

Selective Exposure and Credibility Perceptions of News on Social Media

by

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ABSTRACT

The “filter bubble” has been a heated discussion topic since several years ago. In addition to possible algorithmic contribution to this phenomenon, people’s selective exposure tendency may be another primary cause of the “filter bubble” on social media. Prior research indicates that, under the influence of selective exposure tendency, people tend to perceive pro-attitudinal news as more credible than counter-attitudinal news, with strong partisans more likely to be affected. The proposed thesis seeks to examine whether the perceived credibility of a news source and story on social media is influenced by selective exposure and strength of partisanship. Through an experimental study via Amazon’s Mechanical Turk, 468 participants chose or were assigned to read an ostensible news story from a social media feed with the news source and ideological slant varied between participants. The results showed that people reported higher perceived source and story credibility when the source and stories were pro-attitudinal (consistent with their political ideology) as opposed to counter-attitudinal, regardless of participants’ age, race, perceived credibility of news from social media, in general, and strength of partisanship. However, contrary to the hypotheses, selective exposure behavior (i.e., choosing a preferred news source before reading a news story) did not affect credibility perceptions when participants read counter-attitudinal news from a pro-attitudinal source. Last, strength of partisanship did not moderate the influence of selective exposure on credibility perceptions. In sum, this study suggests that although selective exposure tendency may affect people’s credibility perceptions and contribute to “filter bubbles,” the impact of selective exposure behavior may be overestimated in terms of perceived source and story credibility of news on social media.

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INTRODUCTION

According to a recent survey from Pew Research Center (Matsa & Shearer, 2018), about 68% of American adults get news from social media. Facebook stands out as a main pathway to news for four in ten Americans (43%), followed by YouTube (21%) and Twitter (12%). Especially on Facebook where people are exposed to a lot of news every day, 67% of users depend on Facebook as their primary source of news (Matsa & Shearer, 2018). Meanwhile, as an effective marketing strategy, personalization of information on social media has been commonly known and widely applied. Social media users now are primarily presented with information tailored to their interests based on their profile, location and online interactions such as liking or sharing a post, opening a link or searching a topic. Aside from the commercial profit that personalization on social media has brought by showing users targeted advertisements, such technology is also believed to have improved user experience in less overtly commercial applications by selecting and filtering information for the users to facilitate their navigation and online interpersonal interactions (Bowen & Filippini-Fantoni, 2004). However, such conveniences, as stated by Internet activist Eli Pariser (2011), have isolated us in our own “*filter bubbles*” by changing our exposed feeds on social media, only showing information that matches our pre-existing and self-affirming viewpoints while filtering out challenging and diverse opinions. In the end, “*echo chambers*” are formed where individuals are connected to only in-group members, which may facilitate social extremism and political polarization (Adamic & Glance, 2005; Barberá et al., 2015; Flaxman et al., 2016). Nevertheless, Axel Bruns (2017) found there was in reality limited evidence for the “*filter bubbles*” or “*echo chambers*” on social media, because data

analyses on the Australian Twittersphere showed that the bubbles or chambers represented as individual clusters remained interconnected with each other and highly permeable to outside information, which was contrary to the definition of the “*filter bubbles*.” The proposed thesis seeks to examine whether perceived credibility of news source and story on social media is influenced by selective exposure and strength of partisanship.

Evidence of the “*Filter Bubble*”

While the existence of a “*filter bubble*” may seem pronounced, attempts to find evidence of it have yielded mixed results. Some studies have found that users are confined in a world preselected by algorithms making them more polarized in their opinions (Faridani et al., 2010; Feuz et al., 2011; Hannak et al., 2013), whereas others suggest that the “*filter bubble*” may be overestimated and user choice actually plays a more important role in which information is presented than algorithms (Haim et al., 2017; Haim et al., 2018).

Using a mathematical framework, Chitra and Musco (2019) showed the emergence of “*filter bubbles*” in real-world networks from Reddit and Twitter. Specifically, small algorithm changes made by network administrators aiming to reduce disagreement among users lead to the formation of polarized “*echo chambers*” of users. Other studies indicate that Facebook plays an important role in leading users to “fake news” websites through personalization algorithms in their News Feed (Allcott & Gentzkow, 2017; Guess et al., 2018; Mohseni & Ragan, 2018). The filtering-based recommender systems Facebook and many other social media platforms are using were also found to have a narrowing effect on users’ consumed content over time (Nguyen et

al., 2014). Taken together, these studies provide strong evidence for a “*filter bubble*” or “*echo chamber*.”

On the other hand, other studies suggest personalization does not affect the diversity of exposure to online news. Haim and colleagues (2018) investigated two types of personalization: *explicit* personalization (i.e., personalization based on information users offer proactively such as their profiles, preference settings and subscriptions) and *implicit* personalization (i.e., personalization based on information inferred from users’ behavior and context such as their location, time and browsing history) (Thurman & Schifferes, 2012). Researchers have found that neither type of personalization affects source diversity (i.e., the multitude and variety of news sources); furthermore, explicit personalization has only minor effects on content diversity (i.e., the dispersion of ideas and perspectives in the news) when users selectively choose their interested topics, while implicit personalization has no such effects (Haim et al., 2018; Voakes et al., 1996).

Additionally, there is little evidence for the existence of “*filter bubbles*” or “*echo chambers*” as demonstrated in the literature. Eady and others (2019) analyzed the data from numerous Twitter accounts and found considerable overlap in the ideological distributions of social media accounts followed by partisans, which contradicted the belief that people on opposite ends of the partisan spectrum had mutually exclusive and opposing news sources on social media. Moreover, Fletcher and Nielsen (2018) found that social media users were incidentally exposed to more diverse news sources online than non-users; that is, people who use social media happen upon a greater variety of news from both pro-attitudinal and counter-attitudinal perspectives online than people who do not use any social media. In summary, these results indicate the “*filter bubble*”

phenomenon may have been overestimated in terms of algorithmic personalization of online news.

Although Eli Pariser (2011) attributed the “*filter bubble*” to personalized algorithms, some scholars suggest while algorithms do limit online diversity to some extent, the “*filter bubble*” is actually more of a user choice due to people’s selective exposure tendency. In other words, people selectively expose themselves to information matching their beliefs by following, sharing or clicking on only pro-attitudinal information (Fischer et al., 2011; Garrett & Resnick, 2011). Furthermore, even when opposing opinions are presented side by side, people still prefer information that reinforces their pre-existing attitudes (Liao & Fu, 2013). Thus, the “*filter bubble*” is likely a product of the interactive effects of technology and human cognitive function.

Finally, the consequences of the “*filter bubble*” may vary in degree when the information is accessed from different sources. Recently, there is growing concern over the possible decreasing diversity and ideological segregation brought about by technology (Garrett, 2009; Iyengar & Hahn, 2009; Munson & Resnick, 2010). It is likely that news source moderates the association between personalization and levels of ideological segregation. By examining 50,000 U.S. users’ web browsing histories, Flaxman and others (2016) found that descriptive news accessed via social media led to greater ideological segregation than when articles were read by directly visiting a news outlet’s website.

Regardless of whether the “*filter bubble*” exists or not, selective exposure of online news has been shown to influence people’s segregation of mind via multiple sources, including mainstream news outlets’ websites, web-search engines and social

media platforms. Given the increasing use of social media as a main news source and its greater contribution to people's selective exposure tendency, the proposed thesis will focus on the implications of selective exposure to news via social media.

Selective Exposure and Credibility Perceptions

Selective exposure theory suggests that individuals prefer exposure to affirming arguments while avoiding contradictory messages (Frey, 1986; Klapper, 1960). People may selectively expose themselves to pro-attitudinal news by mainly following news outlets that are biased towards their ideological opinions. Another associated term is *confirmation bias*, a part of the selective exposure process that emphasizes an active pursuit, interpretation and belief in information that favors one's current attitudes (Plous, 2007; Williams et al., 2016). Whereas "*filter bubble*" is posited to be created mainly by algorithm curation, selective exposure explains the filtered information from an active cognitive perspective. Selective exposure tendency and confirmation bias have been demonstrated in that the ideological polarization on Facebook is driven more by users' selective exposure than the News Feed ranking algorithms (Bakshy et al., 2015; Spohr, 2017).

An experimental study by Iyengar and Hahn (2009) illustrates users' active selective exposure by manipulating news sources representing different parties. Participants were presented with a news headline accompanied by logos of four news organizations (Fox News, NPR, CNN, or BBC). They were then asked which report they would like to read. Results showed that Republicans were 25% more likely to want to read the story with a Fox News logo and 10% less likely to read the story with a CNN or NPR logo; they even preferred Fox News over other sources for non-political news such

as travel and sports coverage. This selective exposure tendency was strengthened among more politically engaged partisans (Iyengar & Hahn, 2009).

In another study by Graf and Aday (2008), students were instructed to evaluate online magazines after clicking and reading whatever interested them. They found that participants attended to consistent information first, and then spent a great deal more time reading it than information contradictory to their views. These findings indicate that people selectively expose themselves to consistent information in a bid to reinforce and strengthen their opinions, and then use this frame to contextualize the counter-attitudinal information to avoid cognitive dissonance (Graf & Aday, 2008).

With regard to the news on social media, Mutz and Martin (2001) revealed in their study that online political discussions on social media expose individuals to more homogenous views than traditional news outlets. In other words, most people, especially those with strong partisan attitudes, prefer to be surrounded by similar others in their interpersonal networks and may ignore any disagreement that exists (Mutz & Martin, 2001). Similarly, An and others (2013) found that social media users tended to share like-minded news and avoid conflicting ones, especially among people with high levels of partisanship.

To summarize, people's active selective exposure of news is commonly occurring on social media, facilitating the homogeneity of news feeds and people's polarization of political opinions more than traditional news outlet websites, and partisans with strong political attitudes are more likely to engage in this selective exposure behavior. Because people prefer attitude-consistent news, does it follow they will also perceive it to be more

credible than counter-attitudinal news? To put it another way, will people's source and story credibility of news be influenced by their selective exposure tendency?

News credibility refers to the extent readers perceive news as being believable, reliable and truthful. It is commonly operationalized as a multidimensional concept, consisting of dimensions such as believability, accuracy, trustworthiness, bias, completeness, clarity, fairness and timeliness (Gaziano & McGrath, 1986; Meyer, 1988; Rimmer & Weaver, 1987). Prior research suggests that Internet reliance for information and degree of involvement in news issues affect people's credibility judgements. Stated differently, one's preference for and familiarity with a medium or an issue influence his/her credibility perception of the information source (Johnson & Kaye, 2000, 2002; Melican & Dixon, 2008; Metzger et al., 2003). For example, Weblog users rated blogs as more credible than other information sources (Johnson & Kaye, 2004), implying that people's credibility perceptions are influenced by their preference for a particular information source.

Researchers also found that people tend to examine information that is inconsistent with their preexisting views more critically and attribute higher levels of quality to like-minded sources (Ditto & Lopez, 1992; Fischer et al., 2005). Specifically, they are inclined to view in-group references as more knowledgeable, honest, unbiased and, thus more credible and influential than out-group information sources (Clark III & Maass, 1988; Kahan et al., 2010). Moreover, several studies have revealed that people are inclined to judge attitude-consistent and neutral news as more credible than counter-attitudinal news (Flanagin & Metzger, 2000; Metzger et al., 2015; Vallone et al., 1985). According to a recent survey, 74% of consistent conservatives (i.e., people who are

ideologically consistent in supporting conservative opinions over time) favor Fox News while 73% of consistent liberals view it as unfavorable; on the other hand, MSNBC is viewed unfavorably by 71% of consistent conservatives and supported by 45% of consistent liberals (Pew Research Center, 2014). Thus, for my first hypothesis, I propose that people will report higher source and story credibility towards pro-attitudinal news than counter-attitudinal news on social media (*Hypothesis 1*).

Cognitive Dissonance and Selective Exposure

A significant component of selective exposure theory is cognitive dissonance theory. Festinger's (1957) cognitive dissonance theory describes the internal inconsistency a person may experience when confronted with conflicting beliefs, ideas and values. When exposed to counter-attitudinal news on social media, people may experience cognitive dissonance because the news stories challenge their pre-existing beliefs about the topic. In order to reduce such dissonance, a person will either find additional evidence to justify the dissonance or avoid the contradictory information through selective exposure behavior (Festinger, 1957, 1962; Metzger et al., 2015). Stated differently, when people are confronted with counter-attitudinal news on social media, they may either seek new information to change their opinions on the topic or block the attitude-challenging news source and selectively expose themselves to only attitude-confirming sources.

Efforts to reduce cognitive dissonance may also be manifested by altering source and/or story credibility perceptions. According to Osgood and Tannenbaum (1955), when a source of information that a person regards positively supports an opinion that the person regards negatively, he or she will need to change the evaluation of either the

source or the opinion to reduce the cognitive dissonance. The same mechanism is suggested by Heider's (1958) balance theory, where people are motivated to change their attitude towards either one of the conflicting objects or the relation between the two objects in an attempt to obtain psychological balance. Thus, when confronted with counter-attitudinal news from a pro-attitudinal news source, one is expected to either react less positively to the source or react more positively to the issue; the choice depends on whether the initial attitude toward the source or the issue is a more firmly rooted cognition. For instance, when a conservative reads an article supporting global warming (which contradicts his/her opinion about the issue) from Fox News (which the person evaluated positively due to FOX's perceived bias towards conservative opinions), the person will have two ways to reduce the cognitive dissonance. First, he/she can change the evaluation of the source by perceiving Fox News as no longer credible, or he/she can change the evaluation of the issue by starting to believe in global warming—the chosen action depends on the strength of the person's trust of Fox News or distrust of global warming initially. In other words, the person can either perceive the news stories as more credible or perceive the news source as less credible.

While most studies only look at the effect of selective exposure tendency on people's credibility perceptions (i.e., perceived credibility of pro-attitudinal vs. counter-attitudinal news with forced exposure), it is worth asking whether the behavior of selective exposure influences their credibility perceptions. In other words, in contrast to forced exposure, when people are allowed to choose their preferred news source which imitates their behavior of choosing to follow a news outlet on social media, will this behavior of selective exposure (due to the selective exposure tendency) influence their

credibility perceptions compared to people with forced exposure? Moreover, in a specific condition where people read counter-attitudinal news from a pro-attitudinal news source, will those who selectively exposed themselves to the pro-attitudinal news source perceive the credibility of the counter-attitudinal news differently from those with forced exposure?

Take the following example: after a conservative is exposed to a counter-attitudinal news story on the reality of global warming on social media, they may experience cognitive dissonance. In order to reduce the dissonance, they can either change their attitude towards the topic by starting to believe that maybe global warming is really true, or they can selectively expose themselves to a more typically pro-attitudinal news source such as Fox to avoid seeing counter-attitudinal news in the future (i.e., selective exposure behavior). But, let's say that, unexpectedly, they saw the opinion that global warming is true again on the FOX news feed (i.e., counter-attitudinal news from a pro-attitudinal new source); this may elicit another instance of cognitive dissonance. Now, in order to reduce the *second* instance of dissonance, they have two options again. First, they may start to believe that maybe global warming is really true this time because even FOX is reporting on it. Or, they may perceive FOX as less credible because they still firmly believe that global warming cannot be true. However, because in this case, they had chosen to view and trust FOX News, if they choose to perceive FOX as less credible, the behavior of choosing FOX and the cognition that FOX is not credible will be contradictory with each other, which may cause a *third* instance of cognitive dissonance. In order to reduce this new dissonance, because the behavior of choosing to view FOX News cannot be undone, it is more likely they will change their attitude towards FOX.

The selective exposure behavior of choosing FOX may cancel out the diminished distrust brought by reading counter-attitudinal news from a pro-attitudinal news source. Thus, for my second hypothesis, I proposed that people will report higher source and story credibility for counter-attitudinal stories from a pro-attitudinal news source when they selectively expose themselves to a news source compared to when they are forced to read the news (i.e., non-selective exposure) (*Hypothesis 2*).

Strength of Partisanship as a Moderator

Previous research has also shown that people's selective exposure to conflicting political views may vary by strength of partisanship (An et al., 2013; Iyengar & Hahn, 2009; Kim, 2011; Mutz & Martin, 2001; Young, 2004) (see Appendix A for definition of strength of partisanship). Because partisanship is a construct easily accessible to memory, it can be used to guide selective exposure decisions, which leads to stronger attitude-behavior relationships (Fazio & Williams, 1986; Lau, 1989). As a result, partisans are more likely to select like-minded news, seek out information that supports their existing views and hold more extreme attitudes (Bimber & Davis, 2003; Donsbach, 1991; Graf & Aday, 2008; Heatherly et al., 2016; Stroud, 2008; Taber & Lodge, 2006). For example, Johnson and colleagues (2009) conducted a survey among politically interested Internet users to explore their selective exposure tendency to political blogs. Results demonstrated that political partisanship increased the likelihood of individuals practicing selective exposure, which could be explained by strong partisans' high political interest, participation and knowledge (Johnson et al., 2009). Another study by Stroud (2010) investigated the relationship between partisan selective exposure (i.e., individuals select news outlets sharing their political predispositions) and political polarization. After

controlling for strength of partisanship and political knowledge, Stroud found that partisan selective exposure led to polarization, and participants who had stronger partisan attachments were more motivated to choose like-minded news outlets, process information in a way that confirmed their partisan viewpoints, and hold their attitudes with certainty (Stroud, 2010).

To conclude, strength of partisanship has been shown to be a strong predictor of selective exposure to political news, leading to changes in perceptions and attitudes. In this thesis, I will examine the moderating influence of strength of partisanship in the relationship between selective exposure and perceived source and story credibility. I hypothesized that the contrasts in Hypothesis 1 and 2 would be more evident among strong partisans compared to non-partisans (*Hypothesis 3 & 4*).

Current Thesis Study

With an increasing concern over the “*filter bubble*,” where people may be exposed to homogeneous information on the Internet that supports their beliefs and attitudes, researchers have been dedicated to investigating the factors contributing to this situation. Although it is still up for debate whether personalization algorithms or users’ choice constrains people’s exposure to diverse information, it is clear from prior research that selective exposure tendency may be a primary cause of the “*filter bubble*” on social media, leading people to perceive pro-attitudinal information as more credible than counter-attitudinal information. Furthermore, after people have selectively exposed themselves to pro-attitudinal news sources, when confronted with attitude-challenging news from a pro-attitudinal source, people may either perceive the news opinion as more credible or perceive the news source as less credible in order to reduce cognitive

dissonance. However, the behavior of selective exposure may reduce the likelihood that people will distrust the news source they personally selected because their distrust of the news source is contradictory to their selective exposure behavior. Finally, strength of partisanship may play a significant role as a moderator in these relationships such that strong partisans are more likely to be influenced by selective exposure tendency and behavior in their credibility perceptions. Based on previous literature, the current thesis tests four hypotheses through an experimental study design where participants were randomly assigned to either a non-selective exposure group or selective exposure group.

In the *non-selective exposure* group, participants were randomly assigned to one of five groups: MSNBC with liberal opinions, MSNBC with conservative opinions, FOX with conservative opinions, FOX with liberal opinions, or a control group (AP (Associated Press) with balanced (liberal & conservative) opinions). The news was presented in the form of a News Feed from Facebook. There was no selective exposure because people were randomly presented with news without a chance to select the news outlet. After reading the news, they were asked questions about source and story credibility of the news (their strength of partisanship and ideological identifications were asked separately in a pre-screen survey).

Hypothesis 1: Participants will report higher source and story credibility of news when the source and stories are both pro-attitudinal as opposed to both counter-attitudinal.

Next, in the *selective exposure* group, participants were given the chance to select which news outlet they want to read. After choosing the source, they were randomly assigned to read either conservative or liberal news from the selected news outlet (note:

people who chose AP read balanced news). After reading the news, they were asked questions about source and story credibility.

Hypothesis 2: Participants will report higher source and story credibility of news in the *selective exposure condition* compared to the *non-selective exposure condition* when they read counter-attitudinal stories from a pro-attitudinal news source.

Finally, to examine the moderating influence of partisanship in the relationship between selective exposure and credibility, participants were asked about their strength of partisanship in a pre-screen survey.

Hypothesis 3: Strong partisans will report higher source and story credibility of news when the source and stories are both pro-attitudinal as opposed to both counter-attitudinal compared to non-partisans.

Hypothesis 4: Strong partisans will report higher source and story credibility of news in the *selective exposure condition* compared to the *non-selective exposure condition* when they read counter-attitudinal stories from a pro-attitudinal news source compared to non-partisans.

METHODS

Participants

A total sample of 468 participants were recruited through Amazon Mechanical Turk (M-Turk) and completed surveys designed via Qualtrics. M-Turk was chosen because large amounts of diverse participants can be recruited in a short time, where workers were free to participate in any studies they are interested in and receive monetary compensations upon completion. Only U.S. citizens over the age of 18 who speak English were eligible to participate in the study. Over 900 people completed the pre-screen survey asking about their demographics, political ideology and partisanship, as well as their credibility perceptions of various news sources ($N = 920$). The main survey was sent out after two months to limit priming and social desirability bias of asking partisanship and credibility perceptions at the same time as the experimental design. Almost 700 people responded to the main survey ($n = 690$) representing a 75% response rate. Among the 690 responses, 222 failed the attention checks, resulting in a final sample of 468 people for data analyses. A power analysis was performed using G*Power (Faul et al., 2008) to determine the adequate sample size for the study. A meta-analysis conducted by Richard and others (2003) found that the average effect size in social psychology is $r = .21$, which is considered to be relatively small. Therefore, for the linear regression power analysis, I set the effect size (f^2) to 0.15, $\alpha = .05$ and power = 0.95; based on these parameters for six predictors, the recommended sample size is approximately $N = 120$ for one group and $N = 240$ for two groups. Thus, the current sample size of 468 participants is more than adequate for the main objectives of this study.

Procedure

The experiment employed a 2 (selective exposure vs. non-selective exposure) × 2 (news source: FOX, MSNBC) × 2 (news story: conservative, liberal) design with a control group (balanced news from AP). Participants first completed a pre-screen survey asking their demographics (i.e., age, gender, race, ideological identification, strength of partisanship, main news source, news reading frequency, credibility perceptions of different news sources and three news outlets). After two months, the participants were sent the main survey where they read a Facebook news feed and reported their source and story credibility perceptions of the news.

In the main survey, participants were randomly assigned to either the selective exposure group or non-selective exposure group. As stated above, in the *selective exposure* group, participants were asked to choose which news outlet they wanted to read from among three options (i.e., FOX, MSNBC, AP). By referring to the AllSides Media Bias Chart (2019) based on multi-partisan, scientific analysis and transparent methodology, I selected FOX and MSNBC due to their strong slants towards either conservative or liberal perspectives, respectively; AP was selected because it is considered relatively neutral in terms of political news. Each participant chose their preferred outlet twice: 1) when reading political news and 2) when reading sports or human interest news, and they were informed of the news category before each selection. The sports and human interest news feeds were included to mitigate demand characteristics (i.e., participants being aware of the experiment's purpose regarding political news). In *non-selective exposure* group, participants were directly presented with political and sports/human interest news stories from one of the three news outlets instead of being allowed to choose an outlet.

In the political news section, two news stories were shown on the news feed. Participants who were in *selective exposure group* and chose FOX or MSNBC were randomly assigned to two experimental groups where the two news stories were either both liberal or both conservative. For example, in the “FOX conservative” group, a person who chose FOX would read two actual conservative news stories from FOX; whereas, in the “FOX liberal” group, a person who chose FOX would read two liberal news stories actually from MSNBC (but which were made to appear as though they were from FOX by changing the outlet logo and title, see Appendix B for example). The same procedure was followed for participants who chose MSNBC, where the “MSNBC liberal” group read two liberal news stories actually from MSNBC and the “MSNBC conservative” group read two conservative news stories actually from FOX (but made to appear as though they were from MSNBC news by changing the outlet logo and title). Finally, people who chose AP read one liberal news story from MSNBC and one conservative news story from FOX (both made to appear as though from AP). Participants in *non-selective exposure group* were randomly assigned to one of five groups—FOX conservative, FOX liberal, MSNBC conservative, MSNBC liberal, or AP (one liberal, one conservative)—and they read the same news stories presented to the selective exposure group.

In the sports and human interest news sections, participants also read two news stories in each section. All of the news materials for the sports and human interest articles were taken from the actual AP news feed but made to appear as though they were from FOX or MSNBC when participants selected FOX or MSNBC (in the selective exposure group) or when they were assigned to FOX or MSNBC (in the non-selective exposure

group). The stories from AP were specifically chosen to not have any political bent to them.

Finally, after reading news in each section (political and sports/human interest), participants completed attention checks to determine if they have really read the news (e.g., “what political issue was mentioned in the news feed?”). They also answered questions about whether they have read the news before (1 = Yes, 0 = No) and their perceived credibility of the source and news stories.

Materials

Given that Facebook is the primary news source for Americans among various social media platforms, this study used actual news posts from news outlets on Facebook as the materials. In other words, all news items were real news extracted from various news outlets’ Facebook posts. The news items were carefully chosen to include diverse and heatedly debated topics such as gun control, health care and immigrants. Also, news opinions with strong hatred towards the other ideological party was not included in case of that participants cast doubts on the news authenticity when they read falsified source-story inconsistent news. All news items were presented as screenshots of news posts on Facebook with the news outlet’s logo and name, post time, a short paragraph of the news summary, as well as a picture and news title (see Appendix B for example). Materials included two liberal news posts from MSNBC, two conservative news posts from FOX, and two sports and human interest news posts from AP. Likes, comments and shares were not presented so that participants’ credibility perceptions were not influenced by these social cues.

Measures

Perceived Source Credibility

To measure perceived source credibility of the news feed, I used the scale developed by Metzger et al. (2015), consisting of four items asking participants' perceptions of a news source's bias (*How biased do you find this news outlet to be?*—reverse coded), trustworthiness (*How much do you trust this news outlet?*), professionalism (*How professional do you find this news outlet to be?*) and credibility (*How credible do you feel this news outlet is?*). A 5-point Likert scale was used (1 = not at all; 5 = extremely) and an overall rating of source credibility was obtained by averaging scores across four dimensions. Higher ratings indicated greater source credibility. Cronbach's alpha reliability coefficient for the scale was .83.

Perceived Story Credibility

Perceived story credibility of news feed was measured using items developed by Flanagin and Metzger (2000), consisting of five dimensions: completeness (*How do you find the information to be?*), accuracy (*How accurate do you find the information to be?*), bias (*How biased do you find the information to be?*—reverse coded), trustworthiness (*How trustworthy do you find the information to be?*) and credibility (*How credible do you find the information to be?*). A 5-point Likert scale was used (1 = not at all; 5 = extremely) and an overall rating of story credibility was obtained by averaging scores across five dimensions. Higher ratings indicated greater story credibility. Cronbach's alpha reliability coefficient for the scale was .82.

Strength of Partisanship

To measure strength of partisanship, I used a scale from the American National Election Studies (ANES) (2016). Respondents were first asked "*Generally speaking, do*

you usually think of yourself as a Republican, a Democrat, an Independent, or other?”

Then, if they chose either Republican or Democrat, they were asked “*Would you call yourself a strong (Republican/Democrat) or a not very strong (Republican/Democrat)?*”.

Respondents who chose Independent or Other were asked “*Do you think of yourself as closer to the Republican Party or Democratic Party?*”. The data was coded into seven

categories: 1) Strong Democrat, 2) Weak Democrat, 3) Independent Democrat, 4)

Independent Independent, 5) Independent Republican, 6) Weak Republican, and 7)

Strong Republican. For purposes of the moderation analyses, I created a dichotomous

grouping of *strong partisan* including Strong Democrat or Strong Republican (coded as

1; 47.6%) versus *non-partisan* including Independent Democrat, Independent

Republican, or Independent Independent (coded as 0; 23.3%). For the moderation

analyses, *weak partisan* (i.e., Weak Republican or Weak Democrat) were excluded

(29.1%).

Control variables

Political ideological identification (see Appendix A for definition) was assessed

with a single item from ANES (2016): “*Here is a 7-point scale on which the political*

views that people might hold are arranged from extremely liberal to extremely

conservative. Where would you place yourself on this scale, or haven’t you thought much

about this?” Participants rated their answer on a 7-point scale: 1 = “Extremely Liberal,” 2

= “Liberal,” 3 = “Slightly Liberal,” 4 = “Moderate, Middle of Road,” 5 = “Slightly

Conservative,” 6 = “Conservative,” 7 = “Extremely Conservative.” Participants could

also answer “Do Not Know/Haven’t Thought About It.” Additionally, in the pre-screen

survey, I assessed participant’s main news source (i.e., “*Where do you mainly get news*

from?”), news reading frequency (i.e., “*How often do you read news from your main news source?*”), perceived credibility of news from different news sources (i.e., “*How credible (complete, accurate, unbiased, trustworthy) do you find news information from print newspapers or magazines/radio/social media/news websites to be?*”) (See Table 1 for all measures). These variables were analyzed for potential inclusion as control variables. Participants also answered questions about their perceived credibility of the three news outlets initially (i.e., FOX, MSNBC, AP) in the pre-screen survey using the same source credibility scale in main survey. Finally, additional potential demographic control variables included participants’ age, gender (0 = male, 1 = female) and race (0 = White, 1 = non-White).

Table 1*Demographics of Study Sample by Ideological Identification*

Factor	Total sample (<i>N</i> = 468)	Ideological Identification	
		Conservative (<i>N</i> = 131)	Liberal (<i>N</i> = 259)
Age	<i>N</i> (%)		
Under 20	1 (.2)	1 (1.0)	0
20-29	163 (34.8)	37 (22.7)	109 (66.9)
30-39	161 (34.4)	42 (26.1)	84 (52.2)
40-49	64 (13.7)	26 (40.6)	29 (45.3)
50 or older	76 (16.2)	25 (32.9)	35 (46.1)
Missing	3 (.6)	0	2 (66.7)
Gender			
Male	257 (54.9)	72 (28.0)	142 (55.3)
Female	207 (44.2)	59 (28.5)	115 (55.6)
Other	3 (.6)	0	2 (66.7)
Missing	1 (.2)	1 (1.0)	0
Race			
White	282 (60.3)	102 (36.2)	128 (45.4)
Hispanic	29 (6.2)	4 (13.8)	21 (72.4)
Black	26 (5.6)	2 (7.7)	20 (76.9)
Asian	117 (25)	19 (16.2)	81 (69.2)
American Indian or Alaska Native	6 (1.3)	0	5 (83.3)
Native Hawaiian or Other Pacific Islander	1 (.2)	1 (1.0)	0
Other	7 (1.5)	3 (42.9)	4 (57.1)
Strength of Partisanship			
Strong Partisan	223 (47.6)	62 (27.8)	152 (68.2)
Non-Partisan	109 (23.3)	26 (23.9)	41 (37.6)
Missing	136 (29.1)	43 (31.6)	66 (48.5)

Factor	Total sample (<i>N</i> = 468)	Ideological Identification	
		Conservative (<i>N</i> = 131)	Liberal (<i>N</i> = 259)
Main news source			
Social media	127 (27.1)	38 (29.9)	72 (56.7)
News websites	151 (32.3)	46 (30.5)	74 (49.0)
TV	129 (27.6)	35 (27.1)	75 (58.1)
Print newspapers or magazines	25 (5.3)	2 (.08)	20 (90.9)
Radio	21 (4.5)	4 (19.0)	13 (61.9)
None of the above	15 (3.2)	6 (0.4)	5 (33.3)
News source credibility <i>M (SD)</i>			
Social media	2.58 (1.20)	2.47 (1.13)	2.72 (1.25)
News websites	3.31 (.93)	3.08 (.87)	3.51 (.91)
Print newspapers or magazines	3.13 (.91)	2.82 (.96)	3.32 (.82)
Radio	3.09 (1.03)	2.89 (.99)	3.22 (1.06)
News reading frequency <i>M (SD)</i>			
Several times a day	176 (37.6)	47 (35.9)	109 (42.1)
Once a day	146 (31.2)	39 (29.8)	75 (29)
4-6 days a week	79 (16.9)	19 (14.5)	45 (17.4)
2-3 days a week	42 (9.0)	15 (11.5)	20 (7.7)
Once a week	10 (2.1)	3 (2.3)	5 (1.9)
Less often than once a Week	15 (3.2)	8 (6.1)	5 (1.9)
<i>M (SD)</i>			
	4.84 (1.26)	4.67 (1.43)	4.96 (1.18)
News outlet credibility (initial) <i>M (SD)</i>			
FOX	2.90 (.83)	3.23 (.67)	2.78 (.90)
MSNBC	3.07 (.79)	2.86 (.82)	3.27 (.77)
AP	3.22 (.80)	3.03 (.80)	3.41 (.75)

RESULTS

Demographics

The sample consisted of slightly more males (54.91%) than females (44.23%), was majority White (60.3%), the average participant age was mid-30's ($M = 36.89$, $SD = 12.03$), and the majority reported being liberal (55.34%), with conservatives making up roughly one-quarter of the participants (27.99%) (see Table 1 for sample demographics). Tables 2 and 3 show the number of participants in each experimental group. Correlations between potential covariates (i.e., age, gender, race, news reading frequency, perceived credibility of different news sources), strength of partisanship (1 = strong partisan; 0 = non-partisan) and dependent variables (i.e., story credibility and source credibility), as well as their means and standard deviations are displayed in Table 4. I also conducted two one-way ANOVAs with source and story credibility as dependent variables and main news source (1 = traditional news sources (including Print newspapers or magazines, TV and Radio), 2 = Social media (e.g., FB, Twitter), 3 = News websites, missing = None of the above) as the independent variable. There was not a significant effect of people's main news source on their source credibility, $F(2, 450) = 1.92$, $p = .15$, $\eta_p^2 = .008$. However, there was a significant effect of people's main news source on their story credibility, $F(2, 450) = 5.56$, $p < .05$, $\eta_p^2 = .024$. Post-hoc analyses using Tukey's HSD test revealed that people who mainly get news from traditional news sources reported higher story credibility than those who mainly get news from news websites. Because among the potential covariates, gender and news reading frequency were shown to have no or significant but weak correlations with dependent variables and the study is focusing

on news from social media, I included the following covariates in all subsequent analyses: age, race and perceived credibility of news from social media.

Table 2

Ideological Identification, News Source and Slant of News Stories Based on with/without Selective Exposure

Factor	Total sample (<i>N</i> = 468)	Selective Exposure (SE) conditions	
		NO SE (<i>N</i> = 234)	SE (<i>N</i> = 234)
Ideological Identification	<i>N</i> (%)		
Conservative	131 (28)	69 (52.7)	62 (47.3)
Liberal	259 (55.3)	127 (49.0)	132 (51.0)
News source			
FOX	186 (39.7)	99 (53.2)	87 (46.8)
MSNBC	159 (34)	87 (54.7)	72 (45.3)
AP	123 (26.3)	48 (39.0)	75 (61.0)
News story			
Conservative	168 (35.9)	86 (51.2)	82 (48.8)
Liberal	177 (37.8)	100 (56.5)	77 (43.5)
Mixed	123 (26.3)	48 (39.0)	75 (61.0)

Table 3

Frequency Table of Participants in Selective Exposure Group Choosing News Outlets

Groups	Frequency	Percent (%)
Conservatives who chose FOX	34	54.8
Conservatives who chose MSNBC	15	24.2
Conservatives who chose AP	13	21.0
Total	62	100
Liberals who chose FOX	36	27.3
Liberals who chose MSNBC	47	35.6
Liberals who chose AP	49	37.1
Total	132	100
Independents who chose FOX	16	42.1
Independents who chose MSNBC	10	26.3
Independents who chose AP	12	31.6
Total	38	100

Table 4*Correlations, Means and Standard Deviations for Major Study Variables*

Variables	Story Credibility	Source Credibility	<i>M</i>	<i>SD</i>
1. Age	-.20***	-.10*	36.89	12.03
2. Gender	-.09	.03	.45	.50
3. Race	.27***	.16**	.40	.49
4. Strength of partisanship	.20***	.17**	.67	.47
5. News reading frequency	.11*	.08	4.84	1.26
6. Perceived credibility of print newspapers or magazines	.37***	.31***	3.13	.91
7. Perceived credibility of radio	.32***	.22***	3.09	1.03
8. Perceived credibility of social media	.31***	.16**	2.58	1.2
9. Perceived credibility of news websites	.36***	.28***	3.31	.93
10. Story credibility	–	.77***	3.01	.87
11. Source credibility	.77***	–	3.10	.96

Note. Gender: 0 = male, 1 = female; Race: 0 = white, 1 = non-white; Strength of partisanship: 0 = non-partisan, 1 = strong partisan; News reading frequency: 1 = Less often than once a week, 2 = Once a week, 3 = 2-3 days a week, 4 = 4-6 days a week, 5 = Once a day, 6 = Several times a day.

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

Manipulation Checks

Sports and human interest news were included as manipulation checks to see if participants distinguished between political news and other types of news. Specifically, I expected that participants' credibility perceptions about sports and human interest news should not be influenced by different news sources. To test this, one-way ANOVAs were conducted with story credibility of sports or human interest news as the dependent

variable and news source (i.e., FOX, MSNBC, AP) as the independent variable. There was no significant difference in story credibility of sports news, $F(2, 230) = 0.45, p = .64, \eta_p^2 = .004$, or human interest news, $F(2, 229) = 1.57, p = .21, \eta_p^2 = .014$, among the three news sources. In other words, participants did not report sports or human interest news to be more or less credible based on news source (FOX, MSNBC, AP); thus, the manipulation check was successful.

Selective Exposure Tendency & Credibility

I predicted that participants will report higher source and story credibility when the source and stories are both pro-attitudinal as opposed to both counter-attitudinal (*Hypothesis 1*). Prior to testing the first hypothesis, I first conducted a set of preliminary analyses including the control group (AP/balanced) to determine if participants (regardless of selective exposure condition) view the neutral source/balanced perspective as more credible than the other news sources (FOX, MSNBC) or slants (conservative, liberal). I conducted a one-way MANOVA with source and story credibility as dependent variables and source (i.e., FOX, MSNBC, AP) as the independent variable. The analysis revealed a significant multivariate effect of source on source and story credibility, $F(4, 928) = 4.88, p < .01; Wilk's \Lambda = .96, \eta_p^2 = .021$. Univariate analyses for the effect of source on story credibility were not significant ($p = .24$), but they were significant for the effect of source on source credibility ($p < .01$). Post-hoc tests using Tukey's HSD showed that participants reported higher source credibility towards AP than FOX ($p < .01$); no other comparisons were significant. Next, I conducted a one-way MANOVA with source and story credibility as dependent variables and ideological slant of news stories (i.e., conservative, liberal, balanced) as the independent variable to determine if I could drop

the balanced group from main hypotheses testing. The analysis revealed a significant multivariate effect of slant of stories on source and story credibility, $F(4, 928) = 6.21, p < .001$; *Wilk's Λ* = .95, $\eta_p^2 = .026$. Univariate analyses for the effect of slant of stories on story credibility were not significant ($p = .07$), but they were significant for the effect of slant on source credibility ($p < .01$). Post-hoc tests using Tukey's HSD showed that participants reported higher source credibility after reading balanced news than conservative news ($p < .05$) and liberal news ($p < .01$); no other comparisons were significant. To conclude, there were significant differences in source credibility towards AP vs. FOX, as well as balanced news vs. conservative and liberal news, but no significant differences in story credibility among the sources or slant when including all three sources and slants.

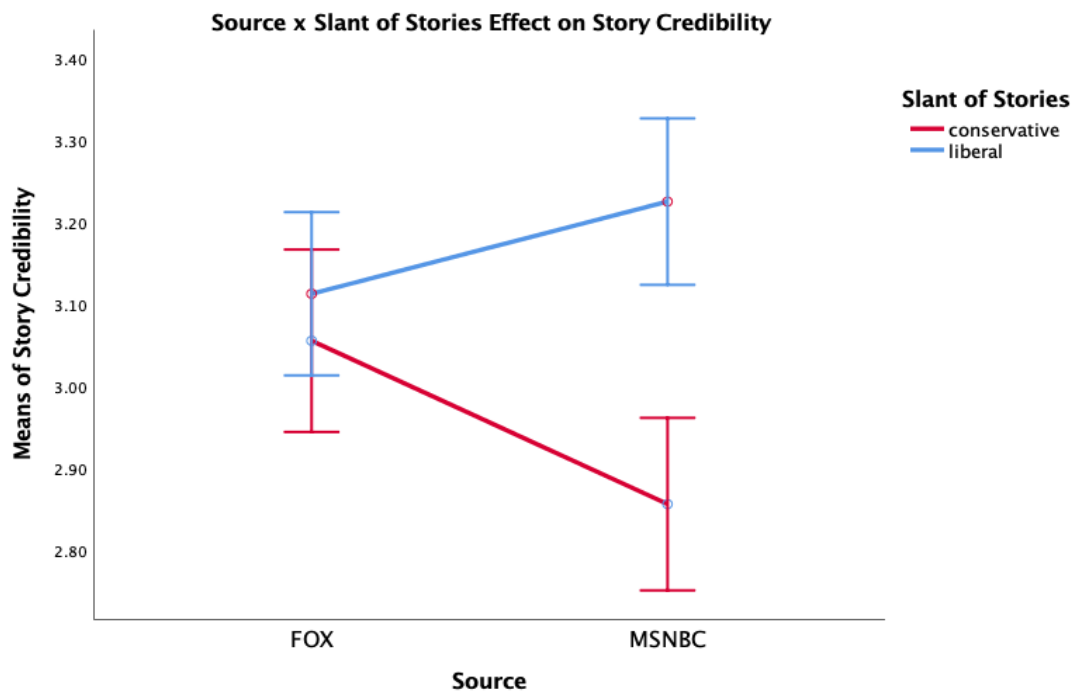
Because the first hypothesis was mainly focused on source and story credibility differences between pro-attitudinal and counter-attitudinal information, I filtered out the control group reading balanced news from AP from the main hypothesis testing and I collapsed across selective exposure condition. I next conducted analyses to examine whether there were differences in perceived credibility when the source and slant were congruent (e.g., FOX-conservative story) as opposed to incongruent (e.g., FOX-liberal story) regardless of the participant's own ideological views. A two-way MANCOVA with source and story credibility as dependent variables, source (i.e., FOX and MSNBC) and slant of news stories (i.e., conservative and liberal) as independent variables, with age, race, perceived credibility of news from social media and strength of partisanship as covariates, revealed a significant multivariate effect of slant of stories on source and story credibility when controlling for age, race, perceived credibility of news from social media

and strength of partisanship, $F(2, 233) = 4.16, p < .05$; *Wilk's Λ* = .97, $\eta_p^2 = .034$.

However, the multivariate effects of source and the interaction between source and slant of stories on the two dependent variables were not significant. Instead, univariate analyses for the main effect of slant of stories on story credibility showed a significant difference with participants reporting higher story credibility when they read liberal news than conservative news $F(1, 234) = 4.10, p < .05, \eta_p^2 = .017$. Figure 1 showed that participants reported higher story credibility towards liberal news from MSNBC than conservative news from MSNBC.

Figure 1

Effect of the Interaction between Source and Slant of Stories on Story Credibility



Finally, for my main prediction, I conducted a one-way MANCOVA with source credibility and story credibility as dependent variables, story-attitude consistency (i.e., pro-attitudinal vs. counter-attitudinal news stories) as the independent variable with age,

race, perceived credibility of news from social media and strength of partisanship as covariates. The story-attitude consistency was coded as equal to 1 when conservatives read conservative news or liberals read liberal news (i.e., pro-attitudinal = 1), and as equal to 0 when conservatives read liberal news or liberals read conservative news (i.e., counter-attitudinal = 0). After splitting data with source-story consistency, when the slants of source and stories are consistent (i.e., the source and stories are both pro-attitudinal or both counter-attitudinal), the analysis revealed a significant multivariate effect of story-attitude consistency on source credibility and story credibility, $F(2, 107) = 6.34, p < .01$; *Wilk's Λ* = .89, $\eta_p^2 = .106$. In support of Hypothesis 1, univariate analyses for the effects of story-attitude consistency on both story credibility ($p < .05$) and source credibility ($p < .01$) were significant, participants reported higher story credibility and source credibility when the source and stories were both pro-attitudinal compared to both counter-attitudinal.

Additional post-hoc analyses using repeated measures ANOVA found that liberals reported higher source credibility of MSNBC after reading pro-attitudinal liberal news from it compared to their initial credibility perception of MSNBC reported two months ago in the pre-screen survey, $F(1, 46) = 5.22, p < .05, \eta_p^2 = .102$. Conservatives who read conservative news from FOX did not report such significant difference, $F(1, 35) = .47, p = .50, \eta_p^2 = .013$.

Selective Exposure Behavior & Credibility

Next, I predicted that participants would report higher source and story credibility of news in the selective exposure condition compared to the non-selective exposure condition when they read counter-attitudinal stories from a pro-attitudinal news source

(Hypothesis 2). To test this hypothesis, I conducted a one-way MANCOVA with source and story credibility as dependent variables, selective exposure behavior (i.e., selective exposure group vs. non-selective exposure group) as the independent variable, with age, race, perceived credibility of news from social media and strength of partisanship as covariates. For *conservatives who read liberal news from FOX*, the analysis did not reveal a significant multivariate effect of selective exposure behavior on source or story credibility when controlling for age, race, perceived credibility of news from social media and strength of partisanship, $F(2, 11) = 0.45, p = .65$; *Wilk's $\Lambda = .92, \eta_p^2 = .076$* . Similarly, for *liberals who read conservative news from MSNBC*, the analysis did not reveal a significant multivariate effect of selective exposure behavior on source or story credibility when controlling for other variables, $F(2, 25) = 0.67, p = .52$; *Wilk's $\Lambda = .95, \eta_p^2 = .051$* . Thus, Hypothesis 2 was not supported; in other words, there was no difference in source or story credibility for those reading counter-attitudinal news from a pro-attitudinal news source regardless of whether they selected the source or were given the source.

Additional post-hoc analyses were conducted using the same one-way MANCOVA to examine whether selective exposure behavior influenced people in other conditions. Results revealed that, *for liberals who read conservative news from FOX*, although there was not a significant multivariate effect of selective exposure behavior on source and story credibility when controlling for covariates, univariate analyses for the effect of selective exposure behavior on story and source credibility were both significant such that liberal participants reported higher story credibility ($p < .05$) and source credibility ($p < .05$) in the selective exposure condition compared to the non-selective

exposure condition. Similarly, for *liberals who read liberal news from FOX*, there was a significant multivariate effect of selective exposure behavior on source and story credibility when controlling for other variables, $F(2, 38) = 3.41, p < .05$; *Wilk's Λ* = .85, $\eta_p^2 = .152$. Univariate analyses for the effect of selective exposure behavior on story and source credibility were both significant such that liberals reported higher story credibility ($p < .05$) and source credibility ($p < .05$) in the selective exposure condition compared to the non-selective exposure condition. In other words, liberals who chose to read FOX news reported higher source and story credibility regardless of whether the news was pro- or counter-attitudinal to FOX compared to liberals who were forced to read FOX news (i.e., non-selective exposure). No significant effect of selective exposure behavior was found for conservatives reading MSNBC news or people reading pro-attitudinal news from a pro-attitudinal news source.

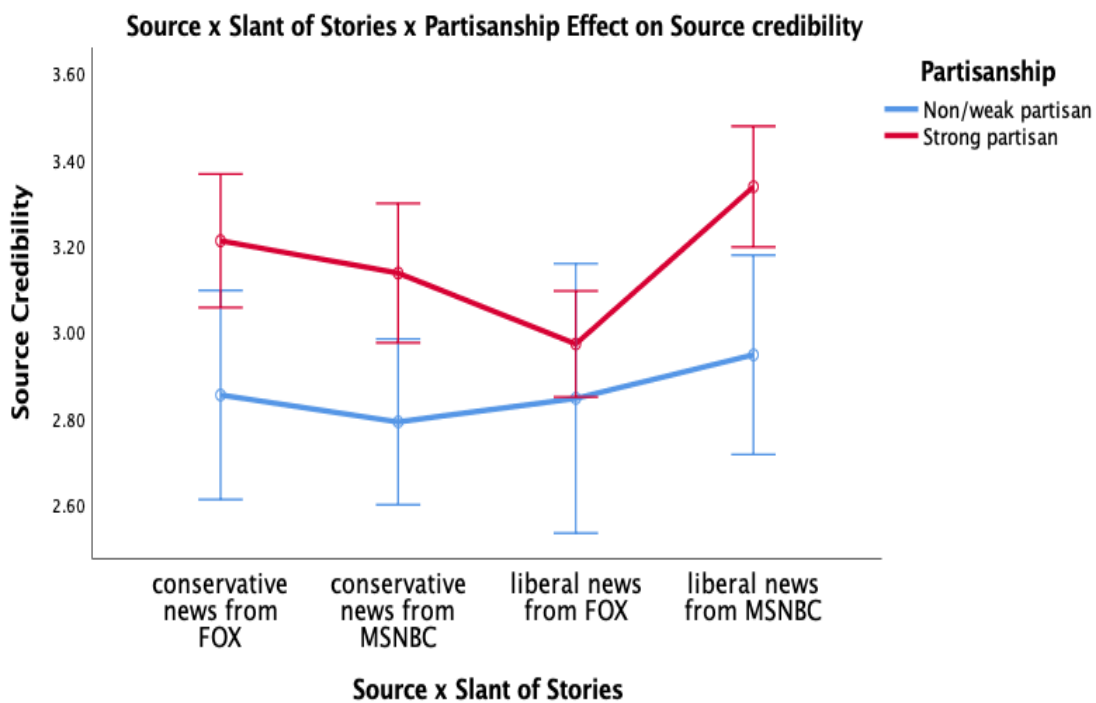
Selective Exposure Tendency & Strength of Partisanship

For my third hypothesis, I predicted that strong partisans would show a stronger effect of selective exposure tendency on source and story credibility than non-partisans. I conducted a three-way MANCOVA and a two-way MANCOVA to test this interaction. A three-way MANCOVA was conducted with source and story credibility as dependent variables, strength of partisanship, source and slant of stories as independent variables, with age, race and perceived credibility of news from social media as covariates. Analyses revealed a significant multivariate main effect of slant of stories on source and story credibility when controlling for other variables, $F(2, 230) = 5.44, p < .01$; *Wilk's Λ* = .96, $\eta_p^2 = .045$. Univariate analyses for the effect of slant of stories on story credibility was significant such that participants reported higher story credibility when they read

liberal news than conservative news ($p < .05$). There was no significant multivariate main effect of strength of partisanship on the two dependent variables, controlling for other variables, $F(2, 230) = 1.56, p = .21$; *Wilk's Λ* = .99, $\eta_p^2 = .013$. Figure 2 showed that strong partisans reported higher source credibility towards liberal news from MSNBC than non-partisans. None of the other interaction terms showed significant multivariate or univariate effects on the dependent variables.

Figure 2

Effect of the Interaction between Source x Slant of Stories and Partisanship on Source Credibility



Next, a two-way MANCOVA was conducted with source and story credibility as dependent variables, story-attitude consistency and strength of partisanship as independent variables, with age, race and perceived credibility of news from social media

as covariates. When the attitudes of source and stories are consistent, the analysis revealed a significant multivariate effect of story-attitude consistency on source and story credibility, controlling for strength of partisanship and covariates, $F(2, 106) = 5.36, p < .01$; *Wilk's Λ* = .91, $\eta_p^2 = .092$. Univariate analyses for the effects of story-attitude consistency on both story credibility ($p < .05$) and source credibility ($p < .01$) were significant. Specifically, participants reported higher story and source credibility when the source and stories are both pro-attitudinal compared to counter-attitudinal. However, there was no significant multivariate effect of strength of partisanship on the two dependent variables controlling for other variables, $F(2, 106) = 0.17, p = .85$; *Wilk's Λ* = .99, $\eta_p^2 = .003$. The interaction between story-attitude consistency and strength of partisanship did not have a significant multivariate or univariate effect on the dependent variables, $F(2, 106) = 0.10, p = .91$; *Wilk's Λ* = .99, $\eta_p^2 = .002$. Thus, Hypothesis 3 was not supported.

Selective Exposure Behavior & Strength of Partisanship

Finally, I predicted that strength of partisanship would interact with the selective exposure behavior, such that strong partisans would show a stronger effect of selective exposure behavior on story and source credibility (*Hypothesis 4*). I tested this hypothesis via a two-way MANCOVA with source and story credibility as dependent variables, strength of partisanship and selective exposure behavior as independent variables, with age, race and perceived credibility of news from social media as covariates. None of the analyses revealed significant effects of either selective exposure behavior or strength of partisanship on dependent variables when participants read counter-attitudinal stories from a pro-attitudinal news source. Thus, Hypothesis 4 was not supported.

DISCUSSION

This study examined whether selective exposure influences people's perceived source and story credibility of news on social media. Partial support was found for my hypotheses. Specifically, results provide evidence that people report higher perceived source and story credibility when the source and stories are both pro-attitudinal as opposed to both counter-attitudinal, regardless of their age, race, perceived credibility of news from social media and strength of partisanship. This is consistent with previous literature finding that people tend to judge attitude-consistent news as more credible than counter-attitudinal news (Flanagin & Metzger, 2000; Metzger et al., 2015; Vallone et al., 1985). Additionally, liberals' credibility perception of MSNBC was increased after reading pro-attitudinal news from it compared to what they reported two months ago, indicating that selective exposure of pro-attitudinal news can change people's credibility perception of the news source over time. However, the results should be interpreted with caution considering the dynamic news environment during two months.

Then, contrary to expectations, I did not find evidence for a significant effect of selective exposure on perceived source and story credibility when participants read counter-attitudinal stories from a pro-attitudinal news source. There are several possible explanations for this result. First, the behavior of choosing a preferred news outlet may not generate enough cognitive dissonance to cause people to make credibility adjustments (in order to reduce dissonance). It was hypothesized that when people read counter-attitudinal news from a pro-attitudinal news source, they would reduce source and story credibility of the news, which could be offset by their behavior of choosing the source in the beginning. However, the results indicate that the behavior of selective exposure has a

minimal effect on changing people's credibility perceptions when they are exposed to counter-attitudinal news from a pro-attitudinal news source. This lack of an effect may be explained using Limited Capacity Model of Motivated Mediated Message Processing, or LC4MP, which assumes that people have a limited capacity for cognitive processing of information (Lang, 2000). Thus, it may be that participants did not allocate as much cognitive resources as expected to choose a news outlet, at least in this experimental setting, which explains why they were not influenced by the selective exposure behavior later during the news credibility judgment process.

An alternate explanation is that people experienced psychological reactance when they were forced to view the news (i.e., non-selective exposure group) compared to those who were allowed to select their news exposure, which effectively cancelled out the difference between selective exposure and non-selective exposure in influencing people's credibility perceptions. The different psychological reactions of forced exposure vs. selected exposure are corroborated in a study by Stroud and colleagues (2019). By randomly assigning participants to either choose among pro-attitudinal, counter-attitudinal or balanced news content or forced exposure to one of these contents, Stroud and colleagues (2019) found that forced exposure led to greater cognitive reactance (i.e., counter-arguing), affective reactance (i.e., negative affect) and higher ratings of issue understanding. Similarly, they did not find differences between forced and selected exposure in issue attitudes, which could be explained by the different directions of attitude change elicited by reactance and cognitive dissonance (Stroud et al., 2019). While reactance leads people to change their attitudes in a message-opposite direction, cognitive dissonance leads people to strengthen message-consistent attitude—and these

effects offset each other (Stroud et al., 2019). To conclude, this thesis suggests that although people's selective exposure tendency leads them to perceive pro-attitudinal news sources and stories as more credible than counter-attitudinal news, their behavior of selective exposure has a relatively minimal effect on their credibility perceptions in certain conditions (i.e., exposure to counter-attitudinal news from a pro-attitudinal news source).

Moreover, additional analyses revealed that selective exposure did not contribute to people perceiving pro-attitudinal news and news source as more credible than those without selective exposure. This finding suggests that except for possible decreased contact with diverse opinions on social media, the behavior of selective exposure itself does not strengthen people's tendency to be more politically polarized and have increased confirmation bias in their pre-existing beliefs.

Another unexpected finding from the current thesis indicates that selective exposure behavior may influence perceived story and source credibility in specific conditions. Notably, in the selective exposure condition, a significant amount of people chose the news outlet opposite to their ideological party—24.2% of conservatives chose MSNBC while 27.3% of liberals chose FOX. Liberals who chose FOX reported higher source and story credibility of both conservative and liberal news (from FOX) compared to liberals who were given FOX news to read, after controlling for age, race, perceived credibility of news from social media, and strength of partisanship. It is reasonable that liberals perceive conservative news from FOX and the news source as more credible after selecting than without selecting, because such news confirms their perception of FOX being biased towards conservative views; thus, they may perceive the news and FOX as

more predictable or credible in a sarcastic way. In other words, for liberals who read liberal news from FOX, because their motivation to select FOX was likely to confirm their perception of FOX being biased towards conservative views, exposure to liberal news on FOX violated their expectations, which caused cognitive dissonance. In line with cognitive dissonance theory (Festinger, 1957), in order to reduce the dissonance, they had to increase their perceptions of the credibility of FOX and the news story. Because people in the non-selective exposure groups were not motivated to confirm their expectancies about FOX, they experienced less cognitive dissonance and changed their credibility perceptions less. The fact that conservatives were not influenced by selective exposure behavior in their credibility perceptions indicates that there is an ideological difference in the effect of selective exposure on credibility, which is also indicated in some other studies (Rodriguez et al., 2017; Stroud & Lee, 2013).

Finally, surprisingly, I did not find any evidence of moderation by strength of partisanship in contrast to prior studies (Heatherly et al., 2016; Iyengar & Hahn, 2009; Johnson et al., 2009; Mutz & Martin, 2001; Stroud, 2008, 2010; Young, 2004). In other words, stronger partisanship did not increase people's perceived source and story credibility towards pro-attitudinal news compared to counter-attitudinal news, nor did it strengthen the effect of selective exposure behavior on perceived credibility. One potential explanation is that in these particularly divisive times, it is possible that individuals who are traditionally weak or non-partisan still hold very strong opinions about the present administration and the news associated with it, which could have limited the strength of the experimental manipulation.

Additionally, this inconsistency in my findings with the prior literature may be due to unequal distribution of people with different strength of partisanship—while strong partisans make up almost half of the sample (47.6%), non-partisans only account for about 20%. The number of non-partisans is even lower when distributed into specific experimental groups for hypotheses testing. A possible explanation for the large proportion of strong partisans in this study is that stronger partisans are more likely to be interested in participating in a study where they read news and answer questions about news credibility perceptions. This inclination is supported by the findings that strong partisans are more active in political engagement and online news use (Chan, 2014; Conover et al., 2012; Gerber et al., 2010; Rainie et al., 2012). Then, in the ANES study from 2016, which included a nationally representative sample of 4,240 people, 38% were strong partisans and 37% were non-partisans (i.e., sum of independents and leaning independents). However, according to the pilot study by ANES in 2019, among 3,161 participants, about 30% were strong partisans and 45% were non-partisans, which may better represent the partisanship distribution in the current political environment after the 2016 presidential election. Future research should increase the sample size and minimize sampling bias to ensure a distribution of participants by strength of partisanship close to the national distribution nowadays.

Limitations and Future Direction

One of the limitations of this study is the low sample size, which could have undermined the statistical power of some of the key statistical tests. Future research should recruit a larger sample size to obtain adequate power for analyses. Another limitation includes lack of measurement of participants' pre-existing attitudes towards the

issues involved in news. Because people with the same ideological leaning may hold different views on various issues, it is likely that a conservative may support gun control and thus may view the liberal news story on gun control as pro-attitudinal. Future replications should measure people's initial attitudes on news issues in the pre-screen survey to ensure experimental validity, and possibly measure participants' attitudes again after reading the news stories. Incorporating these attitude measures would help researchers more directly assess the actual shifts in attitudes predicted by cognitive dissonance theory. Moreover, because the order in which the political news and sport/human interest news was presented was not randomized, such that participants always read the political news prior to reading the sport/human interest news, it is possible that an order effect occurred. The consistent presentation of the political news prior to the sport/human interest news was done to maximize participants' attention when reading the political news. Future research, however, should seek to replicate the present findings with a counterbalanced presentation of different news topics. Additionally, because participants could only read headlines and pictures of the news without further details, future research should consider including complete news articles linked to the news posts. Last, the findings are limited to only the news issues and news sources represented in the current study, which may not be generalized to all political topics and news outlets. Future research should examine the present research questions with different news issues and news outlets to test the generalizability of the findings.

In the current study, the measure of perceived credibility served as an indicator of cognitive dissonance; however, additional indicators of cognitive dissonance are needed to test whether people actually experienced the dissonance when exposed to counter-

attitudinal information. Metzger and others (2016) developed a new scale to assess the cognitive and emotional dimensions of cognitive dissonance, including items such as “*I regret reading this news story,*” “*This news source makes me uncomfortable*” and “*I agreed with the stance taken in the article.*” They also measured participants’ future selective exposure tendency in the study by asking participants how likely they would be to select that same source (vs. another source) for news information in the future (Metzger et al., 2016). Future research should include these measurements to further explore the relationship between cognitive dissonance, selective exposure, and credibility.

Furthermore, the present experimental design sought to mirror people’s selective exposure behavior in real life as much as possible by, for example, allowing participants in the selective exposure conditions to choose the news outlet and presenting the news as an ostensible Facebook post. It may not fully represent the real-life scenario of people reading news on social media, however, for a couple of reasons. First, because people often select news outlets they want to follow on social media and seldom change their followings, the selecting behavior in real life may be less salient than choosing an outlet in the experiment. Second, following a news outlet on social media in real life results in consistent and frequent exposure to news from the single source in the future. Thus, following a news outlet on social media requires more cautious and considerable cognitive efforts with potentially longer-lasting consequences. In contrast, choosing a news outlet in the experiment involved a one-time decision that requires less attention and, thus, may lead to less salient or less strong cognitive dissonance. Future studies using experimental designs that more closely match the real-life context in which

selective exposure occurs on social media or that use digital trace data and computational science methods to further examine these questions would be especially beneficial.

Finally, this study advances research on credibility perceptions of news on social media, which is becoming an increasingly important news source for people. Because no social cues such as likes, comments, and shares were included in the news materials, future efforts should be made to investigate the influence of these social factors on people's selective exposure tendency and credibility perceptions. Also, given the unique interpersonal features of social media, it will be interesting to examine differences in perceptions of the credibility of news shared by mainstream media news outlets vs. friends and families.

Conclusion

The current thesis was novel in examining the influence of both selective exposure tendency and behavior on people's credibility perceptions of news on social media. I found that people tend to perceive the news and news source they are exposed to as more credible when they are both pro-attitudinal compared to both counter-attitudinal. However, I did not find an influence of selective exposure behavior (i.e., choosing a preferred news source before reading news) on people's credibility perceptions when they read counter-attitudinal news from a pro-attitudinal news source. Last, it appears that strength of partisanship does not moderate the influence of selective exposure on credibility perceptions. Overall, the results indicate that although selective exposure tendency may affect people's credibility perceptions and isolate them in their "*filter bubbles*," the impact of selective exposure behavior may be overestimated in terms of perceived source and story credibility.

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APPENDIX A

GLOSSARY OF TERMS AND DEFINITIONS

Filter Bubble

The situation where people can only see information that matches their pre-existing and self-affirming opinions because the personalization algorithms have filtered out the challenging and diverse ones (Pariser, 2011).

Echo Chamber

The situation in which beliefs are amplified or reinforced by communication and repetition inside a closed system (Adamic & Glance, 2005).

Selective Exposure Tendency

The tendency where individuals prefer exposure to affirming arguments while avoiding contradictory messages (Frey, 1986; Klapper, 1960).

Confirmation Bias

A part of the selective exposure process that emphasizes an active pursuit, interpretation and belief in information that favors one's current attitudes (Plous, 2007; Williams et al., 2016).

News Credibility

The extent readers perceive the news as being believable, reliable and truthful.

Cognitive Dissonance

The internal inconsistency a person may experience when confronted with conflicting beliefs, ideas and values (Festinger, 1957).

Balance Theory

A theory of attitude change where people are motivated to change their attitude towards either one of the conflicting objects or the relation between the two objects in an attempt to obtain psychological balance (Heider, 1958).

Selective Exposure Behavior

The behavior of selecting attitude-confirming information while avoiding counter-attitudinal messages as a demonstration or consequence of selective exposure tendency.

Strength of Partisanship

Degree of self-identification to a political party (Republican/Democrat) ranging from strong partisan to non-partisan (Independent).

Ideological Identification

Self-identification to a political ideology spectrum (Conservative/Liberal/Middle of Road).

APPENDIX B

POLITICAL NEWS MATERIALS

Conservative news from FOX



Fox News

August 23 at 10:25 PM · 🌐



"The United States and its allies have a major interest in not allowing these Arctic sea lanes to fall under Russian or Chinese control." — Marc Thiessen via [Fox News Opinion](#)



FOXNEWS.COM

Marc Thiessen: Don't dismiss Trump's Greenland proposal. It's far from ridiculous



Fox News

August 11 at 9:30 PM · 🌐



OPINION: "Long waits, poor care, high costs. That's the reality of life under single-payer -- and a far cry from the health benefits union members currently enjoy. If union leaders want to keep their members happy and healthy, they'll think twice about supporting 'Medicare-for-All.'" – Sally Pipes



About this website

FOXNEWS.COM

Sally Pipes: Union workers, be careful what you wish for – 2020 Dems might ruin your excellent health benefits

Liberal news from FOX



Fox News

Yesterday at 5:34 AM · 🌐

Beto O'Rourke: There's "no place for an AK-47 or an AR-15 on the streets of our communities, nor should you be able to bring them into a church or a synagogue or a mosque or in public life as we're making it easier to do in Texas right now."



FOXNEWS.COM

Beto O'Rourke calls on Americans to vote, fight for gun control



Fox News

August 29 at 7:29 AM · 🌐

Seriously ill immigrant children and their families are "receiving these letters in the hospitals.. telling them that they have to leave the United States." Ronnie Millar of the Irish International Immigrant Center describes what's being done to help them.



FOXNEWS.COM

New Trump policy would deport severely-ill undocumented migrants

Liberal news from MSNBC



MSNBC

Yesterday at 5:34 AM · 🌐

Beto O'Rourke: There's "no place for an AK-47 or an AR-15 on the streets of our communities, nor should you be able to bring them into a church or a synagogue or a mosque or in public life as we're making it easier to do in Texas right now."



MSNBC.COM

Beto O'Rourke calls on Americans to vote, fight for gun control



MSNBC

August 29 at 7:29 AM · 🌐

Seriously ill immigrant children and their families are "receiving these letters in the hospitals.. telling them that they have to leave the United States." Ronnie Millar of the Irish International Immigrant Center describes what's being done to help them.



MSNBC.COM

New Trump policy would deport severely-ill undocumented migrants

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"The United States and its allies have a major interest in not allowing these Arctic sea lanes to fall under Russian or Chinese control." — Marc Thiessen via [NBC News THINK](#)



NBCNEWS.COM

Marc Thiessen: Don't dismiss Trump's Greenland proposal. It's far from ridiculous



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OPINION: "Long waits, poor care, high costs. That's the reality of life under single-payer -- and a far cry from the health benefits union members currently enjoy. If union leaders want to keep their members happy and healthy, they'll think twice about supporting 'Medicare-for-All.'" – Sally Pipes



About this website

NBCNEWS.COM

Sally Pipes: Union workers, be careful what you wish for – 2020 Dems might ruin your excellent health benefits

Balanced news from AP

AP

Yesterday at 5:34 AM · 🌐

⋮

Beto O'Rourke: There's "no place for an AK-47 or an AR-15 on the streets of our communities, nor should you be able to bring them into a church or a synagogue or a mosque or in public life as we're making it easier to do in Texas right now."

APNEWS.COM

Beto O'Rourke calls on Americans to vote, fight for gun control

AP

August 11 at 9:30 PM · 🌐

⋮

OPINION: "Long waits, poor care, high costs. That's the reality of life under single-payer -- and a far cry from the health benefits union members currently enjoy. If union leaders want to keep their members happy and healthy, they'll think twice about supporting 'Medicare-for-All.'" – Sally Pipes

About this website

APNEWS.COM

Sally Pipes: Union workers, be careful what you wish for – 2020 Dems might ruin your excellent health benefits

APPENDIX C
IRB APPROVAL LETTER

EXEMPTION GRANTED

Kristin Mickelson
 NCIAS: Social and Behavioral Sciences, School of (SSBS)
 607/543-1632
 Kristin.Mickelson@asu.edu

Dear Kristin Mickelson:

On 9/20/2019 the ASU IRB reviewed the following protocol:

Type of Review:	Initial Study
Title:	Cognitive Dissonance after Selective Exposure: Perceived Credibility of News and Attitudes towards the Sharers on Social Media
Investigator:	Kristin Mickelson
IRB ID:	STUDY00010549
Funding:	None
Grant Title:	None
Grant ID:	None
Documents Reviewed:	<ul style="list-style-type: none"> • Amazon_Mechanical_Turk_Participation_Agreement.pdf, Category: Resource list; • Study 2_Full Survey.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Consent Study 1.pdf, Category: Consent Form; • Consent Study 2.pdf, Category: Consent Form; • Pre-screen Survey for Study 1.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • IRB Protocol, Category: IRB Protocol; • Study 1_Full Survey.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Amazon_Mechanical_Turk_Privacy_Notice.pdf, Category: Resource list;

The IRB determined that the protocol is considered exempt pursuant to Federal Regulations 45CFR46 (2) Tests, surveys, interviews, or observation on 9/20/2019.

In conducting this protocol you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).

Sincerely,

IRB Administrator

cc: Xingyu Liu
Xingyu Liu