## UNIVERSITY OF CALIFORNIA

## Santa Barbara

The Role of Need for Cognition and Credibility Assessment in Exposure to

Political Information on the Internet

A dissertation submitted in partial satisfaction of the requirements for the degree

Doctor of Philosophy

in Communication

by

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#### ABSTRACT

The Role of Need for Cognition and Credibility Assessment in Exposure to

Political Information on the Internet

by

# Ryan Bradley Medders

The Internet allows individuals access to an unprecedented amount of news information in human history. However, as several scholars have noted, this abundance of information may encourage selective exposure to attitude-consistent information. Despite this reality, the basic model of selective exposure has seen comparatively little elaboration over the years. This study investigates the effects of two related concepts on selective exposure behaviors: need for cognition and credibility assessment. Using two experimental designs with a non-college adult sample, this study shows that selective exposure to attitude-consistent information is a common behavior. Moreover, although selective exposure behavior is related to credibility assessments, the data revealed that need for cognition generally failed to demonstrate an effect on selective exposure. Implications of the findings are discussed and future directions for research are proposed.

# TABLE OF CONTENTS

CHAPTER 1: INTRODUCTION	1
Selective Exposure and the Changing News Media Landscape	4
Selective Exposure Online	9
New Avenues for Selective Exposure Research	11
CHAPTER 2: SELECTIVE EXPOSURE	14
Theoretical Explanations for Selective Exposure	15
Evidence of Selective Exposure to News	19
Effects of Selective Exposure	25
Summary	28
CHAPTER 3: A FRAMEWORK OF SELECTIVE EXPOSURE MODERATORS	530
Need for Cognition	32
Source Credibility and Selective Exposure	36
Credibility and Attitude-Consistency	38
Need for Cognition, Credibility, and Selective Exposure	42
Partisan Brand versus Lead	43
Summary	49
CHAPTER 4: METHOD	50
Overview	50
Study 1	50
Participants	51
Materials and Procedure	53

Group 1 Procedure	55
Group 2 Procedure	56
Post-test Questionnaire	57
Measures	57
Study 2	65
Participants	66
Materials and Procedure	66
Measures	67
CHAPTER 5: RESULTS	72
Study 1	72
Hypothesis Testing	72
Study 2	89
Summary	93
CHAPTER 6: DISCUSSION	96
Major Findings	97
Selective Exposure Hypothesis	97
Need for Cognition	99
Need for Cognition and Credibility	102
News Brands vs. News Leads and Need for Cognition	102
Need for Cognition, News Brands vs. News Leads, and Cre-	dibility.104
Credibility	106
Theoretical Implications	107

	Practical Implications	109
	Limitations	110
	Future Directions for Research	112
	Next Steps	116
	Conclusion	121
Reference	s	122
Appendix	A: Study 1 Group 1 Instructions and News Selection Stimuli	138
Appendix	B: Study 1 Group 2 Study Instructions and News Selection Stimuli	146
Appendix	C: Study 1 Postexposure Questionnaire	153
Appendix	D: Study 2 Instructions and Stimuli	159
Annendix	E: Study 2 Postexposure Questionnaire	163

# LIST OF FIGURES

Figure 1.	Fox News Channel stimulus example	54
Figure 2.	MSNBC with headline and lead paragraph consistent	56
Figure 3.	MSNBC logo with Fox News headline and lead paragraph	57
Figure 4.	Mediation model of attitude consistency on selective exposure both directly and indirectly through credibility assessment	120
Figure 5.	Moderated mediation model of attitude consistency on selective exposure both directly and indirectly through credibility assessment with influence by the moderator, need for cognition	: 120

# LIST OF TABLES

Table 1.	Mean comparisons of political leaning of news brands, excluding Independents	65
Table 2.	Partisan selective exposure across Group 1 and Group 2	74
Table 3.	Partisan selective exposure in Group 1 only	75
Table 4.	Number and percentage of participants selecting an attitude- consistent news brand across Group 1 and Group 2	78
Table 5.	Number and percentage of participants selecting an attitude- consistent news brand in Group 1	80
Table 6.	Correlations between perceived credibility of news brand and selecting that brand	81
Table 7.	Credibility perceptions of attitude-consistent and attitude-inconsistent news brands controlling for familiarity with news brand.	82
Table 8.	Selection of attitude-consistent brand or lead in Group 2	86
Table 9.	Story credibility ratings among high and low need for cognition participants controlling for familiarity with news brand, Group 2 only	88
Table 10.	Estimated marginal mean scores for attitude-consistent and attitude inconsistent news brands credibility by high or low need for cognition.	e- 92
Table 11.	Summary of findings across both studies	94

#### **CHAPTER 1: INTRODUCTION**

Political communication scholars have long been concerned about the effect that selective exposure has on individual consumption of the news and on public opinion more broadly. Recalling the initial findings of Lazarsfeld, Berelson, and Gaudet in their landmark 1944 study, media selectivity was noted for playing a role in the reinforcement of existing political attitudes. Individuals, those researchers found, are more likely to choose and attend to information that is congruent with their preexisting beliefs and avoid information in their media diet and interpersonal interactions that does not conform to their own particular viewpoint. Many have raised concerns about the likelihood of selective exposure to create a fragmented media audience and a polarized electorate (Bennett & Iyengar, 2008; Neumann, 1991; Prior, 2007; Sunstein, 2001).

These questions lie at the heart of an ongoing academic interest in political communication, news media reception, and public opinion outcomes. Particularly, these questions highlight the need to focus on the fragmentation and polarization theses laid out by Neuman (1991), Sunstein (2001), and others. The fragmentation thesis suggests that new technologies in the media world push audiences towards an individualized diet of information that was unthinkable a mere 20 years ago. The argument posits that a multiplication of channels and resulting specialization in content allows the audience to be more selective in its intake of political and news information. As will be discussed in detail later, the fragmentation thesis was theorized in the wake of an explosion of cable television channels, but refined and

concentrated by the sheer magnitude of media choices now available on the global Internet. The central thesis of fragmentation says that digital media, in essence, have the potential to fragment the traditional mass audience into smaller niche audiences. In other words, rather than the general United States media audience receiving a coherent and unified message that is controlled via central authorities like news editors and producers from a handful of organizations, they instead can receive a certain subset of messages that fit into their own pre-conceived values and world-view (Sunstein, 2001).

Galston (2003) contends that fragmentation is the most important issue facing contemporary American politics. Galston, among other researchers, wonders what unifying force will be able to balance these interests to support and strengthen common institutions and processes if audiences attend to mediated messages from special-interest groups, whose information and news choices are filtered through a particular frame or set of values. "During the past generation," Galston writes, "unfettered individual choice has become an increasingly dominant norm in American culture" (2001, p. 35). He argues that individuals may voluntarily seek out communities that lack diversity and instead are homogeneous. The rise of individual choice suggests a weakening of the "central, social bonds" that bind the nation together (Galston, 2003, p. 35). The weakening of the social bonds that unite the American audience has been observed in the past decade by researchers such as Putnam (2000), who suggests that the media, and television in particular, degrades interpersonal associations and decreases community involvement.

The polarization thesis follows from the arguments laid out by fragmentation. It states that public opinion, in a fragmented media world, may lead to audiences that restrict their media diet to a particular ethnic, ideological, political, or religious perspective. These group perspectives may become entrenched and remain unchallenged by contrary information at the level of the individual media consumer. The result, scholars warn, may create an intensification of opposing opinions on political and social issues (Sunstein, 2001). Some evidence of political polarization exists showing that the gulf between Democrats' and Republicans' approval or disapproval of the president is growing (Abramowitz & Saunders, 2006), that partisan news viewers learn different "facts" than nonpartisan news viewers (Bennett, Lawrence, & Livingston, 2007), and that the two parties increasingly dislike their opponents (Iyengar, Sood, & Lelkes, 2012).

Prior (2007) also found that greater media choice leads to a polarized electorate, whereby those who identify as political moderates are less likely to attend to elite political messages, more likely to attend to entertaining messages, and therefore less likely to show up at the polls. Some of the strongest evidence to date indeed demonstrates that choosing like-minded news is positively related to holding a more polarized political view (Stroud, 2011). In fact, Stroud (2010; 2011) has found a spiral effect whereby selective exposure leads to polarized attitudes, and holding polarized attitudes also, in turn, leads to choosing like-minded news.

#### Selective Exposure and the Changing News Media Landscape

In the early years of the United States, newspapers reported news from partisan perspectives (i.e., "the partisan press," see Roberston, 2001). Party affiliation and promoting a respective political viewpoint was crucial to create a new American state. Partisans of the time identified themselves "as Americans *and* Federalists or as Americans *and* Republicans" (Robertson, 2001, p. 1264) in an effort to settle what it meant to be a post-colonial American. Party-affiliated newspapers furthered this objective, which was the norm for printers at the time (Schudson, 2001). Through the early 1800s, the press featured stories and speeches that aligned with publishers' own partisan preferences. As such, news stories were more like the commentary we would find on the op-ed pages today.

Schudson (2001) notes that between 1880 and 1920, partisanship was a sound business model for increasing circulation. However, several events emerged in the late 19<sup>th</sup> and early 20<sup>th</sup> centuries that gave rise to the more "objective" style of reporting that became dominant during the 20<sup>th</sup> century. First, interviewing (as opposed to commentary) became a popular way to attract news audiences in a growing competitive newspaper market (Schudson, 2001). Schudson argues that interviewing a source on the record downplays a particular party angle or preference in favor of reporting facts. Second, reforms at the turn of the century encouraged an independent press. For example, party loyalty was seriously questioned by progressives and other reformers, and ballot reforms created new norms of voting behavior that encouraged a deliberative approach to casting the vote. More and more

newspapers began to declare their independence from political parties and heed reformers' call to treat campaigns in a more educational way. Third, the professionalization of the press also contributed to this independence. This was fed by a recognition among reporters that news was complex and needed to be interpreted by a neutral observer, as well as a need to distance themselves from World War I propaganda and to affiliate with science and progress. These events helped to establish the norm of objectivity, which has lasted over a century in American and, arguably, in global journalism.

The introduction of cable television in the latter half of the 20<sup>th</sup> century introduced a plethora of channels of news and public affairs information to the average consumer, including *CNN* in 1980, the first 24-hour news network, *HLN* (formerly *Headline News*) in 1982, and *CNBC* in 1989, the first financial news network (Neuman, 1991). By 1996, *Fox News Channel* and *MSNBC* premiered, providing news consumers with a previously unheard of number of choices for news and public affairs information. However, rather than continuing the then deeply-entrenched tradition of objectively presenting news, *Fox News Channel* founder Rupert Murdoch decided that the news channel would serve as a "counterweight to the liberal bias" of other news networks, such as, for example, *CNN* (Compton, 2004). In an interview with *The Daily Show's* John Stewart, *Fox News Sunday* anchor Chris Wallace said, "We're the counterweight. They have a liberal agenda, and we tell the other side of the story" (Corn, 2011, n.p.). Providing news and commentary from a particular political perspective turned out to be a ratings and

financial success for *Fox News* and subsequently for *MSNBC*, who themselves adopted a progressive and liberal slant to their reportage. Both networks, right and left, are now the top-rated news networks on cable television (*Fox News*, 2014). As such, American journalism in the cable news environment is said to have ushered in a return to the partisan press of nearly 200 years ago.

The cable TV environment, and now also the Internet with its abundance of information and ability for channel specialization, dilute the traditional power of the gatekeeper. Gatekeepers include news editors and television producers whose responsibility is to provide important cues about the relative importance of news issues through the prominence they place on an issue and the frequency that the media feature an issue (Rogers & Dearing, 1988; Weaver, McCombs, & Shaw, 2004). While the gatekeeping function of the news media is tied to normative assumptions about the nature of a society and its press, newer media like cable and the Internet in some ways shift the burden of gatekeeping onto individual news consumers by affording them simultaneously more choice and control over the news information they are exposed to. Individuals are now able (although not required) to create their own social and political reality out of their personal informational diets through the process of selecting from among the many choices for news available (Williams & Delli Carpini, 2000).

At the same time, Delli Carpini and Keeter (2003) suggest that greater volume of information and fewer professional gatekeepers makes organizing and finding relevant information more cumbersome for news consumers. As a result, it is even

more likely that selectivity, or attending to information that matches the personally-relevant cues most important to the individual (Klapper, 1960), plays a larger role as it helps individuals to sort through the clutter of available information more efficiently.

The digital media environment is perhaps the most extreme case to demonstrate the potential to enhance individuals' ability to selectively tune in or tune out particular issues or perspectives in their news consumption. As an informational medium, the Internet possesses structural characteristics such as hyperlinking, networking of news and political information sources, and search engine-tailored results that may provide individuals with even more power to filter and construct their information diet more precisely than ever before. Thus, the ecology of the Internet may make it even easier to be selective about news consumption. At the same time, the Internet has also resulted in a remarkable abundance of information available to individuals from the entire range of political perspectives. The Internet has made possible an unprecedented array of diverse information sources and, like with cable television, many of these sources are specialized in their ideological orientation for particular niche audiences.

Although more information can be viewed as a positive development in terms of offering the possibility for people to be exposed to a wider variety of viewpoints than they would have had access to previously, there is also the possibility for individuals to attend to only certain, niche information sources. This development stands in stark contrast to the relatively limited set of news media that have been

available to consumers historically (e.g., the three broadcast network television newscasts that dominated the information landscape in previous decades). One of the earliest scholars to discuss the impact of specialized media is Negroponte (1995), who suggested that people would use personal filters to help personalize the flow of information and news in digital formats. His idea of the "Daily Me" was that people could use these filters as a digital curator whereby a person could set it to avoid any topics or perspectives that did not suit his or her needs or even mood.

As usage of the Internet has diffused rapidly across the United States, concerns about its impact on democracy have grown. The percentage of the U.S. population using the Internet increased from just 8% of the population in 1995 to 85% of the population today (Pew Research Internet Project, 2013; Katz & Aspen, 1997). While there is a growing reliance on the Internet for all manner of information, especially important is the use of the Internet to access news and political information. The most recent data on sources of political information indicate that 61% of Internet users look online for news or information about politics compared to just 24% in 2008. Moreover, while 55% of all adults turn to television news, 39% now turn to the Internet (Pew Research Center, 2008; Pew Research Internet Project, 2013). Learning about politics online appears to be an activity that is growing steadily.

The Internet thus represents an increasingly important space for receiving news and political information. That said, the abundance of news information available online creates an ironic challenge to people's ability to process information,

as it makes it impossible to sort through all of the available information in a systematic way. Moreover, this information abundance, which includes the presence of traditional news media products as well as Internet-only and user-generated content, likely also motivates individuals to seek out economical ways to process the vast information they encounter. This has been suggested as a source of selective exposure: people will be motivated to attend to information they perceive as more useful and to filter out information that they deem less desirable in some way as a means to narrow the vast number of options (Knobloch-Westerwick, Carpentier, Blumhoff, & Nickel, 2005; Rieh, 2002). Information that conforms to a person's pre-existing attitudes is thus likely to be favored over attitude-inconsistent information.

In sum, information abundance on the Internet should enhance people's ability and motivation to be biased when selecting information, as there is a much greater variety of sources available to them to choose from compared to more traditional news media, and because of the control the Internet affords to individuals to click on the stories and topics that interest them, rather than having to sit through an entire television newscast or even be inadvertently exposed to headlines of stories that one may not end up reading while paging through a print newspaper. These changes in the media landscape argue for increased attention to selective exposure in the literature going forward.

## **Selective Exposure Online**

The Internet not only provides an abundance of information and perspectives that may be accessed by news seekers, but it also uniquely allows for a variety of

informational cues to be considered simultaneously during information selection. Individuals may consider several cues when searching for information online including, for example, news "brand" partisanship (i.e., whether a news source is liberally or conservatively oriented in their reporting, examples include MSNBC or Fox News), partisan framing of information within news stories (i.e., whether story coverage is liberally or conservatively oriented), cues about source or message credibility (e.g., a more versus less reputable news organization or blog, the quality of information within a story, etc.), and other factors. Research to date on selectivity cues online has predominantly focused on source partisanship and personal issue relevance as cues to evoke selective exposure responses among news information seekers (e.g., Blanton, Strauts, & Perez, 2012; Coe et al., 2008; Garrett, 2006, 2009; Garrett et al., 2014; Garrett & Stroud, 2014; Iyengar & Hahn, 2009; Iyengar, Hahn, & Pryor 2001; Johnson & Kaye, 2013; Knobloch-Westerwick, 2012; Meirick, 2013; Stroud, 2007, 2008, 2011; Tsfati, Stroud, & Chotiner, 2014; Westerwick, Kleinman, & Knobloch-Westerwick, 2013). Yet this narrow implementation of selectivity cues neglects the wide variety and complex interactions of cues that are potentially available to news consumers online. For example, geographic origin, social group membership, currency, story length, social tagging, user generated ratings, social media recommendations, and automated recommender systems all may be used in greater or lesser degrees by consumers to select news to pay attention to online.

The abundance of information in the contemporary news media landscape suggests further that people are more able to expose themselves to a wider variety of

viewpoints than was possible before, to familiarize themselves with multiple arguments or perspectives on a particular issue, and to encounter novel issues and opinions that they normally would not. To this end, the presence of additional selectivity cues available in the media today such as those mentioned above ought to provide news consumers with many opportunities to both approach or avoid attitude-consistent and attitude-inconsistent information.

#### **New Avenues for Selective Exposure Research**

The study of selective exposure has received renewed energy in recent years because of the changes in the media described above, and yet it remains relatively isolated theoretically in the field of political communication. While the basic theoretical concepts have been around for quite some time, and effects can now be demonstrated empirically with some reliability, comparatively little work has been done to elaborate on the basic model, including the mechanisms driving selective exposure to news information, or to identify related phenomena that could moderate or amplify selectivity effects. Two exciting theoretical possibilities emerge in this connection: credibility and need for cognition.

Potential connections between assessments of the credibility of news sources and selective exposure appear promising theoretically. Research suggests that the perceived credibility of a news source increases exposure to that media outlet or source (Johnson & Kaye, 2013; Knobloch-Westerwick, Dillmann Carpentier, & Zillman, 2003; Melican & Dixon, 2008; Tsfati, 2003; Wanta & Hu, 1994; Westerwick, Kleinman, & Knobloch-Westerwick, 2013). Source credibility and trust,

two highly interrelated variables, are often associated with assessment of similarity to self and one's beliefs (Aune & Kikuchi, 1993; O'Keefe, 1990). This association thus suggests that the perceived credibility and trust of news sources may play an important role in the decision to selectively expose oneself to information from that source. As such, the credibility of news sources and information may be an important moderator of what sources people choose to learn about the political world.

Trait-based individual cognitive factors may also play a role in selective exposure phenomena, and yet these have received very little attention in the literature. Although there is some work on the trait of closed-mindedness that suggests a small negative relationship with partisan selective exposure (for a review, see Hart, Albarracín, Eagly, Brechan, Lindberg, & Merrill, 2009), several other traits have remained unexamined. Need for cognition, for example, is a well-studied trait in media research that has been heretofore neglected in the selective exposure research literature. Need for cognition is the tendency to engage in and enjoy thinking, deliberation, solving puzzles, and/or put effort into one's thinking (Cacioppo & Petty, 1982). In the communication literature, need for cognition has been employed to better explain framing effects (Zhang & Buda, 1999), models of persuasion and social influence (Cacioppo, Petty, & Morris, 1983), and cultivation effects (Shrum, 2008) to name a few examples.

Need for cognition is likely to moderate selective exposure for several reasons. When people are asked to solve complex problems, need for cognition is positively related to collecting more information about that problem and more

information on more aspects of the problem (Nair & Ramnaryan, 2000). In fact, Smith, Fabrigar, and Norris (2008) highlight (but do not empirically examine) need for cognition as an important avenue for future selective exposure research because it may affect an individuals' motivation to process information, such that when need for cognition is high, selective exposure should be reduced compared to when need for cognition is low. Need for cognition may also play a particularly important role in the consumption of online political information since those high in this personality trait are more likely to engage the Web or other media to find information, and are perhaps more literate with the various information cues that can help them navigate in complex information environments (Tuten & Bosjnak, 2001).

The goal of this dissertation is thus to answer the question: Can the basic selective exposure concept be made theoretically richer by incorporating credibility and need for cognition, especially in light of the characteristics of newer media environments that offer greater information specialization and choice? Both credibility and need for cognition are suspected to affect selectivity in news consumption, and thus have the potential to help us better understand when selectivity is more or less likely to occur, and to better predict when individuals may purposely expose themselves to attitude-inconsistent information. The dissertation will begin with a theoretical discussion of potential connections and will then test a set of hypotheses derived from these connections using an experimental design allowing for audience selection of news across two studies.

#### **CHAPTER 2: SELECTIVE EXPOSURE**

Research on selective exposure phenomena in the communication discipline has a long and varied history. At the most general level, there are two forms of selective exposure that have been studied. The first focuses on selective exposure to particular types of entertainment media programming. Perhaps the most well-known research traditions in this area are mood management theory (Dillman Carpentier, Knobloch, & Zillmann, 2003; Knobloch, 2003; Knobloch & Zillmann, 2002; Zillmann, 2000) and uses and gratifications (Knobloch-Westerwick, Carpentier, Blumhoff, & Nickel, 2005). The uses and gratifications approach suggests that people choose media whose information they find to be personally useful in some way. Indeed, if news is thought to be useful, it is more likely to be read (Knobloch-Westerwick et al., 2005). Mood management theory predicts that people engage in selective exposure to prolong or switch to positive emotional states, such as choosing to watch comedies when in a bad mood (Knobloch & Zillmann, 2002). Both of these research traditions recognize that media consumers are purposive in their media choices and that such choices are driven to a large extent by personal need satisfaction.

The second form of selective exposure focuses on news media content specifically, seeking to understand how and why people decide which news to attend to. It is this type of selective exposure that is the focus of this dissertation.

Lazarsfeld, Berelson, and Gaudet (1944) were perhaps the first to uncover selective exposure within the context of news and political information. In their study on

voting behavior in Erie County, Ohio in the 1940s, Lazarsfeld and his colleagues found evidence that voters selectively attend to media messages that support their preferred candidate. Other researchers found further evidence of selective exposure to information on United States foreign policy (Hyman & Sheatsley, 1947) and blood donation (Cartwright, 1949), among other issues.

#### Theoretical Explanations for Selective Exposure

Although evidence of selective exposure was first discovered in media research over 60 years ago, theoretical development of the selectivity hypothesis happened only later, after the introduction of Festinger's (1957) cognitive dissonance theory. Cognitive dissonance theory suggests that individuals tend not to attend to or even desire to be exposed to information that runs counter to their own beliefs and predispositions, and in some cases individuals may not even perceive such information if they are exposed to it (Klapper, 1960). The theory says that encountering information that is counter to one's beliefs creates dissonance, which is a feeling of psychological discomfort. Cognitive dissonance theory predicts that individuals will avoid information contrary to their beliefs as a way to prevent or alleviate the psychological discomfort it evokes. In other words, this state of discomfort (or its anticipation) motivates the individual to take action to prevent or ameliorate the discomfort. Cognitive dissonance theory has been used to explain selective exposure such that individuals avoid information in their media diet and interpersonal interactions that does not conform to their worldview as a means to avoid dissonance. As such, selectivity is a rational dissonance-reduction strategy by

which individuals prefer certain information or sources that reinforce their existing views.

Building on this explanation, Klapper (1960) conceived of selective exposure as operating through both individual and social mechanisms. He stated that relatively strong personal predispositions and group norms act as a filter for the information encountered in a person's social and media environment. First, strong predispositions, or existing attitudes, offer a reference point for evaluating information. Those with stronger attitudes will likely desire to maintain those attitudes and thus will select like-minded information for reinforcement purposes (Klapper, 1960). Second, stronger group identities lead individuals to actively test information against their existing groups' values to maintain their membership in those groups. In this way, loyalty to a group, such as a political party, for example, should similarly increase exposure to attitude-consistent information rather than information that challenges those attitudes. These two referents (i.e., strength of attitudes and group identification) help individuals to avoid psychological discomfort brought about by exposure to attitude-inconsistent information by motivating them to screen that information out of individual consumption.

More recent theorizing has similarly focused on social group memberships, invoking social identity theory as an explanation for partisan-based selective exposure to news. Social identity theory states that people naturally place themselves into categories based on group membership (i.e., in-group versus out-group), and people are motivated to protect their in-group identity by either seeking or attending to

positive information about in-group members or disparaging members of out-groups. Research in both psychology and communication indeed backs up this assumption (Reid, Giles, & Abrams, 2004; Tajfel, 1978; Tajfel & Turner, 1986; Turner, 1985). Research has further shown that people also apply this social identification behavior to information seeking in the context of news. For example, Knobloch-Westerwick and Hastall (2010) found evidence that young people were more likely to choose news information that was positive about their own social group (young people), whereas older people were more likely to choose news information that was negative about their out-group (young people). Another study by Melican and Dixon (2008) showed that racial attitudes help drive exposure to certain news stories that are consistent with those racial attitudes (see also Knobloch-Westerwick, Appiah, & Alter, 2008).

Other theoretical perspectives that have been brought to bear on selective exposure phenomena include motivated reasoning and heuristic information processing. Kunda's (1990) theory of motivated reasoning posits that individuals are motivated to engage in selective exposure because of their information-seeking goals. In this perspective, people are driven by different goals to find various answers; for example, sometimes a person may be motivated to find the true or "correct answer" to a question, and at other times people may be motivated to find an answer that confirms their existing beliefs, even if those beliefs may be biased. Someone who wants the true or correct answer is likely to keep searching for quality information from a variety of perspectives. However those with a directional goal, including

those who have a preferred outcome in mind (such as to confirm a preexisting belief or suspicion), are more likely to engage in selective exposure and to truncate their search for information as soon as confirmatory information is located. Consistent with this model, Kim (2007) provides evidence to support the idea that information seeking behavior is affected by goal-directed motivations.

Heuristic information processing may also play a role in selective exposure. The cognitive miser approach to information processing suggests that people want to conserve mental energy and thus desire to make decision-making as easy as possible (Fiske & Taylor, 1991). This may be especially true in information abundant environments. When there is so much information available to choose from, one must rely on cues, frames of reference, or existing knowledge structures such as schemas to navigate the informational field (Conover & Feldman, 1984). As cognitive misers, we prefer not to absorb and centrally process every piece of information that crosses our eyes and ears. There is also a limited amount of time available in the day to avail oneself of the media. The combination of information abundance and limited time places a personal burden on audiences in a multichannel cable and Internet world. Therefore, the audience must utilize strategies to deal with the limited resources available to them. To do this, they may rely on cognitive heuristics that tap into their knowledge structures or schema during decision-making. One such heuristic, suggested by Scheufele and Lewenstein (2005), is political ideology.

Political ideology as a heuristic acts to help people make decisions about information that reduces the use of cognitive resources. In a way, this heuristic filters information encounters within a familiar context or schema, making it less effortful to process and accept. Moreover, Scheufele and Lewenstein (2005) argue that when information is encountered that is inconsistent with a person's schema, individuals have a choice of elaborating more on the information (which is not efficient), creating a new schema for processing this information (also not efficient), or avoiding the information (more efficient). Since there is greater expenditure for processing information that is inconsistent with one's beliefs or attitudes while, conversely, there is more potential reward received from processing attitude-consistent information, people will be less inclined to expose themselves to attitude-inconsistent information. Several explanations thus exist to help explain partisan-based selective exposure to news. That said, cognitive dissonance remains the most prominent and accepted explanation, although interestingly there is almost no empirical research that actually tests this or other theories underpinning selective exposure to news (Hartsell, Metzger, & Flanagin, 2013).

# **Evidence of Selective Exposure to News**

After Lazarsfeld et al.'s early research on selective exposure, a series of studies gave weight to this phenomenon. For example, in the context of studying information campaigns designed to persuade the masses (e.g., education or health campaigns) Hyman and Sheatsley (1947) found evidence that selective exposure served as a psychological barrier such that only people who were motivated to

acquire information from the campaign actually exposed themselves to its messages. More directly related to partisan selective exposure, Schramm and Carter (1959) reported that Republicans watched a Republican gubernatorial candidate's telethon in greater numbers and for a greater amount of time compared to Democrats, despite no real attitude or behavior change in the audience. Lipset (1953) showed that students were more likely to read newspapers whose editorial policies matched their previous experience and attitudes on a loyalty oath controversy at the University of California, which he argued then served the function to energize and strengthen those attitudes. Even when studying car advertisements, research has found that people are more likely to attend to ads that match their own car make (Ehrlich, Guttmann, Schonbach, & Mills, 1957).

But selective exposure fell out of favor in the late 1960s. In a crushing review of the phenomenon in the literature at the time, Sears and Freedman (1967) found that there was no clear support for the selective exposure hypothesis. In fact, their review suggested that selective exposure to like-minded information only sometimes occurred under certain circumstances, but that other conditions did not inspire such directed information exposure or avoidance. Sears and Freedman suggested that one reason for the lack of supporting evidence may be that individuals are not likely to avoid attitude-inconsistent information all of the time. In particular, they argue that there are specific circumstances where people may desire to engage with information that runs contrary to their beliefs in order to, as Sears and Freedman put it, "subject it to careful and mercilessly unsympathetic scrutiny" (p. 213). Yet, treating each piece

of information encountered in one's life in this way would be exhausting and, as a result, they posit, people change their environment to make encountering inconsistent information less likely, resulting in a type of 'de facto' selectivity (Sears & Freedman, 1967).

Although research into selective exposure stalled for a while after the Sears and Freedman critique, research on selective exposure has reemerged in the last two decades, for the reasons detailed in Chapter 1. Recent research has found selective exposure to occur in a variety of media forms, including movies (Stroud, 2007), cable news, and political talk radio (Stroud, 2008). For example, Stroud (2007) found that individuals who expressed strong disapproval of President George W. Bush were more likely to view the film *Fahrenheit 9/11* than those who held more favorable views of the president. Political partisanship acted as an important moderator of this effect: the more liberal the participant reported being, the more likely they were to view the movie. Additionally, Stroud (2008) found that political predispositions, including political beliefs and ideology or party identification, exerted an effect on selective exposure to cable news, political talk radio, and Internet websites.

Despite its theoretical coherence, research to date is somewhat mixed about the role selectivity plays in information selection online, although the number of positive findings are on the rise. One of the first studies of selective exposure to political information online by Iyengar, Hahn, and Pryor (2001) found that participants exercised some selective exposure, but it was along issue interest rather than along ideological or partisan attachment to candidates. Stroud (2007) found that

people's political preferences (specifically, favorability ratings towards President George W. Bush) motivated their exposure to attitude-consistent information across media contexts (newspapers, cable news, talk radio, and the Internet); and Johnson, Bichard, and Zhang (2009) showed that consumers of online blogs were likely to seek out attitude-consistent blog sources rather than attitude-inconsistent blog sources.

However, research has also shown that while Internet users are drawn to opinion-supporting information (i.e., selective exposure), they may not exert a systematic strategy to avoid contact with challenging opinions (i.e., selective avoidance) (Garrett, 2006; Garrett, 2009; Garrett, Carnahan, & Lynch, 2013; Holbert, Garrett, & Gleason, 2010). This argument suggests that while new media sources like cable television and the Internet allow for more attitude-consistent information seeking, people may not purposely avoid attitude-inconsistent information. Horrigan, Garrett, and Resnick (2004), for example, found that Internet users were more likely than non-users to be aware of an array of arguments, including those both in favor of and opposed to their own political beliefs, even when controlling for demographic factors. Garrett (2009) helps to explain these results by suggesting that attitudeconsistency is a more powerful predictor of exposure to political information than is attitude-inconsistency. This effect may depend on one's specific political ideology, however. Garrett and Stroud (2014) found that conservatives were more likely to avoid attitude-inconsistent information than were liberals, independents, or others affiliated with a third-party. In other words, the research suggests that while some people will select information based on its consistency with their own attitudes, this

does not necessarily mean everyone will actively avoid information that is counter to those attitudes. In any case, studies that find no evidence of selective avoidance weaken the argument that selective exposure behavior is driven by the desire to minimize cognitive dissonance. In other words, cognitive dissonance can hardly be a robust theoretical mechanism of selective exposure if people do not systematically avoid information that runs counter to their own opinions.

Other evidence supporting selective exposure has been growing over the past decade. Iyengar and Hahn's (2009) study on partisanship and selective exposure to news brands (i.e., *Fox News*, *CNN*, *BBC*, etc.) provided some of the first experimental evidence that partisans do in fact prefer attitude-consistent news providers over counter-attitudinal news sources. Their study demonstrated that, when given a choice of news sources, conservatives preferred news stories reported by *Fox News* more than stories reported by *CNN*, *NPR*, or the *BBC* even when the content of stories was controlled. Moreover, conservatives avoided news from *CNN* and *NPR*, whereas liberals did the exact opposite by turning to *CNN* and *NPR* and avoiding *Fox News*. In addition, more politically-interested participants evidenced an even stronger inclination towards news providers based on anticipated opinion agreement than did less politically-interested participants in their study.

Knobloch-Westerwick and her colleagues have conducted a series of studies on selective exposure in both news and non-news contexts (e.g., Hastall & Knobloch-Westerwick, 2013; Knobloch-Westerwick, Appiah, & Alter, 2008; Knobloch-Westerwick & Crane, 2012; Knobloch-Westerwick, Dillmann Carpentier, & Zillman,

2003; Knobloch-Westerwick & Hastall, 2006, 2010; Knobloch-Westerwick & Hoplamazian, 2012; Knobloch-Westerwick & Kleinman, 2012; Knobloch-Westerwick & Romero, 2010; Knobloch-Westerwick & Sarge, 2013; Knobloch-Westerwick, Sharma, Hansen, & Alter, 2005; Knobloch, Hastall, Zillmann, & Callison, 2003; Zillmann, Chen, Knobloch, & Callison, 2004). Of their studies that have focused specifically on news and political information online, they found ample evidence of partisan-based selective exposure to attitude-consistent political information across several different news issues, and when using unobtrusive measures of information selection (Knobloch-Westerwick, 2012, Knobloch-Westerwick & Meng, 2009; Knobloch-Westerwick & Meng, 2011).

Moreover, in one of the most thorough and more recent explorations of the selective exposure phenomenon, Stroud (2011) demonstrated compelling evidence of partisan-based selective exposure via several experiments and survey studies. In particular, using survey methods, Stroud found that selective exposure among partisans is evident across media platforms: when watching presidential nomination speeches, when reading newspapers, when listening to talk radio, while watching cable news, and when accessing political websites. Her experimental research similarly showed the same selective exposure pattern: partisans selected waiting room magazines according to their political leanings and selected Google search results that were both compelling and attitude-consistent.

It is not surprising that political partisanship seems to be a consistent factor in selective exposure to news because the partisanship concept uniquely matches two

early predictors of selective exposure: strong predispositions (personal values or attitudes) and group identity (party affiliation). Political partisanship can be seen as an indicator of the level of attitude commitment and attitude certainty about ideological and party-related objects. Strong conservatives, for instance, are more likely to be committed to opinions with which they identify strongly, such as the value of self-reliance, the enhancement of individual economic freedom, a limited government focused on national defense, and adherence to traditional moral and religious social values (Buckley, 1955; Republican Party, 2004). Similarly, strong liberals are more likely to be confident about information or sources of information that align with their views, which include equality of economic opportunity, protections for the disenfranchised, and diversity and inclusivity (Democrats.org, n.d.). In this way, attitude certainty and commitment act as motivations to process information and to be biased in selecting news information (Smith, Fabrigar, & Norris, 2008). Perhaps one of the strongest partisanship cues for most news consumers is the news source or "brand" (e.g., Fox News, NPR, MSNBC, etc.). Indeed, previous research has found effects of partisanship on selective exposure behaviors to news sources that are well known to emphasize a particular political ideological viewpoint (e.g., Iyengar & Hahn, 2009; Stroud, 2007, 2008, 2011).

# **Effects of Selective Exposure**

As mentioned in Chapter 1, one of the most important concerns scholars have about selective exposure revolves around its effects on audiences in terms of attitude polarization. A series of recent survey and experimental designs have examined that

question. For example, Garrett et al. (2014) show that selective exposure leads to polarization of attitudes toward out-party members. Their research suggests that as use of attitude-consistent news sources increases, people are more likely to hold polarized political attitudes. Tsfati, Stroud, and Chotiner (2014) also demonstrate that selective exposure leads to polarized views, but in this case views of the opinion climate, as conceptualized in the Spiral of Silence theory, are polarized. Their conclusions indicate that exposure to biased news sources correlates with a belief that most other people share that bias. Furthermore, they found that belief about a biased opinion climate was also strongly associated with polarized assessments of same-party candidates.

Despite this evidence, debate has arisen recently concerning whether experimental effects of consuming like-minded news and information are overstated and what macro-level consequences fall out from these effects. Some researchers have shown that when participants in selective exposure studies are forced to read or view news media, the results, while genuine, are exaggerated and thus not generalizable to the larger population (Arceneaux & Johnson, 2013). Why would this be? Arceneaux and Johnson explain that, when given a choice of news information in an experimental design—one that includes soft news or entertainment news as options—significantly fewer people would choose partisan news information. They argue that selective exposure effects present in forced-exposure studies will fall out from the general population because very few people in the United States actually tune in to the partisan media that political communication scholars are so concerned

about. And evidence supports their argument. When entertainment programming is included in experimental conditions alongside partisan news, partisan selective exposure is diminished because most people prefer entertainment content (Arceneaux & Johnson, 2013; Arcenaux, Johnson, & Cryderman, 2013). Arceneaux and Johnson (2013) suggest that these findings dilute the strength of the direct experimental effect often seen in the laboratory with regard to selective exposure to partisan media, and therefore that fears of inevitable political polarization are overblown.

Critics of this approach disagree and argue that partisan media, regardless of their audience size, still matter. Levendusky (2013) shows that the audience of partisan media such as *Fox News* and *MSNBC*, although perhaps smaller in relative terms, are actually quite active and engaged in politics, suggesting that these viewers have a disproportionate impact on political affairs. In essence, he argues that those engaged in selective exposure to partisan political information likely serve as opinion leaders in their circle of friends, family, and co-workers, or as influential bloggers or social media pundits.

Levendusky further argues that there is an important indirect effect of likeminded media not only on the actual audience, but also on the mainstream news agenda. For instance, new issues and controversies that bubble up through partisan media sometimes enter into the national media conversation – across hard and soft news as well as more entertaining fare. As an example, Levendusky cites the Van Jones case, where the White House 'green jobs czar' was pressured for months by *Fox News* anchors to account for his alleged Communist and terrorist sympathies,

which eventually prompted coverage in more mainstream, neutral news outlets including *The Washington Post*. This example shows that partisan media can, at times, set the agenda for the national press (Levendusky, 2013). Levendusky's research shows that partisan media affects all Americans, not just those who engage in selective exposure behaviors.

Although the debate over the macro-level impact of selective exposure to partisan media is important, the present study seeks to answer a different question. This study is concerned with how selective exposure operates for those who choose to engage in it. Specifically, this research investigates the more micro-level questions of what mechanisms influence selective exposure behaviors and what role variables like need for cognition and credibility play in that process.

Based on the foregoing literature review, looking across the research record on selective exposure reveals a strengthening yet somewhat conflicted set of findings over time. Given the mixed empirical findings on selective exposure to news, it is important that research continues to verify the existence of the phenomenon. Thus the first hypothesis of this dissertation is proposed to examine whether the basic selective exposure hypothesis can be replicated:

**H1:** Based on political partisanship, participants will select attitude-consistent news brands over attitude-inconsistent news brands.

## **Summary**

This chapter reviewed the history of selective exposure research, including several potential theoretical mechanisms that have been proposed to explain its

operation and an overview of existing empirical research documenting the existence of the phenomenon. It advanced the first hypothesis of this dissertation, which seeks to replicate the basic partisan selective exposure effect. The next chapter explores moderators that are suggested to influence selective exposure patterns.

#### CHAPTER 3: A FRAMEWORK OF SELECTIVE EXPOSURE MODERATORS

In a review of selective exposure research, Smith, Fabrigar, and Norris (2008) suggest that how and when selective exposure occurs can be distilled down to variables that influence individuals' ability and motivation to process information.

Breaking with the traditional cognitive dissonance foundation of selective exposure, their model included four types of moderators: capacity to process information; motivation to process information; ability to be biased in selecting information; and motivation to be biased in selecting information. In line with existing dual process theories such as the Elaboration Likelihood Model and the Heuristic-Systematic Model (Chaiken, Liberman, & Eagly, 1989; Petty & Cacioppo, 1986), Smith and colleagues argue that the decision to selectively expose oneself to attitude-consistent information is a product of individual ability (such as cognition) and motivation, as well as contextual factors that affect ability, such as time and information availability.

In this model, selective exposure is more likely to manifest under conditions when individuals are unable or unwilling to process information due to limits on cognitive capacity or time restrictions (i.e., under conditions of reduced capacity). In other words, people are likely to shorten or truncate information searches by selecting only what is easiest or most relevant when they are pressed for time or are unmotivated to delve more deeply into the information. Information processing restrictions, such as time restrictions and a threat of information scarcity, have been shown to enhance selective exposure to attitude-consistent information (Fischer, Jonas, Frey, & Schulz-Hardt, 2005; Smith, Fabrigar, Powell, & Estrada, 2007). One

explanation for this is that, under restricted search conditions, individuals are more likely to approach information that conforms to existing predispositions because processing this type of information is quicker and easier compared to processing counter-attitudinal information. Information that confirms existing attitudes is thought to be more efficiently processed because this type of information can be more easily fit into existing structures of knowledge (Frey, 1986; Conover & Feldman, 1984), and there is no need to expend energy counter-arguing attitude-inconsistent claims (Petty & Cacioppo, 1986).

Selective exposure is also more likely to occur when motivation to maintain preexisting beliefs, or any motivation that serves a similar dissonance-reduction goal, is high. Smith et al. (2008) argued that although people may be motivated to process information accurately, other goals such as attitude-expressive tasks (to explain an attitude to self and others) and self-verification goals (to confirm self-conception in a group setting) may take precedence. As in all dual-processing theories, this perspective says that effortful processing is not always an efficient mechanism to select and evaluate information. Unless there is motivation to sift through and evaluate all of the available counter-arguments, more immediate attitude-maintenance goals are likely to be given priority.

This conceptualization of selective exposure in terms of ability and motivation helps us move beyond simple partisanship cues. Within this model of selective exposure, exposure to partisan-congruent information is explained as a result of an individual's ability and motivation to process information. Like cognitive dissonance

theory, Smith et al. (2008) hypothesize that selectively processing information is likely to occur under most normal conditions because it is easier to accomplish than more rigorous systematic processing. It is far more convenient to attend to information that fits well into existing cognitive structures and thus takes less effort to process. Moreover, this perspective also explains when individuals might select counter-attitudinal information. Specifically, when attitude defense or conflict resolution are the goals of processing information, but ability is limited (such as time restrictions), then it is predicted that individuals will primarily expose themselves to counter-attitudinal information in order to be prepared to counter-argue. This view provides insight as to the conditions when selective exposure behavior results in processing either congruent or incongruent information. With this new understanding, I propose two additions to our understanding of the cognitive aspects of selective exposure: need for cognition and credibility perception.

#### **Need for Cognition**

Need for cognition, or the tendency to engage in and enjoy thinking, is suggested here to be a moderator of exposure to attitude-consistent and attitude-inconsistent information for those with pre-existing political attitudes. Need for cognition is an individual characteristic that indicates a general preference for analytical and thoughtful cognitive activity (Cacioppo & Petty, 1982). Although applied widely in psychology and communication research, need for cognition has only been applied rarely to selective exposure in past research, and mostly within entertainment media content selection. For example, Hawkins et al. (2001) found that

need for cognition influenced people's preference against certain television genre types (drama and situation comedies). Moody (2011) investigated the effect of need for cognition on media (newspapers, television, radio, etc.) and nonmedia (interpersonal communication, online social networks, public speeches, Google searches, etc.) diets among Australians. Although she found that need for cognition did not predict media type selection (newspapers vs. television, etc.), her study showed that it did predict non-news media use. Specifically, those high in need for cognition were more likely to include in their media diet political information from social media, politician's newsletters, and search results from Internet search engines such as Google. In other words, one's level of need for cognition and the desire to better understand an issue drove exposure to a more diverse set of viewpoints from a diverse set of media sources.

Winter and Kramer (2012) also tested need for cognition's effect on information selection. They found partial support that need for cognition leads to the selection of two-sided over one-sided blog entries, however this effect was not duplicated when sidedness, stance, and credibility were manipulated. Despite these mixed results, Winter and Kramer suggest that future research is needed to better understand the role of need for cognition in information selection online. More generally, Tsfati and Cappella (2005) investigated the effect of media cynicism on media exposure and looked at the effect of need for cognition on media skeptics' consumption of news. They showed that having high need for cognition does not restrict exposure to mainstream media even when media skepticism is high, while

having low need for cognition reduces exposure when media skepticism is high.

These studies demonstrate that need for cognition, as first noted by Smith et al.

(2008), is likely to influence the amount of information that individuals are motivated to process.

Conceptually, this relationship makes sense, especially given the parallels of Smith et al.'s (2008) model to dual processing models. In fact, studies on dual processing models in psychology have shown that need for cognition increases motivation to systematically process information in persuasive contexts (Axsom, Yates, & Chaiken, 1987; Cacioppo, Petty, Kuo, & Rodriguez, 1986). Eagly and Chaiken (1993) reported that higher need for cognition boosts processing or elaboration such that those with high need for cognition are "assumed to have higher sufficiency thresholds" and therefore would engage in effortful processing to satisfy their need for higher judgment confidence (Eagly & Chaiken, 1993, p. 332).

Since those high in need for cognition are more likely to engage in thinking to better understand issues and, at the same time, are more likely to enjoy knowing arguments for and against an issue compared to people with low need for cognition, these individuals should be more likely to spend time with both attitude-consistent and attitude-inconsistent information. Those who are low in need for cognition, on the other hand, may be more likely to spend time reading mostly attitude-consistent information, which arguably requires a lower capacity, or amount of effort, to process.

A convenient heuristic cue for attitude consistency, as noted by Iyengar and Hahn (2009), is "news brand." News brand refers to current affairs information that is produced by a particular company under a particular name. Examples of news brands include, CNN (Cable News Network), Fox News, BBC (British Broadcasting Corporation), and NPR (National Public Radio) to name just a few. Although many news brands remain neutral in their reportage, it is increasingly common for news brands to take a particular ideological position. Perhaps the most famous example is Fox News, which injects its conservative ideology in its reporting, as discussed in Chapter 1. Following from the arguments laid out above, it is likely that people who are low in need for cognition utilize news brand as a heuristic to select and process attitude-consistent news information. This notion is in line with the cognitive capacity model of selective exposure advanced by Smith et al. (2008) in that those who are low in need for cognition should prefer to conserve their mental energy and utilize heuristics to accomplish their information processing goals. Similarly, applying the theory of motivated reasoning as discussed in Chapter 2 further suggests that those low in need for cognition would desire a preferred outcome and thus be more likely to engage in partisan-based selection exposure behavior in relation to news compared to people who are higher in need for cognition. Therefore the following hypotheses are proposed:

**H2a**: People high in need for cognition will select attitude-consistent and attitude-inconsistent news brands with equal frequency.

**H2b**: People low in need for cognition will select attitude-consistent news brands more frequently than attitude-inconsistent news brands.

## **Source Credibility and Selective Exposure**

Credibility is defined in terms of an information recipient's perception of the believability of a piece of information or an information source (Metzger et al., 2003). Little research has been conducted on the relationship between perceived credibility of information sources and selective exposure. Conceptually there is a link between the credibility of an information source, the motivation to process information, and selective exposure (Fischer et al., 2005; Melican & Dixon, 2008). Specifically, to the extent that people are motivated to find "the best" information possible when seeking news, their judgments about the credibility of a source or of the information they find may serve as an important criterion for selective exposure.

There is indeed some preliminary empirical evidence that people's desire to expose themselves to high quality or credible information may drive selective exposure behavior to at least some extent. Rieh (2002) conducted a small qualitative study of academics to investigate the factors influencing judgments during Internet searches. Her analysis revealed the existence of two types of credibility judgments that operate during online information searches: predictive judgments and evaluative judgments. Predictive judgments are concerned with the evaluation of initial search results before accessing the actual content of a webpage. Users in her study judged the search results based on their expectations of the information's likely quality (i.e., the extent to which users believed the information would be useful, good, current, and

accurate), the user's topical interest, and the user's own knowledge of the search topic and search engine or information database. Moreover, perceptions of information quality and authority were found to be a major consideration driving users' ultimate selection of which webpages to view. These predictive credibility judgments were themselves influenced by users' own past experience and knowledge of websites, recommendations by others, the type of source or organization (e.g., a government versus a company site), and the source's reputation. Rieh surmised that these cues generate either a positive or negative prediction about the usefulness of a piece of information. If the prediction is positive, then the user will approach the information. If the predicted quality is negative, the user will likely avoid the information. Overall, Rieh's study suggested that users' net predictive credibility judgment motivated selection decisions concerning exposure to information online.

Applying Rieh's work, as well as the logic of selective exposure discussed earlier by Smith and colleagues (2008), to the context of news selection suggests that news consumers are likely to select news from sources they believe will provide high quality information. As mentioned previously, research is only just beginning to examine the link between credibility and selective exposure. In a preliminary study, Johnson and Kaye (2013) found that among a self-selected sample of politically interested Internet users, those that gave high credibility ratings to political blogs were more likely to seek any online sources of attitude-consistent political information. Thus, it is reasonable to hypothesize that people's preference for

information or news sources that they judge to be credible will influence their news selection decisions, which is what the third hypothesis predicts:

**H3:** Perceived credibility of news brand will be positively related to selective exposure to that brand.

## **Credibility and Attitude-Consistency**

Rieh's conceptualization of the role of credibility judgments in selective exposure is reinforced by Fischer and colleagues' work (Fischer et al., 2005; Fischer, Schulz-Hardt, & Frey, 2008). In their studies, participants reported that the desire for "high quality" information was an important factor in their selection decision.

Moreover, they found that when determining which information is the highest quality, people choose information that is consistent with their preexisting attitudes. Fischer and colleagues suggest that participants are more likely to select supporting information in Internet searches because supporting information requires less critical analysis, and therefore it is more utilitarian to select information that confirms one's own biases. They further suggest that individuals may be more likely to attend to attitude-consistent information because it possesses higher expected quality than counter-attitudinal messages. In other words, attitude-consistency may serve as a convenient heuristic for judging information quality.

These results are also consistent with credibility research in the fields of psychology and communication. Two important factors contributing to credibility evaluations that have been identified in the literature include similarity to and liking of an information source. These factors have been found to positively predict

perceptions of source trustworthiness and perceived source competence or expertise, which comprise the two basic dimensions of credibility (Aune & Kikuchi, 1993; O'Keefe, 1990). Similarity provides a selectivity cue as to the degree of match between a source's and an individual's own beliefs. The more similar some information is to a person's preexisting beliefs, the more likely they will approach the information (see also Knobloch-Westerwick & Meng, 2011). Information that matches preexisting beliefs is also more likely to be considered credible because it conforms to what the individual believes is already true and, as discussed earlier, fits into the individual's existing cognitive structures (Frey, 1986).

The idea that people's preexisting attitudes and beliefs affect their perceptions of information credibility is also supported by research on the hostile media phenomenon. Vallone, Ross, and Lepper (1985) found that partisans view neutral news as biased against their attitude (i.e., the hostile media phenomenon) and thus not credible. Attitude-consistent news reports, on the other hand, are often rated as more accurate and fair—and thus higher in credibility—by partisans compared to attitude-inconsistent news reports (Gunther & Liebhart, 2006). These studies show that attitude-consistent information may be perceived as higher in quality, and thus perhaps favored for selection by news consumers.

Even more evidence that attitude-consistent information is likely perceived as more credible comes from some recent studies on the *cultural cognition thesis* (Kahan, Braman, Cohen, Gastil, & Slovic, 2010). The cultural cognition thesis is based on Wildavsky's Cultural Theory of Preference Formation (1987) and research

in psychology on cognitive heuristics (see also Kahan et al., 2009, 2010). The thesis says that people evaluate and decide to accept or reject information by filtering it through their personal and cultural identities. For example, when considering a proposed piece of legislation, people gauge the legislation's ramifications against their own values, and evaluate the values of the legislation's source to come to a decision about the legislation. Kahan et al. (2010) argue that people use the source's worldview as a heuristic to assess information credibility, making them more likely to value and choose likeminded sources. They do this because people tend to perceive likeminded sources as more honest, knowledgeable, and impartial than differently-minded sources, independent of actual or true message quality. Although few empirical tests of the cultural cognition thesis exist, Kahan et al. (2010) found that people rated attitude-consistent sources of information as more credible than counterattitudinal sources.

Other studies working outside the cultural cognition thesis framework have similarly found evidence for a positive association between credibility and attitude-consistency (Meyer, Marchionni, & Thorson, 2010; Oyedeji, 2010). Meyer, Marchionni, and Thorson (2010) showed that coorientation, or perceived similarity between the audience, the author, and each other's attitudes, predicted expertise and source credibility ratings for news stories written in typical "objective" or balanced formats. Oyedeji (2010) found some evidence for a link between perceived attitude consistency with media brand and credibility ratings of both the brand and its messages. Nevertheless, neither of these studies showed how attitude consistency

and credibility are related to selection of news stories. Westerwick, Kleinman, and Knobloch-Westerwick (2013), on the other hand, showed that time spent with stories was influenced by both attitude consistency and perceptions of source credibility, with attitude consistency being a stronger cue among people with strong attitudes toward an issue compared to people with less issue involvement. However, in this study, sources included organizations such as the Federal Reserve Bank, the World Trade Organization, and various topic-specific fictitious blogs rather than real news brands.

As one final piece of related evidence that attitude-consistency influences credibility perceptions, Metzger, Flanagin, and Medders (2010) found that Internet users evaluate information credibility by whether it confirms their personal opinion or not. Using focus group data across the U.S., their results showed users tend to be satisfied that they obtained credible information and thus end their search for information online as soon as the information they find matches what they already believed to be true.

The foregoing research suggests an interaction between attitude consistency and predicted information credibility that helps to account for selective exposure behaviors. In other words, while attitude consistency alone may encourage selective exposure as predicted in H1, it likely does so through the mechanism of influencing the perceived credibility of the source or information. Specifically, the more attitude consistency there is between a news brand and an individual news consumer will foster more positive evaluations of the credibility of the information from that news

brand, which will then influence selective exposure as predicted in H3. Following this logic whereby attitude-consistency acts as a signal of source credibility, the following hypothesis is thus proposed:

**H4:** Participants will rate attitude-consistent news brands higher in credibility than attitude-inconsistent news brands.

## Need for Cognition, Credibility, and Selective Exposure

So far, this thesis has explored need for cognition and credibility as separate moderators of selective exposure. Earlier it was theorized that need for cognition influences selective exposure such that people low in need for cognition will rely on heuristic shortcuts to help them select a news story and reduce their cognitive effort more than those who are higher in need for cognition. As people who do not enjoy thinking or elaborating on information, those low in need for cognition are likely to be less motivated to process attitude-inconsistent information, either from counterattitudinal news sources or within attitude-inconsistent news stories. Similarly, it was further theorized in this chapter that perceived credibility of information is influenced by attitude consistency. Specifically, attitude-consistent information should be judged to be more credible and trustworthy. Combining these effects, this thesis argues that those low in need for cognition will be more highly motivated to rely on credibility judgments of news brands to select attitude-consistent information, and thus less cognitively effortful information, compared to people who are high in need for cognition.

Conversely, this argument also suggests that people who are high in need for cognition—who do enjoy thinking, elaborating, and considering problems from a variety of perspectives—may be less likely to rely on credibility and attitude consistency as heuristic cues to help them select information. People who are high in need for cognition enjoy spending effort on gathering and integrating information, and so it is likely that they will be more open to locating and attending to alternative viewpoints. It is also likely that their credibility judgments take into account a larger variety of information cues, perhaps even including source bias, and thus are not based solely on a source's attitude consistency with their own partisanship or political ideology. In fact, those high in need for cognition should be more aware of attitudeinconsistent news brands, and it has been shown that familiarity with a news source increases judgments of its credibility (Johnson & Kaye, 2009). This credibility cue is thus also likely to reduce the difference between credibility judgments of attitudeconsistent and inconsistent news brands made by people who are high in need for cognition compared to those who are low in need for cognition. To test these ideas, the following hypothesis is proposed:

**H5:** There will be a smaller difference in the credibility ratings of attitude-consistent and attitude-inconsistent news brands among participants high in need for cognition compared to participants low in need for cognition.

#### Partisan Brand versus Lead

While investigating need for cognition and credibility, it is useful to reevaluate partisanship as a selectivity cue in light of both of these concepts. First, it is important to differentiate between the news brand and a news story's lead paragraph content; and second, when need for cognition and credibility are accounted for, the brand effect on selective exposure may be reduced while the effect of the lead paragraph is not. The following paragraphs elaborate the logic underlying these arguments.

While partisan brand cues may be the most obvious indicator of attitudeconsistency for news consumers, it is essentially a blunt, although generally accurate, indicator. Yet it is possible that news stories published on partisan websites may, from time to time, contain a variety of ideological arguments including those from the opposite political spectrum. For instance, a Fox News story about terrorism may contain arguments relating to civil liberties, which is a more liberal perspective, rather than to national security, which is a more conservative perspective. A conservative news consumer may approach this information by only attending to the partisan brand cue and then be confronted with attitude-inconsistent information that produces psychological discomfort. Yet online content may include headlines, sub-headings, and a lead paragraph in search results, which may serve as an additional evaluative tool beyond brand for partisans to decide whether to click on the story. Moreover, previous research has shown that manipulating the thematic type of sub-headings and lead framing can enhance people's exposure to information (Zillmann, Chen, Knobloch, & Callison, 2004), but no research to date explores the effect of partisan leads on exposure.

A lead is a critical tool to attract readers as it describes the news story in just a single paragraph (Scanlan, 2003). They are written to suck the reader into the story. "A lead is a promise," wrote Pulitzer Prize winner John McPhee (2010, n.p.), "it promises that the piece of writing is going to be like this." Leads containing partisan arguments also relate to a number of factors in the model of selective exposure developed by Smith et al. as discussed earlier (2008). First, leads may act similarly to partisan source cues in enhancing motivation to process information and to be biased in selecting information online. But, importantly, leads may also serve as an indicator of reduced capacity to process information if partisans disregard the lead as a selectivity cue. This behavior may provide insight into why and when partisans select (or fail to avoid) attitude-inconsistent information under such external resource constraints as time restrictions or individual differences such as low need for cognition. Considering Tsfati and Cappella's (2005) findings discussed earlier that having low need for cognition reduces exposure when media skepticism is high, while having high need for cognition does not, it is quite possible that those high in need for cognition are more likely to sample both sides of an argument. Need for cognition therefore represents one motivation to process more information than simply the ideology of the news brand. Rather, those high in need for cognition may be motivated to process both the news source and the story's lead (Axsom et al., 1987; Cacioppo et al., 1986). As such, the following hypotheses are proposed:

**H6a:** Partisans with low need for cognition will select news stories from attitude-consistent news brands with attitude-inconsistent lead paragraphs

more frequently than they select stories from attitude-inconsistent news brands with attitude-consistent lead paragraphs.

**H6b:** Partisans with high need for cognition will select news stories from attitude-inconsistent news brands with attitude-consistent leads with equal frequency as they select attitude-consistent news brands with attitude-inconsistent leads.

As discussed previously, those with high need for cognition are known to enjoy thinking, elaborating, and considering problems from a variety of perspectives. This orientation suggests that they will be more amenable to engaging with material from opposing perspectives, not just those that match their own partisan beliefs. This line of thinking was used to justify H5. The same logic is extended to further propose that people who are high in need for cognition may better process and appreciate information that contains conflicting information more than people low in need for cognition. One reason for this is that they may feel having a variety of perspectives means the information is less biased, and thus more credible. As such, it can be hypothesized that people with high need for cognition will judge news that presents conflicting information (e.g., (conservative news brand with a liberal lead paragraph or vice-versa) as higher in credibility compared to those with a low need for cognition who, by relying to a greater extent on simple heuristics, will judge stories with conflicting ideological information as lower in credibility. Therefore, the following hypothesis is proposed:

**H7:** People with high need for cognition will rate news stories from sources with conflicting information (e.g., where news brand and lead ideology conflict) higher in credibility than will people with low need for cognition.

Additionally, although there has been a lot of research investigating the various cues people use to select news stories to read, very little attention has been focused on news leads as a selectivity cue, especially in relation to other cues such as news brand. Of course there are many cues that news consumers rely on, for example, Zillman, Knobloch, and Yu (2001) found that photographs lead people to spend more time reading news stories; Knobloch-Westerwick, Sharma, Hansen, & Alter (2005) showed that cues such as the number of times an article was viewed by others and user ratings of that article significantly predicted article selection; and Messing and Westwood (2012) showed that user recommendations, or what they term as social endorsements, are a strong predictor of news story selection. More in line with the research in this dissertation, Zillman, Chen, Knobloch, and Callison (2004) found that manipulating the thematic type of sub-headings and lead framing of news stories can enhance people's exposure to information.

While headlines are short, attention-grabbing statements, leads typically include the basic information of the story such as who, what, where, when, why, and how or set the stage for the story that is about to unfold. Headlines may include only scant information, they are generally written by an editor not the reporter, and they may be misleading. On the other hand, Associated Press reporter Jack Cappon highlighted the importance of the lead paragraph saying that "based on the lead, a

reader makes a critical decision: Shall I go on?" (Scanlon, 2003, n. p.). Therefore it may be that lead paragraphs are even more important cues than news brands for selecting which news stories to read.

The websites of news brands don't always feature their own stories. For example, Fox News presents content from external news agencies such as the Associated Press and Reuters services as well as content from its sister companies such as Fox News Latino, which features stories that serve the interests of Latinos in the United States. Similarly, MSNBC, CNBC, and MSN.com stories are featured across each other's sites as well as other properties in the NBC corporate family. Stories are treated differently on Fox News versus Fox News Latino and the reporters and analysts do cross over occasionally (Folkenflik, 2012; Krakour, 2010; Stewart, 2014). For example on January 2, 2013, Fox News Latino featured a story about immigration with the headline "US Eases Path to Legalization for Some Immigrants, Keeps Families Together" while on the same day Fox Nation, its sister news site, headlined its own version of the story, "Obama Begins Amnesty Push" with pictures of armed police detaining young Latino men (Stewart, 2014, n.p.). To complicate matters more, Fox News, Fox Business, Fox News Radio, Fox News Latino, Fox Nation, and Fox News Insider are all listed across the top of each websites' page to easily switch between the news sources. If a story appears alongside the Fox moniker, it is unclear what kind of story you will read about – whether it is framed using traditional objective style of writing typified by the Associated Press or framed with compassion like *Fox News Latino* or framed in terms of law and order like *Fox Nation*.

No research to date has investigated whether attitude-consistent news brands or attitude-consistent news lead paragraphs are more robust predictors of selective exposure to news stories online. Therefore, the following research question is posed:

**RQ1**: Across all participants, which cue will be the stronger predictor of selective exposure, the story's news brand or lead paragraph?

## **Summary**

This chapter reviewed moderators of selective exposure, including several potential variables that may help flesh out the selective exposure phenomenon across individuals who vary in partisanship, issue involvement, and cognitive and motivational factors. Need for cognition and credibility perceptions as they interact with attitude consistency of news information were examined in detail as possibly important, yet overlooked, moderators of selective exposure. Finally, the potential impact of partisan cues in both headlines and lead paragraphs of news stories was considered. The next chapter details the methodology and design of the present study to test the hypotheses and research questions developed in Chapters 2 and 3.

#### **CHAPTER 4: METHOD**

#### Overview

To test the hypotheses and research questions derived in Chapters 2 and 3, two studies were conducted. Study 1 was designed specifically for this project to test all of the hypotheses and research question. Study 2 consisted of an analysis of secondary data and provided an alternative means to evaluate Hypotheses 1-5. Both studies were conducted online and IRB approval was granted before any data were collected.

## Study 1

The first study partially replicated Iyengar and Hahn's (2009) design with some important changes. Study 1 used an experimental design to test how the ideological slant of news brand and lead paragraph affect the selection of news among partisans. Although the manipulation of news brand is similar to Iyengar and Hahn's design in which the news brands available for selection by participants varied from liberal to conservative, and thus could be categorized as being either consistent or inconsistent with each participant's own political ideology, the present study also manipulated the lead paragraph's ideological content to be either consistent with the news brand or inconsistent with the brand. Study 1 also measured participants' credibility judgments to ascertain the credibility attributed to the selected news brand and their need for cognition. As will be explained below, the sample was divided into two groups: one in which participants chose among news stories where the news brand and lead paragraph were ideologically consistent (e.g., liberal news brand and

liberal lead paragraph), and the other where participants selected among news stories where the news brand and lead paragraph were ideologically inconsistent (e.g., conservative news brand and liberal lead paragraph).

## **Participants**

418 participants were solicited from an online panel of Internet users, who were incentivized with a cash reward that was handled by the online panel operator Qualtrics. Qualtrics offers participants for research from an actively managed, census-representative, and USPS-Verified panel called ClearVoiceSurveys.com ("ClearVoice Research ESOMAR," n.d.). Most members are recruited via the web in a double opt-in procedure, where participants register online and then receive another opt-in e-mail to confirm their membership. For hard-to-find demographic groups, Qualtrics seeks out other operators and recruits members from their panels with permission from the client. Annual attrition is 8%, and members of the ClearVoiceSurveys.com panel are recruited for a study no more than once every 10 days. Members of the panel who participate in studies are offered cash rewards that are then credited to their accounts. As the amount surpasses \$10, members are invited to redeem the value as an Amazon.com gift card, a prepaid debit card, or a Restaurant.com gift card.

As mentioned above, the sample was divided into two news selection groups. The first group consisted of 209 participants, 51% of whom were males and 49% were females. The average age of the participants was 51.4 years and ranged from 24 to 85 years (SD = 12.25). These participants were 79% White, 8.6% African

American, 6.2% Latino, 2.4% Asian, 2.4% multi-racial, and 0.5% Native American (one participant indicated their ethnicity to be "other"). Participants' median income was \$40,000 to \$49,999. With regard to political party affiliation, 45.7% identified as Republicans, 45.2% identified as Democrats, and 8.6% (n = 18) identified as Independents.

Group 2's sample consisted of 206 participants, 49.5% of whom were males and 50.5% of whom were females. The average age of participants in this group was 50.9 years and ranged from 24 to 81 years (SD = 13.78). These participants were 80.6% White, 8.3% African American, 4.9% Asian, 1.9% Native American, 1% Latino, 1.5% multi-racial, and 1.9% "other." The participants' median income was \$50,000 to \$59,999. With regard to political affiliation, 46.1% identified as Republican, 46.6% identified as Democrat, and 7.3% (n = 15) identified as Independents.

There were no significant differences between participants in Group 1 and Group 2 with regard to sex ( $\chi^2$  = .06, df = 1, p = .81), age (t = -.357, df = 412, p = .72,  $M_{group\ l}$  = 51.39, SD = 12.22,  $M_{group\ 2}$  = 50.93, SD = 13.78), income (t = .371, df = 403, p = .71,  $M_{group\ l}$  = 10.88, SD = 4.10,  $M_{group\ 2}$  = 11.04, SD = 4.15), or political affiliation ( $\chi^2$  = .262, df = 2, p = .88). However, there was a significant difference in the distribution of race between Group 1 and Group 2 ( $\chi^2$  = 13.841, df = 6, p = .03). As indicated above, there were more Latinos, but fewer Native Americans and Asians in Group 2 than in Group 1.

Further statistical analyses showed no significant differences between participants in Group 1 and Group 2 on how often they pay attention to news, their familiarity with the news issue used for the experimental stimuli (regulation of greenhouse gasses), interest in the issue, knowledge about the issue, and general stance toward environmental policy on greenhouse gas emissions. There were also no differences across the two groups on how often they voted in elections during the last six years, how liberal or conservative their political views on most matters are, or on their interest in government and politics. There was a small difference in their political knowledge such that participants in Group 2 on average answered one more question correctly on average than did participants in Group 1 on a 12-item political knowledge battery of questions (t = -2.87, df = 416, p = .004). The wording used for all of the study items, as well as the available answer options, may be found in Appendices A-C.

Respondents who listed their political affiliation as "Independent" from both groups were excluded from the analyses because they could not be reliably coded as having seen either attitude-consistent or attitude-inconsistent news brands. Analyses were thus performed on 191 participants in Group 1 and another 191 participants in Group 2.

#### **Materials and Procedure**

Participants were asked to go to a website hosted and managed by Qualtrics.

On the website, participants were presented with text that informed them of the general purpose of the study (i.e., "The purpose of this study is to learn how

individuals evaluate news stories on the Internet"), the risks and benefits associated with their participation, and their right to exit the study at any time. Clicking on the "continue" button on the web form signified that they electronically consented. Next they were asked to read the study's instructions. The stories viewed by Group 1 included actual news stories on an issue from major news brands lightly edited to be roughly the same length and for presence of similar details in the lead paragraph. As such, participants in Group 1 selected among stories in which the news brand and lead paragraph were consistent in political orientation (e.g., liberal or conservative). The second group viewed news stories that had been manipulated to match news brands with attitude-inconsistent lead paragraphs (e.g., a conservative brand with a liberal lead paragraph, etc.). For both groups, four news stories were presented to participants on a webpage from four different conservative and liberal news brands (Fox News and The Wall Street Journal; CNN and MSNBC), displayed in list form. As mentioned above, these stories all focused on the issue of greenhouse gasses and were taken from the actual news brands. They were edited lightly to standardize article length across the stories (see Figure 1; see also Appendix A).

Figure 1. Fox News Channel stimulus example.



## EPA's Greenhouse Gases Declaration -- Putting America On the Road to Ruin

The EPA declared greenhouse gases a danger to public health, and here's the bottom line: The biggest threat to Americans, when it comes to huge new energy taxes and hannel government controls, is not from legislation, it's from regulation.

News and The Wall Street Journal for the conservative news brands, and CNN and MSNBC for the liberal news brands. Selection of these brands as stimuli was based on results from a study by the Pew Research Center for the People and the Press (2009) on perceptions of news bias. The findings of that study indicated that a majority of people feel that the press is biased politically, with 84% of Republicans, 67% of Democrats, and 73% of independents expressing the belief that the press tends to favor one side. More importantly, the study found that Democrats held a far greater favorable opinion of CNN and MSNBC compared to Republicans, whereas Republicans held a more favorable view of Fox News and The Wall Street Journal compared to Democrats.

The topic depicted in all four stimulus news stories was about the Environmental Protection Agency and its classification of carbon dioxide as a greenhouse gas. The stories were collected from each of the four news brands, as mentioned earlier. The headline and lead paragraph of each story appeared alongside the news brand's logo. Participants in Group 1 were asked to choose to read one story among the four brands where the headline and lead paragraph matched the ideological perspective of the news brand (Figure 2 provides an example).

Figure 2. MSNBC with headline and lead paragraph consistent.

# M S NBC

## EPA: Greenhouse gases are harmful

The Environmental Protection Agency took a major step toward regulating greenhouses gases, concluding that climate changing pollution threatens the public health and the environment.

By using real news stories from the news brands themselves, the experimental design is more realistic of the actual choices available to Internet users from these news providers. In addition, the order that these news stories appeared on the webpage was randomized to prevent any serial order effects.

Once participants selected a news article to read by clicking on its link, they were directed to a window asking them to answer questions about the perceived credibility of the news stories. Participants were then taken to the story, which contained only the news brand logo and the story itself. Participants were instructed to spend as much or as little time as they liked reading the story. Time spent reading the article was unobtrusively recorded by the software company hosting the survey. When participants finished reading the news story, they clicked a button labeled "continue." Participants then answered questions pertaining to demographic characteristics, political interest, partisanship, and media usage, among others. These measures are listed in Appendix B.

**Group 2 Procedure.** Participants in Group 2 were also given the choice to read one story among four brands, but they were shown a set of headlines and lead

paragraphs that were manipulated so that the ideological perspective of the lead paragraph did not match the ideological perspective of the news brand. In other words, the attribution of the news stories were switched such that a *Fox News* story was attributed to *CNN* and vice versa (see Figure 3). In this way, participants had two selectivity cues that could potentially influence their selective exposure behaviors: brand and lead paragraph. The procedure for this group was identical to the one described for Group 1 and the stories presented the same news topics as above (see also Appendix A).

Figure 3. MSNBC logo with Fox News headline and lead paragraph.



# EPA's Greenhouse Gases Declaration -- Putting America On the Road to Ruin

The EPA declared greenhouse gases a danger to public health, and here's the bottom line: The biggest threat to Americans, when it comes to huge new energy taxes and government controls, is not from legislation, it's from regulation.

**Post-test Questionnaire.** The post-test questionnaire was the same for both groups and asked the participants to answer questions about their own political partisanship, ideology, media use, news brand familiarity, news brand bias perception, political knowledge, and other variables as indicated below. Appendix C lists these measures in full.

#### Measures

**Brand selection.** Brand selection was defined as the news brand selected by the user to read the story about EPA policy on greenhouse gasses. Each participant's

selection was recorded unobtrusively by Qualtrics. Brand selection was recorded in the data set as (1) *Fox News*, (2) *MSNBC*, (3) *The Wall Street Journal*, or (4) *CNN*.

Political party identification. This variable was measured by asking the question, "In politics today, do you consider yourself a Republican, Democrat, or Independent?" and responses included Republican, Democrat, or Independent. As mentioned earlier, participants who indicated that they were Independents (i.e., nonpartisans) were excluded from further analysis because this study is only interested in partisan perceptions and selective exposure behavior and because it is impossible to determine whether a source is attitude-consistent or inconsistent for Independents. Group 1 had 18 Independents and Group 2 had 15 Independents.

Political viewpoint ideology. This variable was measured by asking participants to identify their political viewpoint. The item wording asked, "Would you say that your views on most political matters are:" and answer options ranged from very conservative (0), conservative (1), neither conservative nor liberal (2), liberal (3), or very liberal (4). Participants who answered 0-1 were categorized as conservative, and participants who answered 3-4 were categorized as liberal.

Participants who indicated that they were neutral—neither conservative nor liberal—were excluded from further analysis for the same reason as stated above. Group 1 had 50 neutrals and Group 2 had 55 neutrals.

News brand attitude consistency by political party identification. Attitude consistency was measured by comparing the participants' own political party affiliation with the news brand's ideology that they selected. For instance,

Republicans who chose a story from the conservative *Fox News* or *The Wall Street Journal* brands would be considered an attitude-consistent selection, as would Democrats who chose a story from the liberal *MSNBC* or *CNN* brands. A variable, news brand attitude consistency by political party, was thus constructed with scores ranging from "0" for selection of an attitude-inconsistent news brand (e.g., Republican/*MSNBC*) to "1" for selection of an attitude-consistent news brand (e.g., Republican/*Fox News*).

News brand attitude consistency by political viewpoint ideology. A similar variable was constructed by matching the participants' political viewpoint (e.g., liberal or conservative) with the news brand's ideology that they selected. For instance, a selection of a story from the conservative *The Wall Street Journal* by those who report that they hold liberal views on most political matters would be considered an attitude-inconsistent selection. News brand attitude consistency by political viewpoint ideology thus ranged from "0" for not consistent (e.g., a person with conservative political viewpoints selecting a liberal news brand) to "1" for consistent (e.g., a person with conservative political viewpoints selecting a conservative news brand).

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<sup>&</sup>lt;sup>1</sup> Although not hypothesized specifically, another aim of this study was to understand if selective exposure results differ depending on whether attitude-consistency is measured as a function of political party identification or ideological position on political issues. This is a potentially important methodological issue that is absent in

News story lead attitude consistency. This variable was also operationalized in two ways, again using political party identification and political viewpoint ideology. First, story lead attitude consistency was constructed by comparing the participant's political party identification with the story's lead paragraph ideological orientation. For example, a Democrat who chose a news story with a liberal news lead was marked as "lead attitude consistent," whereas a Democrat who chose a news story with a conservative news lead was marked as "lead attitude inconsistent." The second and parallel measure of lead attitude consistency was constructed by comparing the participant's reported political viewpoints with the lead paragraph's ideological orientation. For example, a person who holds conservative views on most political issues and who chose a news story with a conservative news lead was marked as "lead attitude consistent" whereas someone who holds conservative views but who selected a news story with a liberal news lead was recorded as "lead attitude inconsistent." For both measures of this variable, possible scores ranged in value from 0 for lead attitude inconsistent (e.g., a person with a conservative political identification or viewpoints selecting a story with a liberal brand lead or vice versa) to 1 for lead attitude consistent (e.g., a person with conservative political identification or viewpoints who selected a conservative brand lead).

the research on selective exposure. Hence, attitude-consistency was measured in two ways in this study.

**News brand credibility.** News brand credibility was operationalized by asking participants "How credible do you find the following organizations to be?" The organizations included CNN, MSNBC, Fox News, and The Wall Street Journal. Possible answers included "not at all credible" (1) to "a whole lot credible" (5). Those who indicated that they had no opinion of the news brand or who answered "don't know" were treated as missing data. This measure was used to test Hypothesis 3, and derivative measures reflecting respondents' perceived credibility of attitudeconsistent and -inconsistent news brands were created from news brand credibility to test Hypotheses 4 and 5. Specifically, measures of the credibility of the attitudeconsistent and inconsistent news brands were calculated by averaging the brand credibility ratings for Fox News, The Wall Street Journal, CNN, and MSNBC into attitude-consistent news brands' credibility and attitude-inconsistent news brands' credibility according to political party affiliation. For example, attitude-consistent news brand credibility of those participants who identified as Republican was calculated as a mean of Fox News' and The Wall Street Journal's brand credibility scores, while the attitude-inconsistent news brand credibility was calculated as a mean of CNN's and MSNBC's global credibility scores. The same thing was then done using political viewpoint ideology as the basis for news brand attitude consistency.

**News story credibility.** Respondents' perceptions of the credibility of the story they read was measured at two points in time. First, the perceived credibility of the selected news story was measured just prior to participants reading the story (a la

Rieh's notion of "predictive credibility judgment" described in Chapter 3), using six items: "Overall, how *believable* do you expect the information you selected to be?"; "Overall, how *complete* do you expect this story to be?"; "Overall, how *biased* do you expect this story to be?" (reverse coded for analysis); "Overall, how much do you expect to *trust* the information you found?"; "Overall, how *accurate* do you expect to find this story to be?"; and "Overall, how *credible* do expect the information to be?" These measures are adapted from Flanagin and Metzger (2007). Items were anchored such that higher values on the 7-point scales represented greater credibility. Cronbach's reliability for the combined 6-item scale for each news brand ranged between .85 and .91.

The second measure of story credibility was taken immediately after participants finished reading the news story they selected (a la Rieh's notion of "evaluative credibility judgment") by the following six items: "Overall, how believable did you find the information in this story to be?"; "Overall, how complete did you find this story to be?; "Overall, how biased did you find this story to be?" (reverse coded for analysis); "Overall, how much did you trust the information you found?"; "Overall, how accurate did you find this story to be?"; and "Overall, how credible did you find the information to be?" These measures were also adapted from Flanagin and Metzger (2007). Items were measured on 7-point scales, anchored such that higher values represented greater credibility. Cronbach's reliability for the combined 6-item scale for each news brand ranged between .84 and .94.

These two credibility measures were used to analyze H7, which predicted that people with higher need for cognition will perceive news stories that include perspectives from both sides of the political spectrum higher in credibility than people with lower need for cognition. Because perceptions of both predictive and evaluative credibility may be affected by need for cognition, both were measured in this study.

Need for cognition. Need for cognition was operationalized using Sherrard and Czaja's (1999) condensed 9-item scale, modified from Cacioppo and Petty (1982). Items included, "The notion of thinking abstractly is appealing to me," "Thinking is not my idea of fun" (reverse-coded), "I find satisfaction in deliberating hard and for long hours," "I only think as hard as I have to" (reverse-coded), "I really enjoy a task that involves coming up with new solutions to problems," "Learning new ways to think doesn't excite me very much" (reverse-coded), "I prefer my life to be filled with puzzles that I must solve," "I like to have the responsibility of handling a situation that requires a lot of thinking," and "I would rather do something that requires little thought than something that is sure to challenge my thinking abilities" (reverse-coded). Responses included extremely uncharacteristic (1), somewhat uncharacteristic (2), uncertain (3), somewhat characteristic (4), extremely characteristic (5). Cronbach's alpha for the scale across both groups was .81.

A median split was performed (Mdn = 3.44) to construct a high need for cognition group and a low need for cognition group. The mean for the low need for cognition group was 2.82 (SD = .46) and the mean for the high need for cognition

group was 3.97 (SD = .40). These means differed significantly, t = -27.61, df = 415, p < .001.

**Brand familiarity**. Familiarity with the news brands in the study was measured by asking participants how familiar they were with the news brands presented to them in the study on a 5-point scale, including very familiar (4), familiar (3), somewhat familiar (2), a little familiar (1), and not at all familiar (0). This was used as a control variable in all relevant analyses. On average, participants were familiar with the news brands ( $M_{CNN} = 2.54$ , SD = 1.18;  $M_{Fox} = 2.72$ , SD = 1.17;  $M_{MSNBC} = 2.48$ , SD = 1.23), although *The Wall Street Journal* was slightly less familiar to the participants ( $M_{WSJ} = 2.02$ , SD = 1.25).

Perceived news brand ideological bias. The ideological bias of the news brands used in the study was measured as a manipulation check by asking participants "to indicate how liberal or conservative the following news organizations are," from very conservative (0), conservative (1), neutral (2), liberal (3), to very liberal (4). Across all participants, results show that Fox News (M = 1.31, SD = 1.17) was rated the most conservative, and MSNBC was rated the most liberal (M = 2.74, SD = 1.03); while CNN (M = 2.47, SD = 1.02) and The Wall Street Journal (M = 1.92, SD = 1.13) were rated as more neutral. Repeated-measures ANOVA using planned contrasts showed significant differences between each of these means (F = 138.18, df = 3, 1008, p < .001). See Table 1 for all statistics.

Table 1. Mean comparisons of political leaning of news brands, excluding Independents.

News brand	All Participants $(N = 418)$	Participants in Group 1 only (n = 191)	Participants in Group 2 only (n = 191)
Fox	1.31 (1.17)	1.38 (1.26)	1.24 (1.06)
WSJ	1.92 (1.05)	1.94 (1.10)	1.90 (1.00)
CNN	2.47 (1.02)	2.52 (1.01)	2.43 (1.02)
MSNBC	2.74 (1.03)	2.78 (1.05)	2.70 (1.01)

*Note*: In Group 1, planned contrast tests show all means differ significantly (F = 61.99, df = 3,504, p < .001). In Group 2, planned contrast tests show all means differ significantly (F = 77.32, df = 3,501, p < .001).

# Study 2

Study 2 provided a second test of Hypotheses 1-5, and consisted of an analysis of secondary data from a large national dataset conducted by the Credibility and Digital Media Project at the University of California at Santa Barbara. Study 2 did not include any manipulation of story lead, however, and so could not test Hypotheses 6 and 7 or RQ1. Study 2 also used different measures of some key variables, including selective exposure, credibility, and need for cognition, and used different news stories and brands than in Study 1. Thus, this secondary data analysis provided a rare and valuable opportunity to replicate the findings from Study 1 for H1 through H5 across similar but different measures and across some different news brands and issues.

Data for Study 2 were collected by the professional survey research firm Knowledge Networks, which maintains a probability-based panel of participants that matches the U.S. population. Panel recruitment is done via address-based probability sampling. Potential panel members are sent an invitation to join the panel in the mail, and may sign up by either calling, emailing, or returning an application via mail. Panel members are expected to complete one 15-20 minute study per week. They are entered in prize drawings as an incentive to complete studies.

## **Participants**

A total of 92 members of the Knowledge Networks panel were randomly selected to participate in Study 2. Participants in the sample were 47.8% male and 52.2% female. The average age of these participants was 49 years, ranging from 19 to 86 years (SD = 15.06). 83.7% of participants were White, non-Hispanic, 8.7% were Black, non-Hispanic, 2.2% were Hispanic, and 2.2% reported their race/ethnicity as "other, non-Hispanic," while another 3.3% reported being multiracial. The median household income for the participants was \$75,000 to \$84,999. 47.8% of participants identified as Democrat, 33.7% identified as Republican, 15.2% indicated they were a member of the Tea Party, and 3.3% said they were a member of the Green Party.

### **Materials and Procedure**

Participants in Study 2 were randomly assigned to read one news story presented to them online about either the legalization of gay marriage or budget cuts to Planned Parenthood from a news brand that was either attitudinally-consistent or

inconsistent with the participant's own self-reported political party identification. Based on a pretest, the news brands featured in Study 2 included the conservative-leaning *Fox News* and the liberal-leaning *NPR*. After viewing the story, participants were asked to answer questions about the credibility of the news brand, need for cognition, and whether they would choose to view the news brand in the future as a means of measuring selective exposure. All variables measured in Study 2 are described below and appear in Appendix D as well.

#### Measures

As a preliminary step to deriving measures of attitude-consistency used in this study, the news brands were initially pilot tested with a separate sample to assess whether people would associate the appropriate political bias with each news brand (i.e., NPR as liberal and Fox News as conservative). Results of the pilot test were significant and consistent with expectations. In addition, a manipulation check was embedded in Study 2 itself. That is, perceptions of each news brand's political ideology was measured on a 5-point Likert scale (1 = Conservative, 2 = Slightly Conservative, 3 = neither Conservative nor Liberal, 4 = Slightly Liberal, 5 = Liberal) among the participants in Study 2. As expected, the liberal NPR news brand was rated significantly higher on this scale (M = 4.60, SD = .50) than was the conservative Fox News brand (M = 1.31, SD = .47), t(90) = -32.63, p < .001. Any participant who failed the manipulation check was excluded prior to selection for Study 2.

**Political ideology.** Participants' own political ideology was measured by asking participants which political party they identify with most. Answer options

included Democratic, Republican, Green, Tea, Independent, or "other." Those who identified with the Democratic or Green party were coded as liberal, participants who identified with the Republican or Tea party were coded as conservative, and those who identified as Independent or "other" were coded into a separate group.

Participant's self-reported ideology and the ideology of the news brand they viewed were combined to derive the attitude-consistency measures used in this study, as explained next.

Attitude-consistency with news brand. To operationalize attitude-consistency between the news brand and participant (that is, whether a participant saw an attitude-challenging or attitude-consistent news brand), a variable was created based on each participant's self-reported political party identification and the news brand they were shown in the study. People who identified as members of the Democratic (n = 44) or Green Party (n = 3) and who saw a liberal news brand were categorized as having seen an attitude-consistent news brand, as were people who identified as members of the Republican (n = 31) or Tea Party (n = 14) who saw the conservative news brand. People who identified with a liberal political party and who saw a conservative source were coded as having seen an attitude-inconsistent source, as were people who identified with a conservative party and who saw a liberal source. Independents and those who answered "other" for their political party identification were excluded from being selected into Study 2 because they could not be coded as having seen an attitude-consistent or attitude-inconsistent source.

Credibility of news brand. News brand credibility was measured using items developed by Flanagin and Metzger (2000). Credibility was conceptualized as participants' perceptions of the news brand's bias, professionalism, and trustworthiness, and was assessed using four items, each on a 5-point Likert scale. Items included "How biased do you find this website to be?" (reverse coded) "How much do you trust this website?" "How professional do you find this website to be?" and "How credible do you feel this website is?" The scale was constructed by averaging across scores on the four items. Cronbach's alpha for the scale reliability was .97.

Selective exposure. In Study 2, selective exposure was conceptualized as the likelihood that participants would select the news brand they were presented with in the study in the future. It was measured using a single item, "How likely would you be to select this website rather than another source for news information in the future?" (1 = Not at all likely, 5 = Very likely). Although a direct behavioral measure of news brand selection as in Study 1 is preferable, the selective exposure measure used in Study 2 was necessary because it was presumed highly likely that most participants would select only attitude-consistent news brands to view, and this would have precluded the ability to compare credibility ratings of attitude-consistent versus attitude-challenging news brands which is key to analyzing H4. Moreover, measuring selective exposure via self-reported news consumption (rather than via direct behavioral observation) is common in the literature (e.g., Garrett, 2009b; Kobayashi & Ikeda, 2009; Melican & Dixon, 2008; Stroud, 2008), and meta-analytic

research suggests that behavioral intent is a reliable predictor of actual behavior (Sheeran, 2002).

Need for cognition. A shortened (9-item) form of the Cacioppo and Petty (1982) need for cognition standard scale was used in Study 2. Items included, "I like challenging problems instead of easy ones," "I like problems that take a lot of thought rather than something that needs little thought," "I like to do things where I don't have to think at all" (reverse coded), "I like to do things that make me think hard," "I like to spend a lot of time and energy thinking about something," "I try to avoid problems that I have to think about a lot" (reverse coded), "I like doing things that I've learned to do well again and again so that I don't have to think so hard about them" (reverse coded), "I'm not interested in learning new ways to think" (reverse coded), and "It's really cool to figure out a new way to do something." Answer options ranged from "Strongly disagree" to "Strongly agree" along a 5-point scale. Cronbach's alpha for the scale was .82.

A median split was performed to create the high and low need for cognition category groups. The median across all participants was 3.44, and low need for cognition participants scored significantly lower on need for cognition (M = 3.06, SD = .33) than did high need for cognition participants (M = 3.91, SD = .34), t(90) = -12.11, p < .001.

**News brand familiarity.** Familiarity with news brand was used as a control variable in the analysis and was measured by the question "How familiar are you with this news website?" on a 5-point Likert scale (1 = Not at all familiar, 5 = Very)

familiar). Overall, participants indicated that they were at least "a little familiar" with their randomly assigned news brand.

**Demographics.** This study used Knowledge Networks' standard items to measure panelists' demographic characteristics, including participants' sex, age, race, and income.

#### **CHAPTER 5: RESULTS**

### Study 1

## **Hypothesis Testing**

H1 predicted that participants would select attitude-consistent news brands more frequently than they would select attitude inconsistent news brands. As mentioned earlier, to test this hypothesis political Independents were removed from the analysis. A single-sample chi-square analysis confirmed the hypothesis across the four news brands ( $\chi^2 = 32.84$ , df = 1, p < .001, N = 382). Partisans in both groups selected attitude-consistent news brands (n = 247) to view much more frequently than they selected attitude-inconsistent news brands (n = 135). However, because CNN and The Wall Street Journal scored somewhat in the middle of the ideological bias spectrum among participants in Study 1 (see Table 1 in Chapter 4), Hypothesis 1 was re-tested using only Fox News and MSNBC, which were perceived by participants to be the most ideologically slanted in opposite directions, in order to provide a cleaner and crisper look at selective exposure behavior. A chi-square analysis again confirmed the hypothesis,  $\chi^2 = 34.13$ , df = 1, p < .001, N = 248), and this time an even stronger selective exposure pattern was detected. Partisans who chose the news brands that were perceived to be the most clearly ideologically slanted demonstrated an increase in selective exposure behavior by 4% compared to when the more ideologically neutral or middle-of-the-road news brands were included.

To investigate the selective exposure phenomenon predicted in H1 further, another single-sample chi-square analysis was conducted, this time using reported

political viewpoint ideology instead of party identification as the basis for determining attitude consistency of the news brands. Because the sample reported being more conservative overall compared to the national average (47.2% reported having conservative views on most political issues, whereas only 27.4% reported holding liberal views), party labels may not accurately correlate with the participant's ideological leanings and thus political viewpoint ideology may be a more revealing indicator of selective exposure behaviors than is party identification. The analyses again supported Hypothesis 1, showing that participants chose attitude-consistent news brands (n = 192) much more often than attitude-inconsistent news brands (n = 192) much more often than attitude-inconsistent news brands (n = 192) much more often than attitude-inconsistent news brands (n = 192) much more often than attitude-inconsistent news brands (n = 192) much more often than attitude-inconsistent news brands (n = 192) much more often than attitude-inconsistent news brands (n = 192) much more often than attitude-inconsistent news brands (n = 192) much more often than attitude-inconsistent news brands (n = 192) much more often than attitude-inconsistent news brands (n = 192) much more often than attitude-inconsistent news brands (n = 192) much more often than attitude-inconsistent news brands (n = 192) much more often than attitude-inconsistent news brands (n = 192) much more often than attitude-inconsistent news brands (n = 192) much more often than attitude-inconsistent news brands (n = 192) much more often than attitude-inconsistent news brands (n = 192) much more often than attitude-inconsistent news brands (n = 192) much more often than attitude-inconsistent news brands (n = 192) much more often than attitude-inconsistent news brands (n = 192) much more often than attitude-inconsistent news brands (n = 192) much more often than attitude-inconsistent news brands (n = 192) much more often than attitude-inconsistent news (n = 192) much more often than attitude-inconsistent news (n = 192) much more often than attitude-inconsistent news (n = 192) much more often than attitude-inconsistent news (n = 192) much more often than attitude-inconsistent news (n = 192) much more often than attitude-inconsistent news (n = 192) much more often than attitude-inconsistent news (n = 192) much more often than attitude-inconsistent news (n = 192) much more often than attitude-inconsistent news (n = 192) much more often than attitude-inconsistent news (n = 192) much more often than attitude-inconsistent news (n = 192) much more often news 99),  $\chi^2 = 29.72$ , df = 1, p < .001. Excluding CNN and The Wall Street Journal from the analysis re-affirmed the previous analysis as before and showed a 7% increase in attitude-consistent news brand selection ( $\chi^2 = 41.75$ , df = 1, p < .001) beyond what was found when all four news brands were included. These results suggest that using political viewpoint ideology rather than party identification may produce stronger evidence of selective exposure. The results for H1 are summarized in Table 2 below.

Table 2. Partisan selective exposure across Group 1 and Group 2 (N = 418)

Selection of attitude-consistent news brand	% selecting consistent brand	% selecting inconsistent brand
Attitude-consistency based on political party	identification:	
4 brands: Fox, WSJ, CNN, MSNBC	247 (65%)	135 (35%)
2 brands: Fox and MSNBC only	170 (69%)	78 (31%)
Attitude-consistency based on political viewp	ooint ideology:	
4 brands: Fox, WSJ, CNN, MSNBC	193 (66%)	99 (34%)
2 brands: <i>Fox</i> and <i>MSNBC</i> only	142 (73%)	52 (27%)

Because participants in Group 2 were always exposed to both attitude consistent and attitude inconsistent information simultaneously (i.e., the news brand and story lead were manipulated to oppose one another), their inclusion in the analysis of H1 may not provide the most "pure" test of the hypothesis. Consequently, all of the above analyses were re-run once again, using data from participants in Group 1 only. Group 1 participants were exposed to brands and leads that matched in ideology and so present the clearest data for testing Hypothesis 1. The analyses revealed the same patterns as were found when including participants in both groups. Specifically, when using political party identification as the basis for determining attitude-consistency in news brand selection confirmed the hypothesis for both all four brands ( $\chi^2 = 36.07$ , df = 1, p < .001, N = 191) and when excluding *CNN* and *The Wall Street Journal* from the analysis ( $\chi^2 = 28.57$ , df = 1, p < .001, N = 159). Using

political viewpoint ideology as the basis for determining attitude-consistency of the selected news brand, participants again chose attitude-consistent news brands significantly more often than they chose attitude-inconsistent news brands across all four brands ( $\chi^2 = 38.03$ , df = 1, p < .001) and when excluding *CNN* and *The Wall Street Journal* ( $\chi^2 = 41.29$ , df = 1, p < .001). Overall, the data from Group 1 participants showed slightly stronger partisan selective exposure compared to what was found when all participants were included (see Table 3).

Table 3. Partisan selective exposure in Group 1 only (N = 191)

Selection of attitude-consistent news brand	% selecting consistent brand	% selecting inconsistent brand
Attitude-consistency based on political party	identification:	
4 brands: Fox, WSJ, CNN, MSNBC	137 (72%)	54 (28%)
2 brands: Fox and MSNBC only	93 (74%)	33 (26%)
Attitude-consistency based on political viewp	ooint ideology:	
4 brands: Fox, WSJ, CNN, MSNBC	109 (74%)	39 (26%)
2 brands: Fox and MSNBC only	83 (80%)	21 (20%)

H2a stated that those high in need for cognition would be more likely to select attitude-consistent and attitude-inconsistent news brands equally or, in other words, would not exhibit selective exposure behavior. A single-sample chi square analysis did not support the hypothesis. Using attitude-consistency derived from party

identification, the analysis showed that participants across both groups who were high in need for cognition selected attitude-consistent news brands (n = 132) significantly more often than they selected attitude-inconsistent news brands (n = 67;  $\chi^2 = 21.23$ , df = 1, p < .001). This difference remained significant even after removing *CNN* and *The Wall Street Journal* from the analysis. Specifically, when analyzing those who selected *Fox News* or *MSNBC* only, high need for cognition participants were still more likely to select attitude-consistent (n = 92) over attitude-inconsistent (n = 33) news brands,  $\chi^2 = 27.85$ , df = 1, p < .001. As with the analysis of H1, another test with attitude-consistency derived from political viewpoint ideology rather than political party identification was conducted and showed the same pattern of partisan selective exposure among high need for cognition participants when all four news brands were included ( $\chi^2 = 10.13$ , df = 1, p = .001), and among only those who selected *Fox News* or *MSNBC* ( $\chi^2 = 21.16$ , df = 1, p < .001). H2a, thus, was not supported by the data.

H2b predicted that those low in need for cognition would be more likely to select attitude-consistent news brands than to select attitude-inconsistent news brands. Using attitude-consistency derived from political party identification, a single-sample chi square test showed that the hypothesis was supported ( $\chi^2 = 11.63$ , df = 1, p = .001). Attitude-consistent news brands (n = 114) were selected more frequently than attitude-inconsistent news brands (n = 68) among low need for cognition participants. Again looking at only those who selected *Fox News* and *MSNBC*, a single-sample chi square analysis showed a similar pattern ( $\chi^2 = 8.39$ , df = 1, p = .004). Using attitude-

consistency as derived from political viewpoint ideology instead of party identification, a single-sample chi square test revealed the same results for all four news brands ( $\chi^2 = 20.49$ , df = 1, p < .001), as well as for those who selected only either *Fox News* or *MSNBC* ( $\chi^2 = 19.88$ , df = 1, p < .001). These results support H2b.

Table 4 below presents the data on selective exposure among both high and low need for cognition (H2a and H2b). The table makes evident that partisan selective exposure behavior is similar across people with high or low need for cognition and, if anything, those higher in need for cognition exhibit slightly higher levels of partisan selective exposure. Overall, these analyses indicate that individual differences in need for cognition do not moderate partisan selective exposure to news as expected.

Table 4. Number and percentage of participants selecting an attitude-consistent news brand across Group 1 and Group 2 (N = 418)

	Need for	Cognition
Selection of attitude-consistent news brand	High	Low
Attitude consistency based on political party identification:		
4 brands: Fox, WSJ, CNN, MSNBC	132 (66%)	114 (63%)
2 brands: Fox and MSNBC	92 (74%)	77 (63%)
Attitude consistency based on political viewpoint ideology:		
4 brands: Fox, WSJ, CNN, MSNBC	99 (63%)	92 (70%)
2 brands: Fox and MSNBC	73 (73%)	68 (73%)

As with Hypothesis 1, the data were again re-run using Group 1 participants only and the results for H2a largely mirror what was found using all participants. Table 5 presents these results. Using attitude-consistency derived from party identification and including all four news brands, the analysis showed that participants high in need for cognition selected attitude-consistent news brands (n = 66) significantly more often than they selected attitude-inconsistent news brands (n = 20;  $\chi^2 = 24.61$ , df = 1, p < .001). The same results were found when including only MSNBC and  $Fox\ News$  such that high need for cognition participants were still more likely to select attitude-consistent (n = 47) over attitude-inconsistent (n = 13) news brands,  $\chi^2 = 19.27$ , df = 1, p < .001. With attitude-consistency derived from political

viewpoint ideology rather than political party identification the same pattern emerged again both when all four news brands were included ( $\chi^2 = 15.34$ , df = 1, p < .001,  $n_{attitude-consistent} = 52$ ,  $n_{attitude-inconsistent} = 19$ ) and among only those who selected Fox News or MSNBC ( $\chi^2 = 21.35$ , df = 1, p < .001,  $n_{attitude-consistent} = 42$ ,  $n_{attitude-inconsistent} = 9$ ).

Similarly as when using all participants, the data from Group 1 using attitudeconsistency derived from political party identification supported H2b ( $\chi^2 = 13.76$ , df = 1, p < .001). Attitude-consistent news brands (n = 59) were selected more frequently than attitude-inconsistent news brands (n = 25) among low need for cognition participants. For those who selected Fox News or MSNBC only, a singlesample chi square analysis showed a similar significant difference ( $\chi^2 = 9.62$ , df = 1, p < .01,  $n_{attitude-consistent} = 45$ ,  $n_{attitude-inconsistent} = 20$ ). When using attitude-consistency as derived from political viewpoint ideology instead of party identification, a singlesample chi square test for Group 1 participants revealed the same results as seen above for all news brands ( $\chi^2 = 16.52$ , df = 1, p < .001,  $n_{\text{attitude-consistent}} = 47$ ,  $n_{\text{attitude-consistent}}$ inconsistent = 15), as well as for those who selected only either Fox News or MSNBC ( $\chi^2$ = 15.08, df = 1, p < .001,  $n_{\text{attitude-consistent}}$  = 40,  $n_{\text{attitude-inconsistent}}$  = 12). Data from Group 1 thus also support H2b (see Table 5). In sum, across the various sets of analyses conducted to test H2a and H2b, the results indicate that people high and low in need for cognition operate similarly in that they both tend to select attitude-consistent news brands.

Table 5. Number and percentage of participants selecting an attitude-consistent news brand in Group 1 (N = 191)

	Need for Cognition	
Selection of attitude-consistent news brand	High	Low
Attitude consistency based on political party identification:		
4 brands: Fox, WSJ, CNN, MSNBC	66 (77%)	59 (70%)
2 brands: Fox and MSNBC	47 (78%)	45 (69%)
Attitude consistency based on political viewpoint ideology:		
4 brands: Fox, WSJ, CNN, MSNBC	52 (73%)	47 (76%)
2 brands: Fox and MSNBC	42 (82%)	40 (77%)

Hypothesis 3 predicted that the perceived credibility of a news brand will be positively related to selective exposure to that brand. To test the hypothesis, point-biserial correlations were run between participant's perceptions of the credibility of each brand and having selected that brand or not, while controlling for familiarity with the news brand. Correlations were run first for all participants in the study, and then again for participants in Group 1 only, as Group 1 provides the clearest analysis of H3 because the news brands and leads were congruent in term of their ideological leaning. All of the correlations were significant and in the expected direction, except for *The Wall Street Journal*, which although in the right direction, only approached significance when all participants were analyzed together (p = .09). Overall, these

results provide good support for Hypothesis 3, with the exception of *The Wall Street Journal* as noted above (see Table 6 for these results).

Table 6. Correlations between perceived credibility of news brand and selecting that brand.

	All Participants		Participants in Group 1 only		
News Brand	r	n	r	N	
Fox	.46***	363	.50***	181	
CNN	.19***	369	.29***	179	
MSNBC	.32***	355	.45***	174	
WSJ	.07	355	.01	176	

*Note:* \*\*\*p < .001.

Hypothesis 4 predicted that participants would rate attitude-consistent news brands higher in credibility than attitude-inconsistent news brands. ANCOVA analyses were performed to test the hypothesis with news brand credibility as the dependent variable and attitude consistency as the independent variable, while controlling for familiarity with the news brand. The analyses across participants in both groups show that the data support Hypothesis 4 for all news brands but *The Wall Street Journal*. More specifically, Republicans rated *Fox News* higher in credibility than did Democrats, and Democrats rated both *CNN* and *MSNBC* higher in credibility than did Republicans (see Table 7). The results were the same when attitude-

consistency was determined by political party identification or by political viewpoint ideology, and when using data only from Group 1 participants.

Table 7. Credibility perceptions of attitude-consistent and attitude-inconsistent news brands controlling for familiarity with news brand (N = 418)

		Credib	oility			
		M (se)	M (se)	F	df	$\eta^2$
Attitude- based on identifica	• •	Republicans	Democrats			
V	Fox	3.98 (.09)	2.82 (.09)	81.87***	2, 369	.182
	WSJ	3.67 (.08)	3.78 (.08)	.97	2, 355	.003
	CNN	3.10 (.09)	4.04 (.09)	59.61***	2, 363	.141
	MSNBC	2.88 (.09)	4.05 (.09)	81.88***	2, 355	.187
	consistency political	Conservatives	Liberals			
viewpoin	Fox	4.00 (.09)	2.42 (.12)	115.90***	2, 281	.292
	WSJ	3.69 (.08)	3.68 (.11)	.01	2, 272	.000
	CNN	3.10 (.09)	4.07 (.12)	39.69***	2, 278	.125
	MSNBC	2.87 (.10)	4.20 (.13)	67.46***	2, 275	.197

Note: Results for participants in Group 1 only are the same as when all participants are analyzed. \*\*\*p < .001.

H5 predicted that there would be a smaller difference in credibility ratings of attitude-consistent and attitude-inconsistent news brands among participants who have a high need for cognition compared to those low in need for cognition.

ANCOVA analyses controlling for familiarity with the news brand did not show

support for this hypothesis. In fact, the data revealed a smaller mean difference in credibility ratings of attitude-consistent and inconsistent news brands among participants with lower need for cognition ( $M_{difference} = 1.64$ , se = .18) compared to those with higher need for cognition ( $M_{difference} = 1.73$ , se = .17), although this difference was not statistically significant, F(2, 343) = .13, p = .72. Thus, the data do not support H5. Further analysis looking only at participants who selected Fox News or MSNBC, revealed the same pattern of a greater mean difference in credibility scores for attitude-consistent versus inconsistent news brands for those higher in need for cognition. In other words, people higher in need for cognition were slightly more likely to find attitude-consistent news brands to be more credible than attitude-inconsistent news brands, ( $M_{difference} = 1.22$ , se = .11) compared to those low in need for cognition ( $M_{difference} = 1.10$ , se = .12). But here again, the ANCOVA results were not significant, F(2, 374) = .60, p = .43. Similar results were found when Group 1 participants were analyzed separately. Thus, H5 was not supported by the data.

The above analyses for H5 were repeated using political viewpoint ideology as the basis for attitude-consistency rather than political party identification. The results show were the same as above when considering both all four news brands and when including only *Fox* and *MSNBC*. Looking at Group 1 only also showed the exact same pattern of results.

H6a predicted that partisans with low need for cognition would select news stories from attitude-consistent news brands with attitude-inconsistent leads more frequently than they would select stories from attitude-inconsistent brands with

attitude-consistent lead paragraphs. Only participants in Group 2 saw stimuli in which the news brand and lead ideology conflicted, and thus only data from Group 2 could be used in the analysis of H6.

With party identification as the basis of attitude consistency, a single-sample chi square test showed that those low in need for cognition were not significantly more likely to select stories from attitude-consistent news brands with inconsistent leads ( $\chi^2 = .84$ , df = 1, p = .36,  $n_{attitude-consistent\ brand/inconsistent\ lead} = 53$ ,  $n_{attitude-inconsistent}$ brand/consistent lead = 44). The same pattern was found for those who only selected Fox News or MSNBC ( $\chi^2 = .78$ , df = 1, p = .38,  $n_{attitude-consistent\ brand/inconsistent\ lead} = 35$ ,  $n_{attitude-inconsistent\ brand/consistent\ lead} = 28$ ). However, when attitude consistency was determined by political viewpoint ideology, a single-sample chi square analysis showed slightly greater support for H6a, finding that low need for cognition participants were more likely to select attitude consistent news brands over attitude consistent news leads ( $\chi^2 = 3.08$ , df = 1, p = .08,  $n_{attitude-consistent\ brand/inconsistent\ lead} = 44$ ,  $n_{attitude-inconsistent\ brand/consistent\ lead} = 29$ ). The same pattern was found among only those selecting between Fox News and MSNBC ( $\chi^2 = 2.66$ , df = 1, p = .10,  $n_{attitude-consistent}$ brand/inconsistent lead = 28,  $n_{attitude-inconsistent}$  brand/consistent lead = 17). Although the data are in the expected pattern, these tests do not quite reach statistical significance at the p < .05 level, which might be due to a power issue. It is possible that with additional participants, this difference would be statistically significant. In any case, these data do not provide much, if any, support for H6a.

H6b predicted that partisans with high need for cognition would select news stories from attitude-inconsistent news brands with attitude-consistent leads with the same frequency as attitude-consistent news brands with attitude-inconsistent leads. With party identification as the basis of attitude consistency, and again using data from Group 2, a single-sample chi square analysis showed that those high in need for cognition were significantly more likely to select attitude-consistent news brands with attitude-inconsistent leads compared to attitude-inconsistent news brands with attitude-consistent leads,  $\chi^2 = 4.26$ , df = 1, p = .04,  $n_{attitude-consistent\ brand/inconsistent\ lead} =$ 57,  $n_{attitude-inconsistent\ brand/consistent\ lead} = 37$ . The same pattern was found for those selecting Fox News and MSNBC,  $\chi^2 = 10.59$ , df = 1, p = .001,  $n_{attitude-consistent}$ brand/inconsistent lead = 42,  $n_{attitude-inconsistent}$  brand/consistent lead = 17). These analyses show no support for H6b. However, when attitude consistency was determined by political viewpoint ideology a single-sample chi square analysis demonstrated that participants with a high need for cognition did not have a preference for either attitude-consistent news brands or attitude-consistent news leads as hypothesized,  $\chi^2 = 1.05$ , df = 1, p =.31,  $n_{attitude-consistent\ brand/inconsistent\ lead} = 43$ ,  $n_{attitude-inconsistent\ brand/consistent\ lead} = 34$ . Although, despite this, those selecting only Fox News and MSNBC were significantly more likely to select attitude-consistent news brands than to select attitude-consistent news leads,  $\chi^2 = 5.33$ , df = 1, p = .02,  $n_{attitude-consistent\ brand/inconsistent\ lead} = 32$ ,  $n_{attitude-consistent\ brand/inconsistent}$ inconsistent brand/consistent lead = 16. Therefore, H6b was only partially supported by the data. Table 8 summarizes the results for both H6a and H6b.

Table 8. Selection of attitude-consistent brand or lead in Group 2. (N = 191)

	4 brands: Fox, WSJ, CNN, MSNBC # selecting consistent:		2 brands: AMSNBC	Only	
	Brand	Lead	Brand	Lead	
Attitude-consistency based on party identification:					
Low NFC	53	44	35	28	
High NFC	57*	37*	42***	17***	
Attitude-consistency based on political viewpoint:					
Low NFC	44+	29+	28+	17+	
High NFC	43	34	32*	16*	

<sup>\*</sup> Count pair in row differs significantly at p < .05 or p < .001

H7 predicted that people with high need for cognition will rate news stories from sources with conflicting information (i.e., where brand and lead conflict in ideology, as in Group 2) higher in credibility than will people with low need for cognition. ANCOVA analyses were performed to compare the means of high and low need for cognition participants in Group 2 on their perceptions of both predictive and evaluative news story credibility while controlling for familiarity with the news

<sup>+</sup> Count pair in row differs marginally at  $p \le .10$ 

brand of the selected story.<sup>2</sup> The ANCOVA for predictive story credibility (i.e., participants' evaluation of the story's credibility after selecting but *prior* to reading the story) was significant (see Table 9). Thus, and as predicted in H7, the average predictive credibility ratings by people high in need for cognition (M = 5.14, SD = 1.18) were greater than the predictive credibility ratings by those low in need for cognition (M = 4.66, SD = 1.44). ANCOVA analysis for evaluative credibility (i.e., participants' evaluation of the story's credibility *after* reading it) found that the mean for high need for cognition participants (M = 4.33, SD = 2.14) was higher than for participants lower need for cognition (M = 3.79, SD = 2.44) as predicted by H7, but the difference only approached significance (p = .10). Overall then, Hypothesis 7 was supported for predictive story credibility, but the data provided only limited support for evaluative story credibility.

<sup>&</sup>lt;sup>2</sup> Due to an error in the questionnaire administration for Group 2, data were missing for participants who chose to read the *CNN* story, and so these cases were excluded from the analysis. The analysis of H7 thus evaluated story selection of both participants who were high in need for cognition as well as low in need for cognition from *Fox News*, *MSNBC*, and *The Wall Street Journal* news brands only.

Table 9. Story credibility ratings among high and low need for cognition participants controlling for familiarity with news brand, Group 2 only (N = 191)

	Need for Cognition				
	Low M (SD)	High M (SD)	F	df	$\eta^2$
Predictive credibility	4.66 (1.44)	5.14 (1.18)	6.18*	2, 188	.03
Evaluative credibility	3.79 (2.44)	4.33 (2.14)	2.77+	2, 188	.00

*Note:* \*p < .05, +p < .10

Finally, RQ1 asked whether people more often select attitude-consistent brands or attitude-consistent leads. Given the design of Study 1, for participants in Group 2, choosing an attitude-consistent news brand necessitated that participants did not select an attitude-consistent news lead. A single-sample chi square analysis showed that Group 2 participants were more likely to choose stories from attitude-consistent news brands (58%) than they were to select stories with attitude-consistent news leads (42%),  $\chi^2 = 4.40$ , df = 1, p = .04, N = 191. This pattern intensified by 5% when only considering those participants that selected news stories from *Fox News* or *MSNBC*, as these participants were significantly more likely to choose attitude-consistent news brands (63%) than attitude-consistent news leads (37%),  $\chi^2 = 8.40$ , df = 1, p = .004, N = 122. The same results were found for story selection when using political viewpoint ideology as the basis for attitude consistency. Participants were more likely to choose stories with attitude-consistent news brands (58%) than

attitude-consistent news leads (42%),  $\chi^2 = 3.84$ , df = 1, p = .05, N = 150. Similarly, those participants who chose stories from *Fox News* or *MSNBC* only were significantly more likely to select attitude-consistent news brands (64%) than to select attitude-consistent news leads (36%),  $\chi^2 = 7.51$ , df = 1, p = .006, N = 90. Considering these results in light of the results for H1, together the findings imply that news brand is a stronger selective exposure cue than is lead paragraph content, but that many people seem to pay attention to the lead paragraphs in news stories as well. Supporting this interpretation, although 71% of partisans selected attitude-consistent news brands (with attitude-consistent leads) in Group 1, only 58% did so in Group 2 where the lead paragraph information differed in political orientation from the news brand. Meanwhile 28% of partisans selected attitude-inconsistent news brands in Group 1, although 42% did so in Group 2 where they could see attitude-consistent information in the story's lead paragraph despite the news brand being attitude-inconsistent.

## Study 2

As described in Chapter 4, all participants in Study 2 participants were presented with a news story on one of two issues (i.e., gay marriage or funding for Planned Parenthood) from either an attitude-consistent news brand or from an attitude-inconsistent news brand, and were asked to rate the credibility of the news brand they saw, as well as other measures. Although it was not possible to evaluate Hypotheses 6-7 and Research Question 1 because story lead was not manipulated in this study, Hypotheses 1-5 were re-evaluated with the data from Study 2.

To analyze H1, an ANCOVA analysis was performed with likelihood of selecting the news brand in the future (this was used as a proxy measure for selective exposure, see Chapter 4) as the dependent variable and attitude-consistency of news brand as the independent variable, controlling for news brand familiarity. Results show that participants in Study 2 were significantly more likely to select the news brand in the future if it was attitude-consistent (M = 3.15, se = .17) rather than if it was attitude-inconsistent (M = 1.72, se = .15), F(1, 84) = 38.84, p < .001, partial  $\eta^2 = .32$ ). Thus, the data support H1.

H2a and H2b were examined by looking to see whether people low and high in need for cognition differed in terms of their selective exposure to attitude-consistent and attitude-inconsistent news brands, again controlling for familiarity with news brand. H2a predicted that participants high in need for cognition would be equally likely to select attitude-consistent and inconsistent news brands. Similar to the results of Study 1, the data did not confirm the hypothesis because high need for cognition participants indicated that they were significantly more likely to select attitude-consistent news brands in the future (M = 2.97, se = .22) than they were to select attitude-inconsistent news brands (M = 1.75, se = .23), F(1, 40) = 14.09, p = .001, partial  $\eta^2 = .26$ . H2b predicted that participants low in need for cognition would select attitude-consistent news brands more often than attitude-inconsistent brands. This time, the data did support the hypothesis. Low need for cognition participants reported that they would be more likely to select attitude-consistent news brands in

the future (M = 3.36, se = .26) than to select attitude-inconsistent news brands (M = 1.71, se = .19), F(1, 43) = 26.48, p < .001, partial  $\eta^2 = .38$ .

H3 predicted that the perceived credibility of the news brand would be positively correlated with selective exposure. A partial correlation of credibility rating with selective exposure (i.e., participants' willingness to choose the news brand in the future) controlling for news brand familiarity demonstrated support for the hypothesis. The test showed that the perceived credibility of a news brand was strongly related to whether the participant would select the website again in the future, even when familiarity with the online site was employed as a control variable, r(86) = .78, p < .001. H3, therefore, was supported.

H4 predicted that participants would rate attitude-consistent news brands higher in credibility than attitude-inconsistent news brands. ANCOVA analysis with attitude-consistency of the news brand as the independent variable and perceived credibility of the news brand as the dependent variable controlling for brand familiarity provided support for the hypothesis. There was a significant effect for attitude-consistent news brands on the perceived credibility of that news brand after controlling for brand familiarity, F(1, 88) = 49.95, p < .001. More specifically, those who viewed attitude-consistent news brands (M = 3.53, SD = .85) rated them significantly higher in credibility than those that viewed attitude-inconsistent news brands (M = 2.06, SD = .90). Thus, as expected in H4, people who were given a news story to read from an attitude-inconsistent brand rated the news brand as less

credible than did participants who were given a story from an attitude-consistent news brand.

To analyze H5 the mean perceived news brand credibility score for participants who saw stories from attitude-consistent news brands were compared to the mean news brand credibility score for those who saw stories from attitude-inconsistent news brands, among participants who were (1) high and (2) low in need for cognition and controlling for familiarity with the news brand. H5 predicted that people high in need for cognition would perceive smaller differences in the credibility of attitude-consistent versus inconsistent news brands than would people low in need for cognition. As can be seen in Table 10, the data are consistent with expectations. However, the difference scores for the high and low need for cognition participants are quite similar, and people high in need for cognition still attribute significantly greater credibility to news brands that are attitude-consistent compared to brands that are inconsistent with their political attitudes.

Table 10. Estimated marginal mean scores for attitude-consistent and attitude-inconsistent news brands credibility by high or low need for cognition

	Mean credib	-	
	Attitude-consistent news brands	Attitude-inconsistent news brands	Mean difference:
High need for cognition	3.34	2.06	1.28
Low need for cognition	3.68	2.16	1.52

#### Summary

This chapter presented the results of the tests conducted in this thesis to evaluate the hypotheses and research question. The results supported the prediction that both partisanship and ideological identity are strong cues for selective exposure, with brand being the stronger of the two. Data across Study 1 and Study 2 also showed that the perceived credibility of the news brand is positively correlated with selective exposure, and that participants rated attitude-consistent news brands higher in credibility than attitude-inconsistent news brands as predicted.

The results for hypotheses concerning how need for cognition affects selective exposure were more of a mixed bag in terms of supporting the predictions of this study. For example, both participants with low and high need for cognition selected attitude-consistent news brands over attitude-inconsistent news brands, which runs contrary to the predictions in Chapter 3. Moreover, contrary to expectations, those low in need for cognition did not differ significantly in selecting attitude-consistent news brands with attitude-inconsistent news leads over attitude-inconsistent news brands with attitude-consistent news leads, although the chi-square test did approach significance. However, those with high need for cognition did not select attitude-consistent news brands over inconsistent news brands when consistency was based on party identification as anticipated.

The data also provided mixed results in terms of how need for cognition interacted with credibility. Study 1 showed no support for the prediction that there would be a difference between those high and low in need for cognition in their

credibility ratings of attitude-consistent and attitude-inconsistent news brands, and yet Study 2 did find difference scores in the predicted direction. Finally, participants did rate the predictive credibility of news stories differently based on their level of need for cognition, but differences in evaluative story credibility ratings only approached significance. Table 11 summarizes the results of all the hypothesis tests and research question.

Table 11. Summary of findings across both studies

Prediction	Supported or not?
H1: Based on political partisanship, participants will select attitude-consistent news brands over attitude inconsistent news brands.	Supported in both Study 1 and Study 2. There was a greater selective exposure effect for viewpoint ideology rather than party ID in Study 1.
<b>H2a</b> : People high in need for cognition will select attitude-consistent and attitude-inconsistent news brands with equal frequency.	Not supported in both Study 1 and Study 2. Partisans high in need for cognition selected attitude-consistent brands more often than attitude-inconsistent brands. In Study 1 there was a very small increase in selective exposure for party ID rather than viewpoint ideology, except for Fox News and MSNBC in Group 1.
<b>H2b</b> : People low in need for cognition will select attitude-consistent news brands more frequently than attitude-inconsistent news brands.	Supported in both Study 1 and Study 2. People low in need for cognition selected attitude-consistent brands over inconsistent brands. For Study 1, there was a greater selective exposure effect for viewpoint ideology rather than party ID across all groups.
<b>H3:</b> Perceived credibility of news brand will be positively related to selective exposure to that brand.	Supported in both Study 1 (except WSJ) and Study 2.

**H4:** Participants will rate attitude-consistent news brands higher in credibility than attitude-inconsistent news brands.

Supported in both Study 1 (except WSJ) and Study 2.

**H5:** There will be a smaller difference in credibility ratings of attitude-consistent and attitude-inconsistent news brands among participants who have a high need for cognition compared to those low in need for cognition.

Not supported. In Study 2 estimated marginal means show a difference in the predicted direction, however the credibility difference scores between those high and low in need for cognition are very close to one another.

**H6a:** Partisans with low need for cognition will select news stories from attitude-consistent news brands with attitude-inconsistent lead paragraphs more frequently than they select stories from attitude-inconsistent news brands with attitude-consistent lead paragraphs.

Not supported. Marginal difference in selective exposure among partisans with a low need for cognition for viewpoint ideology rather than party ID.

**H6b:** Partisans with high need for cognition will select news stories from attitude-inconsistent news brands with attitude-consistent leads with equal frequency that they select attitude-consistent news brands with attitude-inconsistent leads.

Partially supported. Partisans with a high need for cognition selected attitude-consistent news brands significantly more when consistency was based on party ID and Fox News and MSNBC only. However there was no difference when consistency was based on political viewpoint ideology for all four news brands.

**H7:** People with high need for cognition will rate news stories from sources with conflicting information higher in credibility than will people with low need for cognition.

Partially supported. Supported for predictive story credibility, but only approached significance for evaluative story credibility.

**RQ1**: Across all participants, which cue will be the stronger predictor of selective exposure, the story's news brand or lead paragraph?

Brand, although mixed political news brands and leads result in a reduction to selective exposure behavior.

#### **CHAPTER 6: DISCUSSION**

Selective exposure is a psychological and communication phenomenon that is alive and well today. Although the selective exposure hypothesis was contested by some in prior decades (e.g., Sears & Freedman, 1967), it is likely that there didn't exist enough alternative sources of information for the hypothesis to be widely supported at that time. Today, more so than ever, our information environment is abundant and includes print media, cable and satellite television, terrestrial and satellite radio, the World Wide Web, blogs and other social media, and podcasts to name just a few available choices. As noted in Chapter 1, the abundance of information choices today creates an environment that is ripe for actively selecting viewpoints in the media that are consistent with our beliefs, whether those beliefs be related to politics, religion, or other attitude targets. Selective exposure is a particularly important concept to explore given the possible dire outcomes of its exercise, including audience fragmentation and political polarization. In other words, the more people engage in selective exposure the more there is the potential that public opinion will become more fractured and divided at the state and national levels. The impetus for this study, therefore, was to explore selective exposure given the new context of information abundance.

The present thesis investigated potential moderators of selective exposure that had not been considered before in the literature. Variables that moderate selective exposure are of particular interest because they help to explain under what conditions selective exposure activity is more or less likely to occur. Moderators of selective

exposure, therefore, may help us to better understand or to be more aware of our inclinations to choose attitude-consistent information. Additionally, exploring selective exposure moderators is important to flesh out our theoretical understanding of the phenomenon. As noted previously, there are several theoretical explanations for why selective exposure exists, yet very few moderators have been scientifically tested in the literature. To answer that call, this thesis tested whether perceived credibility of a news source or an individual's need for cognition predicted selective exposure behaviors in an online news environment.

The following sections of this chapter review the studies' major findings and explore the results that were not predicted by the theoretical arguments laid out in Chapters 2 and 3. Next, theoretical and practical implications for the results are discussed. Finally, the study's limitations will be explained, and suggestions for future research will be advanced.

## **Major Findings**

## **Selective Exposure Hypothesis**

As expected by the basic selective exposure hypothesis, partisans selected attitude-consistent news brands much more frequently than attitude-inconsistent news brands. This effect held when testing attitude consistency using party identification as well as when attitude consistency was determined by political viewpoint ideology. These results are in line with recent research on selective exposure and confirm that people tend to select sources of news that confirm their pre-existing attitudes. Interestingly, tests of Hypothesis 1 showed that both partisanship and ideological

stance are strong cues for selective exposure; there was some indication that viewpoint ideological identity may be an even stronger predictor of selective exposure than political party identification. Although not a primary focus of the hypotheses in this study, this finding is novel in the selective exposure literature and has potentially important implications for measuring selective exposure in future research because it suggests researchers should develop more nuanced measures that go beyond political party identification. Previous research reports that today more than ever these two variables, political party identification and political ideology, measure the same construct; Republicans are conservatives and Democrats are liberals (Iyengar & Hahn, 2009; Stroud, 2011). However, the present study demonstrates that political ideology, not party identification, is more precise in measuring selective exposure as it excludes neutrals or moderates whose attitudeconsistency with a news brand is difficult to assess. These findings show that future research using political ideology or different measures of attitude consistency may reveal stronger selective exposure effects than simply using party identification alone.

The results also showed that the selective exposure effect was magnified among those who selected the news sources perceived to be the most biased by the participants. Iyengar and Hahn (2009) showed that conservatives were much more likely to select *Fox News*-labelled stories over those stories identified as coming from *CNN*, *NPR*, or *BBC*. However, in their study no other conservative options besides *Fox News* were available to participants. The present experiment provided participants with two perceived conservative sources of news, *Fox News* and *The* 

Wall Street Journal, and two perceived liberal choices, CNN and MSNBC, to choose from. For the partisans in this experiment who chose between the most ideological extremes, Fox News and MSNBC, there was a nearly 60% difference between those selecting attitude-consistent and attitude-inconsistent news sources versus a 43% difference when all four news sources were included. This suggests a number of possibilities. First, it might be that participants selecting the most ideological news sources are the most partisan in the sample. Second, this disparity could be the result of Fox News and MSNBC being more recognizable as conservative- and liberal-leaning news sources, respectively. After all MSNBC's slogan since 2010 has been "Lean Forward," a motto that explicitly identifies the network's progressive inclinations (Stetler, 2010). Partisans likely are more confident in selecting news from sources whose ideological biases they know best.

# **Need for Cognition**

Contrary to expectations, need for cognition failed to demonstrate an effect on selective exposure behaviors. Participants with a high or a low need for cognition selected attitude-consistent news brands over attitude-inconsistent news brands significantly more frequently, even after removing the more neutrally-perceived news brands *CNN* and *The Wall Street Journal* from analysis. These results also held when attitude consistency was constructed using party identification or political viewpoint ideology. This suggests that selective exposure based on attitude-consistency is a strong drive that overrides any desire by those who are high in need for cognition to sample all sides of an argument.

An alternate explanation for the lack of findings is that need for cognition may not be related to information *selection* at all, and is rather associated with processing information *after* it is selected. Indeed, need for cognition is often used in studies that investigate elaboration or effortful processing of information (Eagly & Chaiken, 1993) and thus this variable may not affect the selection of information for exposure, but rather it might be activated only after the information is selected and viewed. Accumulating evidence suggests that heuristics such as attitude consistency or personal relevance may motivate initial selection, and once some information is obtained it is possible that need for cognition then plays a role in deciding whether or not to obtain more information or in determining how much time is spent thinking about or processing the information in hand. For example, once a news story from CNN is selected, those with a high need for cognition may go back to a search results page to find more information about that issue from other attitude-consistent and attitude-inconsistent news sources.

The initial logic of this dissertation that need for cognition might moderate selective exposure was based on Tsfati and Capella's (2005) argument that need for cognition motivates one to "receive gratification from ritualistic exposure to information, from trying to understand complex realities, and from thinking about these realities" (p. 256), suggesting that high need for cognition prompts more thorough information searches and exposure to conflicting ideas. But the findings from the current study suggest instead that perhaps need for cognition can be seen as a moderator of credibility on selective exposure, whereby the general desire to

process more (or less) information among those high (or low) in need for cognition coupled with their evaluations of the credibility of that information based in part on its attitude-consistency drives selective exposure. To that end, a different approach to data analysis is proposed later in this chapter that may be able to account for the moderating effect of need for cognition. Nevertheless, the possibility that initial selection of news information is not motivated by need for cognition must be considered.

The lack of results concerning need for cognition do not, however, suggest that personality factors are not important to study with regard to understanding selective exposure to partisan news. Other personality traits, for example, *flexible thinking*, may be fruitful avenues for future research. Flexible thinking is a multifaceted construct encompassing the cultivation of reflectiveness rather than impulsivity, willingness to consider evidence contrary to beliefs, willingness to consider alternative opinions and explanations, and a tolerance for ambiguity combined with a willingness to postpone closure (Stanovich & West, 1997). Unlike need for cognition, which focuses more on how information once obtained is processed, flexible thinking pertain specifically to the way in which individuals *approach* as well as process information (Stanovich & West, 1997), and thus may provide greater explanatory power for selective exposure at the individual level than does need for cognition.

## **Need for Cognition and Credibility**

Need for cognition and perceived source, or brand, credibility did not significantly interact with one another in this study. Those with a high need for cognition were not more likely than those with a low need for cognition to rate both sets of conservative and liberal news brands as equally credible. Contrary to the predictions in Chapter 3, all participants were more likely to find attitude-consistent news brands to be more credible than attitude-inconsistent news brands regardless of their level of need for cognition. This suggests that the cognitive miser model applies equally to those high and low in need for cognition and demonstrates the power of the selective exposure phenomenon over even those that would seem to be cognitively least vulnerable to this sort of effect.

# News Brands vs. News Leads and Need for Cognition

When ideologically-leaning news brands are mixed with opposite ideological news headlines or lead paragraphs, it is unclear which cue will take precedence in news selection decisions. It was predicted that those low in need for cognition would exhibit the typical selective exposure pattern such that they would use the most obvious cue (i.e., news brand) to make selection decisions rather than the lead. However, the test among those with a low need for cognition showed no significant difference in selecting stories from attitude-consistent news brands with an attitude-inconsistent lead as selecting stories from an attitude-inconsistent brand with a consistent lead.

It is somewhat surprising that the standard selective exposure behavior measured in the previous tests failed to materialize for this condition. It is possible that switching the headlines and lead paragraphs with the news brands may have increased the cognitive load for these participants. Seeing a conservative headline appearing alongside the *MSNBC* logo introduces a level of complexity to the judgment process. To reduce the cognitive load, they may have chosen stories more or less at random. This suggests that common heuristics, including attitude-consistency, may in fact be tempered somewhat by other variables acting as additional cues or confounds collected during the information-seeking process. Without more data, however, it is impossible to say exactly what might have happened in this group, so speculation must be tempered with caution here.

Another surprising result was found among participants with high need for cognition. Specifically, using attitude-consistency based on party identification, those high in need for cognition significantly chose attitude-consistent news brands with attitude-inconsistent leads more frequently than they chose attitude-inconsistent news brands with attitude-consistent news leads. This, again, was contrary to the hypothesis and reinforces the powerful selective exposure pattern found throughout this study. That said, however, when attitude consistency was based on ideology, those high in need for cognition did not show a preference for either attitude-consistent news brands or attitude-consistent news leads as predicted. This lent mixed support for the study's Hypothesis 6b, albeit with rather weak evidence.

Overall, despite a couple of exceptions, the majority of the findings did not conform

to expectations regarding which selectivity cue, news brand or lead, those lower and higher in need for cognition prefer while making news selection decisions.

# Need for Cognition, News Brands vs. News Leads, and Credibility

Need for cognition also played a mixed role in influencing credibility judgments. Participants high in need for cognition rated the predictive credibility of stories with attitude-inconsistent news brands and leads differently than participants low in need for cognition. In other words, these individuals expected the stories they selected to be of higher credibility when the news brand and lead paragraph were conflicting than those with a low need for cognition. In line with other results in this thesis, credibility assessment and expected information quality are positively related to selective exposure behaviors. However, this difference did not persist for the evaluative credibility judgment after participants read the story, although the difference did approach significance. There are several reasons why this disparity may exist.

First, one has to consider whether need for cognition necessarily predicts varying levels of evaluative credibility assessments. The logic for the prediction in Hypothesis 7 was that those high in need for cognition were more likely to find stories with attitude-inconsistent news leads from attitude-consistent news brands to be more "balanced" and thus more credible, compared to people low in need for cognition, who might rate attitude-inconsistent stories as less credible than attitude-consistent news brands. It was suggested that those low in need for cognition would resort to the use of simple heuristics or cues like partisanship when evaluating

credibility and thus rate attitude-consistent stories with attitude-inconsistent news brands lower in credibility because they don't match political views. Alternatively, those high in need for cognition would not penalize the stories for being attitudinally-inconsistent between news brands and the actual story content because they would enjoy and appreciate reading arguments for and against their own position. However, participants overall typically rated the story they read as credible after reading it (i.e., credibility means ranged from 3.79 to 4.33 out of 7 points) regardless of need for cognition. This suggests that the theoretical linkage between need for cognition and evaluative credibility is less powerful than theorized.

Second, it is possible that participants who selected a news story for information quality motivations might be committed to thinking of it as a high quality or credible piece of information. That psychological commitment prior to reading the story may override any aspects of the actual text of the news story, such as a surprising disconfirming bias, from altering a person's initial predictive credibility assessment. In Group 2 of Study 1, the story selected was each participant's individual and specific choice after all, not a random assignment from the researcher. Another reason for a type of "commitment bias" operating here could be that, in the context of this online experiment, participants may have selected the story with the expectation that they would need to defend their choice later in the study. The description of the study in the introduction to the experiment read, "The purpose of this study is to learn how individuals evaluate news stories on the Internet." This psychological commitment may have caused participants to engage in a kind of

reactance, with the study's stated goal forewarning of a forthcoming attack on their choice.

Finally, news brand appeared to be a more robust selective exposure cue than lead paragraph content. That said, the data from Study 1 show that lead paragraphs do play a role in information selection. When the lead paragraph and news brand are consistent with one another, selective exposure behavior is strongest, showing a clear preference for attitude-consistent information. When the two are not ideologically consistent with one another, this general pattern remained but was less pronounced. In other words, when the lead paragraph ideology differed from brand ideology fewer participants selected the attitude-consistent brand (compared to when both matched), indicating that the lead did play some role in altering some people's selection decisions. Clearly, though, attitude-consistent news brand was the dominant selection criterion for most participants in the study across conditions.

#### Credibility

Prior to this research, credibility perceptions had been a largely unexplored moderator of selective exposure in the literature. Recent theoretical work and research is beginning to shed light on the moderating effect of perceived credibility on exposure to information, and this study adds to that small but growing body of work. The results from both studies reveal that credibility is a potent moderator of selective exposure behavior online, explaining up to 61% of intentional subsequent information selection. This study thus demonstrates that there is an important linkage between credibility and selective exposure, and the data show that the two variables

significantly correlate with one another. Even when familiarity with the online news site viewed was employed as a control variable, the strong relationship between credibility and selective exposure persisted.

#### **Theoretical Implications**

In summary, the results of this study demonstrate that partisanship and attitude consistency are very powerful cues for news selection in an Internet context. In nearly every analysis, attitude consistency between the news brand and the participant appeared to drive selection of news stories regardless of the content of the headline or lead paragraph. These findings strongly echo work over the past few years that finds a positive connection between selective exposure and attitude consistency (e.g., Iyengar & Hahn, 2009; Knobloch-Westerwick & Meng, 2011; Stroud, 2011).

A unique contribution of this study is the finding that selective exposure is a very powerful behavior that overrides need for cognition, a personality trait, in Internet-based information seeking. Conceiving of selective exposure in terms of dual processing models, Smith, Fabrigar, and Norris (2008) proposed need for cognition as a moderator of people's preference for like-minded information. By their logic, need for cognition ought to have influenced one's ability and motivation to process information or be biased in that effort. However, in nearly every test, participants both low and high in need for cognition selected news brands that conformed to their partisan viewpoints. This result indicates that greater enjoyment of effortful thinking does not appear to alter a person's motivation to purposely select attitude confirming and disconfirming information to an equal degree.

As discussed earlier, there are several competing theories suggesting various explanations for selective exposure. Some theories of selective exposure behavior that have been offered include making information decisions based on one's group or social identities such as political party affiliation (social identity theory), one's information-seeking goal (theory of motivated reasoning), and one's desire to conserve mental energy (heuristic information processing). By far though, the most dominant theoretical explanation is cognitive dissonance theory that suggests people avoid information that creates psychological discomfort. However, the findings of this study certainly call into question the argument for cognitive dissonance. While participants expressed a preference for attitude-consistent information in these studies, not all participants chose information that confirmed their ideological or partisan predispositions. These findings are in line with other studies that show people sometimes select attitude-inconsistent information over consistent information (Garrett, 2009). Cognitive dissonance predicts the opposite of this behavior, and the fact that a solid minority of participants selected information that is contrary to their political beliefs across both studies and both groups in this investigation provides more evidence that cognitive dissonance cannot fully explain selective exposure behaviors. In other words, some other motivation must be at play in the decisionmaking process that overrides dissonance aroused in selecting attitude-inconsistent information. The results of the present study suggest that one such motivation is credibility judgment.

Indeed, the theorized relationship between credibility and selective exposure is strengthened by the results of this study. Evidence that selective exposure may be motivated by credibility judgments is found by the findings that, rather than dissonance avoidance, people tended to select information they felt was credible. Unlike cognitive dissonance, credibility judgments fit nicely with arguments posed by Rieh's (2002) work in information utility and Kahan et al.'s (2010) cultural cognition thesis, as well as theoretical similarities to social identity theory, information goals in motivated reasoning, or in the cognitive miser approach. Participants in this study selected information that they believed would be the most credible, trustworthy, accurate, and unbiased news story. In other words, the results of this study reveal that people were likely to choose information they perceived to possess high quality more consistently than they were to actively avoid attitudinally-inconsistent information that might cause them to feel cognitive dissonance.

## **Practical Implications**

Alongside the theoretical implications of this study, there are a number of practical implications for news producers and for educators. News web site designers are likely aware that clearly signaling partisan bias in the headline and in the lead paragraph will attract audiences, as *Fox News* and *MSNBC* have demonstrated. They may be less aware, however, and the data from this study show, that mixing the partisan bias between news brand and lead paragraph, whereby one is conservative and the other is liberal, might lead to confusing and thus repelling readers. In other words, the findings from this study imply that they should stick to either the more

neutral "objective" form of journalism in both their brand and leads or to the partisan media model to increase their audience.

One of the more powerful take-aways from this study is the potency of selective exposure as a guide to news consumers' information processing, even among those who enjoy thinking and considering multiple aspects of problems. Educators should make students aware of our predisposition toward like-minded information, its influence on selective exposure, and possible negative consequences on partisan politics. One suggestion may be to teach students to identify an information search goal that motivates effortful processing to ensure that searchers learn to enhance their ability and motivation to perform adequately elaborate and informative searches on important topics. On the other hand, these results also suggest that becoming familiar with a news brand will lead to higher credibility judgments of that news brand. Therefore, educators may want to encourage their students to seek out a wide variety of news brands to reduce narrow selective exposure behaviors in the future.

#### Limitations

As with all research, this study had several limitations. Study 1 only presented participants with four choices of news brands, and in Study 2 participants were presented with only one news site to view that they did not choose for themselves. Neither study presented participants with a realistic or naturalistic search setting. Today, there are thousands of news brands to choose from and even more options available from news aggregators. Because the experimental design

necessitated a limited choice of news sources provided to participants in this study, the presented news brands may not have been the preferred brands of the users. Furthermore, the participants were asked to choose only one story. In a typical search session, an individual may search for any length of time they like, from five minutes or for more than one hour, sifting through news brands and stories to read. The limit of selecting one story may have adversely impacted participants' motivation and, as mentioned earlier, may have led to a commitment bias that overrode the operation of need for cognition on selective exposure.

In addition, the participants recruited for the study provided some surprising data. First the participants in both groups of Study 1 did not rate *CNN* or *The Wall Street Journal* as expected. Both news organizations were rated relatively neutral in political leaning. This suggests that one of two things may have happened: First, it is possible these two news brands are generating a new middle-of-the-road reputation, or it may be that participants were thinking of the straight news divisions of these new brands rather than their more high-profile and partisan commentators. For example, *The Wall Street Journal* is known for its staunchly conservative editorial board. Second, it turned out that the participants in Study 1 were themselves more neutral and independent compared to population statistics, and to what the Qualtrics panel operator was required to deliver. The participants were recruited such that the sample was to be half Democrats and half Republicans. Yet, up to 9% of the participants identified as political Independents. Also, as several of the results of this

study suggest, the typical assumed interchangeability of political party identification and political ideology needs to be revisited.

Finally, this study experienced a programming error in the survey instrument in which *CNN* in Group 2 lacked evaluative credibility assessments to use in data analysis for Hypothesis 7. Due to a lack of resources, it was impossible to collect more data, and it is possible that these omissions could have affected the results for Hypothesis 7 given that these two news brands were rated as being more neutral by the participants, and selective exposure effects were stronger for *Fox News* and *MSNBC* 

#### **Future Directions for Research**

This study provides several future directions for research. Although among this study's strengths includes its use of a non-college adult sample, it would be interesting to discover at what age selective exposure to political information develops. It would be informative to discover whether well-developed political attitudes are necessary to engage in selective exposure behaviors. Future studies should investigate whether selective exposure behaviors intensify with age and experience or whether they remain stable across the lifespan.

Another interesting question for future research to explore is to examine the smaller number of people who purposively selected attitude-inconsistent news brands. An important agenda for selective exposure researchers ought to be to discover what pushes people to make these seemingly effortful information selection decisions. To be sure, encountering information that people disagree with is a well-documented

phenomenon (e.g., Garrett, 2006, 2009), and there may be many explanations to account for this behavior. For example, there are times when individuals want to prepare themselves for argument by collecting counterarguments or learning what line of reasoning the other ideological side employs. In any case, understanding people's motivations for selecting attitude-inconsistent information may be a fruitful way to figure out how to counter the potential negative consequences of partisan selective exposure that has been found in this and other studies in recent years.

This study presented participants with a singular news story choice, but future research should investigate how selective exposure operates over a longer search session with more opportunities to read a multitude of news stories. Westerwick, Kleinman, and Knobloch-Westerwick (2013) suggest that research needs to look at information seeking behavior across a longer period of time, rather than in just one sitting. This thinking reflects Sears and Freeman's own critique of the selective exposure literature some 50 years ago, and it is still an important area to investigate today as it will provide a fuller and perhaps more realistic picture of news selection behavior than existing studies have been able to provide to date.

While need for cognition was unsuccessful at influencing selective exposure behaviors in this study, the search for moderators of selectivity is far from over. As discussed earlier, other personality traits may interact with selectivity behavior. Traits such as flexible thinking, openness to experience, conscientiousness, extraversion, agreeableness, or neuroticism, as well as need for closure may be strong candidates to test next. Future studies should also observe selective exposure

behavior under more naturalistic search conditions, where participants can choose from a full set of online news options and also be able to choose to read more than one story. Computer programs that can be installed remotely on the participant's computer for a limited duration, browsing through a researcher-operated proxy server, or tunneling into a virtual private network may reduce any reactivity bias that a directed online experiment could arouse. Under these conditions, we may see more variation among those with high and low need for cognition.

The findings here also suggest that there may be some value to selecting attitude-consistent information especially for those high in need for cognition. For example, participants in this study were told that its purpose was to learn how individuals evaluate news stories on the Internet. It is possible that this prompted participants, especially those high in need for cognition, to be prepared to explain or reflect on their choice in a thoughtful manner later in the study. In this scenario, it is feasible that those with a high need for cognition preferred to read news brands whose attitudes potentially matched their own in preparation for subsequent discussion or elaboration. Another possibility is that those with a high need for cognition already knew about the issue, and therefore didn't need to read the opposing viewpoint. Instead of choosing to read a story from a contrarian source, they conserved time and energy by selecting an attitude-consistent news source. It is also possible that they were preparing to make a best argument with the stories available from the news brands presented to them, which could potentially have overridden their natural inclination toward more effortful processing of both sides of an argument.

Interestingly, the range between those choosing attitude-consistent news brands and attitude-inconsistent news brands was larger for those with a high need for cognition (as much as 64% difference) rather than those with a low need for cognition (as much as 54%). In any case, more research is needed to understand exactly how and why need for cognition may or may not operate to affect news processing in multiple-source environments.

This study revealed credibility judgments to be an important contributor to selective exposure behaviors. While no causal relationship can be determined by this study, it appears that similarity or attitude consistency is an influential building block in credibility perceptions. There is a robust effect of credibility on selective exposure in this study, and as such there is great opportunity for scholars to disassemble which dimensions of credibility, beyond attitude-consistency, drive selective exposure behaviors or the situational factors that affect the use of credibility as a heuristic in information seeking.

Future research should also investigate how attitude importance relates to credibility and selective exposure across a variety of issues. For instance, Westerwick, Kleinman, and Knobloch-Westerwick (2013) showed that attitude importance determines whether people use credibility assessments to help drive their exposure to political information. While attitude importance was not implicated in this study, this variable may help to explain high need for cognition participants engaging in robust selective exposure behaviors. Perhaps other variables such as attitude or issue importance, information processing goals, or political knowledge fuel

one's evaluation of news brands' expertise and trustworthiness and subsequent information selection. Future studies should investigate a variety of attitude-related news categories to determine whether interest and importance moderate information selection

## **Next Steps**

Although the hypotheses advanced in this dissertation were not proposed as an integrated model, they do suggest some causal patterns that will be valuable to explore in further research. Thus, the next step for this research project will be to analyze the data from the current study using conditional process modeling to determine the direct and indirect effects of attitude-consistency, need for cognition, and credibility assessment on selective exposure.

Currently, Andrew Hayes' PROCESS model offers the most effective analytic tool to make these assessments when investigating these effects in the behavioral sciences (Hayes, 2012, 2013). The PROCESS model goes beyond determining whether or not an effect (such as selective exposure) exists, and instead it focuses on a better understanding of the "mechanism(s) by which an effect operates and establishing its boundary conditions or contingencies" (Hayes, 2012, p. 1). This analysis is better suited to understanding both the *how*, or mediation analysis, and the *when*, or moderation analysis, of a phenomenon rather than either one separately. Mediation analysis, therefore, focuses on how independent variables influence dependent variables directly and indirectly through other third variables. For example, the relationship between newspaper consumption and voting in elections

may be mediated by one's engagement in political discussion. Both newspaper consumption and one's engagement in political discussion exert direct influences on voting, but newspaper consumption may also lead to political discussion that then influences voting behavior. Moderation analysis, on the other hand, estimates the difference in the size of the effect of the independent variable on the dependent variable(s) based on the influence of a third variable. A moderation example might be how one's past voting record influences the effect of newspaper consumption on voting. Combining both mediation and moderation analyses will therefore test for one or more other variables' direct and indirect influences on the dependent variable (Hayes, 2012, 2013). For this reason, this analytical tool is a particularly good fit for extending the present study.

In fact this study's present hypotheses may be better tested using this tool rather than testing each hypothesis on its own. In particular, H1 predicted that attitude-consistency of the news brand, via partisanship cues, would predict selective exposure to that news brand. H3 also predicted that the perceived credibility of the news brand would be positively related to selective exposure to that brand. Each of these hypotheses represents a proposed direct effect on selective exposure behaviors. However, H4 predicted that participants would rate attitude-consistent news brands higher in credibility than attitude-inconsistent news brands. This hypothesis suggested that perceptions of attitude consistency, based on partisanship, are exerting an effect on credibility assessments. In other words, together H1, H3, and H4 predicted both direct and indirect (through credibility) effects of attitude-consistent

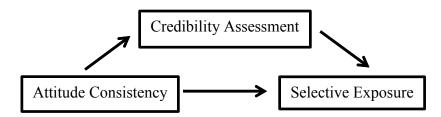
information on selective exposure. Analyzing the data using a mediated moderation analysis would allow a comparison of the size of the direct effect of attitude consistency on selective exposure to the indirect effects of attitude consistency on selective exposure as mediated by credibility assessments. Unlike testing the hypotheses separately, this technique would be able to determine whether selective exposure is fully or partially mediated by credibility assessments. This particular question has not been explored in the literature to date and thus provides a promising line of inquiry as it would shed valuable light on the theoretical mechanisms underlying selective exposure to partisan news.

In addition, H5 further stated that there would be a smaller difference in the credibility ratings of attitude-consistent and attitude-inconsistent news brands among participants high in need for cognition compared to participants low in need for cognition, and it was further implied but not hypothesized or tested that this could impact selective exposure behavior. A moderated mediation analysis could be used to examine the full set of linkages between need for cognition, credibility, and selective exposure, which would provide another novel and interesting nuance to the selective exposure literature. More specifically, the PROCESS model could be used to test whether there is an interaction effect of need for cognition and attitude consistency on selective exposure, mediated by credibility assessments. In other words, a moderated mediation analysis would be able to determine whether differences in need for cognition, working in conjunction with the attitude-consistency of the news information, affects credibility perceptions and selective

exposure behavior. Indeed, such an analytic approach would be both a more powerful way of understanding the hypothesized relationships between need for cognition and credibility in H5 as well as would allow a further analysis of how those variables impact selective exposure behavior, which is the main dependent variable of this study.

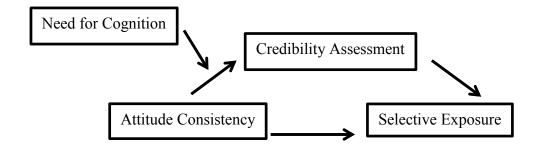
To analyze these data, the hypothesized paths would be tested for simultaneous direct and indirect effects among the variables using Hayes' PROCESS macro for SPSS. As Hayes (2013) recommends, the best procedure for testing for mediation, indirect, and direct effects is ordinary least squares regression, where independent variables (X) are used to predict a criterion variable (Y). Specifically, for this analysis logistic regression will be used because the criterion variable (selection of attitude-consistent or attitude-inconsistent information) is categorical. To test for a direct effects path, the predictor variable would be entered as attitude consistency (X) based on partisanship and selective exposure (Y) would be the outcome variable. To test for an indirect effects path, credibility assessment (M) would be entered as the mediator variable. By assessing the size of the direct effects path between attitude consistency and selective exposure and the size of the indirect effects path with credibility as the mediator, this analysis will be able to determine whether the relationship between attitude consistency and selective exposure is fully or partially mediated by credibility assessments. The findings from this comparison will be important in determining whether credibility is an important theoretical mechanism of selective exposure. See Figure 4 for a representation of this path.

Figure 4. Mediation model of attitude consistency on selective exposure both directly and indirectly through credibility assessment.



To test for moderated mediation in the model as discussed above, the effect of the interaction between need for cognition and attitude consistency on credibility assessment will be tested as a predictor of selective exposure. See Figure 5 for a representation of this moderated-mediation model.

Figure 5. Moderated mediation model of attitude consistency on selective exposure both directly and indirectly through credibility assessment with influence by the moderator, need for cognition.



Finally, these mediation and moderated mediation analyses could also incorporate various demographic variables such as sex, age, and political knowledge as controls. In sum, the PROCESS model analysis offers an exciting new avenue to understand the data collected for this project, extending the insights from the present analyses, and thus promises to add to both the sophistication and quality of the results.

#### Conclusion

The results of this dissertation show that information selection can be predicted by one's credibility judgment but that generally it is not influenced by need for cognition. Smith et al. (2008) put the call out for selective exposure researchers to expand the set of variables that moderate selective exposure, and slowly researchers are beginning to illuminate possible avenues. The emphasis they placed on the classic dual processing model pathway of ability and motivation will yield even more candidates for future research, and credibility judgments should be key among them. The selective exposure paradigm, which has persisted for over 70 years, needs a tighter integration of all possible variables within a cogent theoretical explanation. This dissertation makes a small contribution towards that goal.

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#### Appendix A: Study 1 Group 1 Instructions and News Selection Stimuli

Welcome to the Internet News study. The purpose of this study is to learn how individuals evaluate news stories on the Internet.

You should know that your participation in this study is completely voluntary, and you may stop answering questions at any time without any penalty. The total time necessary to complete the survey is about 15 minutes. Your responses to the survey will be confidential.

You also have the right to ask questions of the researchers at any time, and to receive a copy of the research results when the project is finished by contacting the researcher. If you have any questions regarding your rights as a research subject, contact the staff of the UCSB Human Subjects Committee located in the Office of Research. Their telephone number is (805) 893-3807.

Thank you,

Ryan Medders (Researcher) ryan\_medders@umail.ucsb.edu

Click the arrow button below to get started with the survey. If you'd like to leave the survey at any time, just close out of the survey.

Your participation in this survey is voluntary, if at any time you wish to stop completing the survey, simply close the survey.

Please read through all of the following options. After you've read through each option, please select which story you would like to read in full.





#### EPA's Greenhouse Gases Declaration -- Putting America On the Road to Ruin

The EPA declared greenhouse gases a danger to public health, and here's the bottom line: The biggest threat to Americans, when it comes to huge new energy taxes and government controls, is not from legislation, it's from regulation.

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#### EPA: Greenhouse gases are harmful

The Environmental Protection Agency took a major step toward regulating greenhouses gases, concluding that climate changing pollution threatens the public health and the environment.

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## An Inconvenient Democracy: The EPA aims to bully Congress and business with its carbon ruling

EPA Administrator Lisa Jackson said that her ruling that greenhouses gases are dangerous pollutants would "cement this year's place in history" as the moment when the U.S. began "seizing the opportunity of clean-energy reform."

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#### EPA: Greenhouse gases a public health threat

Greenhouse gas emissions pose a threat to public health and welfare, EPA Administrator Lisa Jackson said. "The overwhelming amount of scientific studies show that the threat is real," she said.

#### If CNN was selected, this is the story participants read:

Please read this story, and when you're finished click the arrow to continue.



# EPA: Greenhouse gases a public health threat

Greenhouse gas emissions pose a threat to public health and welfare, EPA Administrator Lisa Jackson said.

"The overwhelming amount of scientific studies show that the threat is real," she said.

The announcement stems from a Supreme Court ruling which ordered the agency to determine the impact of carbon emissions not only on the environment, but on public health.

"These long-overdue findings cement this year's place in history as the year when the United States government began addressing the challenge of greenhouse-gas pollution and seizing the opportunity of clean energy reform," Jackson said.

Her statement could provide evidence that the agency and the Obama administration are taking global warming seriously.

However, Jackson said that the announcement does not require any immediate regulatory action.

The Obama administration is pushing for comprehensive energy legislation from Congress that puts a price on carbon emissions, a so-called "cap and trade" policy that uses market forces as an incentive for businesses to reduce carbon emissions.

In her announcement, Jackson made the case that climate change affects weather patterns like droughts, hurricanes, heat waves and the air that people breathe, the officials said.

Jackson said carbon dioxide emissions go beyond damaging the environment -- they also endanger public health.

The agency made the announcement because it is required to issue an "endangerment finding" - evidence that carbon emissions are dangerous to the public health -- before it can regulate carbon dioxide and five other greenhouse gases under the federal Clean Air Act.

The EPA said that it would likely make such a ruling regarding carbon emissions and public health. The agency completed a public-comment process before making the announcement.

#### If Fox was selected, this is the story participants read:

Please read this story, and when you're finished click the arrow to continue.



# EPA's Greenhouse Gases Declaration -- Putting America On the Road to Ruin

The EPA declared greenhouse gases a danger to public health, and here's the bottom line: The biggest threat to Americans, when it comes to huge new energy taxes and government controls, is not from legislation, it's from regulation.

President Obama, White House Climate Czar Carol Browner, and their Environmental Protection Agency are not waiting for Congress to pass cap-and-trade. Shrugging off the Climate-gate scandal, today EPA administration Lisa Jackson issues a so-called "endangerment finding," paving the way for onerous greenhouse gas regulations to be shoehorned into the 1970 Clean Air Act.

Based on a legal theory originally conceived by Climate Czar Carol Browner in the late 1990s, Obama's EPA is moving ahead with greenhouse gases regulations under the 1970 Clean Air Act even though in 1970 global warming hadn't even been invented yet, and the doom-saying scientists were instead warning of an impending ice age!

While cap-and-trade remains a major threat (especially with new "tri-partisan" negotiations between Senators Graham, Kerry, and Lieberman), the biggest threat of huge new energy taxes and government controls right now comes not from legislation, but regulation.

President Obama intends to use EPA regulation to short-circuit the democratic process, boycott the Congress, and put us all under a sweeping regulatory regime.

The EPA would also require permitting for businesses and structures that emit as little as 250 tons of greenhouse gases per year. That threshold may make sense for some air pollutants. But for carbon dioxide it's frighteningly low, and would subject millions of never-before-regulated entities to an expensive and lengthy EPA permitting process. Small businesses, restaurants, schools, and hospitals that have commercial kitchens with gas burners would all be affected.

With the Obama administration dead set on selling out our energy policy and economic future to U.N. bureaucrats in Copenhagen, it's imperative that Congress step in and actively stop his backdoor efforts to implement these policies at the EPA. If they don't, they must be held responsible for what happens.

#### If MSNBC was selected, this is the story participants read:

Please read this story, and when you're finished click the arrow to continue.



#### **EPA:** Greenhouse gases are harmful

The Environmental Protection Agency took a major step toward regulating greenhouses gases, concluding that climate changing pollution threatens the public health and the environment.

The announcement came as the Obama administration looked to boost its arguments that the United States is aggressively taking actions to combat global warming, even though Congress has yet to act on climate legislation.

The EPA said that the scientific evidence surrounding climate change clearly shows that greenhouse gases "threaten the public health and welfare of the American people" and that the pollutants — mainly carbon dioxide from burning fossil fuels — should be regulated under the Clean Air Act.

"These long-overdue findings cement this year's place in history as the year when the United States government began addressing the challenge of greenhouse-gas pollution," said EPA Administrator Lisa Jackson at the news conference.

The action by the EPA, which has been anticipated for months, clearly was timed to add to the momentum toward some sort of agreement on climate change and to try to push Congress to approve climate legislation.

"This is a clear message of the Obama administration's commitments to address global climate change," said Sen. John Kerry, D-Mass., lead author of a climate bill before the Senate. "The message to Congress is crystal clear: get moving."

Obama planned to talk with former Vice President Al Gore at the White House. Gore won the Nobel Peace Prize in 2007 for his work toward combating climate change.

Obama is also meeting with environmental leaders and U.S. business leaders to discuss climate change.

Under a Supreme Court ruling, the finding of endangerment is needed before the EPA can regulate carbon dioxide and five other greenhouse gases released from power plants, factories and automobiles under the federal Clean Air Act.

#### If WSJ was selected, this is the story participants read:

Please read this story, and when you're finished click the arrow to continue.



# An Inconvenient Democracy: The EPA aims to bully Congress and business with its carbon ruling

EPA Administrator Lisa Jackson said that her ruling that greenhouses gases are dangerous pollutants would "cement this year's place in history" as the moment when the U.S. began "seizing the opportunity of clean-energy reform." She's right that this is an historic decision, though not to her or the White House's credit, and "seizing" is the right term. President Obama isn't about to let a trifle like democratic consent impede his climate agenda.

With cap and trade blown apart in the Senate, the White House has chosen to impose taxes and regulation across the entire economy under clean-air laws that were written decades ago and were never meant to apply to carbon. With this doomsday machine activated, Mr. Obama hopes to accomplish what persuasion and debate among his own party manifestly cannot.

This reckless "endangerment finding" is a political ultimatum: The many Democrats wary of levelling huge new costs on their constituents must surrender, or else the EPA's carbon police will inflict even worse consequences.

The gambit is also meant to coerce businesses, on the theory that they'll beg for cap and trade once the command-and-control regulatory pain grows too acute—not to mention the extra bribes in the form of valuable carbon permits that Democrats, since you ask, are happy to dispense. Ms. Jackson appealed to "the science" and waved off any political implications.

The political threat is so potent precisely because invoking a faulty interpretation of the 1970 Clean Air Act will expose hundreds of thousands of "major" sources of emissions that produce more than 250 tons of an air pollutant in a year to the EPA's costly and onerous review process. This threshold might be reasonable for traditional "dirty" pollutants (such as NOX) but it makes no sense for ubiquitous carbon, which is the byproduct of almost all types of economic production.

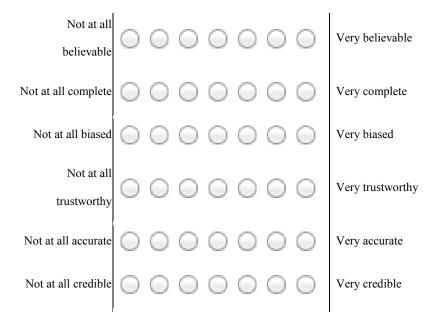
The White House has opened a Pandora's box that will be difficult to close, that is breathtakingly undemocratic, and that the country, if not liberal politicians, will come to regret.

## Prior to reading each story, participants were asked to rate its predictive credibility:

his st	ory o	n the	next	page	, do y	ou exp	ect it to be
0	0	0	0	0	0	0	Very believable
$\bigcirc$	0	$\Theta$	0	0	$\Theta$	$\bigcirc$	Very complete
0	0	0	0	0	0	$\bigcirc$	Very biased
0	0	0	0	0	0	0	Very trustworthy
$\bigcirc$	0	$\Theta$	0	0	$\Theta$	$\bigcirc$	Very accurate
0	0	0	0	0	0	0	Very credible
	0 0 0 0 0						

### After reading each story, participants were asked to rate its evaluative credibility:

#### Now after reading the story, did you find it to be



#### Appendix B: Study 1 Group 2 Study Instructions and News Selection Stimuli

Instruction for selection: Please read through all of the following options. After you've read through each option, please select which story you would like to read in full.

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#### EPA's Greenhouse Gases Declaration -- Putting America On the Road to Ruin

The EPA declared greenhouse gases a danger to public health, and here's the bottom line: The biggest threat to Americans, when it comes to huge new energy taxes and government controls, is not from legislation, it's from regulation.

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#### EPA: Greenhouse gases a public health threat

THE WALL Greenhouse gas emissions pose a threat to public health and welfare, EPA Administrator Lisa Jackson said. "The overwhelming amount of scientific studies show that the JOURNAL. overwhelling amount threat is real," she said.

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# EPA: Greenhouse gases a public health threat

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The agency made the announcement because it is required to issue an "endangerment finding" - evidence that carbon emissions are dangerous to the public health -- before it can regulate carbon dioxide and five other greenhouse gases under the federal Clean Air Act.

The EPA said that it would likely make such a ruling regarding carbon emissions and public health. The agency completed a public-comment process before making the announcement.

#### If MSNBC is selected, this is the story participants read:

Please read this story, and when you're finished click the arrow to continue.



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#### If Fox is selected, this is the story participants read:

Please read this story, and when you're finished click the arrow to continue.



#### EPA: Greenhouse gases are harmful

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Obama is also meeting with environmental leaders and U.S. business leaders to discuss climate change.

Under a Supreme Court ruling, the finding of endangerment is needed before the EPA can regulate carbon dioxide and five other greenhouse gases released from power plants, factories and automobiles under the federal Clean Air Act.

#### If CNN is selected, this is the story participants read:

Please read this story, and when you're finished click the arrow to continue.



# An Inconvenient Democracy: The EPA aims to bully Congress and business with its carbon ruling

EPA Administrator Lisa Jackson said that her ruling that greenhouses gases are dangerous pollutants would "cement this year's place in history" as the moment when the U.S. began "seizing the opportunity of clean-energy reform." She's right that this is an historic decision, though not to her or the White House's credit, and "seizing" is the right term. President Obama isn't about to let a trifle like democratic consent impede his climate agenda.

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The White House has opened a Pandora's box that will be difficult to close, that is breathtakingly undemocratic, and that the country, if not liberal politicians, will come to regret.

# Prior to reading each story, participants were asked to rate its predictive credibility:

When you read t	his st	ory o	n the	next	page	, do y	ou exp	ect it to be
Not at all	0	0	0	0	0	0	0	Very believable
Not at all complete	$\bigcirc$	$\Theta$	$\Theta$	$\Theta$	$\Theta$	$\Theta$	$\bigcirc$	Very complete
Not at all biased	$\bigcirc$	0	0	0	0	0	$\bigcirc$	Very biased
Not at all	0	0	0	0	0	0	0	Very trustworthy
Not at all accurate	$\bigcirc$	0	0	0	0	0	$\bigcirc$	Very accurate
Not at all credible	0	0	0	0	0	0	$\bigcirc$	Very credible

### After reading each story, participants were asked to rate its evaluative credibility:

Now after reading the story, did you find it to be:

Not at all believable	0	0	0	0	0	0	$\bigcirc$	Very believable
Not at all complete	$\bigcirc$	$\Theta$	$\Theta$	$\Theta$	$\Theta$	$\Theta$	$\bigcirc$	Very complete
Not at all biased	0	0	0	0	0	0	$\bigcirc$	Very biased
Not at all	0	0	0	0	0	0	0	Very trustworthy
Not at all accurate	$\bigcirc$	$\Theta$	0	0	0	0	$\bigcirc$	Very accurate
Not at all credible	0	0	0	0	0	0	$\bigcirc$	Very credible

#### Appendix C: Study 1 Postexposure Questionnaire

Before today, to what extent w just read?	ere you l	knowledge	eable abo	ut the is	ssues invol	ved in the s	tory you
Not at all knowledgeable	$\ominus$	$\Theta$	$\Theta$	$\bigcirc$	$\circ$	Extremely	knowledgeable
Before today, had you viewed	, read, or	heard ma	ny news s	stories	about the E	PA?	
Not at all							
A little bit							
Somewhat							
A lot							
A whole lot							
How interested are you person	nally in po	olicies an	d debates	about	the environ	ment?	
Not at all							
A little bit							
Somewhat							
A lot							
A whole lot							
Which statement best matche	s your ow	vn person	al views o	n envir	onmental p	olicy?	
The government should incompower plants and factories in an						strial facilitie	s such as
The restrictions that are cur						f global wari	mina
The government should dec							· ·
yet been proven.				3			
Harris and distance of the date of			! <b>0</b>				
How credible do you find the f	Not at all			ewhat		A whole lot	No opinion/
	credible	credib	le crec	lible	lot credible	credible	Oon't know
CNN	0	$\odot$		$\supset$	$\odot$	$\circ$	$\circ$
MSNBC	0				$\bigcirc$	$\bigcirc$	$\bigcirc$
FOX News	0	0			$\odot$	$\bigcirc$	$\odot$
The Wall Street Journal	0	0			$\bigcirc$	$\circ$	$\odot$

Please indicate how liberal or conservative you believe the following news organizations are

	Very onservative	onservative	Neutral	Liberal	/ery liberal	Oon't Know
CNN	0	0	0	0	0	0
FOX News	0	0	$\odot$		0	$\circ$
MSNBC	0	0	$\bigcirc$	0	0	0
The Wall Street Journal	0	$\bigcirc$	$\bigcirc$	$\circ$	$\bigcirc$	$\circ$
In politics today, do you cons Republican Democrat Independent	ider yourse	lf a Republic	an, Demo	ocrat, or Ind	ependent?	
How familiar are you with thes	Very famil			omewhat familiar .	little familiar	ot at all familiar
CNN	0	0		0	0	0
FOX News	0	0		0	$\circ$	0
MSNBC	0	0		0	$\circ$	$\circ$
The Wall Street Journal	$\odot$	0		$\bigcirc$	$\odot$	$\circ$
How interested are you in info Not at all interested Somewha	rmation ab tt interested	out what's go loderately into	oing on in	n governme Interested		es? interested
Would you say your views in	nost politic	cal matters ar				
Very Conservative Conse	ervative	Liberal		Liberal	Ver	y Liberal
How often do you pay attentio	n to the ne	ws, not inclu	ding spo	rts?		
Always Often Sometimes Rarely Never		voto in notion	and atata	and local a	lootiono?	
During the past 6 years, did yo Strongly Disagree	ou usualiy V	vote in natior	ıaı, state,	, anu iocai e	ieduons (	

	Extremely ncharacteristic 'you (not at all like you)	Somewhat acharacteristic	Uncertain	Somewhat characteristic	Extremely naracteristic of the country of the count
The notion of thinking abstractly is appealing to me	0	0	0	0	0
Thinking is not my idea of fun.	0	0	$\odot$	0	$\odot$
I find satisfaction in deliberating hard and for long hours.	0	0	$\odot$	$\circ$	$\circ$
I only think as hard as I have to.	0	0	$\odot$		$\odot$
I really enjoy a task that involves coming up with new solutions to problems.	0	$\circ$	$\circ$	$\circ$	0
Learning new ways to think doesn't excite me very much.	0	0	$\odot$	$\circ$	$\bigcirc$
I prefer my life to be filled with puzzles that I must solve.	0	0	$\circ$		0
I like to have the responsibility of handling a situation that requires a lot of thinking.	0	$\circ$	0	$\circ$	0
I would rather do something that requires little thought than something that is sure to challenge my thinking abilities.	0	0	0	0	0

Who is the current Secretary of Health and Human Services?

Company Compan
Katherine Solis
Ken Salazar
Kathleen Sebelius
I don't know
Which amendment protects a person from unreasonable search and seizure?
12th amendment
8th amendment
4th amendment
2nd amendment
I don't know
Which party is more conservative on a national scale?
Democrats
Republicans
Neither Democrats nor Republicans
I don't know
Which branch of government enforces the law?
Executive
Judicial
Legislative
I don't know
Which of the following people currently serve in the U.S. House of Representatives?
O John Paul Stevens
Eric Cantor
Jan Brewer
Jan Brewer  Mitch McConnell
Mitch McConnell
Mitch McConnell I don't know
Mitch McConnell I don't know  Which political party is more likely to favor increasing income taxes?
Mitch McConnell I don't know  Which political party is more likely to favor increasing income taxes?  Democrats

Who is the current Speaker of the House?
Nancy Pelosi
Oianne Feinstein
Harry Reid
O John Boehner
O I don't know
Which party currently controls the U.S. Senate?
Democrats
Republicans
Neither Democrats nor Republicans
I don't know
What proportion of votes is needed in Congress to override a Presidential veto?
simple majority
2/3
3/4
None of the above
I don't know
Which of the following people have never served as a Supreme Court Justice?
Antonin Scalia
John Roberts
William Rehnquist
John Barry
I don't know
Who is the current U.S. Attorney General?
Eric Holder
Robert Gates
Ted Strickland
Hillary Clinton
None of the above
I don't know

On the previous page, did you look up any answers that you were not sure about (e.g., using google)? If you have, that is OK. Your response will not influence your score.
Yes, I looked up an answer
No, I did not look up an answer
What is your sex?
O Male
Female
What is your age?
What race do you consider yourself?
White-Caucasian
Latino
Native American
African American
Asian
Multi-racial
Other
What was your total family income last year, before taxes?

#### Appendix D: Study 2 Instructions and Stimuli

#### **Instructions and Stimuli:**

On the next page, you will see a picture of a webpage from a news website. After reading the news story on this page, you will be asked to answer a series of questions about its content.

#### Conservative news brand, gay marriage issue:



#### Gay Marriage is Legal in the US Capital

By: A. Miller Posted August 25 2011

WASHINGTON- Same-sex couples in Washington, D.C. can head to city hall Wednesday to apply for marriage licenses, as the federal district becomes the most recent place in the United States to approve gay marriage. The announcement was met with praise by liberals and disdain by conservatives.

Liberals and gay rights activists lauded the decision. "This is a place people come to see the Constitution and understand what it means to be equal, so symbolically this means a great deal," said Joe Solmonese, president of the Human Rights Campaign.

Conservative opponents of the initiative vowed to fight the decision. "Shame on them," said Bob King, a community activist who lives in the Northeast: "We're going to get to the ballot box through either the courts or Congress. So tell everyone: don't let the marriage licenses start flowing."

City officials say the measure will also provide a financial boost to the local economy. A study by the Williams Institute at the University of California, Los Angeles, predicted that more than 14,000 same-sex marriages would occur in the city over the next three years, which would bring in \$5 million in new tax revenue and create 700 jobs.

Many religious groups also expressed concern. "They want to dilute marriage," said Rabbi Yehuda Levin of the Rabbinical Alliance of America. The Catholic Archdiocese of Washington, meanwhile, claimed that the legislation will force it to shut down social service programs on adoption, health care, and care for the homeless, as the Church could be held liable for discriminating against gay couples who applied for such services.

#### Conservative news brand, Planned Parenthood issue:



## Budget Cuts Force Planned Parenthood Clinics to Shut Down Across Country

By: A. Miller

Posted August 25 2011

ST. PAUL- Planned Parenthood is shutting down clinics across the country in response to federal budget cuts made this spring in a highly politicized abortion battle. Clinics are closing in Minnesota, Indiana, Kansas, and Tennessee. Additionally, lawmakers in Virginia and Utah voted to increase the regulation of abortion clinics.

Most of the clinics being closed did not perform abortions, and were among the smallest in their state. However, the response to the shutdown from both Democrats and Republicans alike was strong.

"Taxpayers should not be directed to this heinous organization, and the federal government should not be in the abortion business," said Rep. Michelle Bachmann, R-Minn, echoing the sentiments of most Republican conservatives.

Reflecting the views of liberal Democrats, former House Speaker Nancy Pelosi, D-Cal, said "Conservative lawmakers are embarrassingly misguided in their treatment of Planned Parenthood. This is an attack on low-income women all over America. By removing their only link to health care and pregnancy prevention, we are putting women's lives in danger."

Congressional votes for the funding reduction fell largely along party lines, with most Republicans supporting the cuts and most Democrats opposing them.

#### Liberal news brand, gay marriage issue:



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by A. MILLER

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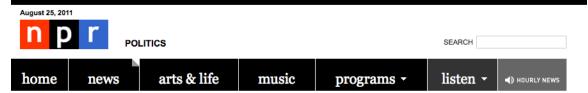
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Congressional votes for the funding reduction fell largely along party lines, with most Republicans supporting the cuts and most Democrats opposing them.

#### Appendix E: Study 2 Postexposure Questionnaire

How familiar are you with this r	news webs	ite?			
Not at all familiar					
A little bit familiar					
Somewhat familiar					
Familiar					
Very familiar					
Please answer the following qu	estions ab	out the new	s website	e you just	saw:
<b>5</b> .	Not at all	A little bit	Some	A lot	A whole lot
How credible do you find this website to be?	0	0	0		0
How biased do you find this website to be?	$\bigcirc$	$\bigcirc$	$\odot$	$\bigcirc$	0
How much do you trust this website?	$\bigcirc$		$\bigcirc$	$\bigcirc$	0
How professional do you feel this website is?	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\circ$	0
Please answer the following qu	estions ab	out the new	s storv v	ou iust re	ad:
	Not at all	A little bit	Some	A lot	A whole lot
How complete is the information presented in this news story?	0	0	0	0	0
How accurate do you find the information to be?	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	0
How unbiased do you find the information to be?	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\circ$	0
How trustworthy do you find the information to be?	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\circ$	0
How credible do you find this story to be?	$\bigcirc$	$\circ$	$\odot$	$\bigcirc$	0
How likely would you be to seld in the future?	ect this we	bsite rather	than ano	ther sour	ce for news information
Not at all likely					
A little bit likely					
Somewhat likely					

Likely Very Likely					
How liberal or conservative wo	uld you sa	y this webs	site is?		
Conservative	•	•			
Slightly Conservative					
Neither Conservative nor Libe	eral				
Slightly Liberal					
Liberal					
In politics today, which politica  Democratic Party Republican Party Independent Tea Party Green Party Other, please specify:  To what extent do you agree or					Strongly
	disagree	Disagree	disagree	Agree	agree
I like challenging problems instead of easy ones.	0	0	0	$\Theta$	0
I like problems that take a lot of thought rather than something that needs little thought.	$\circ$	0	0	0	0
I like to do things where I don't have to think at all.	$\bigcirc$	$\circ$	$\circ$	$\odot$	$\circ$
It's really cool to figure out a new way to do something.	0	$\bigcirc$	0	0	$\circ$
I like to spend a lot of time and					
energy thinking about something.	0	$\circ$	0	$\circ$	0
	0	0	0	0	0

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
I like doing things that I've learned to do well again and again so that I don't have to think so hard about them.	0	0	0	0	0
I'm not interested in learning new ways to think.	$\bigcirc$	0	0	$\circ$	0
What is your age?	$\neg$				
What is the highest level of sch	ooling you	have com	pleted?		
5 <sup>th</sup> or 6 <sup>th</sup> grade					
High school graduate (high se	chool diplon	na or the ec	quivalent)		
Some college, no degree					
Associate degree					
Bachelors degree					
Masters degree					
Professional or Doctorate deg	gree				
What is your race or ethnic bac	kground?				
White, Non-Hispanic					
Other, Non-Hispanic					
Hispanic					
2+ Races, Non-Hispanic					
Are you:					
Male					
Female					
What is your annual household	income be	fore taxes	?		
Less than \$5,000					
\$5,000 to \$7,499					
\$10,000 to \$12,499					
\$12,500 to \$14,999					
\$15,000 to \$19,999					
\$20,000 to \$24,999					

0	\$25,000 to \$29,999
$\bigcirc$	\$30,000 to \$34,999
$\bigcirc$	\$35,000 to \$39,999
$\bigcirc$	\$40,000 to \$49,999
$\bigcirc$	\$50,000 to \$59,999
$\bigcirc$	\$60,000 to \$74,999
$\bigcirc$	\$75,000 to \$84,999
$\bigcirc$	\$85,000 to \$99,999
$\bigcirc$	\$100,000 to \$124,999
$\bigcirc$	\$125,000 to \$149,999
$\bigcirc$	\$150,000 to \$174,999
$\bigcirc$	\$175,000 or more