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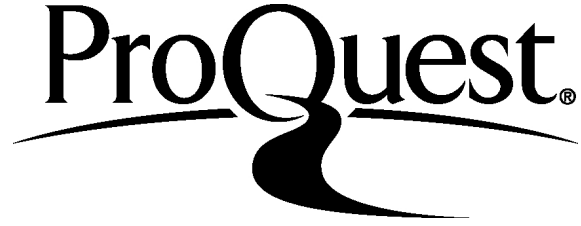
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ABSTRACT

This dissertation extends the media effects literature into the realm of social media. Scholars have long known that partisan news contributes to political polarization, but claim that such effects are often limited to those who tune into politics. Social media, however, can filter political information to those typically uninterested in politics. Because social media feature entertainment and political news in the same space, entertainment-seekers may inadvertently see political news that they normally avoid in traditional media contexts. Through a combination of observational research, survey experiments, and field experiments, I demonstrate that social media facilitate personal influence, drawing new audiences to political news. This increased exposure to partisan media contributes to political polarization, regardless of the ideological congruency between source and receiver, or of news- or entertainment-seeking habits of the audience. But the most important contributions of this dissertation are how it demonstrates the need for scholars to use innovative methods that incorporate personal influence into social media studies, and that it draws scholarly attention to inadvertent media effects for entertainment-seeking audiences. Social media bring political news to new audiences numbering in the millions. Political communication scholars would be remiss not to investigate their influence.

To my father, for my curiosity,
and my mother, for everything else.

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CHAPTER 1

INTRODUCTION

Democracies depend on voters effectively evaluating the qualifications of candidates and their policy proposals. The news media aid in this process. The media explain differences between candidates, provide policy information, and act as a watchdog over government. Despite the news media's important role linking citizens to their government, scholars are undecided on how much influence the media actually wield. Political communications scholars have questioned whether and how the news media influence political attitudes for decades. This dissertation extends this debate by examining how a new method of receiving news – through social media – changes the dynamics of seeking, receiving, and consuming political information.

Social media represent the latest development in a long history of media effects research. The hypodermic needle model characterizes early studies of media effects (Lasswell 1927). This model considers mass communication's reach so pervasive and so effective, that average citizens are unable to withstand the media's influence. The media can "inject" their messages directly into the electorate, effectively controlling public opinion. This early scholarship soon gave way, however, to the minimal effects school of thought spearheaded by sociologists at Columbia (e.g. Lazarsfeld, Berelson & Gaudet 1948; Katz & Lazarsfeld 1955). These scholars argue that the news media's message does not reach most of the electorate. Instead, only the small minority that pay attention to politics receives the media's message, and moreover, these individuals are selective about what information they seek and retain (Klapper 1960).

Research into the nuance of the news' influence reinvigorated the media effects literature. The scholarship on the media's role as an agenda setter convincingly demonstrates that the media are effective at determining which issues the electorate considers important (McCombs & Shaw 1972; Iyengar & Kinder 1987). The media can also subtly editorialize the news by framing issues in a positive or negative light (Iyengar 1991; 1993), as well as influence how audiences evaluate political developments by priming certain heuristics when reporting the news (Krosnick & Kinder 1990; Iyengar 1993).

However, the arrival of cable television and the Internet fragmented the media environment. The proliferation of news choices gives audiences the option to receive their news from ideologically consistent sources that echo audiences' preexisting attitudes (Sunstein 2001; Stroud 2011). Entertainment options have proliferated as well, further limiting the media's reach as more individuals forego political news in favor of entertainment programs (Arceneaux & Johnson 2013; Prior 2007). In this new era of minimal effects (Bennett & Iyengar 2008), the media mostly reinforce existing attitudes, to the extent that they reach audiences at all.

Though social media are the latest development in the media effects research, sites like Facebook are not replacing traditional news sources. Though about half of all Internet users receive news from Facebook (Mitchell et al. 2014), only 4% of these individuals say Facebook is the most important way they get news (Mitchell et al. 2013). Instead of displacing traditional media, social media are supplementing television broadcasts and newspapers, layering new technology on top of old. Even so, social media provide an exciting new avenue of research for the way they facilitate inadvertent

exposure to political news. Much of the classic media effects literature considers exposure to news the result of purposive, news-seeking behavior (Zaller 1992; Stroud 2011; Arceneaux & Johnson 2013; Levendusky 2013) and is largely dismissive (Bennett & Iyengar 2010; Arceneaux & Johnson 2013) of the effect of receiving political news from entertainment (Holbert, Garrett, & Gleason 2010; Baum 2002; Baum 2003; Holbert et al. 2003; Holbrook & Hill 2005). Though television and print media can feature both news and entertainment options, they rarely do so side-by-side. Programs such as *The Simpsons* or *Monday Night Football* rarely address politics and if they do, it is only in passing. Social media, however, regularly display entertainment and hard news in the same space, facilitating inadvertent exposure to partisan information. For instance, that only 16% of Facebook users cite getting news as a major reason for using the site, yet a full 78% of those who do receive news from Facebook do so while logged on for other reasons (Mitchell et al. 2013).

This dissertation examines these new dynamics of media consumption. Using a combination of survey and experiment data, I examine how exposure to partisan media through social media contributes to political polarization, even among those who normally ignore politics in traditional media contexts. By polarization, I mean the widening gap between liberals and conservatives on the ideological spectrum, as measured by their issue positions. I center the project around the premier social networking site, Facebook. Facebook is the largest social networking site, with over 1.5 billion active users. At roughly 900 million unique monthly visitors, it is the second most visited website in the world. Additionally, Facebook allows for more flexibility in how users can share content than other platforms such as YouTube or Twitter. Although

Twitter is widely used in research involving social media, its 140-character limit does not accurately represent the social media landscape at large (Neuman et al. 2014). Finally, Facebook has come to be seen as a viable source for political news: 48% of Internet users gather news about politics and government from Facebook. Only 9% of Internet-users use Twitter to do the same. Furthermore, people turn to Facebook for news much more than sites like Yahoo News (24%) or Google News (22%), and nearly as much as local television broadcasts (49%) (Mitchell et al. 2014).

This dissertation takes a three-article format. The project's first article uses original survey data to distinguish purposive exposure to partisan media from inadvertent, and shows that the attitude extremism associated with exposure to partisan media is not confined to only purposive news-seekers. In the subsequent articles, experimental research demonstrates the causal mechanisms behind political polarization. The second article uses a survey experiment to show that personal influence operates through social media's endorsement features (e.g. Facebook's "Like" feature), enticing social media users to read political news, especially if those endorsements come from friends and family members. In the dissertation's third article, a field experiment subtly inserts partisan information into subjects' Facebook News Feeds. The final article demonstrates that exposure to any partisan media, both pro-attitudinal and counter-attitudinal, through social media contributes to political polarization, a finding that holds for news-seekers and entertainment-seekers alike.

This project's combination of observational and experimental research complements the strengths and weaknesses of each approach. The observational study establishes a real-world basis for conducting experimental research. The experiments

sacrifice some external validity to demonstrate the causal processes behind political polarization. Taken as a whole, these articles show how social media draw wider audiences to political news than traditional media, and how that exposure to partisan media polarizes those audiences. But more importantly, this dissertation demonstrates the need for scholars to use innovative methods that incorporate the role of personal influence in social media studies, and draws much-needed scholarly attention to inadvertent media effects for entertainment-seeking audiences.

CHAPTER 2

THE INADVERTENT AUDIENCE: POLITICAL NEWS & EXTREMISM ON SOCIAL MEDIA

Abstract

This article extends the media effects literature into the realm of social media. Partisan news has long been known to contribute to political polarization, but such effects are often limited to those who tune into politics. Social media, however, can filter political information to those typically uninterested in politics. Because social media feature entertainment and political news in the same space, entertainment-seekers may inadvertently see political news that they avoid in traditional media contexts. This article uses original survey data gathered from Amazon's Mechanical Turk platform to distinguish purposive exposure to political news from inadvertent, and investigates the relationship between these different types of exposure and attitude extremism. Results indicate that encountering political news through social media is related to more extreme attitudes, independent of purposive news-seeking behavior.

Introduction

The proliferation of news choices over the past few decades has driven communication scholars to investigate how media fragmentation influences how individuals select and process their news. The advent of 24-hour news networks and the Internet means that individuals no longer have to rely on the major networks' nightly news broadcasts or mainstream newspapers to receive news about politics. Instead, media fragmentation allows news-seekers to choose their news from ideologically consistent sources. Some have argued that this media fragmentation has led to a new era of minimal media effects; because audiences can self-select into ideologically congruent news sources that simply reinforce audiences' opinions (Sunstein 2001), increased choice prevents the news media from being able to meaningfully change audiences' attitudes (Bennett & Iyengar 2008).

The proliferation of entertainment options may also contribute to the media's decreasing influence. In the early days of television, many individuals watched the nightly news broadcasts as entertainment, simply because there was little else to watch (Prior 2005). Today, however, it is increasingly easy to opt out of news altogether in favor of more entertaining alternatives. Indeed, media effects are mitigated when audiences have the opportunity to pursue entertainment options (Arceneaux & Johnson 2013).

Yet, many of these recent communication studies demonstrating a new era of minimal effects fail to account for inadvertent exposure to partisan information. Bennett and Iyengar (2008) call for communication scholars to bear the changing media landscape in mind when investigating media effects. In this article, I do so by considering

the rise of social networking sites such as Facebook and how they facilitate inadvertent exposure to political news, contributing to attitude extremism in the process. Because social media can contain both entertainment and news in the same space, individuals who use social media for diversionary purposes may still be exposed to political information. In other words, purposive news-seekers are no longer the only ones who regularly receive political news; social media may inadvertently expose entertainment-seekers to such information as well.

Most social networking site users have friends who post political news (Halberstam & Knight 2014). Moreover, online social networks are characterized by weak ties (Hampton, Sessions, Her, & Rainie 2009), which are ideologically heterogeneous (Mutz 2006, 27). This heterogeneity means that audiences are more likely to encounter both pro-attitudinal and counter-attitudinal information on social networking sites. Indeed, social media users are likely to encounter more cross-cutting information (Bakshy, Messing, & Adamic 2015) than traditional selective exposure theory (see Stroud 2011 for a summary) predicts.

In this article, original survey data reveal that encountering political news through social media is associated with attitude extremism. That political news can polarize audiences is not a novel finding in its own right, but most scholars consider the media's influence to be limited to purposive news-seekers (Arceneaux & Johnson 2013; Levendusky 2013). In traditional media contexts, exposure to political news rarely occurs unless audiences seek out such information (Zaller 1992). However, exposure to political information operates differently on social media. The vast majority of social media users receive partisan news when logged in for other reasons (Mitchell et al. 2013). The chief

contribution of this article is its distinction between purposive and inadvertent exposure to partisan media, and its conclusion that the attitude extremism associated with partisan media is not confined to only those who use social media for the express purpose of reading political news.

Media Effects: Then and Now

Though exposure to political information through social media is a relatively new phenomenon, media effects have a long research history. Whether and how the media influence public opinion are questions that scholars have pursued for the better part of a century. If those who control the media are able to manipulate the attitudes of those who are exposed to their messages, it has dire consequences for the democratic process. Indeed, it was with this worry that Harold Lasswell, who is credited with the most noteworthy of the early contributions to the field, began studying the efficacy of propaganda techniques during wartime. Lasswell believes such techniques are very successful in influencing opinion, a conclusion he finds discouraging: “This whole discussion about the ways and means of controlling public opinion testifies to the collapse of the traditional species of democratic romanticism” (Lasswell 1927, 4). This scholarship is known as the hypodermic needle model due to the media’s perceived ability to “inject” thoughts and opinions into the unassuming public.

The hypodermic needle model represents one extreme understanding of media effects: external stimuli have the ability to elicit Pavlovian responses from humans. But this conception of the media’s ability to influence was soon challenged by the minimal-effects literature. This work, spearheaded by those rejecting the behaviorism movement,

demonstrates that the media's content rarely changes public opinion directly (Lazarsfeld, Berelson & Gaudet 1948; Hovland, Lumsdaine & Sheffield 1949). Instead, mass communication mostly reaches only those who are attentive to such matters (Katz & Lazarsfeld 1955). Other individuals only receive their news from these opinion leaders, who share the media's messages with their social circles (Ibid.).

It is important to note, however, that the media's message does not travel through this so-called two-step flow of communication unfiltered. Those who consume news on a regular basis tend to expose themselves to sources of information that align with their preexisting attitudes and interests (Klapper 1960; Taber & Lodge 2006; Stroud 2011). This selective exposure reduces cognitive dissonance (Festinger 1957), aids in comprehending information (Stroud 2011), and allows individuals to arrive at desired conclusions (Kruglanski 1989). In this context, the media are unable to persuade even those who pay attention to the news. Instead, the media only reinforce existing attitudes.

Selective exposure is of particular worry to scholars who believe that the rise of the Internet means that users can self-select into even more niche sources, where the information they encounter merely echoes of their own opinions (e.g. Sunstein 2001; Pariser 2011). As a result, news reinforces the audience's partisan sentiments, increasing intolerance towards alternative perspectives. Without exposure to a fair treatment of the opposing side's arguments, some worry that the resulting ideological extremism will make democratic discourse and compromise more difficult (Mutz & Reeves 2005, Slater 2007, Prior 2007, Jamieson & Cappella 2008).

Many of the classic studies demonstrating selective exposure force their subjects to choose from news stories without the opportunity to opt out news in favor of

entertainment. Decades ago, these designs may have been appropriate as broadcast news often filled the role of both news and entertainment, satisfying both audiences:

In the low-choice broadcast environment, most people watched news and learned about politics because they were reluctant to turn off the set even if the programs offered at the time did not match their preferences... And since broadcast channels offered a solid block of news at the dinner hour and again after primetime, many viewers were routinely exposed to news even though they watched television primarily to be entertained. (Prior 2005, 578-9)

However, with the rise of cable television, audiences are increasingly able to avoid political news altogether. The old research designs forcing exposure to news no longer represent the media landscape accurately, and communication scholars must incorporate the changing dynamic into their research (see Bennett & Iyengar 2008).

Subsequent research investigating the behaviors of news- and entertainment-seekers shows marked differences in political knowledge and voter turnout between the groups (Prior 2005; Prior 2007). Once media preferences are taken into account and individuals are allowed to choose entertainment over information, television news media effects are diminished (Arceneaux & Johnson 2013). Because of the myriad entertainment options available on cable television, those who prefer to avoid political news are easily able to do so. Reiterating the minimal effects literature, the news media are unable to influence entertainment-seekers' political attitudes because such individuals simply do not receive the news media's messages (Zaller 1992; Arceneaux & Johnson 2013).

The separation of news and entertainment media is an important distinction in media effects research. However, it is important to recognize that there can be significant overlap between the two. Research that focuses solely on purposive news-seeking fails to

account for inadvertent exposure to political news. Entertainment-seekers can learn about political issues through “soft news” (Baum 2002), which influences their political opinions (Baum 2003). Additionally, entertainment media can influence political attitudes through agenda-setting (Holbrook & Hill 2005) and priming (Holbert et al. 2003). Social media may provide the best opportunity for inadvertent exposure to partisan news yet. Because social media can display entertainment and political information side-by-side, the chance for inadvertent exposure to partisan news – and the subsequent media effects – makes for an exciting avenue of research.

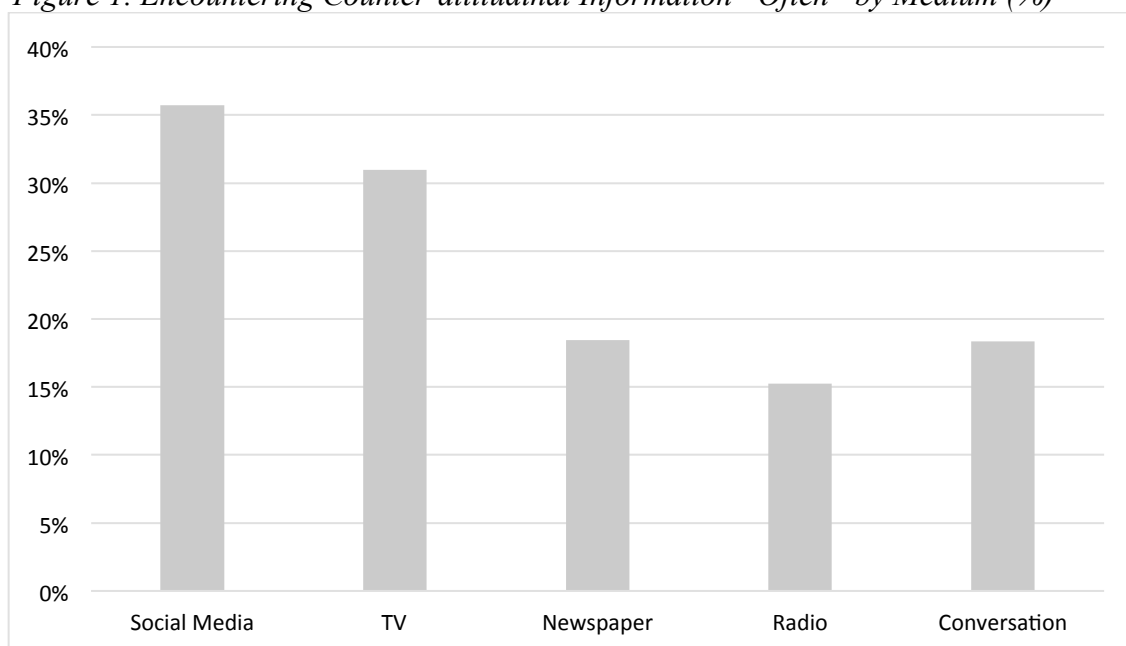
Access to broadband internet facilitates the reading and spreading of news (Rappoport, Kridel, & Taylor 2002) and is associated with affective polarization (Lelkes, Sood, & Iyengar 2015). Like broadband internet, social media extend the reach of partisan media. According to the Pew Research Center, almost half of all Internet users use Facebook to retrieve news (Mitchell et al. 2014). But whereas exposure to partisan news through cable television and traditional websites usually requires a purposive act (e.g. turning on Fox News or directing a browser to Mother Jones), exposure to such information through social media can be incidental. Indeed, 78% of Facebook users encounter news when they are logged on to the site for other reasons (Mitchell et al. 2013).

By definition, entertainment-seekers are not interested in partisan news. If they eschew political information in other media, there is reason to believe that entertainment-seekers will ignore news posts on social networking sites as well. But social media have a unique characteristic that facilitates the two-step flow of communication: social endorsements. Individuals are more likely to select and read political news on social

media if it has been endorsed by others through features such as Facebook’s “Like” option (Messing & Westwood 2012).

With the rise of social media, there is concern over how the algorithms of sites like Facebook determine which posts to display when users log in. Some worry that Facebook’s algorithms create filter bubbles, showing only agreeable information (Pariser 2011). If so, the information shared through social media would rarely introduce new ideas or challenge prevailing attitudes. But concerns over social media filter bubbles seem to be misplaced. Social media connections are often based on weak ties (Hampton et al. 2009), such as relationships with friends from high school or distant relatives. Unlike strong ties – those between close friends or family (Granovetter 1973) – weak tie networks feature a large degree of political heterogeneity (McPherson, Smith-Lovin, & Cook 2001). It is through these weak ties that exposure to counter-attitudinal information occurs; individuals connected via weak ties introduce new perspectives to the social network (Weimann 1982). Online political discussions between these individuals expose participants and audiences to political difference, contributing to network heterogeneity (Brundidge 2010). Furthermore, data from both Facebook (Bakshy et al. 2015) and Twitter (Barberá et al. 2015) indicate that social media audiences see a fair amount of counter-attitudinal information, and original survey data suggest that this phenomenon is more pronounced in the social media context than in any other (Figure 1).

Figure 1. Encountering Counter-attitudinal Information “Often” by Medium (%)



Original data collected Sept. 2014 – Jan. 2016 (n=943)

Of course, encountering counter-attitudinal information is different than consuming it. Selective exposure theory predicts that audiences will ignore cross-cutting information on social media just as they do in traditional media contexts. But just as social endorsements draw entertainment-seekers to political news they normally avoid, endorsements also trump partisan selectivity. While it is true that social media audiences tend to exhibit selective exposure absent any social endorsements, individuals are more likely to select counter-attitudinal information if their social networks have endorsed the posts (Messing & Westwood 2012).

If social media filter counter-attitudinal information to those who normally avoid it, and if social endorsements compel individuals to consume that counter-attitudinal information, then the question is how that information influences audiences.

Heterogeneous discussion is associated with increased political sophistication (Price, Cappella, & Nir 2002), deliberation (Gastil, Black, & Moscovitz 2008), and tolerance

(Mutz 2002), but other research on the benefit of exposure to different views is more equivocal. For example, scholars have demonstrated that exposure to conflicting political viewpoints both encourages (MacKuen 1990; McLeod, Scheufele, & Moy 1999; Scheufele et al. 2004) and discourages (Mutz 2006) political participation, and that it both exacerbates (Lord, Ross, & Lepper 1979; Taber & Lodge 2006; Levendusky 2013) and mitigates (Allport 1954; Mutz 2002) political extremism.

In regard to political extremism, John Stuart Mill writes that exposure to counter-attitudinal information is beneficial because without it, citizens “are deprived of the opportunity of exchanging error for truth (1859, 21).” Yet, this theory of information exchange assumes that individuals will remedy their misperceptions once corrected. Such updating may occur if individuals are motivated to be accurate, but individuals can also be motivated to arrive at certain conclusions (Kunda 1990). In this regard, individuals evaluate new information using internal, not external, criteria (Kruglanski 1989). When these motivated reasoners are exposed to information that runs counter to their predispositions, they (subconsciously or no) are able to adapt the argument in a way that is consistent with their own attitudes, or dismiss it altogether. If so, then no counter-attitudinal information, no matter how accurate, would cause motivated reasoners to change their views. Indeed, empirical studies support the concept of motivated reasoners. Individuals tend to accept pro-attitudinal information uncritically but expend greater cognitive resources trying to undermine counter-attitudinal information (Lord et al. 1979; Taber & Lodge 2006; Edwards & Smith 1996), thus reinforcing partisan attitudes (Levendusky 2013; Arceneaux & Johnson 2013). Corrections of inaccuracies may even

“backfire,” causing conviction in the rightness of those inaccuracies to actually increase (Nyhan & Reifler 2010).

When considering the media’s influence on political attitudes, it may be important to consider the distinctions between partisan and mainstream news. That partisan news can polarize audiences should surprise no one. There is little disagreement that exposure to pro-attitudinal news reinforces partisan attitudes (Stroud 2011). Although there is disagreement over whether counter-attitudinal news would attenuate or exacerbate political polarization, empirical evidence suggests that motivated reasoning (Kunda 1990) worsens partisan extremism (Lord et al. 1979; Taber & Lodge 2006; Levendusky 2013). But what of mainstream news’ influence on partisan attitudes? Scholars often see balanced, non-partisan news as an ameliorative for political polarization (Slater 2007; Sunstein 2009). However, recent evidence indicates that even the moderate nightly news broadcasts on the major networks can also reinforce partisan attitudes (Arceneaux and Johnson 2015). Mainstream news audiences also engage in motivated reasoning when watching political segments, thus driving them further to the ideological extremes. Together, these findings do not provide an optimistic outlook for those hoping to lessen the ideological gap between liberals and conservatives. Any political information, whether it be moderate mainstream news or more biased partisan media, has the potential to polarize audiences.

Social Media, Inadvertent Exposure, & Political Attitudes

Social media are increasingly seen as a viable source of news. In the United States, 72% of online adults use Facebook (Duggan 2015) and 48% of Internet users use

the site to access news (Mitchell et al. 2014). To better understand how individuals perceive and interact with news on social media, I deployed a survey through Amazon's Mechanical Turk (MTurk) platform. MTurk provides low-cost, easy-to-find Workers that social scientists can hire to participate in their research.

Workers living in the United States that had previously completed at least 100 MTurk tasks with at least a 95% acceptance rate were eligible to participate in the survey.

The survey ran in January 2016, with 714 individuals electing to participate in exchange for a small monetary compensation. After removing those responses that provided incorrect verification codes or those that did not pass the attention checks, 690 observations remained.

With the increasing popularity of MTurk, questions have arisen whether generalizations can be made from samples drawn from MTurk Workers.

MTurk samples tend to be younger, more educated, less racially diverse, less employed, less religious, more liberal, and consist of more women than the general population (Paolacci, Chandler, & Ipeirotis 2010; Shapiro, Chandler, & Mueller 2013). The sample used in this article, however, is more representative in regards to age and gender (Table 2). Despite the potential threat to external validity, analyses conclude that samples of

Table 1. Facebook Usage Among Internet Users (in %)

<u>Gender</u>	
Female	77
Men	66
<u>Race</u>	
White, Non-Hispanic	70
Black, Non-Hispanic	67
Hispanic	75
<u>Age</u>	
18-29	82
30-49	79
50-64	64
65+	48
<u>Education</u>	
High school or less	71
Some college	72
College or more	72
<u>Income</u>	
< \$30,000	73
\$30,000 - \$49,999	72
\$50,000 - \$74,999	66
\$75,000+	78
<u>Community</u>	
Urban	74
Suburban	72
Rural	67

Source: Duggan (2015)

MTurk Workers are more representative of the general population than local convenience samples (Berinsky et al. 2012). Additionally, internal validity concerns, such as subject attentiveness and the prevalence of habitual survey takers, are largely unwarranted (Ibid.).

Table 2. Descriptive Statistics of MTurk Sample

	Stat	Std. Dev.	N
Mean age	37.3	12.4	690
Proportion female	.52	--	686
Proportion white	.78	--	680
Proportion Democrat	.58	--	690
Mean political knowledge*	3.5	1.35	690
Proportion on Facebook	.91	--	690

*Max.= 5

In fact, MTurk workers may be especially well-suited for studying social media effects. Approximately 91% of the sample has an active Facebook account, compared to 62% of the entire adult population (Duggan 2015). Though social media still remain most popular with individuals under 50 years old, seniors are increasingly joining social networking sites. Indeed, almost half of all Internet users over the age of 65 are on Facebook (Duggan 2015). However, more young people prefer social media as a source of news. According to the Mechanical Turk survey, 43% of individuals aged 18-29 prefer social media to television as a news source. Only 32% of those over 65 report the same. However, these preferences do not seem to matter when it comes to actually encountering partisan posts on social media, as both groups report seeing political news in statistically indistinguishable proportions ($\chi^2 = 5.13$, $p = .82$).

Table 3. Likelihood of Engaging in Different Social Media Behaviors

	BEHAVIOR		
	Post Entertainment	Interact With News	Post News
Extremism	.013 (.012)	.035 (.013)	.028 (.014)
Time on social media (minutes / day)	.015 (.0020)	.0086 (.0014)	.0053 (.0012)
Age	-.0040 (.0073)	.00035 (.0071)	-.010 (.0078)
Male	-.30 (.18)	.10 (.17)	.0031 (.19)
Minority	-.011 (.22)	.28 (.21)	.417 (.22)
Conservatism	.14 (.12)	.014 (.11)	-.032 (.12)
Republican ID	-.17 (.071)	-.061 (.067)	.021 (.072)
Political knowledge	-.10 (.070)	-.083 (.068)	.071 (.074)
Constant	-.10 (.43)	-1.18 (.42)	-1.79 (.45)
Observations	661	661	661
Pseudo R-squared	.12	.069	.041

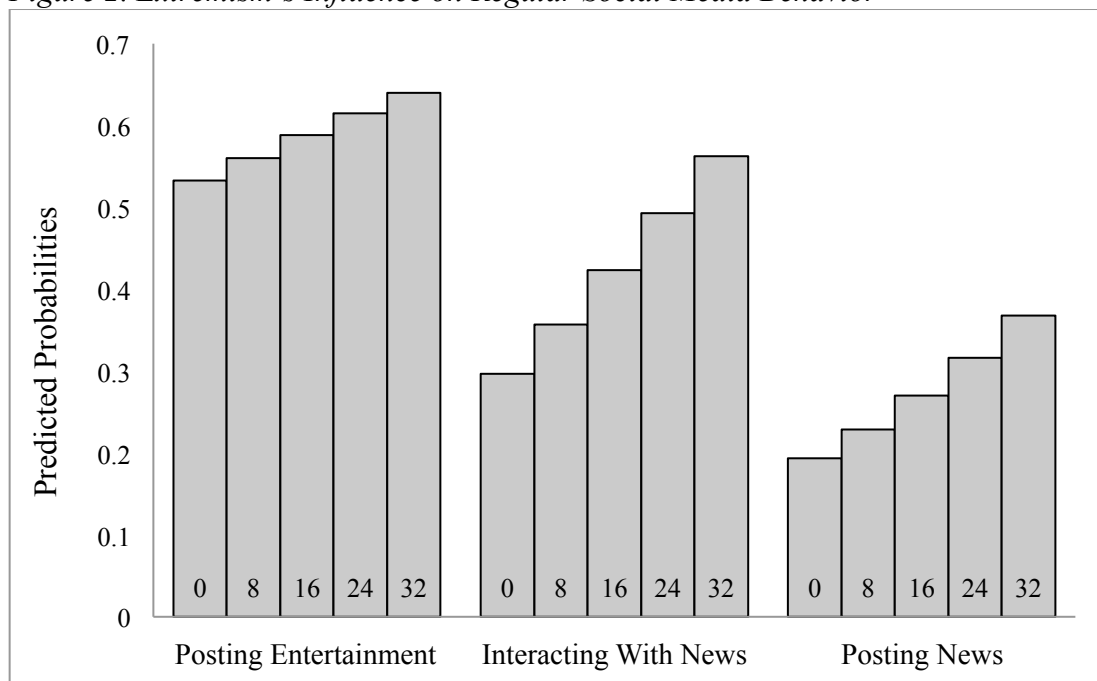
Coefficients that can be distinguished from 0 ($\alpha < .05$, two-tailed) are given in bold.
 Dependent variable is engaging in the corresponding social media behavior.

One might think that exposure to political news through social media would increase awareness of politics and government, but audiences do not feel that way. Only a third of individuals describe political discussions on social media as “useful” for learning about politics, and field experiments indicate that social media do little to increase knowledge of current events (Feezell & Ortiz 2015). Instead of increases in political knowledge, audiences see increases in partisan animus. According to the MTurk data, over two-thirds of individuals think political discussions on social media do more to polarize audiences than to build consensus, while only about 16% think these interactions lessen the gap between liberals and conservatives. Though age has no effect on these perceptions, it is worth noting that women find political discussions on social media to be both more useful, and less polarizing, than men.

Given who usually posts and interacts with political content the most, the perception that political discussions on social media contribute to polarization makes sense. Partisans with strong ideological inclinations tend to post more political news than their moderate counterparts (Smith et al. 2014; Barberá and Rivero 2015). Logistic regressions from the Mechanical Turk survey data corroborate this (Table 3). Figure 2, based on these logistic regressions, graphs the predicted probabilities of regularly engaging in different social media actions (coded as 0 or 1) given varying levels of political extremism. Extremism is calculated by scoring respondents’ positions on 16 different political issues on a 6-point Likert scale. This scale is then folded in half, so each position takes a value from 0 (moderate) to 2 (extreme). I then add the 16 issue scores for each respondent, generating an overall extremism score. The model holds all other variables at their mean values. As Figure 2 indicates, those with the most extreme

political attitudes are almost twice as likely to both regularly interact (i.e. Comment or Like) with posted political content and to regularly post political news than the most moderate users.

Figure 2. Extremism's Influence on Regular Social Media Behavior



Note: Bar numbers represent extremism scores. All other variables held at their means.

How do social media audiences react when encountering political content, the majority of which is posted by those with extreme political attitudes? Specifically, I am interested in whether purposively *seeking* news on social media, and whether *encountering* political news through social media, are each associated with extreme political attitudes. The MTurk survey separates purposive seeking from actual exposure with a pair of questions:

Seeking: “How often do you log onto social media to find political news?”

Encountering: “How often do you see political news posted on social media?”

For both questions, responses are coded categorically as “never,” “rarely,” “sometimes,” or “often.”

The distinction between seeking and encountering is important. Many traditional media scholars consider exposure to news to be the result of a purposive act (Zaller 1992; Stroud 2011; Arceneaux & Johnson 2013; Levendusky 2013), and are generally dismissive of the role of inadvertent reception of news (i.e. Holbert, Garrett, & Gleason 2010; Baum 2002; Baum 2003; Holbert et al. 2003; Holbrook & Hill 2005). But with the advent of social media, both news- and entertainment-seeking behaviors can both result in encountering political information. Because both behaviors can lead to exposure to partisan media, it is important to distinguish between seeking political news, and actually encountering it. Consider that among the MTurk respondents who “never” seek political news through social media, 61% nevertheless encounter political content inadvertently. Moreover, 36% of respondents claim to encounter political news “often” while only 17% claim the same for seeking political news.

Distinguishing purposive exposure from inadvertent also addresses the endogeneity problem associated with studying media effects and extremism. Using observational data, it is often difficult to discern whether news-seekers become extreme because of the partisan information they consume, or whether their extreme attitudes cause them to seek out partisan information. But because there are no *a priori* reasons to suspect that those receiving partisan news inadvertently hold extreme attitudes before encountering partisan content, we can attribute any extreme attitudes shown in the models to exposure to political news rather than any previously-held priors.

To determine how seeking and encountering political news are each related to extreme political attitudes, I run a pair of ordinary least square regressions with the two behaviors as the main explanatory variables (Table 4). The dependent variables for each model in Table 4 varies slightly. In this first model, the extremism dependent variable is the absolute value of the sum of each respondent's distance from the midpoint of 16 different issue dimensions. In this model, both magnitude and direction of each issue position is considered; a negative score indicates that the respondent was to the ideological left of the midpoint, while a positive score indicates a position to the ideological right. The second model, on the other hand, only takes extremism's magnitude into account. By calculating the absolute value from the midpoint before summing the issue positions, the second model does not consider the ideological direction of the position taken.

While this distinction may seem trivial, how extremism is measured can lead to different interpretations. The first model provides a picture of consistent ideological extremism, as it only captures extreme preferences in a single direction. If, for example, an individual has 8 extreme left positions and 8 extreme right positions, the positions would cancel one another out, giving her an extremism score of 0. There is no question that such an individual holds extreme attitudes. But if those attitudes are perfectly balanced between liberal and conservative ideals, how does she fit into the larger picture of political polarization? On a per-issue basis, she is contributing to partisan animus but without a consistent ideology, her aggregate issue positions place her as a moderate.

The second model, on the other hand, treats extremism on a per-issue basis by ignoring the ideological direction of preferences. If any news – mainstream or partisan,

Table 4. Social Media & Extremism

	EXTREMISM	
	Magnitude & Direction	Magnitude Only
Seeking political news	-.31 (.35)	.11 (.32)
Encountering political news	1.04 (.35)	.67 (.32)
Time on social media (minutes / day)	-.0035 (.0041)	.0031 (.0038)
Age	.0098 (.024)	.042 (.022)
Male	-1.42 (.59)	-1.32 (.53)
Minority	-1.66 (.70)	-1.46 (.64)
Conservatism	-2.82 (.37)	-1.26 (.34)
Republican ID	.59 (.23)	.21 (.21)
Political knowledge	1.59 (.23)	.86 (.21)
Constant	8.02 (1.40)	13.36 (1.28)
Observations	661	661
R-squared	.216	.109
F-statistic	19.94	8.82

Note: Standard errors in parentheses.

Coefficients that can be distinguished from 0 ($\alpha < .05$, two-tailed) are in bold. Dependent variable is extremism score based on magnitude & direction of 16 issue positions.

pro-attitudinal or counter – has the ability to reinforce political attitudes, it may not be important whether those attitudes align with a consistent ideology. The second model treats extremism on each issue separately rather than assuming that all liberals or all conservatives should have monolithic preferences. Where our fictional individual scored a 0 for extremism in the first model, she would score a perfect 32 in the second.

The results shown in Table 4 confirm what political communication scholars have known for decades: encountering political news contributes to attitude extremism. If this finding seems underwhelming, remember that this article’s chief contribution is that it does not treat seeking political news as a requisite for receiving such information. For sure, the most noteworthy result shown in Table 4 is that for both models, exposure to political news through social media is associated with extreme attitude positions, independent of news-seeking behavior. This result speaks to the inadvertent exposure to partisan information that social media facilitate. Through social media, reception of political news does not have to be the result of purposive, news-seeking behavior. Because of this, social media funnel political information to millions of individuals who would otherwise avoid it. Vast segments of the population, previously considered to be unreachable by the news media, are receiving the media’s messages through social media. This opens a whole new avenue of research for media effects scholars.

The significant results of both models also provide insight into political polarization. Recall the first model considers both the direction and the magnitude of respondents’ issue position. This means that if an individual does not adopt extreme positions in a consistent ideological direction, the first model does not detect any extremism; issue positions on the ideological left cancel out those on the right. In this

scenario, only the second model – which only considers magnitude – would yield significant results. Yet, exposure to political news’ significant, positive coefficients in both models indicate that individuals are moving in a consistent direction toward one extreme or the other, a clear sign of polarization.

Concluding Remarks

Political communication scholarship consistently demonstrates that partisan media polarizes audiences (Lord et al. 1979; Taber & Lodge 2006; Levendusky 2013; Arceneaux & Johnson 2013). However, an important caveat to much of the media effects literature is that the media’s reach is limited to those who choose to follow news (Zaller 1992; Arceneaux & Johnson 2013). Indeed, the minimal effects literature rose out of the news media’s inability to reach entertainment-seekers who do not pay attention to politics.

Yet, social media have changed the dynamics behind information reception. The contribution of this article is that social media provide a means for inadvertent exposure to political information. In doing so, social media extend the reach of the news media to audiences previously unaffected. Because entertainment-seekers have the least entrenched opinions, they should be the most influenced by the media’s messages (Zaller 1992). The vast majority of social media users are entertainment-seekers (Mitchell et al. 2013), so there is reason to believe that media effects will be especially prominent through social media.

Of course, social media users must decide to consume partisan news for it to have any effect. Though the results presented in this article indicate that social media

audiences are not ignoring political news shared through social media, the question of why remains. Indeed, if entertainment-seekers ignore political news in traditional media contexts, why don't they do the same in the social media context? The answer may be in the fact that social media allow users to easily endorse and editorialize content in a way not possible with television broadcasts. This activity from friends and family may induce social media users to consume political information that they would have otherwise ignored. Though lab experiments have demonstrated that individuals are more likely to select political articles that have endorsements (Messing & Westwood 2012), these experiments do not include entertainment options from which the subjects can choose. Because entertainment-seekers, by definition, are most interested in entertainment, it is possible that the endorsement effect would disappear if individuals were allowed to opt out of information environments (see Arceneaux & Johnson 2013). The second article of this dissertation addresses this gap in the literature, demonstrating how the processes behind information selection operate in more realistic social media contexts.

The research presented in this article suffers from the limitations associated with observational research. The study relies on self-reports of exposure to political news on social media and there is no way to verify the accuracy of these self-reports. Even more troublesome is the inability to determine the content of the political information that social media audiences encounter. Though data from both Twitter (Barberá et al. 2015) and Facebook (Bakshy et al. 2015) indicate that social media users encounter both pro- and counter-attitudinal information on social media, it is difficult to determine which pieces of information individuals are responding to using observational methods. To address this limitation, I utilize a field experiment in the third article of this dissertation

that controls exposure to pro- and counter-attitudinal information on Facebook, thus allowing better claims of causality.

Scholars of polarization have long claimed that it is only the most partisan individuals who receive and are influenced by the media's message (Zaller 1992; Arceneaux & Johnson 2013; Levendusky 2013). But social media are bringing partisan news to moderate entertainment-seekers, which is in turn causing attitude extremism. This may help explain why the general population is more polarized than it has been in decades. Yet, there is still hope for moderation. New research on the two-step flow of communication shows that face-to-face conversations can weaken the polarizing power of partisan media (Druckman, Levendusky, & McLain 2015). Rather than prescribing a healthy diet of counter-attitudinal information or mainstream news to alleviate political polarization, perhaps scholars should encourage individuals to start talking to one other about their differences.

CHAPTER 3

THE NEW PERSONAL INFLUENCE: SOCIAL MEDIA ENDORSEMENTS AND THE SELECTION OF NEWS

Abstract

Has the introduction of social media into the information landscape changed the heuristics individuals use when selecting news? Social media allow users to easily share and endorse political content. These features may increase the salience of partisan information, making it more likely to be read. To test this possibility, I utilize snowball sampling to conduct a survey experiment featuring mock Facebook News Feeds. These Feeds contain different levels of social media activity, which varies by source between subjects' actual friends and fictional individuals. I find that online endorsements and discussions increase the likelihood individuals select partisan news, regardless of the ideological bias of the news' source. This effect is only significant when the activity comes from friends or family members; comments and endorsements made by fictional individuals have no effect on information selectivity.

Introduction

Over sixty years ago, Katz and Lazarsfeld (1955) argued that because most individuals do not pay attention to political affairs, the news media are unable to influence large segments of the electorate directly. Rather than learning about politics straight from the media, most citizens receive their news from the small minority of individuals who actually follow politics. It is only through the personal influence of these news-seeking friends and family members that those uninterested in politics receive the media's message at all. This argument, and others like it (e.g. Lazarsfeld, Berelson & Gaudet 1948), became known as the minimal effects model of media persuasion.

Today, many political communications scholars still agree that the media's effects are minimal. Due to the proliferation of cable television channels, individuals can choose the content of messages (Bennett and Iyengar 2008) and many select entertainment over news broadcasts (Prior 2007; Arceneaux and Johnson 2013). However, many of these studies consider news exposure to be the result of purposive, information-seeking behavior. In doing so, they may underestimate the media's effects when individuals encounter news inadvertently. Because social media provide entertainment and news options in the same space, entertainment-seekers often encounter political news they avoid in traditional contexts.

Against conventional wisdom, entertainment-seekers do not ignore political news featured on social media as they do in traditional contexts. Indeed, a significant number of entertainment-seekers read political news on social media, even when they are logged in for entertainment purposes (Mitchell et al. 2013). In addition to social media channeling political news to entertainment-seekers, sites like Facebook also show

counter-attitudinal news to partisan news-seekers. This is noteworthy, as a preponderance of evidence indicates that individuals tend to exhibit selective exposure by choosing their news pro-attitudinal sources (see Stroud 2011 for a summary). Despite worries that individuals would continue to surround themselves with like-minded information in online environments (Sunstein 2001), recent research has shown that individuals not only encounter counter-attitudinal news on Facebook, but they consume it as well (Bakshy, Messing, & Adamic 2015).

In the social media context, why are entertainment-seekers more likely to read political content, just as partisans are more likely to read news from counter-attitudinal sources? This article explores the heuristics social media users employ when deciding whether to read political content. I argue that the features that allow social media users to share, endorse, and discuss content facilitate the same personal influence that Katz and Lazarsfeld (1955) proposed all those years ago. Personal influence, through social media's endorsement features,¹ is responsible for increasing political news' salience and dampening of partisan selectivity. No other medium enables personal influence as much as social media. While an individual may ignore a political news item featured in a newspaper, she may decide to read the same item on Facebook if her friends have shared or discussed the article.

Though lab experiments have demonstrated that individuals are more likely to select political articles that have endorsements (Messing & Westwood 2012), these experiments do not include entertainment options from which the subjects can choose. Because entertainment-seekers, by definition, are most interested in entertainment, it is

¹ Different social networking platforms use different terminology for essentially the same features. For example, Facebook's Like is very similar to Google Plus' +1 or Twitter's Favorite. Most social networking sites include some variation of share, like, and comment features.

possible that the endorsement effect would disappear if individuals were allowed to opt out of information environments (see Arceneaux & Johnson 2013). This article of this addresses this gap in the literature, using a more realistic representation of social media to determine whether personal influence increases the rate at which social media audiences read political news.

To investigate how social media endorsements influence the selection rates of political content, I implement a pair of survey experiments that feature mock Facebook News Feeds (the name given to the string of posts made by friends that greets individuals when they log onto Facebook) and record which articles subjects choose to read. I designed both experiments to resemble the Facebook interface. Though Facebook is centered around personal connections, it is not uncommon to see strangers' comments on posted news items. The first experiment investigates whether personal influence operates if audiences are not personally familiar with those sharing the political news. I find that endorsements and comments from strangers do not significantly change the way individuals select political news.

If personal influence is a contributing factor to how individuals select political news, then it follows that familiarity with those who are endorsing political content is an necessary part of the process. The second experiment investigates the importance of this familiarity by including endorsements and comments made by the subjects' close friends and family members, collected from a snowball sample. I find that individuals are more likely to select political news, and less likely to exhibit partisan selective exposure, if their friends or family have endorsed the posts.

Selective Exposure and the Role of Personal Influence

For over a century, scholars have argued that seemingly individualistic actions are best understood as the result of personal influence (Durkheim 1897; Key 1949; Berelson, Lazarsfeld, & McPhee 1954; Huckfeldt & Sprague 1995). Exposure to political information is no exception. Before social media, mass political communication mostly reached those who were attentive to such matters (Katz and Lazarsfeld 1955). These opinion leaders – usually pastors, union bosses, or other community leaders – would then share the information gleaned from the media with those in their social circle. However, this two-step flow of communication does not arrive to the uninformed unfiltered. Those who consume news on a regular basis tend to engage in selective exposure – the tendency to seek sources of information that align with their preexisting attitudes and interests (Klapper 1960, 19).

Individuals engage in selective exposure for a variety of reasons. Selective exposure preempts cognitive dissonance (Festinger 1957), creates a favorable bias towards information from pro-attitudinal sources (Lord, Ross, & Lepper 1979), fills a need to draw conclusions that fit with individuals' worldviews (Kruglanski 1989; Kunda 1990), and lessens the cognitive resources needed to understand or rationalize the information gathered (Stroud 2011). Without exposure to a fair treatment of the opposing side's arguments, some worry that individuals will become entrenched in their own attitudes, resulting in political polarization (Sunstein 2001; Mutz and Reeves 2005; Slater 2007; Jamieson and Cappella 2008).

Yet, the increasing ability to watch entertainment over news programs diminishes selective exposure's effects (Arceneaux & Johnson 2013). The proliferation of

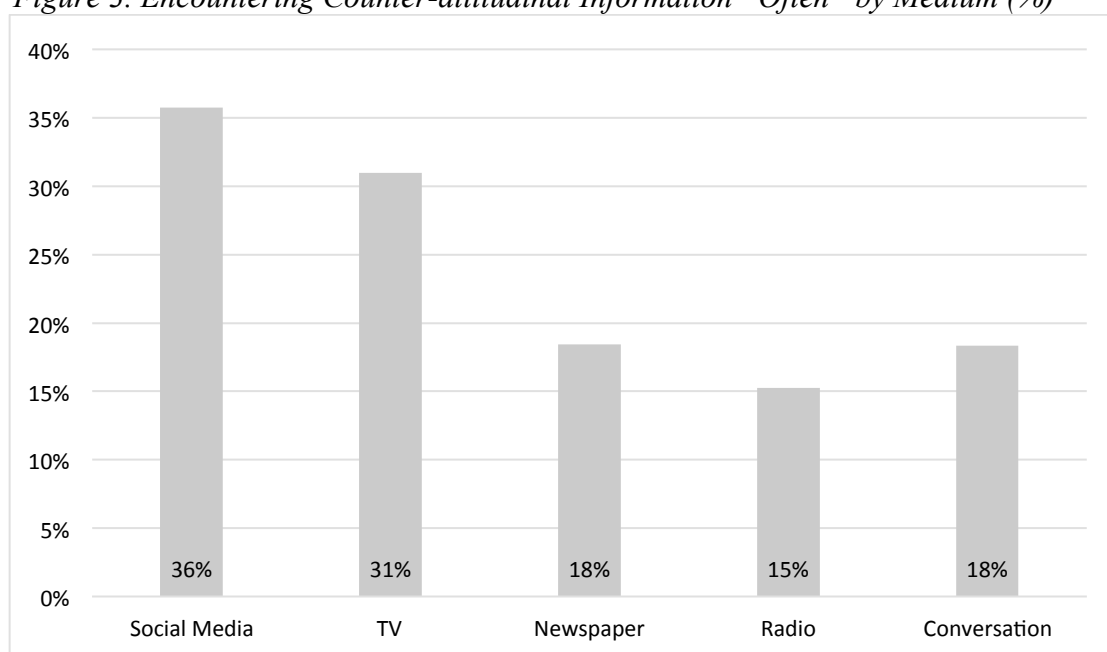
entertainment choices on television means fewer people are watching news (Prior 2007). Furthermore, those who do seek political news have the most enduring political attitudes, dampening the media's ability to influence their opinions (Zaller 1992; Arceneaux and Johnson 2013). However, much of this research focuses on purposive news-seeking behaviors and therefore underestimates the news media's influence when individuals encounter news unintentionally. Entertainment-seekers can learn about political issues inadvertently through entertainment programs (Holbert et al. 2003) or soft news media (Baum 2002), thus influencing the attitudes of politically inattentive individuals (Baum 2003) and increasing their political acumen (Baum & Jamison 2006).

Social media may provide the most inadvertent exposure to political news yet. According to Pew Research Center, 48% of all Internet users use Facebook to access news (Mitchell et al. 2014) and 78% of those users do so when they are on Facebook for other reasons (Mitchell et al. 2013). In other words, politically inattentive individuals no longer have to rely on face-to-face interactions to receive political information consistently. Social media are providing partisan news to millions of individuals who may otherwise not have received it. And despite concerns that online audiences would be surrounded overwhelmingly like-minded information (Sunstein 2001; Pariser 2011), the nature of social media's networks suggests that users will encounter an array of political perspectives.

Social networks built upon strong ties – relationships between close friends or family members – are often politically homogeneous (McPherson, Smith-Lovin, & Cook 2001). This prevailing homogeneity means that political attitudes are rarely challenged within strong tie networks. The opportunity for novel information comes from weak ties

– relationships between acquaintances or distant family members (Granovetter 1973). Weak ties connect groups that have little in common. Marginally positioned individuals connected to a social network via weak ties can introduce ideas that challenge the principle attitudes of the group (Weimann 1982). Because many social media connections are weak ties (Hampton et al. 2009), one can expect to see content from across the ideological spectrum when using sites like Facebook.

Figure 3. Encountering Counter-attitudinal Information “Often” by Medium (%)



Original data collected Sept. 2014 – Jan. 2016 (n=943)

Indeed, evidence indicates that social media users are not residing in echo chambers. Original survey data collected from Amazon’s Mechanical Turk platform show that people are more likely to encounter counter-attitudinal information through social media than they are through traditional types of media or face-to-face conversations (Figure 3). The Pew Report on Political Polarization & Media Habits affirms this pattern in a broader sample of American adults: only about a quarter of those

who pay attention to political posts on Facebook say the posts are “nearly always” (2%) or “mostly” (21%) in line with their own political views. A 62% majority of these users see political content in line with their views only “some of the time” (Mitchell et al. 2014). These numbers may even underestimate the amount of counter-attitudinal exposure, as individuals often disagree with their Facebook friends’ political attitudes more than they realize (Goel, Mason, & Watts 2010). Researchers at Facebook also support these findings, reporting that the site’s algorithm does not create filter bubbles, but instead exposes users to a fair amount of cross-cutting viewpoints (Bakshy et al. 2015).

Of course, encountering counter-attitudinal information is different than actually consuming it. This distinction is important, as traditional media studies find that individuals tend to either forego political information in favor of entertainment options (Prior 2007; Arceneaux & Johnson 2013) or read information from mostly pro-attitudinal sources (Taber & Lodge 2006; Stroud 2011). Yet these behaviors are mitigated in the social media context. Facebook users do not simply scroll past counter-attitudinal information, but are instead deciding to click on such items (Bakshy et al. 2015).

Personal influence may be at least partially responsible for this diminished selective exposure. Seeking political information is costly in terms of both time and cognitive resources. Citizens therefore look for shortcuts to reduce the costs associated with sifting through the countless options available (Downs 1957). Peers can reduce these costs by facilitating the diffusion of elite-driven information (Katz & Lazarsfeld 1955; Zaller 1992), increasing the salience of issues (McCombs 2004). Public endorsement (or derision) of political news by online peers can serve as a heuristic (Knobloch-Westerwick

et al. 2005) when selecting news. In fact, Messing and Westwood (2012) demonstrate that individuals are more likely to select information based on online social endorsements rather than the partisan affiliation of the information's source. The authors randomly assign social endorsements to one of four news article headlines, two of which have partisan sources. They then ask participants to select a headline to read the corresponding article in full and find that social endorsements trigger several decision heuristics that suggest utility, increasing the rate that individuals select counter-attitudinal items.

This article extends Messing and Westwood's design in two ways. First, I attempt to replicate Messing and Westwood's results with the inclusion of entertainment options. Because many individuals select entertainment options over information (Arceneaux & Johnson 2013), and because no entertainment choices were offered in Messing and Westwood's experiments, it is possible that their findings are simply the result of forcing participants to select news items that they would have ignored in a real-world context. If subjects select the endorsed partisan content despite having entertainment options available, we can be more confident in personal influence's explanatory power.

Second, I examine whether the source of a posts' activity matters. This article's experiments include endorsements and comments made by both fictional individuals and by subjects' actual friends and family members, both common scenarios on Facebook. The anonymous endorsements in Messing and Westwood's experiments have a significant, positive effect on article selection, but a more refined test of personal influence is possible. If such an effect exists for anonymous endorsements, it is likely that endorsements made by actual members of one's social network have even greater

explanatory power. Together, these two additions better capture how social networking sites operate in the real world.

This article examines personal influence's effect on two different, yet related, behaviors: selection of partisan news and partisan selective exposure. Before investigating the effect of personal influence on selective exposure, however, it is important to establish that selective exposure exists. When a user posts an article to Facebook, a small preview of the article and the source of the article is displayed. These cues are usually enough to identify the partisan bias of a posted news item, allowing individuals to use that bias as a selection heuristic (Messing & Westwood 2012). This produces the first hypothesis:

H₁: Absent any activity, individuals will select posts from pro-attitudinal sources over counter-attitudinal sources.

For the reasons discussed above, personal influence may make political news more appealing. Entertainment-seekers who usually ignore political news may find themselves reading partisan content if it has generated a large amount of discussion. In this regard, we would expect endorsements and commentary to increase the selection rates of political content. However, it is not enough to know that personal influence compels Facebook users to consume partisan news. It is desirable to understand the ideological congruency of the articles users are selecting. If audiences exhibit selective exposure when selecting partisan news, we would expect personal influence to increase the rates at which users consume news from pro-attitudinal sources. Yet, despite this tendency to select from congruent sources, evidence indicates that Facebook users exhibit less selective exposure than their traditional media counterparts (Bakshy et al. 2015). If

personal influence is the mechanism behind this phenomenon, we would also expect individuals to read information from counter-attitudinal sources when others have commented upon or endorsed the material.

H₂: Individuals will select pro-attitudinal content at a higher rate if it features endorsements or comments.

H₃: Individuals will select counter-attitudinal content at a higher rate if it features endorsements or comments.

But does the source of this commentary matter? Personal influence theory suggests that individuals are most influenced by those in their social circles (Katz & Lazarsfeld 1955). The final hypothesis investigates the importance of the source of a posts' activity for news selectivity. Specifically, *H₄* tests whether endorsements or comments made by friends or family members better predict an article's selection than those made by strangers.

H₄: Individuals will select content at a higher rate if the endorsements or comments are made by peers instead of strangers.

Research Design

I designed the experiments in this paper to resemble Facebook's interface for several reasons. Facebook is the largest social networking site, with over 1.5 billion active users. At roughly 900 million unique monthly visitors, it is the second most visited website in the world. Additionally, Facebook allows for more flexibility in how users can share content than other platforms such as YouTube or Twitter. Although Twitter is widely used in research involving social media, its 140-character limit does not allow the

platform to represent the social media landscape at large (Neuman et al. 2014). Finally, Facebook has come to be seen as a viable source for political news: 48% of Internet users gather news about politics and government from Facebook. Only 9% of Internet-users use Twitter to do the same. For additional comparison, people turn to Facebook for news much more than sites like Yahoo News (24%) or Google News (22%), and nearly as much as local television broadcasts (49%) (Mitchell et al. 2014).

On Facebook, individuals create profiles and can “friend” one another. Users can make posts onto their “Timelines,” which are visible to their friends. These posts can be anything from status updates to pictures, videos, or links to websites. Beyond choosing whom to be friends with and having the ability to hide the activity of certain friends, users have little control over what information is included in their News Feeds. Instead, Facebook’s complex algorithm determines which posts appear when users log on. Despite charges that Facebook’s algorithm filters out cross-cutting content (Pariser 2011), research has shown that the algorithm’s suppression of counter-attitudinal information to be marginal (Bakshy et al. 2015).


To test the above hypotheses, I implement a randomized survey experiment featuring a series of mock Facebook News Feeds. The subject pool consisted of 64 subjects recruited from a Northeastern university. In order to test the importance of the source of personal influence (H_4), it was necessary to collect endorsements and comments for each post from subjects’ actual peers. Potential subjects provided the names and email addresses of friends or family members (“recruits”) who may be interested in participating in a study of Facebook behaviors. Subjects identified 467

recruits for this snowball sample and 138 participated in the study (a 29.6% response rate) in exchange for a small monetary compensation.

Figure 4. Recruit Survey Example

Your Friend shared a link.
1 min · 🔒

Americans who could lose their insurance subsidies if the Supreme Court rules against Obamacare:
13.4 MILLION

 **56%** of Americans have not heard of the Obamacare case.

8 million more uninsured: What could happen if the Supreme Court rules against Obamacare
The possible impacts of the big health-care case being heard today
MOTHERJONES.COM

Like · Comment

Would you like to read the entire article?

No
 Yes

How would you interact with this post if you saw it on Facebook? (select all that apply)

- Like
 Share

Which comment would you most likely post on this article?

- I wish Obamacare would just go away!
 I like how they used graphics. Makes it easy to read.
 It'd be a shame if so many people lost their insurance.
 Important article! Everyone should read it!
 Thanks for posting!

To collect endorsement and commenting data, I gave recruits in the snowball sample a survey that featured six article previews (four political articles and two entertainment articles), appearing as they would on an actual Facebook News Feed. The political articles featured issues that had been in the news during the time of the study: a multinational treaty with Iran regarding that country's use of nuclear energy and the oral arguments made in the U.S. Supreme Court regarding the constitutionality of a provision of the Affordable Care Act. There were two articles for each issue – one from a liberal source, and one from a conservative source

The recruit survey presented recruits with all six of the article previews (Figure 4). After deciding whether to read each article, recruits indicated whether they would “Like” or “Share” each post, features commonly used on Facebook. Recruits also selected from a list of pre-made Comments and were informed that their decisions would be used in a faux Facebook News Feed in future research (i.e. News Feed C below).

Once I collected the recruits' Comments and Likes, I contacted the original subjects, offering a small monetary compensation to participate in a study of Facebook behaviors. Of the original 64 subjects, 49 participated in the second study (a 76.6% retention rate). To see under what conditions individuals choose to read political news, I developed a survey featuring three mock Facebook News Feeds (referred to here as A, B, and C), each featuring different posts and endorsement activity.

Table 5. Descriptive Statistics of Subjects

	Stat	Std. Dev.	N
Mean age	19.4	1.43	49
Proportion female	.69	--	49
Proportion white	.61	--	49
Proportion Republican	.31	--	49
Mean political knowledge [†]	3.12	1.39	49

[†]Max.= 5


The basic structure of each News Feed was the same. Each contained four posts. Two posts of each Feed were entertainment-oriented while the other two were political articles concerning a single political issue, but from news sources at opposing ends of the ideological spectrum. Where the News Feeds differed was in the posts' activity and the source of that activity. I attributed the posts in News Feed A to fictional individuals, and these posts did not include any Likes or Comments. This allows a test of H_1 to determine whether subjects exhibit selective exposure in the absence of any personal influence.

In News Feed B, I randomly assigned Likes and Comments by fictional individuals to a single post. Untreated posts in News Feed B received no activity. By investigating whether subjects select the treated post featuring commentary, News Feed B tests whether the personal influence of strangers can induce individuals to select more political news, be it from pro-attitudinal (H_2) or counter-attitudinal (H_3) sources.


News Feed C featured the same posts used in the recruit survey (e.g. Figure 4). Because subjects are directly familiar with the recruits who Commented and Liked these posts, News Feed C allows an innovative test of H_4 for the effect of personal influence of friends and family members on news selection. News Feed C attributed one randomly-selected post to a friend or family member of the subject. Also, the treated post featured

Figure 5. News Feed A Example (No Activity)

Pretend the following posts are featured on your Facebook News Feed. Which post would you most likely click?


- 

Matt Osborne shared a link.
1 min ·




8 Artists Who Have Never Won a Grammy

From megastars like Katy Perry to legends like Morrissey, acts who've never grabbed a Grammy gramophone
ROLLINGSTONE.COM


Like · Comment
- 

Molly Wolfe shared a link.
1 min ·




Hundreds of cases of potential voter fraud uncovered in North Carolina

The North Carolina Board of Elections is investigating hundreds of cases in which voters appear to have cast ballots in two states during the 2012 presidential election.
FOXNEWS.COM


Like · Comment
- 

Ashley Elizabeth shared a link.
1 min ·




10 People You Wish You Knew In Real Life

Life would be SO MUCH better with these people around all the time.
BUZZFEED.COM | BY DAVE STOPERA

Like · Comment
- 

Travis Thomas shared a link.
Just now ·



John Lewis Says Voter ID Laws Are 'Poll Taxes By Another Name'

WASHINGTON -- Civil rights icon Rep. John Lewis (D-Ga.) said Thursday that voter ID laws are a modern-day version of poll taxes once used by Southern states to disenfranchise black and poor people. In a piece called "The Unfinished Work of Se..."
HUFFINGTONPOST.COM

Like · Comment
- I wouldn't read any of these posts.

All posts are shared by fictional individuals. None of the posts receive Likes or Comments.

Figure 6. News Feed B Example (Fictional Individuals' Comments)

Pretend the following posts are featured on your Facebook News Feed. Which post would you most likely click?

Toni Arnold shared a link.
March 6

 **The 10 Absolute Worst Things In The World**
BE AFRAID. Be very afraid.
BUZZFEED.COM | BY DAVE STOPERA

Like · Comment

2 people like this.

Tim Reckner shared a link.
March 6

 **Obama More Guilty of 'Treason' than Senate Republicans - Breitbart**
Democrats and the mainstream media have used the words "traitor" and "treason" to describe a letter to Iranian leaders, drafted by freshman Sen. Tom Cotton (R-AR) and signed by 47 Republican Senators, that warns any nuclear deal President Barack Obama signs may be voided by a future administration o...
BREITBART.COM

Like · Comment

Nicole Summers, Tanya Wilson and 153 others like this.

View 37 more comments

 **Andrea Gibbs** He should be kicked out of office!
March 6 at 6:36pm · Like · 3

 **Laura Hoover** Why Andrea? For making the world safer?
March 6 at 6:37pm · Like · 3

Benjamin Wilbert shared a link.
1 min

 **NYDN Calls Out 'Traitor' Senate Republicans**
Regardless of President Obama's fecklessness in negotiating a nuclear deal with Iran, 47 Republican U.S. senators engaged in treachery by
NYDAILYNEWS.COM

Like · Comment

4 people like this.

Joe Temple shared a link.
March 6 at 2:12pm

Pee-wee Herman's next movie is heading to Netflix
Today's secret word is: Netflix—because that's where the Judd Apatow-produced Pee-wee Herman movie is going to make its worldwide premiere. Now...
EW.COM

Like · Comment

5 people like this.

I wouldn't read any of these posts.

All posts are shared by fictional individuals. One randomly-selected post receives Likes and Comments, attributed to fictional individuals

Figure 7. News Feed C Example (Snowball Sample's Comments)

Pretend the following posts are featured on your Facebook News Feed. Which post would you most likely click?

Jim Miller shared a link. 4 hrs · 🌐

FOX NEWS **Supreme Court should nix ObamaCare subsidies, instigate reform**
The Supreme Court could improve American health care by striking down federal subsidies offered through HealthCare.com.
FOXNEWS.COM

Like · Comment

👍 26 people like this.

Amy Elizabeth Important article! Everyone should read it!
1 hr · Like

Henry Sweenster It'd be a shame if so many people lost their insurance.
Like · Reply · Just now

Zach Pfeifer shared a link. January 6 · 🌐

Mother Jones **8 million more uninsured: What could happen if the Supreme Court rules against ObamaCare**
The possible impacts of the big health-care case being heard today
MOTHERJONES.COM

Like · Comment

👍 24 people like this.

Sam Weymouth I like how they used graphics. Makes it easy to read.
1 hr · Like · 👍 3

Austin White I wish ObamaCare would just go away!
Just now · Like · 👍 2

John McHugh shared a link. January 6 · 🌐

lonely planet **The best free things to do in 2015 - Lonely Planet**
Read The best free things to do in 2015 by Lonely Planet
LONELYPLANET.COM | BY LONELY PLANET

Like · Comment

👍 22 people like this.

Michael Davis What? No Philadelphia?
January 7 at 12:15am · Like

Laura Murphy Thanks for sharing!
January 10 at 12:21pm · Like

Nick McDonald shared a link. 1 hr · 🌐

the ONION **Man Suddenly Regretting Asking To Be Taken Seriously By Peers**
COLUMBIA, MO—Just two weeks after requesting candid feedback on his work and a greater voice in department meetings, local marketing strategist Daniel Farragut told reporters Monday that he is beginning to regret asking to be taken seriously by his ...
THEONION.COM

Like · Comment

Jack Richards hahahaha
1 hr · Like

I wouldn't read any of these posts.

Subject's actual friends (with actual Facebook profile pictures)

Three untreated posts feature activity attributed to fictional individuals. One randomly-selected post is shared by subject's friend or family member. Treated post also receives Likes and Comments, made by (and attributed to) subjects' actual friends and family, complete with actual Facebook profile pictures.

the relevant Likes and Comments made by the subjects' friends and family members in the recruit survey. This required the intensive process of tailoring the survey to each subject. I used photo editing software so News Feed C included the relevant commentary, as well as the actual Facebook profile pictures of those who contributed that commentary. Because three of News Feed C's posts (liberal, conservative, or entertainment) were eligible to receive the randomly-assigned treatment, I had to develop three iterations of News Feed C for each subject, from which the survey software randomly chose one to display. The untreated posts in News Feed C featured Likes and Comments, but all attributed to fictional individuals. Here, H_2 , H_3 , and H_4 predict that subjects will choose the article endorsed by their peers, regardless of the source's ideological bias.

Table 6. Design Details

	<u>News Feed A</u>	<u>News Feed B</u>	<u>News Feed C</u>
News Feed's Featured Issue	Voter Fraud	Foreign Policy	Healthcare
Treated Article's Activity	None	Fictional	Friends & Family
Other Articles' Activity	None	None	Fictional
Hypotheses Tested	H_1	H_2, H_3	H_2, H_3, H_4

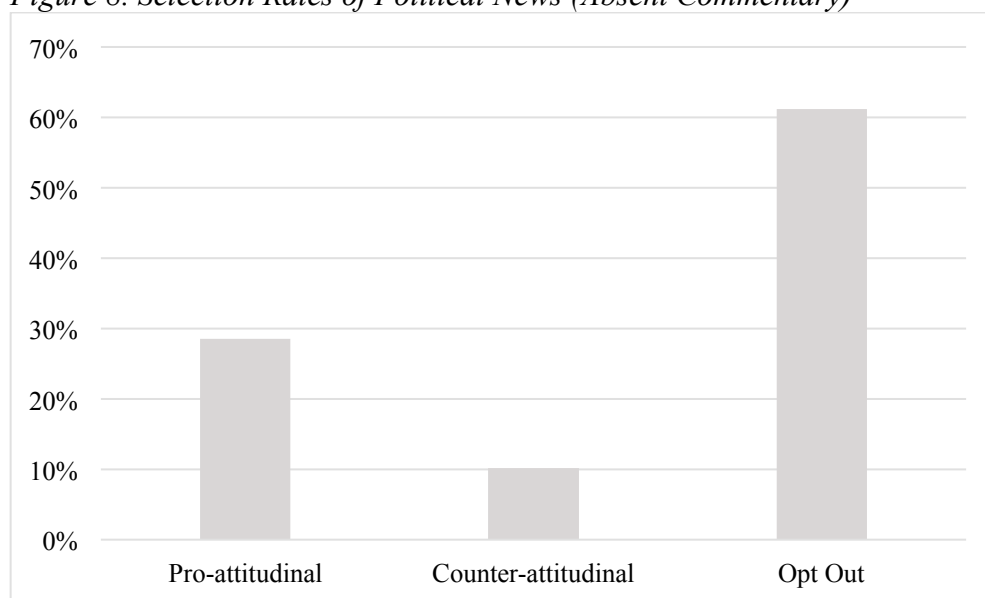
Subjects received the three News Feeds in random order. For each Feed, subjects selected which of the four posts they most wanted to read. To mirror the actual Facebook experience, a fifth option allowed participants to opt out of choosing an article. With this design, each Feed tests a different aspect of information selectivity. Selective exposure theory, addressed in News Feed A, predicts that subjects choose articles from the pro-attitudinal sources more often than counter-attitudinal sources (H_1). News Feed B examines whether the personal influence of strangers can increase the selection of pro-

attitudinal news or mitigate selective exposure, as hypothesized by H_2 and H_3 , respectively. News Feed C also examines the role of personal influence, but that of close friends and family members instead of strangers (H_4).

Results

Figure 8 shows the results of a z-test used to determine whether, absent any Likes or Comments, subjects exhibited selective exposure (H_1). The hypothesis finds support as subjects were almost 20% more likely to select articles from pro-attitudinal sources than from counter-attitudinal sources. In other words, self-identified liberals were more likely to select the article from the liberal source than the conservative source, and vice versa for self-identified conservatives. The difference in these selection rates is statistically significant at conventional levels ($z=2.14$; $p < .05$). It should be noted, however, that the majority of respondents did not select any political news. Consistent with Arceneaux and Johnson (2013), providing individuals with entertainment choices mitigates media effects, as people tend to opt out of information environments. This is an important consideration, as previous research into the role of social media endorsements on information selectivity does not include entertainment options (Messing & Westwood 2012).

Figure 8. Selection Rates of Political News (Absent Commentary)



However, behaviors change once I introduce personal influence into the News Feeds. I conduct ordinary least squares (OLS) regressions to determine whether individuals are more likely to select political news that features Likes and Comments from strangers (News Feed B) or from friends and family members (News Feed C). The dependent variables of these models are dummy variables indicating the selection of news from pro-attitudinal or counter-attitudinal sources.² The independent variables for each model indicate which post in the News Feed received the randomly-assigned treatment: pro-attitudinal, counter-attitudinal, or entertainment. Table 7 shows that Facebook's endorsement features do increase the rate at which audiences select political news from both pro-attitudinal and counter-attitudinal sources, though only if the Likes and Comments come from the audience's personal network. Commentary by fictional

² In order to code sources as pro- or counter-attitudinal, it is necessary to know subjects' ideologies. For those self-identifying as moderates, I inferred their ideologies based on their partisan identification and issue preferences.

individuals does not alter the ways in which individuals select news in any significant way.

Table 7. Effect of Personal Influence on Information Selection

TREATED POST	SELECT PRO		SELECT COUNTER	
	Fictional	Friends & Family	Fictional	Friends & Family
Pro-attitudinal	-0.11 (0.16)	0.32 (0.15)	0.00 (0.13)	0.00 (0.088)
Counter-attitudinal	-0.07 (0.14)	-0.03 (0.15)	-0.06 (0.12)	0.38 (0.090)
Entertainment	0.28 (0.10)	0.18 (0.091)	0.17 (0.085)	0.00 (0.055)
Observations	49	49	49	49
R-squared	0.01	0.11	0.01	0.31
F-statistic	0.26	2.95	0.17	10.56

Note: Standard errors in parentheses. Coefficients that can be distinguished from 0 ($\alpha < .05$, two-tailed) are in bold.

Dependent variable is the selection of pro- or counter-attitudinal information.

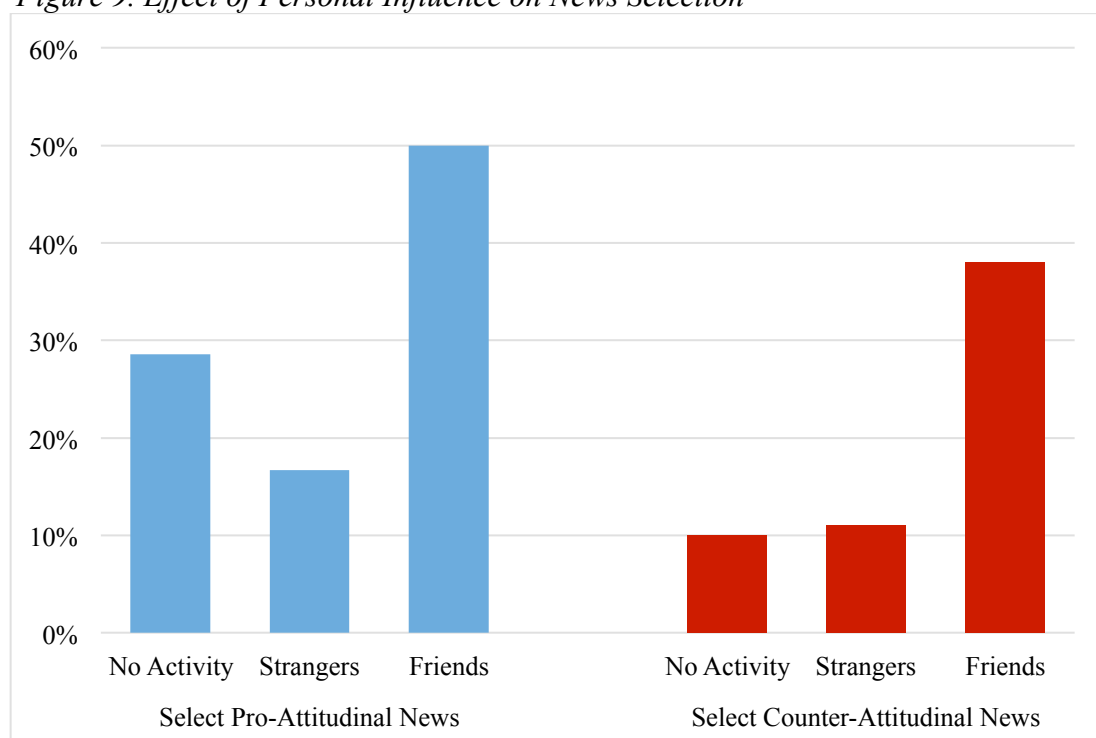
These findings provide strong evidence for H_4 , or the necessity of familiarity in order for personal influence to operate. The results also provide support for H_2 and H_3 , but only in the context of H_4 ; personal influence does draw people to political news, but in order to do so, endorsements or discussions must come from peers. In their similar experiment, Messing and Westwood (2012) find that anonymous endorsements increase news consumption, but do not allow subjects to opt out of political news. However, when I attribute social endorsements to fictional individuals, I am unable to replicate Messing and Westwood's results. Though this may be due to the study's small sample size, another possibility is the inclusion of entertainment options in this research design.

Anonymous endorsements and a lack of entertainment options do not provide an accurate

representation of Facebook. That 67% of this study's subjects opted out of political news endorsed by fictional individuals illustrates the importance of giving individuals choice (Arceneaux & Johnson 2013), especially given today's fragmented media environment (Bennett & Iyengar 2008; Prior 2007).

However, the fact that individuals are more likely to read political news that their peers are discussing speaks to the power of personal influence. Social media users are almost 20% more likely to select endorsed content from pro-attitudinal sources than unendorsed. For counter-attitudinal information, the effect is even greater; audiences are nearly 30% more likely to select news from sources on the other side of the ideological spectrum when friends and family are discussing the content (Figure 9).

Figure 9. Effect of Personal Influence on News Selection



Given Facebook's features, it is possible that the bias of the Comments – not the presence of Comments themselves – is responsible for the increased consumption of news from counter-attitudinal sources. If, for example, a subject saw Comments on a counter-attitudinal post that disparaged the article in question, a subject may select that post based on the attitude of those Comments. In other words, subjects may not be selecting counter-attitudinal articles, but instead selecting pro-attitudinal Comments. To account for this possibility, I coded the Comment balance of each post as either supportive (1), disparaging (-1), or neutral (0) of the relevant post. I then conducted two-stage least-squares regressions with this net balance as the instrumental variables to test whether the Comments' direction influenced selectivity. Ultimately, the direction of the Comments proved to be insignificant on the selection rates both pro-attitudinal and counter-attitudinal information (Table 8).

Table 8. Comment Balance as Instrumental Variables

COMMENT BALANCE	SELECTION	
	Pro	Counter
Pro-attitudinal post	.16 (.450)	-.20 (.430)
Counter-attitudinal post	-.17 (1.24)	-.20 (1.19)
Constant (control)	.17 (.390)	.20 (.372)
Observations	47	47

Note: Standard errors in parentheses. Coefficients that can be distinguished from 0 ($\alpha < .05$, two-tailed) are in bold.

Instrumented variables are the treatments on pro- and counter-attitudinal posts. Instruments are the balance of the number of disparaging comments subtracted from the number of supportive comments on each post.

Concluding Remarks

The research presented in this article provides clear evidence that personal influence, in the form of social media's endorsement features, increases the selection rates of political news. The minimal effects school of thought contends that media effects do not reach entertainment-seekers because they do not pay attention to partisan media (Zaller 1992; Arceneaux & Johnson 2013). If we consider entertainment-seekers to be those who opted out of political news when no endorsements were present (News Feed A), then entertainment-seekers make up 45% of those who selected the partisan posts endorsed by their friends (News Feed C). Additionally, recall that the minimal effects literature argues that the media are largely unable to change the minds of news-seekers because such individuals select their information from mostly pro-attitudinal sources, which reinforce their prior attitudes (Stroud 2011). However, an overwhelming 75% of news-seekers who selected news from pro-attitudinal sources when endorsements were absent (News Feed A) decided to read counter-attitudinal news if their friends had endorsed it (News Feed C). Through their endorsement features, social media can make partisan news salient to millions of individuals who may have otherwise ignored it, providing an exciting opportunity to test theories of communication and psychology on vast segments of the population often ignored by traditional media studies.

By drawing a wider audience to political news, social media's endorsement features may influence the electorate's political participation, knowledge, efficacy, or discourse. It is also likely that increased exposure to partisan media contribute to political polarization, though whether heterogeneous discussion mitigates or exacerbates extreme attitudes is an ongoing debate. On one hand, encountering different perspectives may

enlighten audiences, causing them to reevaluate their prior attitudes in light of new information. Individuals who only receive pro-attitudinal information have their opinions reinforced (Sunstein 2001; Pariser 2011), entrenching their attitudes and making compromise more difficult (Mutz & Reeves 2005; Slater 2007; Prior 2007; Jamieson & Cappella 2008). But on the other hand, it is important to remember that individuals are motivated to reach certain conclusions (Kunda 1990). Because of this, they often evaluate pro-attitudinal information kindly while dismissing information that challenges their priors (Lord et al. 1979; Taber & Lodge 2006). Motivated reasoning causes counter-attitudinal information to “backfire” (Nyhan & Reifler 2010), reinforcing political opinions, intensifying partisan attitudes, and widening the ideological gap between liberals and conservatives (Arceneaux & Johnson 2013; Levendusky 2013).

Yet, scholars mostly associate motivated reasoning with news-seeking partisans because entertainment-seekers rarely encounter political news in traditional contexts (Zaller 1992; Arceneaux & Johnson 2013; Levendusky 2013). But as this article shows, Facebook’s endorsement features compel social media users – the vast majority of which are entertainment-seekers (Mitchell et al. 2013) – to consume more partisan news. It is worth investigating how partisan media, ignored by many in traditional contexts, influences the political preferences of social media audiences. Any political news, regardless of the ideological leanings of the source, is likely to polarize partisan news-seekers. But it is less clear how such information will affect entertainment-seekers. Entertainment-seekers’ opinions are not as entrenched as those of news-seekers (Zaller 1992), so they may be less inclined to use motivated reasoning to defend those positions. Perhaps news from counter-attitudinal sources is able to persuade entertainment-seekers,

moderating their political preferences. Or perhaps entertainment-seekers are just as motivated as their news-seeking counterparts. I investigate these possibilities in the following article. In it, I deploy a field experiment that subtly inserts partisan news into subjects' actual Facebook networks to determine whether exposure to partisan information through social media contributes to political polarization, and for whom.

CHAPTER 4

WHOM DO SOCIAL MEDIA POLARIZE? RESULTS FROM AN ONLINE FIELD EXPERIMENT

Abstract

This paper explores the connection between partisan news shared via Facebook and political polarization. Because many people choose entertainment options over news, media effects are considered by many to be minimal. Yet because much of the media effects research focuses on purposive viewing, scholars may underestimate the media's influence when individuals encounter news inadvertently. Many Facebook users receive news in such a fashion. To understand the ramifications of this accidental exposure, I administer a field experiment in which partisan news is subtly inserted into subjects' Facebook information environments. Results indicate that social media audiences are motivated reasoners, as both pro- and counter-attitudinal news polarized their audiences. Exposure to counter-attitudinal information was unable to moderate political attitudes, even among the politically inattentive.

Introduction

Much of what we know about the polarizing effects of news media comes from studies of television. Political communication studies have long demonstrated that partisan media can cause liberals and conservatives to move farther apart on the ideological spectrum. However, the ways in which individuals consume news has changed. Watching a political news program is a purposive act, one in which individuals tend to seek out pro-attitudinal information (Stroud 2011). On the other hand, the vast majority of Facebook users encounter news when they are on the site for other reasons (Mitchell et al. 2013). Because the Internet can provide individualized, fragmented news, some have worried that our online information environments will resemble echo chambers, where exposure to counter-attitudinal information is rare (Sunstein 2001; Pariser 2011). Yet, individuals do not only encounter counter-attitudinal news on Facebook, they consume it as well (Bakshy, Messing & Adamic 2015). What does this inadvertent exposure to political news – counter-attitudinal or otherwise – mean for political polarization?

It is well-established that pro-attitudinal partisan news can move audiences towards the extremes (see Stroud 2011 for a summary). Despite hope that exposure to counter-attitudinal news will moderate political views (e.g. Sunstein 2001), empirical analyses demonstrate that such exposure actually reinforces partisan attitudes, moving individuals towards the poles (Lord, Ross, & Lepper 1979; Taber & Lodge 2006; Arceneaux & Johnson 2013; Nyhan & Reifler 2010; Levendusky 2013). However, much of this research focuses on the narrow segment of the population that watches partisan news. These extreme individuals are motivated to arrive at certain conclusions (Kunda

1990) and therefore readily accept like-minded information while criticizing discordant information. For these motivated reasoners, it would seem that any exposure to any partisan news – regardless of its ideological leanings – contributes to political polarization.

Yet, focusing on partisans may be overestimating traditional media's influence, which is diminished in real-world contexts. Because most individuals opt out of political news for entertainment options (Prior 2007), the potential of partisan media to reach these individuals is seldom realized (Zaller 1992; Arceneaux & Johnson 2013). But while traditional media's reach may indeed be less than once thought, we should not be so quick to dismiss social media's influence. Facebook, for example, can feature entertainment and partisan information next to one another. Because of this trait, those who use the site for diversionary purposes may encounter political news that they would have successfully avoided in traditional media environments. In a growing trend, almost half of all Internet users get news from Facebook (Mitchell et al. 2014), three-quarters of which do so when they are on the site for other reasons (Mitchell et al. 2013). In this regard, classic communications scholars may not fully appreciate the effect of inadvertent reception of partisan news through social media.

This article investigates whether partisan information shared via social media contributes to political polarization. Though there is little disagreement that pro-attitudinal information reinforces attitudes, the question remains whether counter-attitudinal information moderates Facebook audiences' attitudes or whether audiences meet such information with the same motivated reasoning exhibited by audiences of partisan news broadcasts. While partisan television news audiences tend to exhibit

selective exposure by watching pro-attitudinal sources (Stroud 2011), estimates indicate that as much as a third of the hard news individuals see on Facebook is counter-attitudinal in nature (Bakshy et al. 2015, 31). Whereas traditional media audiences tend to reject counter-attitudinal news, social media audiences are more likely to consume such information if their network has endorsed the item through mechanisms such as Facebook's "Like" feature (Messing & Westwood 2012). Indeed, approximately 55% of Facebook users click cross-cutting news items shared through the site (Bakshy et al. 2015, 23).

To test whether partisan news shared through Facebook contributes to political polarization (and for whom), I administer a randomized online field experiment in which partisan news items are subtly inserted into subjects' actual Facebook information environments. Results indicate that pro-attitudinal and counter-attitudinal information both polarize Facebook users, regardless of whether individuals are news-seekers or entertainment-seekers. These findings suggest that even entertainment-seekers consume partisan information on Facebook and that they engage in motivated reasoning when they do so. Such behavior reinforces social media audiences' conviction in their political attitudes, further contributing to mass political polarization.

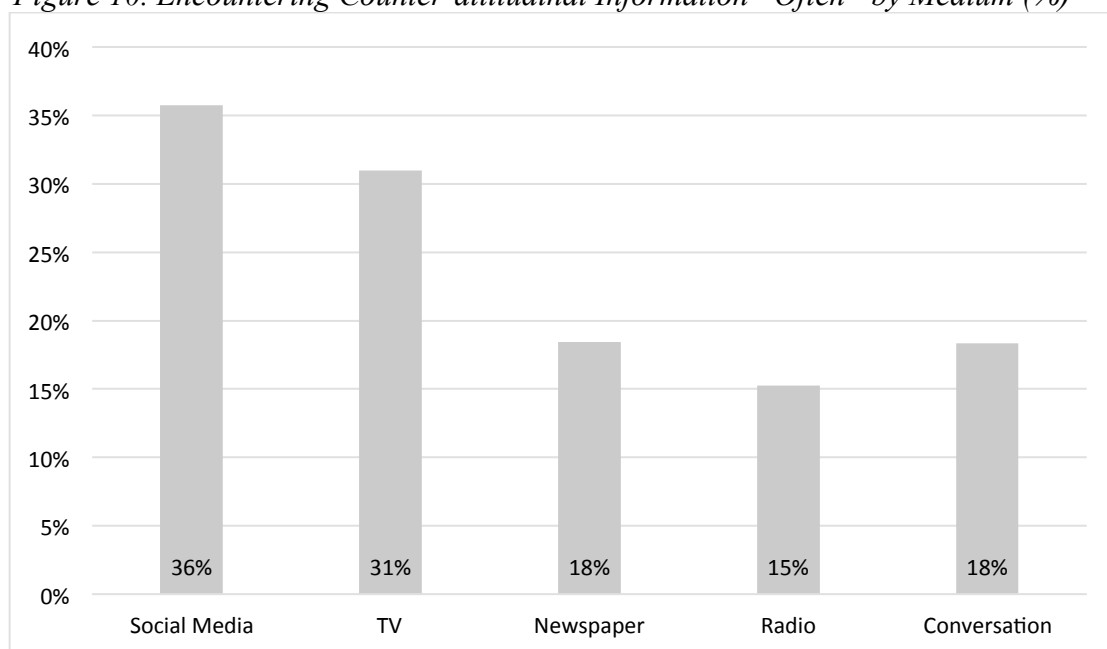
The Inadvertent Audience as Motivated Reasoners

Social networking sites allow users to easily share and endorse content through functions such as Twitter's "Retweet" or Facebook's "Like." Users can also comment upon content that others have shared, generating discussions around posted articles. These features enable a level of engagement with news items not possible with television

broadcasts. Without the filter of a traditional news outlet, users can corroborate their views, receive reinforcement from multiple sources, and create environments where one can easily identify in- and out-group members. Such behavior can be contagious: when Facebook users share their political behaviors online, their close friends are more likely to emulate those behaviors (Bond et al. 2012). This personal influence may prompt entertainment-seekers to consume partisan news that they would normally avoid in traditional media environments. A Facebook user who never watches political news may be compelled to click a partisan article after witnessing her friends' online discussion about the piece.

Social media's endorsement features not only influence *whether* users read political content, but also *what* they choose to read. Recall that estimates indicate that as much as a third of content featured in Facebook users' News Feeds can be counter-attitudinal in nature (Bakshy et al. 2015, 31). A full 85% of those who see political news on Facebook report seeing at least some posts about government or politics that are not in line with their views (Mitchell et al. 2014) and original survey data collected from Amazon's Mechanical Turk platform indicate that this phenomenon occurs more on social networking sites than with other types of media (Figure 10). Online social endorsements play a role when social media audiences encounter counter-attitudinal information, as they increase the likelihood users will actually read such information (Messing & Westwood 2012). Indeed, over half of Facebook users have clicked on a cross-cutting political news item (Bakshy et al. 2015, 23).

Figure 10. Encountering Counter-attitudinal Information “Often” by Medium (%)



Original data collected Sept. 2014 – Jan. 2016 (n=943)

Of course, how social media audiences react upon reading partisan information has significant ramifications for political polarization. Most scholars agree that exposure to pro-attitudinal information reinforces political attitudes (Lord et al. 1979; Taber & Lodge 2006; Stroud 2011). While some see exposure to counter-attitudinal information necessary for a healthy democracy (e.g. Sunstein 2001), evidence shows that such exposure actually reinforces existing attitudes (Nyhan & Reifler 2010; Arceneaux & Johnson 2013; Levendusky 2013). These studies cite motivated reasoning as preventing counter-attitudinal information from moderating attitudes. Because individuals are motivated to arrive at a desired conclusion (Kruglanski 1989; Kunda 1990), the media can do little to change their attitudes. Motivated reasoners accept pro-attitudinal information readily while subjecting counter-attitudinal information to an increased amount of criticism (Lord et al. 1979). They expend greater cognitive resources undermining the evidence of counter-attitudinal information than they do to confirm that

of pro-attitudinal information (Edwards & Smith 1996; Fischle 2000; Fischer, Schulz-Hardt, & Frey 2005; Taber & Lodge 2006; Gaines et al. 2007) or expose themselves to counter-attitudinal information for the sole purpose of rebutting that information (Lowin 1967; Kleinhesselink & Edwards 1975). For these reasons, motivated reasoning is seen as a chief contributor to political polarization.

Individuals who regularly consume political news have the most sophisticated political opinions (Zaller 1992), making them the most likely to engage in motivated reasoning (Taber & Lodge 2006; Levendusky 2013). Some scholars argue that entertainment-seekers do not have the opportunity to do the same because they rarely encounter political news (Zaller 1992; Arceneaux & Johnson 2013). Yet, this characterization may be unfair. Entertainment-seekers can have incidental contact with politics through entertainment (Holbert et al. 2003) and soft news (Baum 2002). And like soft news programs, social media can feature entertainment and political news in the same space. But unlike soft news programs, social media often feature hard news (Bakshy et al. 2015). This creates the opportunity for entertainment-seekers to inadvertently encounter partisan news on social networking sites. Indeed, 78% of all Facebook users who access news on the site do so when they are on Facebook for other reasons (Mitchell et al. 2013). With 48% of all Internet users receiving news from the site (Mitchell et al. 2014), Facebook is providing political news to millions of individuals who may otherwise not have received it.

Facebook, then, provides researchers the opportunity to test how partisan media influences the political attitudes of those least interested in politics. The following three hypotheses aim to do just that. The first hypothesis seeks to replicate a research

demonstrating that exposure to pro-attitudinal arguments reinforces political attitudes (Lord et al. 1979; Taber & Lodge 2005).

H₁: Individuals will adopt ideologically extreme issue positions after exposure to pro-attitudinal information on social media.

Despite hope that the Internet would facilitate democratic discourse (see Dahlgren 2005), exposure to opposing views seems to actually further entrench audiences' attitudes (Taber & Lodge 2005; Arceneaux & Johnson 2013; Levendusky 2013). The second hypothesis tests the supposition that social media audiences are motivated reasoners whose priors are reinforced by counter-attitudinal information.

H₂: Individuals will adopt ideologically extreme issue positions after exposure to counter-attitudinal information on social media.

If *H₂* finds broad support, then it is important to test whether entertainment-seekers specifically – the vast majority of Facebook's user base – also adopt extreme positions after reading counter-attitudinal information. Because entertainment-seekers do not log onto Facebook to read partisan news, it is possible that they are less motivated to reach certain political conclusions. Empirical analyses of whether the politically-inattentive engage in motivated reasoning are inconclusive. Some claim that such individuals adopt more extreme attitudes when forced to watch counter-attitudinal news (Arceneaux & Johnson 2013) while others claim that exposure to such information has no effect (Taber & Lodge 2006). The question, then, remains of how those who normally avoid political news react upon encountering counter-attitudinal information through social media.

H₃: Entertainment-seekers will adopt ideologically extreme issue positions after exposure to counter-attitudinal information on social media.

Research Design

To test the above hypotheses, I implement a randomized field experiment in which partisan news items are subtly inserted into subjects' Facebook information environments. On Facebook, individuals create profiles and can "friend" one another. Users can make posts onto their "Timelines," which are visible to their friends. These posts can be anything from personal musings or status updates to pictures, videos, or links to websites or news articles. Beyond choosing whom to be friends with and the ability to hide posts made by certain friends, users have little control what information is included in their "News Feeds" (the name given to the string of posts made by friends that greets individuals when they log onto Facebook).

To insert partisan news into subjects' Facebook environments, I recruited confederates from three universities in the Northeast to post political news onto their actual Facebook Timelines. Any adult with an active Facebook account who was willing to make partisan posts was eligible to participate as one of these confederates. I randomly assigned confederates to a control group or one of two treatment groups (liberal or conservative). Those assigned to the treatment groups completed a survey to determine which political issue they would be most comfortable discussing on Facebook, as well as the ideological direction they preferred for their assigned posts. The survey indicated that gun control was the ideal issue for the experiment because of the even split of liberal and conservative positions in the confederate pool.

The confederates in the treatment groups each posted two partisan items concerning the gun control debate onto their actual Facebook Timelines. Because ideology cannot be randomly assigned, only confederates with positions on the left (n=9) posted articles that took a liberal stance, while only right-leaning confederates (n=10) posted articles with conservative perspectives. This avoids the confounding situation where confederates are required to share content counter to their political inclinations. For both groups, I provided the items that the confederates posted (Figures 11 and 12). Confederates in the control group (n=18) refrained from posting anything related to gun control for the duration of the study.

Confederates in the treatment groups posted their partisan items two to four days apart. The confederates maintained secrecy about their involvement in the study and presented the political postings as their own. Some added their own commentary to the posts and interacted with their friends' comments in an organic way (see Figure 13 for examples). To monitor the activity of each gun control-related post, I created a research Facebook account that confederates added as a Facebook friend. During the time the experiment ran (October – November 2014), no major shooting incidents occurred.

Figure 11. Treatment Posts (Liberal)



GUNS IN THE UNITED STATES
AMERICANS LEAD THE WORLD IN GUN OWNERSHIP AND WHAT IS THE ACTUAL IMPACT ON SOCIETY OF MORE GUNS?
THE UNITED STATES OF GUN OWNERSHIP
4.4% of the world population
40% of the world's gun production

Guns in America

A look at the actual impact of having more guns in a society.

NUMBERSLEUTH.ORG

Like

Comment

Guns in the United States: Americans lead the world in gun ownership. What is the actual impact on society more guns?
Retrieved from <http://www.numbersleuth.org/guns/>



Myth #7:
Guns make women safer.

10 Pro-Gun Myths, Shot Down

Fact-checking some of the gun lobby's favorite arguments shows they're full of holes.

MOTHERJONES.COM

Like

Comment

10 pro-gun myths, shot down. Retrieved from <http://www.motherjones.com/politics/2013/01/pro-gun-myths-fact-check>

Figure 12. Treatment Posts (Conservative)



Guns in America | Facts and statistics about firearms in the USA

Facts and statistics about firearms in the USA. Guns are used over 80% more often to save a life than to take one. Countries with more guns have less crime in general

AMERICANGUNFACTS.COM

Like

Comment

A factual look at guns in America: how are guns being used by citizens in America each year? Retrieved from <http://americangunfacts.com>



Harvard Study: No Correlation Between Gun Control and Less Violent Crime

A Harvard Study titled "Would Banning Firearms Reduce Murder and Suicide?" looks at figures for "intentional deaths" throughout continental Europe and...

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Harvard study: no correlation between gun control and less violent crime. Retrieved from <http://cdn.breitbart.com/Big-Government/2013/08/27/Harvard-Study-Shows-No-Correlation-Between-Strict-Gun-Control-And-Less-Crime-Violence>

Figure 13. Example Treatments in the Field

October 7

If we are so concerned about saving American lives, why has government spent trillions of dollars to combat terrorist groups across the world, but not curb the gun proliferation in America which has killed more Americans than the Jihadi terrorists did?



Guns in America
A look at the actual impact of having more guns in a society.

NUMBERSLEUTH.ORG

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✓ Seen by 86

View previous comments 150 of 191

Its Not Just Murders But Violent Crime itself is what you have to look at and how many of them are Gang on Gang.
October 7 at 5:12pm · Like

Its crime RATE. It's the number of crimes per a certain number of people. Population number cannot be a useful explanation in this instance.
October 7 at 5:13pm · Like

is right. The states with strict regulations have a higher crime rate.
October 7 at 5:14pm · Like · 1

What about the number of people killed by gun violence? Is it better to have a higher chance of getting shot and killed than having a higher chance of robbery or other non-gun related crimes?
October 7 at 5:16pm · Like

It doesn't have to be with a Gun. The Criminal Will Use anything in his possession. I would Rather Have an Armed Society where I can Own A gun For The Protection of myself and Family than Not have one And Risk getting shot stabbed or Beaten By a criminal.
October 7 at 5:19pm · Like

Violence is Violence No difference
October 7 at 5:20pm · Edited · Like

The fact is when the government controls all the guns and does not allow citizens to own guns legally we as people loose a way to protect ourself. When you defend gun control you're basically saying let the cops protect us. We can see that works great by so many reckless police shootings. I grew up in a country in which the government controlled all the weapons or at least they thought they did. The reason I say that is because criminals will always find a way to get illegal guns. Most of the school shootings if not all happened with illegally acquired guns.
October 7 at 5:34pm · Like · 1

The South is Different from The North They are more Hands On Lol. If you Were able to successfully Disarm them all. They would just use Baseball bats and The Violent Crime Rates would go up. Even if you only looked At 100,000. Same With The North Really But The South Defiantly.
October 7 at 5:36pm · Like



October 9

There are a lot of myths that float around whenever there are conversations on guns in America. These are some of them.

<http://www.motherjones.com/.../20.../01/pro-gun-myths-fact-check>



10 Pro-Gun Myths, Shot Down

Fact-checking some of the gun lobby's favorite arguments shows they're full of holes.

MOTHERJONES.COM

Like · Comment · Share

likes this.

Seen by 83

View previous comments

50 of 59



I am not missing the big picture. And guns significantly increase the chances of violence.

October 9 at 2:59pm · Like



The governments have control of the people. They want to take the guns away by implementing these "gun control" policies. The end result is a ban on owning or purchasing a gun. As was done to the Jews in nazi Germany. The gun cannot increase the chance... See More

October 9 at 3:22pm · Edited · Like



Don't bring the Nazis into this. The situation is different. Nazi Germany didn't have a bill of rights with an amendment explicitly stating the right of people to bear arms. Not to mention that they did have force to take away those guns while in Ameri... See More

October 9 at 3:24pm · Like



And Jews were an extremely tiny minority with a history of state-sanctioned persecution in Europe. The present-day American gun owners are not in a similar situation as German Jews 70 years ago.

October 9 at 3:26pm · Like



Gun control doesn't mean storming into people's houses and forcibly taking guns away, or banning guns outright. It means commonsense policies such as universal and more through background checks and inquiries, some restrictions on weapons such as assault rifles, etc.

October 9 at 3:27pm · Like



You're right in that the determined criminal will probably use another tool to commit a crime. But guns are not the same as knives. And if you look at the data (shown in the post), for every one percent increase in firearms possession in a state, the firearm homicide rate increases by 1 percent.

One to three days after the confederates made their second posts, all confederates used Facebook's messaging feature to share a survey with approximately 30 of their Facebook friends. I limited the pool of potential subjects to those with whom confederates had recently interacted on Facebook. I did this to increase the likelihood that subjects saw the treatment, as well as to increase the probability of responding to the shared survey. Friends who responded to the survey formed the study's subject pool (n=182, 1115 contacted, 16.3% response rate). Subjects were unaware that their participation in the study was related to the partisan treatments and I ensured that no two confederates shared a Facebook friendship with any single subject. Confederates and subjects were both given a small monetary compensation for their participation.

Table 9. Descriptive Statistics of Participants

	CONFEDERATES		SUBJECTS	
	Stat	N	Stat	N
Mean age	21.6	37	26.3	182
Proportion female	.541	37	0.41	180
Proportion white	.703	37	0.79	180
Mean ideology*	1.27	37	1.27	164
Mean political knowledge [†]	--		3.39	182

*0=very liberal 4=very conservative

[†]Max.= 5

In addition to measuring participants' political fundamentals and news-seeking behaviors, the survey also measured preferences on a number of political issues, such as immigration, abortion, healthcare and most importantly, gun control. I operationalize political polarization as the distance between liberals' and conservatives' positions on

each of these issues. Because the confederate posts framed the gun control debate as a public safety issue, subject responses to the prompt “Being able to purchase guns easily makes society safer” on a 5-point Likert agree/disagree scale formed the dependent variable of interest. Individuals adopting positions at towards opposite extremes of the Likert scale indicate polarization. To compare the treatment effects on liberals and conservatives together, I coded issue positions in reverse for self-identified liberals. A positive treatment effect, then, would indicate polarization: conservatives become more likely to agree with the statement, while liberals become more likely to disagree with it.

I coded the partisan treatments as either *pro-attitudinal* or *counter-attitudinal* based on respondent self-reported ideologies and the partisan bias of the posted items.³ I used these explanatory variables in an ordinary least squares (OLS) regression to test H_1 and H_2 . To ensure that the partisan gun control posts did not have a spurious effect on other issue positions, I also ran regressions on immigration, abortion, welfare, foreign policy, and minimum wage policy preferences (see Appendix for these measures).

Lastly, I ran a pair of OLS regressions to determine whether entertainment-seekers also engage in motivated reasoning (H_3). I coded subjects as entertainment-seekers if they reported “never” using social media to seek out political news. I use this threshold for entertainment-seeking behavior as a hard test for motivated reasoning; entertainment-seekers should represent the group least likely to move away from the ideological center after reading counter-attitudinal partisan news. If they exhibit

³ Self-identified moderates, by definition, could not be coded as having encountered pro- or counter-attitudinal information. To code these subjects, I used their self-reported partisanship to determine whether they were exposed to pro- or counter-attitudinal treatments. Excluding the moderates from the analysis did not significantly change the results presented in this paper.

polarization after being exposed to cross-cutting information, then we can be confident that even those uninterested in political news engage in motivated reasoning.

This research design avoids recent criticisms of forced-exposure studies. Because many lab experiments that measure media effects do not allow subjects to opt out of information environments in favor of entertainment options, these kinds of experiments risk overestimating the news media's influence (Arceneaux & Johnson 2013). By implementing a randomized field experiment, I am not forcing exposure on subjects. There is no assumption that subjects read (or even saw) the treatment posts. Because I could not monitor which subjects actually read the partisan information, I estimate the intent-to-treat (ITT) effects of the pro-attitudinal and counter-attitudinal treatments.

Table 10. Balance Test Results

	GROUP		DIFFERENCE
	TREATMENT	CONTROL	TREATMENT – CONTROL
Ideology (mean)	1.24	1.41	-0.17 (p=.48)
Age (mean)	26.5	25.5	1.05 (p=.58)
Proportion female	0.38	0.56	-0.18 (p=.05)
Proportion white	0.84	0.62	0.22 (p < .01)
Knowledge (mean)	3.47	3.03	0.44 (p=.10)

Note: Inclusion of race in the models does not affect the results in a substantive way.

Estimating the ITT effect has two advantages. First, the experimental approach is superior to observational methods that compare exposed individuals to unexposed individuals, which fail to account for the possibility that those who already hold more extreme attitudes could be the most likely to read partisan information on Facebook. The

random assignment used in this experiment ensures that the only systematic differences between treatment and control groups are the planted posts (Table 10). Therefore, any differences in political polarization between the groups can be attributed to the partisan treatments.

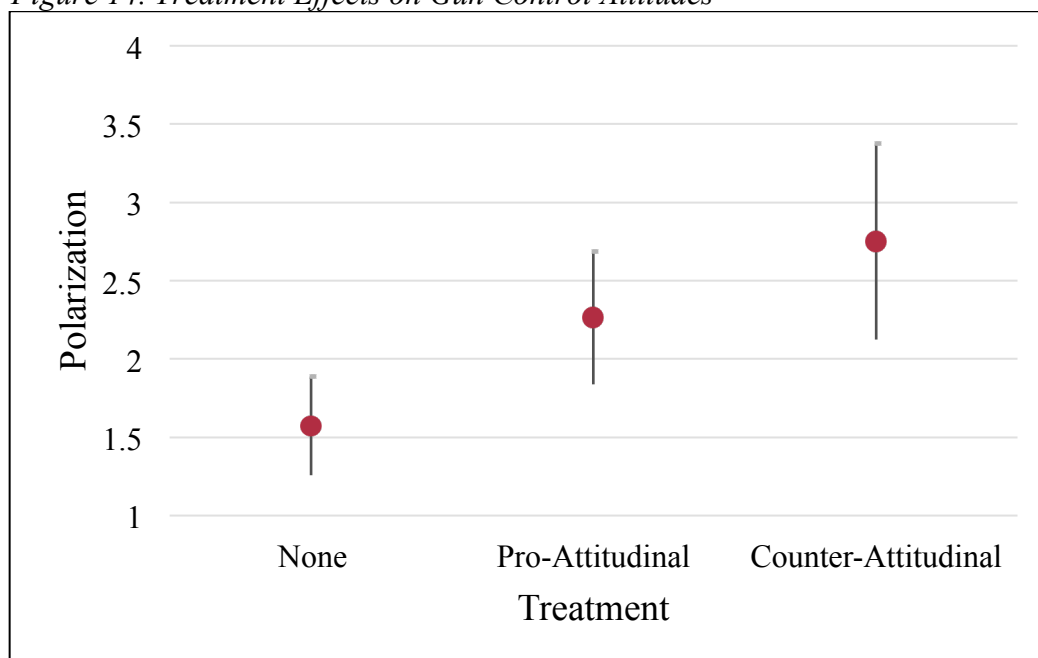
Second, because the ITT effect allows for the fact that subjects might not have seen the treatment posts, it tells us something of practical interest: the overall effect of partisan information placed on Facebook. There are many reasons why those in the treatment group may not have received the treatments. Subjects may not have logged onto Facebook, Facebook's algorithm might not have displayed the partisan news articles, or subjects might have ignored them altogether. Estimating the ITT effect allows for those in the treatment groups to remain untreated, thus avoiding the problems associated with measuring the treatment-on-the-treated (ToT) effect. Comparing the attitudes of only those receiving the treatments to those in the control group suffers from the same limitations as observational studies: those that hold more extreme attitudes could be more likely to read partisan news. In such a scenario, subjects do not receive treatments based on random assignment, but self-select into the treatments; their extreme attitudes could draw them towards partisan news shared through social media. In this case, it would be inappropriate to ascribe polarization to the treatments, when it could be subjects' extremism causing them to receive the treatments. The ITT, on the other hand, is agnostic to whether subjects actually receive the treatments, providing an unbiased comparison between the treatment and control groups (see Arceneaux & Kolodny 2009, 762 for further discussion of the appropriateness of estimating ITT effects).

Results

Figure 14 displays the results of the OLS regressions testing the broad effects of pro- and counter-attitudinal information featured on Facebook. The positive, significant differences from the control group for both the pro-attitudinal and counter-attitudinal treatments indicate strong support for H_1 and H_2 , respectively. The presence of pro-attitudinal partisan posts on Facebook causes their audiences to adopt more extreme issue positions. Similarly, audiences of counter-attitudinal information also become polarized.⁴ This suggests that Facebook users are, on average, motivated reasoners. Rather than moderating opinions, exposure to counter-attitudinal information instead pushes individuals further to the ideological extremes. Taken together, these findings indicate that inclusion of any partisan information on social media – regardless of ideological congruency between information and recipient – can polarize audiences. Additionally, this effect is limited to the issue featured in the posts. Table 11, which includes the full model shown in Figure 14, indicates that the gun control article treatments did nothing to contribute to extreme positions on the other political issue preferences measured by the survey, ruling out any spuriousness.

⁴ I standardize the treatment effects using Cohen's d (Cohen 1988). The standardized effect of both the pro-attitudinal ($d = .28$) and counter-attitudinal ($d = .62$) treatments are considered "medium" by Cohen's standards.

Figure 14. Treatment Effects on Gun Control Attitudes



Because Facebook allows users to easily interact with posted content, it is possible that comments on the treatment posts influenced subjects' attitudes rather than the treatments themselves. If, for example, a subject in the counter-attitudinal treatment group observed many comments disparaging that article, those comments may account for the subject's strengthening attitudes. In other words, subjects may not be reacting to counter-attitudinal articles, but instead to pro-attitudinal comments, a case in which motivated reasoning plays no part. To account for this possibility, I coded all comments made on the treatment posts as either *supportive* (1), *disparaging* (-1), or *neutral* (0) towards the original post and recorded the net balance of comments for each pair of treatment posts. Though a t-test shows that the pro-attitudinal posts received significantly more disparaging comments ($\bar{x}_p = -2.22$, $\bar{x}_c = -.21$, $p < .01$), an instrumental variable

Table 11. Treatment Effects on Additional Issue Positions

TREATMENT	ISSUE AREA					
	Gun Control	Minimum Wage	Abortion	Welfare	Foreign Aid	Immigration
Pro	0.69 (0.21)	0.03 (0.18)	-0.21 (0.21)	0.21 (0.18)	-0.25 (0.18)	-0.16 (0.18)
Counter	1.18 (0.32)	-0.35 (0.18)	-0.58 (0.30)	.06 (0.27)	-0.03 (0.26)	0.52 (0.27)
Control	1.57 (0.16)	2.69 (0.13)	2.91 (0.15)	2.19 (0.14)	2.20 (0.13)	2.23 (0.14)
Observations	182	182	182	182	182	182
R-squared	0.09	0.01	0.02	0.01	0.01	0.04
F-statistic	8.85	1.16	1.88	0.70	1.03	3.41

Note: Standard errors in parentheses.

Coefficients that can be distinguished from 0 ($\alpha < .05$, two-tailed) are in bold.

Dependent variable is agreement with issue statement on 5-point Likert scale (recoded in reverse for counter-attitudinal ideologies)

Table 12. Alternate Issue Dependent Variable Statements

Immigration:	“The government should make it a priority to find and deport immigrants who came to the United States illegally.”
Abortion	“The government should not restrict a woman’s ability to get an abortion.”
Welfare	“The government should reduce the amount it spends on welfare programs.”
Foreign Aid	“The government should reduce the amount of financial aid it gives to foreign countries.”
Minimum Wage	“The government should raise the minimum wage to reduce the income gap.”

Note: Responses coded on a 5-point Likert scale indicating the degree to which participants agreed or disagreed with each statement. Responses were then coded in reverse for counter-attitudinal ideologies.

two-stage least-squares regression indicates that the direction of comments has no effect on gun control preferences independent of the treatments (Table 13).

Table 13. Comments' Influence on Attitudes

COMMENT BALANCE	Effect
Pro-attitudinal post	-1.51 (0.87)
Counter-attitudinal post	0.35 (1.31)
Constant	3.10 (0.72)
Observations	145

Coefficients that can be distinguished from 0 ($\alpha < .05$, two-tailed) are given in bold.

Dependent variable is agreement with issue statement on 5-point Likert scale (recoded for counter-attitudinal ideologies)

Instrumented variables are the pro- and counter-attitudinal treatment posts. Instruments are the balance of disparaging and supportive comments on each post.

Having established that partisan information on Facebook can polarize audiences broadly, I now turn to testing H_3 to determine whether entertainment-seekers – the majority of Facebook's user base – also engage in motivated reasoning. Table 14 presents the results of two different regressions: the original model graphed in Figure 14 and a model interacting the treatments with entertainment-seeking behavior (coded as 1 if subject reported “never” using social media to seek out political news). Again, I used this coding as a hard test for entertainment-seekers, who should be the least motivated to defend political attitudes (Zaller 1992).

Table 14. Entertainment-Seekers' Behavior (H₃)

TREATMENT	MODEL	
	Original	Entertainment-Seekers
Pro-attitudinal	0.69 (0.21)	0.56 (0.22)
Counter-attitudinal	1.18 (0.32)	1.01 (0.32)
Entertainment-seeker		-1.11 (0.04)
Seeker x pro-attitudinal		1.32 (0.71)
Seeker x counter-attitudinal		2.42 (1.46)
Constant	1.57 (0.16)	1.68 (0.17)
Observations	182	182
R-squared	0.09	0.12
F-statistic	8.85	4.69

Note: Standard errors in parentheses.

Coefficients that can be distinguished from 0 ($\alpha < .05$, two-tailed) are in bold. Dependent variable is agreement with issue statement on 5-point Likert scale (recoded in reverse for counter-attitudinal ideologies)

Table 14 features some noteworthy results. The non-interacted entertainment-seeking variable represents entertainment-seekers in the control group. These individuals have less extreme issue positions than news-seekers in the control group, represented by the constant term. This is consistent with previous research that suggests that entertainment-seekers have the least developed political opinions (Zaller 1992; Prior 2007).

When entertainment-seekers are exposed to partisan information, they do not act significantly different than their news-seeking counterparts. In other words,

entertainment-seekers also adopt extreme attitudes when encountering both pro- and counter-attitudinal information. H_3 finds support. In fact, it is worth noting that a one-tailed test indicates that partisan media polarize entertainment-seekers in the social media context more than their news-seeking counterparts. This is also consistent with classic media effects theory, which argues that because entertainment-seeking audiences have the least developed political attitudes, they have the most room for movement towards the ideological extremes (Zaller 1992).

Concluding Remarks

Social media are unique in that they feature hard news and entertainment in the same space. This characteristic means that users can encounter partisan information while seeking diversion. Though most media studies view news-seeking as a purposive behavior, social media often exposes audiences to news incidentally. The results presented in this article indicate that Facebook users are polarized when they encounter partisan news. Specifically, the presence of pro-attitudinal and counter-attitudinal information on Facebook each contributes to attitude extremism.

This study's findings paint a demoralizing picture for those who see consumption of counter-attitudinal information as the cure for mass political polarization. Though we may hope that cross-cutting perspectives will moderate political views, Facebook users – regardless of their news-seeking behaviors – tend to engage in motivated reasoning to undermine such information, thus moving further to ideological extremes. The implications for our democracy are profound. If contact with opposing arguments only

pushes people further apart, then hopes of consistent partisan compromise may be misplaced.

Is reasonable debate doomed? Perhaps not. This study, like all studies, has some limitations. Because the study's confederates were recruited from three Northeastern universities, most of their friends in the study's sample were college students. The mean age of all subjects was 26.3 ($n=182$, $SD=9.86$), which skews young compared to the general population. Younger individuals tend to use Facebook the most, so it is possible that the reported effects may be diminished with a more representative sample.

Additionally, the treatment group's racial composition was whiter than that of the control group. However, controlling for race in the models did not substantively change the findings presented here.

This project hints at the role that personal influence plays in shaping opinions. It is possible that face-to-face deliberation influences attitudes differently than social media. Entertainment-seekers can still receive political news from their friends in a two-stage flow of communication. With that in mind, heterogenous group discussion may moderate opinions. While diversifying media consumption may not solve mass polarization, it is important to remember that the media are not the only sources of political information.

CHAPTER 5

CONCLUSION

In light of changing patterns in news dissemination and consumption, Bennett and Iyengar (2008) urge scholars to update the political communication paradigms that are based on outdated modes of communication. There is a certain appropriateness to the fact their call does not address social media, arguably the most important development in mass media since the Internet. Facebook's meteoric rise as a news source is emblematic of how quickly information technology can proliferate. The development of social media lends credence to Bennett and Iyengar's claim that communications scholars must stay abreast of the rapid changes in technology usage and news consumption in order to remain relevant.

Through a combination of survey and experimental research, I demonstrate that social media draw new audiences to political news, and that this increased exposure to partisan news contributes to political polarization, regardless of news- or entertainment-seeking habits. But perhaps more importantly, this dissertation takes seriously Bennett and Iyengar's appeal to update political communication models, doing so two important ways: by demonstrating the need for scholars to use innovative methods that incorporate the personal influence element of social media and by drawing scholarly attention to inadvertent media effects, especially for entertainment-seeking audiences.

Though this dissertation focuses on attitudinal effects, we should not limit social media research to political polarization. Indeed, scholars have begun investigating whether social media influences audiences' other behaviors or characteristics, such as

political engagement and knowledge. But those communication scholars wishing to study social media effects must implement research designs that closely approximates social media interactions by accounting for personal familiarity. The snowball sampling and field experiments used in this dissertation do this, and may provide inspiration for future communication scholars interested in studying social media effects. Though a significant undertaking, including subjects' friends and family members in research designs provides a realistic representation of actual social media information environments. Chapter 3's results hinge upon the inclusion of the endorsement activity collected from the study's snowball sample; personal influence only operates when audiences have familiarity with those discussing the news. For this reason, it was essential to recruit the confederates featured in Chapter 4's experiment. Given the role of personal influence on social media, Chapter 4's subjects may have ignored the partisan treatments had they not come from close friends or family members. This dissertation shows that social media scholars cannot focus solely on the content of political messages, but must also consider who is sharing the information.

Unfortunately, many communication scholars fail to account for personal influence. For example, Feezell and Ortiz (2015) develop an experiment where subjects join a Facebook group that regularly posts political news to test whether individuals can inadvertently learn about politics while surfing Facebook. Similarly, Foos et al. (2015) design an experiment in which subjects join a group dedicated to preserving a threatened natural resource, which encourages members to take civic action. In both studies, membership in the treatment group has no effect on the variables on interest. Yet, it is important to note that both groups' posts came from accounts designed by the

researchers. Subjects belonging to these Facebook groups received information from a faceless organization with which they are unfamiliar. In other words, there is no element of personal influence. In contrast, consider Bond et al.'s (2012) 61-million-person Facebook experiment that investigates the role of personal influence on political participation. By including personal influence in their research design, the authors find that certain social media behaviors can boost voter turnout. Clearly, failure to account for personal influence may cause scholars to mistakenly conclude that social media effects do not exist. Indeed, one wonders whether the studies demonstrating social media's inability to contribute to political knowledge (Feezell & Ortiz 2015) or political engagement (Foos et al. 2015) would have produced positive results had they accounted for personal influence.

The second contribution of this dissertation is its focus on inadvertent media effects, especially for the entertainment-seeking audiences who normally opt out of partisan news. Traditional media effects research often ignores entertainment-seeking audiences because they rarely receive television or newspapers' political messages. However, because social media feature entertainment and political news next to one another, entertainment-seekers inadvertently encounter political news. Indeed, over three quarters of Facebook users who see news on the site do so when logging on to Facebook for other purposes (Mitchell et al. 2013). Furthermore, because personal influence makes political news more salient, entertainment-seekers are less likely to ignore political news shared through social media.

Political communication scholars face difficulties when modeling the inadvertent reception of partisan news through social media. Without access to Facebook's

proprietary browsing data, it is near impossible to determine which media messages individuals receive and consume. Laboratory experiments confront this issue, but at the cost of external validity. There are concerns that the conditions in the lab do not accurately represent the real world, especially when forcing entertainment-seekers to consume political information they would normally avoid. Chapter 4's field experiment, however, allows me to measure partisan media's effect on entertainment-seekers' political preferences without a forced-exposure design. While lab experiments may help scholars uncover causal mechanisms, field experiments allow researchers to integrate personal influence and realistically create inadvertent exposure.

There is little disagreement that pro-attitudinal news reinforces political preferences (Stroud 2011; Lord, Ross, & Lepper 1979; Taber & Lodge 2006; Levendusky 2013; Arceneaux & Johnson 2013) and empirical analyses indicate that news-seeking partisans are generally unconvinced by arguments challenging these priors (Kunda 1990; Lord et al. 1979; Taber & Lodge 2006; Levendusky 2013; Arceneaux & Johnson 2013). This project corroborates these findings, indicating that exposure to political news from both pro- and counter-attitudinal sources contributes to political polarization. But again, this dissertation goes further than many traditional media studies by investigating how entertainment-seekers react to partisan news outside of laboratory settings. This is a novel contribution to the media effects literature, because communication scholarship often views the media as unable to reach those who are uninterested in politics and opt out of political news (Zaller 1992). But this dissertation demonstrates that when entertainment-seekers do see political news, they, at the least, do not act significantly different than their news-seeking counterparts. In fact, there is slight evidence that they may even exhibit

greater political polarization upon encountering partisan news (Table 14). This is consistent with classic media effects theory, which argues that because entertainment-seeking audiences have the least developed political attitudes, they have the most room for movement towards the ideological extremes (Zaller 1992).

Social media facilitate personal influence in a society that has otherwise been declining in social capital (Putnam 2000; Bennett & Iyengar 2008). In doing so, social media direct partisan news to previously unreachable audiences. While social media are not replacing television or newspapers as sources of political information, these developments make social media worthy of scholarly attention. This dissertation leverages these two characteristics to demonstrate that exposure to partisan news through social media contributes to political polarization, even among audiences whom traditional media do not reach. Though I use Facebook as the focal social networking site for this dissertation, the results presented here are not limited to Facebook alone. Indeed, the results may even not be limited to social media. Eveland (2003) suggests that communication scholars disaggregate media effects to better understand which of the media's attributes produce the greatest effects. Research that simply separate television from social media, and compares the influence of each, misses the opportunity to investigate which elements of each medium have the most explanatory power. To use Eveland's suggested attributes, Facebook has high levels of interactivity and control, and a wide variety of content that can be presented in the same space. Television, on the other hand, lacks many of these characteristics, which may explain social media's ability to facilitate personal influence and inadvertent exposure in ways broadcasts cannot. By focusing on the media's attributes, communication scholars can develop a framework that

allows us to test different social media platforms (e.g. Twitter or YouTube), or even technologies that do not yet exist.

For the foreseeable future, social media are unique in their level of interactivity, control, and its diverse content that audiences may view inadvertently. Scholars dismissing social media as no different from traditional media miss the opportunity to leverage social media's unique characteristics to test new and existing theories of political communication and media effects. Future researchers can compare the effects of identical stimuli in different contexts, varying the attributes that Eveland (2003) describes. Once the scholars uncover the explanatory attributes, we can then investigate the mechanisms causing attitudinal change in those attributes. For example, social media's interactivity may allow posters to build reputations, which could be enough to sway audiences alone. Or if social media audiences exhibit greater control in determining which content is displayed, may we see the return of the echo chamber? Unpacking these mechanisms behind social media (and future communication technologies) will yield communication scholars a greater understanding of how individuals react to political news, and the sources from which they receive it.

Nearly all of the social media effects research focuses on consumers of information, but it is important to remember that social media allow anyone to share political information and become an online opinion leader (see Katz & Lazarsfeld 1955). Studying only consumers of political news only tells half of the social media story. Political scientists and communication scholars should investigate why posters share content in the first place, how they decide which content to share, and what benefits – both intrinsic and extrinsic – they derive from making partisan posts. Additionally, those

interested in attitudinal effects can investigate how the action of posting, as well as how the online community reacts to those posts, influences partisan sentiments. While this research agenda is chiefly concerned with political attitudes, communications scholars should seriously consider the role of online personal influence and inadvertent exposure in other domains, such as political participation, knowledge, efficacy, or debate. Social media bring political news to new audiences numbering in the millions. Political communication scholars would be remiss not to investigate their influence.

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