer to help with a political cause.

Like television before it, widespread Internet adoption led media pessimists to focus on perceived adverse effects—namely that television and Internet use represent negative predictors of civic engagement and political participation (Kraut *et al.*, 1998). Psychological media effects scholars were among those quick to challenge media naysayers, positing that it is not the time spent with media that matters as much as how people use various media that influences levels of engagement (Shah, Kwak, & Holbert, 2001; Shah, Rojas, & Cho, 2009). News use leads to political participation when people actively engage in discussion (Gil de Zúñiga, Bachmann, Hsu, & Brundidge, 2013) and by providing mobilizing information (Lemert, 1992) and allowing audiences to reflect on political issues (Eveland, 2004). However, while consumption of news from legacy-type media alone may provide a direct path to (offline) political participation, we do not anticipate that they provide a direct path to online participatory action. For instance, television may provide information that allows audiences to gather ideas for debate (Eveland & Scheufele, 2000), but researchers have found that the consumption of television news does not lead to online political participation and discussion (Putnam, 2000; Shah *et al.*, 2001). Thus, we hypothesize a negative relationship between TV news consumption (W^1) and online political participation (W^2)—H2a and between newspaper/radio news consumption (W^2) and online political participation (W^2)—H2b.

However, it is through the same pathways discussed above that we believe second screening for news will conduit television news use to online political participation. Specifically, we hypothesize that second screening for news (W^1), by providing ready access and tools for discussion and elaboration, will mediate the path between TV news consumption (W^1) and online political participation (W^2)—H3.

On the other hand, when it comes to web-based news consumption, we see a more direct path to online political action. Seeking information via different online platforms (e.g., social network site) is a significant predictor of political participation (Gil de Zúñiga, Jung, & Valenzuela, 2012). The Internet appears to reinforce personal interaction (Hampton & Wellman, 2003) and volunteerism (Jennings & Zeitner, 2003). When it comes to web-connected media consumption, Shah *et al.* (2005) found that “online information seeking and interactive civic messaging—uses of the Web as a

resource and a forum — both strongly influence civic engagement” (p. 551). We expect our analysis to confirm these previous findings, so we predict a positive relationship between social media use for news consumption (W^1) and online political participation (W^2) — H2c.

The Internet also hosts many citizen journalists. Using available digital tools, the “people formerly known as the audience” (Rosen, 2008) now generate and exchange information as disseminators, activists, and content producers (Bowman & Willis, 2003). Scholars assert that digital technology has “empowered a growing army of citizen journalists” (Franklin, 2008, p. 307) who complement information processes and encourage democratic debate by offering a more pluralistic view of society (Jenkins, Ford, & Green, 2013). This connection may not only explain a possible path from citizen news consumption toward second screening but also a clearer one toward participation. Citizen journalism seems to have a greater impact on politics on the web than does traditional journalism (Kaufhold *et al.*, 2010). Individuals who consume and trust citizen journalism engage more often in online political discussions and online political participation (Kaufhold *et al.*, 2010; Rojas & Gil de Zúñiga, 2010). Given this, we hypothesize a positive relationship between citizen journalism news consumption (W^1) and online political participation (W^2) — H2d.

As discussed previously, informational uses of many media types have been shown to lead directly and indirectly to political participation, including newspapers (McLeod *et al.*, 1999), television (Norris, 1996), the Internet (Shah *et al.*, 2005), mobile communication technologies (Campbell & Kwak, 2010), and social media (Gil de Zúñiga *et al.*, 2014). In addition, we expect that second screening for news, one part informative act, will lead to online political participation. Beyond the information, second screening may engender discussion. Social network sites can lead to community building (Papacharissi & De Oliveira, 2012), and because of its tie to social network sites, we expect second screening to also build a sense of community. We suggest that discussions within these communities may provide a low-cost outlet for elaborative processing, a key aspect of the cognitive mediation model (Eveland, 2001). Additionally, second screening is embedded within a medium that freely avails participants the tools with which to build a more active relationship with political institutions and organizations. This relative ease of participation provides low-barrier access for second screeners to take online political action. As such, we expect a positive relationship between second screening for news (W^1) and online political participation (W^2) — H4.

Method

Sample

The data for this study were drawn from a two-wave U.S. national panel study conducted by the Digital Media Research Program at The University of Texas at Austin. Both waves of the survey were administered online using Qualtrics, a Web survey software to which authors have a university-wide subscription account. Respondents

for the initial survey were selected from among those who registered to participate in an online panel administered by the Nielsen media-polling group. Nielsen employs a stratified quota sampling to recruit the respondents from over 200,000 people. That is, to overcome some of the limitations of surveying Internet users only and to assure national representativeness, a quota based on gender, age, education, and income was established so that the sample match, as much as possible, the distribution of these demographic variables as reported by the U.S. Census (to learn more about this data collection strategy, please see Bode, Vraga, Borah, & Shah, 2014).

The first wave of the data collection was conducted in December of 2013 (from an initial sample of 5,000 individuals). In total, 2,060 participants responded, and 247 cases were deleted for incomplete or invalid data. Employing the American Association of Public Opinion Research's (AAPOR) response rate calculator (RR3), the response rate was 34.6% (AAPOR, 2011, pp 45). This response rate falls within acceptable parameters for web-based surveys (Bosnjak, Das, & Lynn, 2016). The second wave was collected in March 2014, yielding 1,024 valid cases for a retention rate of 57%, which falls within the normal parameters of data validity and representation integrity (for a detailed discussion on the importance of retention rate for web panels, see Watson & Wooden, 2006).

Respondents to the surveys were slightly older, more educated, and included fewer Hispanics than the U.S. population at large. The differences between W^1 and W^2 in terms of demographics are minor, within 3% for all categories. The overall sample was comparable to other surveys employing random collection methods (Pew Research Center for the People and the Press, 2012) and was comparable to the U.S. national population as a whole (see Molyneux, Vasudevan, and Gil de Zúñiga (2015) for detailed demographic breakdown).

Measures

In order to test the proposed research questions and hypotheses in this study, the analyses included five groups of variables. First, the models controlled for as many variables as we identified in the literature to be influential over participatory behaviors and media effects: *demographics*, *sociopolitical controls*, *news media use*, and people's level of *media trust*. Then the study registered the subject's *second screening use for news*, as well as the *informational* and *discussion motivations for second screening*. Second screening was accordingly used first as a criterion variable to learn more about the specific antecedents and characteristics that may explain this behavior. Finally, it was also placed as an independent variable to predict *online political participation*.² As the study relies on two-wave panel data measurements, all the indexes were constructed with the exact same items at W^1 and W^2 .

Endogenous and exogenous variables

Newspaper/radio news use

This variable captured traditional media news consumption relying on print and radio outlets. On a 10-point scale, respondents rated how frequently they "use print media

for news,” “use radio for news,” “get the news from national newspapers,” “get news from local newspapers,” “get news from radio news and talk shows” (6 items averaged scale, W^1 Cronbach’s $\alpha = .72$; $M = 3.7$, $SD = 1.8$; W^2 Cronbach’s $\alpha = .75$; $M = 3.7$, $SD = 1.9$).

TV news use

Comprehensibly measuring TV news consumption was key for our study as this variable is directly tied to second screening behavior. Using the same 10-point scale as above, the index was created by adding 11 items that tapped on the frequency of “TV for news,” “network TV news,” “local TV affiliate stations,” “fake TV news” programs (i.e., Daily show, Colbert report), “cable news,” and specific television news from “CNN,” “Fox News,” “MSNBC,” “BBC,” “PBS,” and “Al Jazeera America” (11 items averaged scale, W^1 Cronbach’s $\alpha = .81$; $M = 4.2$, $SD = 1.6$; W^2 Cronbach’s $\alpha = .81$; $M = 4.3$, $SD = 1.6$).

Citizen journalism

We used two items to compose this index asking respondents about how frequently they relied on citizen media to consume information. Respondents were asked to rate on a 10-point scale (where 1 = *never* and 10 = *all the time*) “how often do you get news from citizen journalism sites” and “how often do you get news from hyperlocal news sites such as Patch.com, etc.” which also captured citizen-generated media. The construct yielded a fairly high validity level (2 items averaged scale, W^1 Spearman-Brown Coefficient = .65; $M = 1.9$, $SD = 1.6$; W^2 Spearman-Brown Coefficient = .69; $M = 2.0$, $SD = 1.7$).³

Social media news use

The last index that dealt with media use for news encompasses social media. Using the same 10-point scale, subjects indicated how frequently they use “Facebook for getting news,” as well as “Twitter,” “Google+,” “Pinterest,” “Instagram,” “Tumblr,” “Reddit,” and “LinkedIn” (8 items averaged scale, W^1 Cronbach’s $\alpha = .84$; $M = 1.7$, $SD = 1.3$; Cronbach’s $\alpha = .83$; $M = 1.7$, $SD = 1.2$).

Second screening for news

This variable was obtained by adding three items to gauge how much individuals use a second device or screen (i.e., laptop, smartphone, etc.) to seek further news or discuss information while watching news on TV. Specifically the survey asked respondents “how often do you second screen during political speeches or debates,” “during news,” and “during election coverage” (3 items averaged scale, W^1 Cronbach’s $\alpha = .92$; $M = 2.5$, $SD = 2.4$; Cronbach’s $\alpha = .91$; $M = 2.6$, $SD = 2.4$).

Informational motivations to second screen

Using a 10-point scale (1 = *completely disagree*; 10 = *completely agree*), two items captured the informational motivations respondents have to engage in second screening behaviors: “I second screen because I get more up-to-date information,” and “I

get additional information about what I'm watching" (2 items averaged scale, W^1 Spearman-Brown Coefficient = .96; $M = 3.4$, $SD = 2.9$; W^2 Spearman-Brown Coefficient = .95; $M = 3.4$, $SD = 2.9$).

Discussion motivations to second screen

Likewise, items captured the discussion motivations respondents have to engage in second screening behaviors: "I second screen because I like to share my thoughts about an event" and "I like to participate in a conversation about an event I'm watching" (2 items averaged scale, W^1 Spearman-Brown Coefficient = .95; $M = 2.5$, $SD = 2.3$; W^2 Spearman-Brown Coefficient = .96; $M = 2.4$, $SD = 2.3$).

Political participation online

This variable taps the level of political engagement subjects report in online activities. The questionnaire asked respondents how often in the past 12 months they had "created an online petition," "signed a petition online," "participated in an online question and answer session with a politician or public official," "signed up online to volunteer to help with a political cause," "used a mobile phone to donate money to a campaign or political cause," and "started a political or cause-related group on a social media site." All responses were then added into a single index (6 items averaged scale, W^1 Cronbach's $\alpha = .81$; $M = 1.9$, $SD = 1.4$; W^2 Cronbach's $\alpha = .84$; $M = 1.8$, $SD = 1.5$).

For a description of residualized variables, please see Appendix A.

Statistical analysis

To test the research questions and hypotheses posed in this study, we employ a two-wave panel data design. First, a series of lagged-panel hierarchical regressions were conducted. That is, the wave two measures (W^2) were regressed on the time one measures (W^1) to understand effects and predict causal patterns (Kenny, 2005). Nevertheless, we further conducted a panel lagged and autoregressive structural equation modeling test to ascertain the causal inference of the variables of interest over participation over time, simultaneously isolating the possible effect participating politically online may have over future engagement (Shah et al., 2001). That is, in this model, an autoregressive term of online political participation was introduced as a control and specified as an exogenous variable, so the gamma coefficient (γ) represents the stability of online political engagement over time, while the rest of the beta coefficients (β) "reflect the influence of predictor variables on the outcome variable above and beyond the causal influence of prior levels of the outcome variable on itself" (Shah et al., 2005, p. 549).

Results

First, RQ1a sought to reveal which demographics best explain people's motivations to engage in second screening during news events. Information seeking and discussion were operationalized as dependent variables. In total, 22% of variance in information seeking and 28.5% of variance in discussion as motivators for second screening are

Table 1 Lagged Panel Regression Models Testing Demographic and Social Antecedents of Motivations for Second Screening and Second Screening News Use

	Information Motivation for Second Screening ^{T2}	Discussion Motivation for Second Screening ^{T2}	Second Screening for News Use ^{T2}
<i>Block 1: Demographics</i>			
Age	-.211***	-.168***	-.067**
Gender (female)	-.032	-.032	.046*
Education	-.010	-.028	-.022
Income	-.016	-.031	.011
Race (white)	-.055	-.077**	.036#
ΔR^2	7.7%	8.5%	6.0%
<i>Block 2: Sociopolitical Controls</i>			
Discussion Network Size ^{T1}	.033	.003	.037#
Discussion Frequency ^{T1}	.056#	.078*	.022#
Political Efficacy ^{T1}	.030	.028	.037#
Strength of Partisanship ^{T1}	.013	.025	.036#
ΔR^2 (%)	6.0%	7.6%%	8.0%
<i>Block 2: News Media Use</i>			
TV News ^{T1}	.117***	.096**	.080***
Radio/Newspapers News ^{T1}	.011	-.018	-.035#
Social Media ^{T1}	.085**	.179***	.082***
Citizen Journalism ^{T1}	.090**	.111***	.047#
ΔR^2	6.4%	10.2%	7.9%
<i>Block 4: Media Trust</i>			
Traditional Media Trust ^{T1}	.004	-.001	-.080*
Alternative Media Trust ^{T1}	.164***	.178***	-.030
ΔR^2	1.9%	2.2%	.6%
<i>Block 4: SS Motivations</i>			
Second Screening Info. ^{T1}	.004	-.001	.513***
Second Screening Disc. ^{T1}	.164***	.178***	.188*
ΔR^2	1.9%	2.2%	31.4%
Total R^2	22.0%	28.5%	53.9%

Note: Sample size = 1,017. Cell entries are final-entry OLS standardized Beta (β) coefficients.
* $p < .05$. ** $p < .01$. *** $p < .001$.

explained by variables included in this analysis. The full results of this model can be found in Table 1, focusing on the first two columns.

For those who second screen for more information, age ($\beta = -.211$, $p < .001$) holds a significant relationship with these motives for second screen use. Again, the younger one is, the more he/she will try to find additional information through second screening. Our lagged panel regression results also indicate that TV news use ($\beta = .117$, $p < .001$), social media use for news ($\beta = .085$, $p < .01$), citizen journalism

news ($\beta = .090, p < .01$), and alternative media trust ($\beta = .164, p < .001$) were all statistically significant predictors of informational motivations to second screen. See Table 1, first column “Information Motivation for Second Screening.”

As for discussion as a motivator for second screening, age ($\beta = -.168, p < .001$) and race ($\beta = -.077, p < .01$) proved significant. Young people and minorities appear more willing to second screen to discuss news. The only sociopolitical variable that explains discussion motivations to second screen is the frequency at which respondents discuss politics ($\beta = .078, p < .05$). All types of media consumption except newspaper/radio news use were positive and statistically significant predictors of the discussion motivation to second screen use: TV news ($\beta = .096, p < .01$), social media use for news ($\beta = .179, p < .001$), and citizen journalism news ($\beta = .111, p < .001$). That is, the more people tend to use these media in the first place (W^1), the more likely they will be to develop a discussion motivation to second screen (W^2). Another interesting finding is that trust in alternative media is also significantly related to and predicts both information seeking ($\beta = .164, p < .001$) and discussion ($\beta = .178, p < .001$) as motivations for second screening (See Table 1).

RQ1b aimed to determine which, and if so how, demographics and sociopolitical variables exerted significant influence on second screen use for news. For instance, trust in traditional media yields a negative relationship ($\beta = -.078, p < .05$), while trust in alternative media does not predict people’s use of a second device for accessing news ($\beta = -.030, p = .210$). In other words, the less people trust traditional media, the more they second screen for news. Among the demographics, age ($\beta = -.067, p < .01$) and gender ($\beta = .046, p < .05$) also predict second screen use— young people and females tend to do so more than older citizens and males. As may be expected, however, people’s motivations to second screen are the strongest predictors in the model: information motivation ($\beta = .513, p < .001$), and discussion motivation ($\beta = .188, p < .001$). In total, over half of the variance (53.9%) of second screen use for news was explained by variables contained in the analysis (see Table 1).

Hypothesis 1 predicted a negative relationship between the consumption of newspaper/radio news (H1a), and a positive relationship between TV news use (H1b), social media use for news (H1c), and citizen journalism (H1d) (all W^1) and second screening (W^2). In order to shed light on these relationships, lagged panel regression was employed as well as further clarification through an autoregressive SEM test. As the third column in Table 1 shows, these propositions were partially supported. (Results of the autoregressive SEM test can be seen in Figure 1.) The consumption of TV news ($\beta = .080, p < .001$) and social media news ($\beta = .082, p < .001$) were significant predictors of second screening for news. The more people use TV news and social media for news, the more likely they are to engage in second screening for news. However, there was no evidence of newspaper/radio news or citizen journalism as predictors of this behavior. The block of news media use alone explains an additional 7.9% of the variance in second screening use for news ($\Delta R^2 = .079, p < .001$).

The second set of hypotheses (H2 a through d) aimed to test whether, and if so how, different types of news use may impact people’s online engagement. In order to

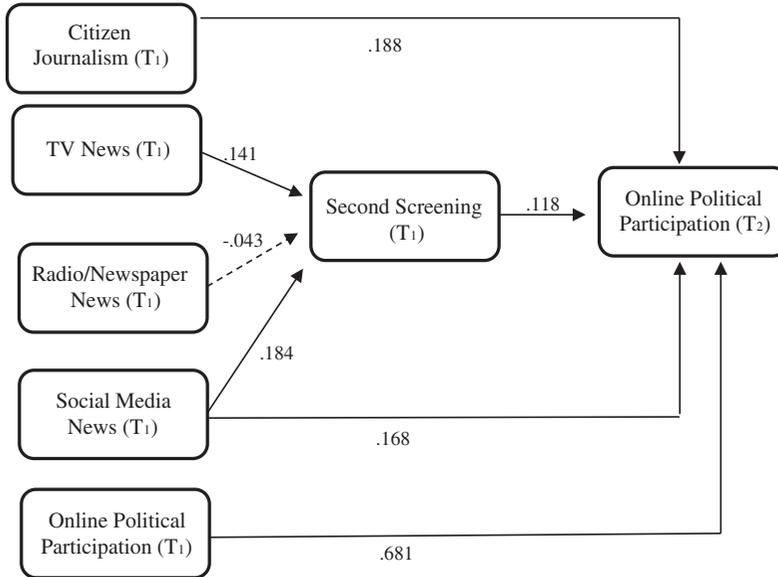


Figure 1 Lagged and autoregressive effects structural equation model of news use, second screening and online political participation. *Note:* Sample size = 1,017. Path entries are standardized SEM coefficients (Betas) and gamma coefficient (γ) at $p < .05$ or better. The effects of demographic variables (age, gender, education, race, and income), sociopolitical antecedents (political efficacy, strength of partisanship, discussion network size, and frequency of discussion), media trust (traditional media trust and alternative media trust), as well as Online Political Participation on Time 1 on endogenous and exogenous variables have been residualized. Model goodness of fit: $\chi^2 = 3.28$; $df = 3$; $p = .35$; RMSEA = .0001, CFI = .995, TLI = .990, SRMR = .0014. Explained variance of criterion variables: Second Screening $R^2 = 5.5\%$; Online Political Participation $R^2 = 7.0\%$. This theoretical model was also bootstrapped based on the Standard Errors with 1000 iterations, converging in 950 iterations and with a 99.99% confidence interval.

test these relationships, we relied on both a lagged panel regression test to observe the overall effect, as well as an autoregressive SEM model to further test and clarify these effects over time (see Shah et al., 2001). Table 2 presents the regression results in full, with the autoregressive SEM test modeled in Figure 1. As we hypothesized, TV news consumption (H2a) had no direct effect on online political participatory behaviors ($\beta = .035$, $p < .12$). Also of interest and as expected (H2b), newspaper/radio news use yields a negative relationship on online political participation ($\beta = -.067$, $p < .05$). On the other hand, as predicted (H2c and H2d), social media use and citizen journalism news use (W^1) positively predicted online political participation at a later time (W^2) ($\beta = .232$, $p < .001$) and ($\beta = .148$, $p < .001$) respectively. So the more individuals consume information via traditional means, the less inclined they will be to engage politically online. The news media use block alone explains an additional 11.2% of the variance of online political participation ($\Delta R^2 = .112$, $p < .001$). This relationship

Table 2 Lagged (Model 1) and Autoregressive Lagged (Model 2) Panel Regression Model Testing Second Screening News Use Effect on Online Political Participation

	Online Political Participation ^{T2}	
	Model 1	Model 2
<i>Block 1: Demographics</i>		
Age	.013	.011
Gender (female)	-.043	-.013
Education	-.016	-.019
Income	-.037	-.016
Race (white)	-.077**	-.038 [#]
ΔR^2	2.0%	2.0%
<i>Block 2: Sociopolitical Controls</i>		
Discussion Network Size ^{T1}	.021	.028 [#]
Discussion Frequency ^{T1}	.230***	.057*
Political Efficacy ^{T1}	.088**	.034 [#]
Strength of Partisanship ^{T1}	.031	.003
Online Pol. Participation ^{T1}	—	.610***
ΔR^2 (%)	19.7%	50.9%
<i>Block 2: News Media Use</i>		
TV News ^{T1}	.035	.005
Radio/Newspapers News ^{T1}	-.067*	-.050*
Social Media ^{T1}	.232***	.082***
Citizen Journalism ^{T1}	.148***	.033 [#]
ΔR^2	11.2%	1.1%
<i>Block 4: Media Trust</i>		
Traditional Media Trust ^{T1}	-.082**	-.012
Alternative Media Trust ^{T1}	.104***	.042 [#]
ΔR^2	1.0%	0.1%
<i>Block 5: Second Screening</i>		
Second Screen News Use ^{T1}	.100***	.061**
ΔR^2	1.0%	0.4%
Total R^2	34.5%	54.6%

Notes: Sample size = 1,017. Cell entries are final-entry OLS standardized Beta (β) coefficients. [#] $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

varied once a lagged autoregressive model was employed rather than a lagged model. That is, the effects became milder once the model controlled for the effect of people's prior political participatory levels (W^1) over time (W^2)—see Table 2, Model 2.

Importantly, we also test to what extent second screen use may also become a significant factor in predicting online political behavior. H4 is supported—second screening in W^1 also directly predicts online political participation at a later time (W^2) ($\beta = .100$, $p < .001$). The more one engages in second screening for news, the more likely he/she is to take political action online. Second screening for news explains an

Table 3 Indirect Lagged and Autoregressive Effects Over Online Political Participation

Indirect Effects	β
TV News (T1) → Second Screening (T1) → Online Pol. Participation (T2)	.017*
Social Media News (T1) → Second Screening (T1) → Online Pol. Part. (T2)	.022*

Notes: Standardized regression coefficients (β) reported. $N = 1,017$.

* $p < .05$. ** $p < .01$. *** $p < .001$ (two-tailed).

additional 1% of online political participation ($\Delta R^2 = .01$, $p < .001$), for a total variance explained of 34.5% in the overall model ($R^2 = .345$, $p < .001$). See Table 3.

As explained earlier, an autoregressive term of the online political participation variable was introduced to control for the effect that individuals' political engagement in W^1 may have on future participation at W^2 . This test better isolates the predicting effect of all the variables in the model accounting for the causal effect online political participation behavior may have on itself overtime.

Accordingly, the SEM test (see Figure 1) also clarifies these connections as a structure including prior online political participation on Time 1 ($\chi^2 = 3.28$; $df = 3$; $p = .42$; RMSEA = .0001, CFI = .995, TLI = .990, SRMR = .016; second screening $R^2 = 5.5\%$; online political participation $R^2 = 7.0\%$). Frequency of social media news use and citizen journalism news use directly predict online political participation ($\beta = .168$, $p < .05$ or better; $\beta = .188$, $p < .05$ or better), whereas TV news and newspaper/radio media news use do not. Furthermore, second screening also directly predicts online political participation ($\beta = .118$, $p < .05$ or better), providing more support for H4.

Interestingly, once the model residualized the effect of online political participation at Time 1, only citizen journalism ($\beta = .188$, $p < .05$ or better), social media use for news ($\beta = .168$, $p < .05$ or better), and second screen use ($\beta = .118$, $p < .05$ or better) remain as statistical significant predictors of future political participation at Time 2. Thus, second screening for news partially mediates the effect of social media news use on participation, and completely mediates the relationship between consuming news on TV and participating online. Therefore, H3 is supported—second screening for news (W^1) mediates the relationship between TV news consumption (W^1) and online political participation (W^2). See also the indirect effects results (Table 3). Also, as it can be expected, the effect of participating politically over time remains fairly stable ($\gamma = .68$, $p < .001$). See Figure 1.

Discussion

Second screening, as a relatively new media behavior, merits examination at a variety of levels. We specifically analyze second screen use for news. As this activity continues to gain popularity, its definition may evolve. For now, it involves watching television and engaging with supplemental digital media—viewers seeking additional information or an outlet for discussion in a computer-mediated sphere.

Our research sheds more light on the phenomenon of second screening by (a) identifying key antecedents and motivations that explain why and how people engage in second screening, and (b) by also empirically exploring whether second screening for news leads to positive democratic outcomes. Results show that information seeking and discussion motivate second screening for news, which predicts online political participation. This finding is consistent with previous research indicating positive and predictive relationships between computer-mediated media use for news and civic and political engagement (Campbell & Kwak, 2010; Shah et al., 2005). By focusing on second screening for news, this study adds weight to the theory that it's *how* people use media that produces positive effects. Second screening provides users an opportunity to get more information, discuss, and elaborate on TV news, a process that we show mediates the path from TV news consumption to online political participation. As such, we provide new media support for both the Communication Mediation Model (McLeod et al., 1999) and the Cognitive Mediation Model (Eveland, 2004).

The confirmed motivations for second screening, to discuss with others and pursue further information, also help explain why those who second screen are politically engaged in a virtual sphere. Previous studies have found positive relationships between media use for news and political participation (Campbell & Kwak, 2010; McLeod et al., 1999; Norris, 1996; Shah et al., 2005), so it's natural to assume that this emerging use of media for news may also lead to political engagement. By using a connected secondary device to obtain more information about news, contextualize the information, and to relate to others through discussion, second screeners are already within the computer-mediated spheres where online political participation happens (i.e., donate money, create online petitions, etc.). Pure ease of action may also explain some of this relationship.

In order to more stringently explore the relationship and influences among our variables of interest, this study used nationally representative, two-wave panel data, often utilized for examining and assessing causal inference. Time-lagged panel effects were tested, with actions in Time 1 predicting behavior in Time 2. It's important to note that in this study we have rigorously controlled for previously identified antecedents of political action (Bakker & De Vreese, 2011). Even when residualizing these effects, second screening for news remained a solid predictor of online political participation. An autoregressive structural equation model confirms the main hypothesis of this study, as it shows individual paths from distinct media uses to second screening, which in turn predicts online political participation. Second screening both partially and fully mediates these relationships. This speaks not only to the power of computer-mediated collocation, but also to the benefits of additional information about and discussion of TV news events, especially as they relate to pro-democratic behaviors like online political engagement.

Additionally, this study confirms previous findings that tested the effects of citizen journalism consumption and social media use for news in predicting online political participation (Gil de Zúñiga et al., 2014). It also sheds light on the relationship between TV news and online political participation when second screening is present

as a mediating activity. As previous research has found no relationship (Putnam, 2000; Shah *et al.*, 2001) between TV news and online political participation, second screening for news provides a path for TV news viewers to political engagement and action in the online sphere. This represents a novel and promising path to a more participatory society.

Even though these findings illuminate the relationship between TV news viewing, second screening, and the democratic process, this study has some limitations. The nature of U.S. two-wave, survey panel data and its representation comparability in relation to the U.S. Census and Pew Center (RDD collected data) demographic measures means we are confident generalizing these findings and suggesting some causal order. However, the two waves are about 3 months apart, which may raise some doubt regarding the possibility of tracing clearly causes and effects. However, scholars have found empirical evidence of the relationship between seeking information/discussing politics at Time 1 and participating in Time 2 (Shah *et al.*, 2005) even in a short time span. Our study shows effects within this shorter time period. On the other hand, collecting the data in two closer times ensured a high retention rate (57%), which lends validity and representational integrity to the data. Additionally, our two-wave panel data only allowed for causal inference from two points in time. The structural equation model tested in this study would have been more theoretically accurate if presented media uses at time one, predicting second screening use at time two, and online political participation at time three.

Future academic efforts should focus on observing specific nuances by which second screen use may lead to political action. Experimental settings and content analysis of second screen use may help clarify this effect. Future research should also examine second screening motivations as antecedent of second screen use and participation. As previous studies have shown (Eveland 2001; Eveland *et al.*, 2003; McLeod *et al.*, 1999; Shah *et al.*, 2007), motivations to discuss politics and to keep up with the news have also been linked to participatory behaviors. Thus, scholars should test whether this connection is direct, indirect, or fully mediated through the use of second screening for news and political discussion. Similarly, future second screen use research should analyze its relationship to offline political activity and civic engagement, which would further probe the hypothesis that interactions in computer-mediated spheres spill over from the screen, resulting in meaningful offline and prodemocratic activities. Finally, future research should also account for the possibility of stronger effects of second screen use as operationalized in this study. That is, this paper may be underestimating the prevalence of second screening, given the relative dearth of political and campaign information during the data collection time frame. It is expected that second screening for news during campaign time may yield stronger effects, never a weaker one.

Given the growing popularity of second screening, the relationship between prosocial and prodemocratic behaviors and these relatively new media habits begs further study. Our contribution here marks a starting point for continuing this vein of research.

Notes

- 1 Given that learning about individuals' motivations to engage in second screening represents a rather novel area in the literature, the authors performed a principal component factor analysis with varimax rotation and Kaiser Normalization to test whether informational motivations to second screen were indeed different from discussion motivations to second screen. Results indicate they are two distinct dimensions of motivations to use second screening: a discussion motivation (48.1% of variance), and an informational motivation (47.8% of variance).
- 2 When conducting the analyses with MPLUS, we also allow the software to handle missing data encountered in our data by estimating means and intercepts for those missing cases (for detailed explanations on how to work with missing values with structural equation modeling SEM, see Acock, 2005).
- 3 Indexes generated with two items need to rely on the Spearman-Brown Coefficient rather than Cronbach's alpha as its formula accounts for the fact that only two items are used in the construct. That is, the reliability test is not sensible to the number of items as it does occur with Cronbach alpha formula (see Spearman, 1910).

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Appendix A. Residualized Variables

	Measure(s)	Scale	Descriptives
Discussion network size	How many people have you “talked to face-to-face or over the phone about politics or public affairs,” and “talked to via the Internet, including e-mail, chat rooms, and social networking sites about politics or public affairs” in the last month	Open ended	$W^1 M = .33, Mdn = .24, SD = .37,$ skewness = 1.32; $W^2 M = .54, Mdn = .45,$ $SD = .28,$ skewness = 1.44 ^a
Discussion frequency	Estimate frequency of political or public affairs discussions with: “spouse or partner,” “family and relatives,” “friends,” “acquaintances,” “strangers,” “neighbors you know very well,” “neighbors you don’t know well,” “coworkers you know well,” and “coworkers you don’t know well”	10-point scale	9 items averaged scale, W^1 Cronbach’s $\alpha = .87; M = 3.3 SD = 1.8; W^2$ Cronbach’s $\alpha = .86; M = 3.2, SD = 1.7$
Political efficacy	“people like me can influence government,” “I consider myself well qualified to participate in politics,” “I have a good understanding of the important political issues facing our country,” “no matter whom I vote for, it won’t make a difference” (recoded), “people like me don’t have any say in what the government does” (recoded)	10-point scale	5 items averaged scale, W^1 Cronbach’s $\alpha = .71; M = 5.4, SD = 1.9; W^2$ Cronbach’s $\alpha = .71, M = 5.3, SD = 1.8$
Strength of party ID	Where would you place yourself on “on social issues,” “on economic issues,” and also in a more general sense “do you usually think of yourself as a Republican, a Democrat, or an Independent”	11-point scale from strong R to strong D	3 items averaged scale W^1 Cronbach’s $\alpha = .90, M = 5.9, SD = 2.6; W^2$ Cronbach’s $\alpha = .90, M = 6.0, SD = 2.6$ Folded into 6-point scale, $W^1 M = 2.0,$ $SD = 1.9; W^2 M = 1.9, SD = 1.9^b$

Appendix A. Continued

	Measure(s)	Scale	Descriptives
Traditional media trust	Level of trust in “mainstream news media” and in “news aggregators”	10-point scale	2 items averaged scale, W^1 Spearman-Brown Coefficient = .48; $M = 5.0, SD = 1.9; W^2$ Spearman-Brown Coefficient = .49; $M = 5.1, SD = 2.0$
Alternative media trust	“how much do you trust news from alternative news media,” and “how much do you trust news from social media sites”	10-point scale	2 items averaged scale, W^1 Spearman-Brown Coefficient = .70, $M = 3.5, SD = 1.9; W^2$ Spearman-Brown Coefficient = .71, $M = 3.6, SD = 2.0$
Demographics	Gender	M or F	50.2% female
	Age	Open ended	$M = 52.71, SD = 14.77$
	Race	Categories	77% white
	Education	Highest	$M = 3.61, Mdn = 2$ -year college degree
	Income	8 categories	$M = 3.61, Mdn = \$50,000$ to \$59,999

^aAs could be expected, the variable was highly skewed ($W^1 M = 4.01, Mdn = 1.00, SD = 20.2, skewness = 19.64; W^2 M = 3.57, Mdn = 2.00, SD = 5.98, skewness = 10.24$), so they were transformed using the natural logarithm (reported above). ^bThis item was folded into a 6-point scale (that is, scores 0 and 10 were recoded to 6, 1 and 9 to 5, 2 and 8 to 4, 3 and 7 to 3, 4 and 6 to 2, and 5 to 1), ranging from no partisanship to strong partisanship.