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Social Media and Misinformation: The Impact of Political Affiliation and Education on News Sharing Behavior and Source Credibility

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Manuscripts

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3 **Social Media and Misinformation: The Impact of Political Affiliation and Education on**
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5 **News Sharing Behavior and Source Credibility**
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10 **Abstract**
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12 The rapid and widespread diffusion of misinformation across social media platforms
13 remains a prominent concern for audiences seeking impartial news coverage of political issues.
14 Using a nationwide sample of U.S. adults ($N = 324$), an experiment was conducted to better
15 understand factors that can influence social media sharing habits and political news credibility.
16 The present study examined demographics and sourcing as ways to potentially combat the
17 dissemination of misinformation. Study participants across multiple demographic backgrounds
18 evaluated the source credibility of a political news article and assessed the likelihood they would
19 share the article information with others. The results provide evidence that educational
20 attainment and political affiliation can be predictors of news sharing behaviors and wider
21 political engagement. The findings also suggest that the combined presence of political
22 affiliation and article sourcing will increase share likelihood. The details of the experiment and
23 the implications of these findings are discussed.
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44 **Keywords:** Media credibility; social media; article sourcing; political affiliation; educational
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Social Media and Misinformation: The Impact of Political Affiliation and Education on News Sharing Behavior and Source Credibility

The 2016 United States presidential election sparked a heightened awareness and renewed vigilance toward news credibility that media organizations continue to cultivate with audiences (Hameleers & Van Der Meer, 2019). Although evidence suggests media credibility and public trust have declined significantly over the past 20 years (Lee, 2018), social media has become a powerful information tool and primary source for reading, rating, sharing, and discussing news, despite potential shortcomings as a filter of false information (Allcott & Gentzkow, 2017). These social media platforms have seen a spike in political news consumption as well as a similar spike in distrust of information encountered on these platforms (Jurkowitz & Mitchell, 2020). In a comprehensive national survey examining political and election news, only 12% of respondents trusted Facebook and 15% trusted Twitter as sources for such news (Jurkowitz & Mitchell, 2020).

Distrust in news content and sourcing has expanded beyond social media with the term “fake news” becoming synonymous with deceptive or untruthful information across media platforms (Tandoc, Lim, & Ling, 2018). When looking at genres where misinformation occurs, it remains a ubiquitous threat in nearly all aspects of news, including entertainment, sports, politics, economics, and public health (Pennycook & Rand, 2019). Although the effects of misinformation exposure have not been fully examined empirically or experimentally, ideological polarization and homogenous information networks have been shown to manifest conditions in which misinformation thrives and credibility declines (Peters, 2018).

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3 Additional studies indicate that information containing more falsehoods and inaccuracies
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5 tend to diffuse more rapidly than news stories of similar topics presented more truthfully and
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7 objectively (Vosoughi, Roy, & Aral, 2018). This phenomenon is often exploited by individuals
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9 and outlets attempting to distribute information maliciously and receive more engagement by
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11 sensationalizing content and headlines. In the wake of the COVID-19 global pandemic, viral
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13 headlines of swans and dolphins returning to deserted Venetian canals as well as elephants
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15 getting drunk on corn wine and falling asleep in a tea garden were shared on social media (Daly,
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17 2020). These stories garnered hundreds of thousands of retweets despite being fake. Essentially,
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19 this phenomenon underscores “how quickly eye-popping, too-good-to-be-true rumors can spread
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21 in times of crisis” (Daly, 2020, para. 5).
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26 During the 2016 U.S. presidential election, Cambridge Analytica used data mining and
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28 psychographics to fuel the spread of political misinformation (Cadwalladr & Graham-Harrison,
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30 2018). The Cambridge Analytica scandal demonstrates a level of media dissonance because
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32 users report that they largely distrust news on social media yet still gather and share news
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34 through these networks (Lewandowsky, Ecker, & Cook, 2017). It also provides evidence that
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36 misinformation campaigns are being orchestrated to not only increase advertising revenue but to
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38 help win elections (Lewandowsky, Ecker, & Cook, 2017). Thus, quelling the spread of fake
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40 news requires collaboration from the public, the fourth estate, and social media developers.
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44 To better understand factors that influence news credibility and social media sharing
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46 habits, the researchers conducted an experiment across a nationwide sample of U.S. adults ($N =$
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48 324). Study participants across multiple demographic backgrounds evaluated the source
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50 credibility of a political news article and assessed the likelihood they would share the article
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52 information with others. Ultimately, the present study seeks to offer determinations regarding the
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credibility of political news, while examining demographics and sourcing as ways to potentially combat the dissemination of false information.

Literature Review

Source Credibility

Online news has experienced a decline in trust as a resource for information gathering since the turn of the century (Kioussis, 2001). Studies conducted shortly after the Internet transitioned into a mainstream news source indicated that online news was perceived to be as credible as all other media, except newspapers (Flanagin & Metzger, 2000). However, news credibility has reached a tipping point for certain audiences, and industry professionals as well as media scholars remain steadfast in their attempt to understand and possibly mitigate the detrimental effects of wavering credibility (Ceron, 2015). By examining specific news genres and the environment in which misinformation can spread, the prevalence and impact of fake news can be better understood as well as a means in which information intervention can effectively take place (Lazer et al., 2018).

Source credibility—a major factor in news credibility—is related to either the sources used by a journalist in a news article (e.g. experts, eyewitnesses, statistics, etc.) or the media outlet or journalist providing the information (Metzger et al., 2003). Any of these factors—individually or in conjunction with one another—may influence how the source and message are perceived within the context of credibility (Carlson & Lewis, 2015). Scholars define a source with high source credibility as having balance, objectivity, completeness, believability, and generally appearing trustworthy (Metzger et al., 2003).

Early scholarship in credibility and persuasiveness (Hovland, Janis, & Kelley, 1953; Hovland & Weiss, 1951) suggests that source credibility is not defined by individuals as a binary

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3 concept with a yes or no response (i.e. credible or not credible). Hovland and Weiss' (1951)
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5 study demonstrates the immediate and latent effects of source credibility on attitude change,
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7 indicating source credibility contains both fixed and fluid elements that are dependent on
8
9 medium and context. More contemporary studies have also determined that untrustworthy
10
11 sources can later be detached cognitively from the message, allowing the lies contained in the
12
13 untrustworthy source to be more persuasive if the message aligns with previously held beliefs
14
15 (Mattson & Henkel, 2011; O'Neil, Eisenmann, & Holman, 2020). This may explain why some
16
17 falsehoods appear trustworthy in social media environments where messages can be
18
19 continuously shared from user to user without a discernable or reputable source of origin.
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24 Additional research in source credibility has shown subjectivity, personal biases, and
25
26 topic salience as influential factors in how a source message is perceived by the receiver (Golan,
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28 2010; Reich, 2011). Effective communication and quality journalism are, thus, reliant on source
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30 credibility to facilitate belief change (Metzger & Flanagin, 2013; Slater & Rouner, 1996).
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33 Credible sources can generate persuasive effects that change beliefs as well as reinforce existing
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35 beliefs. Pornpitakpan (2004) found that source credibility is a key foundation in how information
36
37 communicated can be perceived in terms of objectivity, completeness, and truthfulness.
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40 Subjectivity, personal bias, issue salience, and sociopolitical identity have noticeable influence
41
42 on audiences when an expertise cue or identity cue is triggered, which, in turn, allows for more
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44 charitable assessments of source and message credibility (Go, Jung, & Wu, 2014; Metzger &
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46 Flanagin, 2013).
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49 Source expertise has been conceptualized as any individual with assertive authority by
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51 virtue of skill, ability, or knowledge associated with a given topic (Eastin, 2001). For example, a
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53 celebrity selling a product related to their field has been shown to have persuasive effects on
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audiences who become more inclined to purchase the product (Erdogan, 1999). Furthermore, expertise and identity cues are often associated with professional titles when no other identifying cues are available. In a study examining audience perceptions of scientific information, Konig and Jucks (2019) found that even when non-scientists are made to appear highly credible and more knowledgeable on a specific topic, scientists are still perceived as more credible due to expertise and identity cues. Additionally, the expertise cue can be highly influential in credibility assessments, even when the information is identical to non-expert input (Pjesivac, Geidner, & Cameron, 2018). Pjesivac, Geidner, and Cameron (2018) found that news stories embedded with tweets from scientists were ranked as significantly more credible than the same tweets coming from non-scientist Twitter users. Ultimately, sources have shown to be effective in generating significantly higher credibility judgments and can often be based on social heuristics (Metzger & Flanagin, 2013).

Social Media Use and Sharing Habits

Social media networks have transformed how audiences engage and process information. News has begun to shift from the top-down model that has dominated the flow of information since the inception of newspapers (Park & Kaye, 2019). In the modern media ecosystem, news consumers can repurpose, reframe, and share information from legacy, digital, and new media sources (Fletcher & Park, 2017; Park & Kaye, 2019). Some news consumption motivations reported by social media users are timeliness (e.g. most recent news appearing first) and diversity of content, which allow for a more robust news experience that traditional outlets cannot provide (Hermida et al., 2012). Many social media users engage with each platform differently; Kim and Kim (2019) found that Instagram users, for example, display less information seeking behavior than Facebook users who actively use the website and app as an information hub.

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3 Social media usage and engagement can also have mediating effects on perceived source
4 credibility. According to Pjesivac, Geidner, and Cameron's (2018) online credibility study, the
5
6 researchers found that the most frequent social media users of any given platform are more likely
7
8 to evaluate information stemming from that platform as credible. In a related study, Boukes
9
10 (2019) determined that platform use (e.g. Facebook vs. Twitter) and frequency of engagement
11
12 can significantly influence news information acquisition, depending on the social media outlet.
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14 The study demonstrated that more frequent Twitter engagement is positively correlated with
15
16 news acquisition, while frequent Facebook use displayed a negative correlation with news
17
18 acquisition. This may, however, be related to the trend that news networks are using Twitter to
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20 disseminate news more frequently and in greater volumes than Facebook (Boukes, 2019; Cox,
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22 2016).
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28 Although social media networks can potentially expose users to a broader, more diverse
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30 information marketplace, the effects of this phenomenon have not been shown to significantly
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32 impact persuasion or change attitudes of the average news consumer (Sunstein, 2009). Factors
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34 such as network, source diversity, and platform-specific features allow users to create a news
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36 environment where the effects of echo chambers (i.e. an environment in which audiences
37
38 encounter only beliefs or opinions that coincide with their own) are mitigated (Dubois & Blank,
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40 2018). However, the average social media user dismisses these moderating factors in favor of
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42 personal preference, and groupthink within a media echo chamber can continue reinforcing a
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44 user's beliefs (Dubois & Blank, 2018). Lewis, Gonzalez, and Kaufman (2012) examined how
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46 homogeneity (e.g. shared interest in music or movies) can foster agreement among individuals
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48 on social media. Homogeneity is shown to be a strong indicator of agreement and influence by
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50 friends across networks. These findings are indicative of how social behavior is displayed in the
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context of bonding through homogeneity in a social network, but may also translate to interests, such as news sources and political beliefs.

Homogeneity has been implicated in how news is shared on social media, but with a focus on the homogeneity of the news itself, rather than the people using the network. By employing a Bayesian nonparametric model to investigate the similarity of news stories shared on social networks, Kim, Kim, and Oh (2019) were able to determine which news stories, based on topical interests of network users, are more likely to be shared. Using data analytics to investigate news sharing, the study reiterates the importance of understanding the converging themes of news, audiences, beliefs, and networks.

Political Affiliation

Social media continues to grow as a place where both the public and political actors consume and share news—changing not only political communication modalities but also how democracies function (Bode, 2016; de Zúñiga, Huber, & Strauß, 2018). However, mitigating factors related to biases against certain news outlets (or biases against the media in general) can drastically affect credibility perceptions (Barnidge et al., 2020). Even before the 2016 presidential election, scholars sought to understand the potential of social media platforms to gain audience approval and circulate information about one's political outgroup (Gainous & Wagner, 2013). Examining political campaigns on social media, Conway, Kenski, and Wang (2015) were prophetic in their assessment of social media as a powerful tool to initiate collective action in groups and generate affective polarization advantageously. When distrust runs rampant in mainstream media, consumers of political news seek out alternative news sources that may contain misinformation or lack objectivity (Conway, Kenski, & Wang, 2015; Dunaway, 2013; Jewitt & Goren, 2016).

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3 Although social networks attempt to curb misinformation through story flagging and
4 removal (Bode & Vraga, 2018), biased or factually inaccurate news often appeals to
5 confirmation bias, which frequently occurs with news supporting a political ideology (Brugnoli
6 et al., 2019). Confirmation bias in the political realm also influences the social networks news
7 consumers *avoid*, particularly if their viewpoints are not overwhelmingly supported.
8 Additionally, political ideology has been shown to influence the perceived factual accuracy of a
9 news report (Darr & Dunaway, 2018) as well as the perceived credibility of a source (Landreville
10 & Niles, 2019). Landreville and Niles (2019) found that party affiliation affects judgments of
11 factual information and source credibility, where information is seen as less credible when
12 attributed to an opposing political party and most prominent in conservatives.
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15 Reinforcing an assumption that individuals are heavily influenced by online echo
16 chambers, researchers have found political affiliation to be one of the strongest predictors of
17 news consumption and news sharing (Barbera et al., 2015). Twitter users with strong political
18 affiliations share political news more often and within networks where they are the ideological
19 majority (Barbera et al., 2015). Political leanings have also been effective at predicting which
20 groups are more likely to share fake news, demonstrating that conservatives are more likely to
21 share from fake news domains (Guess, Nagler, & Tucker, 2019). In a related study, researchers
22 determined that individuals who both seek and share political news are more likely to have
23 polarized party affiliations and more likely to participate in the political process (Choi, Lee, &
24 Metzgar, 2017).
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26 News seeking behavior, selective exposure, and sharing likelihood are often mediated by
27 topic with some news topics having more polarizing effects than others. While users can create
28 their own echo chambers on social media, media outlets can, in turn, serve as echo chambers by
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3 repeating the same message to their consumers, even with unsubstantiated claims from
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5 questionable sources (Martin & Yurukoglu, 2017). Additional research based on topic and
6
7 political party has shown that, for example, conservative media use is negatively associated with
8
9 global warming belief (Feldman, Meyers, Hmielowski, & Leiserowitz, 2014). Although political
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11 ideology and salience to certain issues can influence credibility judgments, other demographic
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13 factors may also diminish or amplify such effects.
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Educational Attainment and Media Literacy

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19 Educational attainment—commonly referred to as the highest level of degree earned—
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21 has long been used as a way to stratify populations to better understand a multitude of issues,
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23 including public health and socioeconomic conditions (Ross & Wu, 1995). Educational
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25 attainment is also closely correlated with political interest and participation (Castillo et al.,
26
27 2015). In terms of civic engagement, one’s level of education may also influence media literacy
28
29 as well as one’s ability to effectively use social media information to “exploit” others (Ahmed &
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31 Cho, 2019). In their media competency and retention study, Grabe, Kamhawi, and Yegiyan
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33 (2009) assert that education level influences how information obtained through media is stored,
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35 processed, and recalled. According to the researchers, participants in the low education
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37 demographic demonstrated less of an ability to process and recall Internet news than those in the
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39 high education group.
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45 Outside of cognitive processes like information recall and storage, credibility judgements
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47 can also be influenced by educational background. Shariff, Xiuzhen, and Sanderson (2017)
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49 found that individuals with educational attainment below bachelor’s degree level are less likely
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51 to view tweets as credible, whereas higher educational attainment is positively correlated with
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53 judgments of tweet credibility. Educational attainment may also mitigate the effects of
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3 propaganda or misinformation, but this may be dependent on the amount of bias present in news
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5 stories themselves (Johansen & Joslyn, 2008). When investigating how the 2003 Iraq War was
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7 perceived by news viewers, Johansen and Joslyn (2008) found that participants with higher
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9 educational attainment were the most likely viewers to spot inaccuracies or propaganda.
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12 Conversely, when more biases and inaccuracies were presented in the stories, participants
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14 became more discerning, resulting in all education demographics responding to the
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17 misinformation in the same way.

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20 Recent research asserts that educational attainment and income level can significantly
21
22 impact media literacy; individuals in the high end of those categories demonstrate greater self-
23
24 efficacy to detect misinformation and credible sources (Khan & Idris, 2019). Looking to combat
25
26 the widespread dissemination of fake news, researchers and industry professionals have placed
27
28 an emphasis on developing media literacy strategies for not only the public to follow, but for
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30 media professionals as well (Mihailidis & Viottoy, 2017). Ultimately, the previous literature
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32 provides avenues for the present study to explore sourcing, educational attainment, and political
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34 affiliation as variables that can strengthen or weaken source credibility as well as influence social
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36 media sharing behavior.
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Hypotheses

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42 Based on the review of literature, the following hypotheses are presented to test for
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44 potential significant differences in source credibility (Hu & Sundar, 2010) and share likelihood
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46 (Xu, 2013). Additional hypotheses were developed to better understand the social media sharing
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48 habits of U.S. adults (Beam, Hutchens, & Hmielowski, 2016) as well as perceptions of Internet
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50 news helpfulness in certain situations (Zhang & Zhang, 2013), based on political affiliation and
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52 educational attainment:
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H1: The sources used in the article will significantly influence the perceived source credibility of the article.

H2: Participants with higher educational attainment will be significantly more likely to share news information (e.g. posting news links and sharing thoughts/opinions about news) on social networking sites.

H3: Participants with higher educational attainment will be significantly more likely to share information from the news article with others.

H4: Political affiliation coupled with article sourcing will significantly influence the likelihood of information from the news article being shared with others.

H5: Identified liberal participants will be significantly more likely to share news information on social networking sites than identified conservative participants.

H6: Identified liberal participants will find Internet news to be significantly more helpful overall than identified conservative participants.

Methods

For the present study, an experiment was conducted to draw conclusions about sharing habits, share likelihood, and the source credibility of online news articles. Because the study was designed to examine online news, the experiment was administered online through Qualtrics to accurately reflect the experience of reading an online article. A nationwide sample of U.S. adults was used based on a Qualtrics database of participants who were paid for their participation in the study.

The research study was an eight-group posttest-only experimental design, and participants were randomly assigned to read one of eight articles using the randomization option in the Qualtrics module. The article appeared halfway through the experiment and was adapted

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3 by the authors of the present study from information found in two *Huffington Post* articles
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5 (Lavender, 2017; O’Conner, 2017). The article was factually accurate and discussed an executive
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7 order signed by U.S. President Donald Trump to undo commitments to clean energy from the
8
9 Obama administration. The article also discussed the Chief of the Environmental Protection
10
11 Agency’s claims that humans are the major catalyst for climate change as well as a White House
12
13 decision to revoke an Obama executive order aimed at planning for natural disasters linked to
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15 climate change. The article quotes climate scientists familiar with the subject and politicians who
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17 oppose governmental restrictions on emissions (including the EPA Chief). The title of the article,
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19 author name, date, and news organization were identical for all eight stimuli.
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24 Although the facts in the articles were identical, all the sources in each article differed.
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26 Participants in the first stimuli group read an article with direct quotes from identified reliable
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28 sources. This group received the article as it was initially written with all the direct quotes from
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30 the scientists and politicians quoted in the original *Huffington Post* articles. Participants in the
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32 second stimuli group read an article with direct quotes from identified unreliable sources. For
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34 example, the experienced scientists in the original article were replaced with a middle school
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36 science teacher and an environmental enthusiast. The high-ranking politicians in the original
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38 article were replaced with a registered voter and a lower-level EPA employee. Participants in the
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40 third stimuli group received the entire article with direct quotes from anonymous sources who
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42 were said to have knowledge on the subject.
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47 Participants in the fourth and fifth stimuli groups received the article with embedded
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49 tweets instead of quotes. The fourth group read an article with five embedded tweets from
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51 identified reliable sources. All tweets were from verified Twitter accounts (with a blue
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53 checkmark next to their name), and each tweet had at least 150 retweets and at least 250 likes. In
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3 the fifth stimuli group, participants read the article with embedded tweets from identified
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5 unreliable sources. None of the tweets were from verified accounts, and each tweet had less than
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7 20 likes and retweets. The handles and names of all the Twitter users in these embedded tweets
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9 were also changed to appear less professional and altered to look like parody accounts of real
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11 scientists and politicians.
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15 Participants in the sixth stimuli group read the article without any direct quotes.
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17 However, the article had indirect statements from all the identified reliable sources quoted in the
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19 original article. These statements contained all the same information as the original quotes but
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21 with quotation marks removed and slight alterations to the wording that did not change the
22
23 intended meaning. Participants in the seventh stimuli group read the article with indirect
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25 statements (no direct quotes) from identified unreliable sources. Participants in the eighth group
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27 read the article as an Opinion-Editorial piece without any source attribution.
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31 Before reading the article, participants were prompted to answer questions about their
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33 online media habits. The initial set of 17 questions was developed from Zhang and Zhang's
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35 (2013) study on the online news habits of adults. On a 7-point Likert scale, participants were
36
37 asked to indicate how much they believe information gained from Internet news would help them
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39 in the following situations: 1) Make sense of everyday happenings; 2) Learn about society; 3)
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41 Keep up with what may influence my life; 4) See what might happen; 5) Find out about daily
42
43 life; 6) Get immediate knowledge of big news events; 7) Share with others what I have read in
44
45 online news; 8) Find something to talk about; 9) Provide help to others; 10) Get information that
46
47 improves my future prospects in life; 11) Find facts supporting my views; 12) Know about
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49 something incongruent with my opinion; 13) Obtain information that I can't find elsewhere; 14)
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51 Find opinions consistent with my points of view; 15) Help me find topics to tell others; 16)
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3 Discuss a range of topics with others; 17) Keep up in conversations with people. Zhang and
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5 Zhang's (2013) scale was shown to be highly reliable for the present study (Cronbach's $\alpha =$
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7
8 .946).

9
10 Additionally, participants were asked two questions adapted from Beam, Hutchens, and
11
12 Hmielowski's (2016) study on social media use and news sharing behavior. The questions asked
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14 participants to indicate how often they share the following things on a 7-point Likert scale (1 =
15
16 never; 7 = several times a day): 1) Online news sharing behaviors including posting news links
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18 or information on a social networking site; 2) Sharing thoughts or opinions about the news on a
19
20 social networking site. Beam, Hutchens, and Hmielowski's (2016) scale was shown to be highly
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22 reliable for the present study (Cronbach's $\alpha = .915$). Additionally, participants were asked
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24 demographic questions about their age, gender, race, state of residence, highest level of
25
26 education, and political affiliation.
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31 After answering the preliminary questionnaire, participants received instructions
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33 explaining that they will be shown a news article on the following page. The instructions asked
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35 the participants to read the article in its entirety and answer all subsequent questions about the
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37 article they just read. Participants were then randomly assigned to one of the eight stimuli
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39 outlined above. After reading the article, participants were asked to answer three questions about
40
41 the credibility of the sources used in the story. The credibility scale was adapted from Hu and
42
43 Sundar's (2010) study on source credibility in news articles. On a 7-point Likert scale,
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45 participants were asked to indicate how each of the following statements best describes their
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47 feelings about the sources found in the article they just read: 1) The sources in the article are
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49 experts in the concerned area; 2) The sources in the article are informed; 3) The sources in the
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3 article are qualified. Hu and Sundar's (2010) scale was shown to be highly reliable for the
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5 present study (Cronbach's $\alpha = .923$).
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8 The final set of questions was adapted from Xu's (2013) social recommendation study
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10 and asked participants to indicate how likely they are to share the article's information with
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12 others. Using a 7-point Likert scale, participants indicated the likelihood they would: 1) Discuss
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14 this news with their friends; 2) Share this news with their friends; and 3) Recommend this news
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16 to others. Xu's (2013) scale was also shown to be highly reliable for the present study
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18 (Cronbach's $\alpha = .925$). After answering all the questions, participants were shown a final debrief
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20 screen thanking them for their participation.
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23 24 **Results**

25 26 **Sample Description**

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28 The present study features 324 valid participants recruited from a sample of individuals
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30 across the United States. Gender was evenly distributed among males ($N = 161$) and females (N
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32 $= 163$). Participants resided in a total of 43 different states and Washington, DC with California
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34 ($N = 39$), Florida ($N = 34$), and New York ($N = 18$) being the most common responses. The
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36 average age was 47 years old ($M = 46.88$, $SD = 15.38$). There was also an appropriate
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38 distribution of educational attainment for the sample population. The most common response
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40 was some college ($N = 119$), followed by bachelor's degree ($N = 88$), high school diploma ($N =$
41
42 53), graduate degree ($N = 44$), have not graduated high school ($N = 11$), and a GED ($N = 9$). The
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44 majority of participants identified racially as White ($N = 259$), followed by Black or African
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46 American ($N = 32$), and Asian ($N = 16$). Participants were also asked to indicate their political
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48 affiliation on a 7-point scale ranging from extremely liberal to extremely conservative. 122
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3 participants identified as liberal, 107 participants identified as moderate, and 95 participants
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5 identified as conservative.
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H1

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10 H1 states that article sourcing will significantly influence the perceived source credibility
11 of the article. As outlined in Table 1, participants rated the article with no direct quotes from
12 identified reliable sources as having the most source credibility ($M = 5.16$, $SD = 0.99$), and rated
13 the article with no direct quotes from identified unreliable sources as having the least source
14 credibility ($M = 4.35$, $SD = 1.63$). A univariate analysis of variance (ANOVA) of the credibility
15 ratings found that there was no significant difference in mean source credibility ($F(7, 316) =$
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1.50, $p = .166$), which does not support H1 (Table 1).

[Table 1 about here.]

H2

31 H2 states that participants with higher educational attainment will be significantly more
32 likely to share news information on social networking sites than less educated individuals. As
33 exhibited in Table 2, participants with a graduate degree (e.g. master's or doctoral degree) were
34 the most likely to share news on social media ($M = 3.19$, $SD = 1.33$), while participants who did
35 not graduate high school were the least likely to share news on social media ($M = 1.64$, $SD =$
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0.71). A univariate analysis of variance of social media news sharing scores found that there was
a significant difference in mean scores, based on educational attainment ($F(5, 318) = 3.57$, $p =$
.004), providing strong support for H2 (Table 2).

[Table 2 about here.]

H3

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3 H3 states that participants with higher educational attainment will be significantly more
4 likely to share information from the news article they read with others than less educated
5 individuals. As shown in Table 3, participants with a graduate degree ($M = 4.54, SD = 1.93$) and
6 high school graduates ($M = 4.54, SD = 1.86$) were the most likely to share information in the
7 article with others, while participants with a GED were the least likely to share ($M = 3.04, SD =$
8 1.78). A univariate analysis of variance of article share likelihood scores found that there was a
9 significant difference in mean scores, based on educational attainment ($F(5, 318) = 2.37, p =$
10 $.04$), suggesting that H3 was answered in the affirmative (Table 3).

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21 [Table 3 about here.]

H4 and H5

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24 H4 states that political affiliation coupled with article sourcing will significantly
25 influence the likelihood of information from the news article being shared with others. An
26 ANOVA of the share likelihood mean revealed that there was a significant difference in mean
27 scores, based on political affiliation and article sourcing as independent variables ($F(53, 270) =$
28 $1.61, p = .008$), providing strong support for H4.

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31 H5 states that identified liberal participants will be significantly more likely to share
32 news information on social networking sites than identified conservative participants. As
33 indicated in Table 4, extremely liberal participants were the most likely to share news on social
34 media ($M = 3.33, SD = 1.38$), while conservative participants were the least likely to share news
35 on social media ($M = 2.20, SD = 1.19$). A univariate analysis of variance of the social media
36 sharing scores determined there is a significant difference in mean scores, based on political
37 affiliation ($F(6, 317) = 4.60, p < .001$), supporting H5 (Table 4).

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52 [Table 4 about here.]

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H6

H6 states that identified liberal participants will find Internet news to be significantly more helpful overall than identified conservative participants. As Table 5 outlines, extremely conservative participants are the most likely to find Internet news to be helpful in certain situations ($M = 5.13$, $SD = 0.81$), while conservative participants are the least likely to find Internet news helpful ($M = 4.58$, $SD = 1.12$). A univariate analysis of variance of the Internet news helpfulness scores determined there is no significant difference in mean scores, based on political affiliation ($F(6, 317) = 1.60$, $p = .146$), which does not support H6 (Table 5).

[Table 5 about here.]

Discussion

The primary aim of this study is to better understand news sharing habits through social media use and, particularly, how those habits are influenced by perception of source credibility. Additionally, this research situates political affiliation and educational attainment as two predictors of perception and subsequent sharing. As technologies continue to evolve and consumer preferences coalesce around increasingly networked modalities, the media landscape further fragments and ultimately complicates unilateral understandings of news seeking and news sharing behaviors. Therefore, scholarly and scientific examinations of information and selection processes must pivot thusly in order to gain a richer perspective on the previously unexamined interactions of these emergent factors.

Cultural conversation around the possibility of echo chambers continues to grow, as contemporary communication provides opportunities for users to curate increasingly personalized feeds based on sources and news outlets skewed toward particular lifestyles, values, and political affinity. While there are consumption approaches that can lessen the likelihood of

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3 echo chamber presence, research finds that consumers are more likely to ignore diversifying
4 strategies in favor of habits that reaffirm existing beliefs (Dubois & Blank, 2018). Results of the
5 present study link to previous work arguing that political affiliation is one of the strongest factors
6 influencing news consumption and news-sharing behaviors on social media and therefore offers
7 more insight into methods of combatting the echo chamber effect. Building on previous work
8 about online news habits (Zhang & Zhang, 2013) and credibility in news (Hu & Sundar, 2010),
9 this study—when taken into account alongside user perceptions of credibility—provides insight
10 into the larger social patterns of news consumption and implications of user identity on the
11 potential spread across media.
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24 The study design is separated into three parts in order to address three particular areas
25 previously identified in the literature as contributing to the overall process of news sharing. Part
26 one includes self-report questions about users' overall media habits, developed from Zhang &
27 Zhang (2013). Part two is the actual experimental condition, wherein participants across stimulus
28 groups read an online news article, and then afterward participants answer questions about the
29 source credibility in the article they read, using a scale developed by Hu & Zundar (2010).
30 Drawing from extant theory and design as outlined above seeks to simulate the actual experience
31 of online news reading behavior and evaluation of source credibility. In theorizing the possible
32 influencing factors of social media news sharing, this study considers the social heuristics that
33 help determine source credibility, the democratizing properties of digital and social media, and
34 how education and political ideology affect sharing behaviors based on both of the
35 aforementioned conditions. Centering virtual spread as a contemporary phenomenon can aid in
36 the identification of mechanisms by which misinformation is reproduced (Lazer et al., 2018). A
37 first step toward combating the spread of misinformation and so-called fake news is to isolate the
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multiple influencing factors and interplay thereof; thus, this research presents a series of interconnected hypotheses that test various aspects of sharing behaviors.

The results of this study provide evidence that educational attainment and political affiliation can be predictors of tendency to share news and indicate that education, in particular, is strongly tied to share likelihood. Further, the evidence supports the effect of a previously unexplored interaction between political affiliation and article sourcing, suggesting that the combined presence of these two factors increases share likelihood. Results of this study reinforce the hypothesis that liberal users are more likely to engage in social media sharing of news stories than self-identified conservative users. Liberal-leaning news sources have been identified in previous politically-affiliated sharing studies as having higher frequencies of shares than their conservative counterparts (Morgan, Shafiq, & Lampe, 2013), which provides further reasoning and grounding to this research's supported hypothesis of sharing behaviors among liberally-identified participants.

Existing research links higher levels of educational attainment to higher levels of overall political engagement (Castillo et al., 2015), and the current research builds on this knowledge by hypothesizing that sharing tendencies on social media will show the same positive correlation and lead to users with higher levels of educational attainment being more likely to share news. This bears out in the results, as data strongly evidence positive correlation between participants' education levels and their propensities for sharing news on social network sites. Given the strong support for educational attainment as a predictor of share likelihood, this research suggests that education is still a crucial factor in sociopolitical engagement and that social media access alone does not altogether eliminate the participation gaps or overcome the existing issues of inequity in

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3 public sphere potential that have been previously established in offline and analog examinations
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5 (Castillo et al., 2015; Khan & Idris, 2019).
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8 The relationship between educational attainment and self-efficacy in identifying credible
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10 information is also important to note. In general, users with higher educational status perceive
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12 themselves as better at judging source credibility. This study also indirectly suggests a
13
14 connection between self-efficacy in social media literacy and political engagement on social
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16 media sites. The data on educational attainment and share likelihood supports classical and
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18 contemporary communication theory that suggests attitudinal effects can precede behavioral
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20 effects (Slater & Rouner, 2002). The strong contrast between participants with graduate degrees
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22 and their high share likelihood and participants without at least a high school diploma and their
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24 low share likelihood supports current study hypotheses and also aligns with previous studies
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26 connecting information processing and recall to educational attainment (Grabe, Kamhawi &
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28 Yegiyani, 2009).
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33 In addition to data supporting educational attainment as a sharing predictor, the results
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35 also reveal implications for source type and credibility that are platform-specific. Two of the
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37 experimental groups received embedded tweets as source attributions, compared to the other
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39 groups that were given more standard articles with in-text quote attributions. The data support
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41 and align with previous research indicating that users with high levels of educational attainment
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43 are more likely to judge tweets as credible when tweets are appropriately sourced, while users
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45 with lower levels of educational attainment are less likely to accurately assess tweets as credible
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47 sources (Shariff, Xiuzhen, & Sanderson, 2017).
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51 From a perspective of technological affordances, research focusing on communication
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53 technology considers the notion of media literacy as an alternative approach to examining
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3 engagement (Mihailidis & Viotty, 2017), and though the current study does not specifically
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5 operationalize media literacy, it does support the theoretical development of the many
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7 established links between educational attainment and media literacy. These two conditions
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9 operate in conjunction in ways that have not been clearly explicated in existing research. This
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11 avenue of research becomes even more compelling in light of the democratizing potential for
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13 social networking and digital media toward emergent means of knowledge generation and
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15 information exchange. In other words, while the current study provides direct evidence that
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17 educational attainment positively correlates with share likelihood, there is a need for deeper
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19 probing around differences in traditional, formal education and other modes of learning in order
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21 to understand the nuances in media literacy acquisition and how individuals develop their
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23 aptitude for political engagement online.
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28 **Limitations and Future Research**

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30 One limitation of the present study is the lack of variety in platform integration. As this
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32 study compares sourcing in a standard online article format to sourcing with embedded tweets, it
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34 does not allow for investigation of multiple types of social network sites or for the use of
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36 platform as a variable. Future research opportunities include consideration beyond source
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38 attribution that takes into account differences of platform and/or device as a factor of sharing
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40 behaviors and political engagement. Future research may consider technological affordances writ
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42 large and interactivity with educational attainment and political information, both found in this
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44 study to be significant variables.
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49 One of the strongest contributions of the current research is the recognition of interaction
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51 between different identifying variables—between media literacy and educational attainment for
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53 instance—and how that interplay can explain social media behaviors. Given the evidence of
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3 educational attainment and sourcing ability as a high predictor of news sharing likelihood,
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5 further research can examine other identity-related variables as potential influencing factors and,
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7 crucially, the inter-relation between different categorical variables affecting user identification
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9 and representation. Future research can examine user identity characteristics such as gender,
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11 race, socioeconomic status, and geographical factors.
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Conclusion

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17 The results presented here highlight educational attainment and political affiliation—
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19 particularly when coupled with self-efficacy in judgment of source credibility—as strong
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21 predictors of news sharing behavior on social media sites. Using six different stimulus groups to
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23 investigate the aforementioned variables in expert vs. non-expert source conditions provides
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25 important information about user decision-making and politically motivated sharing behaviors.
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27 Pre-existing links between socioeconomic status and educational attainment, for example,
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29 provide a further vein to explore the strong linkage shown in the data here, denoting educational
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31 attainment as a strong positive predictor of political engagement. In sum, the evidence of this
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33 study generates strong individual identifiers that can predict likelihood of news sharing behaviors
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35 and wider political engagement. These implications contribute to a better understanding of the
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37 potential for an engaged public sphere through more effectively utilizing social network sites and
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39 problematizes user behavior patterns that limit opportunities for pro-social communication
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Tables

Table 1. Univariate Analysis of Variance of Source Credibility Based on Article Sourcing

Article Type	N	Mean	SD	F	df1	df2	p-value
Direct Quotes/Identified Reliable Sources	43	5.14	1.26	1.50	7	316	.166
Direct Quotes/Identified Unreliable Sources	39	4.74	1.79				
Direct Quotes/Anonymous Sources	40	4.80	1.58				
Embedded Tweets from Reliable Sources	37	4.68	1.35				
Embedded Tweets from Unreliable Sources	43	4.85	1.40				
No Direct Quotes/Identified Reliable Sources	41	5.16	0.99				
No Direct Quotes/Identified Unreliable Sources	39	4.35	1.63				
No attribution/Op-Ed Story	42	4.79	1.46				

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Table 2. Univariate Analysis of Variance of Social Media Sharing Based on Educational Attainment

Educational Attainment	N	Mean	SD	F	df1	df2	p-value
Did Not Graduate High School	11	1.64	0.71	3.57	5	318	.004
GED	9	2.61	1.39				
High School Graduate	53	2.88	1.20				
Some College	119	2.49	1.32				
Bachelor's Degree	88	2.67	1.35				
Graduate Degree	44	3.19	1.33				

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Table 3. Univariate Analysis of Variance of Article Share Likelihood Based on Educational Attainment

Educational Attainment	N	Mean	SD	F	df1	df2	p-value
Did Not Graduate High School	11	3.52	1.82	2.37	5	318	.04
GED	9	3.04	1.78				
High School Graduate	53	4.54	1.86				
Some College	119	3.79	1.93				
Bachelor's Degree	88	3.97	1.98				
Graduate Degree	44	4.54	1.93				

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Table 4. Univariate Analysis of Variance of Social Media Sharing Based on Political Affiliation

Political Affiliation	N	Mean	SD	F	df1	df2	p-value
Extremely Liberal	30	3.33	1.38	4.60	6	317	.000
Liberal	67	2.98	1.39				
Slightly Liberal	25	3.16	1.30				
Moderate	107	2.49	1.24				
Slightly Conservative	33	2.26	1.09				
Conservative	47	2.20	1.19				
Extremely Conservative	15	2.83	1.44				

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Table 5. Univariate Analysis of Variance of Internet News Helpfulness Based on Political Affiliation

Political Affiliation	N	Mean	SD	F	df1	df2	p-value
Extremely Liberal	30	5.09	1.31	1.60	6	317	.146
Liberal	67	5.08	1.20				
Slightly Liberal	25	4.95	0.75				
Moderate	107	4.83	0.93				
Slightly Conservative	33	4.68	1.19				
Conservative	47	4.58	1.12				
Extremely Conservative	15	5.13	0.81				

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