From Reactance to Political Belief Accuracy: Evaluating Citizens' Response to Media Censorship and Bias

Dissertation

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Abstract

Much of recent media censorship research focuses on the institutional characteristics of media systems that define what we consider open versus closed media environments. The primary focus of these studies is to assess the negative consequences of media censorship on political learning (i.e., political belief accuracy). Despite these scholarly endeavors, the psychological factors that mediate the relationship between the information environment and citizen knowledge are generally overlooked.

In order to better understand these factors, we must look beyond the structural nature of media systems, and evaluate the role of affective, cognitive, and behavioral responses of citizens who perceive they are living in a censored information environment. The objective of this project is to address these psychological processes by applying the concept of reactance to a novel theoretical framework that explores the relationship between perceived threat to media freedom, online information seeking, and accuracy of political beliefs.

The framework is applied in three studies using samples from three countries with vastly different media systems (Turkey, Iran, and the U.S.). The objective is to assess the hypotheses, which suggest higher levels of reactance towards threats to mainstream media freedom will motivate individuals to turn to alternative online information seeking, which will then influence political belief accuracy with respect to broad social and political issues.

The underlying premise of these studies is that those who exhibit negative affective and cognitive responses to threats towards their media freedom are more likely to engage

in activities or behaviors that supplement their perceived loss of information. Such active pursuit of information through the diverse alternative online sources is then expected to augment political belief accuracy in largely restrictive media environments. It is further suggested that in circumstances where the mainstream media regularly offers diverse perspective (i.e., the U.S.), this alternative online information seeking will diminish political belief accuracy, due to the ideologically polarized nature of online sources. The moderating influence of internal political efficacy, response efficacy, technological efficacy, perceived affordance of visibility, and learned helplessness are also tested in the model.

The results of the three studies broadly demonstrate support for the idea that reactance promotes online information seeking, especially among individuals who experience higher levels of internal political efficacy and perceived visibility of online information (only in Iran). The outcomes also suggest that this online engagement enhances political belief accuracy, with an inverse effect in more politically partisan online information environments (i.e., the U.S.). The implications of the results, as well as limitations and future directions are subsequently discussed.

Dedication

To my parents, Mahvash and Mahmoud.

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Fields of Study

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A Psychological Perspective on Media Censorship, Online Information Seeking, and Political Belief Accuracy

Introduction

When it comes to media and communication theories, the bulk of our understanding is predicated on the openness and availability of the communication environment. However, media information may not always be freely accessible in the manner many of these philosophies propose. One of the goals of the present research is to understand media effects in the most realistic and prevalent contexts possible. This requires thorough examination of the circumstances of citizens who live in media systems that are not entirely open and information is difficult to access.

According to a number of organizations that monitor media freedom around the globe, over 80% of the world's population reside in partially or fully censored mass media environments (Freedom House, 2017; Reporters Without Borders, 2015), making communication and information seeking within censored media systems the global standard (Freedom House, 2017). Despite these conditions, most political communication scholarship only examines the communication processes of citizens who reside in the limited number of countries with open and free media systems. The exception to this bias is the growing number of research in recent years exploring how citizens in non-democratic states and censored media environments employ alternative sources of communication (e.g., Internet) as a means of political learning and mobilizing towards democratic governance (Behrouzian, Nisbet, Dal, &

Carkoglu, 2016; Howard & Hussain, 2013), as well as those investigating the consequences or effects of this learning (e.g., Bailard, 2014; Lei, 2011; Stoycheff & Nisbet, 2014).

Nevertheless, it remains unclear what underlying communication and psychological processes influence citizens to go online for political information within censored media environments in the first place. Why do some citizens engage in these communication behaviors and other do not? How do perceptions of and attitudes towards their mass media news environment influence these information-seeking behaviors? Does this information seeking enhance or impede political learning, and if so, what variations exist in this learning across different countries and levels of perception? The present endeavor makes a unique contribution by developing a theoretical framework that improves our understanding of how citizen perceptions about their information environment lead to a motivated psychological process (reactance) that drives information-seeking behaviors and influences political learning by enhancing accuracy of political beliefs.

Background

Mass media are recognized as playing a central role in influencing public opinion pertaining to an array of political and social issues (Lippmann, 1946). The media guide public opinion through a variety of gate keeping (Bennett, 2004), agenda setting (McCombs, 2005), and framing (Entman, 1993) strategies. Such functions of the media are believed to create a more mindful and knowledgeable citizenry (Weeks, 2000). The fourth estate provides a means by which citizens can obtain information about issues that are most relevant to them. In fact, research demonstrates that in societies where the media are more open and pluralistic, people are likely to exhibit higher levels of knowledge (Bollinger, 1976; Leeson, 2008; Tichenor & Olien, 1970).

However, mass media are also vulnerable to being influenced, especially through government censorship (Freedom House, 2017). In many censored and partially censored societies, powerful actors (e.g., government officials) control the flow of information by manipulating and/or repressing journalists and media outlets (Geddes & Zaller, 1989, Price, 2015; Stockman & Gallagher, 2011), thus, limiting access to information that may be vital for the decision-making processes of citizens. Furthermore, previous research establishes that these restrictive media conditions are linked to lower levels of knowledge and political learning (Leeson, 2008; Weaver, Buddenbaum, & Fair, 1985; Norris, 2012).

While such outcomes resulting from the condition of media systems are widely accepted, there are still some questions that remain unanswered. Are we to assume that because citizens in closed media systems are unable to access information they will lack accurate knowledge? Or those in more open environments are inevitably more knowledgeable? Furthermore, where does perception of censorship factor in? What are the differences in accuracy of political beliefs between those who actively respond to media censorship and those who do not? More importantly, if there is a difference, what elements contribute to this variance? We may be able to address some of these questions by looking at research in other areas of communication. Namely, studies exploring resistance to persuasive messages can help explain why the perception of censorship may potentially enhance accuracy of political beliefs via a series of motivated actions. One prominent theory is that of psychological reactance (Brehm, 1972). This theory was first introduced as a motivational state, and posits that individuals behave in a manner that attempts to maximize the satisfaction of threatened needs. Within the context of the present framework, reactance is expected to explain why perception of media censorship may be associated with political information-seeking behavior. When access to information is

threatened, efforts to reestablish the lost freedom can be triggered. Such freedom restoration efforts may include: denying the existence of the threat; finding means to mitigate the threat; derogating the source of the threat; or engaging in the threatened behavior.

Reacting Against Perceived Media Censorship

The focal relationship in the proposed framework is between perceived threat to media freedom and political learning (broadly defined). The prediction is that this relationship will be mediated first by psychological reactance, which will then be further mediated by political information-seeking behavior. This mediation is ultimately expected to predict more accurate political learning. Reactance is used a great deal in health communication and persuasion literature (Bensley & Wu, 1991; Dillard & Shen, 2007; Miller, Lane, Deatrick, Young, & Potts, 2007); however, the reactance scholarship in international and political communication is limited.

Although the framework of psychological reactance is most often applied to persuasive messaging contexts, it may also be used to understand the audience's response to the perception that media censorship threatens their media freedom. As suggested by Brehm and Brehm (2013), reactance not only increases the likelihood of rebellious behavior, *it also enhances the desirability of the object that is being denied*. Therefore, when an individual recognizes that their ability to access otherwise readily available and/or accurate information is threatened, the affective (e.g., anger and frustration) and cognitive (e.g., counter-arguing) mechanisms of reactance may arise and encourage the individual to reestablish their informational freedom by seeking alternative sources of information, among other things. In some cases, even when a direct threat does not exist, individuals may resist persuasive messages by a potentially threatening source by proactively seeking these alternative information sources.

It is important to remember that reactance is predicated on a perceived *active* threat to freedom, wherein the individual's responses are directed towards that operating threat. However, the inclusion of reactance in this model accounts for the possibility that not all messages are intentionally threatening in the manner that is traditionally posited in certain reactance research; some messages, which are projected to be solely persuasive in nature, may also be perceived threatening (Rhodes, Roskos-Ewoldsen, Edison, & Bradford, 2008; Jones & Brehm, 1970). While these types of messages are prevalent in closed media systems, where the government not only restricts information, but also employs manipulation and propaganda tactics as a means of influencing citizens (Kumar, 2006), we witness such perceptions about messages in more open media systems, as well. In certain circumstances where mass media are more polarized, citizens may view certain sources as more politically bias than others, and perceive that such sources are a direct threat to their personal political ideology (Garrett, 2009). Therefore, the individual's perception of *anticipated* threat to freedom, along with their preventive response, is an important consideration, as well (Whitehead & Russell, 2004). Taking these factors into account, the predicted reactions that transpire in response to the perceived threat may be preemptive responses intended to not only manage an active threat, but to resist potential threats, as well.

When there is a direct barrier to informational freedom, it can threaten the foundation of accurate public opinion, undermine the authority of the state, and even result in misperceptions about significant social issues (Solely, 2002). While such conditions are more likely to occur in non-democratic regimes, the perception of threat to media freedom can potentially exist in any type of state, since it is contingent on individual observations and not the structural evaluation of the media environment provided by various organizations (e.g., Freedom House, IREX).

The introduction of reactance theory provides a level of nuance that is yet to be thoroughly addressed in media censorship research. The addition of this concept allows us to move beyond the purely structural definition of media censorship and its outcomes, and account for the underlying micro-psychological processes that influence citizens who are confronted with repressive media conditions. It should be stressed that this framework does not contradict the groundwork or methods used in previous media censorship research; rather it attempts to initiate a conversation about additional factors and potential boundary conditions that we should take into consideration.

Furthermore, in a variable field such as communication, there is a necessity to recognize the implication of phenomena on multiple levels if we are to obtain a more holistic understanding of broad social experiences (McLeod, Kosicki, & McLeod, 2010). One way to achieve this goal is to integrate macro-level concepts (i.e., institutional censorship) with individual level theories (i.e., psychological reactance), thus underscoring the continuum across which such media effects occur. One of the potential benefits of exploring media censorship through the perspective of citizens in the manner that is proposed, is that we can transcend the boundaries of nation-states and broadly examine the effects of censorship by way of individual perceptions, which provides us with more gradation and depth. For example, we cannot assume that citizens' response to censorship in a country that possesses a long, historical relationship with this phenomenon will be comparable to those who only recently experienced censorship. Through this layered strategy, we can avoid overlooking individuals who may not fall within the confines of a particular country's normative definition of what a media system should be. This shift from the standard, structural perspective that is prevalent in censorship research, to the more

subtle, individualized viewpoint has important implications across different areas of communication.

Reactance and Technology

One possible method for responding to or resisting a perceived threat is online information seeking, or direct engagement in the threatened behavior. This behavior may potentially restore an individual's freedom to access the restricted information. Studies suggest that the Internet plays a significant role in the attainment of political goals (Shirky, 2011), helps in the democratization of information (Kaplan & Haenlein, 2010), and provides citizens with an outlet to express political opinions that may not have been possible otherwise (Woo-Young, 2005). The function of the Internet as an alternative resource for information is especially important in less democratic societies since traditional media is far more malleable to censorship (Tang & Sampson, 2012).

The motivation to employ such alternative sources of information may be further rested on the affordances an individual perceives a particular technology may offer (Treem & Leonardi, 2012). Studies exploring the relationship between online technologies and media freedom, suggest that people in restricted countries are more likely to turn to online platforms, like social media, to express their personal views and even engage in behavior that may be condemned offline (Young, Shakiba, Kwok, & Montazeri, 2014). The perceived characteristics of these alternative technologies may increase perception of media freedom due in part to the capacity for users to more freely express themselves by creating anonymous profiles or aliases (i.e., anonymity), the lack of governmental presence in online platforms, and the ability to see the activity that fellow citizens are engaged in (i.e., visibility).

We may be able to expand our understanding of technological affordances if we begin to consider how perception drives use and technological development. For instance, we continue to witness increases in the use of technology for various political goals, including the depiction of injustices by governmental forces that may not have otherwise been brought to light (Antony & Thomas, 2010), the organization of both political and social movements (Khamis & Vaughn, 2011), and the opportunity for citizens to express political opinions on a public forum that is not controlled by the state (Woo-Young, 2005).

A recent example of how perceived censorship may potentially influence technology use is the case of Telegram in Iran; this relatively new communication tool is now the most widely used social media application in Iran (ISPA, December 2015), and was especially instrumental during the 2016 parliamentary election. Since the government in Iran is notorious for censoring the media (Internet included), citizens are always in search of the newest technology that will allow them to reinstate their freedom and security to access and share information. Interestingly, Telegram is a communication instrument that claims to be uniquely encrypted to deter infiltration and was created in 2013 by Pavel and Nikolai Durov of Russia (Miller, 2016). Although the technology is relatively new and research concerning its effects is extremely limited, we cannot ignore the fact that the construction and use of this tool may be a response to perceptions that it can be used to access information outside of government control.

Nevertheless, the aforementioned example may prompt critics to point out that Iran, is in fact, an institutionally censored environment, so the uses and affordances of technology may not be related to perception of censorship, but the actual existence of it. This is where the proposed framework becomes useful. Because "perception" is an individual trait and can exist anywhere and at any point, limitations will not exist with regards to the context in which the phenomenon

is measured. By applying this framework across diverse media systems we may develop a better understanding of the potentially varied uses of technology that citizens have with regards to their media conditions, as well as understanding the political implications of such uses.

Reactance and Political Belief Accuracy

The final expectation is that this alternative information-seeking behavior will enhance political learning in these closed systems, since the information sought and encountered online is likely to be far more diverse than that which is provided within the government controlled media (Farrell, 2012). In route to better understanding how alternative media sources influence the learning process, we must first grapple with the broad definition of "learning". Much of the extant literature defines political learning as the level of factual knowledge demonstrated by a respondent (Lodge, McGraw, & Stroh, 1989). While this delineation is accurate, there is recent scholarship that more exhaustively explores the dynamic nature of the quality of knowledge that can be attained, especially in censored media environments (i.e., political belief accuracy). A more in-depth explanation of political belief accuracy will be discussed in subsequent sections of this chapter.

In addition to enhancing our knowledge about the effects of perceived censorship and the ability to respond to it through reactance and alternative information seeking technology, we may also be able to draw more realistic inferences about political learning. One of the ways in which this proposed research may contribute to the literature about political learning is that it explores the underlying psychological motivations that may lead to the attainment of useful and accurate political information. The suggestion by a subset of researchers that censored media environments are incompatible with a knowledgeable society (Lor & Britz, 2007), tends to disregard the behavior of individuals who become motivated enough through reactance to engage

in information-seeking behavior that enhances their level of knowledge. In fact, there is evidence that governments that choose to censor political information do so using the rationalization that certain motivated individuals will acquire the information, but that the majority of the masses will not (Ang & Nadarajan, 1996).

It should also be pointed out that the effects of perceived media censorship are certainly not exclusive to non-democratic systems; citizens in more democratic media environments may also experience the consequences of censorship, but in the form of perceived bias. As suggested by Prior (2007), although such media systems offer a higher selection of message channels, there is also a greater potential for gravitation towards ideologically polarized media content. This polarization may encourage audiences to pick specific media that conform to their ideological attitudes and beliefs, a phenomenon commonly referred to as selective exposure (Arceneaux, Johnson, & Murphy, 2012).

It is important to note that this active exposure to agreeable information does not preclude access to or even consumption of disagreeable information. In fact, evidence shows that individuals who are partial to ideologically polarized media do consume information from other view points, but end up processing that information in a manner that is more appeasing to their ideological stance (Garrett, 2009). This pattern of engagement with media that validates one perspective, and the active dismissal or rejection of alternative perspectives may possibly create gaps in knowledge (Prior, 2005). Therefore, a potential outcome of reactance to media imbalance (e.g., perception that mainstream media is bias towards one perspective or ideology) is that citizens may turn to alternative sources of information, regardless of accuracy, simply to reaffirm their pre-existing ideology, thus negatively impacting their political learning process (Hart, Albarracin, Eagly, Brechan, Lindberg, & Merrill, 2009).

The key here is to uncover whether such individuals would attain the same level of political learning or accuracy of political beliefs even if they were not motivated to do so by the threatening conditions of their media system. That is to say, does reactance to perceived media censorship actually enhance an individual's political learning through their engagement in motivated information-seeking behavior? If so, as communication scholars we are faced with an important question: What are the media consumption patterns that ignite this motivation? There is currently literature that looks at media use across countries with varying levels of media freedom (Aalberg, van Aeist, & Curran, 2010; Hallin & Mancini, 2011), however there are few studies actually exploring the distinctions between the means by which media consumption habits change across different ranges of individual motivation. If we can establish that certain communication characteristics exist uniquely among those who are more reactant, we will be one step closer to developing more useful and applicable media strategies for these distinct environments.

Although the institutional criteria traditionally used to measure censorship (e.g., Freedom House, Reporters Without Borders, IREX) are useful, the results seem only valid for the more macro level of measurement. After a certain point we are confronted with what McLeod and Lee (2012) call the "illusion of uniformity and stability" which asserts that while the criteria used to establish censorship might be relevant by institutional standards (e.g., government), they may not be enough to explain the assorted reasons and outcomes of censorship, which occur at levels that are more micro in nature (e.g., individual citizen).

Furthermore, the proposed model reevaluates the assumption that political learning and engagement can only exist in more open media systems, by suggesting that those who actually perceive the most censorship will engage in behaviors that will positively enhance their process

of learning (see Figure 1). Moreover, a key caveat is examined in the form of selective exposure to ideological media in more democratic media systems, as a means of accounting for the disinformation that arises when media is polarized. This motivated information processing may explain how excessive media choice may hinder the political learning process. Research has shown that in cases where there is a high diversity of media choices and "more points of view are heard and defended, beliefs will converge to the truth" (Gentzkow & Shapiro, 2008). This is consistent with the chart in Figure 1, which suggests that in such conditions, those who react against the widely accepted information provided in mainstream media will exhibit less accurate beliefs. A primary justification for why the relationships presented in Figure 1 will produce such outcomes is that the media freedom and reactance variables are measured on two different levels. In this case, media freedom is observable and measured on a more macro, contextual scale, whereas reactance is subjective and measured on a micro, individual scale. A similar approach is used in Nisbet and Stoycheff (2013), where the macro attributes of a country's media institution are linked to the micro conceptions of democratic norms by way of individuals' perceived media supply. It would be unwise of us, as researchers, to ignore the distinctions that exist, not only across various countries and media systems, but across perceptions, as well. Such nuances occurring at the lower levels of analysis may potentially explain why and how people come to react differently to censorship.

	High Media Freedom	Low Media Freedom
Low Reactance	**High Political Learning**	**Low Political Learning**
High Reactance	**Low Political Learning**	**High Political Learning**

Figure 1. Proposed outcomes for media reactance by media freedom

Reactance and Individual Differences

In addition to the aforementioned variables, several other moderating concepts will be included in the model, which may advance our understanding of how and to what effect reactance is motivated. One theory that may account for psychological motivations related to reactance is *learned helplessness*. This process, which will be explicated in further detail in the following sections, occurs when an individual relinquishes efforts to remedy an aversive situation because they believe that they are unable to escape the unfavorable condition (Carlson, Heth, Miller, Donahoe, & Martin, 2010).

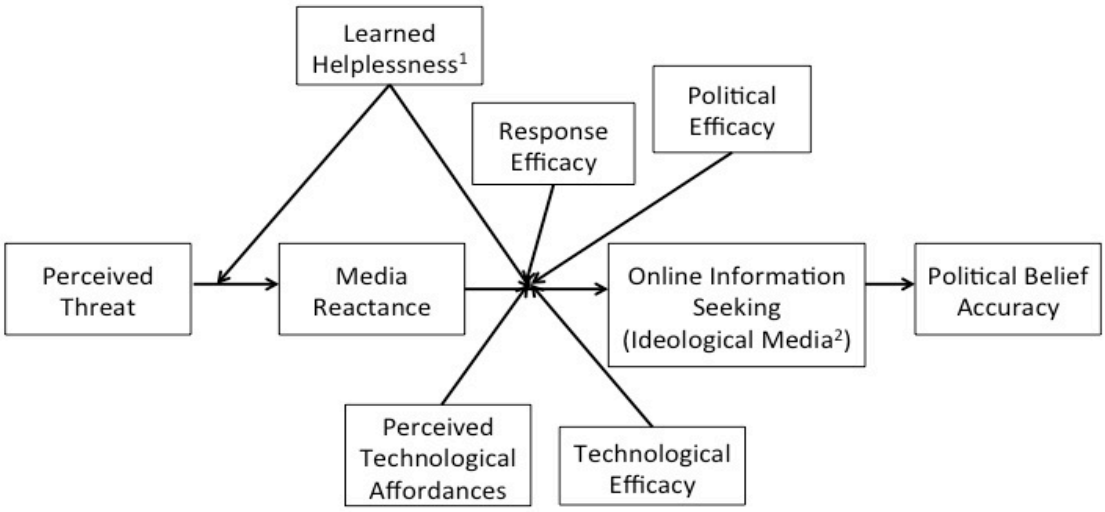
A parallel concept that is also incorporated in the framework is efficacy, in multiple forms. The extent to which an individual engages in information-seeking behavior after experiencing reactance towards perceived censorship may be related to their professed ability to engage in a task or behavior, otherwise referred to as internal efficacy (Bandura, 1977), and their belief that this engagement will result in fruitful outcomes with regards to reduction of risk, also known as response efficacy (Finkle, 1985). In the context of online information seeking, internal and response efficacy may be only partially predictive of the likelihood that an individual will partake in online information-seeking behavior. Technological efficacy is a third consideration;

this condition is specifically associated with an individual's perceived ability to successfully use the technology necessary to ascertain online information (Johnson, 2005).

Finally, the use of alternative online sources for information seeking may also be predicated on an individual's perceived affordance of the technologies being used to ascertain that information. Specifically, certain perceived affordance may motivate individuals to engage with technology more than relying on the traditional sources of information. It is possible that these uses are rooted in the perception that alternative online sources offer qualities (or information) that may not be easily accessed in traditional sources (Conole & Dyke, 2016).

Key Theoretical Associations

As was outlined in the overview, the research program for this endeavor involves a multitude of variables that will be used as part of a larger theoretical framework in order to explain how citizens respond to perceived censorship of media. The aim of these studies is to monitor this response in terms of psychological motivations, processes and outcomes, as well as behavioral and cognitive results (i.e., information-seeking behavior and learning, specifically defined political belief accuracy). In order to achieve this goal, a theoretical model is introduced that encompasses the variables of interest. The model, which will be tested in increments, is displayed in Figure 2, followed by a more in-depth explanation of the concepts and relationships, along with research propositions for each of the main associations.



[1]Iranian data only [2]U.S. data only

Figure 2. Theoretical framework

Perceived threat and reactance. The framework illustrated in Figure 2 can be best explained in two subdivisions. The first part of the model explores the relationship between perception of threat to media freedom and how this perception is associated with reactance. Though for the benefit of the present analyses the connection between perceive threat and reactance was previously verified (Behrouzian, Nisbet, Dal, & Carkoglu, 2016), it is still essential that the conceptualization of this variable and its connection to the model be explicated.

Perceived threat. Despite the potentially idiosyncratic nature of censorship, studies proceed to demonstrate through ranking systems that certain countries exhibit higher levels of media censorship than others. These rankings are provided by numerous organizations, most notably, Freedom House (2017) and include three broad measurement categories: the legal, political, and economic conditions that impact media institutes. While the criteria established by

independent organizations like Freedom House are well founded, these attributes can be perceived as democratically biased or normative in nature; as such, the use of alternative measures is necessary.

In an attempt to better understand what prompts individuals to react to censorship, a reassessment of our definition of "censorship" is required. Instead of using the aforementioned institutional narrative of media censorship, which underscore the restriction or omission of information, and more importantly, place a great amount of weight on the structural aspect of the media system, it is proposed that we instead reframe our understanding of this concept as a *threat* to a person's perceived ability to access media information. By approaching censorship in this manner, we are able to circumvent the normative, institutional demarcations and introduce individual motivations to these analyses, which can be empirically measured.

The ability to quantifiably measure perceptions of threat is an integral part of clearly understanding this concept. Nisbet and Stoycheff (2013) assert that an alternative method to establishing perception of media censorship is to gauge both an individual's perceived supply of and demand for media freedom. In this case, supply is described as the amount of media freedom an individual perceives they possess, while demand is the measure of media freedom an individual desires or believes they *should* have. The study by the aforementioned authors shows that stable democracies exhibit patterns of citizen media demand that is matched by equal or near equal institutional media supply.

An inevitable question that arises is why media censorship occurs in the first place? Using data from the Global Press Freedom and the Polity IV datasets, Whitten-Woodring (2009) finds that a majority of countries with government-controlled media systems are autocracies. This finding is consistent with that of previous scholars, who suggest that censored media allows

for greater government control of the people through the regulation and manipulation of information, a popular tactic employed by autocratic regimes (Geddes & Zaller, 1989; Stockman & Gallagher, 2011).

Despite these studies, we cannot assume that citizens living in censored media environments will perceive these restrictions as threatening in the manner described by external organizations; nor can we deduce that *only* those in living in censored media environments will perceive these threats. A number of additional factors may increase or decrease an individual's perception that media is jeopardized. In certain circumstances (e.g., war or threats to national security), citizens may feel the intention of censorship is justified (Hayes & Reineke, 2007); deficits in education and awareness are also been linked with false perceptions of media accuracy (Zaller, 1992); studies likewise show that in countries with more media restrictions, support of the regime is much higher (Norris & Inglehart, 2008).

Furthermore, there is evidence to suggest that even in conditions where media institutions are more autonomous, citizens may still perceive a threat or *bias* regarding the quality of information based on more individual factors, such as political ideoology (Morris, 2007). Regardless of these conditions, when a legitimate threat is observed, then it is expected that people will feel compelled to respond to that threat in some motivated manner (Nisbet, Kamenchuk, & Dal, 2017). As demonstrated by Behrouzian, et al (2016), in circumstances where a threat to media freedom is perceive, individuals were more likely to experience media reactance and engage in alternative information-seeking behaviors.

Reactance. As presented in the preceding sections, a potential outcome of perceived threat to media freedom it anticipated to be affective and cognitive reactions to the source of the threat. Psychological reactance is defined as a motivational state that aims to reestablish a

threatened freedom (Brehm, 1972). While this definition of reactance remains pertinent to psychological research, we now have an alternative context in which to apply this theory. Dillard and Shen (2005) expanded on Brehm's work by defining reactance as a concept composed of both affective and cognitive attributes that motivate the desire to restore one's freedom. The authors describe these affective attributes as those related to anger and frustration, which are likely to emerge when a threat is made against an individual's freedom to engage in an activity or hold a particular opinion. Furthermore, affective traits are expected to prompt the motivation necessary to achieve or restore satisfaction to a particular threatened need (Brandon, 1994).

In conjunction with the affective components, cognitive attributes are described as negative responses towards a threat or the source of a threat. Researchers who have explored these cognitive responses to persuasive messages have found that the acceptance or rejection of a persuasive message is conditional on preexisting thoughts about the same or related issues (Greenwald, 1968). Therefore, it may be plausible that in situations where there exists negative perceptions that media are bias or censored, then such individuals may likely direct negative cognitive reactions towards messages from these threatening sources (regardless of content), because their preexisting attitudes are already unfavorable.

Therefore, this conceptual framework, which is often applied to persuasive messaging, may also be utilized in understanding audience's psychological reactance to perceived threats to media freedom. When an individual recognizes that their ability to access otherwise readily available and/or accurate information is threatened, the affective (e.g., anger and frustration) and cognitive (e.g., counter-arguing) components of reactance

may arise. In turn, these elements of reactance may *motivate* the individual to reestablish their informational freedom through a number of strategies, including the use of alternative information sources or the rejection of messages presented by the threatening source.

The extent to which an individual decides to react may be further dependent on the scale and seriousness of the perceived threat. Reactance may be stronger in situations where the threat is perceived to be high and more effort is required to restore the lost freedom.

The items used in this adaptation are theoretically similar to the items included in other reactance measures, which operationalize the concept as a combination of both affective and cognitive measure, (e.g., Dillard & Shen; Quick & Stephenson, 2007). This modified measure accounts for responses that underscore both the anger/frustration and the potential negative thoughts that are associated with reaction to censorship.

Reactance and information seeking. In the second half of the model, the relationship between reactance and information seeking becomes paramount. This is also the relationship most central to the primary analyses conducted in this exploration. There is an emphasis on how the psychological motivations brought on by reactance may manifest as deliberate political information-seeking behavior that can impact political learning, which is more distinctly defined as accuracy of political beliefs. As subsequently described, the association between reactance and political learning will not only be potentially mediated through information seeking, but it may also be contingent on a series of efficacy and perceived affordances of information and communication technologies (ICT) that could prospectively alter the magnitude of these associations.

Information seeking. Information seeking is described as one of the potential outcomes for those who perceive a threat to their media freedom *and* engage in reactance. In conditions where mainstream media is highly controlled by the state, either through censorship, manipulation, or propaganda, citizens may lose confidence in the information source and turn to outlets that they believe are not as tightly regulated or biased. The advent of the Internet plays a crucial role in reshaping the face of media censorship. A number of studies reported the significant role that the Internet plays in the promotion of deliberative democracy (Dahlberg, 2001), the diffusion of diverse information, which may rebut mainstream discourse (Farrell, 2012), and a more interactive means of conveying information (Taylor & Perry, 2005). Finally, the Internet is established as an integral tool in social, cultural, and political movements (Meikle, 2002). The convenient, unaltered, and multifaceted nature of the Internet provides greater potential for informing the masses at a higher standard (Kaye & Johnson, 2002; Kenski & Stroud, 2010). For example, according to Freedom House (2015), in countries with censored media systems like Russia, Malaysia, Ukraine, Egypt, and Turkey the Internet offers a more open information environment than traditional mass media. Such conditions may offer citizens a more attractive alternative to information seeking, especially when compared to their countries' mainstream media.

In a more exhaustive delineation, Bailard (2014) offers two unique theoretical approaches to understanding information seeking in censored media systems. The first approach, identified as "mirror holding", underscores the search for information concerning internal aspects of their own society or political system; people in restricted media environments who utilize alternative media sources for this purpose are predicted to have a more accurate understanding of these "internal" elements, which may include knowledge about the function of government, as well as

social and political issues within their country. The second approach, called "window opening", emphasizes the access of information related to how other countries and societies operate in comparison to the individual's own country. Using this approach to information seeking, we may be able to better discern the quality of learning that occurs through the use of these alternative sources.

Research indicates that employing online information sources in response to perceived threats to media freedom is common (Coombs & Cutbirth, 1998). Citizens who perceive these threats are likely to experience negative affective reactance (i.e., fear and anxiety), which encourages alternative information-seeking behavior (Valentino, Hutchings, Banks, & Davis, 2008). Consequently, it would appear conceivable that citizens who experience a valid threat to freedom and develop unfavorable emotions towards the message (as is predicted by reactance), will seek out information via a source that restores that freedom, or helps them resist the persuasive nature of the threatening message (i.e., the Internet).

The potential outcome of information seeking, which is based on citizens' affective and cognitive reactance to a perceived threat to media freedom is the primary foundation upon which the theoretical framework for the studies in this dissertation on based. This important relationship is summarized in the first of four propositions that synthesize the core associations put forth in this research.

> Proposition One: *Reactance to perceptions of censored, manipulated, biased, or inaccurate information in mainstream media content may lead to an affective and/or cognitive motivational state that encourages alternative forms of information seeking as a means of reestablishing access to perceived accurate information.*

While being aware of this consequence of reactance is significant, we must also understand why the alternative sources contain an attraction for people with such perceptions of restrictive media. In order to gain a more thorough understanding for why people turn to specific sources, it is necessary to provide background with respect to the qualities embodied by these alternative sources that may encourage their use, especially by those who feel that mainstream media is not meeting their needs. These qualities are defined in the context of media technology as *perceived affordances*.

Perceived affordances of technology. There are a number of definitions provided for affordances as they relate to technology. Gaver (1991) suggests that an important consideration of affordances is their relationship to the perceptual information made available about them, or the physical, perceptual characteristics of the object. In another approach, Treem and Leonardi (2012) describe affordances as the perceived utilities of a particular technology; that is to say, the apparent functionality that the user perceives the technology to have. The latter definition is most applicable to the research laid out in this proposal; as such, for the remainder of this paper, any discussion of affordances will refer only to those *perceived* utilities afforded by a given technology.

In the context of non-democratic countries, where the media system is highly regulated by the government, citizens may turn to online information platforms due, in part, to a number of perceived affordances, most notably: *visibility*. Media consumers living in more democratic conditions may also utilize online information platforms due to the perceived visibility of information in cases where there is a perception that the mainstream media is biased. The affordance of visibility may allow such users to obtain broader access to information that they believe is not represented in more traditional media outlets.

This perceived technological allowance, employed by users in both democratic and non-democratic media systems, is indicative of the degree to which previously undisclosed information is made available through online platforms. The underlying premise of visibility states that when information is not easily available (though it may otherwise exist), people may be less likely to seek it out; therefore, when information on certain sites is made available, these platforms may be perceived as possessing the affordance of visibility (Treem & Leodardi, 2012). Using the context of the aforementioned media systems, an online platform such as Facebook may present the perceived affordance of visibility since users are able to view information from a vast array of sources with relative ease, a task that may be impossible via the mainstream media within their respective countries. For example, since BBC and Voice of America are viewed as Western propaganda and censored in the mainstream media of certain countries (e.g., Iran), the only way people can access this information is through the organizations' online presence on various sites. As a result, many citizens and news sources turn to Facebook or Telegram because these platforms are perceived as making news information from various sources easily visible (Berlot, Jaeger, & Grimes, 2010).

In addition to the visibility of news information, Facebook users are able to see the activities and interests of others on a more expansive scale. The ability to observe the preferences of other users (e.g., "likes", comments, posts) can provide people with vital information regarding the degree of support for political movements or social causes, and can create momentum for significant social change (Pearce & Guliyev, 2015). In more democratic societies, a perception of ideological bias in mainstream media may provide motivation for those who want to access information that they believe is "hidden" in more traditional outlets. As a result, these media consumers may turn to online outlets that discernably offer those opinions that users are

unable to recognize in the mainstream media (Garrett, 2009; Knobloch-Westerwick, Johnson, & Westerwick, 2014).

One might question the viability of the perceived visibility of online information in authoritarian circumstance, given the pattern of Internet suppression that many of these governments engage in. However, the use of circumvention technology to gain access to blocked information should not be underrated. Even in some of the most censored media environments where the Internet is subject to government regulation, we are seeing increases in the use of circumvention technology, which enables citizens to access information that may not be readily or legally available to them (Maitland, Thomas, Tchouakeu, 2012). Virtual private networks (VPNs), proxies, and anti-filters are all devices used by individuals as a means of bypassing Internet censorship (Diamond, 2010). Such activity highlights the vital contribution that the Internet makes with regards to information visibility.

This unique characteristic of the online environment allows people from all over the world to engage in discussions, while sharing and accessing information about important societal and political issues. Having a relatively democratic platform to deliberate and exchange ideas can be instrumental in prompting change throughout many non-democratic countries (Bucy & Affe, 2006). An alternative benefit of this perceived affordance is the potential to access information through a variety of methods (e.g., social media, news sites, and blogs), something that is not as feasible through traditional media (Conole & Dyke, 2004). For example, when governments decide to impose interference on satellite television, or shut down a newspaper organization, there are only finite measures that can be taken by citizens to overcome these obstacles. However, when the government filters websites or content on the Internet, tech savvy individuals can circumvent these restrictions by accessing VPNs, anti-filter software, proxies,

and other similar technologies. The ability to access and view information with relative ease despite attempts of censorship is a unique affordance of online environments that may motivate people to utilize this platform more often for their information needs.

In a more idealistic account of the Internet, Boyle (1997) posits that this technology is inherently incompatible with censors, since it was programmed to bypass and find loopholes for any sort of interference or malfunction. These attributes of the Internet created a sense that this new frontier should not and could not be manipulated or restrained. While such perceptions about the Internet may still exist, users are finding that that this medium is not immune to impediments. While the structure of the Internet offers seemingly limitless sources of information, that same structure also allows governments of various nation-states to employ censorship of the Internet under the pretense of controlling information (Aryan, Aryan, & Halderman, 2013), protecting citizens from dangerous or immoral material (McCarthy, 2005), preserving the integrity of copyrighted material (Fraser, 1998), and maintaining political control (Hofheinz, 2005).

While the Internet was initially thought of as a tool for liberating and democratizing information, the use of it by social actors is what ultimately determines the role of this technology. That is, in some cases the very nature of the Internet as a neutral, malleable tool is used to limit users' access to information and knowledge (Xu, Mao, & Halderman, 2011). Likewise, we are able to observe inconsistencies in how people use ICTs to gain access to alternative information, with some citizens using online technologies to supplement the information that they are exposed to in the mainstream media (Bucy, 2003), and others using the same technology to counter government-controlled mainstream outlets (Hwang, Schmierbach, Paek, Gil de Zuniga, & Shah, 2006).

The role that online information sources play in society is undoubtedly significant. While there are vast amounts of scholarship about the uses and influences of technology within society, an attempt was made to emphasize how online sources are perceived to function in censored media environments. Specifically, why do citizens turn to online technologies when they perceive limitations to their media freedom? It is important that we understand the features of these technologies, as well as the reasons why these features are attractive to citizens who experience censorship of traditional or mainstream media.

In the case of those who live in less-democratic media systems and face harsh repercussions for expressing opinions, sharing content, or even seeking information that is in opposition to the government's position, online sources may be considered viable alternatives. The affordance of visibility offers some justification for why citizens in such environments may elect to seek information through an alternative path. Similarly, it will be interesting to observe whether those in more democratic media systems will also feel motivated to use technology based on the perceived affordance of visibility. That is to say, will perception of bias in media sources be viewed as an obstacle to the visibility of desired information?

Proposition Two: *The perceived affordance of online technologies, especially those that enhance the visibility of information, will moderate the relationship between media reactance and information seeking behavior, so that a higher perception of visibility will amplify the relationship between reactance and alternative information seeking.*

Efficacy. The effect of reactance on online information seeking may be further contingent on individual factors, which can potentially influence the magnitude of any effect observed in this relationship. A central individual characteristic that will be explored further in this study is the concept of internal political efficacy, response efficacy, and technological

efficacy. Efficacy is defined as the degree to which an individual feels they have the ability to stimulate change in a particular area of their life and that such expenditure of energy is worth the effort (Bandura, 1977; Niemi, Craig, & Mattei, 1991). Additional research on efficacy suggests that this concept is composed of two constructs: internal efficacy or self-efficacy (referred to in this paper as political efficacy), and external efficacy, otherwise referred to as response efficacy (Balch, 1974). The former pertains to the individual's personal characteristics and how confident they feel in their own abilities, while the latter refers to how much the individual feels confident that a suggested solution to a perceived problem will actually reduce risk and be worthy of the energy expended to achieve that particular outcome.

The concept of efficacy is widely studied in the arena of political communication and is predicted to be a significant contributor to the process of political participation (Scheufele & Nisbet, 2002). In this context, the feeling of political agency may have a significant association with information-seeking behavior. As many scholars point out, online political information seeking itself can enhance political efficacy (Kenski & Stroud, 2006; Tedesco, 2007). An alternative proposition suggested in this study is that initial feelings of political efficacy can promote information-seeking behavior. A significant body of research examines the idea that internal efficacy is a necessary precursor to behavior or action (Bandura, 1977; Bandura & Adams, 1977; Bandura, Adams, Hardy, & Howells, 1980), and that this concept is a significant component of the more general theoretical framework of planned behavior, which explores the relationship between beliefs, attitudes, intentions, and behavior (Ajzen, 1991). Brown, Ganesan, & Challagalla, (2001), find that higher levels of internal efficacy act as a moderator for information seeking, so that those who are more efficacious have a higher propensity to search for information on a given topic.

Since efficacy is expected to moderate political information-seeking behavior, it is expected that those who feel most confident in their ability to engage with and understand political news information (political efficacy) *and* believe that information seeking is a viable solution to reducing threat to media freedom (response efficacy), will be more receptive to partaking in the information-seeking behavior in conditions where their is a perception of threat to media freedom. Since the focus of this research is censorship of mainstream, traditional media, the belief that information seeking will reduce threat to media freedom is further rested on the perceived affordances of alternative technologies that can help alleviate this threat. Therefore, in addition to political and response efficacy, we should also account for citizens' level of technological efficacy, or the degree of comfort they feel they possess with regards to utilizing alternative forms of information technology (Hargittai & Shafer, 2006).

Evidence points to the positive relationship between online activity and political efficacy; that is, those who engage in increased online activity are more likely to feel efficacious as a result of the enhanced level of political involvement granted by the Internet (Pinkleton, Austin, & Fortman, 1998). However, it is important to determine whether efficacy can have a conditional effect on the association between reactance and online information-seeking behavior, as well. This conditional effect is particularly important to consider in restricted media environments, as citizens in such societies may not be given a great deal of opportunity to engage in participatory political activities or discussions, therefore political news information seeking may not be perceived as something they are capable of doing (political efficacy) or that even if they did engage in the information seeking they would not be able to find the information they are seeking, and thus, would be unable to reduce the threat to media freedom (response efficacy). In this sense, efficacy may moderate the relationship between reactance and political news

information-seeking behavior. In the context of online information seeking, political and response efficacy may be only partially predictive of the likelihood that an individual will partake in online information-seeking behavior. Technological efficacy is a third consideration; this condition deals specifically with an individual's perceived ability to successfully use the technology necessary to ascertain online information (Johnson, 2005).

Proposition Three: *The belief that one understands and has the ability to engage in forms of political behavior (political efficacy) and that alternative forms of information-seeking will successfully reduce media freedom threat (response efficacy), as well as the perceived ability to utilize online sources (technological efficacy), will moderate the relationship between reactance and alternative information seeking.*

Learned helplessness. The concepts of political, response, and technological efficacy address an individual's confidence in a) their ability to successfully engage in a task or behavior; b) their perception that a recommended solution will have the desired outcome; c) effectively use the technology necessary for the achievement of their goal, respectively. However, an additional framework that may further refine our understanding of responses to censorship is learned helplessness. This concept provides an alternative boundary condition for why people perceive a threat to their freedom and experience reactance, but do not engage in the actions necessary for managing the discrepant state. The premise of learned helplessness is that those who experience prolonged exposure to a difficult condition without the control to alleviate the discomfort of that condition will learn to contend with that given situation, with little perceived hope of escaping that condition (Maier & Seligman, 1976). A key contribution of learned helplessness to censorship research is that, although a response to the perceived threat may exist and those who

perceive the threat may have the ability or efficacy to enact a response, they are conditioned to believe that regardless of their efforts, the unpleasant situation cannot be reify (Bandura, 1977).

This theory is particularly useful in explaining differences in the magnitude of response to media censorship across various populations, which may have distinct cultural, historical, and political experiences with such restrictions. In their book, Hallin & Mancini (2011) explore various non-Western media systems and summarize how societal development within these countries helps form the media culture and vice versa. The application of a country's history and political cultural is an important consideration in media censorship research since it may shed light on the expectations and values people have for the media system. We cannot assume that every individual covets freedom of speech in the same manner that many Americans do; for them, this notion may not be engrained in the cultural system the way it is in the U.S. Moreover, some people may become accustomed to the "tradition" of censorship in their country and simply accept it as part of the larger media system. This effect of quiet acquiescence is a significant aspect of media censorship and deserving of deeper scrutiny.

Although learned helplessness is traditionally used to explain individual-level traits (Dweck, Davidson, Nelson, & Enna, 1978; Hiroto & Seligman, 1975), in the case of media censorship, one may link the application of this concept to the institutional level, as well. By comparing the quality of media systems based on the level of learned helplessness exhibited by the population living in those environments, we may be able to discern the threshold at which these individuals conform passively to their condition instead of engaging in reactive behavior.

Furthermore, the inclusion of learned helplessness creates an intriguing boundary condition for the magnitude of reactance that is expected to take place. This variable is particularly important in cross-cultural censorship research since it may help account for

differences in the historical, political, and cultural conditions of media freedom in various countries, a fact not accounted for in the current institutional and structural description of censorship (e.g., Freedom House, Reporters Without Borders). Learned helplessness also bridges a particularly important gap related to why those who experience a threat may not engage in reactance in the same manner dictated in existing reactance literature. Including this variable as a moderator in the model allows us to provide a deeper interpretation for why some individuals are less likely to engage in behaviors that reduce reactance, and potentially engage in what may be perceived as self-censorship, which leads to the fourth proposition:

Proposition Four: *Learned helplessness will dampen the relationship between reactance and information seeking.*

Information seeking and political belief accuracy. Much of the earlier literature that defines political learning as the level of factual knowledge demonstrated by a respondent also suggests that this is the most ideal method for gauging political sophistication or expertise (Krosnick & Milburn, 1990; Lodge, McGraw, & Stroh, 1989; Luskin, 1987). While this conceptualization is accurate, there is recent scholarship that explores the more comprehensive and dynamic nature of the quality of knowledge that can be attained, especially in censored media environments.

A more contemporary approach to gauging outcomes of news consumption is by assessing the accuracy of beliefs about political issues; this strategy targets the issue of political misperception, which is a pressing topic in recent political discourse (Garrett & Weeks, 2010; Kuklinski, Quirk, Jerit, Schwieder, & Rich, 2000; Nyhan & Reifler, 2010). The shift in focus from pure recall to an understanding of what beliefs people adhere to regardless of evidence,

permits a degree of nuance that does not exist in questions that require participants to simply recollect factual information.

In their study, Eveland and Cooper (2013) introduce an Integrated Model of Communication Influences on Beliefs as a potential explanation for how certain "priors", like ideology and motivation can impact communication exposure and the communicative process, which can ultimately lead to accurate or inaccurate perceptions. The model is consistent with literature that suggests certain heuristic cues (e.g., political partisanship, partisan media) can contribute to a certain level of confirmation bias that can potentially reinforce false perceptions (Garrett & Weeks, 2013; Garrett, Weeks, & Neo, 2016; Kull, Ramsay, & Lewis, 2003). In specific instances, researchers demonstrated that misperceptions may be amplified based on previously held ideological beliefs (Taber & Lodge, 2006), and that even when faced with corrective information, individuals may cling more to those misperceptions and reject the accurate information due to perceived bias (Nyhan & Reifler, 2010).

The aforesaid weight that political ideology potentially bears on accuracy of beliefs is particularly relevant in this current study, which seeks to explain seemingly contradictory outcomes in belief accuracy across more liberal and restrictive media systems. That is to say, what are the characteristics of these media environments that may contribute to differences in political belief accuracy? The answer to this question relies on a deeper probe into the cognitive and affective processes of individuals in these circumstances, as well as the broader structure of the information-disseminating institutions.

While we may be tempted to adopt the perception that restrictive media systems are most conducive to limiting access to information, this perspective assumes that individuals desire access to a broad range of diverse information; however, such circumstances may not necessarily

be appealing. Per Mutz's (2001) proposal, as the supply of media choices increases, people have an increased opportunity to engage in selective exposure, which may potentially reduce their exposure to alternative or discrepant ideas and perspectives (Prior, 2005; Prior, 2007). In certain documented cases, it is suggested that exposure to ideological news information can shape how individuals perceive (or misperceive) reality in the face of sufficient evidence and expert testimony (Garrett, Weeks, & Neo, 2016). Although these researchers did not find that consumption of ideologically oriented media leaves audiences unaware of alternative perspectives, they did observe a pattern of information processing that suggests individuals prefer information that is less threatening to their ideological stance. These findings offer support for the proposition that perception of bias in mainstream news may motivate those who feel that their ideological way of life is being threatened, to persist in their quest to process and expose themselves to information in a way that is more congenial to their beliefs.

Since the U.S. media system lacks a common source of centralized information and is instead more partisan than media systems with authoritarian proclivities, we would expect that belief accuracy among more partisan media consumers will be similar to those who rely predominately on government sponsored media (versus those who engage in alternative information seeking) in the restrictive information environments. The foundation for this reasoning is predicated on the notion that prolonged exposure to sources of information that simply conform to ones prior held beliefs will only strengthen those beliefs, regardless of the accuracy of information (Hart, Albarracin, Eagly, Brechan, Lindberg, & Merrill, 2009). This pattern of selective exposure may be more likely to occur under conditions where media selection is diverse and consumers have access to niche ideological information that corresponds with their prior beliefs. The chart illustrated in Figure1 offers an explanation for how political

learning may be affected by reactance based on the information environment. Noticeably absent in this chart are the various individual factors that may explain such outcomes; therefore, it is important to remember that the political learning consequences highlighted in this illustration are also dependent on the individual-level variables discussed in the rest of this paper.

Mirror-holding and window-opening political knowledge. The more open, pluralistic, and credible attributes of the online information environment as compared to the mass media in non-democratic states are the basis upon which "mirror holding" and window opening" in the democratization literature are grounded (Bailard, 2014; Nisbet, Stoycheff, & Pearce, 2012; Stoycheff & Nisbet, 2014; Stoycheff, Nisbet, & Epstein, 2016). Mirror holding underscores the domestic aspects of political knowledge; people in restricted media environments who utilize alternative media sources are predicted to better understand the "internal" elements of their own society, which may include knowledge about the function of government, as well as social and political issues within their country. Window opening highlights how accessing information via alternative media sources provides individuals with insight as to how other countries and societies operate in comparison to their own.

Using this approach to political learning, we may gauge how the quantity and quality of political learning differs amongst those who use the Internet as an alternative source of information and those who do not. Specifically, the target outcome for this framework is the types of misperceptions (mirror holding or window opening) that occur when people perceive threats to their media freedom.

Case study: Reactance, Information-Seeking, and Belief Accuracy

Over 80 percent of the world's population lives in countries that are recognized as having censored or partially censored media systems. As redundant as this statement is, there is a degree

of tragedy associated with it that we cannot ignore. When information is censored or manipulated, our global community feels the consequences. Everyday brings us new opportunities to become more interconnected by way of novel communication technologies, but when the information relayed to such large portions of our international community is restricted, then our interconnectedness may not translate to coexistence. We risk implementing policies and regulations that do not accurately reflect certain nationalities, cultures, and ideologies, and we alienate groups by imposing standardized guidelines on their societies because we do not understand their unique capabilities. Even though media censorship is not something we can eliminate completely, we do have the opportunity to understand the consequence more thoroughly via research about the people and societies that are most affected by it.

The study of how people manage their information environment and what motivates them to respond in such a way is important for both academics and policy makers. For scholars, the psychological processes and media consumption habits are significant aspects of understanding how perceptions influence behavior. As was presented in Table 1, if the perception of media censorship (when such restrictions actually exists) motivates citizens to seek out information that potentially enhances their belief accuracy, then we need to recognize what types of information are contributing to these advances in learning. On the other hand, if citizens who perceive restrictions or bias in the media (when none actually exist), turn to alternative sources of information that dampen their learning process, we must identify the psychological factors that contribute to the perception that censorship or bias is occurring.

For policy makers, having a firmer grasp on the information citizens in closed-media systems consume will permit them to combat misinformation and create policies that are more effective at achieving efficient diplomatic relations. Furthermore, in conditions where mass

media is open to a wide variety of perspectives, yet people find themselves gravitating towards sources that simply support their inherent political ideology (regardless of accuracy), policy experts can formulate more effective messages that garner less perceptions of ideological threat, and allow people to engage with information based on evidence, rather than emotion.

Overview of Studies

The aim of this dissertation is to test the theoretical model laid out in the first part of this chapter through a comparative analysis of three countries: Turkey, Iran, and the U.S. These three studies will be broken up into three chapter

s based on country. Each study, along with contextual description of the country and methodology will be described in further detail in its respective chapter. Given the large scope of the model, it is more feasible to measure select portions of the framework instead of every individual relationship. Since the intention is to survey three different countries, testing select relationships will allow for a well-rounded interpretation of the broader model. As mentioned before, several sections of the model were tested in Turkey. Below is a brief overview of the theoretical components tested in each country.

Turkey. The Turkish study expands on the relationship between perceive threat to media freedom and political belief accuracy by way of media reactance and online information seeking. This study takes into account results from the previous studies that established an association between perceived threat to media freedom, media reactance, and online information seeking, and adds the extra component of political belief accuracy, which is measured as generalized knowledge about Turkish and international political systems. The purpose of this study is to

broadly establish the nature of the relationship between media reactance and belief accuracy by way of online information-seeking behavior.

Iran and the U.S. The second and third chapters offer a more comparative perspective of the theoretical model by juxtaposing Iran and the U.S., two countries with relatively dissimilar cultural and media systems. The remaining theoretical components of the model including learned helplessness, efficacy (self, response, and technological), and technology affordance, will be used in a more comparative capacity in these two studies. Instead of simply measuring "political knowledge" in a broad sense, the outcome variable in these studies will be one that assesses misperceptions about the Iran nuclear deal, an issue that is pertinent for populations in both countries. Furthermore, information seeking will be delineated further in this study by exploring perceived affordances of specific types of alternative media in order to evaluate which of these criteria contribute most to information-seeking behavior. In order to justifying the selection of each of these countries, a brief background for each is provided with the context of the theoretical framework laid out in this section.

Chapter 2:

Turkey

As explained in the previous section, the relationship between perceived media censorship and political belief accuracy is contingent on a series of factors. Based on psychological reactance studies, the perception of threat may induce negative affective and cognitive responses that motivate the individual to reestablish access to the threatened object. Therefore, as per *proposition one*, it is predicted that in situations where an individual perceives that their access to accurate media information is threatened, they are likely to experience media reactance in the form of anger, frustration, and counter arguing, which could lead to alternative online information seeking as a means of accessing information that they believe is being withheld from them. Since the online environment offers a more diverse selection of information than the government-sponsored mainstream media, it is also predicted that those who access these alternative information sources will exhibit higher levels of belief accuracy about political issues than those who do not use such sources for their news information needs. This proposition is further delineated in a series of hypotheses and a research question:

Hypotheses and Research Question

The following hypotheses and research question are proposed for the three waves of data collected from Turkey:

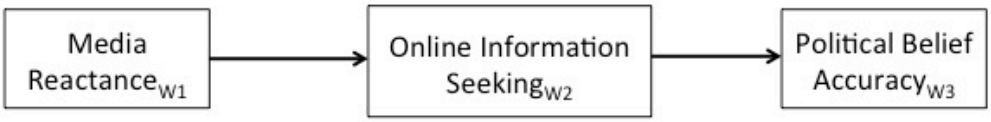


Figure 3. Three-wave study in Turkey

H1: Reactance in wave one will be associated with online information-seeking behavior in wave two.

H2: Online information-seeking behavior in wave two will be associated with belief accuracy in wave three.

H3: Reactance will indirectly increase belief accuracy by way of information seeking.

R1: What is the direct relationship between reactance and political belief accuracy?

Turkish Media Environment

Data from Turkey will be used to examine the relationships proposed in the aforementioned hypotheses. The population in Turkey has endured a great deal of political and social turbulence in recent years. Specifically, with regards to media freedom, Turkey underwent a series of downgrades in ratings according to recent reports released by Freedom House (2017) as a result of a number of offenses, including the detainment of activists and journalists, severe clampdowns on public protests, and undue political pressure on private companies. Furthermore, the government is known to issue gag orders that prevent local media outlets from covering certain events (e.g., Gezi Park protests) and even go so far as to fine all stations that air such stories using independent sources. Many journalists were fired for their reporting of sensitive occurrences or for what the government deemed biased coverage of these issues. Social media

were also the target of excessive government scrutiny and were banned intermittently throughout 2013-2015; moreover, the government even went so far as to detain certain Twitter users for their online endeavors.

Provided this precarious political and social climate, especially in relation to media, Turkey was deemed an appropriate case study for this project. As a result of the increasingly stringent restrictions placed on mainstream media, individuals may potentially engage in activities, such as supplementing their information needs through online sources, which may ultimately impact their political belief accuracy. In the context of the theoretical model, the recent threats to media freedom in Turkey may serve to incite feelings of anger and frustration against the sources censoring the media, while simultaneously prompting those who feel threatened to counter argue against government media sources that presumably hinder their access to broader news information. Such reactance can then justify the use of alternative online sources, which offer more diverse perspectives on political issues. This boost in information-seeking behavior can then enhance accuracy of beliefs.

Methodology

As a means of testing the autoregressive mediation model in Turkey, a series of media reactance, political online information seeking, and belief accuracy measures were added to a multi-wave political omnibus survey conducted in 2015 and early 2016. The survey was a national, face-to-face, general population household panel survey of Turkey conducted over a ten-month period between March 2015 and January 2016. The survey was organized by Koc University in Istanbul and funded by the Open Society Foundation Turkey. The first wave of the survey was conducted in March/April 2015 and consisted of 2,201 completed survey interviews. The second wave of the panel survey was conducted in July/August 2015 with 1,081 respondents

successfully re-contacted (49.1% re-contact rate). The third wave of the panel survey was conducted December 2015 through January 2016 with 705 respondents completing the third wave of the survey (32% completing all three waves of the panel survey).

The initial sample for the survey was a random stratified, clustered sample with stratification applied in two levels based on the total population and urban/rural proportion within each Turkish census region, with clusters containing 20 households. The Turkish census agency randomly selected clusters and households for the survey. The survey was conducted by both male and female interviewers, so as to allow for same-sex interviewing when appropriate. One survey respondent was randomly selected within each household without replacement. The response rate for the first wave was 55% and in accordance with AAPOR standard Two.

Analytical approach. With three waves of survey data available for analysis, the approach used was an autoregressive mediation model (e.g., Cole & Maxwell, 2003; Selig & Preacher, 2009) using PROCESS (Hayes, 2017) see Figure 3. PROCESS combines serial OLS regression with bootstrapping to allow mediation analysis equivalent to an observed structural equation model and is more applicable than SEM when considering only one mediator as in this case (Hayes, 2017). The mediation pathway of reactance in the first wave of the survey predicts online political information seeking in the second wave, and in turn online political information seeking in the second wave is used to predict belief accuracy in wave 3. In addition to standard exogenous control variables in the model, online political information seeking and belief accuracy measured in wave 1 of the survey are also included in the model. This employment of multiple waves of survey data in this analysis allows for the observation of change within subjects over time and strengthens the causal argument regarding how media reactance increases belief accuracy through online political information seeking.

Model variables. Three sets of model variables were tested in our autoregressive mediation model (See Appendix A for variable wording). The first was a measure of *reactance* based on an index measure of eight items that evaluates both the affective and cognitive dimensions of the concept. The survey items, originally adapted from previous studies measuring reactance and resistance to persuasion (e.g. Moyer-Gusé & Nabi, 2010; Nabi, Moyer-Gusé, & Byrne, 2007), was previously validated by Behrouzian, Nisbet, Dal, and Carkoglu (2016). *Political online information–seeking* was assessed by asking on both survey waves 1 and 2 the frequency of six online information-seeking behaviors. The dependent variable in the mediation model is *political belief accuracy*, and was assessed by asking participants whether or not they believed four true statements about Turkish politics.

Control variables. In addition to the model variables specified above, a series of control variables measured in the first wave of the survey were entered into the analysis including age (M= 45.5, SD= 15.5) and educational attainment $_{T1}$, which was measured on a 7-point scale ranging from *no formal education* to *graduate education* (M= 3.8, SD= 1.5). Dummy codes were entered for respondents who were formally employed $_{T1}$ (30%), female $_{T1}$ (57%), Kurd $_{T1}$ (15%), and Sunni $_{T1}$ (89%). A measure of Muslim religiosity$_{T1}$ was constructed by combining two survey items, one item asking respondents on a 7-point scale ranging from *never* to *more than once a week* how often they pray (M= 2.5, SD= 2.2), and the other item asking regardless of prayer, how religious do the respondents perceive themselves (M= 7.5, SD= 2.0). These two items were standardized (z-scores) and averaged into an overall index of religiosity (M= .05, SD= .52).

How much the respondent pay attention to political news$_{T1}$ (M=2.8, SD= 1.2, α = .92) was measured by averaging two survey items asking respondents on five-point scales how much

attention they pay to Turkish politics in general (M=2.8, SD=1.2) and how much attention they pay to Turkish election news (M=2.8, SD=1.2). Regime support$_{T1}$ (M=4.6, SD=3.9, α =.90) for the Turkish government was also assessed by averaging two survey items ranging from zero to ten that asked favorability of President Erdoğan (M=4.8, SD=4.1) and Prime Minister Davutoğlu (M=4.4, SD=3.9).

The last two variables entered into the model were measures of traditional mass media news exposure. Respondents were asked on a seven-point scale ranging from "never," to "everyday" how often they watched TV news$_{T1}$ (M=6.4, SD=1.5) and read newspaper news$_{T1}$ (M=3.6, SD=2.6).

Results

The first study looks at three-waves of face-to-face data collected both before and after the 2015 Turkish parliamentary election. As was mentioned earlier, these results are expanding on previous research exploring the relationship between perceived threat and information-seeking behavior (Behrouzian, Nisbet, Dal, & Carkoglu, 2016), where researchers found that reactance is a significant predictor and mediator of online information-seeking behavior. The current results are an extension of the aforementioned study and focus on the relationship between reactance and accuracy of political beliefs.

Table 1 presents the results from the autoregressive mediation analysis by employing PROCESS and bootstrapping the model 5000 times. The first model in Table 1 predicted online political information seeking$_{T2,}$ controlling for online political information seeking$_{T1,}$ with unstandardized coefficients and standard errors reported. Media reactance$_{T1}$ significantly predicted online political information seeking$_{T2}$ (b=.18, p $\leq$.05) **confirming H1**. In addition to media reactance$_{T1,}$ other significant predictors in the model were age$_{T1}$ (b=-.03, p $\leq$ .001),

employment (b=.54, $p \leq .001$), TV news exposure$_{T1}$ (b=.-10, $p \leq .001$), and online political information seeking $_{T1}$ (b=.36, $p \leq .001$). The model explained 41.1% of online political information seeking$_{T2's}$ total variance.

The second model in Table 1 predicted political belief accuracy$_{T3,}$ while controlling for belief accuracy$_{T1.}$ Online political information seeking$_{T2}$ significantly predicted political belief accuracy$_{T3}$ (b= .03, $p \leq .05$) **confirming H2.** However, **in answer to RQ1,** media reactance $_{T1}$ did not have a significant direct relationship with political belief accuracy$_{T3}$ (b= .01, p= n.s.). Other significant predictors of political belief accuracy$_{T3}$ were sex$_{T1}$ (females) (b= -.15, $p \leq .01$), Muslim religiosity$_{T1}$ (b= -.11, $p \leq .01$), Kurdish $_{T1}$ (b= -.16, $p \leq .05$), pro-government regime support$_{T1}$ (b= -.02, $p \leq .01$), and political belief accuracy$_{T1}$ (b= .10, $p \leq .01$). The model explained 11.1% of political belief accuracy$_{T3}$'s total variance.

Our third hypotheses posited that the indirect effect of media reactance$_{T1}$ on political belief accuracy$_{T3}$ through online political information seeking$_{T2}$ would be significant. The bootstrapped mediation analysis in PROCESS **confirmed H3**, with a significant indirect effect (b= .006, 95% CI [0.000, .02]) of media reactance$_{T1}$ on political belief accuracy$_{T3}$ by way of online information seeking.

Table 1

Autoregressive Mediation Model Predicting Online Political Information Seeking$_{T2}$ and Belief Accuracy$_{T3}$

Variable	Online Political Information Seeking$_{T2}$ b(se)	Political Belief Accuracy$_{T3}$ b(se)
Constant	2.49 (.65)***	3.27 (.24)***
Age$_{T1}$	-.03(.01)***	.00 (.00)
Sex (female coded high)$_{T1}$	-.23(.15)	-.15 (.05)**
Educational attainment$_{T1}$	.23(.05)	.03(.02)
Employed$_{T1}$	.54 (.16)***	-.04 (.06)
Sunni Muslim$_{T1}$	-.10 (.22)	-.05(.08)
Muslim religiosity$_{T1}$	.18 (.12)	-.11 (.05)**
Kurdish $_{T1}$	-.35 (.20)	-.16 (.08)*
Regime support$_{T1}$	-.01 (.02)	-.02 (.01)**
TV news exposure$_{T1}$	-.10 (.04)*	.02 (.02)
Newspaper news exposure$_{T1}$	.02(.03)	.00 (.01)
Attention to political news$_{T1}$	.07(.07)	.00 (.02)
Media reactance$_{T1}$	.18 (.08)*	.01 (.03)
Political Belief Accuracy$_{T1}$	-.11 (.13)	.10 (.05)*
Political Online Information Seeking$_{T1}$	.36(.05)***	-.02 (.02)
Political Online Information Seeking$_{T2}$	-	.03(.01)*
% Total Variance Explained	*41.1*	*11.1*
F (df)	*25.25 (614)*	*4.87 (614)*

#$p \leq .10$. *$p \leq .05$. **$p \leq .01$. ***$p \leq .001$. Unstandardized coefficients and standard errors reported.

Chapter 3:

Iran

This second study aims to replicate the findings of the first study, which are also highlighted in *proposition one*, while also considering the influence of a series of additional moderating variables. In *proposition two*, it is suggested that the magnitude of the relationship between reactance and online information seeking is dependent on the perceive affordance of visibility. As the affordance literature demonstrates, people are more likely to perceive that a particular technology possess the quality of visibility if it displays information that may not have otherwise been available. In the case of this framework, it is not only expected that reactance will motivate information seeking, but that the additional perception that the online media sources offer visibility of information will further increase the magnitude of the relationship between media reactance and online information seeking.

Similarly laid out in *proposition three*, is the idea that internal political efficacy and response efficacy will moderate the relationship between reactance and information seeking. As is documented in numerous cases, the feeling that one is cognitively capable of engaging in a particular behavior *and* that engagement in such behavior will achieve the desired outcome, are both potential precursors to the actual behavioral action. It is further suggested in proposition three that the ability to use online technology will be a significant moderating factor in this equation, as people must feel they are able to effectively use the technology associated with the information they are seeking.

Finally, the theory of learned helplessness was introduced as a possible fifth concept influencing the relationship between reactance and online information seeking. Because this theory suggests that individuals who feel as though they have no control over their adverse circumstance will lack the motivation to reduce their unpleasant state, *proposition four* indicates that learned helplessness will diminish the relationship between media reactance and online information seeking. All the proposed theoretical relationships are represented in the following hypotheses and research questions:

Hypotheses and research questions

Based on the aforementioned contextualization, the following hypotheses and research questions are proposed for the study in Iran:

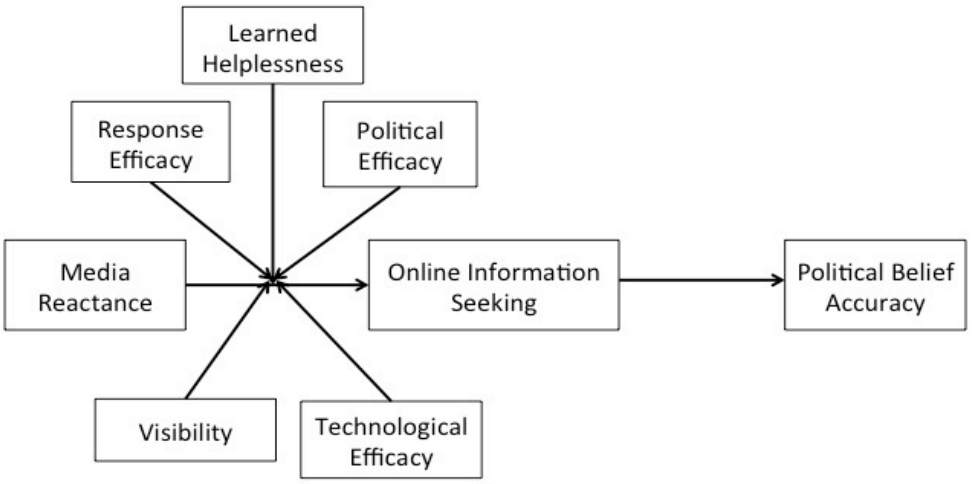


Figure 4. *Iranian reactance and political belief accuracy with learned helplessness, efficacy, and visibility moderators*

H1: As reactance increases, online information seeking will increase.

H2: Reactance will be associated with increased information seeking amongst those with higher response efficacy.

H3: Reactance will be associated with increased information seeking amongst those with higher internal political efficacy.

H4: Reactance will be associated with increased information seeking amongst those with higher technological efficacy.

H5: Reactance will be associated with increased information seeking amongst those who perceived the affordance of visibility.

H6: Increased information seeking will be associated with more accurate political beliefs.

R1: How does learned helplessness moderate the relationship between reactance and information seeking?

R2: What is the direct relationship between reactance and political belief accuracy?

Iranian Media Environment

The general scarcity of media and policy research about Iran, despite the significant role the country plays in U.S. foreign policy initiatives, is one reason why this study may be useful, especially in a comparative context. As one of the countries with the lowest media freedom rankings in the world, the authoritarian regime in Iran places some of the most stringent regulations on media organizations (Freedom House, 2017). Since the Islamic Revolution in 1979, the government continues to cracked down on any material that is deemed Western propaganda or in conflict with Islamic values. This rigid jurisdiction stretches over both traditional and online media outlets. Employing satellite- jamming techniques, the regime blocks

viewers' access to television information channels (Black, 2010) and regularly shuts down newspaper publishers.

Furthermore, Internet freedom is in a constant state of threat by way of website filtration, broadband limitations, connection throttling, and calls by the conservative clerics to develop a 'Halal' Internet (Anderson, 2013; Aryan, Aryan, & Halderman, 2013). These suppression techniques become even more palpable during times of political unrest, as was the case during the 2009 Green Movement and the more recent social uprisings of early 2018 when the regime blocked access to several social media sites, including Facebook, Telegram, and Twitter (Rahimi, 2011).

What is particularly unique about Iran is that these conditions have existed for quite some time. As a result, there is a culture of well-established censorship within society. This point is deserving of attention, especially when assessed in terms of learned helplessness and internal efficacy. Individuals experiencing prolonged exposure to what they perceive as censored media may feel apathetic towards their circumstance and lack the motivation necessary to actively resist media restrictions, thus potentially creating a moderating effect between reactance and information seeking.

The Iranian context offers the ideal circumstance for assessing the propositions put forth in this dissertation. The overt censorship tactics employed by the government are particularly conducive to triggering perception of threat to media freedom, resulting in citizens turning to alternative online sources for information. This pattern of Internet use as a way to seek out otherwise unavailable information continues to be observed quite frequently in Iran. As scholars pointed out, citizens frequently use social media sites such as Twitter and Facebook (Christensen, 2009), as well as Telegram (Alimardani & Milani, 2018) to seek information that

they perceive is not visible via the mainstream media. Since exposure to such sites may provide users with a more comprehensive knowledge base, it is expected that these individuals will display higher levels of belief accuracy with regards to political and social issues.

Methodology

The study in Iran explores the results from the parliamentary election in 2016. The data for the study was collected via quota sampling during the months of March and April 2017 through an online Qualtrics panel using the Iranian survey contractor, IranPoll. The sample consisted of adults over the age of 18 and was stratified based on age (50% 18-32, 50% 33+), gender (51.5% male, 48.5% female), education (42.5% completed secondary education or less, 57.5% completed some college/university or more), and region (20% Tehran, 80% other regions). The survey took an average of 25 minutes or less to complete, anyone who completed the survey in less than one-third of this time was considered a speedster and was filtered out. Additionally, three quality checks were used throughout the survey to ensure that respondents were paying attention to the questions.

Model variables. Eight sets of model variables were tested in this moderated-mediation analysis (See Appendix B for specific variable wording). The first was a measure of *reactance* based on an index measure of eight items, similar to those used in the Turkish survey, which evaluated both the affective and cognitive dimensions of media reactance. *Political online information–seeking* was measured through a six-item index, which asked respondents about the frequency of their online political news consumption. The dependent variable in the mediation model was *political belief accuracy*, which was measured by asking participants the extent to which they believed three statements about the Iranian Nuclear Deal were true.

The additional five model variables, which were included as potential moderators, are *global learned helplessness*, which was comprised of seven-statements that tap into the individuals' belief that they cannot escape the perceived negative state of the media within their respective political system (Ashforth, 1989); *internal efficacy* and *response efficacy,* which tapped into the individual's perceived agency to understand and engage in political discourse (Craig, Niemi, and Silver, 1990) and their belief that having access to online information will enhance their ability to understand political issues (Champion, 1999; Umphrey, 2004); *technological efficacy*, a measure that combined items related to computer and online efficacy (Cassidy & Eachus, 2002); and finally, the perceived affordance of *visibility*, which focused on the importance for the participant of having information available on a given platform.

Control variables. In addition to the model variables specified above, a series of control variables were entered into the model, which consisted of age (M= 33.8, SD= 11.5 in Iran) education, measured on a nine-point scale from *"No formal education"* to *"Four or more years of graduate school"* (M= 5.8, SD= 1.7), and Muslim religiosity, a seven-point self-report of how religious they consider themselves (M= 4.6, SD= 1.3). Dummy codes were created for those who are Shia Muslims (93.4%), female (48.6%), resident of Tehran (20.4%), employed (25.8%), student (20%), and those who voted for President Rouhani in the second election (34.8%). Political attitudes were measured on an 11-point scale, specifically measuring favorability towards Principlists (M= 4.9, SD= 2.8), Reformists (M= 5.8, SD= 3.0), and former president Mahmoud Ahmadinejad (M= 4.1, SD= 3.2).

Participants were also asked on an eight-point scale ranging from "never" to "everyday", how often they consume news information via domestic TV channels (M= 4.9, SD= 2.8), foreign TV channels (M= 2.0, SD= 2.0), newspapers (M= 2.9, SD= 2.4), and Internet (M= 3.1, SD= 1.9),

as well as how closely they paid attention to news related to political issues, including the Iranian Nuclear deal (M= 3.4, SD= 1.0). In addition, respondents were asked questions to assess their *perceived media freedom* (M= 3.1, SD= 1.02) and *perceived media supply* (M= 2.6, SD= .80),

Results

Several regression analyses were conducted before the moderated-mediation model was run in PROCESS. The first regression aimed to predict online information seeking. Results indicate that there is a significant positive relationship between reactance and online information seeking behavior (b= .35, p≤ .01 , supporting **H1** (see Table 2). However, in testing the interactions central to the hypotheses and research question (i.e., internal political efficacy, response efficacy, visibility, technological efficacy, and learned helplessness) it was determined that only internal efficacy (b= .19, p ≤ .05) and visibility (b= .18, p≤ .05) significantly moderated the relationship between reactance and information seeking, supporting **H3** (see Figure 5) and **H5** (see Figure 6), respectively.

Other significant predictors of online information seeking include support for Principlist (b= .05, p≤ .05), exposure to domestic TV news (b= -.06, p≤ .05), exposure to foreign TV news (b= .11, p≤ .001), exposure to newspaper information (.06, p≤ .05), Internet use (b= .49, p≤ .001), attention to political news (b= .37, p≤ .001), technological efficacy (b= .21, p≤ .05), and response efficacy (b= .25, p≤ .05). The model containing the interactions explained 62.6 percent of the variance in online information seeking.

In the second regression predicting accuracy of political beliefs, results show that information seeking is a significant predictor of belief accuracy (b= .02, p≤ .05), supporting **H6** (see Table 3). Reactance also exhibited a significant association with belief accuracy (b= .12, p ≤ .05). Additional predictors of belief accuracy include age (b= .01, p≤ .01), support for Reformist

(b= -04, p≤ .001), newspaper consumption (b= -.04, p≤ .01), attention to political news (b= .15, p≤ .001), perceived media freedom (b= .10, p≤.01), and internal political efficacy (b= .15, p≤ .001). This model explained 18.3 percent of the variance in political belief accuracy.

With regards to the first research question, it was determined that learned helplessness had no association with information seeking or political belief accuracy. Since it is likely that the method of data collection (i.e., cross-sectional survey) hampered the manner in which this concept was intended to be measured, the choice was made to remove this variable from the analysis all together. The implications of this decision are discussed in the limitations section.

Finally, the second research question required an examination of the moderated mediation using PROCESS. That is, what is the indirect relationship between media reactance and political belief accuracy, by way of information seeking, as well as the visibility and internal efficacy moderators? The moderated mediation analysis, which was bootstrapped 5000 times and run twice in PROCESS, once for visibility as a moderator and once for internal political efficacy, indicated that there are significant indirect effects for both visibility (b= .01, 95% CI [0.001, .025]) and internal political efficacy (b= .01, 95% CI [0.002, .031]). It is important to note that in addition to the observed indirect effect, direct effects were also detected for both visibility (b= .12, SE= .06, p≤ .05) and internal efficacy (b= .14, SE= .06, p≤ .05). The implications of these direct and indirect relationships will be discussed further in the final chapter.

The summary of the results as they pertain to the original hypotheses and research questions is as follows: There is support for **H1**: As reactance increases, online information seeking also increases; there is no support for **H2**: Reactance is associated with increased information seeking amongst those with high response efficacy; there is support for **H3:** Reactance is associated with increased information seeking amongst those with average to high

internal political efficacy; there is no support for **H4:** Reactance is associated with increased information seeking amongst those with higher technological efficacy; there is support for **H5:** Reactance is associated with increased information seeking amongst those who perceived the affordance of visibility; there is support for **H6:** Increased information seeking is associated with more accurate political beliefs. With respect to **R1**, it was determined that there is no significant moderating effect of learned helplessness on the relationship between reactance and information seeking. And finally, in regards to **R2**, there is direct relationship between reactance and political belief accuracy.

Table 2

OLS regression predicting information seeking (visibility and efficacy as moderators)

Variable	Model 1	Model 2 (Visibility)	Model 3 (Efficacy)
Constant	-4.65(.79)***	-2.75 (1.22)*	-2.75 (1.22)*
Age	-.00(.00)	-.00(.01)	-.00 (.01)
Sex (female coded high)	.01(.12)	-.01(.12)	-.02 (.12)
Educational attainment	.02(.04)	.02(.04)	.02(.04)
Employed	.10(.14)	.08(.14)	.07 (.14)
Shia Muslim	-.33(.24)	-.27(.24)	-.31(.24)
Muslim religiosity	.06(.05)	.07(.05)	.06 (.05)
Student	-.07(.16)	-.08(.16)	-.07 (.16)
Tehran	.12(.14)	.11(.14)	.10(.14)
Support for Rouhani	-.08(.13)	-.09(.13)	-.10 (.13)
Reformist	.02(.02)	.01(.02)	.01(.02)
Principlists	.05(.02)*	.05(.02)	.05(.02)*
Support for Ahmadinejad	.01(.02)	.01(.02)	.00(.02)
TV news exposure	-.06(.02)*	-.06(.02)*	-.06 (.02)*
Foreign TV news exposure	.11(.03)***	.10(.03)**	.10(.03)**
Newspaper news exposure	.06(.03)*	.06(.03)*	.07(.03)**
Internet use	.49(.04)***	.50(.04)***	.49(.04)***
Attention to political news	.37(.08)***	.36(.08)	.37 (.07)***
Media supply	.13(.08)	.12(.08)	.13(.08)
Media freedom	-.06(.07)	-.07(.07)	-.07(.07)
Technological efficacy	.21(.10)*	.20(.10)*	.20(.10)*
Response efficacy	.25(.10)*	.26(.10)**	.21(.10)*
Political efficacy	.24(.10)**	.24(.09)**	-.38(.31)
Media reactance	.35(11)**	-.28 (.33)*	-.22 (.30)
Visibility	.43(.09)***	-.14 (.30)	.45 (.09)***
Visibility*Reactance	-	.18(.09)*	-
Efficacy*Reactance	-	-	.19(.09)*
% Total Variance Explained	*62.3*	*62.6*	*62.6*
F (df)	*43.34 (653)****	*41.99 (653)****	*41.99 (653)****

#$p \leq .10$. *$p \leq .05$. **$p \leq .01$. ***$p \leq .001$. Unstandardized coefficients and standard errors reported.

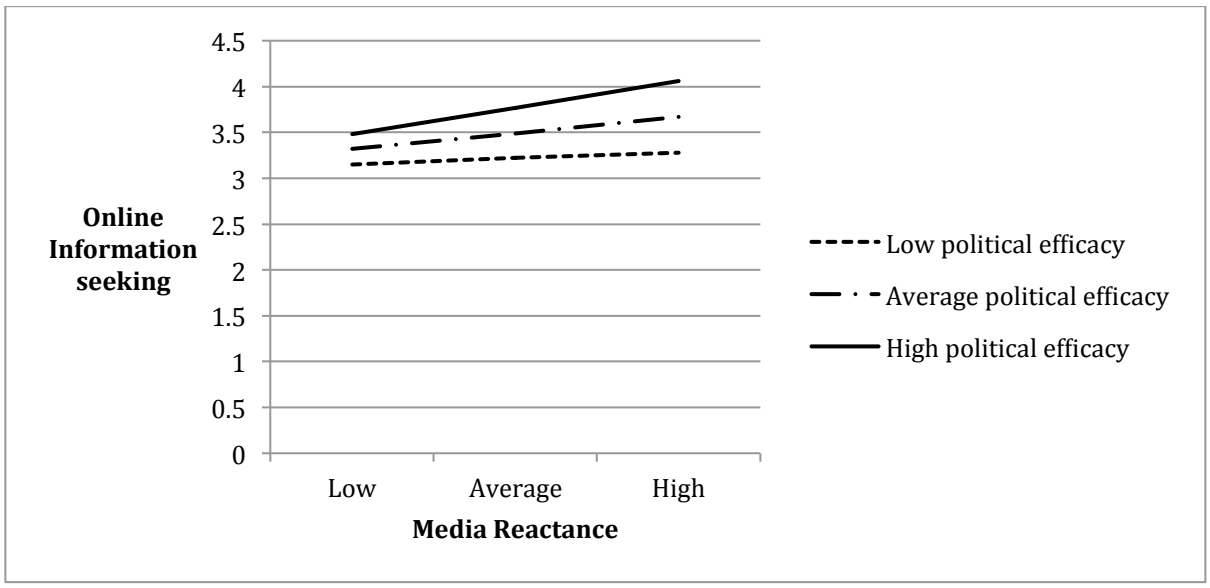


Figure 5. *Conditional effect of media reactance on information seeking by efficacy*

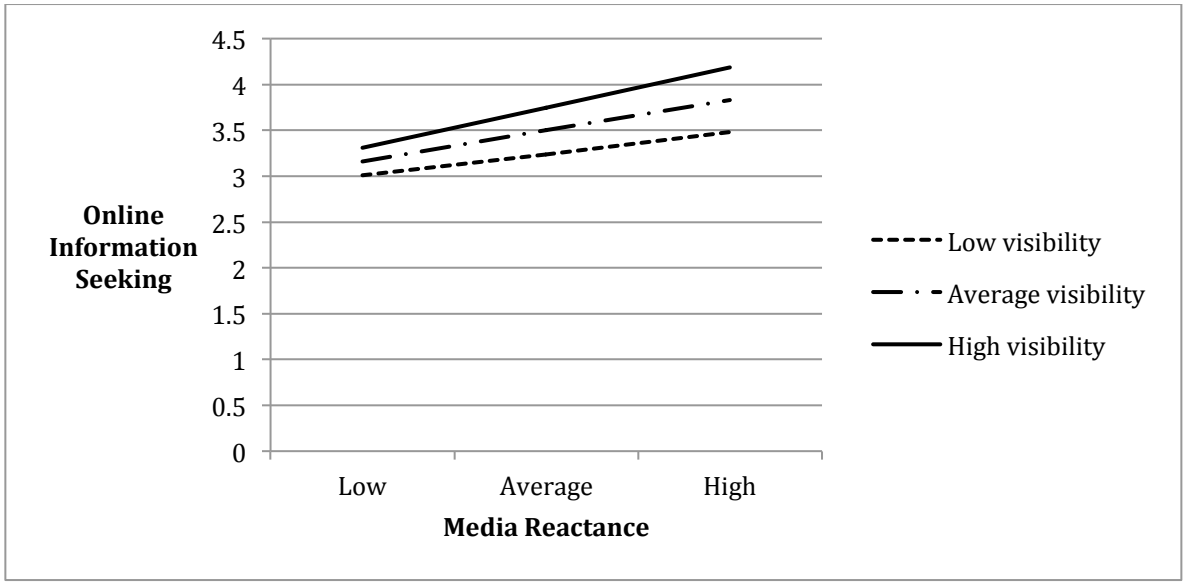


Figure 6. *Conditional effect of media reactance on information seeking by visibility*

Table 3

OLS Regression predicting accuracy of beliefs in Iranian sample

Variable	Model 1
Constant	1.64(.47)***
Age	.01(.00)**
Sex (female coded high)	-.06(.07)
Educational attainment	.04(.02)
Employed	.03(.08)
Shia Muslim	.11(.13)
Muslim religiosity	-.03(.03)
Student	.07(.09)
Tehran	.00(.08)
Support for Rouhani	.04(.07)
Reformist	-.04(.01)***
Principlists	.01(.01)
Support for Ahmadinejad	-.01(.01)
TV news exposure	.01(.01)
Foreign TV news exposure	-.03(.02)
Newspaper news exposure	-.04(.02)**
Internet use	-.03(.02)
Attention to political news	.15(.04)***
Media supply	-.03(.04)
Media freedom	.10(.04)**
Technological efficacy	.04(.05)
Response efficacy	-.01(.05)
Political efficacy	.15(.05)***
Visibility	.01(.05)
Media reactance	.12(.06)*
Information Seeking	.05(.02)*
% Total Variance Explained	*18.3*
F(df)	*6.86 (653)****

#$p \leq .10$. *$p \leq .05$. **$p \leq .01$. ***$p \leq .001$. Unstandardized coefficients and standard errors reported.

Chapter 4:

The United States

This final chapter similarly examines the relationship between perceive threat to media freedom and political belief accuracy, by way of online information seeking. However, in this case, "perceive threat" is demarcated not as overtly censored media, but as a perception of ideological bias in mainstream media. Moreover, based on the literature describing the American media system, the definition of online information is divided into distinct categories representing conservative and liberal online sources.

With respect to *proposition one*, it is likely that in conditions where media choice is not limited, but mainstream media is perceived as holding a particular partisan bias, citizens who perceive this bias will gravitate towards online sources that support their political ideology, while rejecting those sources that are incompatible with their beliefs. This rejection may manifest not only as avoidance of uncongenial information, but also in the form of selective processing (i.e., counter arguing in the face of evidence). It is further predicted in *propositions two* and *three* that the relationship between perceived bias and ideological information seeking will be magnified by the perceived technological affordance of visibility, as well as feelings of political efficacy, response efficacy, and technological efficacy. The justification for such forecasts is that those who suggest that mainstream media is bias towards a particular ideology will be encouraged to pursue information sources that they believe make visible the information that is allegedly concealed in the mainstream sources. Additionally, such individuals must also feel efficacious in their ability to understand the information they may seek, and feel that searching for such

information through alternative sources will resolve their perceived information deficiency. Moreover, the ability to seek out such information is thought to be further contingent on the individual's ability to use the technology and online sources.

Hypotheses and Research Question

The following hypotheses and research question are proposed for the U.S. sample:

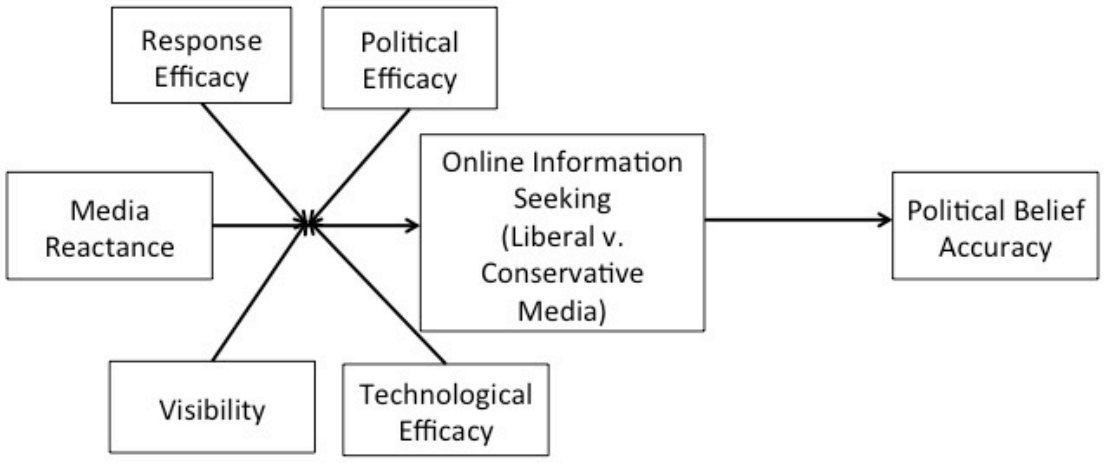


Figure 7. *U.S.: Reactance and learning with efficacy and visibility moderators*

H1: As reactance increases, online information seeking will increase.

H2: Reactance will be associated with increased information seeking amongst those with higher response efficacy.

H3: Reactance will be associated with increased information seeking amongst those with higher internal political efficacy.

H4: Reactance will be associated with increased information seeking amongst those with higher technological efficacy.

H5: Reactance will be associated with increased information seeking amongst those who perceive higher visibility.

H6: Increased bi-partisan information seeking will be associated with less accurate political beliefs.

R1: What is the direct relationship between reactance and political belief accuracy?

U.S. Media Environment

By comparison to Turkey and Iran, the U.S. is consistently ranked by the same media-monitoring organizations as having a "free" media system, with many information sources available to citizens. However, the U.S. media system also exhibits increased levels of partisanship, thus resulting in a more polarized public and information environment (Baum & Groeling, 2008). Social media research suggests that this political partisanship is linked to the sharing of news information that conforms to an individual's political ideology, which in turn reinforces that partisanship (Jacobson, Myung, & Johnson, 2016). This was certainly the case in the 2016 U.S. election, where one of the primary claims for the propagation of disinformation was that political ideology played a key role, and that disinformation was shared most by those who maintained ideologically homogenous social networks and held a strong ideological preference for either candidate (Allcott & Gentzkow, 2017). This landscape of polarized political ideology and the relatively vast and diverse media system in the U.S. is unlike that which is common in developing regions of the world, specifically those with historically closed-media systems, where ruling regimes tend to dominate most media and information outlets, thus limiting the range and competition of various perspectives (Freedom House, 2017). Since the

presence of a robust and diverse media system is presumed to be central to the cultivation of a politically informed public (Lasorsa, 1991), it would appear plausible that when such circumstances are not met, either due to external forces (i.e., involuntary acquiescence to government-controlled media) or internal psychological motivations (i.e., self-selecting a certain type of ideologically driven media) then accuracy of political beliefs will be impaired. Scholarship suggests that this shift in the media perspective results in audiences engaging in reasoned action and selecting media that reinforces their preexisting beliefs (Levendusky, 2013). It is, therefore, expected that the exceedingly polarized nature of the American media system will be conducive to such perceptions of threat and that acceptance of highly partisan information will jeopardize belief accuracy.

Methodology

Similar to the Iranian study, a sample of 800 adult Internet users age 18 and older was contacted via Qualtrics during March 2017. The quota sample was stratified by age (28% 18-34, 38% 35-54, 34% 55+), gender (52% female, 48% male), education (72% some college or less, 28% college graduate or more), and race (13% African American, 87% everyone else). The average time for completion of the survey was approximately 15 minutes and anyone who completed the survey in one-third of this time was filtered out. This survey also included three quality check questions to ensure that participants were paying attention to the content.

Model variables. For the moderated-mediation analysis of the U.S. data, eight sets of model variables were tested (See Appendix B for specific variable wording). The first was the measure of *media reactance*, used in both the Turkish and Iranian analyses. In contrast to the two previous studies, *political online information–seeking*, was delineated further into two categories, *online liberal news information seeking* and *online conservative news information*

seeking. Similar to the Iranian study, the dependent variable in the mediation model, *belief accuracy*, was assessed by asking participants the extent to which they believed three statements about the Iranian Nuclear Deal were true.

The additional four model variables, which were included as potential moderators, included *internal efficacy* and *response efficacy,* which tapped into the individual's perceived agency to understand and engage in political discourse (Craig, Niemi, and Silver, 1990) and their belief that having access to online information will enhance their ability to understand political issues (Champion, 1999; Umphrey, 2004); *technological efficacy*, a measure that combined items related to computer and online efficacy (Cassidy & Eachus, 2002); and finally the *perceived affordance of visibility*, which focused on how important the individual feels that information on online alternative sources is visible.

Demographic controls. In addition to the model variables, as series of demographic and control variables were also included. These demographics included the percentage of the population that is White (79.9), female (52.4), employed (47.9), and evangelical Christian (32.3). We also asked about age (M= 46.8, SD= 15.6), education on a seven-point scale ranging from "some elementary school" to "four or more years of graduate school" (M= 3.91, SD= 1.05), ideology based on an index of social and economic ideology on a seven-point scale ranging from "very liberal" to "very conservative" (M= 4.01, SD= 1.66), interpretation of the bible on a three-point scale ranging from "The Bible is an ancient book of fables, legends, history and moral precepts recorded by men" to "The Bible is the actual word of God and is to be taken literally, word for word" (M= 1.99, SD= .74). Participants were also asked about their feelings towards President Trump on an 11-point scale ranging from "very unfavorable to "very favorable" (M=

4.96, SD= 3.85), as well as how satisfied they are with President Trump's performance on a five-point scale ranging from "very dissatisfied" to "very satisfied" (M= 2.61, SD= 1.48).

A series of media variable were also controlled for, including newspaper reading habits (M= 3.82, SD= 2.74) and TV viewing habits (M= 5.34, SD= 2.66) both on an eight-point scale ranging from "never" to "everyday", and finally attention to news, which is a three-item index consisting of question about how closely people follow news concerning political, international, and the Iranian Nuclear Deal.

Results

Similar to the previous studies, several OLS regression analyses were completed before the model was run in PROCESS. The first regression aimed to predict each type of online information seeking (i.e., liberal and conservative). Table 4 shows that reactance is only predictive of conservative online information seeking (b= .32, p≤ .001), partially supporting **H1.** Additionally, the only significant interaction is between reactance and efficacy for both liberal (b= .18, p≤ .05) and conservative (b= .21, p≤ .05) online information seeking behavior, supporting **H3** (see Figures 8 and 9).

Other significant predictors of liberal online information seeking include ideology (b= -.27, p≤ .001), attention to political news (b= .30, p≤ .001), technological efficacy (b= .41, p≤ .001), response efficacy (b= .17, p≤ .01), exposure to TV news (b= .06, p< .05), and exposure to newspaper information (.22, p≤ .001). The model as a whole explains 48.4 percent of the variance in liberal information seeking. The significant predictors for conservative information seeking include interpretation of the bible (b= -.25, p≤ .001), ideology (b= .25, p≤ .001), attentions to political news (b= .42, p≤ .001), technological efficacy (b= .42, p< .001), response efficacy (b= .16, p≤ .05), exposure to TV news (b= .12, p≤ .001), exposure to newspaper

information (b= .12, p≤ .001). This model explained 47.7 percent of the variance in conservative information seeking.

In the second regression predicting accuracy of political beliefs, results show that only conservative information seeking is a significant predictor of belief accuracy (b= -.05, p≤ .01), partially supporting **H6** (see Table 5). Reactance also exhibited a significant association with belief accuracy (b= -.09, p ≤ .01). Additional predictors of belief accuracy include sex (b= -.10, p≤ .05) and satisfaction with Trump (b= -09, p≤ .05). The model as a whole predicted 13.5 percent of the variance in belief accuracy.

Finally, the research question was addressed through a moderated-mediation analysis using PROCESS. The analysis, which was bootstrapped 5000 times in PROCESS, indicated that the indirect effects are only significant for conservative media (b= -.01, 95% CI [-0.030, -.005]), but not for liberal media (b= -.002, 95% CI [-0.010, .001]). In addition to the observed indirect effect, direct effects were also detected between reactance and belief accuracy (b= -.10, 95% CI [-.169, -.038]). The implications of these direct and indirect relationships will be discussed further in the final chapter.

The results of the U.S. analysis, as they pertain to the original hypotheses and research question, can be summarized as follows: There is support for **H1:** As reactance increases, online information seeking increases; There is no support for **H2:** Reactance is associated with increased information seeking amongst those with higher response efficacy; there is support for **H3:** Reactance is associated with increased information seeking amongst those with higher internal political efficacy; there is no support for **H4:** Reactance is associated with increased information seeking amongst those with higher technological efficacy; there is no support for **H5:** Reactance will be associated with increased information seeking amongst those who

perceive higher visibility; there is partial support for **H6:** Increased bi-partisan (i.e., conservative) information seeking is associated with less accurate political beliefs. Finally, with regards to **R1**, it was established that there is a direct relationship between reactance and political belief accuracy.

Table 4

OLS regression predicting ideological online information seeking with political efficacy moderation

Variables	Online Liberal Media	Online Conservative Media	Online Liberal Media (Efficacy interaction)	Online Conservative Media (Efficacy interaction)
Constant	.42(.67)	-3.20 (.75)***	-1.96(1.23)	-.45 (1.37)
Age	-.01(.00)*	-.00(.01)	-.01(.00)	-.00(.00)
Sex (female coded high)	.03(.12)	.11(.13)	.02(.12)	.12(.13)
White	-.04(.15)	-.15(.17)	-.06(.15)	-.13(.17)
Educational attainment	.06(.06)	-.06(.07)	.06(.06)	-.07(.07)
Employed	.06(.12)	.17(.14)	.05(.12)	.18(.13)
Evangelical	-.01(.14)	-.00(.16)	-.02(.14)	.01(.15)
Bible	-.11(.09)	-.25(.10)*	-.11(.09)	-.25(.10)*
Ideology (Conservative high)	-.28(.04)***	.26(.05)***	-.27(.04)***	.25(.05)***
Affect toward Trump	-.01(.03)	.02(.04)	-.01(.03)	.02(.04)
Satisfaction with Trump	-.04(.09)	.16(.10)	-.03(.09)	.15(.10)
Attn to political news	.30(.08)***	.42(.09)***	.30(.08)***	.42(.09)***
Technological efficacy	.41(.13)**	.41(.15)**	.41(.13)**	.42(.14)***
Response efficacy	.16(.06)*	.18(.07)*	.17(.06)**	.16(.07)*
Visibility	.10(.09)	-.09 (.10)	.08(.09)	-.07 (.10)
TV news	.06(.03)*	.12(.03)***	.06(.03)*	.12(.03)***
Newspaper (print & online)	.22(.02)***	.12(.03)***	.22(.02)***	.12(.03)***
Political efficacy	.05(.09)*	.12(.11)	.69(.29)*	-.62(.33)
Media reactance	-.10(.08)	.32(.09)***	.57(.30)	-.46(.34)
Reactance*efficacy	--	--	-.18(.08)*	.21(.09)*
% Total Variance Explained	*37.6*	*34.1*	*48.4*	*47.7*
F(df)	*26.25(795)****	*22.63(795)****	*25.34(795)****	*21.92(796)****

#$p \leq .10$. *$p \leq .05$. **$p \leq .01$. ***$p \leq .001$. Unstandardized coefficients and standard errors reported.

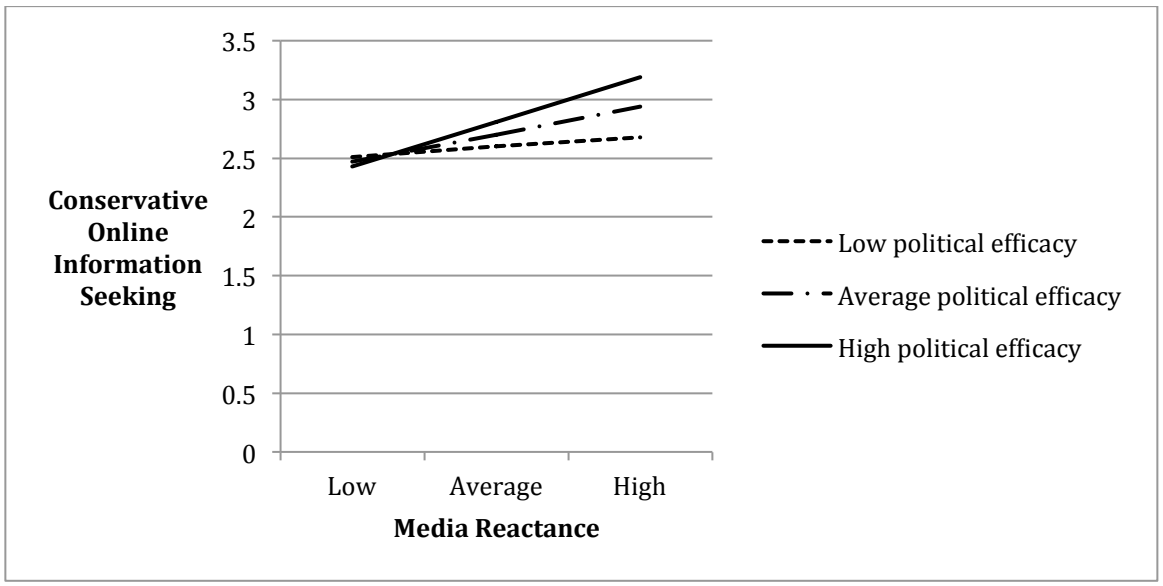


Figure 8. *Interaction between media reactance and efficacy and conservative media use*

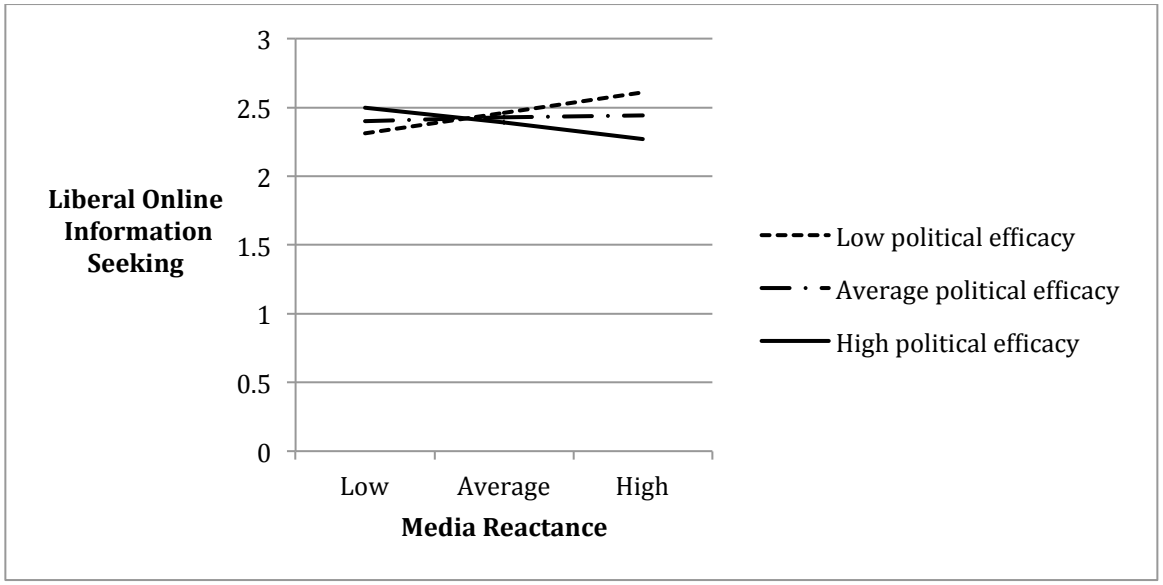


Figure 9. *Interaction between media reactance and efficacy and liberal media use*

Table 5

OLS regression predicting belief accuracy

Variable	Model 1
Constant	3.31(.27)***
Age	.00(.00)
Sex (female coded high)	-.10(.05)*
White	.08(.06)
Educational attainment	.04(.02)
Employed	-.01(.05)
Evangelical	-.03(.06)
Bible	.05(.04)
Ideology (Conservative high)	-.03(.02)
Affect toward Trump	.02(.01)
Satisfaction with Trump	-.09(.04)*
Attention to political news	.00(.02)
Technological efficacy	.07(.05)
Response efficacy	-.04(.03)
Political efficacy	.04(.04)
Media supply	-.03(.03)
Media reactance	-.09(.03)**
Visibility	.04(.04)
TV news	-00(01)
Newspaper (print and online)	.02(.01)
Liberal online media	.01(.02)
Conservative online media	-.05(.01)**
% Total Variance Explained	*13.5*
F(df)	*5.84(774)****

#$p \leq .10$. *$p \leq .05$. **$p \leq .01$. ***$p \leq .001$. Unstandardized coefficients and standard errors reported.

Chapter 5:

Limitations & Discussion

The theoretical model and the three studies presented in this dissertation offer an overview of information processing and citizen response to media censorship across three diverse cultural and media contexts (i.e., Iran, Turkey, and the U.S.). In this final chapter, a thorough discussion of the results and implications for future research will be followed by limitations of the studies.

Discussion

A relatively widespread perspective of media censorship suggests that individuals who have limited access to information will face consequences that include less accurate beliefs about political and social issues, while those who have increased access to information will be more informed about such issues. Although intuitive, there are several drawbacks to this viewpoint; the first is an underlying assumption that media consumers are passive and will simply acquiesce to the perception of censored, inaccurate, or otherwise biased information; the second is that these suppositions are rooted in the idea that in circumstances where media is freely available, the information will always be accurate. However, as we witnessed in recent coverage of political and social unrest both within the United States and abroad, perceived limitations to media freedom do not preclude the public from engaging in information-seeking behavior and furthermore, it does not guarantee that this alternative information seeking will actually improve belief accuracy, especially in ideologically polarized media conditions. What is, in fact, lacking

in most media censorship research is accountability for the psychological and affective responses that motivate this information-seeking behavior.

As it is such, the objective of this project was to explore citizens' response to perceived censorship in three different media contexts. That is to say, while accounting for variations in institutional censorship, how do citizens actually respond when they perceive their access to media is compromised? In an attempt to answer this question, I drew upon theories in both the fields of communication and psychology to help explain media consumption behaviors. Specifically, the novel introduction of psychological reactance as a potential forecaster of not only information seeking, but of accuracy of beliefs, may help shed light on the deeper implications of perceived media restrictions.

The U.S., Turkey, and Iran each maintain vastly different media cultures and regulations. Various organizations monitoring media freedom around the world consistently ranked the U.S. and Iran as having 'free' and 'not free' media systems, respectively. Turkey's more dynamic reputation earned it spots on both the 'not free' and 'moderately free' lists. Due to the more recent turbulent political climate, Turkey is currently considered by most organizations to be 'not free'. Using data gathered in these three diverse media systems allowed for a more holistic account of the hypotheses posed in this project.

Results gathered from the populations sampled in the three countries used in this research indicate that there is a pattern of media use that extends beyond most of the research that is currently available. The evidence points to nuances in the psychological motivations of individuals who perceive media censorship or bias, which ultimately influences the accuracy of their political beliefs by way of information seeking, and possibly the manner in which they process information. Referencing the first figure introduced in this paper (Figure 1), it is

expected that people will have varying levels of political belief accuracy based on several key conditions, including the amount of media freedom within their country and the level of reactance they experience in their given circumstance. While the results from the first study in Turkey support the central hypothesis laid out in the theoretical model, the results from the U.S. and Iranian studies suggest a more complex relationship between reactance, information seeking, belief accuracy, and several key moderating variables.

Turkey summarized. The preliminary study in Turkey examined the theoretical model as a whole. In this case, citizen uprisings against a pattern of authoritarian government policies led to a sudden and rapid decline in media freedom, as the government initiated aggressive crackdowns on journalists and media outlets. This transparent loss of freedom to access accurate and relevant information from the mainstream media resulted in a reliance on alternative news sources. This study explored three waves of data that examined how this perceived loss of media freedom might impact political belief accuracy through the use of online information technologies.

The collection of three waves of data in this panel study allowed for more confident causal claims with regards to the mediated relationships. The analysis demonstrated that there are positive relationships between perceived threat to media freedom and reactance, between reactance and information seeking, and between information seeking and political belief accuracy. Furthermore, a mediation analysis showed that there is an indirect relationship between perceived threat to media freedom and belief accuracy, supporting the research hypotheses.

The significant associations in this first study demonstrate support for the theoretical model proposed in this dissertation. On a more social level, the outcomes indicate that there is an important trigger in the form of reactance that motivates individuals to seek alternative online

information, which can then be used to enhance accuracy of beliefs. Moreover, these results support research claiming that online information sources can offer users more pluralistic choices, which can be conducive to political discourse in environments where the mainstream media is highly controlled by government entities (Meng, 2011).

Iran summarized. The results from the studies in Iran and the U.S. presented a bit more nuance and complexity. The inclusion of several essential moderating variables like learned helplessness, internal efficacy, response efficacy, technological efficacy, and the perceived technological affordance of visibility offered an opportunity to expand on the results from the previous study. Nevertheless, the results of these comparative analyses demonstrated several notable parallels with the Turkish study, especially as it pertains to the focal relationships.

In the second study, the sample used for analysis was Iran. With a notorious history of flagrant social and political repression, this country serves as a fitting example of the most extreme case of media censorship. The government in Iran continues to marginalize those opinions and perspectives that run counter to its own political and religious agenda, creating a mainstream media atmosphere that is rife with inaccurate claims and outright omission of information (Aryan, Aryan, & Halderman, 2013).

Broadly speaking, the Iranian study replicated key components of the Turkish analysis, with similar results. There was a positive association between reactance and online information seeking, and between online information seeking and belief accuracy. The mediation analysis also showed a significant indirect relationship between perceived threat and belief accuracy, again supporting the idea that online information-seeking behavior serves as an important intervening component when a threat to media freedom is perceived. However, in a noteworthy

divergence from the Turkish results, a direct relationship was also observed between media reactance and belief accuracy.

This direct association suggests that while information seeking may intervene between reactance and belief accuracy by providing access to more diverse and potentially accurate sources, information processing also plays a central role in the model. Research shows that the way people process information can shape the way in which they interpret facts (Garrett, 2009; Hart, Albarracin, Eagly, Brechan, Lindberg, & Merrill, 2009). As it is such, the mere psychological response to censorship (in the way of reactance) may in fact, influence accuracy of beliefs through motivated processing of information. In the case of Iran, people may be exposed to mainstream, government-sponsored news information, but the mere threat of perceived inaccurate information may result in counter-arguing and subsequent rejection of the information being provided by these sources.

U.S. summarized. Finally, the outcomes from the U.S. sample again illustrated support for the segment of the model predicting online information seeking; however, an interesting caveat is that this was only true for conservative online information seeking, as reactance was not predictive of liberal information seeking, at all. These results suggest those who consume more conservative online media, are likely to do so as a result of perceiving a bias in the mainstream media. After accounting for the moderating effect of efficacy, the outcome showed that reactance was predictive of *both* liberal and conservative online information seeking among those individuals who exhibited average to high internal political efficacy, similar to the sample in Iran.

At this point the results from the samples began to diverge. While an increase in online information seeking in both Iran and Turkey was associated with higher political belief accuracy,

the same was not the case in the U.S. In fact, the moderated media effects showed that there were no indirect effects between reactance and belief accuracy for liberal online information seeking, but there was a *negative* indirect effect between reactance and political belief accuracy amongst those who sought conservative online information. This is a particularly relevant consequence given the relationship between the current U.S. administration and the mainstream press. While some media outlets attempted to provide balanced evaluations and offer fact checking, there were widespread claims of "fake news" and the proliferation of "alternative facts." Moreover, the current president continues to make it abundantly clear that the fourth estate is not to be trusted, going so far as to label certain news outlets an "enemy of the American people" (Donald Trump, 2017). This attack on mainstream media is likely the culmination of a two-decades long trend of rising alternative conservative media across online, TV, and radio outlets (Domke, Watts, Shah, & Fan, 1999). Thus, while skepticism of news media is not a novel phenomenon, the radical and sweeping levels of doubt created within the past year in the United States helps explain the outcomes observed in this particular context.

A second partially consistent outcome with the Iranian data was the fact that a significant, albeit negative, *direct* effect was also observed in the U.S. data. This finding further suggests that behavioral reactance in the form of alternative online information seeking may not be the only forecaster of political belief accuracy, but that the mere affective and cognitive processes that occur as part of reactance may act as stimuli for trusting certain information while dismissing others.

Integrating the Findings

An effort was made in these three studies to advance a novel theoretical model that aims to explain the underlying psychological motivations in individuals' information processing. The

central objectives of these studies were laid out in four comprehensive propositions, which addressed key components of the theoretical framework. Broadly speaking, the three studies exhibited support for the *first proposition*, which examined the relationship between reactance, online information seeking, and political belief accuracy. This psychological perspective on media censorship is one that receives limited discussion in media and communication research. Hopefully, the theoretical map introduced in this dissertation offered supporting evidence for the important role that individual-level psychological variables play in our understanding of how citizens respond to media censorship and bias. Specifically, the outcomes appear to indicate that individuals who *perceive* that they experience censorship or bias media coverage, are more inclined to seek out ways in which to restore their access to the absent information.

However, an alternative and equally meaningful interpretation of these results draws us back to Figure 1 presented in the first chapter. As expressed in this two-by-two table, the expected political learning outcomes were contingent both on level of reactance and media environment. So, although there was an emphasis throughout this paper on perception of threat, the actual institutional conditions of the media continue to exert influence on how people are able to process information. Furthermore, the conceptualization of "media freedom environment" was a bit too broad for the scope of this project. As was previously mentioned, the organizations that monitor media freedom (e.g., Freedom House, Reporters Without Borders, IREX), all use numerous factors to assess a country's media freedom conditions. These criteria include, but are not limited to, political pressure from the government, economic sanctions, threats to journalists, general corruption, and a lack of diversity of media sources (Freedom House, 2017). In the cases studied for this project, it appears that the latter is most applicable criterion to use in assessing the media freedom environment. That is to say, the plurality of news

sources is what seems to be the driving force for perception of media freedom in each of these cases. For example, in Turkey and Iran, the lack of mainstream media sources that counter or check the government discourse is arguably the primary reason why people turn to alternative sources. Conversely, in the U.S. it is the plethora of alternative sources that allows for the formation of ideologically polarized media, which becomes an attractive alternative for those who feel that mainstream media is biased.

While the fundamental components of the theoretical model were supported by the three studies, there were important modifications that afforded a more thorough understanding of the central elements of the framework. The key difference between the Turkish study and the Iranian and U.S. comparative studies was the addition of several important moderating variables, which were tackled in *propositions two, three,* and *four*. The results showed that while visibility and efficacy moderated the relationship between reactance and information seeking in Iran, only efficacy significantly moderated the relationship in the U.S. The significance of efficacy in both cases demonstrates convergent validity and is consistent with the theory of planned behavior, where scholars suggest people must feel they have a locust of control over the behavior they desire to engage in. Therefore, it is theoretically intuitive that individuals, who are reactive to media freedom threats and place average or high on the political internal efficacy scale, will be more likely to engage in online political information seeking.

The perceived affordance of visibility was only significant for the Iranian population and did not moderate the relationship between reactance and information seeking in the U.S. However, provided the media environment for each of these countries, this outcome appears logical, in hindsight. Since the technological affordance of visibility is predicated on the perception that certain technologies have the propensity to make "visible" information that

would otherwise be "hidden" (Treem & Leonardi, 2012), then visibility would only be expected to moderate the relationship between reactance and information seeking in conditions where the perception of hidden information existed. Such an opinion is less likely to be prevalent in the U.S., since information is actually available in mainstream media (and people are exposed to it), but due to perceived partisan bias people simply process the disagreeable information in a different manner (Garrett, 2009). By contrast, the Iranian mainstream media system is highly controlled by the government and information is more likely to be perceived as omitted, rather than misrepresented. Under these circumstances, online information seeking may justifiably be perceived as possessing the affordance of visibility, since it may allow people to "see" information that is otherwise unavailable in the mainstream media.

In retrospect, it may also be beneficial to include another technological affordance, either with or instead of visibility. For instance, the affordance of perceived *control* may offer a more accurate description for why people turn to alternative online sources, since the technology offered online provides users the opportunity to personalize their news information. This affordance can also be applied to various contexts in different countries.

While the moderators included in the U.S. and Iranian analyses expanded on the Turkish findings and clarified the theoretical framework, not all components displayed the expected outcomes. Notably missing from the analyses was the theory of learned helplessness, which was a key component of the model and central to *proposition four*. The justification for omitting this variable from the analysis is discussed in detail in the limitations section below.

Limitations

Despite the aforementioned propositions, there are still a number of issues to take into consideration. The first is related to online information-seeking behavior and political learning.

While we can independently assess an individual's information seeking and political belief accuracy, it remains challenging to establish a causal link between these two variables, even through the autoregressive mediation analysis of panel data. Ideally, a more suitable approach for this type of investigation would be Structural Equation Modeling, so as to establish a more direct causal link between the variables.

Likewise, determining what type of information seeking is actually influencing learning may also be problematic. People who seek online political information are likely seeking other types of information online, as well; consequently, the learning that we observe may or may not be a direct outcome of the *political* online information seeking that they self report. A last issue associated with the online information seeking behavior included in the model is that this sets a precedent that *online* information seeking is the best alternative to traditional media censorship. However, in certain cases, people may be turning to other methods of censorship circumvention (e.g., satellite TV, underground newspapers, peer/social groups). It is equally important that as scholars, we take into account these unconventional methods of political information seeking, as well.

An additional important concession is that which there was significant convergent validity between the three countries used in this research, it would be imprudent to draw broad conclusions based on this limited sample. Therefore, it is important for future research to expand on the findings here so that we can draw more substantial deductions

Finally, as was formerly alluded to, learned helplessness was removed from the model, as it did not significantly predict information seeking or belief accuracy, and there was a great deal of overlap with the variable of internal political efficacy. Furthermore, theoretically speaking, learned helplessness and reactance have a very intricate relationship, stemming from each

variable's relationship to the concept of control and attribution of threat; broadly speaking, reactance is a motivated response to a loss of control, when control is expected, along with an external attribution of threat, while learned helplessness is a lack of response due to uncontrollable outcomes, and a more internal attribution of threat.

The psychological scholarship exploring reactance and learned helplessness offers an integrative approach to the two theories and examines them as parallel concepts (Wortman & Brehm, 1975). As these scholars contend, while initially these concepts appear contradictory (motivation versus passivity), they actually possess similar underlying processes. In fact, it may be possible to view one as an extension of the other; that is to say, the two concepts appear to initially follow a similar psychological path, then diverge at the point of control and attribution of threat. Therefore, it is likely that individuals experience one or the other of these phenomena, rather than both simultaneously.

In addition to theoretical limitations, methodologically speaking, it is difficult to ascribe the concept of learned helplessness to the sample based on the current mode of measurement. For the most part, learned helplessness is only induced in previous studies, and there is very limited research in which the concept was measured directly, making it difficult to establish a successful precedent. This variable, if it is to be properly distinguished from internal political efficacy and juxtaposed to reactance, is composed of a causal assumption associated with a sense of helpless passivity towards uncontrollable outcomes, and may best be unearthed via longitudinal studies. The underlying supposition is that people who experience a prolonged deprived state will "learn" to feel "helpless" with regards to their situation. Assessing the process that leads to learned helplessness is difficult to do in a survey of this kind. If we are to accurately measure *learned*

helplessness, we must explore experimental methods that allow for testing a stimuli that arouses learned helplessness, and test the phenomenon over time.

Even so, if we want to pursue the path of direct measurement, there needs to be thoughtful revisions of the items used for this particular measure. The current series of questions do not accurately represent the underlying processes designated in the original theory. Future amendments must explore statements that are more task-specific; that is, items that tap in to the details of a particular unachievable behavior. Moreover, there needs to be additional attention to the internal and external attribution of blame, which is something that is not apparent in the current index. A key distinction between learned helplessness and internal efficacy is that in the former, there is more of an external attribute of blame, whereas in those who lack internal efficacy primarily associate the blame with themselves.

Nevertheless, the construct of learned helplessness should remain an important consideration for scholars exploring media censorship. As quantitative researchers, we may at times find it tempting to rely on statistics to guide our understanding of human behavior; however, we are also responsible for the limitations in our methodology. Therefore, I would encourage future scholarship to acknowledge the relevance of learned helplessness as a potential factor for how citizens respond to censorship, and employ a more appropriate methodology as a means of measuring the effectiveness of this concept.

Future Directions

The summary of outcomes described above also present unique opportunities for future research endeavors. Firstly, while the cross-sectional and panel studies used in this analysis delivered interesting and convergent findings, exploring alternative methods may offer a more robust interpretation of the phenomena in question. For example, adding an experimental

component to the survey, in the form of vignettes may allow researchers to observe reactions to specific types of restricted content. In the case of learned helplessness, employing a more long-term strategy (i.e., panel studies) may help in discerning the intended consequences of this phenomenon. As mentioned before, the current cross-sectional approach did not allow for the observation of change over time, which is a key aspect of the framework.

Although an alluring outlook towards censored media systems is that citizens in these environments are likely to experience reduced levels of accurate political beliefs, there is a more multifaceted phenomenon at work. The first step in developing a better understanding of how media functions in these systems is to discard our pre-existing assumptions regarding the outcomes of institutional media censorship. That is to say, it is not so much the objective, structural nature of restricted media that matters, but a combination with the individual's perception that such restrictions exist in the media system. Once we account for this intertwined perspective, we can tease out a more meaningful interpretation of the outcomes of censorship.

As the results of this dissertation demonstrate, accuracy of political beliefs varies regardless of the established nature of a society's media environment. In fact, the directly comparative portion of analysis show that citizens who live in a more restrictive media environment (i.e., Iran) exhibit higher levels of belief accuracy on average that those who live in a more democratic media environment (i.e., U.S.). Therefore, it is imperative that we continue considering the underlying psychological factors that contribute to these learning outcomes, if we are to sufficiently understand the consequences of media censorship and bias.

Appendix A: Turkish variables

1. *Media reactance.* Respondents were asked their agreement or disagreement with eights statements using a five-point Likert scale: 1) "I feel frustrated by the lack of accurate information available in Turkish media"; 2) "I often find myself looking for the flaws in the way information was presented in the Turkish media"; 3) "The Turkish media tries to pressure me to think a certain way"; 4) "When consuming Turkish media I often find myself thinking about the many ways in which I disagree with it"; 5) "I often think the information in Turkish media is inaccurate or misleading"; 6) "The Turkish news media tries to manipulate me"; 7) "I feel limited by what information the Turkish government allows to be in the media"; 8) "When accurate information is not freely available in the Turkish media I get angry." These eight statements were asked on both the first wave and second wave of the panel survey and were combined and averaged to create an overall measure of media reactance$_{T1}$ (M=3.5, SD=.85, α=.93) and media reactance$_{T2}$ (M=3.5, SD=.84, α=.93).

2. *Online information seeking.* The six behaviors were: 1) use foreign Internet sources (websites, blogs, social networking sites) for political news; 2) search for information on political leaders or issues; 3) read news headlines or short news summaries on social networking sites; 4) look at videos or images about the political leaders or parties**;** 5) read messages from, or profiles of, the political leaders or parties on social networking sites; 6) read political opinions about political leaders or issues on social networking sites**.**

These six survey items were combined and averaged to measure online political information-seeking$_{T1}$ (M=2.2, SD=1.8, α=.92) and online political information seeking$_{T2}$ (M=2.5, SD=2.0, α=.94).

3. *Belief accuracy.* Answers were recoded on a five-point scale so accuracy was coded high and "not sure" responses scored as a "three." The four statements were: 1) "according the constitution, the president of Turkey has to sever his relations, if any, with all political parties and thus cannot actively campaign during elections" (M_{T1}=3.8, M_{T3}=3.8), 2) most democracies in the world are governed by not a presidential system (as in the US) but a parliamentary system" (M_{T1}=3.5, M_{T3}=3.6), 3) "independent candidates are not subject to an electoral threshold in general elections" (M_{T1}=3.5, M_{T3}=3.5) and 4) "the electoral threshold that is exercised in Turkish general elections is the highest in the world" (M_{T1}=3.5, M_{T3}=3.6). These four statements were combined and averaged to assess political belief accuracy$_{T1}$ (M=3.6, SD=.57) and political belief accuracy$_{T3}$ (M=3.7, SD=.59).

Table 6
Turkey means and standard deviations for demographics by wave

	Wave 1			Wave 2			Wave 3		
Variables	M	SD	% Missing	M	SD	% Missing	M	SD	% Missing
Age	44.60	15.55	-	45.23	15.61	-	45.55	15.45	-
Sex (female coded high)	0.56	0.50	-	0.56	0.50	-	0.56	0.50	-
Educational attainment	3.92	1.56	-	3.98	1.50	-	3.80	1.49	-
Employed	0.31	0.46	-	0.31	0.46	-	0.30	0.46	-
Sunni Muslim	0.88	0.32	-	0.88	0.33	-	0.89	0.31	-
Muslim religiosity	0.00	0.86	69.3	0.00	0.86	69.3	0.00	0.86	69.3
Kurdish	0.16	0.37	-	0.15	0.36	-	0.15	0.36	-

Table 7
Turkey variable means, standard deviations, and % missing

Variable	M	SD	% Missing
Age_{T1}	45.55	15.45	-
Sex (female coded high)$_{T1}$	0.56	0.50	-
Educational attainment$_{T1}$	3.81	1.49	-
$Employed_{T1}$	0.30	0.46	-
Sunni $Muslim_{T1}$	0.89	0.31	-
Muslim $religiosity_{T1}$	0.00	0.86	4.4
$Kurdish_{T1}$	0.15	0.36	-
Regime $support_{T1}$	4.57	3.87	7.2
TV news $exposure_{T1}$	6.43	1.45	0.1
Newspaper news $exposure_{T1}$	3.61	2.60	0.3
Attention to political	2.82	1.18	0.6
Media $reactance_{T1}$	3.46	0.85	1.1
Political Belief $Accuracy_{T1}$	3.60	0.57	-
Political Online Information $Seeking_{T1}$	2.21	1.78	-
Political Online Information $Seeking_{T2}$	2.47	1.99	-
Political Belief $Accuracy_{T3}$	3.65	0.59	-

Table 8
Continued

Variable	9	10	11	12	13	14	15
9. TV news exposure$_{T1}$	-						
10. Newspaper news exposure$_{T1}$	0.21	-					
11. Attention to political news$_{T1}$	0.27	0.45	-				
12. Media reactance$_{T1}$	0.12	0.20	0.28	-			
13. Political Belief Accuracy$_{T1}$	0.21	0.25	0.38	0.28	-		
14. Political Online Information Seeking$_{T1}$	0.09	0.45	0.30	0.14	0.22	-	
15. Political Online Information Seeking$_{T2}$	-0.02	0.28	0.21	0.12	0.13	0.56	-
16. Political Belief Accuracy$_{T3}$	0.06	0.14	0.19	0.13	0.20	0.12	0.18

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

Table 8
Turkey variable correlations

Variable	1	2	3	4	5	6	7	8
1. Age$_{T1}$	-							
2. Sex (female coded high)$_{T1}$	-0.19***	-						
3. Educational attainment$_{T1}$	-0.32***	-0.13	-					
4. Employed$_{T1}$	-0.20***	-0.39	0.29	-				
5. Sunni Muslim$_{T1}$	0.10**	-0.02	-0.05	0.03	-			
6. Muslim religiosity$_{T1}$	0.19***	0.05	-0.28	-0.11	0.30	-		
7. Kurdish $_{T1}$	-0.194***	0.14	-0.24	-0.06	-0.01	0.08	-	
8. Regime support$_{T1}$	-0.02	0.08	-0.19	-0.06	0.18	0.31	-0.07	-
9. TV news exposure$_{T1}$	0.06	-0.09	0.05	0.03	0.02	0.05	-0.02	0.02
10. Newspaper news exposure$_{T1}$	0.03	-0.23	0.37	0.17	0.01	-0.10	-0.20	-0.24
11. Attention to political news$_{T1}$	0.09*	-0.33	0.26	0.18	-0.05	-0.07	-0.12	-0.17
12. Media reactance$_{T1}$	0.11**	-0.10	0.12	0.01	-0.08	-0.16	-0.03	-0.41
13. Political Belief Accuracy$_{T1}$	0.01	-0.15	0.22	0.12	-0.05	-0.15	-0.09	-0.23
14. Political Online Information Seeking$_{T1}$	-0.35***	-0.14	0.50	0.28	-0.05	-0.22	-0.10	-0.18
15. Political Online Information Seeking$_{T2}$	-0.38***	-0.16	0.48	0.34	-0.07	-0.27	-0.10	-0.16
16. Political Belief Accuracy$_{T3}$	-0.01	-0.19	0.21	0.11	-0.06	-0.19	-0.12	-0.18

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

Appendix B: Iranian variables

1. *Media reactance.* The media reactance measure is comprised of an eight-item index similar to the scale used for the Turkish study: 1) "I feel frustrated by the lack of accurate information available in Iranian media"; 2) "I often find myself looking for the flaws in the way information was presented in the Iranian media"; 3) "The Iranian media tries to pressure me to think a certain way"; 4) "When consuming Iranian media I often find myself thinking about the many ways in which I disagree with it"; 5) "I often think the information in Iranian media is inaccurate or misleading"; 6) "The Iranian news media tries to manipulate me"; 7) "I feel limited by what information the Iranian government allows to be in the media"; 8) "When accurate information is not freely available in the Iranian media I get angry", (M= 3.2, SD= .75, α= .82).

2. *Online information seeking (Iran).* The following six items, measure on an eight-point scale ranging from "never" to "everyday", were included as an index for the information seeking measure. 1) Use foreign Internet sources (websites, blogs, social networking sites) for political news; 2) Search for information on political leaders or issues; 3) Read news headlines or short news summaries on social networking sites; 4) Discuss political issues with others on social networking sites; 5) Read messages from, or profiles of, the political leaders or parties on social networking sites; 6) Read political opinions about political leaders or issues on social networking sites (M= 3.5, SD= 2.3, α= .92 in Iran).

3. *Accuracy of political beliefs.* As a means of evaluating accuracy of political beliefs, a three-item scale was used, which focused on the U.S.-Iran nuclear deal. Participants responded to the following questions on a five-point scale ranging from Definitely True-Definitely False: 1) The nuclear agreement between Iran the U.S. lifts all American sanctions on Iran and prohibits new ones (FALSE); 4) The International Atomic Energy Agency has verified that Iran has fully implemented the terms of nuclear agreement requiring it to rollback its nuclear program (TRUE); 5) The nuclear agreement with Iran did not require Iran to reduce its existing number of centrifuges or stockpiles of uranium (FALSE). (M= 3.14, SD= .68 in the U.S., M= 3.6, SD= .81 in Iran).

4. *Global learned helplessness.* Participants were asked to respond to the question, "I want you to think about accessing news information through the media. Particularly, we are interested in your perceptions of how easy it is to access alternative news sources. By alternative news sources, we mean news sources that fall outside of the mainstream news outlets. How accurately do the following statements represent your feelings about accessing news information in Iran" (Accurate/Not Accurate 5-point Likert scale): 1) News media is bias so I can't have access to accurate information; 2) I have a great deal of freedom to choose different sources of information online; 3) There is no point in trying to seek out accurate news information in Iran, because the information is misleading; 4) I feel hopeless attempting to access anything that contradicts the government's views; 5) I don't care if I can access accurate political news information because I can't change anything about the government anyway (M= 2.8, SD= .63, α= .61).

5. *Political Internal Efficacy.* (5-point Agree-Disagree): 1) Generally, politics seems so complicated that people like me cannot understand what is happening; 2) I feel that I have a pretty good understanding of the important political issues facing my country today; 3) When political issues or problems are being discussed I feel like I have something to say; 4) I think that I am better informed about politics and government than most people, (M= 3.5, SD= .82, α= .74 in the U.S.; M= 3.1, SD= .80, α= .80 in Iran).

6. *Response efficacy.* (5-point Agree-Disagree)*:* 1) If I have access to news media sources outside the mainstream outlets, I will have a better understanding of politics; 2) News information from online outlets will provide me with the knowledge I need to make informed decisions about politics; 3) The use of online news information sources is the most effective way to combat government censorship; 4) Online news sources are the best way to access information that the government does not want me to see; 5) The use of online news information sources is the most effective way to combat government propaganda, (M= 2.8, SD= 1.0, α= .92 in the U.S.; M= 3.2, SD= .75, α= .83 in Iran).

7. *Technological efficacy***.** The following six items are used to measure users' computer self-efficacy. These items have been adapted from the Computer User Self-Efficacy scale, which originally included 30-items (Cassidy & Eachus, 2002): 1) Most difficulties I encounter when using computers, I can usually deal with; 2) I find working with computers very easy; 3) I am very unsure of my abilities to use computers; 4) I find that computers get in the way of learning; 5) I am very confident in my abilities to make use

of computers; 6) Computers are far too complicated for me. In addition to computer literacy, it is also necessary to measure digital literacy. Respondents will answer questions related to their confidence in using the following platforms, which are adapted from Hargittai's (2005) scale of digital literacy: 1) SNS platforms (e.g. Facebook, Twitter, Telegram, Instagram, etc.); 2) online news sites (e.g., BBC, VOA, CNN, etc.); 3) political blogs; other social media platforms.

For the purposes of this paper, the two aforementioned scales were combined in to one nine-point index (M= 3.10, SD= .49, α= .83 in the U.S. and M=. 3.3 , SD= .72, α= .85 in Iran. The justification for this combination is that the sample of participants are all Internet users, as such their comfort using technology and online resources are more intertwined than non-internet users.

8. *Visibility.* The measure for affordances of online technology will employ an adapted framework discussed by Treem and Leonardi (2012). The aim is to describe the perceived qualities that certain online platforms offer, which may motivate users to gravitate towards them instead of traditional media. The focus for this research will be on the perceived affordances of *visibility*. Although the affordance of anonymity is an important consideration, since the concentration of this project is on information *seeking*, rather than information *expression*, the affordance of visibility was deemed more appropriate to use in this circumstance. While there is no comprehensive list of affordances, an attempt was made to address as many potential characteristics as possible (Hite, Voelker, & Robertson, 2014). Respondents will be asked to respond to three sets of questions

pertaining to Social Media Applications (Facebook, Twitter, Telegram), Online News Organizations (BBC, CNN, VOA, Fox), Other social media (Blogs, Wikis, etc.). Each set of questions will allow respondents to select as many criteria that apply to that particular platform. The features that will be included for each platform type are the following: 1) I can see comments and opinions about political posts; 2) I can view news stories from a diversity of sources; 3) I can see political news information that the government does not allow in the news media; 5) I can find the information I want about political issues and candidates (M= 3.4, SD= .79, α =.80 in Iran).

9. *Internet Use.* Internet news consumption was measured as an index variable on an eight-point scale ranging from "never" to "everyday" using four items, which asked about information seeking from or related to "foreign news websites or media outlets", "Iranian news media websites", "political leaders or issues", "opinions on Iranian blogs or websites" (M= 3.1, SD= 1.9, α= .76).

10. *Attention to news.* This composite variable was measured using four statements, which asked participants on a five-point scale how closely they follow news about:1) Iranian politics in general; 2) International issues and events; 3) Upcoming Iranian presidential election; 4) JCPOA nuclear agreement between Iran and the P5 + 1 (M= 3.4, SD= 1.0, α= .88).

11. *Media Supply.* It was necessary to control for the amount of media respondents perceive that they currently have. The following perceived supply measures will be used as indicators for perceived threat to media freedom in Iran: 1) The Iranian news media is

free to criticize the government; 2) The government limits what the Iranian news media is allowed to report; 3) Journalists are free from harassment and violence when reporting controversial issues; 4) The Iranian news media is entirely free from government oversight, (M= 2.6, SD= .80, α= .65 in Iran).

12. *Media freedom.* In addition to the media supply item, respondents in Iran were asked how much freedom exists in the Iranian news media. Participants responded to the following polarized statements on a five-point scale: 1) News and information from most Iranian news media is fair/biased; 2) News and information from most Iranian news media tells the whole story/is incomplete; 3) News and information from most Iranian news media is accurate/is inaccurate; 4) News and information from most Iranian news media can be trusted/is untrustworthy, (M= 3.14, SD= 1.02, α= .90)

Table 9
Iran variable means, standard deviations, and % missing

Variable	M	SD	% Missing
Age	33.80	11.45	15
Sex (female)	0.49	0.50	-
Educational	5.79	1.71	-
Employed	0.26	0.44	-
Shia Muslim	0.93	0.25	-
Muslim religiosity	4.57	1.34	0.4
Student	0.20	0.40	-
Tehran	0.20	0.40	-
Support for Rouhani	0.35	0.48	-
Reformist	5.83	2.98	0.1
Principlists	4.85	2.83	0.1
Support for Ahmadinejad	4.09	3.25	0.4
TV news	4.92	2.80	0.6
Foreign TV news	2.01	1.97	0.6
Newspaper	2.90	2.43	0.5
Internet use	3.10	1.89	0.7
Attention to political news	3.36	1.03	0.5
Media supply	2.60	0.80	0.5
Media freedom	3.14	1.02	0.5
Learned helplessness	2.77	0.63	0.4
Technological efficacy	3.81	0.80	0.9
Response efficacy	3.18	0.75	0.2
Political efficacy	3.14	0.80	0.1
Visibility	3.44	0.79	0.5
Media reactance	3.16	0.75	1
Information Seeking	3.51	2.25	0.7
Belief Accuracy	3.58	0.69	0.5

Table 10

Iran variable correlations

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Age	-												
2. Sex (female)	0.09*	-											
3. Educational	-0.383***	0.013	-										
4. Employed	0.15***	-0.21***	0.14***	-									
5. Shia Muslim	0.04	0.017	0.07	0.05	-								
6. Muslim religiosity	0.12**	-0.017	-0.09**	-0.02	0.13***	-							
7. Student	-0.426***	-0.07*	0.11**	-0.29***	0.05	-0.01	-						
8. Tehran	-0.09*	0.042	0.19***	-0.01	0.06	-0.13***	0.12***	-					
9. Support for Rouhani	0.09*	0.018	0.06	0.09*	-0.07	-0.05	-0.18***	-0.04	-				
10. Reformist	-0.03	-0.029	0.03	0.03	-0.06	-0.24***	-0.03	0.01	0.32***	-			
11. Principlists	0.01	0.05	-0.07	-0.02	0.08*	0.31***	0.01	-0.09*	-0.25***	-0.39***	-		
12. Support for Ahmadinejad	-0.02	-0.027	-0.18***	-0.10**	0.02	0.17***	0.00	-0.10**	-0.24***	-0.23***	0.39***	-	
13. TV news	0.12**	-0.069	-0.05	0.02	0.09**	0.22***	-0.08*	-0.05	-0.06	-0.13***	0.16***	0.10**	-
14. Foreign TV news	0.02	-0.035	0.09**	0.08*	-0.13***	-0.18***	-0.10**	0.01	0.13***	0.10**	-0.23***	-0.17***	0.04
15. Newspaper	0.01	-0.074	0.17***	0.07*	0.05	0.05	-0.03	0.07*	0.07	-0.04	-0.03	-0.06	0.26***
16. Internet use	-0.09*	-0.22	0.24***	0.13***	0.01	0.07	0.00	0.08*	0.07*	-0.05	-0.04	-0.08*	0.23***
17. Attention to political news	-0.02	-0.224	0.24***	0.12***	0.09**	0.16***	0.00	0.01	0.05	-0.09*	0.00	-0.07*	0.38***
18. Media supply	0.08	-0.036	-0.04	0.00	0.07*	0.20***	-0.07*	-0.05	0.05	0.04	0.09*	0.07	0.07*
19. Media freedom	-0.02	-0.004	-0.13***	-0.12**	0.00	0.30	-0.02	-0.07*	-0.09**	-0.21***	0.31***	0.27***	0.15***
20. Learned helplessness	0.00	0.004	-0.15***	-0.10**	-0.07*	-0.12***	0.01	-0.04	-0.04	0.04	-0.10**	0.04	-0.08*
21.Technological efficacy	-0.37***	-0.125	0.42***	0.10**	-0.02	-0.11**	0.16***	0.10**	0.02	0.04	-0.07*	-0.14****	-0.04
22. Response efficacy	-0.09*	-0.181	0.17***	0.04	0.02	-0.11**	0.07	0.08**	-0.01	0.00	-0.18***	-0.12***	0.00
23. Political efficacy	-0.03	-0.222	0.17***	0.13**	0.08*	0.14***	0.06	0.04	-0.10**	-0.10**	-0.03	-0.10**	0.17***
24. Visibility	-0.07	-0.081	0.20***	0.07	0.11**	-0.02	0.05	0.07	-0.01	-0.06	-0.02	-0.05	0.07*
25. Media reactance	-0.02	-0.076	0.14***	0.09*	0.03	-0.22***	0.04	0.09*	-0.03	-0.05	-0.20***	-0.21***	-0.02
26. Information Seeking	-0.11**	-0.204	0.28***	0.15***	0.03	0.04	0.02	0.11**	0.04	-0.05	-0.05	-0.12***	0.14***
27. Belief Accuracy	-0.03	0.049	-0.14***	-0.10**	-0.07*	0.01	0.01	-0.03	-0.10**	0.02	0.07*	0.10**	-0.08*

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

Table 10

Continued

Variable	14	15	16	17	18	19	20	21	22	23	24	25	26
14. Foreign TV news	-												
15. Newspaper	0.20***	-											
16. Internet use	0.24***	0.45***	-										
17. Attention to political news	0.24***	0.38***	0.49***	-									
18. Media supply	-0.15***	0.04	0.01	0.08*	-								
19. Media freedom	-0.28***	0.03	-0.07	0.02	0.29***	-							
20. Learned helplessness	0.063	-0.13***	-0.14***	-0.23***	-0.19***	-0.18***	-						
21.Technological efficacy	0.067	0.13***	0.24***	0.21***	-0.10**	-0.09**	-0.15***	-					
22. Response efficacy	0.22***	0.06	0.26***	0.24***	-0.21***	-0.28***	0.07*	0.20***	-				
23. Political efficacy	0.17***	0.15***	0.36***	0.49***	0.00	-0.061	-0.27***	0.22***	0.29***	-			
24. Visibility	0.08**	0.13***	0.26***	0.28***	-0.01	-0.10**	-0.22***	0.24***	0.43***	0.28***	-		
25. Media reactance	0.27***	0.05	0.18***	0.13***	-0.52***	-0.50***	0.21***	0.16***	0.51***	0.22***	0.26***	-	
26. Information Seeking	0.31***	0.39***	0.68***	0.53***	-0.03	-0.16***	-0.18***	0.29***	.41***	0.44***	0.42***	0.33***	-
27. Belief Accuracy	-0.19***	-0.18***	-0.24***	-0.30***	0.06	0.13***	0.042	-0.10**	-0.27***	-0.28***	-0.23***	-0.23***	-0.28***

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

Appendix C: U.S. Variables

1. *Media reactance.* The media reactance measure is comprised of an eight-item index similar to the scale used for the Turkish study: 1) "I feel frustrated by the lack of accurate information available in Iranian media"; 2) "I often find myself looking for the flaws in the way information was presented in the American media"; 3) "The American media tries to pressure me to think a certain way"; 4) "When consuming American media I often find myself thinking about the many ways in which I disagree with it"; 5) "I often think the information in Iranian media is inaccurate or misleading"; 6) "The American news media tries to manipulate me"; 7) "I feel limited by what information the American government allows to be in the media"; 8) "When accurate information is not freely available in the Iranian media I get angry", (M= 3.5, SD= .83, α= .85).

2. *Bi-partisan online information seeking (U.S.).* Since the U.S. media offers a more ideologically diverse media environment, the variable for online information seeking in the U.S. was split in two as a means of accounting for liberal and conservative information sources. Each of these variables included two items that asked respondents where they received their news information: 1) (Conservative/Liberal) talk news radio shows, including online broadcasts/podcasts; 2) (Conservative/Liberal) online news sites, newspapers, blogs, or news apps (M= 2.72, SD= 2.14, α= .76, for Conservative media; M= 2.40, SD= 1.97, α= .77 , for Liberal media).

3. *Accuracy of political beliefs.* As a means of evaluating accuracy of political beliefs, a three-item scale was used, which focused on the U.S.-Iran nuclear deal. Participants responded to the following questions on a five-point scale ranging from Definitely True-Definitely False: 1) The nuclear agreement between Iran the U.S. lifts all American sanctions on Iran and prohibits new ones (FALSE); 4) The International Atomic Energy Agency has verified that Iran has fully implemented the terms of nuclear agreement requiring it to rollback its nuclear program (TRUE); 5) The nuclear agreement with Iran did not require Iran to reduce its existing number of centrifuges or stockpiles of uranium (FALSE). (M= 3.14, SD= .68)

4. *Political Internal Efficacy* (5-point Agree-Disagree): 1) Generally, politics seems so complicated that people like me cannot understand what is happening; 2) I feel that I have a pretty good understanding of the important political issues facing my country today; 3) When political issues or problems are being discussed I feel like I have something to say; 4) I think that I am better informed about politics and government than most people, (M= 3.5, SD= .82, α= .74)

5. *Response efficacy* (5-point Agree-Disagree)*:* 1) If I have access to news media sources outside the mainstream outlets, I will have a better understanding of politics; 2) News information from online outlets will provide me with the knowledge I need to make informed decisions about politics; 3) The use of online news information sources is the most effective way to combat government censorship; 4) Online news sources are the best way to access information that the government does not want me to see; 5) The use

of online news information sources is the most effective way to combat government propaganda, (M= 2.8, SD= 1.0, α= .92)

6. *Technological efficacy***.** The following six items are used to measure users' computer self-efficacy. These items have been adapted from the Computer User Self-Efficacy scale, which originally included 30-items (Cassidy & Eachus, 2002): 1) Most difficulties I encounter when using computers, I can usually deal with; 2) I find working with computers very easy; 3) I am very unsure of my abilities to use computers; 4) I find that computers get in the way of learning; 5) I am very confident in my abilities to make use of computers; 6) Computers are far too complicated for me. In addition to computer literacy, it is also necessary to measure digital literacy. Respondents will answer questions related to their confidence in using the following platforms, which are adapted from Hargittai's (2005) scale of digital literacy: 1) SNS platforms (e.g. Facebook, Twitter, Telegram, Instagram, etc.); 2) online news sites (e.g., BBC, VOA, CNN, etc.); 3) political blogs; other social media platforms.

   For the purposes of this paper, the two aforementioned scales were combined in to one nine-point index (M= 3.10, SD= .49, α= .83). The justification for this combination is that the sample of participants are all Internet users, as such their comfort using technology and online resources are more intertwined than non-internet users.

7. *Visibility.* The measure for affordances of online technology will employ an adapted framework discussed by Treem and Leonardi (2012). The aim is to describe the perceived

qualities that certain online platforms offer, which may motivate users to gravitate towards them instead of traditional media. The focus for this research will be on the perceived affordances of *visibility*. Although the affordance of anonymity is an important consideration, since the concentration of this project is on information *seeking*, rather than information *expression*, the affordance of visibility was deemed more appropriate to use in this circumstance. While there is no comprehensive list of affordances, an attempt is made to address as many potential characteristics as possible (Hite, Voelker, & Robertson, 2014). Respondents will be asked to respond to three sets of questions pertaining to Social Media Applications (Facebook, Twitter, Telegram), Online News Organizations (BBC, CNN, VOA, Fox), Other social media (Blogs, Wikis, etc.). Each set of questions will allow respondents to select as many criteria that apply to that particular platform. The features that will be included for each platform type are the following: 1) I can see comments and opinions about political posts; 2) I can view news stories from a diversity of sources; 3) I can see political news information that the government does not allow in the news media; 5) I can find the information I want about political issues and candidates (M= 3.5, SD= .75, α =.73).

8. *Media Supply.* It was necessary to control for the amount of media respondents perceive that they currently have. The following perceived supply measures will be used as indicators for perceived threat to media freedom in the U.S.: 1) The American news media is free to criticize the government; 2) The government limits what the American news media is allowed to report; 3) Journalists are free from harassment and violence

when reporting controversial issues; 4) The American news media is entirely free from government oversight, (M= 3.1, SD= .93, α= .69).

Table 11
U.S. variable means, standard deviations, and % missing

Variable	M	SD	% Missing
Age	46.83	15.60	-
Sex (female)	0.52	0.50	-
White	0.80	0.40	-
Education	3.91	1.05	-
Employed	0.48	0.50	-
Evangelical	0.32	0.47	-
Bible	1.99	0.74	-
Ideology (Conservative)	4.01	1.66	0.1
Affect toward Trump	4.96	3.85	0.1
Satisfaction with Trump	2.61	1.48	-
Attn to political news	3.16	1.07	-
Technological efficacy	3.10	0.49	-
Response efficacy	2.78	1.04	-
Visibility	3.54	0.75	-
TV news	5.34	2.66	-
Newspaper (print & online)	3.82	2.73	-
Political efficacy	3.48	0.82	0.1
Media supply	3.11	0.94	-
Reactance	3.50	0.83	0.1
Liberal media	2.40	1.97	-
Conservative media	2.72	2.14	-
Belief accuracy	3.14	0.68	-

Table 12

U.S. variable correlations

Variable	1	2	3	4	5	6	7	8	9	10	11
1. Age	-										
2. Sex (female)	0.01	-									
3. White	.20***	-0.18***	-								
4. Education	.08*	0.09*	-0.08*	-							
5. Employed	-.21***	-0.18***	-0.03	0.23***	-						
6. Evangelical	0.01	0.07*	-0.14***	-0.04	-0.01	-					
7. Bible	-.10*	-0.04	0.12**	0.08*	0.02	-0.53***	-				
8. Ideology (Conservative)	.13***	-0.07*	0.12**	-0.09**	0.02	0.24***	-0.32***	-			
9. Affect toward Trump	.16***	-0.18***	0.28***	-0.13***	0.02	0.14***	-0.23***	0.58***	-		
10. Satisfaction with Trump	.13***	-0.16***	0.27***	-0.15***	0.00	0.13***	-0.24***	0.58***	0.90***	-	
11. Attn to political news	.11**	-0.17***	-0.02	0.24***	0.11**	0.01	-0.05	0.01	0.11**	0.07	-
12. Technological efficacy	-.27***	-0.03	-0.04	0.10**	0.12**	-0.04	0.03	-0.14***	-0.06	-0.07	0.25***
13. Response efficacy	-.35***	-0.06	-0.07*	-0.03	0.15***	0.06	-0.07*	-0.04	0.01	0.20	.20***
14. Visibility	-.18***	-0.12**	-0.04	0.11**	0.15***	-0.02	0.03	-0.13***	-0.03	-0.03	0.31***
15. TV news	.24***	-0.07*	-0.04	0.09*	0.03	0.02	-0.09**	-0.06	-0.02	-0.03	0.42***
16. Newspaper (print & online)	.07*	-0.01	0.02	0.17***	0.03	-0.09*	0.09**	-0.16***	-0.11**	-0.10**	0.38***
17. Political efficacy	.10**	-0.13***	0.01	0.25***	0.15***	-0.03	0.03	-0.04	0.04	0.02	0.65***
18. Media supply	.20***	-0.13***	0.04	0.14***	0.05	-0.07*	0.03	0.00	0.07*	0.05	0.21***
19. Reactance	-.04	-0.11**	0.12**	-0.03	0.01	0.03	-0.04	0.37***	0.39***	0.40***	0.08*
20. Liberal media	-.12**	0.00	-0.09**	0.16***	0.09*	-0.07	0.07	-0.35***	-0.23***	-0.23***	0.36***
21. Conservative media	0.02	-0.08*	0.01	0.04	0.10**	0.12**	-0.21***	0.31***	0.31***	0.31***	0.41***
22. Belief accuracy	0.01	-0.04	0.02	0.10**	0.01	-0.12***	0.171***	-0.25***	-0.21***	-0.24***	0.00

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

Table 12

Continued

Variable	12	13	14	15	16	17	18	19	20	21
12. Technological efficacy	-									
13. Response efficacy	0.27***	-								
14. Visibility	0.35***	0.42***	-							
15. TV news	0.07*	0.00	0.14***	-						
16. Newspaper (print & online)	0.16***	0.11**	0.15***	0.36***	-					
17. Political efficacy	0.22***	0.16***	0.34***	0.24***	0.25***	-				
18. Media supply	0.11**	-0.10**	0.13***	0.16***	0.13***	0.26***	-			
19. Reactance	-0.07	0.04	0.06	-0.15***	-0.09*	0.11**	-0.18	-		
20. Liberal media	0.29***	0.24***	0.26***	0.27***	0.46***	0.26***	0.04	-0.16***	-	
21. Conservative media	0.17***	0.19***	0.14***	0.27***	0.24***	0.27***	0.05	0.24***	0.37***	-
22. Belief accuracy	0.07	-0.05	0.05	0.03	0.10**	0.04	0.02	-0.21***	0.10**	-0.19***

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

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