A Study of How University Students Describe Their Media Informational Reasoning Process and How They Perceive it Relates to Their Social Identities

Robert Wayne Keener

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Reading Committee:

James A. Banks, Chair

Walter C. Parker

Geneva Gay

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Robert W. Keener

University of Washington

Abstract

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Robert Wayne Keener

Chair of Supervisory Committee

James A. Banks

College of Education

A large body of research has been conducted about how the social identities of individuals influence and bias their reasoning about specific pieces of information such as climate change or political policy. The increasing amount of media misinformation that individuals encounter on the Internet in the Digital Age, and the negative effect that result from media misinformation have increased the importance of this research. The current focus on misinformation has led to an increase in media literacy programs in K-12 education and in educational research about how young people reason with information on the Internet. Much of the research that has been conducted on how individuals reason with information has used large-scale quantitative surveys. Few these studies have asked participants to describe their reasoning process themselves. In addition, much of the research that has been conducted on how individuals interact with and make sense of information has focused primarily on political identity and has not examined how other identities, such as those related to ethnicity, culture, and gender influence the reasoning process. In addition, the two major studies in the field of

education did not ask their participants to describe their online reasoning processes in their daily lives (Kahne & Bowyer, 2017; McGrew, Breakstone, Ortega, Smith & Wineburg, 2018). This study addresses the gaps in the research literature by asking a group of university students to describe their media informational reasoning process and how they think it is related to their social identities. Semi-structured interviews and three elicitation techniques were used in to gather the data in this study. The elicitation techniques used in this study were a free-listing exercise, a sentence completion exercise, and a think-aloud protocol.

The findings of this study indicate that the identities of the participants drove their media informational reasoning process through their motivated interests. The participants often made judgments about the veracity or accuracy of information on the Internet by identifying bias in media sources and determining truthfulness through a consensus of sources stating similar outcomes. The participants often detailed implicitly trusting sources that mirrored their identity and did not fact-check them. The participants viewed their political identity as being more salient than their ethnic or cultural identities in their media informational reasoning process. More than half of the participants did not perceive themselves as having strong ethnic or cultural attachments. Most of those that did have a strong ethnic or cultural attachment perceived them as having little influence on their media informational reasoning process. An important finding of this study is that the identities of the participants were at the heart of how they reasoned with information online, not just how they came to conclusions about information. An implication for practice of this study is that educational efforts related to media informational reasoning should encourage individuals to thoroughly examine and understand how their multiple identities shape their application of online reasoning rather than just focus on the development of fact-checking skills.

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Glossary

- *Civic Online Reasoning*: a term created by the Stanford History Education Group to describe an individual's "ability to effectively search for, evaluate, and verify social and political information online" (McGrew, Breakstone, Ortega, Smith, & Wineburg, 2018, p. 166).
- *Social Identity*: the part of an individual's self-concept that originates from their social group memberships, and the ethical standards and emotional importance of their specific memberships (Tajfel, 1982). Therefore, individuals' identities are defined by their relations with specific groups, which are affected by a variety of contextual factors.
- *Positionality*: the intersection of an individual's views and values, along with how their spatial and temporal locations mediate how they view the world (Tetreault, 2016).
- *Motivated Reasoning*: Reasoning that is influenced by the reasoner's conscious and unconscious biases because individuals "generally *reason* their way to conclusions they favor, with their preferences influencing the way evidence is gathered, arguments are processed, and memories of past experience are recalled" (Epley & Gilovich, 2016, p. 133). Individuals are motivated to make judgements about information based on a desire for accuracy or in a direction that reflects their prior beliefs, experiences or social identity (Kunda, 1990; Taber & Lodge, 2006).
- *Motivated Interest*: Individual's choices to apply or not reasoning techniques such as fact-checking on topics that they are interested in, and possess prior knowledge about, which is often tied to their social identity (Keener, 2018).
- *Media informational reasoning*: The complex cognitive processes that individuals experience when they attempt to make sense of information in the media such as data on climate change, or fact-checking and cross-referencing informational sources on a

specific news story. It is the process by which individuals interact with a range of media sources that may corroborate their previously held perspectives or challenge them. This reasoning process also describes fact-checking in the basic sense, which is cross-referencing claims through multiple sources. Media informational reasoning also describes how people examine a multitude of sources such as either traditional press sources such as the *New York Times* or informational mediums such as Facebook or Reddit. The term "online reasoning" is synonymous with media information reasoning and is also used in this study

- *Consensus Determination*: Consists of performing an Internet search to determine whether numerous media reports demonstrate a consensus about a certain topic and then making a judgement about its veracity based on that consensus.
- *Source Preferencing*: A strategy used by individuals to verify the accuracy of information by placing implicit trust in certain media sources. Some examples might be trusting the legacy press or other sources that participants perceived as being less partisan. Another example was trusting Google to provide accurate and truthful information in a search.
- *Legacy Press:* Longstanding and traditional news organizations such as *The New York Times* or *The Washington Post.* These mainstream news sources stand in contrast to recent blog and Internet sources such as the Huffington Post or Breitbart.
- *Bias Identification*: verifying the accuracy or truthfulness of media information by attempting to identify the bias in the story or report.
- *Deep Reasoning:* Fact-checking information horizontally across multiple sources, considering multiple perspectives, and discerning how the information is constructed before then making a judgment about the veracity of that piece of information.

CHAPTER 1

INTRODUCTION

The goal of this chapter is to elucidate the parameters for this study. In order to situate my research within the body of scholarship, it begins with a brief overview of research that details how individuals reason with information in the digital age. The remainder of the chapter consists of three sections. The first discusses the rationale for studying how young people describe and understand how their identities influence their media informational reasoning processes. It will also present the problem statement of the study. The second section consists of a short description of the study and its research questions. The third section consists of the study's conceptual framework. The conceptual framework section describes research related to social identity theory, media informational reasoning, and how those two concepts influence motivated reasoning.

In late 2018 a measles outbreak occurred in Vancouver, Washington (Brice-Saddler, 2019). A disease that was almost eradicated in the United States as a result of widespread vaccinations made a comeback because some parents chose not to vaccinate their children. These parents have come to be described as 'anti-vaxxers.' Many anti-vaxxer parents decided to not vaccinate their children because they believed that the measles-mumps-rubella (MMR) vaccine can cause autism in young children. Anti-vaxxers maintain that there is a causal relationship between the MMR vaccine and autism, despite the overwhelming scientific evidence that vaccines do not cause autism (Brice-Saddler, 2019). Researchers in Denmark recently completed a 10-year study that tracked over 600,000 children who had received the MMR vaccine (Hviid, Vinslov, Frisch, & Melbye, 2019). They concluded that there is no link between the vaccine and autism. This work followed a 2002 study from Denmark of 500,000 children who had received the MMR vaccine (Meldgaard Madsen, et al., 2002). The authors also concluded that there is no

link between the vaccine and autism. Nonetheless, the number of people who support the anti-vaxxer movement has increased in recent years, despite the overwhelming scientific evidence that contradicts their beliefs (Hoffman, 2019).

Access to false or misleading information on the Internet often causes the rejection of scientific information on the specious link between vaccinations and autism. Brice-Saddler (2019) asserted that Facebook and Pinterest created a platform that allowed anti-vaxxer communities to share information in ways which established a filter bubble. A filter bubble is a self-reinforcing information bubble on the Internet within which individuals search for and continually find information that confirms their own beliefs and biases (Pariser, 2011). As result of the filter bubble phenomenon, individuals are increasingly seeking out, exposing themselves to, and making judgments about inaccurate information that confirms their beliefs and biases, rather than instead of seeking accurate and verified information. This problem is exacerbated by the fact that many people access information through social media sources, which often display results based on an individual's search history rather than the most relevant or accurate information (Pariser, 2011).

Nontraditional media entities such as Facebook, Twitter, Google, Yahoo, and Reddit are now the main access points for people to garner media information. Gottfried and Shearer (2017) estimated that 67% of people get their readable or watchable news through these sources. Use of these media has a destabilizing influence on the way individuals interpret information because social media often provide access to misleading information (Pariser, 2011).

The process individuals use to assess and understand information that they often encounter in the media are linked to their social identity (Lewandowsky, Oberauer, & Gignac, 2013; Pariser, 2011). Social identity is the part of individuals' self-concept that originates from their social group memberships and the ethical standards and emotional importance of their

specific memberships (Tajfel, 1982). Therefore, individuals' identities are defined by their relations with specific groups and are based on a variety of contextual factors. Group identities are diverse and highly contextual. They may be centered on religious affiliation, education, race, ethnicity, profession, sexual orientation, family orientation, social class, culture, sports teams, gender, and any other social category. What is important to note for this study is that individuals' group identities are based on social constructs that create lenses for how they view the world around them (Diehl, 1990; Hogg, 2016). These lenses become the primary means by which individuals interpret the information they encounter within various media sources (Lewandowsky Oberauer, & Gignac, 2013; Pariser, 2011).

Reasoning based on information acquired primarily through the lens of individuals' social identity has undermined the democratic processes of many nations (Bennett & Livingston, 2018). Some notable examples are the successes of the Russian media misinformation campaigns in the cases of Brexit and the 2016 United States presidential election (Bennett & Livingston, 2018). These disconcerting events have led to the implementation of media literacy education laws and government mandates in states such as Washington and California (Melton, 2018). The rise of fake news and media misinformation has also led to an increase in educational research related to media literacy and media reasoning processes (e.g. Hodgin & Kahne, 2018; Kahne & Bowyer, 2017; McGrew et al., 2018). These important studies indicate that there is a dearth of media literacy across their large sample sizes of young people from middle school through college. However, these researchers did not ask their participants to describe how they reason with information in the media in their daily lives, and how they believe their social identities influence that media reasoning process.

Problem Statement

McGrew et al. (2018) described the process by which individuals go beyond basic levels of reading or watching online media information to engage in an arduous reasoning process as "civic online reasoning" (p. 166). Civic online reasoning is "the ability to effectively search for, evaluate, and verify social and political information online" (p. 166). This dissertation study differs from large-scale studies that relied primarily on elicitation techniques such as think-aloud protocols on specific assessments constructed by the research team (McGrew et al., 2018) or large-scale experimental design studies (Kahne & Bowyer, 2017). For example, McGrew et al. (2018) required middle-school (N = 405), high-school (N = 348), and college students (N = 141) to perform a qualitative "civic online reasoning" assessment in which they responded to a variety of assessment tasks (p. 168). The researchers used think-aloud protocols and analyzed written responses. They found that most participants demonstrated low proficiency levels at determining the veracity of information received online. They also concluded that young people often read vertically through one source. Reading vertically can be defined as making judgments about a specific media piece and its claims and information as they read, but not fact-checking until they have finished reading the text if at all. This reading method contrasts with the horizontal reasoning processes that fact-checkers apply in their profession. Horizontal reasoning occurs when an individual reads across multiple sources to check its information on a claim-by-claim basis (Wineburg & McGrew, 2018). McGrew et al. (2018) did not highlight how young people applied civic online reasoning in their everyday lives or how they perceived their online reasoning process intersected with their social identities.

Kahne and Bowyer (2017) used a survey that applied a large-scale experimental design (N = 2,101) which tested young people's ability to judge the veracity of political claims. They found that the participants usually judged the accuracy of political claims through the lens of their political identity. However, they also found that young people who had some level of media

literacy education were able to judge the veracity of political claims more accurately. Kahne and Bowyer found that youths who had no civic media literacy education were just as likely to determine that inaccurate political online posts were accurate as they were to judge posts that contained factual information. They also found that students who had some civic media literacy education were 26 % more likely to decide an accurate evidenced-based post as being true as opposed to an inaccurate one. These studies, however, did not require young people to describe how they reasoned with information they encountered in the media in their daily lives and how they perceived that their social identities influenced this process.

Purpose of the Study

My study addressed this gap in the research by examining how university students in an "Informational Reasoning in the 21st Century" course at a large public university in the Pacific Northwest applied online reasoning or 'media informational reasoning' in their everyday lives and their perceptions of how that process intersects with their social identities. The intersection of social identity and 'media informational reasoning' is manifested in how people make sense of the information they encounter on the Internet. 'Media informational reasoning' can be defined as the complex cognitive process that people undergo when they attempt to make sense of information in the media such as data on climate change or by fact-checking and cross-referencing a specific news story. It is the process by which people interact with a range of media sources that may corroborate or challenge their previously held perspective. The process also describes fact-checking, which is cross-referencing claims or information through multiple sources with the intention of finding accurate and truthful information in the process. Media informational reasoning describes how people examine a multitude of sources such as traditional press outlets like *The New York Times* or informational mediums such as Facebook or Reddit. This process does not refer to high-level statistical or data reasoning such as analyzing graphs or

scientific data. Rather it illuminates how individuals reason with the information they encounter in a variety of media sources such as social media, news stories, or television. Individuals engage with the media in a basic sense of reading or watching the news or participating in a discourse about it. However, they apply media informational reasoning when they engage in a more in-depth process of fact-checking, cross-referencing, and trying to make sense of the issue that is being examined. McGrew et al. (2018) labeled the fact-checking process “civic online reasoning.” However, I use the term media informational reasoning because it is a broader concept that describes how individuals make sense of information that they encounter throughout a diverse media landscape beyond fact-checking specific claims.

Individuals’ choices in how they apply media informational reasoning and on the media topics to which they apply them are reflective of their social identities (Keener, 2018). These choices consist of an intersection of the individual’s social identities and their media informational reasoning processes which be characterized as a form of motivated reasoning, explained in the following paragraph. Motivated reasoning is reasoning that is influenced by the reasoner’s conscious and unconscious biases because individuals “generally *reason* their way to conclusions they favor, with their preferences influencing the way evidence is gathered, arguments are processed, and memories of past experience are recalled” (Epley & Gilovich, 2016, p. 133). Individuals are motivated to make judgments about information based on motivation for accuracy or in a direction that reflects their prior beliefs, experiences, or social identity, judgements which help them make sense of their world (Kunda, 1990; Taber & Lodge, 2006). Individuals’ social identities and their motivated reasoning processes influence how they reason with the data or claims that they encounter within various informational media such as the legacy press, social media, and television news.

My recently conducted pilot study indicated that young people believed their social identities and positionality have a substantial effect on their reasoning process (Keener, 2018). This process was evident in the participants chose to reason with information or stories that interested them and in which they possessed some prior knowledge. I found that the participants usually engaged in procedures such as fact-checking when subjects were of interest to them and when they possessed some prior knowledge of the subject matter (Keener, 2018). All of these procedures could be linked to the young people's identities, which drove their motivated reasoning processes. I called this phenomenon "motivated interest." This finding differed from McGrew et al. (2018) and Kahne and Bowyer (2017) who both judged young people's informational reasoning processes on the basis of applied skills on a range from novice to expert rather than examining how those individuals applied their media informational reasoning in their daily lives.

I hypothesized in my dissertation proposal that the university students in this study would describe their understanding of the intersection of their social identities and media informational reasoning processes in ways that reflect of their level of personal cultural identity development. Cultural identity can be defined as the formation of one's identity as it relates to the adoption of beliefs and practices of multiple cultural communities (Jensen, 2003; Jensen, Arnett, & McKenzie, 2011). The association between the practices and beliefs of a cultural community was described as a 'custom-complex' by Whiting and Child (1953). Schweder et al. (1998) stated that a custom complex is built upon the "customary practice and of the beliefs, values, sanctions, rules, motives, and satisfactions associated with it" (p. 872). The formulation of cultural identity development is based on how individuals make choices about the cultures and their custom complex with which they identify (Jensen, 2003; Jensen et al., 2011). Cultural identity development is similar to Erickson's (1968) adolescent identity development in that it

emphasizes individuals' attachment to ideology, love, and work in order to formulate their sense of self within a specific cultural community. However, cultural identity development focuses more on how individuals make choices about the culture or cultures in which they identify. Jensen et al. (2011) described the cultural identity development process as "deciding on the cultural community to which one belongs" (p. 286).

The concept of cultural identity development overlaps with ethnic identity development because both processes focus on the nature and characteristics of an individual's group attachments. However, the research on ethnic identity development centers more on how individuals from specific minority groups navigate their group identifications as it relates to the ethnic and racial power hierarchies that have been constructed in modern societies (Jensen et al., 2011; Phinney, 1992). Since the participants in this study were a diverse group of students, cultural identity development was a more appropriate concept for this context. Those students who describe greater levels of cultural identity development may be able to explain better and understand how they think their other social identities influence their online reasoning processes than students who have experienced weak cultural identity development. However, I anticipated that most of the participants this study would be able to describe their online reasoning processes on subjects that are related to their identity-driven interests, processes which are related to motivated reasoning.

The Study and Research Questions

This qualitative study was based on a series of semi-structured interviews and elicitation techniques. Qualitative methods are appropriate for examining how university students describe their media informational reasoning processes because interviews allowed me to answer questions that large-scale qualitative elicitation work, experimental studies, or surveys could not (Hodgin & Kahne, 2018; Kahne & Bowyer, 2017; McGrew et al., 2018). In particular,

qualitative interviews enabled me to find how university students describe and understand how their perceptions of how their social identities influenced their use of media informational reasoning in their daily lives.

In order to examine how university students describe and understand how their perceptions of how their social identities influenced their the media informational reasoning process I applied a basic qualitative study. The term “basic qualitative research” was developed by Merriman (2009) to describe how those participating in the research understand and experience the phenomenon being studied from a constructivist perspective. Constructivist meaning that reality is not discovered but constructed by individuals. The purpose of using a basic qualitative study it to study how individuals build their reality as they interact with experiences in their broader social world, how they describe and interpret those experiences, and how they attribute meaning to those experiences (Merriam, 2009).

To examine how university students describe their use of media informational reasoning and how they perceived their social identities influenced that process, I conducted purposely sampled semi-structured interviews. A purposeful sample is completed with the “assumption that the investigator wants to discover, understand and gain insight and therefore must select a sample from which the most can be learned” (Merriam & Tisdell, 2016, p. 96). The protocols for semi-structured interviews are preplanned but give the researcher freedom to change the order of certain questions in order to “respond to the situation at hand, to the emerging worldview of the respondent, and to new ideas on the topic” (Merriam & Tisdell, 2016, p. 111). In addition to the semi-structured interviews, I used several elicitation techniques in this study to gather data. Elicitation techniques are data-gathering methods that allow the researcher to apply “visual, verbal, or written stimuli to encourage participants to talk about their ideas” (Barton, 2015, p. 179).

The purpose of this study was to examine how university students understand and describe how they perceived their social identities intersect with their media informational reasoning processes. The central research questions that guided this study were:

- How do university students describe their application of media informational reasoning in their daily lives and what are they using it for?
- How do university students describe their perceptions of the way that their social identities influence their media informational reasoning processes?

Conceptual Framework

The conceptual framework used in this study was based on social identity theory, its relationship with media informational reasoning, and how those two concepts combine to drive an individual's motivated reasoning process. I described in this study how the intersection of social identity and media informational reasoning helps university students create a frame of reference for how they make sense of the world around them through motivated reasoning, and how they describe and understand that process in their daily lives. This relationship is depicted in Figure 1.1, which shows how social identity and media informational reasoning are part of a process that drives motivated reasoning. Each of the conceptual components is explained next.

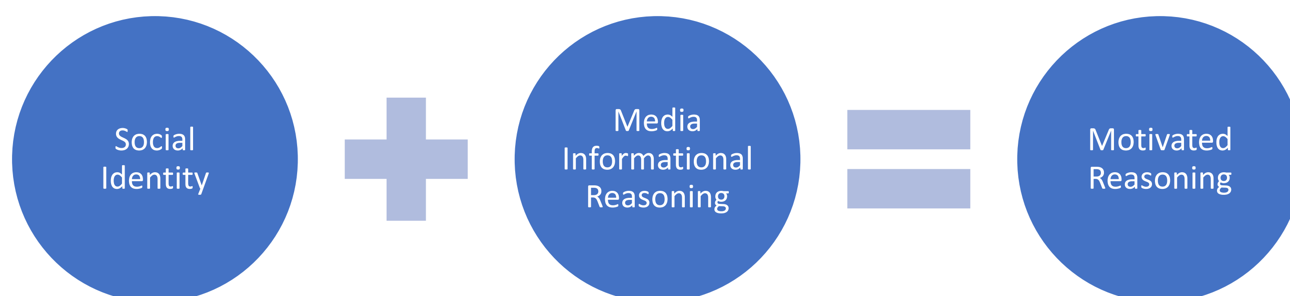

Figure 1.1 The intersection of social identity with motivated reasoning.

Social Identity

The principal conceptual framework for this study was based on social identity theory (Hogg, 2016; Tajfel, 1982). The theory enabled me to explore how university students describe and understand how their media informational processes intersect with their social identities to drive their motivated reasoning process. To achieve this research goal, it was important to find out what social identities were the most salient to the participants, e.g., ethnicity, race, culture, gender, political, or professional identity. Given that so much of the research on how social identity is applied as a lens to help people make sense of information has focused on political orientation (Hogg, 2016; Taber & Lodge, 2006), I asked questions about how social identities such as ethnicity, race, gender, and culture combine with participants' media informational reasoning processes to drive their motivated reasoning process.

Individuals' identities influence how they engage with the media and reason with the information they find within it. Therefore, it was necessary to examine and understand how these social identities intersect with an individuals' media informational reasoning processes and how that process drives their motivated reasoning. Social identity theory and its emphasis on creating an individual's identity through group membership helped me to explain this dynamic. Social identity theory also enabled me to describe how the participants understand how their group identities intersect with their media informational reasoning process. However, it did not completely explain how individuals reason with the information they encounter in the media. Social identity theory may explain how group identities influence media choices or shape reactions. I discuss this reasoning process in the next sections on media informational reasoning and motivated reasoning.

Two concepts, positionality and cultural identity development, were central to helping me explain how university students' social identities are an important part of their motivated

reasoning process. Positionality can be defined as the intersection of a person's views and values, along with how their spatial and temporal locations mediate how they view the world (Tetreault, 2016). It is linked to individuals' group identifications and is a large part of their social identity.

Positionality is a concept that arose from postmodern feminist scholarship by authors such as Code (1991), Crenshaw (1991), Harding (1991), and Tetreault (2016). It was developed in response to the debate about the supposed objective nature of knowledge and the processes by which it is constructed. The positivist perspective on knowledge construction is that knowledge is not influenced by the positionality of its creators and therefore is inherently objective (Banks, 1993). The construction of knowledge is a process whereby the values, interests, cultures, politics, and positionalities of its creators are embedded in the type of knowledge they create (Code, 1991). The postmodern epistemological perspective is that "knowledge is socially constructed and reflects human interests, values, and actions" (Banks, 1993, p. 5). Knowledge in this sense is how one "explains and interprets reality" (Banks, 1993, p. 5). Banks (1993) stated, "the knowledge that people create is heavily influenced by their interpretations of their experiences and their positions within particular social, economic, and political systems and structures of a society" (p. 5).

According to Banks (1993), many researchers in the Western empirical tradition "are unaware of how their personal experiences and positions within society influence the knowledge they produce" (p. 5). Therefore, researchers' positionalities are key components in how they construct knowledge. Postmodern feminist scholars such as Harding (1991) and Code (1991) asserted that identifying one's positionality, ideological perspectives, and normative viewpoints are important steps in highlighting bias in scholarship so that these may be reduced in a researcher's findings and conclusions. This view on identifying one's positionality and bias

stands in contrast to the Western empirical tradition that treats objective knowledge as value-free and, therefore, not influenced by the values, interests, politics, and positions of its creators.

Code (1991) argued that scholars must "discover how subjective and objective conditions together produce knowledge, values, and epistemology… Knowledge is neither value-free nor value-neutral; the process that produces it are themselves value-laden; these values are open to evaluation" (p. 70). Thus, people need to ask, "Out of whose subjectivity has this ideal [of objectivity] grown? Whose standpoint, whose values does it represent?" (Code, 1991, p. 70). These questions are at the heart of what the Frankfurt School termed the sociology of knowledge, or knowledge construction (Mannheim, 1936).

An important question for my study was the relationship between positionality and how university students reason through information that they encounter on the Internet. It is known that positionality has a large influence on how people reason with information (Pariser, 2011). Scholarship has examined how positionality influences academic research (Code, 1991; Banks, 1998; Milner, 2007). However, positionality also affects how people interpret the world around them because it is a frame of reference for making interpretations. A male student from the Chinese mainland in my pilot study stated that after moving to the United States for college, he began to think that Taiwan was an independent nation (Keener, 2018). According to the participant, this change in thought was a significant shift from how many Chinese people view Taiwan's political status. He stated that after being exposed to the more diverse media perspectives that are available in the United States as compared to China, and in speaking with some Taiwanese students, he changed his opinion about the country's political status. In essence, he said that his U.S. context and access to new information enabled him to change his view of Taiwan's nationhood status. The change in his positionality and location enabled him to change his opinion.

The concept of positionality helped me explain how the participants' frames of reference—that can be tied to their various identities or immigration status—can help them make sense of the information that they come across on the Internet. Another participant in the pilot study held a strong identity related to medicine and science (Keener, 2018). He wanted to go to medical school after he graduated and stated that his medical and scientific frame of reference was one of the most important lenses through which he viewed information. He was far more likely to fact-check information about science and medicine than about politics or economics. He claimed to have a lot of scientific knowledge and therefore was more comfortable fact-checking science and medical information that he encountered online as opposed to political or economic information. His position as a biology and chemistry major, which was directly tied to his social identity, served as a frame of reference for how he saw the world around him. Positionality, therefore, helped to explain how the participants understand the ways in which their social identities intersect with their frames of reference and how they apply them with their media informational reasoning processes to drive their motivated reasoning process.

As stated in the previous section, cultural identity is the portion of an individual's social identity that is based on their self-concept of membership in a culture or cultures and how that membership is comprised of the adoption of beliefs and practices of certain culture (Jensen, 2003; Jensen et al., 2011). This concept helped explain how the participants described their own cultural identity development and how they perceive its influence on their media informational reasoning. I chose to focus on cultural identity development because of its salience to individuals' social identity. Also, there seems to be a link between the participants' cultural identity development, or lack thereof, and their ability to describe and understand how their identities provide lenses for how they make sense of media or internet information.

Media Informational Reasoning

A secondary framework for the study was ‘media informational reasoning,’ particularly how media informational reasoning interacts with social identity theory. ‘Media informational reasoning’ can be defined as the complex cognitive process that people undergo when they attempt to make sense of information in the media such as data on climate change or fact-checking and cross-referencing a specific news story. The concept of media informational reasoning was developed in my pilot study (Keener, 2018) and was used to highlight my participants’ fact-checking and reasoning processes in this study. The term media informational reasoning also incorporates a broader range of reasoning behaviors than civic online reasoning, which refers mainly to fact-checking procedures.

Media informational reasoning is the process by which an individual interacts with a range of media sources that may corroborate their previously held perspective or challenge it. In addition, the process describes fact-checking, which is checking the veracity of claims and information across multiple sources. Media informational reasoning describes how individuals examine a multitude of sources such as traditional press sources like *The New York Times* or informational media such as Facebook or Reddit. This theory of the reasoning process does not refer to high level statistical or data reasoning such as analyzing graphs or scientific data, rather it illuminates how individuals reason with the media information they encounter in their everyday lives.

Media informational reasoning is a more rigorous cognitive process than just reading the news or watching it on television. Individuals engage with the media in a basic sense of reading or watching the news or participating in a discourse about it. However, they apply media informational reasoning when they engage in a deeper process of fact-checking, cross-referencing, and making sense of the issue. McGrew et al. (2018) labeled this process “civic online reasoning”, but I use media informational reasoning because not all individuals apply it

online. Some people still prefer to watch the news or read traditional newspapers (Gottfried & Shearer, 2017).

Motivated Reasoning

Individuals use motivated reasoning to make sense of the world around them (Kunda, 1990; Kahan, 2013). In a highly contentious media environment whereby Internet access, 24-hour cable news, and social media enables individuals to construct their own realities based on their social identities and motivated reasoning processes, the need to examine how young people describe their use of this process has become important. The concept of motivated reasoning helped explain this process because it provides a link between an individual's social identities and how they reason with information they encounter in various media. That link can be described as what individuals are choosing to reason with and how are they going about it in their daily lives.

Motivated reasoning helped me explain my participants' reasoning process as a combination of their social identities and how they apply media informational reasoning. I did not seek to test how quickly the participants demonstrated hot cognition or the levels of cognitive dissonance as some researchers have done (Lodge & Taber, 2005; Taber & Lodge, 2006). Rather, I described how university students explain and understand this process for themselves as it relates to their social identities and media informational reasoning process. I was interested primarily in how the participants described their reasoning process rather than what conclusions they were forming. The theory of motivated reasoning helped me take a discussion of fact-checking procedures and allowed me to describe how their identities influence that process. It is the reasoning aspect of motivated reasoning that is the most pertinent part of this theory for my dissertation.

Summary

This chapter focused on the impetus and issues within media informational reasoning. It discussed recent educational research by Kahne and Bowyer (2017) and McGrew et al. (2018) and how my study filled gaps in the research by focusing on how university students described their media informational reasoning processes and how they perceived their social identities as influencing that process. I provided a description of the research questions and study design that were used to address this gap on how students reason with information on the Internet and discussed the conceptual framework. The conceptual framework contained aspects of social identity, especially positionality and cultural identity development, media informational reasoning, and motivated reasoning. The following chapter will describe the literature that was reviewed for this study.

CHAPTER 2

LITERATURE REVIEW

This chapter reviews research and theory regarding social identity, motivated reasoning and the study problem. First, I provide a short historical overview of social identity theory. I then discuss how social identity has shaped the information consumption of individuals in the digital age. Next, I describe how social identity theory has been used in research regarding political ideology and how individuals use their social identities to make sense of information. I then review research related to motivated reasoning. Finally, I review research literature related to the phenomenon underpinning this study: how social identities and group memberships influence responses to scientific and political information.

An Overview of Social Identity Theory

Social identity theory originated at the University of Bristol in the late 1960s and 70s when Henri Tajfel merged his self-categorization and social perception research with his desire to perceive how intergroup conflict, discrimination, and prejudice occur in society (Hogg, 2016; Tajfel, 1970, 1982). Tajfel was Polish and Jewish, and his family perished in the Holocaust. He was a student at the Sorbonne in Paris and enlisted in the French Army at the start of World War II. He was later captured by the Nazis. However, the Nazis did not classify him as Jewish and placed him in a prisoner-of-war camp, a placement which enabled him to survive the Holocaust. This event of social categorization had an enormous effect on Tajfel and his research (Hogg, 2016). He sought to examine and understand the group dynamics of racism, prejudice, and intergroup conflict that were driven as a group phenomenon as opposed to individual actions. Tajfel saw group actions as reflexively interacting with their members' beliefs about society, themselves, and their place within it. He was interested in how the immediate context influenced individual behavior as mediated through intergroup relations.

Tajfel's work on intergroup relations and social identity theory emerged out of social psychologists' struggles to explain the Nazi regime's behavior during the war (Hogg, 2016). For example, Adorno, Frenkel-Brunswik, Levinson, and Sanford (1950) claimed that Germany's authoritarian parenting styles created individuals with personalities that leaned towards authoritarianism. However, this Freudian explanation of parenting and how it shapes future behavior did little to explain the scale of violence that arose out of the Nazi regime (Billig, 1976).

Later researchers in the early 1970s asserted that personality and family upbringing had a small role in causing group violence and instead argued that intergroup tensions that were inflamed by the Nazis were much more significant factors in the violence (Tajfel, Billig, Bundy, & Flament, 1971; Diehl, 1990; Tajfel, 1970,1972). Browning (1992), the historian, confirmed this hypothesis. Browning described in *Ordinary Men* how groupthink and social pressure were what led the vast majority of people to participate in the Holocaust.

Tajfel and his colleagues developed the minimal group paradigm in response to their disagreements regarding the scholarship on the causes of the Holocaust (Tajfel, 1970, 1972; Tajfel, Billig, Bundy, & Flament, 1971). The minimal group paradigm theory is a psychological paradigm that states individuals will attach strong affect to group membership and demonstrate competitive intergroup behaviors with the slightest provocation (Diehl, 1990). Doise et al. (1972), in their research on the minimal group paradigm, found that even the future anticipation of competitive interaction between groups led to discrimination between groups, while the anticipation of cooperative interaction yielded no discriminatory behavior. The minimal group paradigm theory was developed in response to the debate about the power of intergroup conflict and its effect on prejudice and racism. It would later become known as 'social identity theory' by the late 1970s and early 1980s (Hogg, 2016; Diehl, 1990).

Hogg, Terry, and White (1995) stated that "social identity theory is a social psychological theory that sets out to explain group processes and intergroup relations" (p. 260). It is a theory that puts its "major theoretical emphasis on a multifaceted and dynamic self that mediates the relationship between social structure and individual behavior" (Hogg et al., 1995, p. 260). Tajfel described the theory as an "individual's knowledge that he belongs to certain social groups together with some emotional and value significance to him of this group membership" (Tajfel, 1972, p. 292).

Social identity theory allows researchers to build on and describe how the group membership of individuals influences their social behaviors (Hogg et al., 1995). The theory views identity as an ever-changing and dynamic construct that is reflective of the present in- and out-group situation that an individual occupies. Social identities are "responsive to immediate contextual factors: different contexts may prescribe different contextually relevant behaviors contingent on the same social identity" (Hogg et al., 1995, p. 265).

Social identity, therefore, is comprised of individuals' self-concept related to their group memberships (Diehl, 1990). Tajfel and Turner (1979) developed three core principles to social identity: (a) Individuals are naturally inclined to seek a positive social identity; (b) an individual's positive social identity is built upon favorable comparisons between their in-groups and select out-groups, and (c) individuals will seek to leave their current group and join a different and distinct group that is more positive to them or they will seek to make their group "more positively distinct" when their present social identity is unsatisfactory (Diehl, 1990, p. 269).

Initially, two main types of research emerged from social identity theory. The first was work on intergroup relations (Brewer & Campbell, 1976; Hogg, 2016; Hogg & Abrams, 1988; Tajfel & Turner, 1979). The second body of research that emerged from social identity theory

was self-categorization research (Abrams & Hogg, 1990; Hogg et al., 1995; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). I now briefly summarize both social identity theory paradigms.

Regarding intergroup relations and social identity theory, Hogg et al. (1995) stated that "social identity theory tries to specify the effects of salient social identity on people's perceptions of and conduct toward others, particularly out-group others" (p. 264). In other words, social identity researchers and theorists focus on the nature of conflict and cooperation in intergroup contexts, and how individual's individual group identities that are more salient influence that process (Hogg, 2016). Identity salience is the hierarchical and dynamic nature of group identities, which can change as a result of a variety of contextual factors. The identities that are the most important to individuals, or ranked higher in an individuals' identity hierarchy, will produce a greater effect on their behavior and therefore are more salient to the persons. The most salient group memberships are large-scale memberships such as race, ethnicity, nationality, politics, gender, and sexual identity (Hogg, 2016). Social identity research focuses on the dynamic social relationships among these group memberships.

Researchers such as Brewer and Campbell (1976) have found that individuals generally favor their in-group. Higher status groups will insist on maintaining their dominance or perceived superiority, while lower status groups will attempt to rid themselves of the social stigma placed on them by the higher status groups and promote themselves and their value to society.

Social categorization theory is a development within social identity research that expands the cognitive processes of group categorization as a cognitive foundation for group behavior (Abrams & Hogg, 1990; Hogg et al., 1995; Turner, Hogg, Oakes, Reicher, & Whetherell, 1987). This theory suggests that individuals categorize themselves and others because it "highlights

intergroup discontinuities, ultimately renders experience of the world subjectively meaningful, and identifies those aspects which are relevant to action in a particular context" (Hogg et al., 1995, p. 261). Individuals categorize themselves and others in ways that focus on what they see as either similarities or differences against a group of socially constructed group norms. These categories then become prototypes for the group, which can be defined as a "subjective representation of the defining attributes (e.g., beliefs, attitudes, behaviors) of a social category, which is actively constructed relevant social information in the immediate or more enduring interactive context" (Hogg et al., 1995, p. 261). Individuals often have access to this constructed social information because social group members often congregate in the same physical spaces. Abrams and Hogg (1990) termed this social construction process as social influence. However, while social groups define themselves as a grouping of individuals who share and construct information, they also define themselves by contrasting themselves with other social groups.

Group members' self-categorization is influenced and changed by how they contrast themselves with other groups in response to changing social contexts (Abrams & Hogg, 1990). This phenomenon is known as 'metacontrast.' Individuals are continually negotiating with themselves, their group norms, and the reflexive action of in-groups and out-groups in ways that allows them to ascribe those norms to themselves as much as the social context will allow (Hogg & Turner, 1987).

More recent research into social identity has demonstrated that, as a result of their self-categorization process, individuals are generally motivated to find positive ideals for self-esteem from their group memberships (Sedikides & Strube, 1997). In other words, individuals highlight their group distinctiveness based on self-categorization because it makes them feel better about themselves. The opposite is also the case. Individuals with weak group identifications have been shown to demonstrate lower levels of self-esteem (Leary & Baumeister, 2000; Rubin &

Hewstone, 1998). Hogg (2007, 2012) also found that individuals who possessed uncertainty regarding their social identity were strongly motivated to find a positive version of their social identity and that the lack of a positive or uncertain social identity can have adverse effects. An example of this lack is the pain that many Jewish people felt at the loss of their distinctive group attributes in the process of becoming White in the United States after World War II (Brodkin, 2000). Social categorization is a cognitive tool that individuals use to reduce the adverse effects produced by either negative social identities or uncertain ones (Hogg, 2016).

What is of relevance to the present study is how researches have used the in-group and out-group cognitive function of social identity theory to explain how individuals make judgments about information based on that in-group or out-group orientation. A significant amount of research has been done that concerns political ideology and social identity (e.g. Iyengar, Sood, & Lelkes, 2012; Levitin & Miller, 1979; Mason, 2015, 2018), how individuals use their social identity to make sense of scientific information (Lewandowsky et al., 2013; Nauroth, Gollwitzer, Bender, & Rothmund, 2014), or political information (Cohen, 2003). The next section of this chapter will provide a summary of these different research applications of social identity theory. However, I will first describe how social identity shapes individual's media consumption and interaction with information in the digital age.

Social Identity and its Influence on Individuals' Media Consumption

Social identity theory is based on the concept that "social categorization is both a natural cognitive process and functional for adaptation in a complex world" (Stephan & Stephan, 2004, p. 783). Social categorization is a fundamental part of how individuals develop their identities. Once formed, individuals' identities shape how they respond to new information based on their political ideology, worldview, value systems, and in-group affiliations (Cohen, 2003; Jost, Nosek, & Gosling, 2008). Individuals' social identities also influence their belief in the validity

of scientific information (Lewandowsky et al., 2013; Nauroth et al., 2014). Their social identities, in addition, influence their news choices, and these news choices have a direct effect on how people determine whether information within those news choices is true or accurate (Wardle & Derakhshan, 2017). The process of how individuals interpret information through their social identity is influenced by the fact that most now access news through social media. Social media are a problematic news access point because they display news choices based on individuals' search histories and, therefore, often reflect their various identities and political leanings (Pariser, 2011). As a result, people are unlikely to encounter diverging news perspectives on social media. This recent epistemological development has a substantial effect on how individuals engage with the media, reason with information, and form shared realities because of the large amount of media misinformation that they encounter (Bennett & Livingston, 2018). Media misinformation can be defined as purposefully misleading information that has specific political aims by those disseminating it. The term is interchangeable with "fake news" (Wardle & Derakhshan, 2017).

Individuals are increasingly getting their information from politically driven news sources including right-wing outlets such as Fox News or MSNBC, social media sites such as Reddit and Facebook, and more politically radical information outlets such as Info Wars (Pariser, 2011). Individuals are choosing these sources based on their social identities and thereby making judgments about information regarding controversial issues they encounter in these polarized sources (Wardle & Derakhshan, 2017).

Individuals are also much more likely to share information that has been recommended to them from a person in their social group rather than read traditional news sources such as print news (Messing & Westwood, 2014). This news selection process has a negative effect on democracies because different population groups develop separate truths and realities that shape

their choices and opinions about important societal issues such as climate change and political elections. Research by Silverman (2016) indicated that individuals are much more likely to click on, view, and share fake news or media misinformation than mainstream news stories. Fake news stories had over one million more shares on social media than mainstream news stories in the lead up to the 2016 U.S. presidential election (Silverman, 2016).

Twitter, Facebook, and Reddit are now the primary sites where individuals encounter and engage with media information. Gottfried and Shearer (2017) estimated that 78% of the U.S. population between the ages of 18 and 49 get their news from social media with the numbers skewing higher in the younger portion of the demographic. Sites such as Facebook, Twitter, and Google customize individuals' news content based on their data history, thereby creating a situation in which they are less likely to encounter diverging viewpoints (Fuchs & Fischer, 2016). The customizing of news content also makes individuals more likely to focus on the story they are presently viewing rather than the source from which it originates, an outcome that paves the way increasingly for them to examine information from less reputable sources (Messing & Westwood, 2014). Individuals' growing tendency to view information online from less reputable sources is significant because young people increasingly access their news information through social media (Gottfried & Shearer, 2017).

How individuals engage with the media though the lens of their social identity is creating an epistemological divide in society. An epistemological divide can be described as two or more population groups that view information or truth in increasingly divergent ways. This epistemological divide is directly linked to how social identities influence an individual's reaction to and interpretation of information. The growing epistemological divide in society can also be seen in the ever-increasing ideological divide between liberals and conservatives in the

U.S., which social identity theory can help explain (Mason, 2018). The next section describes the application of social identity theory and political ideology.

Social Identity, Ideology, and Informational Reasoning

Much of the research on how people's social identities influence their reasoning processes comes from psychology, political science, and communications research. The two main foci of this research are how individuals' identities and biases shape their political ideology (Levitin & Miller, 1979; Mason, 2015, 2018), and how they respond to information based on their social identities (Lewandowsky et al., 2013; Nauroth et al., 2014). There are two separate research directions to these investigations. The first addresses how individuals respond to scientific and political information. The second addresses how people use their social identities to mediate information regarding climate change. This section provides a brief review of these two research categories, including the fields from which scholarship originates, the methods used, the main findings reached, and elements missing from the scholarship. Then I describe how this dissertation study can fill that gap.

Social Identity, Ideology, and Political Affiliation

Much evidence indicates a growing political divide between Republicans and Democrats (Iyengar & Westwood, 2015; Mason, 2015; Mason, 2018). While this political divide is increasing, Americans have held the same policy beliefs in their respective political groups for decades (Converse, 1964; Kinder & Kamloe, 2017). Pernicious ideological rhetoric has increased over the last decade, in part due to Donald Trump's divisive campaign and subsequent presidency (Kinder & Kamloe, 2017; Mason, 2018). This divisive political rhetoric—according to Mason (2018)—is centered on notions of liberals versus conservatives and is driven by identity groupings rather than specific policies.

The values and attitudes towards specific government policies are not required concepts for identity development (Mason, 2018). All that is needed for identity to develop in a polarized environment is a notion of exclusion and inclusion (Brewer, 2001). Mason's (2018) survey analysis from the field of political science indicated that in the U.S., individuals are not so much divided by their differing ideological notions of appropriate government action and policy, but rather by their in-group and out-group judgments of others as being either a liberal or conservative. Mason stated that ideology "can be understood separately as a set of issue positions and an identity, and…that it is the 'otherness' of ideological opponents, more than issue-based disagreement that drives liberal-versus-conservative rancor" (Mason, 2018, p. 281). In short, Mason claimed that ideology is not just a set of beliefs but a means of creating in-and out-group lenses that drive the United States' increasing political divide.

The body of research on people's political ideology, especially in political science, has traditionally viewed ideology as "a broad worldview represented by a set of issue positions that can be consistent with each other to varying degrees, and this consistency generally has been understood to form along one dimension—liberal to conservative, left to right, or pro-government to anti-government" (Mason, 2018, p. 282). Mason termed this description of ideology as "issue-based ideology" (Mason, 2018, p. 282). However, the second part of research related to ideology has focused on how individuals' social identities affect their ideology, which is the main concern of this section. I will now describe and discuss selected research related to how individual's social identities influence their political worldview.

The research that views part of ideology as related to social identity began with Levitin and Miller in 1979. Levitin and Miller's (1979) survey analysis from the field of political science, examined how liberals and conservatives apply labels to themselves along with political objects. They sought to understand how individuals' in-group and out-group political labeling

shaped how they perceived the American political environment. Levitin and Miller asked their respondents to locate themselves on a political scale and then asked them in interviews to state the issues that they believed were related to their political identity. They found that "Americans use ideological labels in ways that suggest only a partial understanding of the terms 'liberal' and 'conservative' and their implications" (Levitin & Miller, 1979, p. 752). Levitin and Miller also found that labeling an issue or policy as liberal or conservative had a considerable influence on how their participants voted, regardless of whether the labeling was accurate. They concluded that ideological labels served as a heuristic for those who sought to make sense of a complicated political landscape, and the way they used those labels were linked to their political identities. A heuristic is a cognitive process that allows a person to reach a conclusion in the easiest way possible and often leads to incorrect assumptions and determinations. What is important to keep in mind for the current study is that individuals' group identities are among the more potent lenses for how they make sense of information.

Recent research on ideology and political identity has confirmed that people often use the terms liberal or conservative as a heuristic to make political judgments about specific issues regardless of whether or not that liberal or conservative identity is attached to any particular policy (Malka & Lelkes, 2010; Mason, 2018). Mason (2018) termed this phenomenon "identity-based ideology" (p. 282). Malka and Lelkes (2010) called it "ideological identity" in their political science research on political ideology (p. 161). They found that individuals' self-identification as liberal or conservative was the most accurate predictor for how they would respond to political cues. The authors made this claim based on the analysis of two large surveys that tested how identity-based ideology influenced how self-identified liberals and conservatives responded to political cues regarding the topics of farm subsidies and the invasion of Iraq. Malka and Lelkes posited that individuals' ideological identity served as a lens to make sense of the

world around them in a way that was consistent with the socially prescribed facets of either a conservative or liberal ideological identity. Ideological identity is based on self-categorization and is rooted in a person's group experiences as it related to discursive political developments (Krosnick, 1990) and familial socialization (Jennings, Stoker, & Bowers, 2009; Niemi & Jennings, 1992).

Research on self-categorization theory has shown that persons' identities become more socially focused as a result of social conflict (Malka & Lelkes, 2010; Turner, Oakes, Haslam, & McGarty, 1994). Individuals' increasing ideological perspectives as a result of conflict may explain why there has been a growing ideological divide in the wake of the divisive 2016 U.S. presidential election. What is important to note here is that ideological identity grows in response to conflict and therefore takes a more prominent role in how individuals make sense of the world around them. Evidence of how individuals' group identities influence their judgments can be seen in the growing body of research on how individuals respond to identity-matched sources (Cohen, 2003).

Iyengar, Sood, and Lelkes (2012) found in their political science survey analysis that liberals' and conservatives' growing dislike of each other emerged from in- and out-group judgments of the other party rather than policy disagreements. They used an analysis of six national surveys from the United States and Britain and determined that negative political messaging and the changing nature of political campaigns in the digital age helped drive individual's in- and out-group political judgments. A related study by Huddy, Mason, and Aarøe (2015) showed that a stronger partisan political identity is a more significant effect on individuals' participation in political campaigns than their thoughts on specific policy. Indeed, individuals' group attachments and how those memberships mediate their judgments about the world may be more powerful than their ability to reason through a specific policy or piece of

information because those attachments emotionally transcend rational thought (Achen & Bartells, 2017).

There is evidence that society's relationship to and use of social media is exacerbating the ideological division within it, a division which is often driven by group memberships. Messing and Westwood (2014), in a study of social media use, found people were much more likely to share information received from persons in their social group, regardless of the original source or veracity of the information, than they were to share information they had gathered on their own. Their group memberships, which can now be more distinctively identified online, were found to be the biggest factor in how individuals made sense of and shared information on social media. The increasing propensity of individuals to share information on social media from people they know regardless of the source or veracity of that information is similar to the phenomenon of individuals using their social identities to make sense of information on the Internet. Messing and Westwood claimed the problem of how individuals share information on the Internet is primarily driven by group-based ideology.

What is missing from the body of research on ideology and social identity is qualitative studies that ask individuals to explain this process in their own words. The research that I reviewed for this study was primarily quantitative or experimental. Therefore, my dissertation study will shed some light on how university students understand and perceive how their social identities influence their reasoning process. However, while I asked my participants some questions about their political orientation and how it shapes their reasoning process, it was not the main focus of my interviews because I asked more questions about ethnicity, culture, and gender than about politics and political ideology. One of the reasons that I focused on other parts of participants' social identities such as ethnicity, culture, and gender was because so much of

the research that was reviewed omitted those variables of social identity, even though ethnicity, culture, and gender are highly salient aspects of the social identity of individuals.

Group Identities Influence on Individuals' Responses to Scientific and Political Information

> I can tell you, our grandchildren will laugh at those who predicted global warming. We'll be in global cooling by then, if the Lord hasn't returned. I don't believe a moment of it. The whole thing is created to destroy America's free enterprise system and our economic stability.
>
> —Reverend Jerry Falwell, 2002 (Corn, 2002)

The vignette above from the Revered Jerry Falwell is an example of how group membership can serve as a lens that distorts a person's view of reality or interpretation of information. Falwell is a conservative Christian minister and the president of Liberty University, a conservative Christian higher education institution (Liberty University, n.d.). The quote represents an intersection of salient group memberships for Falwell. First, he expressed his in-group sentiment of rejecting anthropogenic climate change, then he demonstrated his Christian principles, and then he stated a free market ideology that has been shown to have a considerable influence on how people make judgments about climate change information (Heath & Gifford, 2006; Lewandowsky et al., 2013). Falwell showed how three salient portions of his identity intersect in a way that shaped his opinions about the origins of climate change. He made an out-group judgment about what others—or individuals not in his particular in-group—are attempting to do by promoting their climate change agenda, which he claimed will harm the United States. This example of how persons' social identities can intersect to enable them to make a judgment

about a particular topic or piece of information is important because it shows how powerful a lens that an individual's social identity can be.

Individuals' group memberships are a strong force in shaping and influencing how they respond to information (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). Most of the research about how group memberships or social identities affect people's informational responses have come from the field of psychology and are predominantly quantitative. Information in this paradigm has often described how individuals make sense of scientific information such as climate change data (Lewandowsky et al., 2013; McCright & Dunlap, 2011, 2016), how they form attitudes towards science research in general (Morton, Haslam, Postmes, & Ryan, 2006), and how they respond to out-group information that challenges their in-group (Nauroth et al., 2014). This section will first describe selected research on how individuals react to information about climate change through their social identities and then will detail works that highlight how persons respond to scientific and political information through their group membership lenses. The scholarship covered in this section is not comprehensive but rather is meant to highlight two different research foci within this paradigm.

Individuals not only respond to political information based on their group memberships, but also to scientific knowledge (Jost, Banaji & Nosek, 2004; Lewandowsky et al., 2013). One of the most studied topics in this body of research is how individuals respond to and judge climate change information (Dunlap & McCright, 2008; Feygina, Jost, & Goldsmith, 2010; Kahan, 2010; McCright & Dunlap, 2011, 2016). The main reasons that so much scholarship has been devoted to this topic are that people's views on the anthropogenic origins of climate change have dramatically changed over the last 25 years, and that predictions made by many climate scientists about the future of the planet are becoming more dire. In 1993, there was a sizeable societal consensus that climate change was a human-caused phenomenon. However, by 2008, American

beliefs on the anthropogenic origins of climate change were split along political party lines, with Democrats more likely to believe that humans caused climate change and Republicans less likely to think so (McCright & Dunlap, 2016).

The divergence of thought on the origins of climate change mirrors the growing political divide in the United States and is as an example of how in the digital age individuals are increasingly making judgments about information through the lens of their social identities. Heath and Gifford's (2006) psychological survey analysis (n=185), for example, found an association between individuals who professed a free-market oriented social identity and those who deny anthropogenic climate change. The authors used a free market ideology as a frame for assessing people's thoughts on climate change because scholars such as Shrivastava (1995) and Axelrod and Suedfeld (1995) have argued that free-market based capitalism is the driving force that causes global warming. Heath and Gifford (2006) determined from their survey that people who deny climate change while maintaining a free-market identity demonstrated a degree of "environmental apathy" (p. 48).

Lewandowsky et al. (2013) used a different approach in their psychological survey analysis than Heath and Gifford (2006). They followed visitors to climate denial blogs and assessed their interpretations of anthropogenic climate change to determine if a connection exists between climate change denial and a propensity to believe in conspiracy theories. Some of the conspiracy theories that the researchers highlighted were whether or not NASA faked the moon landing or whether the FBI was behind Martin Luther King Jr.'s assassination. This research differed from Heath and Gifford's because it examined a specific in-group rather than a random sample as Heath and Gifford had done. Lewandowsky et al. (2013) found a causal connection between their participants' climate change denials and their predisposition for a free market ideology and conspiracy theories. The authors' finding is an essential contribution to the field of

how individuals' identities shape their responses to and analyses of scientific information because of how strongly their participants indicated that they used their social identities to make sense of climate information. Lewandowsky et al.'s sample size (n = 71) was small, and more research needs to be done to establish a stronger connection between how a person's identities influence their responses to climate change information. Lewandowsky et al. also did not explain why individuals deny climate change. They only discussed how their participants' group affiliations affected how they responded to climate change information.

Feygina, et al., (2010) conducted a series of three randomly sampled surveys totaling 941 participants, analyzing their data through systems justification theory, to investigate why individuals deny the existence of anthropogenic climate change. Systems justification theory maintains that some individuals are less likely to make decisions about information that would influence the status quo in society than information that maintains the status quo (Jost, Banaji, & Nosek, 2004). Individuals use conscious and unconscious reasoning processes to justify the maintenance of a current status quo, especially if they benefit from it. Systems justification theory may explain why White conservative males are more likely to deny climate change than other gender, ethnic, and political groups (McCright & Dunlap, 2011). Another example of systems justification theory is how many people have been shown to reject the structural inequality and injustice that was revealed by the response to Hurricane Katrina because these failures challenged America's status quo (Napier, Mandisodza, Andersen, & Jost, 2006).

Feygina et al.'s (2010) study found that conservatives of both genders were more likely to desire maintenance of the status quo and therefore were more likely to deny climate change and the structural economic changes that would be required to reverse its effects. However, they did also find that women were more likely than men to support actions that would repair the impact of climate change. Feygina et al. determined that individuals with a strong national

identity were more likely to believe that the status quo is fine than were those who possessed a weaker national identity. This finding intersects with conservative politics, national identity, and gender. However, they found that individuals were open to policies that would ameliorate the effect of climate change if politicians framed those policies in a patriotic language. Feygina et al.'s findings demonstrated that politics, national identity, and gender intersect with how individuals make decisions about anthropogenic climate change. The authors' finding is important for the current study because it describes how an individual's multiple identities can intersect to help them make sense of information that is pertinent to their everyday lives.

McCright and Dunlap (2011) examined why White conservative males are more likely to deny the existence of anthropogenic climate change. They analyzed 10 Gallup Polls on individuals' attitudes regarding climate change in their quantitative psychological analysis. They determined that conservative White males were more likely than other gender, ethnic, and political groups to deny the existence of human-caused climate change. This finding is important because it highlights an intersection of political identity and racial identity in a way that other research into how individuals' identities influence their decisions about climate change do not. McCright and Dunlap related their findings to Kahan, Braman, Gastil, Slovic, and Mertz's (2007) identity cognition thesis. The identity cognition thesis states that White males demonstrate a risk skepticism when events or information challenge their cultural identity in a perceived harmful way. In short, Kahan et al. stated that White males often make in-group reactions to activities from perceived out-groups that challenge White men's individuality and hierarchical structures. One factor that challenges those cultural artifacts is climate change and the structural changes needed to remedy the problem (McCright & Dunlap, 2011).

What is missing from this body of research is interview and observational data. The studies that were reviewed in this section were solely based on a quantitative analysis of survey

data. Additional qualitative research is needed that will allow individuals to explain for themselves why they deny climate change and how their identities influence that process.

Non-Climate Change Related Information

Individuals often use heuristics when making judgments about whether to accept or reject new information (Eagly & Chaiken, 1993; Petty & Cacioppo, 1986). People also use heuristics as a means of stereotyping their social reality (Oakes, Haslam, & Turner, 1994). In addition, individuals are not very motivated to make judgments or reason with information that is not important to them (Johnson & Eagly, 1989) or when they do not have the necessary background information to make those judgments (Johnson, 1994). In addition, individuals have also been shown to rely on expert opinions and findings rather than making personal judgments and interpretations about certain information (Petty, Cacioppo, & Schuman, 1983). However, individuals are less likely to accept expert information and opinions in the Digital Age. Nichols (2017) dubbed the process by which individuals are increasingly less likely to value expertise such as scientific findings as ‘the death of expertise.’

As the political and social epistemic divide widens, individuals may be more inclined to make conclusions about information in ways that seek to highlight their social groups more positively (Hewstone, 1990). This process of people being more inclined to choose and accept information that depicts their social group in a positive light has been shown by Tajfel and Turner (1979) to be a result of individuals’ garnering part of their self-esteem from those memberships. For example, Morton et al., (2006) determined through their political psychology study based on two randomly sampled surveys that the participants in the study valued science that valued themselves. The participants with some scientific training were more likely to express an affinity for scientific information that “affirmed the reader’s gender identity” as opposed to scientific information that challenged their gender identity (Morton et al., 2006, p.

823). In addition, the participants with less scientific training showed a positive affect towards scientific research when it conformed to their preconceived notion about what science should be. However, public attitudes toward the importance and validity of scientific information have changed dramatically since Morton et al.'s (2006) article was written according to Nichols (2017).

This reaction to information based on a person's group memberships can be seen in how video gamers have been shown to react strongly to evidence that demonstrates that violent video games can have a negative psychological effect on their users (Nauroth et al., 2014). Nauroth et al. (2014) found in their psychological survey on gamers that a strong correlation exists between gamers' group identity and their angry reaction towards those whom the gamers perceived as having stigmatized them. This out-group reaction was made regardless of the soundness of information presented. The authors' finding on how an in-group responded to what members saw as stigmatizing information from an out-group follows a long line of research into how individuals self-categorize themselves through their social groups and how those groupings becomes a powerful lens for how they view the world around them (e.g., Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). In short, individuals' social memberships influence how they respond to out-group information.

An example of the power of group memberships shaping their responses to out-group information is Cohen's (2003) psychological study that utilized experimental design sought to examine how group identity influenced individuals' reactions towards a specific social welfare policy. He concluded that his participants' political party identity was the overwhelming factor in how they responded to the experiment. Party identity was found to be stronger than the content of the proposed policy and the participants' ideology. Cohen found in his experiments that his

participants' group memberships were the most potent force in shaping how they responded to policy information.

What is missing from the research on how individuals' social identities influence how they make sense of information is a broader discussion of how race, gender, culture, ethnicity, and class shape this process. Other than the research of McCright and Dunlap (2011) and Feygina et al. (2010), the majority of scholarship in this body of research does not focus on other salient aspects of social identity outside of political identity. Most of this research is also quantitative. Qualitative research that utilize interviews and observations would help support or confirm the claims made by many researchers in this field. The current study introduced qualitative data by asking university students how they understand the process of how their social identities influence their media informational reasoning processes. However, my study did not focus on a particular topic such as climate change, or responding to political campaigns, or how my participants respond to and make sense of ethnic and cultural information, or stereotypical information. All of these are important directions for future research. The next section reviews research on motivated reasoning.

Review of Motivated Reasoning Scholarship

Motivated reasoning explains how individuals make sense of information that they encounter in their daily lives, whether it be politics, nightly news, or scientific information. Motivated reasoning is pertinent for this study because it describes the process of how people use their social identities and media informational reasoning processes to make sense of information, which I described in the conceptual framework section in Chapter 1. I review and describe "motivated reasoning", some of the prominent research on the concept, and some of the gaps in the research.

Epley and Gilovich (2016) described motivated reasoning as the process by which individuals reason their way to favored conclusions based on their identity and biases. The concept explains how individuals actively seek to find information or use the information that promotes the conclusion that they prefer (Kunda, 1990). Motivated reasoning research describes why individuals reason a certain way (Epley & Gilovich, 2016). Researchers describe a reasoning process and its motives, such as why certain individuals actively separate themselves from rational standards of thought (Erdelyei, 1974). Some researchers have argued that people deviate from rational standards of reasoning because they want to persuade others on a particular topic (Erdelyei, 1974) or because the information that they are using to reason challenges their in-group beliefs (Festinger, 1957). Individuals use motivated reasoning because it indicates their belonging to a specific social identity group (Lodge, Steenbergen, & Brau, 1995), because they are aiming for self-preservation (Kahan, 2013), or because they are promoting their self-image (Kahan, 2013). Individuals also use motivated reasoning processes because they desire accurate information about a topic (Kunda, 1990). Individuals have also been shown to use motivated reasoning when they attempt to prove something as false, especially when it challenges their in-group. Research also indicates that people are less critical about information that supports their identity and biases that information that disconfirms their biases (Kunda, 1990). What is important for the current study is how individuals use motivated reasoning in their gathering and assessment of evidence or information. It is not that individuals merely reason about any particular topic in a way that fits their biases and identities. They go further and actively seek evidence that reinforces those biases and identities. In addition, when individuals come across evidence that challenges their biases and identities, they are motivated to reject that information, especially if it is controversial (Kunda, 1990).

Individuals often respond to controversial issues based on their political leanings. Studies indicate that people's judgments about important topics such as the Iraq War (Kull, Ramsay, & Lewis, 2003), income inequality (Bartells, 2009), and climate change (McCright & Dunlap, 2011) are consistent with their political party affiliations. These findings can be linked to increasing political polarization in U.S. society (Mason, 2018). The fact that individuals have been shown to make strong determinations about controversial subjects primarily through their political identity follows a trend in the Western media environment whereby individuals have much more access to politically polarizing information than in the past, a circumstance which makes detecting false information or misinformation significantly more difficult than it has previously been (Garrett, 2011; Lewandowsky et al., 2013; Rojecki & Meraz, 2016; Wardle & Derakhshan, 2017). Researchers have shown that individuals make judgments increasingly about a variety of issues based on their political affiliations, and their capacity for reason had little influence on whether they respond to those issues based on their political identity (Lavine, Johnston, & Steenbergen, 2012; Taber & Lodge, 2006). However, Kahan's (2013) psychological study found that individuals who demonstrated the highest capacity for reasoning skills also showed the largest tendency towards ideological decision-making.

The theory of motivated reasoning comes out of the field of psychology and mainly focuses on individuals' motivation to reason to conclusions that are consistent with their biases and identities. This scholarship arose out of a desire to examine how motives can shape the process by which people reach certain conclusions (Kunda, 1990). For example, Festinger's (1957) work on cognitive dissonance found that his participants' motives can influence their attitudes about particular subjects. Similarly, Erdelyei (1974) concluded that his participants actively selected evidence based on their motives in ways that shape the preconceived perceptions about a topic, and their selection and interpretation of that evidence was inherently

self-deceptive. What developed from this early work was a body of research that examined how individuals' conscious and unconscious motivations influenced how they reasoned with information (Kunda, 1990).

Kunda (1990), in a landmark review of motivated reasoning research, described two types of motivated reasoning, 'directional motivation' and 'accuracy motivation.' Directional motivation is the desire or need to align findings or conclusions with one's beliefs. Ditto, Scepansky, Munro, Apanovitch, and Lockhart (1998) claimed that individuals, when shown information that aligned with their belief system, responded uncritically compared to when they were shown information that was inconsistent with their beliefs, to which they demonstrated more scrutiny. Ditto et al. performed three psychological experiments with undergraduate students (n = 60). They found in the first experiment that the participants responded to favorable feedback about a particular topic by taking it at face value when it came from an interpersonal source but did not accept the unfavorable feedback. The second study found that the participants demonstrated cognitive dissonance with unfavorable feedback. The third study examined manipulated medical feedback. Ditto et al. found that the students were uncritical of positive medical feedback but were motivated to investigate the accuracy of negative medical feedback.

Conversely, accuracy motivation is the desire to reason for the purpose to arrive at an accurate conclusion. When individuals choose to apply accuracy motivation, they show careful attention to detail in their reasoning processes and engage in complex means of information reasoning (Kunda, 1990). Kahne and Bowyer (2017) found that when students received media literacy education, they were able to use accuracy motivation more often than directional motivation.

Individuals, however, are much more likely to use directional motivation when processing political or controversial information (Lodge & Taber, 2005). There is a strong link

between social identity and directional motivation because directional motivation is rooted in an individual's prior beliefs or belief system, which is often influenced by group affiliations such as political leanings. Lodge and Taber's (2005) series of experiments (n=352) on hot cognition found that the participants with strong political attitudes responded with "hot cognition" to "affect-laden" political concepts (p. 456). This finding means that those with strong political opinions demonstrated high levels of motivated reasoning, which can be seen in how participants represented their bias in an almost immediate fashion when presented with information that differed from their prior beliefs. Lodge and Taber argued that all political claims, or any controversial claims, are 'affect-laden' and therefore produce an emotional response that is tied to one's identity as opposed to evidence-based reasoning processes. This conclusion is built on a large body of research on the nature of individuals' responses or reactions to political claims (e.g. Bargh, 1994; Fazio & Williams, 1986; Lodge, McGraw, & Stroh, 1993). In other words, individuals' first reaction to political or controversial claims is embedded in their social identity and prior beliefs rather than in an unbiased reasoning based on that information. Researchers have demonstrated consistently over time that most members of society are 'biased reasoners,' and this assertion applies to those who use motivated reasoning to evaluate political claims (e.g., Lodge & Taber, 2005; McGraw, Lodge, & Jones, 2002).

Qualitative research based on interviews and observations is missing from the field. The majority of research on motivated reasoning is psychological and relies primarily on an experimental studies. Little work has been done on how people describe applying motivated reasoning in their own words and how they understand how their social identities influence that process. Motivated reasoning research has not focused on how individuals' ethnicity, culture, and gender influence their reasoning processes. My dissertation filled these research gaps through qualitative interviews and think-aloud protocols. In addition, while significant amounts

of motivated reasoning research have used college students as research subjects (Lodge & Taber, 2005), very little of it has focused on educational processes or outcomes. Exceptions are research by Kahne and Bowyer (2017) and McGrew et al. (2018). Lenker's (2016) essay on the need for promoting informational literacy in education as a means of combating motivated reasoning among students is one example of educational theory that discusses motivated reasoning.

Summary

This chapter has reviewed a broad swath of research on how individuals make sense of information, often through the lens of their social identity. It began with an examination of the origins of social identity theory, and then described how social identity influences society's media consumption in the digital age. Next, I discussed how social identity theory has been used in research on political polarization and social identities affect views of climate change information, scientific information in general, and political information. The last section in this chapter focused on a review of motivated reasoning research and its use of social identity theory. The main conclusion that can be found this review is that the psychological, political science, and communications research on these topics is overwhelmingly quantitative and often did not discuss salient aspects of social identity such as ethnicity, race, culture, gender, and class. My study filled some of those gaps through the use of qualitative methods that examined how university students understand and perceive how their social identities influence their media informational reasoning processes.

CHAPTER 3

METHODOLOGY

This chapter details the methodology used in this study. I first describe the rationale for the study and the research design. This description is followed by a presentation of the research setting and participants. Next, I outline the steps taken to ensure ethical treatment of the participants. I then discuss the data collection methods, which were a series of semi-structured interviews followed by use of three elicitation techniques. Next, I highlight the methods that I used for data analysis, specifically my coding strategy, the main themes that the coding strategy produced, and the analysis questions that I used to ask low to high inference questions of my data. The data analysis section is followed by a description of the steps taken to ensure data trustworthiness.

Rationale and Research Design

A qualitative design was appropriate for examining how university students describe their perceptions of how their social identities influenced their media informational reasoning processes because interviews allowed me to explore the "meanings of social phenomena as experienced by individuals themselves" in their daily lives (Malterud, 2001, p. 483). The use of the basic qualitative approach helped me to examine and describe how the participants constructed their reality as they interacted with their experiences within their social world, how they interpret those experiences, and what meaning they attribute to those experiences (Merriam, 2009). In addition to helping me describe how the participants discuss how they experience and interact with their social world, qualitative methods allowed me to answer questions that large-scale qualitative elicitation work (McGrew et al, 2018), experimental design (Kahne & Bowyer, 2017), or surveys could not (Hodgin & Kahne, 2018). To gather data for the study, I chose to use qualitative interview methodology because it enabled me to explore how the participants gave

meaning to their experiences related to media informational reasoning (Tong, Sainsbury, & Craig, 2007). In particular, the qualitative interviews and the elicitation techniques that I used enabled me to investigate how university students describe and understand how they perceived how their social identities influenced their use of media informational reasoning process in their daily lives. These methods helped me to ask questions about how my participants applied their media informational reasoning processes and what they applied it toward. Qualitative methods permitted me to describe and construct complex profiles of the participants that highlight their understanding and perceptions of how their social identities shape their media informational reasoning process (e.g. Creswell, 2003; Miles, Huberman, & Saldaña, 2014).

In order to examine how college-age students described their use of media informational reasoning and how they perceived how that process was influenced by their social identities, I purposely sampled participants from an "Informational Reasoning in the 21st Century course" at a large public university in the Pacific Northwest. A purposeful sample is completed with the "assumption that the investigator wants to discover, understand, and gain insight and therefore must select a sample from which the most can be learned" (Merriam & Tisdell, 2016, p. 96).

To study and describe how university students perceived how their social identities influence their media informational reasoning processes, I applied a semistructured interview methodology. The protocols for semistructured interviews are preplanned but give the researcher freedom to change the order of certain questions in order to "respond to the situation at hand, to the emerging worldview of the respondent, and to new ideas on the topic" (Merriam & Tisdell, 2016, p. 111). My intention in using semistructured interviews was to provide thick descriptions (Geertz, 1973) of university students' media informational reasoning processes and how they perceive how their social identities influence that process. Geertz described analysis in ethnographic research as seeking to provide thick descriptions of the people and culture that one

was studying. Thick descriptions not only analyze what a person said or did, but the larger cultural framework in which they are saying it or doing it. While, I did not use an ethnographic methodology, my intention was still to thickly describe the social phenomena that was examined in this study.

In addition to the semistructured interviews I used three elicitation techniques to gather data. Elicitation techniques are data-gathering methods that allow the researcher to apply "visual, verbal, or written stimuli to encourage participants to talk about their ideas" (Barton, 2015, p. 179). The purpose in using elicitation techniques was to help participants describe or discuss topics that may be sensitive or are grounded in tacit knowledge. The elicitation techniques that I applied were a free-write exercise (written), a sentence completion exercise (written), and a think-aloud protocol (verbal). I elaborate on these techniques in the Data Collection section.

Setting and Participants

The participants were purposively selected from an Informational Reasoning in the 21st Century course at a large public university in the Pacific Northwest. My intention in selecting the sample from students in this course was to describe how university students were applying media informational reasoning in their daily lives and how they perceived that their social identities influenced that reasoning process. I believed that the best means for describing this phenomenon was to involve students who were either active in using media reasoning techniques or had been taught to do so. I selected students from this course because I believed that their enrollment in the class signaled their desire to learn to be more critical consumers of the news and information that they would encounter within a diverse media environment. I believed that selecting participants from this course allowed me to provide a thicker description of how students perceive how their social identities intersect with their media informational reasoning processes

because of the mentorship that they received in the Informational Reasoning in the 21st Century course.

I obtained the course instructor's permission to disseminate information about my study in the class and recruit participants. I then spoke to the class about the nature of my study, and the course instructor distributed a flyer detailing the study and my contact information. Thirteen students expressed an interest in participating in the study. Of the 13 students who communicated an interest in my study, 10 served as participants for the study, a number which was sufficient to research data saturation (Guest, Bunce, & Johnson, 2006; Miles et al., 2014). Saturation meaning that there was enough participants to generate generalizable themes across the data set and increasing the amount of participants may have led to redundancy in the findings.

One additional student, who was not in the Informational Reasoning course, expressed an interest in participating. While the data that were garnered from this interview and the elicitation techniques were not used in my data analysis, the student's participation provided an invaluable trial exercise that enabled me to hone the mechanics of my interview process and further develop the research questions.

I used purposive sampling when selecting the participants, based on two criteria (see Rubin & Rubin, 2005). One criterion was age. The participants had to be of the digital native generation and therefore born after 1980. A second criterion was course enrollment; participants also had to have taken and completed the Informational Reasoning in the 21st Century course. I did not consider race, gender, sexual orientation, or social class as criteria for selecting the participants. However, I did ask the participants questions about how they understood the ways in which these identities influenced their media informational reasoning processes.

Four of the 10 participants were female and six were male. All of the participants majored in a science, technology, engineering, or mathematics (STEM) field, except one who was a classical studies major. The participants' pseudonyms, ethnic backgrounds, gender, and majors are in Table 3.1 below. Several of the younger participants had not been able to formally select a major yet because of the stringent requirements and application process of entering into STEM field majors at the particular university in which the study was calculated. For example, the majority of students who apply to become computer science majors are not able to do so until after their sophomore year and must maintain at least a 3.8 GPA to gain admittance. Pseudonyms were assigned to each participant as all of them declined to choose their own. All participants signed a consent form to participate in this study. A copy of the consent form is available in Appendix A.

Table 3.1

Participant Pseudonym, Ethnicity, Gender, College Year, and Major

Participant	Ethnicity	Gender	College Year	Major
Stuart	Vietnamese American	Male	Freshman	Wants to Major in Electrical Engineering
James	Hispanic White	Male	Sophomore	Classical Studies
Danielle	American Indonesian	Female	Senior	Microbiology
Sam	Chinese	Male	Junior	Computer Science
Brad	Chinese American	Male	Junior	Biochemistry
Yuri	Russian-American	Male	Sophomore	Computer Science
Pam	Filipino British	Female	Sophomore	Wants to be an Informatics Major
Amrita	Indian	Female	Senior	Informatics and Communications
John	White	Male	Junior	Informatics
Meg	White	Female	Senior	Molecular-Cellular Developmental Biology

Protection of Participants' Rights

The collection of participants' personal information adhered to the university's Internal Review Board's (IRB) standards regarding human subjects and the required levels of privacy and confidentiality. I received IRB approval for this study in November, 2018. I will keep the link between the participants' names and the study's information until April, 2020, when I will destroy that information.

The names of the participants used in this study are pseudonyms. For the others, I choose names that reflected the participants' real names. For students who had English names, I choose an English pseudonym. I choose a pseudonym as well from the ethnicity and culture of the students who did not have English names. I then emailed those two participants with the pseudonym that I choose to ensure that they approved of my choices. In addition, I used a pseudonym for the title of the course and the university to create additional confidentiality for the participants. All documents and recordings with the participants' real names were stored on a password encrypted file on a cloud computing service.

Data Collection Strategy and Procedure

I collected data through a series of semistructured interviews with the participants and through the use of three elicitation techniques. The sessions ranged from one to two hours in length. All took place in a private office on the campus of the university in which the study occurred. I audio recorded each interview using an app on my iPhone. After the semistructured interviews, I asked the participants to complete the two written elicitation techniques. Finally, I asked them to participate in the think-aloud protocol, which I video recorded with my iPhone camera. I compensated each participant at the end of the interview with a $30.00 Amazon gift card. Below I describe the interview protocol and methods, the two written elicitation techniques, and the think-aloud protocol.

Semistructured Interview Process

The semistructured interview was guided by an interview protocol, shown in Appendix B. I began with a series of easy questions about why participants took the Informational Reasoning in the 21st Century class, what they hoped to learn from the course, and how it shaped their fact-checking behavior (see Questions 1–5 in Appendix B). Then I asked more specific questions about how the participants use fact-checking in their daily lives, what their aims were

for fact-checking, and what subjects they typically fact-check (see Questions 6–13 in Appendix B). Next, I asked the participants to describe how their social identities and positionalities influenced their reasoning processes, especially as these related to their ethnic and cultural identities. This line of questioning included questions regarding the participants' ethnicity, and gender. I also asked questions about how family life, and culture shaped the participants' online reasoning processes (see Questions 13–30 in Appendix B).

My sequence questions evolved over several stages beginning with my pilot study, my trial interview, the feedback provided from the dissertation committee, and through the initial stages of the constant comparative analysis method that I applied in my data analysis (Corbin & Strauss, 1990). The constant comparative analysis method and how I used it are described in further detail in the following section on data analysis. The initial interview protocol I used in my pilot study focused more on the media informational reasoning process than on how specific social identities influenced or shaped that process (Keener, 2018). However, I found in the pilot study that social identities played a large part in how participants reasoned with information on the Internet, especially what information they chose when reasoning. I termed this process "motivated interests." I also found that participants who described themselves as being further along in their cultural identity development process were better able to describe how their cultural identity and other parts of the social identity influenced their reasoning efforts.

I decided to ask pointed questions about how specific parts of the participants' social identities related to how race and diversity shaped their media informational reasoning process because my field is multicultural education. Therefore, I added 12 questions to my interview protocol related to certain parts of social identity such as political identity, gender, and ethnicity. Through my trial interview for this study and the first few interviews, I sometimes noticed that I

was asking repetitive questions or that the participants were addressing issues that I intended ask about later. As a result, I was forced to be more flexible in how I applied my interview protocol.

I also found through my constant comparative analysis that a large number of the participants were able to clearly articulate how they used the Internet to make sense of certain information, especially political or social information. However, many had a difficult time describing or understanding how aspects of their social identity such as ethnicity and culture influenced their online process. The first participant, Sam, told me after the interview that no one had ever asked him anything about his specific identities before and that he had never thought about any of the questions that I had asked. As I proceeded with the subsequent interviews, I found that I was asking pointed questions about culture, gender, and ethnicity, for which many of participants did not have clear answers.

The 12 questions that I added to my interview protocol over the course of my study significantly added to the time of the interview, and I often found myself running out of time because of the added questions. I assured my participants that the interviews would take approximately 1 hour, and the elicitation techniques would take 15 to 30 minutes. Therefore, I had to cut some of the detailed questions from certain interviews because I did not want to take more time from the participants than I had originally stated.

I chose to omit two parts of social identity from my interview protocol. Those parts were race and sexual orientation. I chose to not ask about race because I made the decision to focus on ethnicity. I believed, based on my pilot study, that the participants would be more able to discuss ethnicity in detail because of how that concept combined multiple identity factors such as shared ancestry, language, religion, culture, and national origins (Banks, 2008). In addition, because many of the participants in the study were not able to define ethnicity, I believed that adding a concept such as race, which overlaps with ethnicity, could be confusing for some of the

participants. I chose not to include a discussion of sexual orientation in the interview because of the sensitive nature of that topic.

Elicitation Techniques

Elicitation techniques are data-gathering methods that enable a researcher to apply "visual, verbal, or written stimuli to encourage participants to talk about their ideas" (Barton, 2015, p. 179). The purpose in using elicitation techniques was to help participants describe or discuss topics that may be sensitive or are grounded in tacit knowledge. They can also reduce power imbalances between the researcher and the participant by enabling the participant to have greater agency in the research process (Walker & Widel, 1985). Because I asked questions related to the participants' social identities that may have been sensitive and controversial, it was essential that I take steps to reduce this power imbalance, make the participants comfortable, and help them to elaborate their responses. These precautions were important because asking questions about sensitive and controversial topics can lead participants to answer questions in a way that they think satisfy the researcher or produce vague generalities about the question (Barton, 2015).

Elicitation techniques can ameliorate negative factors in asking sensitive and controversial questions by helping the participant express their ideas in a more complex and in-depth manner, while also making the research process more "transparent, comfortable, and authentic" (Barton, 2015, p. 181). These techniques make the research process more transparent by helping the participant have a concrete understanding about what the research project is about. Elicitation techniques also help make participants more comfortable by removing awkward silences and reducing self-consciousness. The techniques make participants feel more like partners in the research process rather than as subjects to be probed. These tasks also make

the interview more authentic because the participants have greater power, voice, and agency (Harper, 1988).

I used elicitation techniques to enable the participants to describe their reasoning process in greater and more complex detail and how they perceived how their social identities influenced the reasoning process. I also applied elicitation techniques to help the participants to be more comfortable during the research process. The elicitation techniques also helped my participants think more clearly about their previous answers without the pressure of having to provide a verbal answer.

The three elicitation techniques used in this study were (1) free-listing, (2) sentence completion, and a (3) think-aloud protocol. Free-listing can be performed orally or in writing and consists of having participants list particular items or procedures related to a specific concept (Barton, 2015; Bernard, 2006). I asked the participants to list in writing the different ways that they apply some form of media informational reasoning in their daily lives. The purpose was to examine what examples appeared most often across the sample and to compare and contrast the participants' responses to their verbal ones.

Sentence completion is another elicitation technique whereby the researcher gives a sentence stem to the participants and asks them to complete the sentence with an oral response (Barton, 2015). I used this technique to enable me to narrow the number of responses from the participants, to help them give more specific answers, and to reduce researcher bias. The sentence completion questions I used were:

1. I am most likely to fact-check information on the Internet when...
2. The sources that I am most likely to use for fact-checking are…
3. The subjects that I am most likely to fact-check are…
4. My cultural identity shapes my informational processing by…

5. My political identity shapes my fact-checking process by…

6. My familial identity shapes my fact-checking process by…

Examples of the questionnaire can be found in Appendix C.

The elicitation technique based on sentence completion allowed the participants to describe their individual media informational reasoning process, the ideas to which they applied the reasoning process, and how some of their social identities influenced this process. I choose to use a written sentence completion elicitation technique to reduce researcher bias and to provide data that served to triangulate my findings. I focused on culture and political identity in this part of the session because the participants in my pilot study and in my trial interview were generally more able to describe and discuss those aspects of their identities than their ethnicity or race (Keener, 2018). That trend continued throughout this study as well. I also did not want to prolong use of the elicitation techniques because of time constraints. Participants performed the elicitation techniques after a 1-hour to 1.5-hour interview, and I did not want to burden them with too long of a writing exercise. Consequently, I choose to restrict the number of elements included in this section.

Think-aloud protocols are a more introspective method than the previous two and allow the participants to "reflect on the nature of their thinking" as they work their way through a specific task (Barton, 2015, p. 194). The goal of a think-aloud protocol "is not for them [participants] to analyze or explain their thinking but simply to state aloud the thoughts that occur to them" (Barton, 2015, p. 195).

I asked the participants to identify a topic before the interview that they were likely to fact-check in their everyday life. Then I found a short news article or an excerpt that pertained to each participant's topic of interest and then asked the participant to perform a think-aloud protocol using it. My intention was to position the participants as knowers who were capable of

performing these reasoning tasks in an effort to learn more about how they describe using them every day. This positioning differed from that of McGrew et al. (2018), who conducted a series of think-aloud protocols based on the Stanford History Education Group's civic online reasoning assessment. They evaluated whether the participants were successful or unsuccessful at online reasoning through an assessment test and then graded them on a spectrum that ranged from novice to expert. However, I asked the participants to tell me how they reasoned with which they were familiar in an effort to learn more about how they applied media informational reasoning. My intention was to use these techniques to help the participants describe their media informational reasoning processes and how they perceived how their social identities influenced that reasoning process, not to ascertain whether or not they were good or bad at reasoning with information on the Internet.

Data Analysis

I used a combination of social identity theory, media informational reasoning, and motivated reasoning to code and analyze my data. For a coding process, I initially used open coding. Corbin and Strauss (1990) defined open coding as an "interpretive process by which data are broken down analytically. Its purpose is to give the analyst new insights by breaking through standard ways of thinking or interpreting phenomena reflected in the data" (p. 12). I openly coded my interview data until themes began to emerge, a process which I discuss in the following section. I used a constant comparative method from the moment I began collecting data, a choice which also helped to yield several prominent themes and enabled me to refine my interview protocol. During the process I actively recorded my assertions and thoughts in a journal and linked them to coded data (Miles et al., 2014). I then used analysis questions to test the assertions in my journal (Creswell, 2003). I created low to high inference questions answered in order to elucidate findings from the data (Miles et al., 2014). Next, I compared my claims

across all participants and by examining the claims against my theoretical frameworks. I then examined my conclusions for outliers, extreme cases, and negative evidence. Finally, I performed if-then tests that were also scaffolded into my analysis questions, which I followed up with an examination of rival explanations and member checks with some of my participants (e.g. Miles et al., 2014; Creswell, 2003; Yin, 2013).

Coding

I began reviewing my data shortly after I conducted my first interviews. This process began with listening to my interviews within 24 hours after conducting them. After I completed each session with the participant, I paid to have the interview data professionally transcribed on Rev.com. After I downloaded the transcription, I listened to each interview and made corrections on the transcription document. I then reviewed the transcript while I listened to the interview a second time in order to correct mistakes in the transcript and to highlight long pauses and other statements of emphasis from the participants. I repeated this process for every interview in the study. After I corrected mistakes in the transcription and made annotations, I then began to open code my data. The coding process for the first few interviews mirrored line-by-line open coding but as major themes began to emerge, the coding process became more closed (Corbin & Strauss, 1990). I used Dedoose's coding software for my analysis (Dedoose, 2019).

The eight major themes that emerged from the coding process were:

1. Media informational reasoning is an individual process.
2. All participants applied motivated interests in the media informational reasoning process.
3. The participants applied several strategies to verify the veracity of information on the Internet. Those were (1) bias identification, (2) consensus determination, and (3) finding multiple perspectives.

4. The participants often applied source preferencing in their fact-checking procedures, which was linked to their social identities.
5. The participants' most salient identity related to their media informational reasoning process was their political identity.
6. Most of the participants described having little ethnic or cultural attachments.
7. Most of the participants that did describe having strong ethnic or cultural attachments perceived them to have little influence of their media informational reasoning process.
8. The participants did not perceive their gender identity to influence their media informational reasoning process very much.

After I coded participants' interview responses, I analyzed their written elicitation responses. I then compared their responses in the two written elicitation techniques with the participants' verbal responses in the interviews in order to see if they expressed any similarities or differences between the two data gathering techniques. Finally, I watched the video recordings of the participants' think-aloud protocols and analysed them with consideration of their media informational reasoning procedure and reports of how their social identities influenced that process.

Throughout the coding process, I continuously made notes in my journal regarding my assertions about the participant's responses and the data that was produced. My intention in doing so was to provide a record of my thoughts throughout the analysis process. Journaling provided a foundation for my analysis questions that enabled me to thoroughly test my assertions.

Analysis Questions

The analysis questions that I developed were used to test and describe my central research questions. The first research question asked "how did the participants describe their media informational reasoning processes?" The second asked "how did the participants describe their perceptions of how their social identities influenced their media informational reasoning processes?" I developed low-inference questions for each research question, and then I developed higher-inference questions to answer each research question more broadly (Miles et al., 2014). To address the first research question, the low-inference questions that used were:

1. How did the participants describe their media informational reasoning processes, such as their fact-checking procedure?
2. To what types of information do the participants apply media informational reasoning?
3. How did the participants determine the veracity of information that they came across in their application of media informational reasoning?
4. Did participants' descriptions of their media informational reasoning process match their demonstration of it in the think-aloud protocol?

The high-inference question that was built from the lower inference ones was: How did the participants describe their application of media informational reasoning in their everyday lives?

In addressing the second research questions, the low-inference questions were:

1. What were the participants' most salient social identities?
2. How did the participants describe each social identity?
3. How much cultural identity development did the participants describe?
4. How did the participants use the Internet to investigate or research aspects of their social identities?

The high-inference question that was built from the low-inference ones asked how participants described the ways their social identities influenced and shaped their media informational reasoning process.

In addition to using low to high inference questions to analyze my data, I scaffolded two if-then tests into both high-inference analysis questions. The if-then tests were:

1. If the participants applied media informational reasoning, then how did they do so, and what did they apply it toward?

2. If the participants described salient aspects of their social identities, then how did they perceive those identities as influencing their media informational reasoning processes?

The results of the analysis questions and the if-then test are described in Chapter 4.

Data Trustworthiness

Because researchers are the primary means of data collection and analysis in qualitative research, it is imperative that they take steps to ensure the trustworthiness of their data (Miles et al., 2014). I took several steps to ensure data trustworthiness in this study. First, I checked the method of checking for representativeness. Miles et al. (2014) described checking for representativeness as a means of avoiding the overgeneralization and drawing conclusions about a specific piece of datum that the researcher collected. These overgeneralizations include “sampling non-representative participants”, “generalizing from nonrepresentative events or activities,” and “drawing inferences from nonrepresentative processes” (Miles et al., 2014, p. 290). The two approaches of checking for representativeness that I used were using a large number of cases (10) and purposefully searching for contrasting cases. Searching for contrasting cases means seeking out negative, extreme, or countervailing cases in the data. I describe in the subsequent findings chapters where I sought out negative evidence or outliers in the data.

Checking for outliers can be described as examining the data for expectations to other themes and patterns (Miles et al., 2014).

A second method I used for checking the data's trustworthiness was checking for researcher bias (Miles et al., 2014). The methods used to identify researcher bias were identifying the places in the data where I may have veered from providing a useful example and determining if I had manipulated the participants responses. Veering from providing a useful example is what Miles et al. (2014) described as casually showing off how much the researcher knows either about the topic at hand or extemporaneous subject matter. In my analysis of the data, I found in several interviews that when the participants asked for clarification, I provided superfluous examples that could be described as showing off my knowledge. This had little effect on the research outcome because the participants were not giving me answers that matched the extemporaneous information that I provided. I only succeeded in wasting time. The next step that I used was to identify the places where I may have manipulated participants' responses and determine if I had done so. I determined that I did not manipulate participants' responses to any visible amount because they were often honest about the places that they did not apply media informational reasoning or their descriptions of their ethnic or cultural attachments. The participants were straightforward about how they perceived their social identities influenced their media informational reasoning process and therefore I determined that I did not manipulate their responses because of the amount of negative responses they provided.

I additionally came into the study with the assumption that many of the participants would be able to describe how their culture influences their media informational reasoning process because of information from my pilot study. However, I found that most participants did not have strong cultural or ethnic attachments and those who did have those attachments perceived that they had little influence on their media informational reasoning process.

In examining researcher bias I found that my bias showed up in the interview process in several ways. I had expected the participants to be able to describe performing a more in-depth fact-checking procedure in their daily lives than they did and provide examples. However, most did not describe using an in-depth fact-checking process and were not able to provide many examples.

A third method of ensuring data trustworthiness was triangulating my data across the three different data gathering techniques. These were semi-structured interviews, written elicitation techniques, and a think-aloud protocol. Triangulation is used to "support a finding by showing that at least three independent measure or it agree with it or, at least, do not contradict it" (Miles et al., 2014, p. 293). In addition, this method enabled me to test my data for evidence that either confirmed or contradicted my findings.

I then looked for negative evidence in my data. Looking for negative evidence can be described as the active search for evidence that disconfirms one's beliefs and findings (Miles et al., 2014) After I searched for negative evidence, I made an if-then test as part of my use of analysis questions, a step which involves looking for relationships within the data. Doing so enabled to me to connect my data to larger theory regarding informational reasoning, which is explained in Chapter 6 (Miles et al., 2014).

The next step that I took was an examination of rival explanations based on the recommendations of McGrew et al. (2018) and Kahne and Bowyer (2017). The purpose of a rival examination is to further test one's data against disconfirming evidence (Miles et al., 2014) McGrew et al. (2018) found that many of their participants described applying vertical reasoning in their study. Even the university students at a top-level university in their study did not demonstrate proficiency in their online reasoning process. The findings served to confirm

McGrew et al.'s (2018) claim because most of my participants described using vertical reasoning and demonstrated it in their think-aloud protocol.

Finally, I contacted three participants and did member checks with each one. The purpose of the member checks was to allow the participant to respond to specific findings, claims, data, or data displays and let the researcher know their feedback (Miles et al., 2014). The checks also allowed the participants to provide "feedback at a higher level of inference: on main factors, on casual relationships, and on interpretative conclusions" (Miles et al., 2014, p. 303). I met three participants for coffee to discuss their thoughts and interpretations of my findings and claims. The member checks served to confirm my findings and none of the participants viewed my findings or claims as extreme. One of the participants, Meg, related how her participating in the study allowed her to attempt to understand the culture she grew up in and how her gender influences her reasoning process.

Researcher Positionality and Influence

The researcher in qualitative research is the primary means of data collections and its subsequent analysis. Therefore, it is important to acknowledge the researcher's positionality and how that serves as lens in the data interpretation process (Miles et al., (2014); Merriam & Tisdell, 2016). First, it is important to acknowledge my social identities and positionality. I am a White male with moderate- to left-leaning political views. This acknowledgement is important, because most participants in the study were people of color, and I asked them numerous questions regarding their ethnicity, culture, and gender. I also asked how they perceived how those social identities influenced their media informational reasoning processes. Because I conducted a study about social identities, I had to be cautious not to overplay the participants' social identities that I may have viewed as being more salient than they did. For example, a

participants' culture may not have that large of an influence on their media informational reasoning process, and it is important that I did not overplay that aspect of their social identity.

Secondly, as an individual who is interested in multicultural education, informational reasoning, and media literacy, it is easy to overemphasize the degree to which individuals can describe how they perceive their social identities influences their media informational reasoning processes. I can think of multiple instances where my political and cultural identity might have shaped how I responded to specific information. I was, for example, a staunch conservative when I was younger, and I believed the information that I consumed about the necessity for the U.S. to invade Iraq as being accurate. In retrospect, I engaged in confirmation bias and let my political identity influence how I analyzed information about that subject. It is imperative that I do not let my interest and experiences related to this research topic cloud, shape, and overemphasize how the participants perceive how their social identities influence their online reasoning process.

Summary

This chapter described my rationale, methodology, and research strategy and design. I focused on highlighting the research setting, participants, and the methods I used to gather data. I also discussed the steps I took to treat my participants' ethically, how I analyzed my data, the coding scheme that I used, the analysis questions I asked of the data, the steps I took to ensure the trustworthiness of my analysis, and my positionality as a researcher. The next chapter describes my findings, claims, and the manner in which I came to them. The further interpretation of my findings and their implications will be described in this discussion chapter.

CHAPTER 4

PARTICIPANTS' MEDIA INFORMATIONAL REASONING PROCESS

Chapters 4 and 5 present the results of this basic qualitative study. Chapter 4 includes the results from the first research question, while Chapter 5 includes the results from the second research question. The results were generated from the following data collection methods: (1) semistructured interviews, (2) a free-listing elicitation exercise, (3) a sentence completion elicitation exercise, and (4) a think-aloud protocol. After collection and transcription, I analyzed the data through open coding, a process which became more closed as the coding process developed. Next, I applied analysis questions in order to elicit data and explanations that would answer my first research question. This question was: How do "university students describe their media informational reasoning process in their daily lives and what do they use it for?"

The 10 participants in this study came from diverse backgrounds. Seven of the participants were male, and three were female. John and Meg were White. Stuart was Vietnamese American. James was Hispanic-White, and Sam was Chinese. Brad identified as Chinese American, and Yuri identified as Russian American. Pam described herself as a mix of Filipino and British, and Amrita was Indian. A more extensive description of the participants can be found in Table 3.1.

The remainder of Chapter 4 presents the findings, evidence, and themes that address the first research question in this study. The presentation is broken down into the four themes that emerged from the coding procedure and data analysis. These themes are shown below in Table 2. I provide selected evidence to support each theme that highlights the main points from the theme and the different factors within it.

Table 4.1

Themes for RQ1

Theme	Theme Title
Theme 1	Media informational reasoning is an individual process
Theme 2	Motivated interests
Theme 3	Determining the veracity of information on the Internet
Theme 4	Source preferencing

The first theme that arose from the coding and data analysis is that media informational reasoning is an individual process. The participants in this study applied their media informational reasoning processes in different ways and applied them toward different topics or subjects. Some participants described using horizontal reasoning, and others described using vertical reasoning. The common thread in this theme is that the participants often did not apply deep reasoning in how they made sense of information on the Internet or in the media. Deep reasoning can be defined as fact-checking information horizontally across multiple sources, considering multiple perspectives, and discerning how the information is constructed before making a judgment about the veracity of that piece of information.

The second theme that arose was that all participants applied motivated interest toward information that related to their social identities or found sufficiently interesting. All participants in this study made conscious choices about what information they chose to use in their reasoning process. All participants described applying motivated interest in different ways, and that process was often tied to their social identities. The third theme was that the participants all sought in some fashion to verify whether information was true. The three ways that the participants described determining the veracity of information were consensus determination, bias

identification, and identifying multiple perspectives. The fourth theme that arose from the data analysis was source preferencing. Source preferencing can be defined as placing implicit trust in certain media sources. Some examples might be trusting the legacy press or other sources that participants perceived as being less partisan. Another example was trusting Google to provide accurate and truthful information in a search.

Theme 1: Media Informational Reasoning is an Individual Process

Media informational reasoning is an individual process that is shaped by an individual's social identity. No two participants in this study reasoned with media information in the same way. Some participants, such as Pam, were more prone to reason in their social or peer groups. Others, such as John, described attempting to identify bias in their reasoning processes. Another participant, James, described how his personal knowledge and background related to health and nutrition information drove his reasoning process. He stated that his fact-checking procedure was buttressed by his personal experience, which was the main barometer by which he assessed and made sense of the nutrition and health information that he consumed. Each participant's media informational reasoning process is described in Table 4.2 below. I then present data from a sample of participants to the highlight the main points from this theme. I then do the same with each subsequent theme.

Table 4.2

The Participant's Media Informational Reasoning Process

Participant	Media Informational Reasoning Process
Stuart	Fact-checking across multiple sources and social reasoning.
James	Fact-checking across multiple sources for economic and political information. Described using horizontal reasoning to judge the veracity of health and nutritional information and then gauging that information against his personal experience.
Danielle	Described applying social reasoning and consulting multiple sources that she found reliable to determine if information is true or not.
Sam	Described applying bias identification and consensus determination in order to determine if information was true or not.
Brad	Focused on sourcing and using Snopes.com to determine whether information was true or not. He described using his personal experience to judge the veracity of technological information.
Yuri	Described using Google searches about a certain topic and then comparing the results of that search to his worldview.
Pam	Described using social reasoning and placing great trust in certain sources such as the *New York Times.*
Amrita	Looked at multiple websites that she found credible to learn about a topic such as CNN, especially if it was in a social debate context.
John	Applied consensus determination and bias identification in his reasoning processes.
Meg	Often fact-checked health and medical information on Pubmed.com (a medical journal website) and used the *New York Times* or NPR for information related to current events.

Pam

Pam's media informational reasoning process can be characterized as reasoning in her social group, which she claimed had a large influence on her reasoning process. On the sentence completion elicitation technique that stated, "My family influences my reasoning process by. . .",

she crossed out family and wrote “social group.” In addition, when I asked her the same question in the interview, she stated, “So, I feel like it's more of my social group that influences my consumption of news rather than my family.” Additionally, her reasoning process generally occurred in her social or peer groups. She described this social process as:

> Pam: I feel like a lot of times when it comes to fact-checking, it's more of, I'm just, I tend to believe, I think, what I read on the Internet if it comes from a source that I find reputable.
>
> Robert: Okay.
>
> Pam: And then, I'll just like mention it, and if a friend calls me out, like, ‘No, I don't believe that,’ then, we start, like, Googling it and seeing who is correct or not.
>
> Robert: And how does that, what is the next step of that process? You're entering in a search into Google, and then . . .
>
> Pam: Usually, it will be whatever's most recommended.

What Pam described here was her social process of fact-checking. A topic would be discussed amongst her friends; someone would disagree, and then they would use Google to determine who is correct. The sources that they used to make that determination were the most recommend sources by Google on that particular search.

Pam also described her social process of sharing information, where she stated that a lot of the information or media that she consumed was driven by a Google search or from her Facebook news feed, which she would then share with her friends if she found the information interesting. Her friends would also do the same thing, sharing information they thought was interesting to each other. She described this news gathering and sharing process as “Usually it's just based on the news feed [Facebook] of like what's popular, and then if something catches my

interest, then I'll like Google it and try to find out more, or I'll like send stuff to my friends, and then they'll do the same."

What is important to note here is that Pam's media informational reasoning process was influenced by her social identity created by her group friendships, and she described that group relationship as having a significant effect on her reasoning process. This reasoning process played out in her social fact-checking. The reasoning process also reflects the manner in which she shared and consumed information with her social group. The data that Pam provided on her media informational reasoning process were corroborated by the free list elicitation technique, where she wrote that her reasoning process could be characterized by:

> Check BBC—Nightly News (King 5, Komo 4)—Watch the View—advertisements on Facebook, Instagram—fact-check—share news stories with friends

In the think-aloud protocol, which was on a *New York Times* article on gun statistics, Pam demonstrated vertical reasoning and did not check other sources. She read the article from top to bottom, making assertions about the data as she read. Pam stated, "I'm not really questioning what I'm reading because it's from *The New York Times,* and most of it seems that it sounds about right."

John

John described applying media informational reasoning in ways that he sought to identify bias, whether it was political or financial. He described this reasoning process as:

> A lot of times it'll be an article like this person said this or did this or took a strong stance that maybe seems unexpected, right, and so I'll try to look at it and maybe they'll just have a brief quote, and occasionally I'll look for where it took place or whether it was in an interview or podcast or, a tweet, and try to figure out the context of it. Because I think one of the most common sources of, misleading information in the news is where, an

> outlet will leave out context or even someone tweeting about it will leave out the context of what that person was saying.

Examining the context of information, a quote, or a statement is part of the way that John identifies bias in his media informational reasoning process. Furthermore, he stated that he often tries to determine if someone is relating factual information in his online reasoning process. However, he described that it was difficult to determine if someone was providing factual information because he would see conflicting reports about particular subjects. He said, “if the reports are mixed, if I look up something, and I'm getting a bunch of conflicting information from the first page of Google, then a lot of times I don't know what to believe.” John described attempting to identify bias as part of his fact-checking process, which is also a significant theme in this study that is discussed in the following section. When he sought to apply media informational reasoning, John focused on identifying context and bias of the person reporting the information and then performing a Google search to further identify the veracity of truthfulness of the information that he was examining.

John, however, stated that he rarely fact-checked information on the Internet, a process which is an important part of media informational reasoning. When I asked him how often he fact-checked information on the Internet, he said,

> Rarely, unless I see something that I'm surprised by, and then maybe I look it up on Google and see what most of the top links are saying about it. But I think for the articles I read more in depth, I tend to trust them if they're from *The New York Times* or *The Washington Post*.

In this statement, John described performing a Google search to determine what a variety of sources were saying about a topic and placing trust in sources such as *The New York Times*, which is another common theme in the finding in this study.

The data that John provided in the interview were compared to his elicitation technique, which provided similar data. In the free listing exercise, he wrote:

> Google searches—Pre-existing knowledge (Bias!)—What to individuals I trust think/say? →General trusted friends / family / mentors → What are most individuals saying?—What motives are behind this information → money → power → consistency with previous beliefs/platform.[1]

These written statements serve to complement the interview data that he provided on his media informational reasoning process as being geared toward bias identification.

James

James described his media informational reasoning process as being geared toward health information, politics, and economics. He stated that when he fact-checked information about politics, he often searched for multiple perspectives in Google. However, his biggest interest is nutritional information because of his extreme weight loss over the last several years. James detailed his reasoning process as it related to health and nutritional information as following certain sources, mainly blogs he followed on Twitter, and then determining what type of studies they were describing. Then he weighed those arguments against his own experiences.

I asked James how he went about verifying truth when he reasoned with nutritional information. He detailed his reasoning process as:

> Well because it depends on the common theme, some are really science-minded. They might have a lot of biochemistry or like certain dietary things. So, like those are more dense. They'll have a lot of sources at the end. But then there are others that are argumentative. Where they might take a vegan or vegetarian thing, and go through that and deconstruct what the vegan or vegetarian may be saying. And with, with links to

---

[1] The arrows reflect the symbols he drew in his elicitation exercise.

> maybe studies or things like that. . . I might see what they say, what sources they might have. And then the arguments against that.

In this interview excerpt, James described his reasoning process as it pertained to health information, especially with information with which he does not always agree. He detailed determining what sort of argument was being made, examining the sources and citations related to the article, weighing against his personal experience with weight loss, and then determining whether a study described causation or correlation.

I was able to triangulate this interview data on James' reasoning process across the elicitation techniques. In his free listing exercise James described the ways he applied media informational reasoning as:

> I will look up different sources for a story of some information to see if they agree, and if so, I can assume that the information is accurate. If they don't agree, I may look at the citations, at least if provided. If not provided, I would say that the source may not be as accurate as those that do provide where they received the information. Depending on the topic, I may also judge the citations; for nutrition, I usually do not give much attention to associative/correlation studies, regardless if I may like their conclusion based on how I eat.

In the think-aloud protocol, I asked James to reason through an article related to a recent diet trend. He detailed reasoning through the information based on his personal experience, which led him to dispute some of the information based on his prior experiences with weight loss. In the exercise he demonstrated vertical reasoning because of his reliance on his personal experiences, and he did not check any other sources or citations in the article. Therefore, this exercise contradicted some of the information that he gave on how he applied media informational reasoning to his everyday life.

Every participant in the study described applying media informational reasoning in different and personal ways that varied depending on a variety of factors. Pam described being greatly influenced by her social group, and this influence in turn influenced her reasoning process. John detailed searching for bias and consensus among media information. James highlighted a reasoning process that influenced his weight-loss. He used that information along with horizontal reasoning to make sense of nutritional information. However, his think-aloud protocol somewhat contradicted his described reasoning process. The next section describes how the participants discussed the importance of fact-checking, which many of them did not discuss applying well in their daily lives.

Theme 2: Motivated Interests

Most of the participants described applying their media informational reasoning toward topics that were of direct interest to them or were socially motivated. I have described the process by which individuals apply media informational reasoning toward topics that are of interest to them as motivated interest. Motivated interest is an identity-driven process. Motivated interest describes the application of media informational reasoning processes to information that someone is explicitly interested in or toward information that is related to their social identity. Each participant's interest can be seen Table 4.3 below.

Table 4.3

Participants' Motivated Interests

Participant	Motivated Interest
Stuart	Social information such as media stories about musicians, information that sounds bizarre, or interesting things that he sees on Facebook.
James	Nutritional and diet information, along with stories about economics and politics.
Danielle	Political information that peaks her interests.
Sam	Information that which he encounters and has an emotional response to and politics.
Brad	Computer, technology, and science information.
Yuri	Computer games, fan fiction, politics, current events, and information that interests him enough to fact-check.
Pam	Political information and information shared by her social group.
Amrita	Political or controversial information, and issues related to race and representation.
John	Political and social information.
Meg	Politics and medical and nutritional information.

Stuart

Stuart was very interested in social information, and his media informational reasoning process often played out in social groups such as his peer group. This process of reasoning through social information is described below:

> Do you know how 21 Savage was deported to the U.K? So I was like, 'There's no way he's English.', and all my friends were like, 'There's no way.', and so we didn't believe it for the first couple of days that we saw memes about it and stuff like that. We thought it

was really funny, and then it like kept circulating. So, we were like, ‘Is this actually real?’, and we looked up on it up online and everyone was saying it's true so.

What Stuart was describing was the process by which he and his friends applied media informational reasoning in a social setting. The topic that they chose to reason with was a controversy about a hip-hop artist named 21 Savage who was being deported from the United States to Great Britain, even though he appeared to be an American. The process by which they determined the information or story to be true can be described as consensus determination, whereby an individual or group of individuals perform an Internet search and make a judgement about the veracity of that story based on a number of media reports stating similar information. Many of the participants described applying consensus determination in their media informational reasoning process, and this theme is discussed in the following section.

Brad

Another example of participants’ application of motivated interest is Brad’s description of his reasoning about information related to graphics cards and other computer-related information. Brad is very interested in computers and technology, and that interest shaped his reasoning process and estimated that he spends 70 % of his time online researching this information. He described his technology-related interests driving his use of the Internet as:

> A lot of the stuff that I read on the Internet is related to computers. All of my YouTube subscriptions, like half my YouTube subscriptions is tech channels. And, most of the time when I'm just browsing the Internet, I'm looking at tech news.

In another exchange he described his motivated interests as:

> Robert: How do you decide what you're going to read or watch?

Brad: I guess, for me, when I read tech news, I really only read about, new products, interesting things to me. For politics, I guess I definitely, in retrospect, am looking for clickability and hot takes.

Robert: Yeah.

Brad: You know, definitely, like, something that's more interesting that piques my interest more. It's definitely whatever it is that sounds super interesting to me.

In these two exchanges, Brad described that his main interest is related to technology and technology news, and for him to expend the effort to examine something related to politics, it had to greatly arouse his interest. Technology information was a part of his identity, and it influenced his reasoning behavior because it was the subject toward which he chose to apply his online reasoning efforts.

In the interview Brad did not describe applying his media informational reasoning process toward issues of politics and discussed technological information much more. However, in the sentence completion exercise he wrote:

1. I am most likely to fact-check information on the Internet when "they feel like they have a more immediate, significant impact on my life. When something is deemed nationally important or affects our society on an international or national scale."
2. The subjects that I am most likely to fact-check are "more polarizing topics in politics like immigration or international relations."

Brad's second response in the sentence completion exercise where he described fact-checking information related to politics or immigration contradicted his interview data where he said that he mainly fact-checked social information. This contradictory statement may be the result of him attempting to give me an answer that he thought would fit the nature of my study.

Danielle

Danielle also described applying motivated interests in her reasoning process. She detailed a need for sufficient interest in a topic to be motivated to apply media informational reasoning. She stated:

> I guess, if someone mentions a big event or something [on social media], and I'm curious about it, where I want to know more about it, then I'll definitely go, and I'll look up stuff online, on the Internet, because that's pretty easy to do. Otherwise, it's a way to pass time, or just to stay updated.

Danielle did, however, state that she was more interested in politics than other subjects:

> I'd say a bit more, yeah. I'm definitely more inclined to investigate events or things like that, that politicians talk about. To see, what they're talking about.

Yet for Danielle to apply media informational reasoning, she needed to be interested enough to do so. The interview data that Danielle provided can be confirmed by her written elicitation techniques. In the free listing exercise, she stated she applied media informational when:

1.) I am most likely to fact-check information on the Internet when "the information seem pretty outlandish, and this I feel the need to consult other sources. Or, if it's a really big news story with a lot repercussions for a group or many groups of people."

2.) The subjects that I am most likely to fact-check are "nowadays, politicians."

Danielle's answers further confirmed her claims that she needed to be interested enough in something to investigate it further.

The participants in this study were interested in applying their media informational reasoning process toward a variety of subjects for different reasons. Stuart was interested in social information, and his reasoning process was driven through his social group. Brad was

interested in computers and technology and that interest influenced what he chose to research online in his daily life. Danielle described needing to be interested enough in something to actually take the time to apply media informational reasoning. All of the participants described needing to be motivated to apply media informational reasoning toward a topic or piece of information. Some of the participants, such as Stuart and Brad, described applying motivated interest through their social identity. However, not many of the participants discussed applying their salient social identities such as ethnicity, race, or culture in their use of motivated interests. The discussion of the next theme illustrates how the participation used some combination of consensus determination, finding multiple perspectives, and bias identification in order to determine the veracity of information on the Internet.

Theme 3: Determining the Veracity of Information on the Internet

Another theme that arose from the data as the participants described their media informational reasoning process was how they determined whether information was accurate. Several sub-themes arose from this theme. The first sub-theme is that many participants applied consensus determination in their process of determining the veracity of information on the Internet. Consensus determination is the process of determining if something is accurate based on the statements from a plurality of sources in an Internet search. The next sub-theme is that some participants saw the identification of bias as a to determine whether a piece of information or a media story is accurate. The third sub-theme is that some participants viewed the identification of multiple perspectives as one way to determine the veracity of information on the Internet. Each participant in this study described using some combination of these three sub-themes in their media informational reasoning process. The way that each participant sought to determine the veracity of information on the Internet and which sub-theme they used is described

in Table 4.4 below. Next, I discuss three key examples from this theme and one example of negative evidence.

Table 4.4

How the Participants Determined the Veracity of Information on the Internet

Participant	How the participants determined the veracity of information on the Internet.
Stuart	Consensus determination and bias identification.
James	Judged information using personal experiences and knowledge.
Danielle	Consensus determination.
Sam	Bias Identification.
Brad	Consensus determination and bias identification.
Yuri	Fact-checked information and then compares it with his world view.
Pam	Consensus determination and bias identification.
Amrita	Consensus determination.
John	Bias identification.
Meg	Bias identification and checking information against peer reviewed sources.

Danielle

Danielle, for example, described using consensus determination in order to make judgments on whether or not a particular story was accurate or valid. She believed that truth could be found by seeing if a group of centrist news sources were consistent in their analysis of a topic. Danielle stated, “Ideally, there is going be less bias by the left or the right, and they're going to want to actually go for, untarnished facts, so to speak, or, at least, not present something in a way that's left- or right-leaning.” She was wary of overt sources that she thought were

partisan. Her process of consensus determination was centered on her preference for media sources that she perceived as demonstrating less bias. Danielle further stated,

> I guess multiple legacy presses say similar things or validate the same thing. To me that's valid cases where, maybe the legacy presses aren't getting involved. Like local news has to be involved, I guess seeing what the larger most central leaning news source has to say about it.

Danielle described preferring sources that she perceived as being less partisan in her media informational reasoning process and then determining what was true or not based on whether a consensus of those sources stated similar findings or claims about a certain topic. However, she was not able to give a clear example of subjects toward which she applied consensus determination toward.

Sam

Sam also described using consensus determination and bias identification in his media informational reasoning process. He described this process as:

> I first usually look at the initial report, like where I'm reading it from . . . So if I'm not as aware of that, I just go onto the homepage, I scroll through different highlights to see which way they usually lean. And if they're usually more bias toward a certain candidate or not, then I'd probably just search out the topic on Google probably, you know just go through news.
>
> Robert: Okay. So, are you verifying headlines, or seeing what multiple perspectives? Like how would you go about determining if something was true or not?
>
> Sam: Usually I would look through . . . I'd try to find something more right leaning or left leaning. . . And then see what's the consistent factor for me. And then try to ignore when they analyze, like spin, but they try to make it look like a fact.

In the excerpt above Sam described performing some amount of horizontal reasoning where he attempted to see what was consistently said about a particular topic which he described as a "consistent factor," and then try to identify the bias involved in the story. The consistent factor can also be labeled as consensus determination. Either way, Sam highlighted how he made use of consensus determination and bias identification to determine the truthfulness of information that he encountered in the media or on the Internet. However, he was not able to point out a specific example where made use of these parts of the media informational reasoning process.

Sam further corroborated these findings in his elicitation responses where he described trying to see multiple perspectives, find consistent information about a particular topic, and identify the bias within a piece of information. In the free listing exercise on the ways that participants apply media informational reasoning he wrote the he would:

> 1.) Try to look at the source/author of a certain article—try to understand their stance/see if there's an external reason (lobbying/funding) to why they answer that way. 2.) Look at how other sources cover the topic. What is the consistent information between different outlets of different political leanings. 3.) See who they cite and if what is being posted is more objective and reporting or subjective and analytical. 4.) Try to see the precedent, what sort of related information was posted beforehand.

Sam's free listing responses corroborated his answers from the semistructured interview and showed that the manner in which he attempted to seek truth was related to his efforts to see multiple perspectives and develop consensus determination about a topic. In addition, as part of his reasoning process he attempted to identify bias, a process which he described as "try to understand their stance/see if there's an external reason (lobbying/funding) to why they answer that way." In this example, his bias identification process concerned what monetary reasons existed for a person's statements, which probably was related to politics. He wrote in the

sentence completion exercise that the subjects that he was most likely to fact-check were "more polarizing topics in politics like immigration or international relations."

Amrita

Amrita described determining whether some piece of information was true through the use of consensus determination as well. She recounted her media informational reasoning process as:

> It's more like, when I'm talking about if I know it's true, if I see something on the news related to something political, I'll figure out whether or not this really happened within the first search or so. Because they'll be articles saying the same thing. . . The articles are the exact same, there's just more information everywhere . . . But that doesn't really change, I guess, the wording might change per article, depending on how into it they're getting. But I never really look into, like, um, I usually look into the major ones. But, I don't go out of my way to look at, things that are, like, Fox News or anything.

Amrita recalled her process of seeking truth about a particular topic as seeing if a plurality of sources state "the same thing," a process which can be described as consensus determination.

John

John's media informational reasoning was often applied to social information, especially music. He stated that the Trump presidency often made him want to avoid the news. When he did attempt to apply media informational reasoning, he often relied on his preexisting opinions to determine the veracity of information in a Google search. He would stop his search if there appeared to be a consensus of articles about an issue. On the other hand, he would dig further if positions appeared to be mixed, and he did not know what to believe. John described this process as:

> Unless I see something that I'm surprised by and then maybe I look it up on Google and see what most of the top links are saying about it. But I think for the articles I read more in depth, I tend to like trust them if they're from the *New York Times* or *The Washington Post.*

He continued,

> with CNN articles sometimes that I click on, I'll occasionally look up what they're speaking about to see like, oh, is this just what CNN's saying or do a lot of other people telling the same story the same way because sometimes, like I said, their stuff seems a little skewed.

What John described was using a consensus determination to verify the veracity of information on the Internet when he felt compelled to do so. He would apply consensus determination by examining the top link in a Google search. These approaches represented the use of consensus determination.

John also described attempting to identify bias in his fact-checking process. I was able to corroborate this information from John in his free listing responses on the ways that he applied media informational reasoning, which are shown below:

> Google searches—Pre-existing knowledge (Bias!)—What do individuals I trust think/say? →General trusted friends / family / mentors → What are most individuals saying?—What motives are behind this information → money → power → consistency with prev. beliefs/platform.

John described attempting to identify bias in the information he was reasoning with in the free listing exercise. This attempt at bias identification was evidenced in his statements about identifying what persons in the media were saying. He questioned their motives and whether their statements demonstrated consistency with prior statements.

Yuri

Yuri's responses in the semistructured interview and in the elicitation techniques could be characterized as searches for negative or disconfirming evidence. He did not describe using bias identification or consensus determination in trying to determine whether information was accurate. Rather, Yuri focused on attempting to see multiple perspectives in his "debunking" process. Then he would compare those perspectives with his current worldview, and decide whether or not he should change his mind about a particular piece of information. His usage of the term debunking was interchangeable with fact-checking. He described this process of trying to see multiple perspectives as they related to the recent controversy about the students from Covington Catholic High School in Kentucky who had a confrontation with an elderly Native American man during their antiabortion protest. He described this story as:

Robert: Okay. And what do you typically try to debunk?

Yuri: I will try to debunk things that conflict with my worldview. I say that it's an all right standard because my world view is pretty factual based. I prefer to determine things are correct before saying that they're correct for accepting them as they are. But at times I myself can fall into that trap. Like you remembered the MAGA kid controversy about the kid wearing a MAGA hat standing in the face of.

Robert: Yeah.

Yuri: As it turns out, the kid himself was actually innocent in all that wrongdoing.

Robert: Yeah.

Yuri: And it was like the Native American actually approached him, and this was because he felt a little bit insulted by them, and he also wanted to break up a fight between what he thought was going to be a fight between them and apparently Black Israelites or something, I don't know. But the point is the kid himself wasn't complicit in

> any wrong doing, but the Internet exploded about it and immediately accused him. And I was among those that accused him because I very much dislike Donald Trump. . . so I tend to believe bad things said about his supporters. I did try to fact-check a lot of this at the time. And to be fair, most of the, most of the places, the overwhelming majority of articles painted this kid in bad light. Even *The New York Times*. Fox News wasn't even defending him, which is already a kicker. Like this was, okay, he's probably complicit. But then the video got released of the entire thing because the initial publicly available information was a five second video. When it was found out that the kid was innocent, I immediately retracted any condemnations I had about him.

Yuri then described how his confirmation bias led him to make negative judgments about the "kid" in the video but that would be the type of worldview challenging story that he would be likely to fact-check. He stated,

> It seems like something someone wearing a MAGA hat would do. They're well known for their attitude. So it's something I expected to be true I guess. I would question things that seem off like something that either contradicts my worldview or contradicts like something extremely obvious about the world.

This except illustrates several points related to Yuri's motivated interests and reasoning process. First, he clearly described his desire to see multiple perspectives in choosing to make a judgment about information that contradicted his present worldview and changed his assertions about the guilt of the young man at the center of the controversy. Second, he described how his political identity shaped how he reasoned with this particular piece of information, a point which I further discuss in the following section.

Yuri further emphasized his desire to fact-check political information that challenged his worldview in his sentence completion response. When asked when he was most likely to fact-check information on the Internet, he wrote

> It disagrees with my worldview and/or is suspicious. → If something turns out to be true. I accept the change to my worldview."

Furthermore, Yuri wrote that the subject that he is most likely to fact-check is "politics."

Yuri's description of his media informational reasoning process served as negative evidence because he did not discuss attempting to identify bias or see what a plurality of sources said about a piece of information or media story in the process of consensus determination. Rather he described using a fact-checking process to specifically challenge his worldview and then attempt to change his perspective if he deemed it necessary. This process of checking information against his own bias differed from the other nine participants in the study. However, in the free listing exercise on how he applied media informational reasoning he mentioned attempts to see "where someone's coming from and how much I feel someone's involved in a topic." This statement may describe his use of bias identification, but it was not enough to contradict the rest of his answers in the interview.

This section has described how many of the participants determined if information or a media story was valid or accurate. All of the participants used various ways of making conclusions. However, to determine what was accurate or valid, most attempted to determine if information was biased, if there was a consensus from a variety of sources, and what multiple perspectives revealed. Danielle, Amrita, and Sam all described applying consensus determination, while in his reasoning process John described attempting to identify bias and finding multiple perspectives. Yuri's responses served as negative evidence because he detailed

using media informational reasoning to question his own biases. The next section discusses how the participants valued certain sources more than others.

Theme 4: Source Preferencing

The fourth theme that addresses Research Question 1 was that many of the participants placed implicit trust in certain sources to deliver truthful or accurate information. The first research question was: How did university students describe their media informational reasoning process? Many of the participants described trusting *The New York Times* and did not detail any specific use of fact-checking in response to newspaper articles. Each participant discussed trusting different sources for somewhat varied reasons but the common threads among all of their responses was favoring certain sources, trusting Google to provide accurate information, or favoring sources, such as local news that they believed contained less bias. I label the process by which an individual places implicit trust in certain sources as “source preferencing.” Source preferencing was an important theme in this study because it seemed to have an influence on how the participants reasoned with information on the Internet. They often described ending their fact-checking or reasoning process at sources that they trusted. Table 4.5 below describes the sources that the participants preferred to trust. I then detail select participants’ responses and data related to this theme.

Table 4.5

Sources that the Participants Trusted to Deliver Truthful Information

Participants	Sources they Favored
Stuart	Google searches and local news.
James	*The New York Times, The Wall Street Journal,* and blogs from nutritional writers.
Danielle	*The New York Times,* CNN, ABC, or what she considers centrist news sources. Peer reviewed scientific sources.
Sam	Google searches.
Brad	Snopes.com and Google searches.
Yuri	Google searches and Wikipedia.
Pam	*The New York Times,* local news, BBC and Google searches.
Amrita	Online newspapers that she finds credible and CNN.
John	Google searches, *The New York Times,* and *The Washington Post.*
Meg	*The New York Times,* Pubmed.com, *The Washington Post*

Pam

An example of trusting certain sources to deliver truthful information can be seen in how Pam described that part of her reasoning process. Pam stated that she placed a lot of trust in legacy press sources such as *The New York Times, The Washington Post,* and the BBC. Pam said that she “tends to believe the sources that she finds reputable.” In addition, she detailed avoiding sources that she saw being more politicized or opinionated such as Fox News or CNN. Pam also described preferring local news sources. She detailed some of her source preferencing in this excerpt:

Robert: Outside of the BBC, can you give me some others that ring true to you?

Pam: I like ABC. I like NBC. I do a lot of local.

Robert: Okay.

Pam: I don't like CNN. I don't like Fox. I don't like MSNBC.

Robert: Why not?

Pam: Just because I see those to be the most biased, on both ends of the spectrum, where it's also more opinionated . . . Than it is fact-based.

In this exchange, Pam described preferring sources that she saw as being less opinionated than others. This preference was an important distinction because she did not describe fact-checking or attempting to reason beyond reading or watching the sources that she trusted. For example, in the think-aloud exercise on a *New York Times* article on gun control she stated, "I'm not really questioning what I'm reading because it's from *The New York Times* and most of it seems that it sounds about right."

Furthermore, in Pam's sentence completion on the sources that uses for fact-checking she wrote:

Google → top sites—Friends—"Reputable sources" →BBC→Seattle/NY Times[2]→Washington Post→Boston Globe.[3]

In the sentence completion exercise where I asked how her political identity influences her informational processing she responded:

→ Don't' like 'opinionated sources' for politics i.e. Fox, CNN, MSNBC

→ Prefer least bias

→ Recognize bias in sources

[2] Pam is referring to her preference for the *Seattle Times* and *The New York Times* in this elicitation technique.
[3] These symbols reflect the arrows used in Pam's elicitation techniques.

These sentence completion exercise data, her think-aloud response, and her interview data can all be triangulated to determine that Pam places significant trust in certain sources. This trust in certain sources shaped her reasoning behavior because her fact-checking process would end at those sources.

Danielle

Danielle placed trust in local news outlets because "they're more trustworthy" and news sources that she viewed as being more "centrist." She described applying consensus determination in order to ascertain the validity of information or a story. Danielle believed that truth could be found by seeing if a group of centrist new sources were saying about a topic. She stated "Ideally, they're gonna be less bias by, like, the left or the right, and they're going to want to actually go for untarnished facts, so to speak, or, at least, not present something in a way that's left- or right-leaning." She was wary of overt sources that were vary partisan. So, Danielle's process of determining whether information was accurate based on if a plurality of sources that she trusted, such as centrist news sources, all made similar claims about a piece of information or news. She described this process as:

> Danielle: I guess, multiple legacy presses say similar things or validate the same thing. To me that's valid, in cases where, maybe the legacy presses aren't getting involved. Like local news has to be involved, I guess seeing what the larger most central centralist, leaning news source has to say about it.
>
> Robert: Okay, and why do you think it's important to go to a centralist-leaning news source?
>
> Danielle: I think it's important because, ideally, they're going be less bias by the left or the right, and they're going to want to go for untarnished facts.

Danielle viewed centrist news sources as having less bias, which therefore made them more accurate in her estimation. She would make this determination regarding the veracity of a specific piece of information or news based on her trust of sources that appeared to have less bias.

Danielle described making out-group judgments about sources that she perceived as having more bias than centrist-leaning new sources. The term out-group judgements comes from social identity research (see Hogg, 2016; Tajfel, 1978) and details how individuals make decisions about other persons or groups who are not in their identity group. She described this out-group judgment as:

> Source that are very overtly, are very overt, I should say, with their political means. Like, Breitbart for instance. It's pretty clear from their headlines that they're putting emotional headlines. Like so and so's, crazy, so and so's stupid. So there's also the Milo [Yiannopoulis] person being involved with [Breitbart.com][4]. Or even MSNBC, just because of the format that they have the show in.

The aversion to sources that she perceived as opinionated and geared toward driving emotional reaction drove her source preferencing toward informational sources that she thought were more centrist. Danielle did not provide much information about her source preferencing in her three elicitation responses, and therefore I was unable to triangulate the data from her session. However, her description of source preferencing still fits the theme that the rest of the participants described placing a significant amount of trust in certain sources, and this choice had an influence on their reasoning processes.

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[4] Breitbart.com is a far-right media website. Milo Yiannopoulis was a former staff writer on the website and has often made disparaging remarks about people of color. He was forced to resign from Breitbart for making comments that were seen my many to be in support of pedophilia (Farhi, 2017).

John

Another form of source preferencing is trusting Google to display accurate and truthful information in a search. This type of source preferencing is not exclusive to Google searches and can be combined with placing trust in certain new sources. John described trusting Google and placing trust in legacy press sources. In describing his media informational reasoning process, he stated,

> Unless I see something that I'm surprised by and then maybe I look it up on Google and see what most of the top links are saying about it. But I think for the articles I read more in depth, I tend to trust them if they're from like *New York Times* or *Washington Post*.

John described in this excerpt using what Google displayed as the top results in a search to make sense about an event. This source preferencing process was related to consensus determination because that part of the reasoning process was also tied to determining what a plurality of sources say about a topic and then making a judgment based on that plurality. However, an individual does not often use consensus determination without trusting Google to display trustworthy sources. John, for example, described placing trust in legacy press sources. He did not detail fact-checking information from those sources because he stated he trusted them. Legacy press sources were often the end of John's reasoning process.

John further detailed his source preferencing in his free listing and sentence completion exercises. He listed the ways that he applies media informational reasoning in his daily life as

> Google searches—Pre-existing knowledge (Bias!)—What to individuals I trust think/say? →General trusted friends / family / mentors → What are most individuals saying?—What motives are behind this information → money → power → consistency with prev. beliefs /platform.

John also wrote for his sentence completion exercise that the sources that he was most likely to use for fact-checking were “Google, .gov sites, .edu sites, NYT, WA Post.”

What John detailed as it pertained to source preferencing was that the sources that he trusted, legacy press and Google searches, had an effect on his media informational reasoning processes. This decision was important because the sources that he trusted would generally be where his reasoning processes ended, a finding which was a common amongst the participants in this study.

The participants that I described in this section highlight three different ways that the participants detailed source preferencing. Some such as Pam placed great trust in the legacy press and local new sources. Danielle preferenced sources that she perceived as being more centrist and contained less bias. In addition, some of the participants, such as John, placed deep trust in the search results provided by Google, and they described making judgments about information based on the top results of a Google search. All three types of source preferencing were important parts of the participants’ media informational reasoning processes because the ways that they placed their trust in certain sources generally determined where they would end their reasoning process. Some participants, such as Pam, would not reason past the information provided in sources such as *The New York Times.*

Yuri

In the analysis of data as these related to the theme of source preferencing, one outlier emerged. Yuri did not describe applying any particular trust in certain sources. He stated that,

> my preferred news sources is honestly, I don't have really a preferred news source. I judge things based on what sources they provide to me because I want to see how they got their conclusion and then test that against my own knowledge. And if I'm lacking any

> knowledge to compare it to. . . I don't really have like a single preferred source, so to speak. I prefer to dissect the sources of what I'm trying to debunk.

Yuri described being mistrustful of most of the information that he came across. He reported using Google, but he would not make judgments about information based on a consensus determination within that search. He described his fact-checking procedure:

> First, I read the article, then I look at the sources of that article. Then I consider it based on what knowledge I know. If there's something I feel I'm lacking to be able to accurately judge it, then I'd Google it. And I look through Wikipedia. I look through the source Wikipedia has. I try to hunt down maybe the paper if it's based on some kind of research, that kind of thing. And basically I try to judge something based on what sources it provides me based on my own internal knowledge. And if I feel my internal knowledge is lacking, I Google for the knowledge that I need after also fact-checking that knowledge.

What Yuri described was trying to ascertain the perspective of an author or source, seeing how that related to what he knew about a topic, and then making a determination once his research was complete. In his free listing exercise, Yuri wrote that he applied Google searches to "seeing where someone's coming from." In the think-aloud protocol, Yuri demonstrated using more horizontal reasoning than any other participant in the study, and he described being less likely to accept the facts in *The New York Times'* article on gun control than other participants. Yuri's case is an outlier to my claim on source preferencing because he did not describe implicitly trusting certain sources.

Summary

This chapter described and discussed the themes and evidence that were used to answer the first research question, which was: "How do university students describe their application of media informational reasoning in their daily lives and what are they using it for?" Four main

themes arose from the coding process and subsequent data analysis questions. The first was that all participants described applying media informational reasoning in different ways and that there was no generalizable pattern to their process. The second theme was that all of the participants described applying their media informational reasoning process to their motivated interests. Therefore they used media informational reasoning when driven by their social identity or when driven by interest in a topic. The third theme that arose was that many of the participants described using bias identification, finding multiple perspectives, and applying consensus determination to make a judgement about the validity or truthfulness of a media story or a piece of information. The fourth theme was that many of the participants described applying source preferencing in their media informational reasoning process. Source preferencing was characterized by trusting certain sources or such trusting Google to display accurate results in a search.

Chapter 5, the next chapter, will discuss and describe the evidence, data analysis, and themes that arose in my effort answer the second research question of this study. The second research question is: “How do university students describe their perceptions of the way that their social identities influence their media informational reasoning processes?”

CHAPTER 5

PARTICIPANTS' SOCIAL IDENTITES AND THEIR MEDIA INFORMATIONAL REASONING PROCESS

This chapter presents the findings, themes, and evidence that address the second research question in this study. The question was: "How do university students describe their perceptions of the way that their social identities influence their media informational reasoning processes?" This chapter is broken down into the presentation of the four central themes that emerged from the coding procedure and data analysis. These themes are listed in Table 5.1 I provide selected evidence to support each theme that highlights the main points of the theme and the different factors within it. I then present data from a sample of participants to the highlight the main points from this theme. I then do the same with each subsequent theme.

Table 5.1

Themes for RQ2

Theme	Theme Title
Theme 1	Political identity and the media informational reasoning process
Theme 2	Few participants had ethnic or cultural attachments.
Theme 3	Ethnicity, culture, and the media informational reasoning process.
Theme 4	Gender and the media informational reasoning process.

The first theme that arose from the coding and data analysis was that most of the participants described their political identity as their most salient identity as it pertained to their media informational reasoning process. This is not to say that the participants' most salient identity was their political identity, but rather that they were more able to describe it influencing their online reasoning processes than their other identities. The second theme was that most of

participants did not perceive themselves as having ethnic or cultural attachments. The third theme was most of the participants who perceived themselves as having a strong cultural or ethnic identity did not describe those identities as having much influence on their media informational reasoning process. The fourth theme was most of the participants did not perceive their gender as having an influence on their media informational reasoning process.

Theme 1: Political Identity and the Media Informational Reasoning Process

Most of participants in this study described their political identity as being the most salient identity as it pertained to their media informational reasoning process. However, they often did not describe perceiving that their political identity was biased and instead looked for bias in other sources. Their political identity was manifested and expressed in their use of source preferencing, bias identification, consensus determination, and motivated interests in their media informational reasoning processes. This section discusses several examples that exemplify this theme. James reported his political identity as driving his use of motivated interests and consensus determination. Danielle detailed how her political identity influenced her source preferencing. Yuri was focused more on using his own bias or worldview as a benchmark in his media informational reasoning process, a choice which stood apart from the other participants.

James

James reported his political identity as being very salient in his media informational reasoning processes, an approach which played out in his application of motivated interests and consensus determination. His motivated interests were centered on economics, politics, and nutrition and health information. However, the motivated interest related to nutrition and health was tied to his extreme weight loss and can be considered a personal identity, not a social one. His positionality that included his political identity and his personal identity related to health and nutrition were important factors in his media informational reasoning process.

James wrote in the sentence completion exercise that his political identity influenced his informational processing by:

> Leaning more toward the right on economic issues, though even there may be disagreements since 'economic' can be very general. I also like to spend more time on the philosophy of surrounding economic systems; the morality of capitalism is hardly ever defended, whereas most people, including those on the right, believe in the morality that supports socialism, even though the right does not support the system itself.

James described in the written statement above that his right-leaning philosophy on the morality of capitalism was a big driver in how he perceived his political identity as it pertained to economic information. Furthermore, he made an out-group assertion toward those who he perceived as supporting socialism, even on the political right.

In the interview, James also reported fact-checking the political philosophy of socialist politicians such as Bernie Sanders and Alexandria Ocasio-Cortez. He did not provide an exact example of what he fact-checked about those two politicians. However, James did detail clear perceptions about how his political and economic perspective shaped how and why he chose to reason with information regarding socialists' political philosophy, especially as it pertained to what he thought was the 'moral aspect' of that philosophy. Our exchange on this topic went as follows:

> Robert: So, are there any other topics aside from nutrition that you're likely to fact-check or investigate?
>
> James: Well I guess just if I find interesting in that, I might fact-check at least as we get further in the economics topics-
>
> Robert: Okay. Can you give me like an example? It's okay if you can't remember.

James: I guess if a politician like Bernie Sanders or like Alexandria Ocasio-Cortez might say something about like socialism or a thing like. If they have a specific plan to, I guess I would investigate further kind of like how they would implement that, how they would try to implement that. Like how they would pay for it. . . . I guess the quantitative aspect to it. And then, qualitative and kind of philosophically because I feel like what a lot of like people on like the right in general, and I don't think of myself as right or left, but I guess I would if I lean toward one it would be right. But anyway, they argue more on just purely economic facts.

Robert: Mm-hmm (affirmative).

James: And the reality is that people listen to more kind of like philosophy and like morals. And so, not just so there's the facts portion of it, but then I believe really strongly in the moral aspect of it. And so I might go to play like a, I'm not sure if you've ever heard of like Ayn Rand?

Robert: Yeah of course.

James: Yeah, yeah. So that's that morality, she was the only philosopher who ever talked about that. Except maybe Aristotle. But she's the only one who put capitalism, stuff like that on a moral basis. Which is what I feel like we really need, and if and people kind of want, I guess I think people like me want, kind of like you know a lesson, Bernie Sanders influence, stuff like that. So that's kind of why I would investigate more of the moral aspects of that.

In this exchange, James perceived and described his right-leaning political and economic philosophy that centered on the morality of capitalism as being a driver of motivated interest and provided a lens for how he would interpret information regarding economic philosophy.

Danielle

One of Danielle's most salient identities was her political identity. She reported in her sentence completion elicitation exercise that her political identity drove her source preferencing, which influenced her use of consensus determination. She wrote that her political identity shaped her informational process by, "making me very critical of blatantly conservative news sources and more trusting of sources like CNN, *The New York Times,* and *the Washington Post.*" Danielle described herself as a liberal, and she reported that political identity shaped her source preferencing of more liberal news sources. She emphasized her source preferencing by underlining the word "very," and the names of two of the news sources that she also reported consuming in her media informational reasoning process. However, in her interview she described herself as favoring more centrist-leaning news sources. When determining how to find truth in media sources she stated:

> Ideally, there is going be less bias by the left or the right, and they're going to want to actually go for, untarnished facts, so to speak, or, at least, not present something in a way that's left- or right-leaning.

Danielle often reported trusting and preferring sources that she thought were centrist and less partisan such as national or local news.

Danielle also reported using consensus determination to infer the veracity of information on the Internet and this process relied on her source preferencing. The sources that she saw as being reliable were:

> CNN, they're considered to be pretty reliable. The national news like CBS, or NBC, or ABC, stuff like that. So, if a story came out, I would look to see if that was being publicized on other major news outlets.

What Danielle illustrated was often placing her source preferencing to sources that she thought were reliable and centrist. She looked for sources that relied on fact-based information rather

than opinion. However, many of the sources she reported preferring such as CNN, *The Washington Post,* and *The New York Times* often lean to the political left.

Danielle seemed to perceive that her political orientation shaped her news choices but was not aware of the political leanings of the sources that she preferred. In her interview and elicitation exercise she reported making out-group judgments toward conservative sources. Danielle reported avoiding sources that she saw as being overtly partisan. She stated that she avoided sources that:

> are very overt, I should say, with their political means. Like, Breitbart for instance. It's pretty clear from their headlines, they're putting emotional headlines. Like so and so is crazy; so and so is stupid. And there's, also the Milo person being involved with that, that everyone, kind of, knows about.

In this statement, Danielle detailed making an out-group judgment toward an overtly conservative news source, Breitbart.com, and its former editor Milo Yiannopoulis. She continued to describe her preference for centrist-leaning news sources by stating "even MSNBC, just because of the format that they have the show in. It's kind of very op-ed-y versus news." Danielle described in that quote that she perceives MSNBC as focusing more on opinions than news.

Danielle perceived that her left-leaning political orientation shaped her source preferencing for sources that she believed as being more centrist and containing fewer opinions. She reported making judgments about the veracity of information based on a consensus determination from the sources she perceived as being more centrist. Danielle also reported making out-group judgments toward sources she thought were overtly partisan and conservative. However, what she did not describe was an understanding of how her own biases, as they related to her political identity, influenced her media informational reasoning processes.

Yuri

Yuri and his method for bias identification served as the outlier for how the participants saw their political identity as their most salient identity in their media informational reasoning processes. He was concerned about identifying bias in his fact-checking process. However, he was the only participant who actively examined his own bias in that process. He framed examining his own bias as testing information against his own knowledge as he was implementing his media informational reasoning process. He stated:

> I judge things based on what sources they provide to me because I want to see how they got their conclusion and then test that against my own knowledge. And if I'm lacking any knowledge to compare it to, like I knew that ice froze and refroze in that previous example. And so that was knowledge I had. If I didn't know that, I would likely have Googled it and found out more.

Here Yuri described wanting to test information against his knowledge. Furthermore, when I asked him what types of information he would normally fact-check he stated:

> I will try to debunk things that conflict with my worldview. I say that it's an alright standard because my world view is pretty factual based. I prefer to determine things are correct before saying that they're correct for accepting them as they are.

This quotation is an example of Yuri detailing his motivated interest of wanting to fact-check information that challenged his worldview and then attempting to garner the correct information before he made his determination.

Yuri was the only participant who reported using his media informational reasoning process to test his own biases or worldview as he termed it. He also sought to fact-check information that he could test against his own knowledge. This process differed from that of the other participants, who did not describe recognizing their own biases to the extent Yuri did.

Most of the participants in this study perceived their political identity as the most salient identity as it pertained to their reasoning process. Their political identities often helped drive their motivated interests or use of consensus determination, as evidenced in James' session, or was a part of their use of bias identification, as in Danielle's session. However, Yuri again served as the outlier for this study because, when compared to the other participants, he was the one participant who was more concerned with evaluating his own biases.

Theme 2: Few Participants Described Having Cultural or Ethnic Attachments

The second theme that arose in the analysis of the data pertaining to the second research question is that most of the participants did not perceive themselves as having many cultural or ethnic attachments. Table 5.2 below describes the level of cultural or ethnic attachment provided by each participant. Most of the participants did not perceive themselves as having much attachment to their cultures or ethnic groups. I made this determination by comparing responses of the participants in the interviews and in the sentence completion exercises to the concept of cultural identity development (Jensen et al., 2011).

Table 5.2

Perceptions of Cultural or Ethnic Attachments

Participant	Perceptions of Cultural or Ethnic Attachments.
Stuart	Perceived himself as having little cultural or ethnic attachments.
James	Perceived himself as having little cultural or ethnic attachments.
Danielle	Felt more of a connection to her American identity and perceived herself as having little cultural or ethnic attachments to her Indonesian identity.
Sam	Described himself as having a strong attachment to his Chinese culture and ethnicity.
Brad	Described his identity as Chinese American.
Yuri	Described feeling strong cultural attachment to his Russian heritage.
Pam	Perceived herself to have little cultural or ethnic attachments.
Amrita	Described having a strong attachment to her Indian ethnic and cultural identity along with her American identity.
John	Did not feel attached to his ethnicity but described what he perceived as his Pacific Northwest liberal culture.
Meg	Perceived herself as having little cultural or ethnic attachments.

Cultural and Ethnic Groups

Cultural identity can be defined as the formation of one's identity as it relates to the adoption of beliefs and practices of multiple cultural communities (Jensen, 2003; Jensen et al., 2011). The formulation of cultural identity development is based on how individuals make choices about the cultures and their custom complex with which they identify (Jensen, 2003; Jensen et al., 2011). The concept of cultural identity development overlaps with ethnic identity development (Phinney, 1989 1992) because both concepts focus on the nature and characteristics of an individual's group attachments. However, ethnic identity development centers more on

how individuals from specific ethnic minority groups navigate their group identifications as it relates to the ethnic and racial power hierarchies that have been constructed in modern societies (Jensen et al., 2011; Phinney, 1992). I choose to use the concept of cultural identity development rather than ethnic identity development because I did not focus on how individuals from specific minority groups navigate racialized hierarchies. Rather, I was concerned with how the participants perceived their group attachments to culture or ethnicity influenced their media informational reasoning process.

It is important to remember that culture and ethnicity remain overlapping concepts and can be used somewhat interchangeably. Culture comprises “the behavior patterns, symbols, institutions, values, [and] other human-made components of society” (Banks, 2009, p. 60). Geertz (1973) defined culture as “an ordered system of meaning and symbols” (p. 144). Banks (2009), for example, described the United States’ culture as a composition of a variety of microcultures that maintain distinct characteristics while sharing many characteristics of the national culture. Therefore, a participant, such as Amrita who is Indian-American, can describe herself has having cultural characteristics that are distinctly Indian, while having some that are American as well. Other examples of cultural groups are Southern White culture, or various LGBTQ cultures.

An ethnic group is a type of cultural groups that is generally involuntary (although identification with an ethnic group may be optional) and are based on historic origins, shared heritage, and traditions (Banks, 2009). The members of an ethnic group share a sense of peoplehood. An example of an ethnic group with a shared sense of peoplehood are the Irish. The component of shared ancestry is largest factor in distinguishing ethnicity from culture. However, ethnicity and culture overlap in terms of their composition, relying also on behavioral patterns and constructed symbols.

In addition, it is important to keep in mind that people's attachments for and identification with ethnic and cultural groups is positional and depends on a variety of factors (Banks, 2009). Some people may express great attachment for those group memberships and actively participate in customs and rituals related to their ethnicity or culture, or they may choose not to. Many of the participants in this study did not express a strong attachment to their cultural or ethnic group, and those who did often did not describe it having large influence on their media informational reasoning process outside of their motivated interests.

More than half of the participants in this study perceived themselves as having little attachments to their cultural or ethnic group. Six of the participants described little identification or attachment much with their cultural or ethnic group. What I mean by stating that the participants described having little identification or attachment with their cultural or ethnic group is that they did not take part in customs and traditions related to those groupings or express those groupings as a large part of their identity. Four of the participants, however, expressed having strong identifications with their culture and ethnicity and taking part in the subsequent customs and traditions of those groups.

I detail examples from the data regarding participants who few cultural or ethnic attachments or affiliations in this section. Stuart, who identified as Vietnamese-American, perceived himself to be more influenced by the political culture of his school and neighborhood community than by his Vietnamese cultural or ethnic identity. James perceived his economic and political social identities, along with his personal identity regarding nutrition and health, as being more salient than his Hispanic cultural or ethnic identity. In addition, he stated not that he did not feel a strong attachment to his Hispanic identity. Danielle identified as Indonesian American; however, she perceived that her American identity was much more salient than her Indonesian

one. She described several ways that she perceived her American cultural identity as influencing her media informational reasoning process. I now detail each example for this theme.

Stuart

Stuart did not perceive that his cultural and ethnic identities were salient. He identified as Vietnamese-American. Stuart was a first-generation American, and his parents were refugees who immigrated to the U.S. in the early 1980s. He described his parents as instilling a strong work ethic in him, a belief which he related as coming from their immigration status. He said that his parents:

> Escaped [Viet Nam] by boat and to Malaysia and then flew over here.[5] So they're both immigrants, and it's affected their work ethic and that kind of mindset on starting from the bottom now we're here, so they, they've kind of not really forced it on me. But they've always kind of drilled it subconsciously into me to keep working you know, no matter where you're coming from and no matter how low or high you are you know, you can always succeed. And so that's always been kind of an inspiration to me.

In addition, Stuart did not describe having much attachment to his Vietnamese culture or ethnicity. Rather, he felt more attachment to his multicultural Asian American group identity than his Vietnamese one.

Stuart wrote in sentence completion exercise that his cultural identity shaped his informational processing by:

> Making me need to see both sides of an argument. I identify with my multicultural minority community as an Asian American, but my community/friends of conservative viewpoints caused an internal clash where I have to see both sides to understand / form my own opinions on media.

[5] Any information in brackets has been inserted to clarify a statement or replace a word that could identify a participant.

He attributed this need to see both sides, which he perceived as having a large effect on his media informational reasoning process, to growing up in a predominately White community.

When I asked Stuart in the interview how his culture influenced his reasoning processes he stated:

> I am Vietnamese, and my parents come from, from Vietnam, I've always grown up in I'd say a generally White community. Even though my school is one of the most diverse, but that's because I commuted a little further to my school. And the neighborhood that I lived in was generally pretty White. And because of that all the people in my community, their social views and kind of their ways of deducting news, I wouldn't say influenced me but like or I guess it kind of did.
>
> Like, it was just around me a lot, and, and I'd say a lot of my neighbors were very Republican and conservative I would say. And that doesn't mean I'm conservative, but I feel like their views, or I saw more conservative views around me so I kind of understood the other side a little bit more than maybe a lot of people at my school. For example, at my previous high school. I went to school in Kent, and that was a pretty diverse area I would say, and a lot of the people there were obviously Democratic, I guess. And their views, but the thing is they grew up like, in their own communities and they didn't have many other wide-ranging views around them
>
> So it's easier for them to be very one-sided, and I feel like for me, I kind of got the best of both worlds, and I can see what they were thinking versus what people in my neighborhood were thinking, for example.

What Stuart perceived and described as influencing his media informational reasoning process was the political culture of his neighborhood versus his school. He reported growing up around conservatives and going to school with liberals and those experiences enabled him to be able to

see multiple perspectives. Stuart also made out-group judgments about people who were unable to see multiple perspectives in their reasoning process, a choice which may relate to the importance of seeing multiple perspectives in his reasoning processes.

Two different times when I asked Stuart about how his cultural or ethnicity influenced his reasoning process, he provided an example of how his best friend, who is a conservative, was treated poorly by his more liberal social group. He perceived that this relationship with his best friend had an important influence on his reasoning process and his desire to see multiple perspectives. Stuart described his relationship with his friend as:

> He's like my best friend, and he's had a lot of influence on me. And we're both Catholics and a lot of the views that he's shared with me I wouldn't say I necessarily agreed with at first, and then, knowing the whole story I told you about him feeling attacked even though he was different from what people would label him as. I think it helped me open up with my viewpoints comparative to his. And I'd say I now share very similar views that he does because I wouldn't say it's because he's White or anything. For example, I'd just say it's just because I've spent a lot of time with him and he's like grown on me. And I don't know if there's a specific identity that I could say that, that makes me think this way now. And I will fact-check [and] think about media the way that he does a lot more often now than I would say like before that.

The example that Stuart gave from his friend influencing his reasoning process was his friend convincing him that there was more to the story regarding the media furor over the students from Covington Catholic High School in Kentucky. Those students were filmed confronting a Native American elder during their anti-abortion protests in Washington, D.C. Because of the short nature of the film of the confrontation, it became a media phenomenon. Stuart reported trying to see both sides of the story after speaking to his friend.

Stuart perceived the political culture of his school and community, along with the reflexive personal friendship with someone with a differing worldview than him as having an important influence on his reasoning process. The positionality of occupying different spaces with different political cultures shaped Stuart's reasoning process because he believed that it enabled him to see multiple perspectives along with his relationship with his best friend. He did described perceiving few attachments to his Vietnamese ethnic or cultural identity; nor did he describe those identities as much of an influence on his media informational reasoning process. After our session concluded, he told me that no one had ever asked him about his identity before, and that he had never thought about in the context in which I was asking. He then thanked and expressed gratitude for me being interested in that aspect of his life.

James

James also did not describe having much attachment to his Hispanic ethnicity or culture. Rather, he believed that his political identity and his personal identity related to his extreme weight loss. James described his lack of attachment for his Hispanic ethnicity and culture:

> Well, I guess identity biases you toward some things. And so sometimes like how strongly you feel, you connect with that identity. So, I might be Hispanic, but I don't feel I'm really that strongly connected to it. Last time I've been to Puerto Rico was, I think when I was 8 years old. I understand a lot of Spanish, but I don't speak it. I haven't been to the to the Dominican Republic at all. So probably, being Hispanic, I don't really see that as being that important to me. When I'm on the Internet or fact-checking things whereas you know the diet is, after being overweight or obese like most of my life until about 2 years ago. You know that one's more important to me than being Hispanic, because that one I feel like giving me a lot more. And so that influences me just because . . . if like with the nutrition advice that most people get, most doctors, most scientists give,

> I just feel that it's wrong, and a lot of people will benefit by switching their diet to like a lower carb one.

James stated that his Hispanic identity is not that important to him and he does not participate in aspects of its culture such as language. He does not feel a connection to Hispanic peoplehood, nor does that identity influence his reasoning process. In the sentence completion exercise James stated his cultural identity had not influenced his media informational processing by writing, “In most cases I don’t really feel like my cultural identity influence this.” He described having little cultural or ethnic attachments and therefore did not feel it influenced his media informational reasoning process. However, James’ positionality related to his political identity and his weight loss driving his motivated interests in regard to health information had a large influence on his media informational reasoning process than his ethnic group or cultural identity. James’ case indicates that an individuals’ personal identities may have a larger influence on their reasoning process than their social identities.

Danielle

Danielle, much like Stuart and James, did perceived herself as having few attachments to her Indonesian ethnic or cultural identity. Rather she reported what she perceived as her American cultural identity along with her political identity, which drove her media informational reasoning process. Ethnically and culturally, Danielle was Indonesian American, but she identified more as an American. She described herself as having little attachment to her Indonesian identity and stated that she sees herself as being more racially ambiguous depending on the social context that she occupied at any given time.

When I asked Danielle how she ethnically identified she stated:

> Ethnically, my dad, he's White American, and my mom, she's Indonesian. And in that, like her own tribal slash ethnic group is some Arabic in there. So, I've been raised here [U.S.] predominantly though, and I only speak English, so I'd say I'm pretty American.

Furthermore, she perceived her American cultural identity as having a greater influence on her media informational reasoning process than either her Indonesian ethnic or cultural identity. She stated:

> I guess I think I've had the benefit, or privilege, or whatever you want to call it, of being pretty, racially ambiguous. So, there's a lot of fluidity, I think, in my identity. So, I feel like, when it comes down to being, represented or finding information on the Internet, it's kind of based off of more my interests.
>
> And that makes my culture works more than say, like, ethnic identity. Just because it's . . . growing up it was always a question. And, so, and my parents were always very big on, I guess, assimilating. So, it was never like I am like this. It was oh okay, you can think I'm, Hispanic, that's cool. So, I think with that fluidity comes, just culturally I'm more motivated by my interests and where I've grown up.

Danielle also reported growing up in a small suburban town in the Pacific Northwest, where she detailed being taught to ask a lot of questions, which she perceived as intersecting with American culture. She stated,

> I think being a relatively educated American. I would say has definitely shaped my view of information. I say American just because, at least in this part of the country, I feel like or at least, I should say at least in my school that I grew up within [a small suburban town in the Pacific Northwest], they taught us to ask a lot of questions. I know in other countries, like for instance in Indonesia. I think one of the biggest things that bugs my mom is that I ask a lot of direct questions, and they're culturally, it's as little rude to just

> be like 'hey why do you do it like that?' And so, I think that, definitely, defines my identity when asking for information, or when delving into things.

Danielle reported in our session that she perceived herself having little attachment to her Indonesian identity, and she viewed herself as "racially ambiguous." She perceived her American culture, which she equated with being direct and questioning information or people, as forming a large part of her media informational reasoning process. Danielle made this assertion about American culture based on her comparison between Indonesian culture and American culture, while focusing on how she viewed directness as being a symbol of American culture. In addition, in her sentence completion exercise, she stated that her cultural identity shaped her informational processing by "making me direct with my questions, and digging into more details because I've been drilled to develop strong arguments by my academic experience."

Danielle's perception of her American cultural identity served as an outlier to the other participants in the study because she was the only participant who viewed her media informational reasoning process as being reflective of a large American culture. The other study participants either did not perceive or describe themselves as having much attachment to a broader American culture, or they focused on either their micro or macro cultures.

Most of the participants in this study did not perceive themselves having a strong ethnic or cultural attachments. Some, such as James, had strong personal identities that were very salient to them. Other participants, including Stuart, did not feel as connected to their ethnic identity but reported being more influenced by the political culture of their school or neighborhood community. Another participant, Danielle, served as an outlier to the others because she was the only participant who viewed her identity as being attached to a larger American culture, which she perceived as influencing her media informational reasoning process. The identities of the study participants in many ways were based on the choices they

made toward certain groups and the perceived that those choices had a strong influence on their reasoning process. However, not everyone's group attachment toward different identity groups such as ethnicity and culture influenced them in the same way. Some individuals believed that their media informational reasoning processes were influenced by their ethnicity and culture more than others in this study. In the next theme, I will detail how the participants who reported having strong ethnic and cultural attachments perceived how those identities influenced their media informational reasoning process.

Theme 3: Ethnicity, Culture, and Media Informational Reasoning.

I hypothesized in my dissertation proposal that the university students in this study would describe their perception of the intersection of their social identities and media informational reasoning processes in ways that reflected their level of personal cultural identity development. However, the data from the participants in this study did not match my hypothesis. Most participants who reported having the greatest attachment toward their culture or ethnicity did not perceive that attachment as having an important influence on their media informational reasoning process. However, some of the participants did describe their ethnicity and cultural as having shaped their motivated interests. The participants' perceptions of how their culture or identity influenced their reasoning processes are detailed in Table 5.3 below. Amrita reported that her Indian and American cultural identities affected her consumption of social information. On the other hand, Yuri did not believe his Russian culture influenced his online reasoning process. Sam is the outlier for this theme because he perceived that his Chinese culture and ethnicity had a significant influence on his media informational reasoning processes. I will next detail examples from these three participants.

Table 5.3

Ethnic and Cultural Identities and The Media Informational Reasoning Process

Participant	How they perceived their ethnic and cultural identities as influencing reasoning
Stuart	Viewed the political culture of his community and driving his media informational reasoning process more than his Vietnamese-American ethnicity or culture.
James	Believed his cultural or ethnic identity had little influence on his media informational reasoning process.
Danielle	Believed her cultural or ethnic identity had little influence on her media informational reasoning process.
Sam	Described his culture and ethnicity as having a large influence on his reasoning process through his use of motivated interest and part of his cultural identity development process.
Brad	Described focusing on how Chinese people are represented in the media.
Yuri	Believed his cultural or ethnic identity had little influence on his media informational reasoning process.
Pam	Believed her cultural or ethnic identity had little influence on her media informational reasoning process.
Amrita	Described her consumption of social information related to her Indian and American ethnic and cultural identities as driving her motivated interests.
John	John perceived his upbringing in the liberal culture of the Pacific Northwest as having a large influence on his politics which played out in his source preferencing, bias identification, and consensus determination.
Meg	Did not describe herself as being a part of a culture or ethnicity.

Amrita

Amrita’s main identity was her Indian ethnic and cultural identity. She also had an American identity. She expressed a strong attachment to her culture and seemed to have positive cultural identity development, but she did not describe that identity as being a large influence on her media informational reasoning process outside of some Indian media consumption. She

described this cultural effect being built on communal Indian activities such as going to temple, Indian weddings, and family get-togethers.

Amrita reported that her cultural identity development took place in these Indian communal activities. She stated that her sense of belonging came from going to:

> An Indian event on campus, if I go to an Indian wedding and see all my cousins, or if I go to the temple or something, if I interact and do things, or if I watch things that are Indian, at home, if I do anything related to being Indian then I most likely feel it.

One of the cultural activities she would partake in at home was her consumption of Bollywood movies, which drove some of her motivated interests. She stated:

> I watch Bollywood movies just because I like them, and I can put them on, if there's new news in Bollywood sometimes I'll just look it up because I wonder what's happening. And it's if there is a new movie coming out, some information about the [movie] stars, I'm like, 'Oh this is cool.' So, like, I'll look it up.

Amrita reported that she was interested in social information that was culturally related to her Indian identity, and this interest drove part of her motivated interest to consume that cultural content and examine information about it on the Internet.

Amrita did not describe keeping up with news in India outside of major events, and she stated that she was more interested in history and Bollywood than current Indian events. She stated:

> In terms of news, I also have that, where if it's a major event that happened, like the thing two weeks ago. I'll look more into detail about that.[6] But if it's related to history, I'm just really interested in history. And, whenever Bollywood has historical movies, I always find that really cool.

[6] The major event that Amrita was referring to was the terrorist attack in Kashmir, India where a suicide bomber killed 40 soldiers on February 18, 2019.

In the statement above Amrita described her motivated interest as it related to her Indian identity as including history, Bollywood movies, and major current events.

When I asked Amrita if she believed that the Internet enabled her to purse her ethnic identity development, she responded by saying, “I don't know how much it helps me develop my identity. But it helps me look into things I'm interested in that relates to being both Indian and American.” Amrita perceived herself as having both Indian and American identities. She stated:

> My identity's pretty solidly a mix of being Indian and American. Because I have both cultures kind of, intertwining. I grew up in a really small town, before I moved to [a small city in the Pacific Northwest] where I was the only Indian person in my town.

Amrita also reported having an American identity that generally played out through her social college behaviors and her upbringing. She stated that often her identities go back and forth depending on her positional space. She described this code-switching process as going back to her childhood in a small town in the Pacific Northwest. She said:

> Because I have really solid parts of being Indian that I fully identify with. Whether it's parts of me being Indian, like dressing up, listening to Bollywood, eating Indian food, having fun, just kind of taking a break, or putting on henna, and stuff like that.
>
> And then there's, parts of me that are more Americanized, I guess. Like, identity. Where it's more not partyish, but more open to just do things that more college kids will do. Like, going out to more, events and, I don't know. I would say it's stuck between that. I go back and forth. Because some days I really listen to American music. Sometimes I listen to Bollywood. So, I wouldn't say any of them make me question who I am, which identity I am. But I’m in the middle.

Amrita also believed that her American identity drove her consumption of American news. However, the main descriptions of how her American identity influenced her media

informational reasoning process centered more on the consumption of social information. She also viewed her social groupings and friendships as being a place where her American identity developed.

Amrita did not think that either Indian or American cultural identities influenced her media informational reasoning process. Rather, she described those identities as driving her news consumption regarding both Indian and American current events, and mostly driving her consumption of social information such as Bollywood movies and Indian music. Amrita believed that most of her ethnic or cultural identity development occurred in her social relationships in college or her Indian cultural activities such as weddings and other family gatherings. However, she did detail part of her motivated interest being related to her Indian ethnic and cultural identities.

Yuri

Yuri did believed that his ethnic or cultural identity had little influence on his media informational reasoning process, even though he described having strong attachments to his Russian and American identities. He stated that he "would consider myself maybe 70 % [or] 65 % American [and] 35 % Russian." Yuri also explained connecting with his Russian identity by experiencing the "traditions and values that are connected to Russia through my parents." He stated that he experienced those traditions and values through "food, stories, music, the culture, that kind of thing. My parents still practice that whenever culture comes from there." Yuri also reported connecting to his Russian culture by speaking Russian at home with his family.

Furthermore, Yuri described connecting with his American cultural identity by coming:

> To [a large public university in the Pacific Northwest]; I talk to Americans. I talk to other people, and parts of what they think become parts of what I think. I enjoy cup noodles, hot dogs, that kind of thing, maybe hamburgers, stuff. My parents might not

> enjoy that, whatever. So, it's a hodgepodge of things. So, I would consider myself both Russian and both American because I fulfill the conditions for both being a Russian and both being an American.

Here Yuri reported what he perceived as some of the cultural connections to his American identity. However, he did not describe either his American or Russian ethnic or cultural identities as influencing his media informational reasoning process. When I asked him if he ever used the Internet to investigate anything related to his culture, he said:

> Not really. It's not something that's particularly major. It's not something that weighs on me, so to speak. I know what I am, I'm comfortable with what I am. I have probably more important things to do with my time than figure out whether or not my last name means horse trainer.

In this statement above Yuri reported being comfortable with his identity and to him that meant he did not feel the need to investigate information related to his culture.

Yuri's lack of motivated interest in examining information related to his ethnicity or culture could also been seen in how he responded in one of the elicitation exercises. He explained how his cultural identity shaped his informational processing by writing:

> I'm less willing to contradict something that I feel I don't have the right to comment on. (I'm not part of Black culture, so if a Black person states a civil issue as real, I'm more likely to believe them.)

Yuri perceived that his lack of cultural attachment or affiliation to other cultures prevented him from forming opinions about those cultures.

Sam

Sam described experiencing a cultural identity development that was often linked to his family-oriented Chinese culture and his family's experience of living in the U.S. When I asked him what his main identities were, he said:

> I guess mainly Asian American. I think just being college-educated, and doing, particularly like CS [computer science] and being in engineering. Just I feel it shapes a lot of the work like the work I'm doing shapes a lot of my time in my life.
>
> Robert: Like in terms of like sheer schoolwork?
>
> Sam: Sheer school work, and then just outside of it, just like I was thinking about how the world works, and just like different technologies I'm encountering. . . .I don't just walk down the street, I'm really just tuned into how I walk, I usually kind of look around, and think about like infrastructure, or just like how different systems work.

Along with his Asian American identity, Sam thought that a large part of his identity was tied to his work in the STEM fields and how science and engineering can improve things such as infrastructure. However, when I pressed him to elucidate more specific aspects of his Asian American identity, he was able to describe significant ways in which parts of his Chinese identity and culture influenced his media informational reasoning process. Sam believed that his Chinese culture and identity influenced his media informational reasoning process through his adopting a family-oriented culture, investigating Chinese cultural norms on the Internet, and reasoning through representations of Chinese people in the media.

Within his family and broader social life, Sam reported practicing Buddhism, taking Eastern medicines, and negotiating Western and Eastern informational and cultural norms. His familial cultural norms were evident in how he talked about his main values being related to his family. His main desire after he graduated was to be able to help support his family and that is his main goal in life. He stated that his "professional career will have its own goals, but at the

end of the day, this is also to take care of the family." Sam further perceived the link between his informational reasoning process as having an important relationship with his family. In the sentence completion exercise Sam wrote that his family identity shaped his informational processing by:

> Having me think about how this would affect my family. I think about how it changes my ability to provide for my family and how it affects parts of their lives. I try to think about information in ways that my family would understand and relate it to something they can relate to. I know my family is more limited in how they receive and interpret information, so I try to think about information in ways that they can understand. This could mean breaking down arguments into more general concepts and reasoning that they can picture.

Sam did not provide specific examples of topics or information that he would take to his family. However, he did describe how his media informational reasoning process helped him develop cultural affect and understanding through the investigation of Chinese cultural norms on the Internet.

Sam illustrated two events that aided him with his cultural identity development. He said that coming to a diverse university helped him develop a greater affinity for his ethnicity. Having access to the Internet also enabled him to investigate familial norms that puzzled him, but upon further investigation he was able to determine those were broader cultural norms. When I asked Sam if he felt a sense of belonging to his ethnic group he stated:

> Yeah, I think I do. Like when I was little, I didn't really want to be Asian, or I didn't think about being part of it. Just because it was always in my family, we didn't do too much with other Asian families or community. So, I just felt isolated. But then when coming to [the university under study], and so when I'm with more like an Asian community, and

just like other diverse groups. Like just seeing people having their cultural pride, has made it more an important to me.

Sam perceived coming to college as an important step in developing his cultural affinity because his kindergarten through high school education and social life experience made him feel isolated.

Sam reported how the isolation he felt drove his motivated interests to investigate information about his culture and ethnicity. In this exchange below he explained investigating cultural differences between the U.S. and Chinese culture as it pertains to family and medicine:

Sam: So, I was one of two or three Chinese kids in my school, or Asian in general. So, I guess growing up culture-wise, I got everything from the Internet and TV. . . so I guess just finding more about the history and stuff, like I'd have to look more online.

Robert: Okay. How often would you do that?

Sam: I guess when I first got the Internet, it was a lot, like that was mostly the content I would take in. And then as I get older, probably it was something culturally that was happening, that I didn't really understand, I'd probably look up, how this, how other people are thinking about it. Or how this was the culture here, that I wouldn't really understand.

Robert: Okay.

Sam: And I think like one of the family things was my friends would talk about how they see their family for holidays, and they see their cousins like once a year or something like that, or they'd never see them. Or not be close with their family. And that was something like I didn't understand. I would always be close to my cousins back when we were younger.

Robert: Yeah.

Sam: And just always have family around. And I guess, it's just different views. I think healthcare was one of the big things. I didn't really know a lot about medicine stuff when I was younger, up until I tried research online. Because traditionally, we did more the Eastern medicine route, like I would have to drink herbal medicine, or more teas and roots, and not really take stuff like Tylenol or antibiotics back in the day. Which I guess still kind of affects me now, because I really don't take over-the-counter medicine when I feel sick.

Here Sam described applying his motivated interest toward investigating cultural issues such as family and medicinal practice. Both of these examples demonstrated his perception that his Chinese American social identity drove his motivated interests.

Sam, in another exchange, reported looking up cultural memes and information on a Facebook group titled “Subtle Asian Traits.” He described the group as having “five million people on there or something. It's just a lot of like cultural memes, trinkets that people might put on it.” He said:

> I see it, and then I share it with people. I can usually share with my family, where it's like I didn't know other people did this. Or I can share with my friends, and they'll be like, ‘Oh yeah, we did that too.’ Yeah, my parents are like, ‘Yeah, that's just how it is.’ I'm like, ‘Well I didn't, I didn't know that, you did not tell me that.’

What Sam illustrated in this statement was looking up or coming across and sharing cultural memes from social media with friends and family and then finding out that parts of what he thought were his familial culture, and his broader Chinese culture. This example of his social identity helping to drive his motivated interests demonstrated how Sam perceived how his culture intersected with his media informational reasoning process.

Sam also described culture driving part of his media informational reasoning process as being able to use information from his culture as a lens for examining topics in the media or on the Internet. He detailed using his cultural knowledge and comparing it with representations of Asians in the American media. I then asked Sam how he thought his being Chinese shaped his thoughts about representations of Asians in politics or in film or in television. He responded by saying:

> I guess what you think about is there's always the token minority that you have to think about. Where if you see someone, is it like a big thing that they're Asian? Or is it a big thing that they're Latino or stuff like that? Or is it like a main trait that you have thrown in there? Or is it a character that's just there, and he happens to be Asian? I guess that's a thing. I know, I forget who I was listening to, but there was some California politician . . . I think he was in the House of Representatives.
>
> He was talking about how his culture changed his politics, and how his community shaped him to what his goals are. I guess it's good that's being thrown out there, and that he's showing it. But it also feels weird that it's such a different common shared belief that my family holds, that are probably similar to his family, is like that has to be explained. Or when Caucasian representatives talk about their platform. It's kind of just assumed.
>
> It's kind of like, 'Oh yeah, we see where you're coming from,' but then when that guy was talking about his platform, he would have to explain beforehand, because he knows there will be questions about why do you think this way or something like that. I know there's one Chinese guy running for House of Representation thing, he was talking about gun control, and I think he was like, more right-leaning, so he was more like for the NRA and stuff like that. And there was where you're watching him, had to explain why,

his background. And how that brought him to believe in that, instead of just thinking, maybe I guess it's like, when you hear people talk about the NRA, you kind of assume that's how they grew up. But then to see him have to like to explain his background, and why he grew up that way was weird.

Robert: Because, if I was running for office, no one would ask me, 'Why do I like guns?'

Sam: So, I think that sparks, background checking. Whereas when people have a platform, when they have their platform, and when you just stereotype them, what they believe in. You kind of just like let that be. But then when someone's, their stereotype goes against what they are then you would fact-check that more.

Robert: Okay, and how would you go about fact-checking that? Or is it just because of like your kind of experience as a Chinese American male?

Sam: I guess it's like thinking about, like people would have more disbelief. Even though, like, anyone, any politician on your stance could have something, like there'd be gain money from some sort of company, different lobbying groups. That could affect it. But then certain people publicly aren't as fact-checked, or as targeted, I guess.

Sam perceived that his cultural identity served as a lens for him interpreting a story about a politician where he was left wondering why White people's perspectives are automatically accepted but an Asian politician had to justify his policy perspectives.

Sam's perception of how his Chinese cultural identity influenced his media informational reasoning process made him an outlier compared to the other participants in this study because of the depth to which he viewed his culture influencing his reasoning process. He described his cultural familial identity shaping his reasoning. He reported using the Internet to research information based in his cultural identity development process, and as a lens in examining and

researching about stereotypes of Asians in politics and the media. Other participants such as Amrita reported her ethnicity and culture as being a motivated interest but not a large part of her reasoning process. Yuri did not see his Russian American culture as having much of an influence on his media informational reasoning process. Sam, however, perceived his ethnicity and culture as having been a large influence on his media informational reasoning process.

Theme 4: Gender and Media Informational Reasoning

Most participants perceived that their gender identity has little influence on their media informational reasoning process. Table 5.4 below describes the participants' perception of how their gender identity influenced their media informational reasoning process. Some of the participants thought that their gender influenced their online reasoning process, however they were unable to provide clear examples.

Table 5.4

How the Participants Perceived their Gender as Influencing their Media Informational Reasoning Process

Participant	Gender and its Influence on Participants' Media Informational Reasoning Process.
Stuart	Did not ask this question in the interview.[7]
James	Perceived his gender as having little influence on his media informational reasoning process. He did, however, make an outgroup judgment regarding what he saw was feminist take downs of men.
Danielle	Danielle described her gender having much little her reasoning process, but she saw gender and negatively shaping the physical space in the STEM fields.
Sam	Perceived his gender as having little influence on his media informational reasoning process
Brad	Perceived his gender as having little influence on his media informational reasoning process.
Yuri	Perceived his gender as having little influence on his media informational reasoning process.
Pam	Described herself as a feminist, which she perceived as influencing her media informational reasoning process through her liberal political identity.
Amrita	Said gender does influence her media informational reasoning process but described notions of women's safety and sexism that she faces as a video game player rather than providing direct examples of how her gender shaped her online reasoning process.
John	Said gender influenced his media informational reasoning process and he described stereotypes that he believes women face in their daily lives.
Meg	She equated gender with her deep emotionally empathy which is an important part of her personal identity but could not described how that identity influenced her reasoning process.

Amrita stated that her gender influenced her media informational reasoning process but reported examples relating to prejudice toward women and the sexism she experienced in her

[7] I added the question about gender after Stuart's session.

social space as a female video game player. John believed that his gender influenced his media informational reasoning process but described stereotypes that women face rather than providing an example of how his gender shaped his reasoning process. Meg said her gender was important in her media informational reasoning process but related that gender identity to her personal value of empathy, and she did not provide an example of how that social identity shaped her reasoning process. I next describe the data for each example.

Amrita

Amrita said her gender had an influence on her media informational reasoning process. However, she did not provide a specific example of how her gender identity served as a lens in how she made sense of information on the Internet. She described the discrimination that women face in the job market and in her social world, especially the sexism she faced as a female video game player. But she did not discuss how those experiences shaped her media informational reasoning process. When I asked her how her gender influenced her media informational reasoning process, she stated:

> Oh yeah. Because one of the things that I'm passionate about is equal rights. But also, giving women the strength or if relates to sexual assault and things like stopping it, or preventing it, are things that I'm really passionate about.
>
> And, it's really annoying when, I've dealt with this in person too. When guys often just, I don't know, they say some things that are either it's really rude or it just doesn't make sense. And they're like, 'Yeah. Like, she was asking for it because like, her skirt was short,' or something.
>
> Or, someone will deal with something in the industry. And they're like, 'Oh well she has lots of roles. So, I don't know why she's upset,' or something. Or say something

that's really rude or whatever. And then I'm just really irritated. Because then you try to explain that as a woman you already go through a lot.

In regard to video games and the sexism she has experienced, Amrita also stated, "You'll always get unexpected sexist comments, especially if you're a girl in video games, who likes video games, who, like, dresses girly or who acts really preppy." She described these sexist comments as caused by men not believing that she was good at video games or not believing her advice about a certain game because she was a woman. However, Amrita did not provide an example of how her gender identity and the discrimination she faced influenced how she reasoned with information on the Internet.

John

John also perceived that his gender had an influence on his media informational reasoning process, but like Amrita, he was unable to provide specific examples of how that identity influenced his reasoning process. He described the stereotypes that women face in society and acknowledged his privilege as a White, cis-gendered male rather than how his gender identity served as a lens for how he reasoned with information on the Internet. John equated his privilege with being able to say whatever he wanted because he was not oppressed. He stated:

> I don't ever feel societal pressure to not say my opinion because my gender, because I identify as male, and I think if I identified as female, there would be a lot of underlying pressures, like I feel I would have more of a burden to carry because I think females have been more oppressed, definitely been more oppressed throughout history. And there's almost in a way a higher standard for them where they feel they're carrying a torch, right? And they are judged more than men, and so that way I feel I have privilege and always grew up in a way where I wasn't afraid to say anything or be wrong, and I didn't feel that would reflect badly on my gender or anything, there's definitely a lot of male privilege

> that I was a benefactor of in terms of my reasoning and my life confidence in my reasoning.

John perceived that his male privilege enabled him to think more freely and reason more comfortably. However, John could not provide an example of how his gender privilege shaped his media informational reasoning process.

Meg

Meg differed from John and Amrita in that she stated that her gender had an influence on her media informational reasoning process, and provided a direct answer to how she perceived that gender identity influenced her online reasoning process. A large part of Meg's personal identity was her strong capacity for empathy, and she equated empathy with being a part of her gender identity. She stated:

> For me, I also, I don't know if I believe that that woman have more capacity for emotion. I think every individual is very different in their capacity for empathy. And I think that presents a very different strength. And for me personally, I've always been very empathetic . . . And so, but I think for me, because I already had it in me, I intrinsically I think have that empathy. And to me it's a strength, but it's also how I view that news and wanting to, you know, and growing up, you know, like recognize people are human and there's, there's love in this world and not trying to kill everyone by, you know, fertilizing the soil with an inorganic compound.

Meg's idea of empathy was also tied to her liberal political identity, which influenced her source preferencing and consensus determination. However, Meg did not provide a detailed answer beyond her focus on empathy as it pertained to how her gender influenced her media informational reasoning process. Meg stated during the subsequent member check that the question about gender had stayed with her after our session because she had never been asked to

think about how gender could affect how an individual makes sense of information on the Internet. She related this omission to her being primarily in STEM classes and said, "she lacked the language regarding gender to be able to really answer that question."

The participants in this study perceived their gender had little influence on their media informational reasoning process. Although several participants such as Amrita, John, and Meg reported their gender as influencing their reasoning process, they did not provide specific examples of how their social identity served as a lens for how they reasoned with information online. Amrita described stereotypes and discrimination that women face but did not discuss how these variables influenced her online reasoning processes. John also described stereotypes that victimize women, and that his privilege enabled to him to be free to state his opinions, but he did not discuss how that freedom shaped his media informational reasoning process. Meg equated her personal identity regarding empathy with her gender identity but did not discuss how that empathy shaped her reasoning processes. I was unable to find any outliers in these data. The participants in this study did not perceive or describe gender as a salient identity in their media informational reasoning process.

Summary

This chapter described and discussed the findings, themes, and evidence that were used to answer the second research question, which was: "How do university students describe their perceptions of the way that their social identities influence their media informational reasoning processes?" Four main themes arose from the coding process and subsequent data analysis questions. The first theme was that most of the participants described their political identity as their most salient identity as it pertained to their media informational reasoning process. The second theme was that many participants did not perceive themselves as having many ethnic or cultural attachments. The third theme was most of the participants who perceived themselves as

having a strong cultural or ethnic identity described those identities as having little influence their media informational reasoning process. The fourth theme was most of the participants perceived their gender as having little influence on their media informational reasoning process. The next chapter presents the discussion and main conclusions from this study.

CHAPTER 6

DISCUSSION

In this chapter, I summarize the main findings of this study. Then I interpret those findings within the context of the literature reviewed in Chapter 2. Next, I describe the limitations and recommendations for future research and the implications of the study.

This study examined how university students described their perceptions of how their social identities influenced their media informational reasoning process. Two central research questions guided this study. First, "how did university students describe their application of media informational reasoning in their daily lives and what purpose were they using it for?" Second, "how did university students describe their perceptions of the way that their social identities influenced their media informational reasoning processes?" In order to address the research questions, I used a basic qualitative study design and relied on the following methods of data collection: semistructured interviews, two written elicitation exercises, and a think-aloud protocol.

I hypothesized in the dissertation proposal that the participants would describe their understanding of the intersection of their social identities and their media informational reasoning process in ways that were reflective of their cultural identity development. This hypothesis was not supported in the findings in this study, and I will describe how it was not supported by the findings in the next section.

In answering the first research question, four main themes or findings arose from the research and data analysis. First, the participants in this study described applying media informational reasoning in different ways in their everyday lives. Some of the participants described reasoning horizontally across multiple sources, while most of them reported using vertical reasoning as they attempted to make sense of information on the Internet. They stated

that they rarely attempted to reason deeply with information on the Internet. The second finding was that each participant described applying their media informational reasoning process toward their motivated interests. Motivated interests concern how individuals make conscious choices about what information they choose to apply in their reasoning efforts. Those interests are generally linked to their social identities or topics they find sufficiently interesting.

The third finding was that the participants used bias identification, consensus determination, or finding multiple perspectives in order to determine the veracity or accuracy of information on the Internet. However, most of the participants did not describe identifying their own biases in their media informational reasoning process. The fourth finding was that the majority of participants applied source preferencing in their media informational reasoning process. They often described placing implicit trust in certain sources such as *The New York Times*, *The Washington Post*, or Snopes.com. Many of the participants also implicitly trusted Google to provide accurate information in an Internet search. This finding is important because it often detailed where the participants' reasoning process would end. What I mean by stating that the participants reasoning process would end with information they trusted is that they rarely described reasoning past that information. The participants did not describe fact-checking or performing deep reasoning with sources they trusted.

In answering the second research question, four main findings or themes arose from the research or data analysis. First, most of the participants described their political identity as their most salient identity as it pertained to their media informational reasoning process. Most perceived that their political identity had a greater influence on their media informational reasoning process than did their ethnic, cultural, or gender identities. The participants were able to clearly describe how their political identity shaped their use of bias identification, consensus determination, and source preferencing. The second finding was that most of the participants

perceived themselves as having few ethnic or cultural attachments. The third finding was that most of the participants who perceived themselves as having a strong cultural or ethnic identity described those identities as having little influence on their media informational reasoning process. The fourth finding was that most of the participants perceived their gender as having little influence on their media informational reasoning process.

Interpretation of Key Findings

Findings Addressing Research Question 1

The first finding in this study is that media informational reasoning is an individual process. Each participant in this study described reasoning with information on the Internet or fact-checking in slightly different ways. The significance of this finding is that it points to the overall difficulty of finding generalizable results related to the reasoning behavior of individuals. Some participants were social reasoners, such as Stuart or Pam, who performed their fact-checking in peer groups. Others such as Yuri and Meg were more likely to fact-check or reason through information in private and did so to investigate information as an examination or challenge of their worldview. This finding is important for how educators might consider teaching people to reason with information on the Internet in the Digital Age because it speaks to the difficulty of teaching skills such as fact-checking and reasoning deeply with online information. This difficulty exists because of how entrenched the social identities of individuals are in their reasoning processes.

Individuals have been shown to be biased reasoners (Kunda, 1990; Taber & Lodge, 2006). Their social identities are the primary lens used as they make decisions about a variety of information such as climate change (Lewandowsky et al., 2013; McCright & Dunlap, 2011 & 2016) or political information (Cohen, 2003; Mason, 2015, 2018). Most people have been shown to reason through their social identities, and they come to judgements about information based

on their biases and worldviews. Motivated reasoning researchers have termed this process "directional motivation" (Kunda, 1990). However, what this body of quantitative research in psychology, communications, and political science rarely discussed was how individuals perceived and described how their social identities influenced that reasoning process.

This study filled the gap in the literature previously described by asking participants what information they chose to reason with in their daily lives, how they made sense of that information, and how they understood how their social identities shaped that process. The second major finding addressed what information the participants chose to reason with through their description of their use of motivated interests. Each participant in this study applied motivated interests in their reasoning process. Motivated interests are a form of motivated reasoning that describes how and with what information people choose to support the process of media informational reasoning. Motivated interest is tied to the subjects that are so interesting or that are so strongly linked to individuals' social or personal identities that they are motivated to conduct research. All of the participants said they used motivated interests in some form or fashion and directed it toward a variety of different topics. However, many of the participants did not perceive that their personal identities outside of the political identity influenced their media informational reasoning process. Their political identity often drove their use of motivated interest.

Many previous researchers investigated predefined topics rather subjects that were of direct interest to the participants. Lewandowsky et al. (2013) asked their participants how their political identity shaped how they made sense of climate change and conspiracy theory information. Kahne and Bowyer (2017) asked their participants to reason about political claims. The participants in this study were free to identify topics themselves. They described using their reasoning process to make sense of social, political, nutrition, or health related information

because those were the topics that were of interest to them and were often tied to either their personal or social identities.

In asking the participants what information they choose to use when reasoning in their daily lives, I was able to find that their identities drove their reasoning processes beyond how they came to conclusions about certain information. Their identities were at the heart of where they applied their reasoning efforts in their everyday lives. This finding confirms what Johnson and Eagly found in 1989, that individuals are not very motivated to make judgements about information that is not important to them.

A significant amount of the literature reviewed in Chapter 2 focused on how individuals interpreted topical information as it related to their social identities. However, I wanted to know how the participants in this study described their reasoning process in general rather than how they responded to or made sense of specific topics such as climate change data (e.g. Lewandowsky et al., 2013; McCright & Dunlap, 2011). Two key findings stood out in the results from this study because they both described two ways that the participants determined whether or not information was accurate or valid. These two findings did not appear in the previous literature.

First, most of the participants in this study often described attempting to identify bias in media sources as a way to determine whether something on the Internet was true. John and Sam, for example, described attempting to identify bias in their fact-checking procedure, and bias identification was one of the tools they used in their media informational reasoning process. However, most of the participants did not describe examining their own biases in their media informational reasoning process, a process that is an important aspect of how individuals should determine whether information is accurate or valid.

Second, the reports of consensus determination are different from the findings of studies reviewed in Chapter 2. Many of the participants described attempting to determine the veracity of information on the Internet by preforming a Google search about a topic and then ascertaining its accuracy based on whether a plurality of sources or headlines described similar findings. Amrita described this process as:

> If I see something on the news related something political, I'll figure out whether or not this really happened within the first search or so. Because they'll be articles saying the same thing . . . the articles are the exact same, there's just more information everywhere.

Her response was echoed by many of the participants. If they saw that numerous sources in a Google search revealed similar information, they would accept it as accurate or valid. This finding differed from much of the literature reviewed that described how individuals' social identity influences their reasoning processes because it downplays the influence of social identity on determining whether or not a topic or piece of information is accurate. Rather, in consensus determination individuals place the burden of proof onto Google to provide accurate and reliable information as opposed to reasoning through their social identity.

The fourth major finding in this study also confirmed another major claim from motivated reasoning research. That finding is that the participants in this study often implicitly trusted certain sources to provide them with accurate information, and that trust was often linked to their political social identity. I termed this process "source preferencing." Lavine et al. (2012) and Taber and Lodge (2006) found that individuals' capacity for reason had little effect on whether they responded to political information in ways that reflected their political identity. Kahan (2013) found that individuals with a large capacity for reason demonstrated higher tendencies toward ideological decision making. The participants were a group of individuals who were all in difficult majors at a university that had high standards for admittance. However, they

all described using ideological decision making in some way. These decisions played out in their bias identification and sources preferencing. Ideological decision making can also be described as directional motivation (e.g., Lodge & Taber, 2005; McGraw, Lodge, & Jones, 2002).

An example of directional motivation in this study is the large number of the participants who trusted sources that mirrored their political identity and were much less critical about those sources than others. Their media informational reasoning process often ended with sources they implicitly trusted. Most of the participants described being less critical of information that supported their biases or ideological perspective. Both of these choices can be characterized as responses to directional motivation. In addition, aside from Yuri, all of the participants did not describe examining their biases in their media informational reasoning process, yet they were often concerned with bias being demonstrated in the information with which they were reasoning. Most of the participants described applying directional motivation, despite the fact that they had just taken an Informational Reasoning in the 21st Century course.

The finding that the participants placed implicit trust in certain sources challenged findings by Messing and Westwood (2014) that people are more likely to consume media content that is shared by people in their social group, often on social media. Messing and Westwood found that "social endorsements increase the probability that people select content and that their presence reduces partisan selective exposure to levels indistinguishable from chance" (Messing & Westwood, 2014, p. 1042). I found that the participants placed implicit trust in certain sources that reflected their social identity or relied on Google to present them with accurate information in an Internet search. Only one participant, Pam, described sharing media content within her social group. Most reported searching for content on their own and did not use social media to access their information. Messing and Westwood made their claim based on the growth of social media and its ability to be an information hub among groups of individuals. The participants in

this study, however, did not use social media in that manner. Instead, they often relied on traditional news media online and on the market-dominating search engine (Google). This finding also confirmed that individuals were placing themselves into a filter bubble. A filter bubble is a self-reinforcing information bubble on the Internet within which individuals search for and continually find information that confirms their own beliefs and biases (Pariser, 2011). As result of the filter bubble phenomenon, individuals are increasingly seeking out, exposing themselves to, and making judgments about inaccurate information that confirms their beliefs and biases, instead of seeking accurate and verified information.

Pariser (2011) asserted that people are increasingly placing themselves in filter bubbles by their identity-driven choices, which plays into the business model of the Internet. That model is designed to deliver personalized content to users based on their search history. The participants in this study often played into their own filter bubbles by not being aware of how their biases influenced their choices for what information and sources they preferenced, and how they used consensus determination to make judgments about media information. Some participants were able to clearly identify how their political identities shaped how they preferred some sources, but they were not able to identify why they implicitly trusted certain sources such as *The New York Times* to provide them with accurate information. Most were not aware of how their biases placed them in a filter bubble. However, that process was not driven by social media behavior as was argued by Messing and Westwood (2014).

In answering the first research question I found that the participants described reasoning through online information in different ways. Their motivated interests drove their reasoning processes in terms of what information they chose to reason with. When the participants sought to determine the veracity of information on the Internet, they applied bias identification, consensus determination, and finding multiple perspectives in that process. Finally, they all

described some level of source preferencing, a choice which was important because their reasoning process generally ended with sources that they implicitly trusted.

Findings Addressing Research Question 2

The second research question was how the participants perceived how their social identities influenced their media informational reasoning processes. This question was important because it addressed the gap in the research on social identity and informational reasoning that did not discuss identity groups such as ethnicity, culture, and gender. The first main finding for this question was that the participants described their political identity as their most salient identity in their media informational reasoning process.

The participants' political self-categorization, mostly as liberal or democratic, had an important influence on their use of source preferencing. Danielle, for example, described being more trusting of liberal sources such as *The New York Times* and more discerning of conservative sources such as Brietbart.com. A significant amount of the participants also described placing implicit trust in legacy press sources such as *The Washington Post* and *The New York Times.* The fact that individuals' political self-categorization shaped their news choices is not a new finding (e.g. Pariser, 2011; Wardle & Derakhshan, 2017). However, what stands out from this study compared to the literature reviewed in Chapter 2 is how the participants were able to describe their fact-checking procedures in their own words. Prior studies were based on aggregate responses to survey questions about how participants made sense of information regarding climate change data (Lewandowsky et al., 2013) or how their political ideology shaped how they responded to policy information (Cohen, 2003).

The finding of source preferencing reflected where the participants often ended their reasoning process, which was on sources in which they placed implicit trust. The participants' fondness for those sources was often influenced by their political social identity. However, the

literature reviewed in Chapter 2 often discussed how individuals came to identity-based conclusions about a variety of topics. This study added to this body of research a discussion of how the participants described and perceived how their social identities drove their reasoning process. One of the major ways that the participants perceived their social identities as driving their media informational reasoning process was through their use of motivated interest. I stated in the previous section that participants' social identities did not just shape how they came to conclusions about information but were a major factor in their online reasoning processes. What I mean by stating that the participants' social identities were a major factor in their online reasoning process is that their choices about information was often directly tied to their political identity. That identity was often linked to how they chose to reason with information and what information with which they choose to reason. However, many of the participants did not view their ethnic and cultural identities as being salient to their online reasoning processes.

The second major finding in answering Research Question 2 was that many of the participants did not describe having strong ethnic or cultural attachments. Meg stated in the member check meeting that she did not ever think that she was part of a culture. After the interview session she began to consider all the ways that the small college town that she grew up in had a culture, how she participated in that culture, and how it shaped her ways of interpreting information. However, prior to our meeting she stated that she had not considered that possibility. James also reported feeling little attachment to his Hispanic culture and believed that his political and personal identities had a larger influence on his reasoning process. Danielle, who was Indonesian-American, described having little attachment to her Indonesian culture or ethnicity but viewed herself as being more immersed in American culture. She viewed her American identity as having an important influence on her media informational reasoning

process. Danielle viewed her ethnic and cultural identity as fluid and influenced by her social context.

The finding that many of my participants perceived themselves as having little ethnic or cultural attachment was surprising to me. Since I had a diverse group of participants, I had expected them to be able to describe how their ethnic groups and cultures shaped their media informational reasoning processes. However, Stuart told me after our session that no one had ever asked him about how his identity or culture shaped his reasoning process, I was left wondering about the amount of multicultural education the participants had experienced in their lives. I believe this unexpected finding occurred because the United States' K-12 school system often lacks multicultural education that would enable people to explore their own identities in a way that intersects with curriculum materials and educational processes (Banks, 2016; Gallavan, 1998; Gay & Howard, 2000). This observation is especially true in the STEM fields, which have been overwhelmingly framed around the identities of White men (e.g. Atwater, Russell, & Butler, 2013; Tetreault, 2016). For example, Black girls' have been shown to be dehumanized in mathematics classrooms (Joseph, Hailu, & Matthews, 2019). Nine of the participants in this study were STEM majors and therefore may not have had or sought educational experiences that would allow them to understand how their culture and ethnic group intersected with and shaped their online reasoning processes.

The third major finding in addressing the second research question was that the four participants who described having strong cultural and ethnic attachments did not perceive them as having an important influence on their media informational reasoning process. Yuri did not believe that his Russian identity shaped his online reasoning. Amrita perceived that her Indian identity drove her motivated interests for major current events and her interest in Bollywood movies. However, most of her reasoning process was driven by her political identity. Sam was

the exception because he described using the Internet as a large part of his cultural development process. He detailed examining Chinese cultural norms on the Internet and investigating the stereotypical representation of Asian people in a variety of media formats.

This finding that the participants who had salient ethnic and cultural identities did not perceive them as influencing their media informational reasoning process was unexpected. I hypothesized in my proposal that the participants who had experienced strong cultural identity development would be able to describe in detail how those identities shaped their online reasoning. That hypothesis was not confirmed by this study.

The fourth finding in answering Research Question 2 was that most of the participants perceived their gender as having little influence on their media informational reasoning process. Several of the participants, such as Amrita, described the struggles and stereotyping that women face, but could not state how these experiences influenced their online reasoning. Others did view their gender as being a salient identity but did had little effect on their online reasoning processes.

Most of the participants in this study did not view their ethnic, culture, or gender identity groups as having much an effect on their online reasoning process. The implication of this finding is that I was not able to confirm or challenge much of the research cited in my literature review. More research will need to be conducted in the future, with different populations, in order to examine further how ethnicity, culture, and gender influence individuals' media informational reasoning process. This will be an important research direction in the future for this field because even though many of the participants in this study did not describe themselves to have strong attachments to their ethnic group, culture, or gender or perceive those identity groups to influence their media informational reasoning process, it does not mean that those groups do affect their online reasoning.

We know that individuals' identities are multiple and often have some level of hybridity (e.g. Bhaba, 1994 Anzaldúa, 1999). Those identities often exist as a social construction and defined by their relations with others, or constructed based on other's perceptions (Tatum, 1997). For example, many European ethnic groups who immigrated to the U.S. at the turn of the 20th century were characterized through their supposed otherness and difference compared to the White Anglo Saxon Protestant majority (Jacobson 1999). However, those identities may not often be realized if the individual has not experienced the culturally situated discourse that would lead to a realization of certain identities and how they shape our worldview and behavior (Gee, 2012). For example, Meg told me in our member check meeting that she felt that after thinking about our interview session, she realized why she had such a hard time answering my question about gender. She attributed that difficulty to her primarily focusing on STEM classes because she wants to be a medical doctor. Meg stated that her experiences in STEM education did not offer her the ability to have the language to be able to answer that question about how gender influenced her media informational reasoning process. This may be an example of what has occurred with some of the other participants. It is not that their identities outside of politics do not have an influence on their online reasoning. Rather, those identities may not have been encouraged in specific discursive systems that would enable them to have the language or understanding of how those identities influence their media informational reasoning process.

In addition to many of the participants not being exposed to discursive spaces that would enable them to have the language or concepts to understand how their multiple social identities influence their reasoning process, they may not have experienced little ethnic or cultural identity development. Phinney (1989) asserted that minority group members who had identified with their identity group but had not made much exploration related to it, possessed a foreclosed identity status. This means that they may have parental values related to their ethnic group but

have not made a commitment to explore that identity further. Cross (1978) asserted that Black individuals must undergo a crisis that would propel them into exploring and developing their ethnic identity outside of the mainstream or majority culture. Arce (1981) stated that individuals would immerse themselves in exploring an identity, they would undergo a period of "cultural and political consciousness" and then develop a greater sense of belonging to their ethnic group (p. 186). What comes after this conscious attachment to the group, is a more positive self-image about their group membership (Tajfel, 1978). Much of the process for ethnic identity development is similar to cultural identity development. Ethnic identity development focuses on how minority group members form group attachments. Cultural identity development, however, is concerned with how individuals develop cultural attachments (Jensen et al., 2011). These examples pertain to this study because it is not that the participants in this study did not have any ethnicity or culture. The case may be that many of them had not experienced much development related to those identity groups and that could possibly be why many of them could not provide information on how those identities influenced their media informational reasoning process.

Most of the participants in this study viewed their political identity as being their most salient identity as it related to their media informational reasoning process. This finding was a result of many of the participants not perceiving themselves to have strong ethnic or cultural attachments. In addition, many of the participants who had a strong ethnic or cultural affect, did not view those identities as influencing their media informational reasoning process very much. Lastly, the participants in this study did not view their gender as shaping their online reasoning process much at all.

Limitations

This study had two key limitations. First, I had to rely primarily upon the participants to describe their reasoning behavior to the best of their ability. I assumed for the most part that they

were honest about how they made sense of information on the Internet because they often admitted to not fact-checking or applying deep reason. However, to examine more accurately how university students perceived how their social identities influenced their media informational reasoning processes in their daily lives, some form of ethnography is needed because I was unable to follow the participants and study how their daily fact-checking behavior. The fact that I had to rely on self-reports to describe this process is a limitation of this study.

Another limitation of this study is that I did not ask participants about how they dealt with information or perspectives that differed from what was ordinarily accepted by their social groups. For example, most of the participants described themselves as liberals, but I did not ask them what were their opinions about *Fox News* or to interpret a conservative policy proposal such as tax cuts. Had I done so, I would have been better able to explain how participants' self-categorization influenced their reasoning process because making out-group judgments is a large part of the research on social identities influence reasoning.

The population in which I conducted my study was also a limitation. All but one of my participants were STEM majors. If I had conducted this research with students in liberal arts major such as history, my data might have been different in some significant ways. Meg stated in the member check that she realized after our session that she did not have the language to answer my question about how gender shaped her informational reasoning processes and attributed that lack to her focusing primarily on STEM classes in her undergraduate career.

Recommendations for Further Research and Implications

The main recommendation for future research is that scholars should investigate how social identities such as political, cultural, ethnic, and gender serve as lenses for how individuals interpret information on the Internet. In addition, the educational processes that are being developed should include a discussion of enabling young people to examine and understand how

those identities shape their media informational reasoning process. This added focus could be an important addition to the field because some of the early educational research has only prescribed skill development to help young people become better at reasoning with information on the Internet. McGrew et al. (2018) posited that students are in desperate need of “civic online reasoning” skills to make sense of the world around them. The authors’ timely and important findings demonstrated that “students struggled to engage in even basic evaluations of authors, sources, and evidence” (McGrew, et al., 2018, p. 187). They argued that students need these skills because:

> If we are unable to distinguish truth from falsehood, it can weaken the quality of our decisions and our ability to advocate for our interests. In order to capitalize on the promise of the Internet and not be victims of its ruses, teachers need tools to prepare students to evaluate information and arguments online (McGrew, et al., p. 187).

This assertion does not address the fact that people distinguish truth from falsehood based on their social identities rather than through a learned set of skills. In fact, there is a growing body of evidence that education and higher levels of reasoning skills are entrenched in individuals’ directional motivation (Kahan, 2013; Taber & Lodge, 2006). In addition, Mason (2018) demonstrated that high levels of political polarization are driven by social identity, and the more education people have, the more likely they are to express polarization. Identity often overrides skills because people are more likely to use an in-group versus out-group lens to reason with information rather than apply a learned set of skills to that process (Lewandowsky et al., 2013). The participants in this study had just completed an Informational Reasoning in the 21st Century course, but they still described making biased reasoning choices through their motivated interests, bias identification, and source preferencing.

A concern is that if a "civic online reasoning" educational focus is only based in skill development and does not help students examine how their identities shape their media choices and how they interpret the information contained within each medium, then students will use the newly acquired reasoning skills to fact-check themselves into their own filter bubble. Young people need to be taught not just how to go from novice to expert fact-checkers, they also need to be taught to understand how their social identities influence that reasoning process and the choices that they are making. These two educational aims are mutually interdependent. Using historical thinking skills such as sourcing and making evidence-based claims to help students reason with media information is important but does not help them to understand what it is about themselves and their identities that shapes their reasoning process. This added aspect of how people reason with information in the Digital Age is important because there are far too many "truths" for anyone to find online.

Researchers and educators need to begin to incorporate multicultural frameworks related to identity development into their research and theory development on how educators teach young people to reason with information in the Digital Age. Researchers and educators should push for new ways for young people to use learned skills such as media informational reasoning, in ways that transcend their own political lenses. By incorporating an intersectional focus on identity and positionality along with civic online reasoning skills development recommended by McGrew et al. (2018), educators would be better equipped to create "bridges of meaningfulness" with their students' cultural and ethnic identities and the world around them (Gay, 2018, p, 31). Gay asserted that teachers should employ curricular and pedagogical strategies that validate students' lived ethnic and cultural experiences. One way to accomplish creating a meaningfulness bridge between students' home lives and school experiences is to develop pedagogical and curricular procedures that incorporate their ethnic and cultural identities into

teaching them online reasoning skills. This teaching direction will become increasingly important as more and more young individuals get their media information on the Internet in the Digital Age.

It is one thing to say, "here are the skills that you need to be more discerning of the media." It is another to ask students "what are your interests, how do you investigate them, how is that interest related to your various cultural, ethnic, or gender identities, what are your biases and how do they shape your interpretation of information on the Internet, how can we use those skills for transformative actions?" Teachers should then help student obtain skills they need to navigate their own media environments along with their identities and biases in way that is culturally responsive (Gay, 2018). What I mean by stating that teachers and researchers should develop pedagogical tactics for teaching online reasoning skills that are culturally responsive is that those skills should seek to validate students' cultural heritage and their ethnic groups and help them to build bridges between their home lives and their school experiences. This teaching strategy could help student develop better discursive abilities to elucidate how their various social identities shape their media informational reasoning process.

Erickson (2010) described the interrelationship between education and culture as being all encompassing, "just as the air we breathe" (p. 35). Culture permeates every facet of our education system and pedagogical process (Gay, 2018). Even if teachers and students do not discuss culture, it is still being constantly implemented and transmitted to students through the vary structure of the school system and their home lives. The need to intersect culture and pedagogical teaching processes along with curricula remains important today. That necessity rings true for all subjects and when students encounter educational process that take in account their cultural heritage and ethnic experiences, their academic performance improves. Christianakis (2011) found that urban 5th grade students who had rap music incorporated into

their English-Language Arts classes, showed improved literacy skills. Dimick (2012) found that students in an environmental science class were able to develop an action plan for restoring a polluted river near their community, thereby demonstrating the importance of bridging students lived experiences with their traditional curriculums. Joseph et al. (2019) asserted that humanizing Black girls' mathematics experiences should improve their educational outcomes. There is little reason to believe that including a culturally responsive focus on teaching students online reasoning skills would not help them to better navigate the informational deluge of the Digital Age. More research is needed into how teaching students to reason with information on the Internet and how it intersects with students' culture, ethnicities, and lived experiences would influence learning outcomes. This research direction would also help make the emerging field of informational reasoning and education more multicultural.

One way that teachers and researchers can make media informational reasoning more culturally responsive is developing pedagogical process to help students deconstruct racialized media misinformation. The United Daughters of the Confederacy, for example, have been waging a misinformation campaign about the origins of the Civil War, most of which has taken place online (Holloway, 2018). In addition, memes and images have begun to circulate as of late that falsely depict Black people's support of the confederacy. Please see Figure 6.2 below that depicts a Black man posing as a Confederate officer in prayer, which is an example of misinformation meme that had circulate recently online by individual's supporting the Lost Cause (Personal Communication with Darren Grem, July 19, 2019). The Lost Cause describes the process by which post-bellum Southerners blended Christian rhetoric with symbols and ideals from the Confederacy to reassert the cultural and hegemonic loses that were caused by their lose in the Civil War (Wilson, 1980). This perpetuation of this myth has sought the removal of race and slavery being at the root cause of the Civil War and has often made the discussion

about states' rights and the federal government's aggression toward Southern society. The process has seen the veneration of Confederate generals, Southern society, and the enshrinement of monuments, all done in race neutral language that promotes the glories of the Old South while removing problematic issues, such as forcing millions of people into bondage. Teachers and Researchers should develop media informational reasoning processes that help students deconstruct racialized imagery and misinformation that is being shared on the Internet as of late. This is one example of how educators can help students' lived experiences intersect with curriculum and instructional processes related to contextualized racialized misinformation online.

Figure 6.1 Black Confederate Soldier Misinformation Example

In order to include a more multicultural focus into the research on how individuals' social identities influences their media informational reasoning, scholars need to expand their research to different populations. This study examined students who were primarily STEM majors. I believe if I had interviewed a group of ethnic studies majors, my findings regarding how the participants viewed their ethnic and cultural identities as influencing their online reasoning process would have been different. Therefore, it is essential that researchers begin to add more

diverse voices to the body of research on how identities influence reasoning in the Digital Age. By diverse I do not just mean ethnically or racially, but intellectually as well. This type of research could be done through large scale quantitative survey analyses or qualitatively through ethnographic or interview research methods.

Researchers and educators need more data about how the current drive to teach kindergarten through 12th grade or college students how to reason with information on the Internet is affecting student learning and behavior. It is now known from Kahne and Bowyer (2017) that exposure to some level of media literacy increases young people's ability to evaluate political claims by a 26% margin. However, there is not enough statistical data on how educators are teaching students to evaluate information on the Internet. One research study that could be used is a mixed method study that combines interviews and classroom observations with a learning assessment that tests how much students were able to better evaluate information on the Internet after exposure to online reasoning educational practices. The measure for the study could include how those students perceive how different parts of their identity influence their reasoning processes.

Another possible research avenue that could be built off of the study is examining how young individuals with multiple ethnic and cultural identities describe how those identities influence their media informational reasoning processes. Both Amrita and Sam described how their multiple ethnic and cultural identities shape their online behaviors in different ways. However, this finding little about how an individual with multiple identities uses the Internet in connection with those identities. Expanding the research on identity and reasoning in the Digital Age to larger purposive sample would yield more generalizable results than the narrow scope of this study. Generating more generalizable data could be accomplished by a mixed methods study that employed a survey and then developed a semistructured interview protocol from that survey.

In addition to finding out how to develop a more culturally responsive teaching strategy for online reasoning skills and investigating further how young individuals' various identities influence their media informational reasoning process, I posit that teaching media informational reasoning skills will help them become better global citizens. Global citizens are people who are knowledgeable about global societal issues, have empathy for people in far off places, aware of the structures and natures of the integrated global economy, have an appreciation for the interdependence of people and the various ways that they are interconnected, have a respect and appreciation for cultural diversity, take actions for global social justices, and have an appreciation for our environment (Zhao, 2010). Global citizenship education is the pedagogical processes that help students develop into global citizens. The necessity for promoting global citizenship education has been accelerated in our era of globalization, global migration, and climate change which have all served to strengthen the interconnectedness of our global society (Castles, 2017). Global citizens in the 21st century must develop better informational reasoning skills in order to develop what Zhao (2010) termed "global competence" (p. 427). He stated that "Global competence is the knowledge and skills needed to function successfully in a globalized world. More specifically, it includes the ability to speak, understand, and think in a foreign language, knowledge of the global system and world history, geography, and other global issues such as health and economics, and knowledge of other cultures" (Zhao, 2011, p. 427). As climate change, globalization, and global migration all change the nature and ethnic make-up of nations around the world, it is imperative that we empower students to have the skills to make transformative decisions about those varying issues.

Given the hyper-partisan miss-information that exists about each of the above topics in the digital age (Wardle & Derakhshan, 2017) it is important that we enable students to make sense of information these important issues with an eye towards accuracy rather than through

their directional reasoning. Doing so, would help students became better global citizens. It is important that researchers and educators develop pedagogical processes that are culturally responsive, which would enable students to better understand how their identities and biases shape their media informational reasoning processes. In addition, further research is needed about the success and efficacy of teaching students to understand how their identity shapes their online reasoning process.

Summary

This chapter reviewed the key findings and their interpretation and discussed and described how those findings expanded the research literature reviewed in Chapter 2. It also described the key limitations of this study and made recommendations for future research. The main take away from this study is that the participants main identity as it relates to their media informational reasoning process was their political identity. Many of the participants did not view their ethnicity or culture as having a large influence on their reasoning process. Therefore, it is imperative that we develop educational procedures to enable students to understand how their various identities influence their media informational reasoning process.

Appendix A

PARTICIPANT CONSENT FORM

Social Identity, Positionality, & Motivated Reasoning: A Study of College Students Application of Civic Online Reasoning

Investigator: Robert Keener. (206) 496-4439; keener2@uw.edu

Faculty Advisor: James A. Banks. 206-543-3386; jbanks@uw.edu

<u>Investigator's Statement</u>

I am asking you to be in a research study that I am completing as part of my doctoral dissertation at the University of Washington. The purpose of this consent form is to give you all the information you will need to help you decide whether or not to be in the study. Please read the form carefully. You may ask questions about the purpose of the research, what I would ask you to do, the possible risks and benefits, your rights as a volunteer, and anything else about the research or this form that is not clear. When all your questions have been answered, you can decide if you want to be in the study or not. This process is called "informed consent." I will give you a copy of this form for your records.

PURPOSE OF THE STUDY

The purpose of this study is to examine how college students understand and describe their reasoning process. I want to find out how people's identity and background's influence this process.

PROCEDURES

If you choose to be in this study, I would like to do between 1-2 interviews with my participants that will last no longer than 2 hours. My main source of data collection will be interviews. Some of my questions will be: So first of all tell me about what is your definition of news? How do you feel about the use of data, such as graphs or other numbers in news sources? I would like to do what is now called a think a loud protocol. I am going to give you some examples of data that is represented in the media and I want you to think aloud through your data reasoning process. Take a few minutes and read each article and analyze the information. In what circumstances might you use data reasoning?
With your permission, I would like to audio tape your interview so that I can have an accurate record of our conversation. I will transcribe this recording without identifiable information and destroy the recording after the study is over. Only I will have access to the recording, which will be kept in a secure location. If you would like a copy of the transcript of the interview, I will gladly provide you with one.

In addition, I would like your permission to video tape one segment of the interview where I will ask you to fact-check a couple of articles.

RISKS, STRESS, OR DISCOMFORT

Some people feel that providing information for research is an invasion of privacy. I have addressed concerns for your privacy in the section below. Some people feel self-conscious when notes are taken or interviews are recorded. If this makes you uncomfortable or you have any other concerns please let me know immediately.

In addition, I will be asking questions related to race, culture, ethnicity, and identity and how that influences your informational reasoning processes. If this information is disclosed, it could cause embarrassment and some psychological harm. These questions could also cause some discomfort or embarrassment. At any moment if you feel that you do not want to ask answer a question or want to take a break or stop the study, please let me know immediately. In order to protect your identity and information, I will use pseudonyms in my writings and all data will be in password encrypted files.

BENEFITS OF THE STUDY

You may not directly benefit from taking part in this research study. One benefit of this study is the beginning of gathering qualitative data about a subject that has generally been covered in quantitative ways so it may provide an opportunity to expand the scope of research on data reasoning and identity.

OTHER INFORMATION

Taking part in this study is voluntary. You may refuse to participate and you are free to withdraw from this study at any time without penalty or loss of benefits to which you are otherwise entitled. Information about you is confidential. I will assign you a pseudonym and code the study information. I will keep the link between your name and the pseudonym code in a separate, secured location until the study is complete. Then I will destroy the information linking your information to the pseudonym. If the results of this study are published or presented, I will not use your name, or any other identifying information.

I may want to re-contact you for future related studies. Please indicate below whether you give me permission to re-contact you. Giving me permission to re-contact you does not obligate you in any way.

If you have any questions about this research study, please contact James A. Banks at the telephone number or email listed at the top of this form. If you have any questions about your rights as a research subject, please contact the University of Washington Internal Review Board at 206-598-0043.

____

Signature of investigator Printed Name Date

Participant's statement

This study has been explained to me. I volunteer to take part in this research. I have had a chance to ask questions. If I have questions later on about the research, I can ask the investigator listed above. If I have questions about my rights as a research subject, I can contact one of the course instructors. I will receive a copy of this consent form.

____ I give permission for this researcher to audiotape my interview.
____ I do NOT give my permission for the researcher to audiotape my interview.

____ I give permission for this research to videotape part of my interview
____ I do NOT give permission for this research to video tape part of my interview.

____ I give permission for the researcher to re-contact me to clarify information.
____ I do NOT give permission for the researcher to re-contact me to clarify information.

____

Signature of participant Printed Name Date

Copies to: Investigators' file
Participant

Appendix B

Interview Schedule

1.) Tell me a little about yourself. Who you are, what city are you from, what is you major, what is your racial and ethnic background, and what do you do fun besides go to UW.
2.) So tell me why did you take the Calling BS class?
    a. What made you to learn data reasoning skills?
    b. Why is this data reasoning process of interest to you?
    c. How do you think it relates to reasoning with information on the Internet?
3.) So tell me about how do you define the news or the "media"?
    a. What are your preferred sources? (the guardian, mother jones, fox)
    b. And where do you access it? (i.e. smart phone, computer, TV, or print)
    c. How do you decide what news source are you going to read or watch?
    d. Possible? Of the time you spend on social media, how much of it is spent reading, sharing, and discussing the news?
        i. Do you use social media to access the news?
        ii. If so, which sites?
4.) Do you think that you reason with/fact-check with information (either media, political, scientific, or social) on specific social media sites like Facebook? Or is it the same across all the sites you use?
        i. Can you tell me about a time that you fact-checked and discussed in media story through social media?
    b. If you don't access the news through social media then how often do you watch or read the news through traditional sources (digital/print or on TV)?
        i. How much time per day do you spend reading/watching the news? How many times per day do you look at the news?
5.) Has your reasoning processes changed since your took the calling BS course?
    a. Do you use any of the concepts from the class in your day to day analysis of the news?
6.) Has anything else in your life influenced your approach to news/media consumption?
    a. Any serious world event or event from your personal history?
7.) Why do you think it is important to fact-check information on the Internet?
8.) What are your end goals when you fact-check something?
9.) What would be topic that you would be likely to fact-check or investigate?
    a. What are your fact-checking processes?
    b. What sites do you use to fact-check?
    c. How often do you engage in this type of reasoning process?
10.) If you don't mind, please walk me through your fact-checking process?
11.) Do you think prior knowledge of a topic is important when it comes to fact-checking?
    a. How does your possession of prior knowledge on a certain topic influence your fact-checking process?
12.) Would you say you are more likely to fact-check political information or social information?

a. Define social information

13.) How do you go about fact-checking political information?
   a. What sources do you use to do so?
   b. Can you tell me about a time that you fact-checked something related to politics?
      i. Why did you fact-check that particular issue?
      ii. What sources did you use to investigate this matter?
      iii. Why do you prefer those sources?
   c. Can you tell me about a time that you fact-checked social information?
      i. What sources did you use to fact-check it?
      ii. Why do you use those particular sources?

14.) How do you think about or consider how knowledge that we encounter online is constructed?
   a. i.e. how has the information about climate change that has been described is created?
   b. What would be the type of knowledge that you value most? For example, is it scientific knowledge that is peer reviewed? Or is it social or cultural knowledge such as it relates to things like music or art?

15.) How do you define truth in the news media?
   a. What is your barometer for judging if something is true or not and how do you know that a story has achieved that or not?
   b. Is there certain sources that you view as having more credibility than others?
      i. If so, why? / If not, then why not?
   c. Could you give me an example of something that you have identified as being true? How did you determine whether or not that event was true? Could you give me an example of something that you have identified as being false? Did you use a similar process in investigating the event that you stated was true?

16.) How did your family view the news?
   a. By view, I mean how often did they watch it?
   b. What did they watch?
   c. Was it an important part of your family discussions?

17.) Does your reasoning processes ever play out in your social groups?
   a. For example, do you talk politics with your friends and would there be any social fact-checking going on during a political conversation (if so – how does this process occur, in what setting, and how do you preform the fact-checking?
   b. Or does this process play out online – such as on Facebook or Redditt?

18.) Do you ever feel any social pressure to fact-check or reason with information online?
   a. If so, what is the context? Can you give me an example?

19.) How do you define ethnicity?
   a. What is your own ethnicity?
   b. Do you ever consider how your ethnic group shapes how you make sense of the world around you?
   c. Have you ever investigated any information related to it?
   d. If so, what did you find?
   e. Have you had much education related to ethnicity and ethnic development?

20.) Do you feel a sense of belonging to your ethnic group?
   a. If so why and how, if not, then why not?
      i. How and when did this sentiment of ethnic belonging develop?
   b. Does the Internet play a role in that sense of or lack of belonging to an ethnic group?
      i. Do you ever use it to discuss matter related to your ethnicity?
   c. How would you judge the veracity of ethnic information online?
   d. Do you ever use the Internet to investigate information about ethnicities other than your own?
      i. If so how, what sources?

21.) How do you define culture?
   a. What is your culture or cultures?
   b. Do you participate in cultural activities related to your own culture?
      i. If not, then why not?
   c. What role do you see your culture playing in how you reason with information online?
   d. If so, then how so? If not then why not?
   e. Have you had much education related to culture?
   f. Do you use the Internet to investigate anything related to your culture?
      i. Why? What subjects would you be researching?
      ii. Do you think the Internet is a helpful tool for investigating issues related to culture?
      iii. How to judge the veracity of cultural information on the Internet?
   g. Do you ever use the internet to investigate matters related to other cultures?

22.) If you had to identify your main values, the things that you care about that define your character, what they be, and why?
   a. How do you think that those influence your online reasoning processes?

23.) We all have multiple identities that are shaped by a variety of factors. What are your primary identities?
   a. Of your main identities, which do you think has the largest influence on how you reason with information on the Internet?
   b. Could you describe a time where your identities influence your fact-checking or reasoning process?
   c. Why do you think that identity has such a large effect on how you make sense of information on the Internet?
      i. Or why do you think it does not have much of an affect how you make sense of information on the Internet?

24.) What is your political identity?
   a. Do you think it influences your online reasoning processes?
   b. Can you give me an example?
   c. How has your political identity development occurred?
      i. What role has the Internet played in this process?

25.) Can you tell me about how your positionality influences your informational reasoning on the Internet?
   a. (Define positionality and give example if need be)

26.) Can you tell me about how your gender may or may not influence how you reason with information online?

   a. If not, then why not?

27.) How much influence do you think our race and culture have in shaping our society? Why or why not?

28.) How do you think your racial and cultural heritage shapes how you see the world around you?

   a. How do those concepts influence how you reason with information in the media?

Elicitation Techniques

29.) FREE LISTING ELLICITATION TECHNIQUE:

   a. Ask participants to list all the ways that they regularly apply civic online reasoning in their daily lives.

30.) SENTENCE COMPLETE ELLICITATION TECHNIQUE:

   a. Hand students a printed sheet with sentence stems and ask them to write it out.
      i. I am most likely to fact-check information on the Internet when….
      ii. The sources that I am most likely to use for fact-checking are…
      iii. The subjects that I am most likely to fact-check are…
      iv. My cultural identity shapes my informational reasoning by…
      v. My ethnic/racial identity shapes my informational reasoning by…
      vi. My political identity shapes my informational reasoning by…
      vii. My family identity shapes my informational reasoning by…

31.) THINK-a-LOUD PROTOCAL

   a. First, I will ask my interviewee a topic that they are likely to fact-check in their every day life. I will have a news story ready on my computer for the interview. Then I will ask them to talk out loud their thought process as they fact-check the particular new story. I will stand beside them and film the process with my iPhone with the intention of recording the sites that they use to fact-check the story that I choose for them.

Appendix C

Elicitation Techniques: Interview FREE LISTING ELLICITATION TECHNIQUE:

a. List: all the ways that you regularly apply civic online reasoning/fact checking in you daily lives.

SENTENCE COMPLETE ELLICITATION TECHNIQUE:

i. I am most likely to fact check information on the Internet when….

ii. The sources that I am most likely to use for fact checking are…

iii. The subjects that I am most likely to fact check are…

iv. My cultural identity shapes my informational processing by…

v. My political identity shapes my informational processing by…

vi. My family identity shapes my informational processing by…

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