Vertical and Horizontal Political Knowledge Gaps in the Contemporary Media
Environment: The Case of the 2010 Health Care Reform Legislation

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ABSTRACT

This dissertation investigates how media consumption patterns in the contemporary media environment may influence a person's political knowledge. Drawing on previous research in political psychology and media effects, I argue that a knowledge gap phenomenon (Tichenor, Donohue, & Olien, 1970) still exist today. However, with an empowered audience base, individuals' differing motivation to engage with certain media content may become a more powerful antecedent of knowledge. In line with this reasoning, I proposed a vertical and horizontal knowledge gap framework. The dissertation presents the results of two complementary studies that test the existence and the antecedents of these two knowledge gaps against the backdrop of the 2010 health care reform legislation.

Building on previous studies of media framing, Study 1 tracked the news coverage of the health care reform legislation from 10 online media outlets from February 22 to March 24, 2010. A total of 1,268 news stories were analyzed using qualitative content analysis software. Results of this study not only revealed a set of media frames associated with the issue of health care reform, they also illustrate that different media outlets produced different media frames according to their ideological leaning as well as the offline characteristics of the particular online media outlet.

Informed by the opportunity-motivation-ability framework of political learning (Delli Carpini & Keeter, 1996), Study 2 was a survey study designed to examine the relationship between an individual's motivation and ability to learn about politics, media consumption patterns, and political knowledge – particularly, knowledge about the health care reform legislation. Data for this study were collected from a national online panel

that consisted of 333 respondents. The results showed a mixture of support for specific

research hypothesis that I proposed, but they broadly illustrated the theoretical idea that

in the contemporary media environment, a person's motivation to learn about politics,

rather than ability to process political information, is a more powerful predictor for the

resulting political knowledge.

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CHAPTER I
INTRODUCTION

Modern man is living in an environment permeated by communications media.

Virtually every city in the United States has at least one newspaper. Most people

can watch three or more television channels. Movies are available on television

nightly and at the theatre as well. National magazines, despite erosion, appear

regularly on the newsstands and through mail subscription. Homes and cars are

equipped with one or more radios. Transistors bring the world to the peripatetic

listener, wherever he may be. Paperbacks are plentiful, and available.

Stanley and Steinberg, 1976

When I read these words in the introductory chapter of a book called *The Media*

Environment written more than 30 years ago, I cannot help but to think how drastically

different the media landscape is today. As researchers tried to grasp the effects of

emerging communication technologies then – be it cassette players, satellite television, or

cable networks – on a whole host of social and interpersonal issues, media scholars today

are facing similar challenges with the current iteration of the communication evolution.

What does a media world filled with, for example, hundreds of television channels,

millions of Web sites, instant text messages, streams of *Twitter* tweets or *Facebook*

updates, and viral *Youtube* videos mean for individuals and for societies and social

institutions at large?

In the realm of politics, some have argued that the recent developments in

communication technologies have significantly expanded the opportunities for political

participation by informing, connecting, and engaging more citizens into actions (e.g.,

Hague and Loader, 1999; Rash, 1997). Looking at the ways in which the Obama

campaign tapped into the power of social networks to mobilize supporters and raise

money in 2008, it is not difficult to see why such proposition may ring true to many

observers. In contrast, other scholars have suggested that these technologies may further

divide the electorate, as individuals gravitate toward information and communities that

are more in line with their beliefs and preferences (Stromer-Galley, 2003), and that the

existing dominant social, political, and economic elites take advantage of the digital tools

to further their agenda and interests (Margolis & Resnick, 2000; Norris, 2001a).

Essentially, extant research findings illustrate that new communication

technologies may have two possible impacts on politics. First, we could see an

integration effect, in which individuals utilize technologies to explore new information

that has not been otherwise available and thus develop more diverse opinions and

experiences. As a result, societies may become more interconnected, interdependent and

tolerant. On the other hand, there is potential for a *polarization effect*, in which

individuals utilize technologies to find information that matches their interests and

values, and interact solely with others who are mirror images of themselves.

Consequently, societies may become a collection of fragmented and polarized enclaves of

individuals and groups.

The research literature over the past 20 years is rife with case studies and

empirical evidence that seemingly support either of these two propositions. However, we

should be careful not to draw a direct connection between new communication

technologies and integrative or polarizing consequences for individuals or societies.

Considering the 2008 presidential campaign once again, social networks alone did not

win the election for Barack Obama – his messages, characteristics, and the overall political climate in the U.S. at the time were key contributing factors to his success as well. Likewise, the Internet by itself cannot perpetuate individual identities, values, and beliefs, but only serves as an outlet for existing ones to be shaped, experienced, or cultivated.

In other words, technologies per se do not have direct and powerful influences over individual behaviors that are at the core of political science or political communication research. The evolution of communication technologies should not be treated as an isolated phenomenon that has a beginning and end point, or as requiring us to re-evaluate the fundamental principles of communication. Rather, new communication technologies should be seen as part of a media landscape that has a historical trajectory and continues to provide the *context* for which individual interactions and social processes occur.

The rationale behind my dissertation research, therefore, is that we need to think about the "new" in new media as whether, and the extent to which, the media environment that these technologies represent are new and different from before. I join a growing number of scholars (e.g., Bennet & Iyengar, 2008; Bonfadelli, 2002; Lievrouw & Livingstone, 2002; Yzer & Southwell, 2008) to suggest that more attention should be paid to the basic human motivations and tendencies in social interaction and communication, and how these individual variables may *interact* with the socio-technical characteristics of contemporary media environment to produce outcomes that could be essential to political behaviors or processes.

This dissertation accordingly examines the relationship between several ability and motivational variables, and their subsequent impact on media usage patterns and political knowledge at the individual level. Political knowledge is an important construct, as political theorists have long argued for the positive values of an informed citizenry in democratic politics (e.g., Cohen, 1989; Elster, 1998; Habermas, 1984; Rawls, 1971). Because the mass media produce and distribute information, the role of mass media in creating knowledge has also been a key focus in mass communication research. For example, the knowledge gap hypothesis proposed by Tichenor, Donohue and Olien (1970) pointed to social economic status as the primary factor in explaining differences in civic knowledge in the public; that is, the ability to receive and process information disseminated through the mass media differs for people from different demographic segments. However, given that the social economic environment (e.g., level of income, availability of public education) and the media landscape has changed since the time when the knowledge gap hypothesis was originally formulated, a fascinating question emerges: are the ways through which people nowadays acquire political knowledge different from when the knowledge gap hypothesis was first developed? It is the overarching focus of this dissertation.

The Present Research

To recapitulate, this dissertation revolves around a central paradox: at the same time when the decentralized nature of the new media environment is empowering more new voices and actors to participate in political affairs, the public can nevertheless become more fragmented and polarized as it is much easier today for consumers to

receive or take shelter from different information according to their existing preferences, and to communicate with like-minded others through various social networking tools. Consequently, this suggests that a growing difference in the knowledge of the state may be observed between those who are more engaged and those who are not, and also among those who are already attentive, but choose to consume information from different media outlets.

The broader theoretical argument that I am making is that in today's media environment a knowledge gap still exists, but that it manifests itself differently than knowledge gaps forty years ago. I contend that the cause for this new knowledge gap phenomenon is not simply differences in the degree of "access" to mass media, which may vary according to individuals' *ability* to acquire media technology or to understand media content. Rather, with an empowered media audience that enjoys greater choice and control over his or her media diet, individuals' differing *motivation* to engage with (or refrain from) certain media content may become a more powerful antecedent of knowledge and thus be explanatory of knowledge gaps.

I propose that today gaps in political knowledge come in two forms. The first is what I call a *vertical knowledge gap*, which refers to variations in awareness and understanding of factual information about public affairs issues or current events (i.e., what they are) between media audiences who are motivated to engage with different media content. Vertical knowledge gap is the result of differences in media use, where media use is defined as a person's level of media consumption and content preference. I submit that those who prefer to engage with news related media content have higher levels of political knowledge, as they have more opportunities to learn about politics from

mass media. By contrast, those who prefer entertainment related content would have relatively lower levels of political knowledge, as they choose to turn away from news information and have less opportunity to engage in political learning. We can therefore observe this difference in an individual's *level of knowledge* along a vertical (i.e., low to high) dimension, thus forming the vertical knowledge gap.

The second type of knowledge gap is what I call a *horizontal knowledge gap*, which refers to variations in perception and interpretation of public affairs issues or current events (i.e., what they mean) between media audiences who embrace different political values and ideologies. Horizontal knowledge gap is a result of an individual's media outlet choice, as people tend to gravitate toward media outlets that are more compatible with their existing values and beliefs. Previous research discussed in the chapters that follow have also noted that media outlets cover news stories differently, often emphasizing certain aspects of the news event over others based on various sources of news bias, including the news organization's particular political leaning. If this is indeed the case, then individuals who embrace strong partisan beliefs are more likely to rely on media outlets that share similar political ideology and are also reporting and interpreting the news through such ideological lens. For example, self-identified Democrats will be more inclined to receive their information from liberal media outlets that are reporting the news with more of a liberal perspective, and vice versa. Over time, I believe a gap in how a *same* public affairs issue is interpreted will develop among strong political partisans. This can be empirically demonstrated through a person's "structure of knowledge," defined as the mental structural representation or configuration of ideas (cf. Converse, 1964; Hamill, Lodge, & Blake, 1985), about the particular public

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affairs issue. We can therefore observe this difference in an individual's *structure of knowledge* along a horizontal (i.e., left to right) ideological spectrum, and thus forming the horizontal knowledge gap.

The purpose of this dissertation is twofold: a) to demonstrate the existence of the horizontal and vertical knowledge gaps; and b) to explore the antecedents of these knowledge gaps in the contemporary media environment that is characterized by greater user choice, control, and an increased availability of unfiltered information.

Given the theoretical rationale and research focus described above, the remainder of the dissertation will proceed as follows:

Chapter 2 contains a review of relevant literature that provides the theoretical foundation for this dissertation research. Given the interdisciplinary nature of the problem, the review draws from three broad areas of research; media effects, political communication, and social psychology. I focus on several issues that are central to the proposed horizontal and vertical knowledge gap framework. First, I provide a detailed account of how and why the contemporary media environment is different from the past and discuss the implications that this "new" media landscape has on media effects and political learning. I then review the conceptualization and measurement of political knowledge, with particular attention paid to the Opportunity-Motivation-Ability (OMA) framework proposed by Delli Carpini and Keeter (1996) and the OMA framework's relevance to the contemporary media environment. I then review the psychological and sociological basis for the gap of political knowledge at the individual level. Finally, building upon classic knowledge gap research (e.g., Ettema & Kline, 1977; Tichenor,

Donohue & Olien, 1970) and other ideas introduced in the literature review, I discuss the horizontal and vertical knowledge gaps concepts in detail.

Chapter 3 presents Study 1, a content analysis of news coverage of the health care reform legislation. Building on existing media bias and media polarization work, Study 1 aimed at identifying a set of media frames, defined as central organizing idea or story line that provides meaning to an unfolding strip of events (Gamson & Modigliani, 1987) that were being propagated through various online media outlets about the issue of health care reform. In addition, it examined whether different media outlets cover the health care reform issue differently, especially in ways that are compatible with the particular media outlet's political and ideological leaning. To that end, the study tracked news coverage of the health care reform legislation from 10 online media channels, including the online platforms for newspaper, cable news network, news wire services, and blogs, between February 22 to March 24, 2010 to answer the following research questions:

RQ1: What are the media frames associated with the health care reform legislation?

RQ2: Do the media frames identified in RQ1 differ for various media outlets?

Overall, a total number of 1,268 stories were analyzed using qualitative content analysis software. The results inform Study 2, a survey study.

Chapter 4 presents Study 2, a survey designed to examine the relationship between an individual's motivation and ability to learn about politics, media consumption patterns, and political knowledge, using the health care reform legislation as the backdrop. The goal of this study was to test the existence of the horizontal and vertical knowledge gaps and to explore the antecedents of these gaps. Chapter 4 presents a review

literature to support the operationalization of the OMA framework and the development

of the following research hypotheses:

> *H1: motivation to learn about politics, rather than ability to learn about politics, will best predict levels of media use.*

> *H2: motivation to learn about politics, rather than ability to learn about politics, will predict media genre choice.*

> *H3: media genre choice and level of media use will predict levels of knowledge about a public affairs issue in the news – in this case, the health care reform legislation.*

> *H4: motivation to learn about politics, rather than ability to learn about politics, will predict levels of knowledge about the health care reform legislation.*

> *H5: existential motivation and relational motivation, rather than ability to learn about politics, will predict media outlet choice.*

> *H6: structure of knowledge about the health care reform legislation will be correlated with media outlet choice.*

> *H7: existential and relational motivation will predict structure of knowledge about the health care reform legislation.*

Data for this study were collected from a national online panel, and the results were

analyzed using statistical procedures that included structural equation modeling, factor

analysis and multiple linear regressions.

Chapter 5 concludes the dissertation with a summary of the key findings of the

two studies. The theoretical contribution of the dissertation to a broader understanding of

how the contemporary media environment may influence the consumption of news

information and political knowledge is then discussed. The limitations of the current

research design and suggestions for future research are also considered. The dissertation

concludes by placing the current research within the larger context of the media effects

and political communication literature.

CHAPTER II
THEORETICAL FOUNDATION

The Contemporary Media Environment

In the early days of the 20th century, the media landscape in the U.S. was dominated by print and radio. By 1940, there were more than 700 radio stations (Sterling & Kittross, 1978) and over two thousand daily newspapers with a combined circulation of roughly 41.1 million (Project for Excellence in Journalism, 2008). The rise of commercial television in the late 1940s opened a new chapter in the media history, and by 1960, there were more than 500 television stations, and 85% of U.S. households had a television set (Federal Communications Commission, 2005). The media industry continued to expand throughout the 1970s and 1980s, introducing more technologies and more broadcast stations to the public. Yet despite the rapid growth, scholars have argued that the media environment during most of this "broadcast era" was largely characterized by the "homogeneity of content and limited opportunities for audience to choose between genres" (Prior, 2007, p. 14). Although there were many notable television shows that became an indispensible part of American popular culture, programming was dominated by network news, attracting an upwards of 40 million viewership throughout most of the 1980s (Guskin, Rosenstiel, & Moore, 2011).

Fast-forward to the year 2008, the media environment is drastically different. Television penetration rate stands at approximately 98%, and the average American household owns 2.79 television sets (TVB, 2008). More than 87% of the TV households subscribe to cable, through which they receive an average of 118 channels (Nielsen Media Research, 2008). Personal computers have reached 78% of the homes and are expected to increase (TVB, 2006). 73% of American adults are connected to the Internet

on daily basis, about half of those are doing so via broadband (Pew Internet, 2006). In addition, portable devices such as i-Pods and cellular phones also provide alternative avenues for media consumption. On the flip side, the rapid growth of these "new" media translates into a declining newspaper industry and lower viewership for traditional television networks (Project for Excellence in Journalism, 2008).

Increased Choices, Greater Control

The stark contrast between the media landscape in 1950 and today implies that media usage patterns may have also changed along with these technological developments, and that such shift in consumer behavior may have social and political consequences. Many scholars and practitioners point to two important characteristics of the contemporary media environment that are driving the trends in media production and consumption: an increase in information and media choices (Mutz, 1998; Kinder, 2003; Prior, 2007) and a greater level of audience control (Stromer-Galley, 2000; Eveland & Dunwoody, 2001; Sundar, Kalyanaraman, & Brown, 2003). Indeed, television viewers today have much more choices than ever before both in terms of content genre (e.g., news, comedy, drama, sports, reality shows, and etc.) but also the number of programming available within each content category. Combined with other entertainment options such as video games or online activities, the immediate result of this high choice media environment is a *fractured* audience base and a greater *variance* (or heterogeneity) in media content. With viewers dispersed across different channels, television shows with near complete reach become close to extinct and programmers are therefore forced to become even more niche in pursuit of profits. And, while television still dominates our media routine with roughly 8-hours of average daily viewing time (TVB, 2008), other

media are quickly catching up, as people learn to multi-task across different communication platforms (Veronis Suhler Stevenson, 2007).

The increase in media choices also means that people have greater control over their media diets. From on-demand television bundles to individual news-feeds of specific topics, interactivity and personalization are the buzz words in recent years and have been projected to further shape the media industry (Future Exploration Network, 2007). The growth of digital video recording devices like Tivo and online video streaming sites like *Youtube* and *Hulu* also allow more time-shifting and viral consumption based on individual interests and preferences. The notion of the "Daily We" – a term first coined by MIT professor Nicholas Negroponte in 1995 to hypothesize a daily dose of information package that is fully customized in advance by the consumers themselves - is no longer an imagination, but a reality that is being materialized and further cultivated by new communication technologies. The implication of this highly personal media environment may be a double-edged sword. For example, while audiences may now surround themselves with their favorite shows or subjects of interests, such customization and fragmentation also allows marketers and advertisers to take the idea of *narrowcasting*, or the specific targeting of a demographically and psychologically defined group (Eastman, Head & Klein, 1985), to a higher level by constructing better and more accurate consumer profiles. Given the multitude of options and greater audience control today, what, how, and why consumers choose to engage with a particular type of information or media content is therefore worthy of scholarly debate and investigation.

Information, Unfiltered

One of the consequences of the high choice, high control media environment is the explosion of information. Indeed, as sociologist Manuel Castells (2004) observed, the development of new communication technologies has allowed information to replace natural resources and machineries as the new material basis, and such shift has profound implication on individuals and societies. At the micro level, individuals are surrounded by an overwhelming amount of information in their daily lives. At the macro level, many scholars (e.g., Benkler, 2007; Lessig, 2008; Rheingold, 2002) have also noted that, with the decentralized nature of digital information and communication, we are seeing a breakdown of traditional top-down hierarchies and the emergence of grass-root movements or peer-to-peer relationships. Taken together, this rich information environment would seem to suggest that individuals today should reasonably have more knowledge, or at least have more opportunities to obtain such, on a wide variety of topics. The increased availability of information and the decline of gatekeepers may also mean that a greater level of transparency and scrutiny is possible on different social, economic, and political activities and processes.

Such assumptions appear to be true in the consumer front, for the Internet and various e-commerce Web sites have afforded individuals with a tremendous amount of resources to search for information, engage with peers, and eventually form opinions or make purchasing decisions about a product or a brand (Bakos, 1998; Bickart, 2001). In the realm of politics, however, the link between greater availability of information and political processes is less clear. On the one hand, it is undeniable that new communication technologies have increased the accessibility and facilitated the creation

and dissemination of political news and information at a greater speed and intensity. On the other hand, the rapid growth of information channels creates vast amounts of information that are beyond our ability to digest and creates opportunities for inaccurate information to flow into the public discourse. The severity of this problem is made worse by the rise of blogs and other social media, which allows anyone, regardless of his or her expertise and credibility, to become a producer of content. In a similar vein, the 24-hour news cycle and the rise of opinion-based news programs (e.g., *Countdown with Keith Olbermann*; *The O'Reilly Factor*) as a business model mean that a lot of ideologically-driven and unverified information are being made available to the public. Finally, the growing popularity of comedy shows such as *The Daily Show* or *The Colbert Report* further blurs the boundary between facts, opinion, and humor. All in all, it is reasonable to say that the information environment today has become not only enormous, but also increasingly *unfiltered*.

New Media, Old Questions

Taken together, the increased audience choice and control, combined with the unfiltered information environment, characterize the media world that we live in today. Since many of the existing theories in mass communication research are formulated in a time when the media landscape was much different, this challenges media scholars to re-think many questions about how people interact with information, about the process of communication, and about the nature of media effects – all of which are essential to the discipline. For example, Chafee and Metzger (2001) noted the process of media convergence – the flow of content across multiple media platform – that has taken place

so rapidly over the past several decades and raised the question of whether the term "mass communication" may still be an accurate descriptor of what is taking place in the real world. In an address to the International Communication Association annual convention, Livingstone (2008) also observed the "mediation of everything" and urged scholars to attend to issues and empirical questions brought forth by the diffusion of new communication technologies.

Likewise, Yzer and Southwell (2008) reviewed competing hypotheses about the impact of new communication technologies and cautioned that we do not need new theories to understand the effects of these technologies. Instead, more valuable insights can be gained from considering how the basic tendency of human interaction and communication may manifest in this media environment. Finally, Bennet and Iyengar (2008) traced the past developments in political communication with the increasingly networked social structure, decline of hierarchical social institutions, and the personalized information channels, and warned that more attention must be paid to the socio-technological context of political communication in order for the field to advance. Heeding these scholars' call to re-visit communication questions from the perspective of the "new" media environment and to pay particular attention to the condition from which the effect of mass media might occur, this dissertation therefore focuses on the concept of knowledge, more specifically – political knowledge.

POLITICAL KNOWLEDGE: FROM CONCEPT TO MEASURES

Does the exponential growth of media content and distribution channels mean that people today are more engaged with media and therefore become more informed about

the world in which they live? The idea of an informed citizenry is central to the healthy

functioning of a democracy. For example, political theorists have long argued that it takes

a knowledgeable public to collectively make decisions and participate in political

activities (Cohen, 1989; Rawls, 1971). Berelson, Lazarsfeld and McPhee (1954) noted,

"the democratic citizen is expected to be well informed about political affairs. He is

supposed to know what the issues are, what their history is, what the relevant facts are,

what alternatives are proposed, what the party stands for, what the likely consequences

are" (p. 308). As an indicator of the extent to which individuals and the society at large

are informed, the notion of *political knowledge* has also been an important construct for

scholars who are interested in the study of political attitudes and behaviors. However,

there exists a debate among social scientists regarding the content, structure, and

measurement of political knowledge.

In terms of the conceptualization of political knowledge, can we consider political

knowledge as a set of essential facts and information about political and social issues

from which a person can rely on to make political decisions and choices such as voting?

Scholars who support this line of reasoning often follow the normative ideals of

democratic theories and contend that citizens "should" possess certain knowledge about

their governments and leaders, and that political decisions are best made in a rational and

deliberative manner (Elster, 1989; Habermas, 1984). Consistent with this, political

knowledge has often been measured in a "pop quiz" fashion. To evaluate knowledge of

political facts, for example, Delli Carpini and Keeter (1993) developed a standardized

index measure of general political knowledge that can be used across election cycles

through the American National Election Studies. They claimed that "factual knowledge is

the best single indicator of sophistication and its related concepts of 'expertise,' 'awareness,' 'political engagement,' and even 'media exposure'" (p. 1180). Other researchers (e.g., Eveland, Hayes, Shah, & Kwak, 2005; Holbert et al., 2002) have also constructed items to capture knowledge of candidate issue stance in order to evaluate communication campaigns or measure media effects.

Although factual knowledge measures are valuable for longitudinal analysis or comparison across different election cycles, critics argue that they assume political knowledge as one-dimensional or a passive content of what is known, and are therefore insufficient to accurately gauge an individual's level of political knowledge. Scholars (e.g., Graber, 2001) who support this line of reasoning cite studies in social psychology and information processing to note that people may not always follow the rational choice model of decision making. Instead, individuals can react to environmental cues and interpret factual information based on the context of their own experiences or rely on heuristic shortcuts to form attitudes toward the issue or subject matter (Petty & Cacioppo, 1986; Eagly & Chaiken, 1993). As Graber (2001) demonstrated through series of focus groups and interviews, individuals who score low on the standardized factual index measures described above may still be knowledgeable about politics and be active in the political process. In addition, research in vote choice (Lau & Redlawsk, 2006) and candidate evaluation (Brader, 2006; Marcus, Neuman, & Mackuem, 2000) has found that when making political decisions, individuals do not rely on facts alone. Rather, a decision is often emerged through a complex interaction of facts, non-facts, emotions, heuristics, cognition, and situational cues stemming from a wide range of information sources – all of which can be treated as some kind of "knowledge" that contribute to the actual

political decision or behavior. Therefore, in addition to the factual knowledge about politics and government, more attention should be paid toward the ways in which individuals select and interact with their information environment.

Finally, beyond the conceptualization and measurement of political knowledge as a metaphysical construct, how such knowledge is structured and organized in our brain once it is consumed is also central to scholars. Converse (1964), for instance, has used the term "belief system" to describe a "configuration of ideas and attitudes in which the elements are bound together by some form of constraint or functional interdependence" (p. 207). Converse argued that how ideas are organized) in a person's belief system is determined by the level of information that the individual possesses, which is comprised of both facts and the knowledge of the relationships between those facts (p. 212-13). Studies using social-psychological approaches have led to similar conceptualizations of political knowledge. For example, Hamill, Lodge and Blake (1985) focused on "schema" – a mental structural representation that consists of both factual knowledge and knowledge of the associations between concepts and facts, similar to Converse's conception of information constraint (p. 852). Likewise, to explore how knowledge is compartmentalized and structured, Eveland, Marton, and Seo (2004) examined the extent to which individuals see connections or relationships among various concepts within the political domain. Following the cognitive research tradition, political psychologists have also explored various aspects of political information processing and memory processes about political events, actors and groups (for details, see, e.g., Hermann, 1986; Iyengar and McGuire, 1993; Lau and Sears, 1986; Lodge and McGraw, 1995).

What we can conclude from the scholarship on political knowledge is that there are at least three essential features about political knowledge that should be taken into consideration when examining the construct. First, political knowledge may consist of knowledge of facts (e.g., general political knowledge and issue stance knowledge), and knowledge of relationship among facts (e.g., how different facts are related to one another). Second, the consumption and interpretation of these political facts may well depend upon an individual's own personal background and experiences, or the social and information environment that he or she resides in. Finally, political knowledge can be organized and stored as structural mental representations, or schemas, in our brains and be retrieved via different memory processes. Taken together, political knowledge is perhaps best described as an active, dynamic, and polysemic construct that is constantly being updated and cultivated by an individual's internal and external environments.

In sum, political knowledge is a complex construct that has multiple dimensions. In this dissertation, I acknowledge such complexity and strive to achieve a balance that addresses all three essential features of political knowledge discussed above. For the purpose of this dissertation, I therefore operationalize political knowledge as **the knowledge about public affairs and civic life that**: a) may be factual or opinion-based information; b) may be derived from an individual's interaction with his or her information source, which is shaped by the individual's personal background or social environment; and c) can be stored as mental schemas in a variety of configuration or structures depending on the individual. To get a better view of how this interpretation of political knowledge may be adequately observed and measured, it is necessary that we understand how political knowledge is acquired.

ACQUIRING POLITICAL KNOWLEDGE

Opportunity-Motivation-Ability (OMA) Framework

Given the centrality of an informed citizen in democratic societies, an important

question is *where* and *how* political knowledge can be obtained. Several schools of

thoughts exist in explaining how individuals learn about politics. The first, and perhaps

most obvious channel of political learning, is formal education. As Delli Carpini and

Keeter (1996) noted, "a central purpose of public education in America has always been

to teach the requisites of citizenship" (p. 106). Through citizenship courses and related

curricular activities, individuals are expected to acquire the necessary skills in gathering

and processing political knowledge, and to develop interests in social issues or

motivation to consume public affairs information even after one leaves school.

While citizenship education can be seen as a conscious and rather narrow means

of transmitting political knowledge in societies, a more unconscious and broader way in

which individuals acquire political cognition, attitudes and behaviors is through the

process of socialization. The political socialization literature (see Langton, 1969;

Renshon, 1977, for more information) views political learning as a developmental

process that begins in childhood and continues throughout life. Social institutions like

schools, families, churches, youth groups, community organizations, and the mass media

all play a role in the development of an individual's civic orientations such as their

loyalties, their civic virtues, their tolerance, their political self development, and their

political participation and civic behavior. As Conover and Searing (1994) noted, "in

effect, these social institutions represent the contexts through which other political and

social factors exert an influence on the making of citizens" (pp. 43).

To describe the ways through which individuals can engage in the acquisition of political information, Delli Carpini and Keeter (1996) argued that there are three broad determining factors – opportunity, motivation, and ability, also known as the OMA framework for political learning. First, the *opportunity* to acquire information about politics depends on the availability and the frequency with which information is made available, and the communication technology (if applicable) through which such information is being distributed. For example, it would not be possible for an individual to learn about a particular news event if: a) it was not reported in the news, b) it was reported in the news, but only briefly, or c) the individual does not have access to the appropriate news channels. The idea of opportunity is therefore best characterized as largely external to the individual, as ordinary media consumers do not have control over what gets reported in the news or how long the coverage would last.

The second factor in the OMA framework is *motivation* to acquire information about politics, which may come from a number of sources. Motivation, according to Delli Carpini and Keeter (1996), can result from a general interest or curiosity in public affairs. Such would be the case for people who follow politics closely and are often proud to identify themselves as "news junkies" or "political junkies." Motivation can also stem from a more focused interest based on personal concerns or needs. For instance, a military family would be following news about the US government's war on terrorism effort because their loved ones may be involved in military actions overseas as a result of government policy. In addition to personal interest, motivation is also a function of an individual's belief that one's engagement in politics is "a good investment of one's time, that it will produce either psychic, solidary, or substantive rewards" (p.114). On a related

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note, motivation can also be derived from a sense of civic duty, through which a person believes he or she has the obligation to become politically engaged regardless of personal interests or possible rewards, because being politically involved is what a good citizen *should* do.

Finally, the last factor in the OMA framework is *ability* to learn and understand information about politics, which covers "a wide range of skills, talents, and attributes, from physical (the ability to see and hear, for example) to the cognitive (the ability to process and retain information) to the social (the ability to read and write)" according to Delli Carpini and Keeter (1996, pp. 106). All of these factors are important determinants of an individual's level of political knowledge, as one cannot engage in political learning without first the basic physical capacity to first receive and process such information, organize them into memories, and then be able to apply such knowledge into different context when called upon.

Role of Mass Media

The OMA framework provides us with a useful way to think about how and where an individual may learn about politics. As discussed previously, the source of political information may vary widely, including socialization (Atkin, 1981; Bandura, 1971; Eveland, McLeod, and Horowitz, 1998), culture (Canache, Mondak, and Stewart, 2003), or civic education (Galston, 2001). However, given the immediacy and availability of media content in contemporary society, it has been argued that mass media is one of the most influential sources of political information today (e.g., McCombs & Shaw, 1972), as it plays a crucial role in forming and reflecting public opinion, connecting the world to individuals and creating a perception of social reality.

The potential impact of mass media on individuals and society has certainly attracted attention from communication scholars, particularly from those in the media effects tradition. One such theoretical concept about the role of media in constructing an individual's world views is cultivation theory. Developed by George Gerbner in the 1970s, the cultivation ideas argued that, "those who spend more time 'living' in the world of television are more likely to see the 'real world' in terms of the images, values, portrayals, and ideologies that emerge through the lens of television" (Gerbner et al., 2002, p. 47). The effect of cultivation is often achieved through two mechanisms: a) the process of mainstreaming, referring to "the sharing of commonality among heavy viewers in those demographic groups whose light viewers tend to hold divergent views" (Gerbner et al., 1980, p. 15); and b) the process of resonance, referring to "what is seen on television is similar to one's life experience and creates a "double-dose" of the message which greatly enhances cultivation" (Gerbner et al., 1980, p. 15). Given that television and much of the media industry are controlled by social, cultural, and economic elites, the cultivation perspective is often used as evidence for the social control function of mass media (cf. Shanahan & Jones, 1999).

Importantly, however, despite the prevalence of mass media channels and the potential effects of cultivation, the rate and the extent to which people acquire political knowledge may differ. This possibility is articulated by Tichenor, Donohue and Olien (1970), who proposed a knowledge gap hypothesis, such that "as the infusion of mass media information into a social system increases, segments of the population with higher socioeconomic status (SES) tend to acquire this information at a faster rate than the lower status segments" (p. 159) due to higher levels of education, better communications skills,

and more relevant personal contexts. Over time, a gap in knowledge of various current events or public affairs issues may be found in the population. Although the original knowledge gap hypothesis was a macro-level account of how information may diffuse in societies, it did not discount the influence of micro-level processes, as an individual's level of education (and by extension, cognitive skills and abilities) was thought to be the main indicator of SES. Building on the knowledge gap framework, Ettema and Kline (1977) further contended that gap in knowledge acquisition is a result of the different situational needs and cognitive processes of individual actors, because "higher and lower SES persons…may well see the world in somewhat different ways" (p. 189).

With the growing prominence of new communication technologies over the past two decades, some scholars (e.g., Bryant, 1986) have argued that cultivation theory or the knowledge gap hypothesis have become things of the past. In counterpoint, although the two theories were indeed developed in a time when television was the dominant medium, they were not theories about television. Reduced to its core, both cultivation and knowledge gap effects illustrate that a particular information source or environment can lead to normative influence on an individual's attitudes, beliefs and behaviors, as it tells individuals what issues or events to think about, how to think about them, and why. While television was used as the primary example by cultivation and knowledge gap researchers, information sources can also be other types of mass media (e.g., radio, newspaper, Internet), social institutions (e.g., military, religion), or interpersonal networks (e.g., kinships, friends, colleagues). In other words, the underlying micro and macro level processes identified by these classic media effects theories may still be

relevant and applicable today, but scholars need to take into account the contemporary media environment that, as described previously, has changed from the previous era.

POLITICAL KNOWLEDGE IN THE
CONTEMPORARY MEDIA ENVIRONMENT

The unfiltered nature of today's information environment, rooted in the digital revolution and further harnessed by the rapid growth of new communication technologies, may require scholars to re-consider several issues about how people interact with information or media content. This is especially true if one accepts the idea that political knowledge is best conceptualized as **an active, dynamic, and polysemic construct that is constantly being updated and cultivated by an individual's internal and external environments**.

First, what constitutes "knowledge" that informs people's attitudes, decisions, and behaviors today, when facts, spins, opinions, and rumors are all competing for their attention at the same time? Terms such as "wikiality[1]" and "truthiness[2]" are words invented by comedian Stephen Colbert perhaps for entertainment purposes only, but they capture the undercurrent of the larger information and news environment, in which reality is splitting and organizations such as *Factcheck.org*, a nonpartisan organization established by the University of Pennsylvania to monitor factual accuracy in the political discourse, is born out of necessity in order to reduce the level of deception and confusion in U.S. politics.

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1 Stephen Colbert first used the term in 2006, referring to "a reality where, if enough people agree with a notion, it becomes the truth."
2 Stephen Colbert first used the term in 2005, referring to "the quality of preferring concepts or facts one wishes to be true, rather than concepts or facts known to be true."

Second, as media communication moves from the mass-mediated model of the broadcast era to the increasingly personalized model of the digital age where people now have greater choice and control over their media diets, what motivates consumers to engage with different types of political information – be it the more filtered type of information as presented in the traditional form of network news, or the vastly unfiltered information landscape as seen on the Internet? Finally, *if* the second question is true and individuals *are* indeed motivated and empowered today by their different personal backgrounds, interests, and social identities to engage with vastly diverging information in terms of volume and content, what might be the consequences for individuals and societies? Is it possible that media consumers can still find common threads in the immense, unorganized, and unfiltered information environment – the threads that create shared memories, experiences, and emotional attachments that connect people together in a community? Or, is it possible that, with projected realities starting to split in such an information environment, a gradual disintegration of interpersonal relationships and community bonds may also follow? As Doris Graber (2001) asked in *Processing Politics*, "if citizens do not drink from the same well of information, will they splinter into communication ghettos?" (p. 166). These questions are the theoretical foundation and rationale that drives the present study, and they also pose significant implications to future media effects and political communication research. While a single project cannot adequately address all of these issues, I hope that this dissertation opens the door for future studies by using "political knowledge" as a lens through which to examine these issues.

Vertical and Horizontal Knowledge Gap Framework

Given the change in the broader media landscape and the nature of news, it is reasonable to suggest **that perhaps the ways through which people acquire political knowledge and the manifestations of the knowledge gap might be different** from the 1970s. I argue that today's high choice/control media environment actually provides an environment for the macro-level approach proposed by Tichenor et al (1970) and the micro-level analysis advocated by Ettema and Kline (1977) to work in a complementary fashion and produce two types of knowledge gap. First, when information resources were relatively few and homogenous in terms of content, the absence of alternative sources arguably made the *ability* to process and understand information key to one's level of knowledge. In other words, the media audience either understands the information about politics immediately as they appear in the mass media, or they do not. The other possible way for the media audience who does not understand such media content in the first place is to wait until the information diffuses into other realms of life and then obtain them through means (e.g., interpersonal communication) that match his or her abilities to process such information. The differences in speed (e.g., how fast) and volume (e.g., how much) between those who are able to consume and understand political information as they appear in the mass media and those who do not was the basic premise of the original knowledge gap hypothesis.

However, with almost unlimited supply of political information proliferating through the 24-hour news cycle and the Internet, the motivation to learn about politics and, subsequently, to engage with which type of information and to what extent is likely to be the key today. With an empowered media audience that has greater choice and

control over what they consume, it is far easier for individuals to "change the channel" when the content does not suite their tastes or goes beyond their intellectual ability to understand. As such, those who are interested and motivated to learn about politics have more opportunities and freedom (compared to forty years ago) to do so. On the other hand, those who have little interest in learning about politics (despite being highly educated or have strong intellectual ability, for example) may easily surround themselves with media content that fits with their personal interests (e.g., sports, drama) or simply provides entertainment value (e.g., reality television), and subsequently wall themselves away from civic life. Overtime, a gap in political knowledge between those who are motivated to engage information about politics and those who are not may be observed. In contrast with the original knowledge gap hypothesis developed by the Tichenor team, an individual's social economic status (or ability) may not be the factor responsible for its manifestation. Rather, one's motivation to learn about politics may become a relatively stronger predictor for this knowledge gap phenomenon. Conceptually, this gap in political knowledge that is the result of an individual's media use cab be considered as a **vertical knowledge gap**, stretching along a vertical line between those with high levels of knowledge, and those with low levels of knowledge. The vertical knowledge gap can particularly be applied to *factual* knowledge, as factual knowledge can be observed using a binary logic (have versus have-not) and can therefore be quantified using a high-low dimension.

In addition to the vertical knowledge gap, a second type of knowledge gap phenomenon may also be observed. When media content were more homogeneous in the 1970s, it can be expected that media audience, regardless of his or her abilities and

motivations, is receiving fairly similar information from a limited number of media outlets. Since mass media shapes how people think about the environment around them (e.g., Gerbner et al., 1980; McComb & Shaw, 1972), it follows that people's perception of what is important in the world (particularly, the political world) will be relatively similar, because the information sources are similar However, as discussed previously, the information environment has changed dramatically today. With greater user choices and the availability of unfiltered information, it is highly possible that audiences are receiving their information from a much greater variety of sources. How do people choose their information sources, particularly mass media outlets? According to existing scholarship on selective exposure (Hyman & Sheatsley, 1947; Klapper, 1964), selective resistance (Eagly & Chiken, 1998; Mutz & Martin, 2001; Taber & Lodge, 2006) and motivated reasoning (Kunda, 1990; Trope & Thompson, 1997), it is highly possible that individuals will choose their information sources according to their political ideology.

This pattern of information seeking and consumption behavior is rooted in the human desire to maintain one's attitude and avoid cognitive dissonance (e.g., Festinger, 1956; Heider 1958), but is further amplified by the characteristics of the contemporary media environment in which individuals have greater choice and control over their media consumption pattern. Individuals can be motivated by his or her political ideological preference to "stay tuned" to a specific media outlet that they particularly like or find easier to understand. On the other hand, media audiences can easily "tune out" media outlets that present information that challenges their prior beliefs, or opinion that they do not necessarily agree with. If these two contrasting possibilities were true, it is then reasonable that we may find people in their own information silos that they have

constructed based on their own ideological leanings, with very little flow of information from outside of their preferred media outlets. Further, as will be discussed in Chapter 3, it has been found that news coverage has become increasingly politicized – that is, media outlets are increasingly reporting news events with an ideological spin compatible with the news organization's particular political leaning, and emphasizing certain aspects of an issue or event while omitting others.

Taken together, a gap in how a *same* public affairs issue is interpreted and perceived among media audiences may be seen. Particularly, this gap will develop along the dimensions of one's political affiliation and ideologies, as these existing values and beliefs motivate individuals to choose media outlets that provide them with information about politics. For example, self-identified Democrats will prefer to receive information from liberal leaning media outlets that are covering, say – news about the war in Afghanistan with more of a liberal spin. Likewise, self-identified Republicans will gravitate toward conservative leaning media outlets that are covering the war in Afghanistan with more of a conservative flavor. As a result, we may find two very different interpretations of the same event (war in Afghanistan) among these two groups of media audiences. Conceptually, this gap in political knowledge that is the result of an individual's media outlet choice can be considered as a **horizontal knowledge gap** that stretches along a horizontal line between the liberal (left) and the conservative (right) ideological spectrum.

In sum, the vertical and horizontal knowledge gaps can be viewed as a framework of how people engage with political information. For example, when a political event occurs, the factual information surrounding this event (e.g., who, what, when, where,

why, and how) may be instantaneously disseminated through the media communication channels. Whether or not an individual is aware of this event may depend on the extent to which he or she is motivated to consume or seek out this information. As a result, the gap in the differential acquisition of factual information is the essence of the vertical knowledge gap. Likewise, the information about how to interpret the event (e.g., what does it mean, what is the implication, what should be the response) may also be disseminated through a wide range of media and interpersonal networks. The way that individuals perceive the meaning and significance of this event may depend on the type of information channels that he or she engages with. As discussed earlier, since the unfiltered information environment is characterized by a greater variance (or heterogeneity) of content, and that people are also able to customize their media diets based on existing interests or ideologies, it is plausible to suggest that individuals' interpretations of the very same event may be vastly different. Consequently, such gap in the interpretation of an issue or event is the essence of the horizontal knowledge gap.

To summarize, it is reasonable to conclude that the contemporary media environment provides the necessary tools and mechanisms that allow horizontal and vertical knowledge gaps to be formed, maintained, and further cultivated by individuals' motivational drives and cognitive skills and ability. The classic media effects theories of cultivation and the knowledge gap hypothesis offer useful insights into how the horizontal and vertical knowledge gap phenomenon could emerge, although the specific mechanisms at work might be somewhat different due to the broader technological environment. In the following chapter, I discuss a number of variables relevant to the two

knowledge gaps that are worthy of further examination in the context of political

knowledge.

CHAPTER III
STUDY 1: ANALYSIS OF MEDIA CONTENT

Purpose of Study

To examine if the horizontal and vertical knowledge gap phenomena materialize in the high-choice, high-control contemporary media environment, I should first test whether different media outlets provide a diversity of content choices for the audience to choose from. If media content is not largely homogeneous, that is, the coverage and interpretation of a *same* public affairs issue is different across media outlets, there is then a basis for knowledge gaps to emerge, as people can gravitate toward different media driven by their motivation and acquire different information about the same issue.

Building on previous research findings, Study 1 is designed to investigate this question of whether media outlets report a single public affairs issue differently. The main objective of this study is to identify a set of major "themes" (or media frames) associated with a specific public affairs issue that are being propagated through various media outlets. I can then draw comparisons and see whether the information presented among different media outlets are consistent or have a certain type of pattern. In addition, since the media frames associated with a public affairs issue represents the possible knowledge that individuals may possess about that particular issue, this study can also help establish the parameters for the subsequent study. Within such boundaries, I can then examine whether individuals may differ in terms of their levels or structures of knowledge.

LITERATURE REVIEW

Media Bias

As a major storyteller and record-keeper of our times, mass media serve as an important information source that affects how individuals make sense of the world (e.g., Gerbner et al., 1980), as well as how they decide what is important to themselves and to their communities (e.g., McComb & Shaw, 1972). The ability of the mass media to emphasize certain information while suppressing others, and in particular the possibility that this creates a "bias" about a certain public affairs event or figure, has long been a concern for communication scholars (for instance, see: Bagdikian, 1971; Breed, 1960; Gans, 1979; Gitlin, 1980; White, 1950). Why would journalists or other media professionals contribute to biased reporting in the production of information? To answer this question, a steady stream of research (e.g., Shoemaker & Reese, 1996; Tuchman, 1978) has examined the factors, both internal and external to the newsroom, that might influence the production and selection of news.

According to D'Alessio and Allen (2000), there are three bodies of work on the nature of media bias, which they termed gatekeeping bias, coverage bias and statement bias. G*atekeeping bias* refers to journalists' and editors' selection of stories from the universe of news items, and thereby excluding others, during the news production process. It is assumed that these editorial decisions inevitably reflect the ideologies, values, and beliefs of the newsroom staff (Levite, 1996) or the media organization itself. As an extension to the gatekeeping function of the press, *coverage bias* refers to the relative amounts of coverage that, for example, a political party receives. For example, various studies have been conducted to measure the amount of time devoted to different

sides of an issue (e.g., Doll & Bradley, 1974) on broadcast news, or the length of coverage in print newspaper and magazines (e.g., Stempel, 1965). Finally, *statement bias* focuses on the possibility that media professionals intentionally inject their own opinions into the coverage or presentation of an issue, thereby creating "favorable coverage" toward one political party. Prior studies on favorable coverage primarily focused on media coverage of campaigns and elections. For example, scholars have analyzed newspaper coverage (e.g., Graber, 1971; Nollet, 1968; Stovall, 1985), news magazine coverage (e.g., Evarts & Stempel, 1974; Moriarty & Garramone, 1987), television news coverage (e.g., Clancey & Robinson, 1985; Lowry & Schidler, 1995; Murphy, 1998), as well as cross-media comparisons of coverage of a single campaign (e.g., Hofstetter, 1978).

Media Effects: Framing, Agenda Setting, Priming

If we accept the idea that media biases exist, what might be the implications for audience members in terms of their knowledge, attitudes, and behaviors? As mass media can also be considered as a social institution that serves a social and political function in our societies (cf. Silverblatt, 2004), what might be the consequences at the macro-level? And exactly through what mechanisms do they influence behaviors and attitudes? The possible answers to these questions have been examined through three research programs in the media effects tradition – framing, agenda setting, and priming. Not surprisingly, these concepts can be traced back to the sources of media biases discussed previously, and therefore should also be discussed here in order to fully understand the phenomenon of media bias.

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According to McCombs and Shaw (1972), agenda setting refers to the idea that in choosing and displaying news, media professionals place emphasis on certain issues through frequency and intensity of coverage. As a result, such placement or patterns of coverage lead audiences to attribute and judge the relative importance of these issues accordingly, such that those issues that are reported on most frequently are being perceived as most important. Mass media therefore may set the "agenda" and tell the public what might be the important issues that they should pay attention to. Much agenda setting research showed that, particularly during election seasons, mass media indeed set the tone and "agenda" for the campaign and exert a significant amount of influence on what voters consider to be the major issues (Eaton, 1989; Funkhouser, 1973; McComb & Shaw, 1972; Brosius & Kepplinger, 1990). Therefore, it can be said that agenda setting effects also reflect the "gatekeeping bias" of the press described earlier. Whether the pattern of coverage or the particular criteria for news selection is chosen intentionally or unintentionally, the agenda setting effect is the inevitable result of the media production process and can have a profound impact on how an audience perceives their social reality.

One such impact can be seen through the process of priming. Often considered as an extension of agenda setting theory (Iyengar & Kinder, 1987), priming is a term that originated from the social psychology literature. In that literature priming has to do with the non-conscious form of human memory that is concerned with perceptual identification of words and objects (Tulving & Schacter, 1990). In political communication, however, priming refers to "changes in the standards that people use to make political evaluations'' (Iyengar & Kinder, 1987, p. 63). The priming effect, in

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essence, deals with information processing and retrieval. It is assumed in the priming literature that when people form attitudes or make decisions, they tend to rely on the information that is most salient and accessible to them (Hastie & Park, 1986). Therefore, when extensive coverage and media attention make certain public affairs issues or particular aspects of a given issue more salient in the public consciousness, it creates not only the "coverage bias" of the press described earlier but also primes audiences to use this information when making judgments and evaluations about political figures and public policy decisions.

Finally, framing refers to the idea that "how an issue is characterized in news reports can have an influence on how it is interpreted and understood by audiences" (Scheufele & Tewksbury, 2007, p. 11). In other words, while agenda setting raises certain issues into the public consciousness, framing tells the media audience how to think about an issue and why, by leading them to see things in a certain light or perspective. Similar to priming and agenda setting, framing is also an inevitable result of the news production process. According to Gans (1979), framing becomes a valuable tool for journalists as they attempt to produce stories more efficiently under various organizational pressures such as space constraints or airtime limits. Framing can also help reduce the complexity of an issue and make a news story more relatable, as journalists can "frame" their stories using existing schemas and contexts accessible to the audience. While it will be not be accurate to assume that journalists are out there to spin every story according to their own beliefs and values or to deceive the audiences, it is certainly possible that the "statement bias" described previously can seep into news coverage, thus creating an effect on the ways in which people form impressions and attitudes about events in the news.

Media Frame and Individual Frame

The discussion thus far indicates that framing, priming, and agenda setting can collectively influence what individuals think about politics (agenda setting), how to evaluate public policies and political leaders (priming), and how to make sense of news events and the world around them (framing). Two concepts that deserve further attention are what Scheufele (1999) called media frame and individual frame. *Media frame* is conceptually defined as "a central organizing idea or story line that provides meaning to an unfolding strip of events…the frame suggests what the controversy is about, the essence of the issue" (Gamson & Modigliani, 1987, p. 143). In other words, it can be seen as the "schema" that mass media offer to the audience in order to help them interpret and understand various news events. Or, if one were to describe the media-audience relationship using the classic Sender-Message-Channel-Receiver model of communication (Berlo, 1960), media frame can be characterized as the message that the news organizations (sender) are trying to send to the audience (receiver). Since media frames, just like media bias, are inevitably results of the news production process, media framing is not necessarily always intentional (Gamson, 1989).

In contrast to the frames provided by the mass media, *individual frame* is defined as the "mentally stored clusters of ideas that guide individuals' processing of information" (Entman, 1993, p. 53). Similarly, Kinder and Sanders (1990) also suggested that individual frames can be thought of as the "internal structures of the mind" (p. 74). Individual frames are therefore the schema that people use to understand and interpret news events, which may derive from long-term political and ideological affiliations developed over time as a result of socialization, personality differences, and

other micro-level factors, but may also stem from short-term, issue-related references, for example from mass media frames. In other words, if media frame represents *messages* that media organizations send to the audience, individual frames tell us how these messages are *received* by audience members.

Polarization of News Audiences

Taken together, there are many sources of media bias, ranging from the particular ways in which stories were written by journalists to the larger organizational and economic pressures that affect the editorial decisions made in the newsroom to create biased reporting. Interestingly, however, while the opportunities for media bias are plenty, empirical research has found little evidence for a consistent liberal or conservative bias (Jamieson & Waldman, 2002; Kuypers, 2002; Niven, 2002). Yet, with the current high choice and high control media landscape and the unfiltered information environment, there is emerging evidence that media audiences, particularly those who hold strong partisan beliefs, are now receiving their news from different sources. For example, a poll conducted by the Pew Research Center (2004) found that news audiences have become more politicized and partisan. As Figure 3-1 below shows, between 2000 and 2004 Republican television viewers were rapidly turning to Fox News as their regular source for news, while Democrats were turning to CNN and MSNBC, Fox's principal rivals, for information.
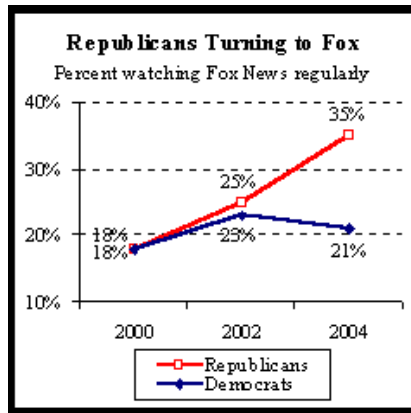
Figure 3-1. Polarizing News Audiences. This figure illustrates how Republicans and Democrats are turning to different sources for news and information. Adapted from "News Audiences Increasingly Politicized," by Pew Research Center for the People and the Press, 2004.

The result of this polarizing news consumption was a growing credibility gap toward

news outlets in the minds of news audiences. In the same Pew Research (2004) report, it

was found that CNN received dwindling trust among Republican over the years, while

the perceived credibility of Fox News suffered greatly in the minds of Democratic voters

(Figure 3-2).

Figure 3-2. Perceived Credibility Gap Among News Audiences. This figure illustrates how Republicans and Democrats have less trust toward news outlets that tend to embrace political ideology in contrast to their own. Adapted from "News Audiences Increasingly Politicized," by Pew Research Center for the People and the Press, 2004.

In addition to the politicizing of media audience that was observed by scholars, several popular books in recent years also argued that major U.S. media outlets are reporting the news with a severe bias. Depending on the author's ideological stance, the alleged media bias is either to the left (e.g., Coulter, 2003; Goldberg, 2003) or to the right (e.g., Alterman, 2003; Franken, 2003), which exacerbates the lack of media credibility already perceived by many in the public. The confluence of these changes both from the media industry as well as the audience's perspective raises the important question what the polarizing media audience and the shifting media consumption pattern might mean.

One possibility, as described in Chapter 2, is the formation of a horizontal knowledge gap. In other words, with the media audience segregating themselves in seeking information from different news outlets, many of which are assumed to present biased reporting that highlights certain aspects of an issue or news story over others, it is reasonable to suggest that people are exposed to and perhaps adopt different "versions" of the *same issue*. There is empirical evidence for this possibility. For example, according to a Harris Opinion Poll conducted in October 2004, many Americans had false beliefs about facts surrounding the Iraq war, and a fair large amount of discrepancy was found among self-identified political partisans. As Table 3-1 below illustrates, there was a significant difference between liberals and conservatives about these beliefs. We already established that, to some degree, political partisans receive their news from different sources. These sources perpetuate information considered to be "popular" with their audiences, while suppressing others that are deemed "unfavorable" (Bernhardt, Krasa, & Polborn, 2008). As a result of this media production and consumption pattern, political partisans might hold different knowledge about a same public affairs issue or event.

Table 3-1

Harris Opinion Poll, #79, October 21, 2004

	Total (%)	Bush Support ers (%)	Kerry Support ers (%)
Saddam Hussein had strong links to Al-Qaeda	62	84	37
Saddam Hussein helped plan and support the 9/11 attacks	41	52	23
Iraq had weapons of mass destruction when the US invaded	38	58	16

Source: http://www.harrisinteractive.com/

A more recent example of divergent issue interpretation is the conspiracy theory about the citizenship of Barack Obama, which questions whether or not the president is a natural-born citizen of the U.S. In a Harris Opinion Poll conducted in March 2010, 25% of the respondents said they believed that Obama was not born in the U.S. and therefore not eligible to be president. Similarly, a CNN poll conducted in July 2010 found "27% of Republicans surveyed said [Obama] was probably not born here, and another 14% of Republicans say he was definitely not born in the U.S." (Travis, 2010). Even after the White House release of the original Certificate of Live Birth, a Gallup Poll conducted in May 2011 reported "47% of those surveyed – less than a majority – said they believe the president was "definitely" born in the United States…But a third of Americans remain skeptical or unsure" (Morales, 2011).

Although it is worth noting that these examples are isolated instances of politicized public affairs issues that do not necessary repudiate the integrity of the entire journalism profession, they do illustrate the problem of a split reality when media bias (regardless whether bias is strategic or a result of the media production process) is combined with people selectively choosing their information source (which is in part a result of the empowered media audience in today's technological environment).While

one could also argue that the concern over possible media bias has long existed and is not a new problem, I contend that the characteristics of the contemporary media environment, as described previously, has made this issue much more prevalent, persistent, and the implications far more profound. As President Obama noted in response to questions about his birth certificate, "there is a mechanism, a network of misinformation that in a new media era can get churned out there constantly" (Thrush, 2010). What about this new media era? How might the mechanism of misinformation work? And to what effect? These are some of the important questions that this dissertation hopes to shed light on.

RESEARCH QUESTIONS

The purpose of this study was to identify the media frames associated with a public affairs issue perpetuated through various media outlets, using the health care reform legislation as an example. Consistent with this the first research question was:

RQ1: What are the media frames associated with the health care reform legislation?

In addition, given the various institutional and editorial pressures that lead to bias in the production of news, I explored whether media bias exists in the coverage of the health care reform legislation. More specifically, I want to know whether different media outlets would produce different *media frames* in their reporting of this issue. The second research question is therefore:

RQ2: Do the media frames identified in RQ1 differ for various media outlets?

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METHODS

A content analysis was performed to examine media frames perpetuated by various media organizations. Content analysis is a useful tool to examine media content, especially if the researcher wishes to describe the characteristics of a communication, or to draw inferences about the effects of a communication (Holsti, 1969), and has been widely used by scholars who are interested in issues such as agenda setting, priming, and framing. The process of content analysis involves coding of raw messages, such as textual material or visual images, according to a classification scheme developed by the researcher or derived from previous literature. Elements included in such classification scheme may be words, phrases, theories, topics, concepts, or other characteristics (Kondracki & Wellman, 2002). Once the elements are identified, the message can then be analyzed using a quantitative, a qualitative approach, or a combination of both. In quantitative content analysis, messages elements are often counted to determine "explicit themes, relative emphasis on various topics, amount of space or time devoted to certain topics, and numerous other dimensions" (Berg, 1995, p. 77). In qualitative content analysis, the researcher is afforded with greater latitude to infer the meaning of communication or message based on the researcher's own knowledge or conceptual frameworks drawn from existing theories and literature.

For the purpose of this study, quantitative content analysis was particularly useful because it provides a list of words and phrases that represents the media frames associated with the issue of health care reform. Further, through the frequency count of how often the media frames appear in news stories, I was also able to infer the relative emphasis that different media outlets put on these media frames. While quantitative

coding was used as the primary method to analyze the news stories, qualitative approach

was also utilized as a supplement, as the coding process may benefit from additional

insights that the researcher gained while collecting the data. More information on how

these two approaches were integrated to analyze the news stories is discussed in the data

analysis section.

Public Affairs Issue – Health Care Reform

For the purpose of this study, the public affairs issue chosen to be examined was

the debate over health care reform that dominated much of the public policy discourse

during 2009 and 2010. This issue was selected for two reasons. First, the health care

reform was a newsworthy event that received extensive media attention. According to a

recent Project for Excellence in Journalism (2011) report, coverage of the health care bill

made up for 14.1% of the news stories in all forms and sectors of media surveyed during

the first quarter of 2010 and 4.7% for the entire year. The intensity and frequency of

coverage thus ensured that I could collect a sufficient number of samples for analysis.

Second, the health care reform issue was also highly divisive in light of what the

landmark legislation strived to achieve, as well as the high profile political figures from

both political parties involved in the negotiation process. Therefore, it presented an

opportunity to observe the degree as well as the characteristics of the polarization of news

coverage. Taken together, the media prominence of the health care reform and its

controversial nature made this issue an appropriate topic for the purpose of Study 1.

The issue of health care reform has been in the public consciousness for quite

some time. After decades of failed attempts to transform the health care system in the

U.S., President Obama signed legislation on March 23, 2010 to overhaul the nation's

health care system and extend access to medical insurance to millions of Americans. The bill was highly partisan – not a single Republican voted for the final version, and Republicans across the country campaigned on a promise to repeal the bill later during the midterm election in 2010 ("Health Care Reform," 2011).

Leading up to the final passage of the bill, Republicans have criticized the overhaul as impeding economic recovery and as giving the government an unnecessarily big role in a personal matter such as health care insurance. In contrast, Democrats highlighted the benefits of expanding health care coverage, especially for the uninsured, and noted that the nonpartisan Congressional Budget Office had projected that the law would reduce future deficits. In addition to these meta-narratives, there were a number of specific issues that stirred up controversy and debate both within the two political parties and among the public. For example, Democrats and a large number of the bill's supporters insisted that a new government insurance plan to compete with private insurers, i.e., "public option", to be included in the health care bill. On the other hand, Republicans and many conservative organizations sought to tighten restrictions on abortion coverage in subsidized plans bought through the insurance exchanges, to insure that no federal money was used to pay for an abortion.

The evolution and context of the debate on health care reform that I described here offers useful background information, but note that it is an almost anecdotal account of the major milestones and notable storylines leading to the final passage of the reform legislation. To systematically and objectively identify media frames associated with health care reform in the news, a more rigorous sampling and analytical approach was integrated into the design of Study 1.

Sampling and Data Collection

This study focused on the content from major **online news sources**. Offline news sources (e.g., print newspaper and broadcast TV) are excluded for two reasons. First, from a pragmatic perspective, digital Web content is easier to store and archive than content from television programs or print newspapers. Moreover, online news content draws heavily from materials originally produced for TV and print (this is especially true for traditional media outlets, with the same news team producing stories for online and offline platforms), and therefore little news coverage is lost when focusing on online content. Second, the Web is a microcosm of the high choice, high control, and unfiltered contemporary media environment that this study focuses on. I argued previously that these characteristics (high choice, high control; unfiltered information) likely induce horizontal and vertical knowledge gaps. The Web thus provides an appropriate context.

In terms of sampling, the top five online news sources during this time according to *Alexa*, a company that tracks Web traffic and the audiences based on its proprietary Web crawling algorithm, were: *Yahoo News*, *BBC News*, *CNN*, *The New York Times*, and *Google News*. Since *Google* and *Yahoo News* are both aggregator services that do not produce actual news content, but collect stories from other media outlets instead, they were excluded from the analysis. *BBC News* was excluded because it is based in the UK, and as a result, its coverage of the health care debate in the US may not be as directly relevant. The first two samples to be included were therefore *CNN* and *The New York Times*, which I then used as the basis to look for equivalent news organizations for the purpose of drawing comparisons. First, since *CNN* is a cable news network, the online outlets for two other major cable news networks – *Fox News* and *MSNBC* were included.

Second, since *The New York Times* falls under the category of national newspaper that enjoys a nation-wide audience, its local/regional counterpart – *The Star Tribune*, which represents a local newspaper in the Minneapolis-St. Paul area that also has a regional presence in the Upper-Midwest, was included in order to draw comparison between newspapers that have different circulation as well as national prominence. Further, since many news media rely on wire services to produce their stories, the two major news agencies that provide such services – *The Associated Press* and *Reuters* were also included.

In addition to cable news network, newspapers, and wire services, blogs also represent an important news source for many people in today's media environment and should also be considered accordingly. According to *Technorati*, a company that tracks the audience and ranks the top blogs in different categories (e.g., politics, business, etc.) by tracking the number of inbound hyperlinks that each blog points to, the top five political blogs in the US at this time were: *The Huffington Post*, *Think Progress*, *The Corner on National Review*, *Hot Air*, and *CNN Political Tracker*. Since *CNN* was already included in the sample, its blog was excluded from our analysis. To determine political affiliation for each blog, I followed Hargittai, Gallo, and Kane's (2008) method of identification by visiting each site to look for obvious indications of association, such as banner, link, or buttons supporting a particular political party, politicians, or campaigns. Other clues, according to this method, include statements that "unequivocally announced the allegiance of the blog or blog author (i.e., 'I am a proud [insert ideological alignment]')" or "written content of the blog often allowed for categorizing the author or blog as falling into one of the two general political categories: conservative or liberal"

(pp. 73). Since *The Huffington Post* was considered by *Technorati* as having substantial influence on the Web, it was chosen to represent the voice of the left on the blogosphere in our sample. On the other side of the political spectrum, *The Corner* and *Hot Air* were both included in the sample to represent the voice of the right because these sites receive less traffic individually when compared to *The Huffington Post*.

As Table 3-2 below shows, a total number of 10 media outlets ranging from newspaper, cable news network, news wire services, and blogs were included in the sample. The political leaning of these media outlets was also well balanced. For data collection, news stories that focus on the health care debate were tracked for roughly 30 days (from February 22 to March 24, 2010). Stories from specific news sections (e.g., US news, politics, and front page) of each Web site were collected daily via RSS feeds using *Google Reader* and screened for the topic. A story was determined to be appropriate for inclusion by looking at the headline as well as the first few sentences of the news story. Once a particular story was selected, the entire content of story was stored in a spreadsheet for future analysis. Overall, a total number of 1,268 stories were collected.

Table 3-2

Media Outlets and Number of Articles Sampled for Content Analysis

Media Type	Name	Ideological Leaning	Number of Articles Included
Newspaper - National	New York Times	Neutral	56
Newspaper - Local	Star Tribune	Neutral	65
Wire Service	Associated Press	Neutral	65
Wire Service	Reuters	Neutral	83
Cable News	CNN	Neutral	73
Cable News	Fox News	Right Leaning	132
Cable News	MSNBC	Left Leaning	68

Political Blogs	Huffington Post	Left Leaning	401
Political Blogs	Hot Air	Right Leaning	145
Political Blogs	The Corner	Right Leaning	180
Total			1,268

Data Analysis

After the collection of news stories was completed, the data were examined using the qualitative data analysis software *NVivo* (version 9.0). Since the amount of data was fairly large, a two-prong analytical strategy was adopted in order to best identify the major themes and concepts associated with the debate over health care reform. First, an *exploratory* coding approach was taken to look at all the news stories as a whole without any presumed knowledge of what might be in the dataset. Conceptually, this approach is similar to exploratory factor analysis of quantitative data, where the researcher has no a priori assumptions about factor solutions and allows the data to freely emerge. This approach is especially useful when existing theory or description about the communication being examined is limited or lacking, because the technique provides the researcher with greater freedom to "explore" the data (Hsieh & Shannon, 2005). Methodologically, the exploratory coding approach consisted of quantitatively calculating the *frequency* of all the words that appeared in 1,268 news stories in order to find what appeared most often – thereby establishing the major themes. (Note that pronouns, conjunctions, etc. were not counted because they are not informative.) In the past, this technique has been used by researchers to examine different frames in texts (e.g., Miller & Riechert, 2001; Triandafyllidou & Fotiou, 1998). Thanks to advances in computer software, tag/word clouds as a visual representation of frequency counts have also become popular in qualitative data analysis (e.g., Cidell, 2010).

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The exploratory approach produced a short list of words that could be used for preliminary analysis. Next, using such short-list as a reference and my own interpretation of what might be important in the health care debate, a *confirmatory* coding approach was applied to the data. This approach is similar to the more traditional notion of content analysis and conceptually analogous to confirmatory factor analysis of quantitative data, in which the researcher has specific hypotheses, in this case about particular terms and concepts, and attempts to validate these ideas in the dataset. Methodologically, this approach consisted of compiling a list of words to be counted and, once again relying on the word frequency technique, calculating how often they appear in the news stories produced by different new media outlets. Drawing such comparison across media outlets, I could therefore answer the research question of whether different media organizations offer different media frames of the same public affairs issue.

RESULTS

General Overview

The exploratory coding approach revealed several themes that emerged from a general frequency count of all 1286 news stories. As shown in Figure 3-3 below, the top-200 most mentioned terms were displayed using the word cloud technique, which is a visualization technique that summarizes the contents of a document by depicting the words that appear more often in larger, darker type within the cloud (Cidell, 2010). In other words, the larger the font type, the higher the frequency of the particular term appears. The list of top-200 terms produced by the exploratory coding included the major players involved (e.g., President Obama, House Speaker Nancy Pelosi, the two major

political parties (i.e., Democrats and Republicans), the two branches of Congress (i.e., Senate and House), the subject of debate (e.g., health care bill, insurance, and legislation). However, one drawback of the word cloud visualization was that it included words that appear frequently, but do not bear any significant meaning in reality. In this case, there were several nouns and pronouns (e.g., we, you, he, she, and so on) that could be removed from the analysis. In order to take a closer look at the dataset, these trivial terms were therefore discarded from the top-200 words list to create a "cleaner" list.
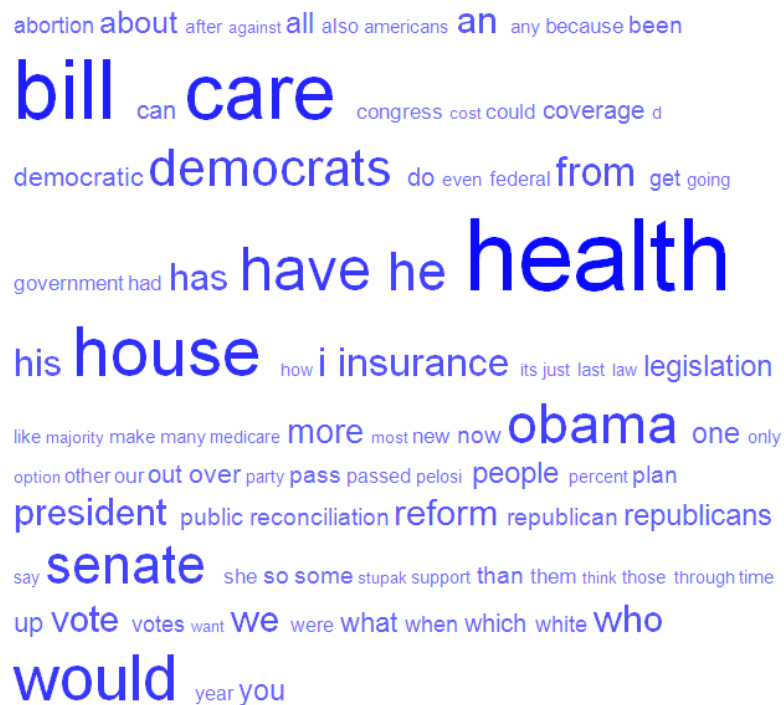
Figure 3-3. Word Cloud of Top-200 Words. This figure illustrates the important concepts about the health care reform legislation being reported in the media.

Table 3-3 below illustrates the filtered list that includes the top-40 words that appeared most frequently in the news stories. In addition to the major political figures and parties involved in the health care debate, we also see several contentious issues that

both parties did not agree on (e.g., abortion, reconciliation, medicare, and public option).
Based on a comparison of the major themes that emerged through the frequency count of
all the news stories examined by this study with the history of the health care bill that was
described previously, I contend that the word cloud captured here was a good
representation of what news media reported on during the period of analysis.

Table 3-3

Top-40 Words

Word	Count
health	7651
bill	6298
care	5862
house	5211
obama	3977
senate	3946
democrats	3726
insurance	2688
president	2541
vote	2503
reform	2423
republicans	1905
legislation	1892
democratic	1593
coverage	1439
republican	1398
public	1397
pass	1379
plan	1366
reconciliation	1338
abortion	1289
votes	1269
congress	1171

government	1113
passed	1030
federal	1028
americans	982
pelosi	957
support	931
many	893
medicare	851
party	842
percent	842
law	828
cost	799
majority	795
option	789
against	785
stupak	780

Ideological Clusters

The word cloud and the list of terms generated by the exploratory coding

approach begin to indicate possible frames in the dataset. However, it is not clear whether

the terms align with certain media outlets. To address this question, I utilized the

confirmatory coding approach by first constructing a list of "nodes." A node, as defined

in the social network literature, refers to the individual actors that are connected by

different ties or relationships in order to form a network (Wasserman & Faust, 1994). In

this case, imagine that the content of all the news stories I analyzed comprise a

"knowledge network" about the health care legislation. The nodes then represent the

individual "concept" or "knowledge items" that existed within the network. Similar to

how the combination of different vocabularies lead to a sentence that has meaning, those

concept nodes, through their connections, produce a meaningful knowledge network

about the health care reform legislation that tells the media audience what and how to think about this particular issue.

The second coding was performed using the nodes shown in Table 3-4. The table has the name of each node, how many sources (e.g., media outlets) they appeared in, and how often they were referenced in the news stories. The list of nodes was compiled using terms from the top-40 words list as well as from my own reading of what was prominent in the health care debate. My own interpretation was necessary to identify concepts or knowledge items that were only used frequently by a certain set of media outlets, and therefore were not prominent enough to be picked up by the exploratory free coding approach that treated all media outlets as a whole. For example, while screening the news stories for data collection, I noticed that the term "ObamaCare" was predominantly used by conservative media outlets (particularly in the blogosphere) when referring to the health care reform. Likewise, many liberal media outlets frequently mentioned the term "reform" and were also more likely to focus on "insurance companies" as the reason for the health care overhaul.

Table 3-4

Coding Nodes

Name	Sources	References
Public Option	9	623
Insurance Companies	10	389
Reform	10	2423
Pro-Choice	8	63
Health Care Summit	10	478
Premium	10	152
Sarah Palin	9	45
Medicare Medicaid	10	1311
Abortion	10	1289
Bart Stupak	10	780

Tea Party	10	136
Pro-Life	8	136
Deficit	10	289
ObamaCare	9	359
Reconciliation	10	1338
Nancy Pelosi	10	957
Economy	8	162
Max Baucus	10	57

The list of nodes was analyzed once again using *NVivo* (version 9.0). First, a cluster analysis was performed. Cluster analysis is a data analysis approach that organizes group entities into subsets, so that entities within a subset are relatively similar to each other (Wasserman & Faust, 1994). This technique allowed me to see the similarities and differences across the media outlets in terms of the news stories that they produced. To illustrate the result of cluster analysis, *NVivo* produced a visual representation known as the dendrogram (see Figure 3-4 below) that showed multiple branches, where similar media outlets were clustered together on the same branch and different items are further apart. The dendrogram also depicted different levels of hierarchies – in this case, there were seven. Each level could be thought as comprising of equivalent entities that have a single or multiple branches that included subsets of media outlets that were grouped together based on degrees of similarity of the stories they produced.

For example, looking at the dendrogram from the bottom up, at the lowest level there were *Hot Air* and *Fox*, meaning that these two media outlets were each unique but comparable entities. Moving up one level and adding another media outlet into the mix, *Hot Air* and *Fox* were now considered to be one entity that was comparable with *The Corner*. Continue moving upward, *Hot Air*, *Fox*, and *The Corner* merged into one entity that was comparable with the other entity at this level, which consisted of *MSNBC* and

The Huffington Post. This clustering pattern was the first clue from the cluster analysis that the news media were producing stories consistent with their ideological bent, because the liberal and conservative leaning media outlets did not show up in the same cluster. Moving up one more level, one could see that the partisan media outlets, regardless of their political leanings, were grouped into one entity that was comparable with the other entity (*CNN*) at this level. This cluster pattern suggested not only that the liberal leaning media outlets were covering news about the health care reform legislation differently from the conservative leaning media outlets – these more "partisan" media organizations were also having quite different coverage when grouped together and compared to a more "neutral" media organizations, such as the *CNN*. All in all, these results offered initial evidence that different media outlets may be projected different media frames as well as interpretation of the same public affairs issue.
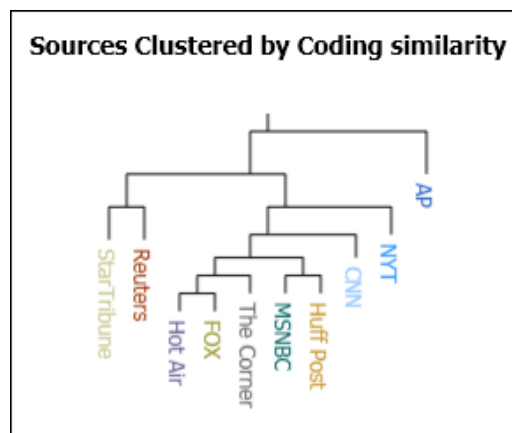
Figure 3-4. Source Cluster (News Stories). This figure illustrates the result of the cluster analysis.

Another interesting finding from the cluster analysis was that, when moving upward on the levels of hierarchy in the dendrogram, one could see that both the broadcast (e.g., *CNN, MSNBC, Fox News)* and online media outlets (e.g., *The Huffington*

Post, Hot Air) were clustered in one group, while *The New York Times*, a print medium,

clustered in another. This was fascinating because while all the news stories examined

here were drawn from the Web platforms of the respective media outlets, the clustering

patterns indicated that these online stories were not the same. In fact, the news stories

tended to reflect their offline organizational origins (e.g., print or broadcast media).

Further, we could also see that *The Star Tribune*, a media outlet that only enjoys regional

circulation and influence, was grouped in one entity[3] versus another cluster of media

outlets that has wider national circulation and influence. Once again, this may indicate

that the offline characteristics of the news organization matters influence the kind of

stories that media outlets produce for their respective online platforms.

Differing Realities

While the results of the cluster analysis suggested that different media outlets

cover the health care reform legislation in manners that were consistent with their

ideological bent, they did not offer further insights into the reasons behind these

clustering patterns. In other words, *what* exactly were these media outlets clustering

around, and therefore, *what* was the interpretation or perception of the health care reform

being perpetuated through different cluster of media outlets? To answer these questions, I

analyzed how often the nodes appeared in different media outlets and tallied up the

frequency counts. For instance, as the chart in Figure 3-5 below shows, the term

"abortion" appeared a combined 340 times in liberal leaning media (e.g., *The Huffington*

Post and *MSNBC*), but 511 times in conservative leaning media (e.g., *Fox News*, *The*

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3   It is not clear why the *Star Tribune* and *Reuters* were clustered together. Perhaps because the *Star*
    Tribune adapts content from *Reuters* in their stories, but this claim would need to be verified in future
    studies.

Corner, and *Hot Air*). It could therefore be argued that the issue of "abortion" was more important to the conservatives as it received more media attention.
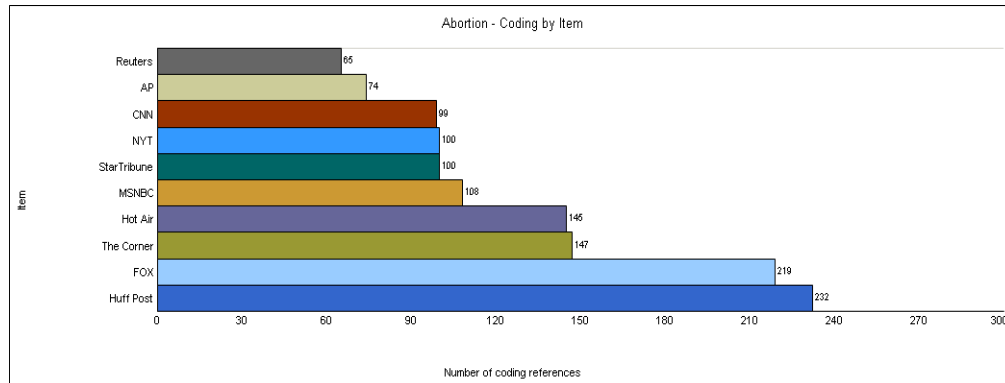
Figure 3-5. Frequency of References – Abortion. This figure illustrates how often the term "abortion" was used by various media outlets.

In another example shown in the chart in Figure 3-6 below, the term "reconciliation" appeared a combined 456 times in liberal leaning media (e.g., *The Huffington Post* and *MSNBC*) and 464 times in conservative leaning media (e.g., *Fox News*, *The Corner*, and *Hot Air*). It should be noted that *The Huffington Post* may be an outlier with many mentions of the term "reconciliation." The exact reason behind this pattern was not clear, but it may be that *The Huffington Post* is a blog-based news outlet, and "reconciliation" may be something that excites the blogosphere, as it was also frequently mentioned in *Hot Air*, a conservative leaning blog. When looking at the total number of counts, however, the over-reporting of this item in the blogosophere was balanced by fewer appearances in the traditional media outlets. Thus, the term "reconciliation" may be considered as important to both liberals and conservatives because it received a fairly equal amount of attention from all media outlets analyzed in this study.
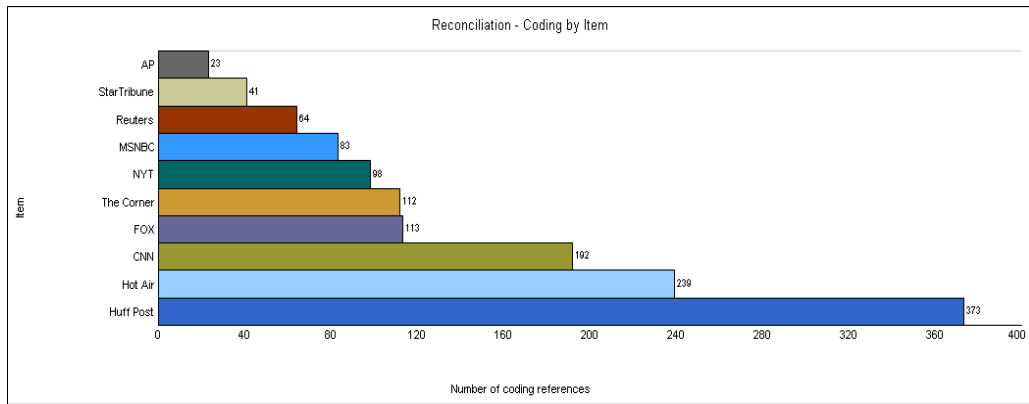
Figure 3-6. Frequency of References – Reconciliation. This figure illustrates how often the term "reconciliation" was used by various media outlets.

The frequency of references from the list of nodes was calculated for all 10 media outlets. Issues were labeled "liberal" when they received more attention from liberal leaning media outlets, "conservative" when they received more attention from conservative leaning media outlets, and "neutral" when they received equal amounts of attention from media outlets, regardless of their ideological leanings. (A series of bar graphs that report on the frequency of references for all of the nodes are included in the appendix.) To summarize the result of this coding, the treemap shown in Figure 3-7 below visually represents how the nodes were used by news outlets in their coverage of the health care legislation, with the area of the square representing the *frequency of references* (e.g., the larger the area, the more frequent a node was referenced in the news stories) and the *ideological ownership* (e.g., whether the term was used more frequently by liberal or conservative leaning media outlets, or both).

60
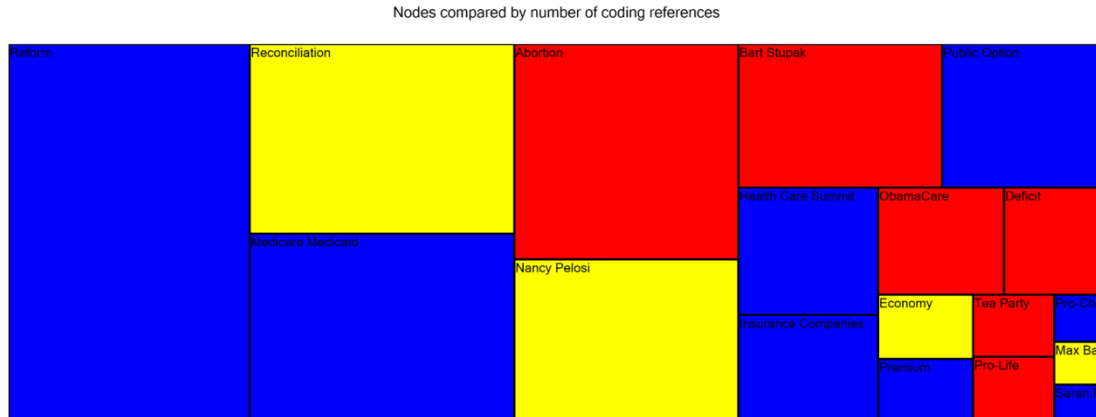
Figure 3-7. Frequency of Node References by Ideological Leaning.[4] This figure illustrates the frequency and ideological ownership of different concepts about the health care reform legislation used by media outlets.

The treemap lends further support to the idea that different media outlets projected different perception and interpretation of the same public affairs issue along the media's ideological bent. While liberal and conservative leaning media outlets spent a fairly equal amount of attention to issues like the impact of the health care bill on the "economy" and the process of reaching a bi-partisan consensus through "reconciliation," the media outlets were actually propagating two narratives, each with different focal points, of the health care debate to their respective audiences.

Although care need to be taken not to over-interpret, the treemap makes one wonder whether the liberal leaning media outlets projected a sense that the current health care system is flawed and therefore focused on the importance of "reform." As valued social services programs to the liberals, efforts to slow the pace of Medicare spending and expand Medicaid program were also covered extensively by liberal leaning media outlets. The idea of "public option" as an alternative to private insurance plans also received plenty of attention. In addition, liberal leaning media also appeared to be

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4   Figure 5 legend: Blue – liberal leaning; Red – conservative leaning; Yellow - neutral

portraying a number of villains and protagonists in the health care debate. For example, President Obama's effort to reach out to the Republicans through the "Health Care Summit" that he held at the White House was frequently mentioned by liberal leaning media – perhaps in the context of suggesting that the President and his party has done everything he could to reach a consensus, but such effort was not appreciated by the Republican party. Finally, "insurance companies" and the "premiums" were used frequently, perhaps to suggest why the reforms were needed.

The conservative leaning media outlets presented a very different interpretation of the health care debate. As the treemap indicates, conservative media outlets focused primarily on the issue of "abortion" as a way to mobilize the conservative support base and reason to oppose the health care reform. Consequently, related terms such as "pro-life" was frequently referenced as well, and Representative Bart Stupak (D-MI), who had become a leader of anti-abortion Democrats on the issue, also received plenty of coverage as well. Conservative media outlets also questioned the health care bill for its possibility to increase the federal "deficit" and referenced "Tea Party" members, who held strong positions to reduce the size of the government and the budget deficit. Finally, conservative media outlets often referred to the health care reform proposal as "ObamaCare" – thus linking President Obama directly to the bill and making him responsible for any political liabilities.

DISCUSSION

Knowledge about Health Care Reform

The content analysis identified a set of "knowledge items" that were being frequently covered by different media outlets. These included, for instance, the names of the important political figures that were involved in the negotiation process, such as President Barack Obama, Speaker of the House Nancy Pelosi (D-CA), and Representative Bart Stupak (D-MI), who expressed support for the health care legislation but feared that federal funds would indirectly pay for abortion services – a position quickly adopted by the Republicans. The fact that no other political leaders received sufficient press coverage (and particularly none from the Republican Party) to be in the top-40 list suggested that these three individuals were, in the eyes of the press, primarily "responsible" for the success and failure of health care legislation. These findings possibly indicate that the health care overhaul will be President Obama's (Purdum, 2010) and Speaker Pelosi's legacy (Associated Press, 2010). As for Representative Stupak, it has been noted that the controversy over the abortion aspect of the bill made him the "single most important rank-and-file House member in passing the bill" (Carney, 2011).

In addition to the politicians, specific events and milestones were also covered in the press. For example, the "reconciliation" of Democrats and Republicans in terms of their respective demands on the health care bill, and the "Health Care Summit" held by President Obama at the White House as part of the negotiation process were both frequently mentioned in the sampled news stories. Further, controversial issues such as "public option," "abortion," "Medicare/Medicaid" also received plenty of attention in the media and became part of the lexicon associated with the health care legislation during

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the coverage of the event. These knowledge items served as the building blocks that can be used by media professionals to convey the story of health care reform to the American public. However, whether media professionals did indeed choose to emphasize certain aspects of the story over others according to their ideological preferences is the focus of the second research question.

Media Frames and the Construction of Reality

The second research question asked whether different media outlets project different perception and interpretation of the same public affairs issue, in this case the health care overhaul. With the polarization of news audiences, it is certainly possible that media professionals will present media frames that are consistent with the political/ideological leaning of the news organization itself *and* the preferences of their audience so to satisfy audience demand. As the content analysis indicated, this was clearly the case, and the results could be interpreted at two levels – in terms of the structure and the actual content of the coverage.

At the broader structural level, the cluster analysis revealed that different online media outlets cling together consistently according to the news organization's audience base and ideological leaning, as well as to the offline characteristics, such as the technological platform (e.g., print, broadcast, online) or audience base (e.g., national versus regional), of the media organization. The reason for this clustering pattern may be the principle behind network formations. According to many sociologists (e.g., Castells, 1996; van Djik, 1991; Wellman, 2001), the rise of digital communication technologies has resulted in a world that is increasingly being shaped by the networked form of

relations and structures in nearly all aspects of human life – such is the central tenant

behind the term "network society." As networks grow to be a dominant feature of our

society, the idea of homophily, which refers to the tendency of individual actors in a

network to gravitate toward clustering based on shared characteristics (Cartwright &

Harary, 1956; Davis, 1967), becomes an important organizing principle. The idea that

birds of the same feather flock together is particularly relevant in the current digital

media environment, where the Web's intrinsic connective nature and the decentralized

structure offers unlimited possibilities for individuals and organizations to connect and

share information, and many studies have found evidence of this phenomenon. For

example, Adamic and Glance (2005) examined the political blogosphere in the US and

found that both liberal and conservative blogs shared links and content with blogs or sites

that had a similar ideological leaning, and that there was very little interaction across the

ideological divide. In the case of the present study, the principle of homophily may help

explain why online news media outlets clustered with outlets that share similar

characteristics.

At the content level, results suggested that online news outlets projected different

perception and interpretation of the health care legislation to their audiences. For

example, liberal leaning media organizations offered many media frames that linked

"insurance companies" and "premiums" with the health care reform. . Ideas such as the

"public option" plan and extending the coverage of Medicare/Medicaid were also

frequently mentioned by liberal leaning media as potential solutions to the health care

reform. In addition, the Obama administration and the Congressional Democrats were

often depicted as extending the olive branch and offering the opportunities for bipartisan

collaboration through events such as the Health Care Summit, but the Republicans were simply the "Party of No" that has chosen obstruction over any meaningful progress and reform. On the other hand, conservative leaning media outlets have taken on the abortion issue (e.g., the fear that federal funds may indirectly pay for abortion services) and used it as the reason why the health care legislation should not be supported. Finally, questions were also raised about how the Obama administration plans to pay for the health care reform without raising the current government deficit and hurting the economic recovery. In short, the media frames offered by liberal leaning media emphasized the benefits of the health care legislation and casting the Obama administration under favorable lights, while their conservative counterparts did the opposite.

Formation of Horizontal Knowledge Gap?

The findings of this study suggest that different media outlets project different realities and interpretations of the same public affairs issue. As discussed previously, this assumption is the foundation for the formation of a horizontal knowledge gap because, given the high choice and high control contemporary media environment, individuals can now choose to consume different media content based on their preferences and values. The statistics shown earlier on the polarization of news audience in recent years serve as initial evidence for this trend. When polarized news audiences meet with polarizing news content, a "gap" may occur in people's knowledge and understanding of public affairs.

The first study is the foundation for further investigation into the horizontal knowledge gap. The knowledge items and the media frames identified through the coverage of the health care reform also represent the possible building blocks of an individual's political knowledge about this particular issue. While the first study offered

the perspective from the media content standpoint, it is useful to now address questions from audience members' perspective. For example, do media frames translate into "individual frames" in the minds of the media audience? Are these individual frames formed in accordance with an individual's media consumption? What, then, can explain individual's media choice and usage patterns? To answer these questions, we turn to the second study that focused on media consumption and political knowledge from the media audience perspective.

CHAPTER IV
STUDY 2: ANALYSIS OF MEDIA CONSUMPTION

Purpose of Study

To further examine the horizontal and vertical knowledge gap phenomena in the contemporary media environment, let us turn to a second study of individuals' media use. While Study 1 provided useful insights in the coverage of the health care reform legislation by various online media outlets, its content analysis of news stories obviously could not address questions about the media audience. For example, what drives media use in this day and age, when media audiences are bestowed with greater control and choice over their use of media technologies and content? Further, what might be the subsequent impact of different media consumption patterns on audiences' political knowledge?

To answer these questions, a survey questionnaire focusing on online media use was conducted in Study 2 with two purposes. First, building on the conceptualization and operationalization of the opportunity-motivation-ability framework, this study aimed to explore the possible indicators at the individual level that might help us understand media consumption. In the discussion of the horizontal versus vertical knowledge gap phenomena, I contended that motivation would be a more powerful predictor of media use in the contemporary environment. The survey therefore represents a good place to test this claim. Second, with Study 1 providing the media frames and the knowledge items associated with the health care reform legislation, Study 2 sought to capitalize on this foundation to test the existence of the horizontal versus vertical knowledge gap phenomena. Not only could we examine how much individuals know or do not know

about the health care reform – an indication of the vertical knowledge gap, we could also test whether the pattern of media polarization found through Study 1 would lead to the polarization of the audience's political knowledge – an indication of the horizontal knowledge gap.

With these two objectives in mind, this chapter begins with a literature review to inform the current study's conceptualization and the operationalization of the opportunity-motivation-ability framework. Based on this review, a list of research hypotheses is introduced. Then, I discuss the design of the survey instrument and consider the methodological and analytical issues involved. Finally, the results of this study are presented and the theoretical implications are discussed accordingly at the end of the chapter.

LITERATURE REVIEW

In order to better understand how the horizontal versus vertical knowledge gap phenomena may come into existence, it is important to look at the mechanisms behind individuals' information seeking behavior, or more specifically, the factors that drives the acquisition of political knowledge from mass media. To that end, Delli Carpini and Keeter's (1996) OMA framework on political learning may serve as a useful theoretical foundation. As described in Chapter Two, the OMA framework suggests that the acquisition of political knowledge (or political learning) is a result from three broadly defined factors – opportunity, motivation, and ability. I also briefly discussed how opportunity, motivation, and ability were conceptualized by Delli Carpini and Keeter. However, since the authors have not provided clear measurement recommendations, the

goal of this literature review must be to inform operationalization of the OMA

framework's central components: opportunity, motivation and ability.

The Opportunity Construct

While opportunities for political learning may mean anything from interpersonal

conversations to direct observations of political events, the kind of opportunities that are

critical for the purpose of this research are presented by mass media, because mass media

can easily disseminate knowledge and information about a particular issue or event to the

public with great speed and reach. Indeed, as previous media effects research has

demonstrated (see Chapter Two), mass media serve as an important source from which

people receive information about public affairs and current events. Therefore, we can

describe the opportunity construct as "opportunities for individuals to engage with media

technologies and receive media content," or in short, *media use*.

Operationally, how do we measure a person's media use? We can think about the

pattern in which an individual engages with media content (including both traditional and

newer media) to receive information in a number of ways. First, we can describe that

pattern in terms of how much a person is exposed to media, that is, how often (frequency)

and how long (length), regardless of the type of media content. These measures are

commonly used by scholars to investigate an individual's level of media exposure. For

example, Drew and Weaver (1998) examined media exposure through an individual's

frequency to use different medium (e.g., newspaper and television) for news information

about presidential campaigns. In the same vein, Pinkleton and Austin (2002) also asked

survey respondents to indicate how many days within a week that they use a particular

medium for news and information. Finally, Ward (2004) measured media exposure pattern in terms of viewing amounts – that is, the number of hours that an individual consumes a particular media programming. Given the usefulness of these two measures (frequency and length) in prior studies, the combination of both would therefore provide an adequate measure of a person's *level of media use*.

Second, an individual's media use pattern can also be described in terms of the kind of media content that he or she is interested in and drawn toward. Therefore, the notion of media genre, defined as the categorical type that particular media content belongs to (see Chandler, 2000, for more discussion on genre theory), is a useful way to interpret people's media content preference. For example, whether it is television programming, online sources or other media vehicles, mass media include a wide range of genres, such as drama, talk shows, reality television, which cover an equally wide range of content, such as news, sports, humor, etc. Although there are a great many different genres in mass media, this study is interested in the acquisition of "political knowledge." As such, this study follows Prior's (2007) categorization of media content into two broad categories. The first category is media content that covers current events and news related information. This type of content may thus be called the *news* genre. The second category is all other media content that provides entertainment value to the audience, but does not necessarily provide news information, which we may call the *entertainment* genre. Since news genre offers more public affairs information to the media audience, one could logically expect that those who consume more news genre would have a higher level of political knowledge. Altogether, these two content categories can be used to assess an individual's *media genre choice*.

Finally, patterns of media use can also be described in terms of the particular media outlets that a person spends most of his or her times with, or a person's *media outlet choice*. In a study of selective media exposure, Stroud (2010) operationalized media exposure as the consumption of conservative versus liberal media outlets because a person's political party affiliation may have a direct effect on the type of media source that an individual chooses. As the present study focuses on online media outlets, media outlet choice would therefore refer to liberal or conservative leaning Web sites that provide news content. Taken together, the three operationalizations of opportunity to be exposed to political information discussed here – media usage level, media genre choice, and media outlet choice can be used to examine a person's media usage patterns. Table 4-1 below provides a summary of the construct with a short definition of the three operationalizations and the observable indicators that falls under each category.

Table 4-1

Media Use (Opportunity) Construct

Media Use Construct	Definition	Possible Components
Media level usage	Media level usage refers to both the frequency (e.g., how often) and length (e.g., how long) in which an individual is exposed to media, regardless of the type of content or genre.	Frequency of use Length of use
Media genre choice	Media genre can be defined as the categorical and typological group that particular media content belongs to. For the purpose of this study, two media genres will be identified: a) news related programming or websites that cover public affairs news and are considered to be news source; and b) entertainment	News genre Entertainment genre

	related programming or websites that cover non-news related issues.	
Media outlet choice	Media outlet refers to the specific media outlet that provides news content. Generally this would include traditional (e.g., television, print newspapers) and online media (e.g., online news sites) outlets, but for the purpose of this study, I will focus on the latter.	Specific online news media outlets, such as cnn.com or newyortimes.com

The Motivation Construct

The second factor in the OMA framework is motivation, which encompasses self-interest and a sense of civic duty in Delli Carpini and Keeter's (1996) account. However, since the OMA framework does not offer a specific operationalization from which observations can be made, we need to search in existing literature and see what might be some of the possible indicators of a person's motivation as related to the acquisition of political knowledge from mass media.

According to Jost, Federico, and Napier (2009), psychologists have found through decades of research that a wide range of dispositional, cognitive, and situational variables can influence an individual's political ideology. Jost and colleagues identified three major classes of psychological variables, called *epistemic*, *existential*, and *relational* motives that are crucial to the formation of one's political ideology, each with different effect on how individuals think about the world and seek out information. Whereas theorizing about political ideology is ongoing, there is consensus that political ideology is the result of political learning (Jost, Federico, & Napier, 2009), which as discussed previously, may come from exposure to mass media. Therefore, if the three classes of motivations

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identified by Jost et al are relevant to the formation of political ideology, then they should also be pertinent to our discussion of political learning, and thus should be useful for my objective to operationalize the motivation construct in the OMA framework.

Epistemic motivation.

First, *epistemic motivation* is defined as "the willingness to expend effort to develop and hold accurate and well-informed conclusions about the world" (van der Schalk, Beersman, van Kleef, & De Dreu, 2010, p. 356). Jost, Federico, and Napier (2009) similarly defined it as the drive to reduce uncertainty, complexity, or ambiguity. In other words, it can be thought of as the impetus that drives individuals to know, to form opinions, and to seek out information in order to reduce uncertainty about the world they live in. Psychological variables pertaining to the management of uncertainty thus seem relevant indicators of a person's epistemic motivation. For example, the Need for Cognition scale developed by Cacioppo and Petty (1982) examines "an individual's tendency to engage in and enjoy effortful cognitive endeavors" (Cacioppo, Petty, Feinstein, & Jarvis, 1996, p. 197). Cohen, Stotland, and Wolfe (1955) described need for cognition as "a need to structure relevant situations in meaningful, integrated ways" (p. 291). Individuals with high need for cognition were more likely to organize and evaluate information presented to them (Cohen, 1957), they were also more likely to engage in thorough information search that often leads to better outcomes when making decisions (Bailey, 1997). In the context of information search on the Web, Das, Echambadi, McCardle, and Luckett (2003) also found that individual's level of need for cognition has a strong, positive, and direct effect on information seeking behavior on the Web.

Further, Webster and Kruglanski (1994) constructed the Need for Cognitive

Closure scale, which measures the desire for predictability, preference for order and

structure, discomfort with ambiguity, decisiveness, and close-mindedness. Previous

research suggested that those with high need for closure are motivated to avoid

uncertainties, and have a greater tendency to freeze on closure once it has been attained.

They are also more likely to form conclusions quickly, become locked into their

opinions, and ignore contradicting information. In contrast, those who have low need for

closure tend to embrace alternative explanations, engage in different search strategies in

order to make sure that the information they have is valid (Kruglanski et al., 1993;

Webster & Kruglanski, 1994). In the realm of information acquisition on the Web, it has

been noted that people with low need for closure prefer more complex Web sites with

more hyperlinks so that they can engage in deeper information search, while people with

high need for closure would prefer the polar opposite (Amichai-Hamburger, Fine, &

Goldstein, 2004).

Finally, Jarvis and Petty (1996) created the Need to Evaluate scale to assess the

tendency of individuals to form evaluative responses about situations and objects.

According to the need to evaluate research, people high on this trait have more evaluative

thoughts and hold attitudes toward a wide variety of objects (Jarvis & Petty, 1996).

Existing research also indicate that individuals with high need to evaluate are more likely

to use news media to learn about the political world, because they are inclined to evaluate

political actors and policies, and are therefore more motivated to be more attentive to

political information provided by news media (Bizer, Krosnick, Holbrook, Christian

Wheeler, Rucker, & Petty, 2004).

Taken together, these three psychological measures have good face validity as measures of epistemic motivation. From previous research on these variables I can conclude that individuals with higher levels of epistemic motivation can be expected to be more active in seeking out information and knowledge in order to learn about the world they live in.

Existential motivation.

Existential motivation refers to "the drive to manage threatening circumstances, a personal search for security, self-esteem, and meaning in life" (Jost et al., 2009, p. 309). Jost and colleagues operationalized existential motivation using measures of, for example, terror management (e.g., reduction of fear) or mortality salience (e.g., increasing awareness of one's death). In other words, existential motivation is related to a person's effort to maintain a sense of existence, which means that it is intrinsic, self-driven, and personal. However, since the context of this research is not political ideology, but political "knowledge," we need to explore other operationalizations that have more theoretical and logical linkage to political learning. To do so, let us start with a definition of existential motivation for the purpose of this study, which I consider to mean "the motivation to acquire information because such knowledge or information is critical to ensure the individual's survival, or is essential to maintain the individual's self identity.

Two important ideas about existential motivation stood out from the definition above. First, a person who sees certain knowledge that is essential to his or her survival implies that he or she would be driven by a high level of *self interest* – that is, this person is interested to know more about something because this information has significant

consequences for his or her life (Sears & Funk, 1991). For example, it is reasonable to suggest that those who belong to the gay and lesbian community would be more attentive to news coverage about gay rights issues around the country because this topic is important to their day-to-day lives. Likewise, we can also logically expect military families to pay more attention to news coverage about U.S. policies in Iraq and Afghanistan because this information may affect their family members or friends.

Empirical data from existing research also appears to support this claim that individual's level of interest is an important motivation behind information acquisition. For example, Apsler and Sears (1968) told students participating in an experiment that a change in school policy would affect them directly, and this self-interest induction increased reports of concern about the school policy. According to Petty and Cacioppo's (1986) elaboration likelihood theory, self interest would lead to closer attention to the merits of the argument and diminished reliance on peripheral cues. A number of studies have provided supportive evidence to this claim (e.g., Borgida & Howard-Pitney, 1983; Omoto & Borgida, 1988). From the field of information science, it has also been observed that self interest is central in determining how we select and persist in processing certain information (Hidi, 1990), as well as sustaining effort and overcoming anxious or uncertainty that the individuals might have about themselves or the particular information task at hand (Bowler, 2010). All in all, based on the evidence discussed here, we can therefore accept that self interest would be an appropriate operationalization of a person's existential motivation.

In contrast to self-interest that motivates one to engage with politically relevant information, a person's level of political apathy, defined as a general lack of interest in

political involvement, knowledge or activity (Rosenberg, 1954), has the opposite effect. According to Baran and Davis (2009), previous studies have noted that there is a strong correlation between political apathy and political ignorance. That is, those with high levels of political apathy are less inclined to engage with political activities or consume news and information about current events. Consequently, they become politically ignorant by possessing less knowledge about political issues and events. Given the importance of political apathy in motivating people toward (or shy away from) a range of behaviors that are relevant to one's political knowledge, it should be considered as an additional measure self-interest that reflects a person's existential motivation.

Finally, the second idea that stood out from the definition of existential motivation is that people seek out certain knowledge because it is important to the maintenance of their *self-identity* – that is, people are interested to know something because this information has significant consequences for who they are. Self-identity is part of an individual's self concept, which is defined as the accumulation of an individual's self perceptions (Wigfield & Karpathian, 1991) that are derived from environmental experiences or significant others (Shavelson, Hubner & Stanton, 1976). Self-concept has been found to drive behavior in many realms of human activities, such as consumer behavior (Sirgy, 1982) or academic achievement (Marsh, 1990). For example, a person who considers being an environmentalist as part of his or her self-concept will be more motivated to seek out and be more receptive to such information disseminating through media communication channels. Existing literature also provides support for this claim. Research by Markus (1977, 1983) examined how self concept was used to process information and found that individuals who embrace certain self concept

or traits were able to process relevant information more efficiently. Similarly, Edwards (2008) noted that self concept plays an important role in information processing by facilitating the processing and retrieval of self-relevant information, as well as influencing interpretations of such information. Thus, it is reasonable to expect that an individual's self-concept will play a role in an individual's acquisition of information or knowledge.

Relational motivation.

Finally, the last variable in Jost, Federico, and Napier's (2009) three classes of motivational substructures is *relational motivation*, which is defined as "the desire to affiliate and establish interpersonal relationships, a need for personal or social identification, solidarity with others, and shared reality" (p. 309). In other words, relational motivation is interpersonal in nature, as it builds upon one's relationship with his or her social world, or one's view toward others in society. In the context of information acquisition, I consider relational motivation as "the desire to acquire information because such knowledge or information is essential to the pursuit or maintenance of the individual's social identification or interpersonal relationships."

A good example of such social identification is a person's political party identification, which is defined as a sense of personal, affective attachment to a political party based on feelings of closeness to the social groups associated with the parties (Campbell et al., 1960; Green, Palmquist, and Schickler, 2000). For example, the closer one feels toward social groups typically seen as associated with the Democrats, such as progressive environmentalist or pro-choice advocacy groups, the more strongly one

identifies with the Democratic Party. Previous studies have found that individual's strength of political party identification has powerful influence over information seeking and processing (Goren, 2005). According to research conducted by Campbell et al. (1960), party identification "raises a perceptual screen through which the individual tends to see what is favorable to his partisan orientation. The stronger the party bond, the more exaggerated the process of selection and perceptual distortion will be" (pp. 133). As such, individuals who hold strong political identifications can be expected to seek out and process information that is compatible with the ideology of the political party that they are more identified with. Political party identification thus appears an appropriate operationalization of relational motivation.

In addition to one's self identification with a social group, as represented by political party identification, we could also think about relationship motivation from the perspective of how an individual views other's place in society. That is, one's social identity (i.e., group membership) involves an evaluation of how one's own group does relative to other groups. The idea of social dominance orientation, proposed by Sidanius and Pratto (1993, 1999), is therefore a very relevant concept. Social dominance orientation is defined as "the degree to which a person desires to establish and maintain the superiority of his or her own group over other groups" (Sidanius & Liu, 1992, p. 686). It has been found to correlate with right-wing authoritarianism (Sibley et al, 2006) and conservative political views (Pratto et al, 1994).

In the context of political learning and knowledge acquisition, social dominance orientation is also known to influence the processing of stereotypical information (Sidanius & Pratto, 1999). Particularly, as Levy (1999) pointed out, individuals with high

social dominance orientation tend not to try to process information about others beyond readily apparent categorizations. Since news coverage often consists of information about others (i.e., certain events, policies, or social groups), a person's level of social dominance orientation may also influence his or her engagement with mass media for political learning, and should therefore be considered as another operationalization of relational motivation.

Further, another measure that can be used to observe an individual's view of other's role in society is through his or her belief about individualism versus egalitarianism. The individualism belief system refers to a set of values that promotes meritocracy, self-reliance, or self-determination, and is exemplified by the idea that "people can pull themselves up by their bootstraps" (Levy, 1999, p. 750). In contrast, egalitarianism is based on social justice principles and promotes values such as inclusion, equality, empathy, and co-operation. Empirically, as Pratto et al. (1994) noted, egalitarianism is the opposite of social dominance orientation. Therefore, we can also consider individual's degree of identification with the egalitarianism principles to be an indicator of relational motivation. It should influence a person's engagement with mass media for political learning in the opposite direction compare to social dominance orientation.

Finally, we could also think about relationship motivation from the perspective of how an individual views the system that makes rules that govern the social group that they belong to as well as its interaction with other out groups. Relevant here is the notion of political cynicism, defined by Cappella and Jamieson (1997) as "mistrust generalized from particular leaders or political groups to the political process as a whole – a process

perceived to corrupt the persons who participate in it and that draws corrupt persons as participants" (pp. 166). In other words, political cynicism can be thought of as the level of trust that a person has in government, political figures, and the political system as a whole. Previous studies have found that political cynicism is negatively related to exposure to news and current events in the media – that is, the less cynical a person feels about the political system, the more likely he or she is going to pay attention to what goes on in the news. In fact, the relationship between media exposure and political trust is positive and reciprocal (Avery, 2009). For example, Norris (2000) proposed the "virtuous circle" theory, which suggests that media exposure leads to greater trust in government and civic engagement. In turn, those who are most politically interested, engaged, and trusting will pay the most attention to political news and therefore learn more about government and politics. Given the role that political cynicism plays in a person's media exposure and political learning, we should therefore consider it as another operationalization of relational motivation.

In sum, the motivational construct plays an important role in the political learning process identified by Delli Carpini and Keeter (1996), and, as will be discussed in the section that follows, is also critical in the manifestation of horizontal and vertical knowledge gaps in today's media environment. Table 2 below summarizes the three aspects of the motivation construct and the operationalizations I chose to empirically assess each aspect.

Table 4-2

Motivational Construct

Motivational Construct	Definition	Possible Components

Epistemic Motivation	Cognitive impetus that drives individuals to know, to evaluate, and to seek out information.	Need for cognition Need for cognitive closure Need to evaluate
Existential Motivation	The incentive to acquire information because such knowledge or information is essential to the maintenance of the individual's self identity or is critical to ensure the individual's survival.	Self concept Self interest Political apathy
Relational Motivation	The incentive to acquire information because such knowledge or information is essential to the maintenance of the individual's social/group identity or interpersonal relationships.	Political party identification Social dominance orientation Individualism Political cynicism

The Ability Construct

Ability is the third factor that plays a role in the OMA framework for political learning. According to Delli Carpini and Keeter (1996), ability in the context of political learning refers to a wide range of skills and attributes, from the ability to see and hear, to the ability to process and retain information. To arrive at a more specific measurement of ability in the context of knowledge acquisition, we can conceptualize this variable along three dimensions – actual ability, perceived ability, and inferred ability.

Actual ability.

Actual ability refers to one's ability to physically receive information, which can be further operationalized into two categories: a) a person's ability to receive and understand information in general; and b) a person's material possessions that help him or her to engage with mass media. In other words, actual ability is something that can be objectively observed about one's capacity to engage with information about politics.

First, one cannot adequately acquire information or knowledge without the basic physical ability to see and hear. Whether a person is suffering from any physical disability can therefore be considered as an indication of his or her actual ability. Second, being able to see and hear does not necessarily suggest that a person has sufficient ability to read and write, or to be able to understand the information that is received. Verbal ability, which broadly refers to a person's reading, writing skills and vocabulary capacity (cf. Hyde & Linn, 1988), for example, has been found to be positively correlated with an individual's political knowledge (Nie, Junn & Stehlik-Barry, 1996). Indeed, a significant amount of political information comes in textual form, be it through print media (e.g., newspaper) or (increasingly) texts and hyperlinks in online media (e.g., Web pages), and media audiences clearly cannot fully digest text-based information without adequate reading comprehension abilities. As such, individuals who have higher verbal ability tend to also have greater level of political knowledge. Similarly, as Tichenor, Donohue and Olien (1970) suggested, basic communication skills such as reading and writing may also affect how people engage in the acquisition of political knowledge, namely, the ability to consume information about public affairs or current events from the mass media. Previous studies have found that verbal ability is correlated with formal education (Hatch, Feinstein, Link, Wadsworth & Richards, 2007). An individual's level of education thus can be used as an indicator of ability to acquire political knowledge.

In terms of material possessions, since politically relevant information tend to be covered in the mass media, actual ability also means having access to certain communication technologies in order to receive media content. For example, one would need a television set in order to receive broadcast news. Likewise, one would need to

have access to the Internet in order to consume online news. This idea of "Internet access" is central to the notion of digital divide, defined as the differences between the haves and have-nots regarding access to the Internet (Hargittai, 2002). Previous studies have found that digital divide is correlated with one's social and economic status (DiMaggio & Hargittai, 2001; Norris, 2001) and influences an individual's level of civic engagement and political knowledge (Mossberger, Tolbert, & McNeal, 2008).Since the present study focuses on individual's online news consumption and political knowledge, we should consider Internet access as a measure of an individual's actual ability.

Perceived ability.

Further, even if one has a high level of actual ability (e.g., no physical disability, has a high level of education, and has access to the Internet and other media outlets), he or she still needs to "believe" in his or her ability to utilize these abilities and tools effectively when it comes to acquiring political information and understanding them. This is the notion of "self-efficacy," defined as one's belief in one's ability to succeed in specific situations or tasks, by psychologist Albert Bandura (1977). Although originally developed as part of the social cognitive theory about learning, researchers have generalized Bandura's theory for various specific behaviors and applications. In the context of acquiring political knowledge, we can therefore consider individual's level of self-efficacy as a measure of *perceived ability*, which can be further operationalized in two ways.

First, a person's level of Internet self-efficacy, defined as "the belief in one's capabilities to organize and execute courses of Internet actions required to produce given attainments" (Eastin & LaRose, 2000), may influence the extent to which an individual

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is willing to engage with the vast and unfiltered information environment such as the World Wide Web. For instance, a survey conducted by The *Pew* Research Center's *Internet* & American Life Project in 2000 found that 36% of the people who do not use the Internet or seek out information online expressed concerns about the online world being a confusing and hard place to negotiate. Although self-efficacy was not studied in this Pew Center survey, it seems plausible that people who are less inclined to engage with online content or information have low self-efficacy about their ability to navigate through technological environments. As such, Internet self-efficacy is an indication of one's perceived ability that is worthy of further examination.

Second, a person's political self-efficacy, defined as "the beliefs individuals hold about "their capacities to voice their own political opinions and preferences about candidates, to raise funds, to campaign for one's own political program or party, to keep in touch with one's own political representatives and to monitor their activities and choices" (Caprara et al., 2009, pp. 1006) may also be an important factor in determining the extent to which individuals engage with political information via mass media. For example, previous studies have found that those with high political self-efficacy are more likely to rely on the Internet to voice their views to government officials, as well as to participate in discussions with like-minded others (Bimber, 1998). Consequently, they are more likely to engage in political activities (Pinkleton &Austin, 1998) and have shown to score higher on measures such as political interests and political knowledge (Hill & Hughes, 1998). Given the role that political self-efficacy plays in a person's level of engagement with political information and activities, it can be considered as another measure of an individual's perceived ability.

Inferred ability.

Finally, it is important to note that both actual and perceived ability can be informed by interaction with other people (Bandura, 1977, 1986, 1997). Thus, we may consider a third category of ability – *inferred* ability, referring to the factors that are known to play a contributing role to learning, from which we can infer about a person's ability to acquire politically relevant information. For example, it has been consistently shown that parent education has a direct and positive influence on children's achievement and intellectual development (Jimerson, Egeland, & Teo, 1999; Kohn, 1963; Luster, Rhoades, & Haas, 1989). Higher levels of education have been associated with parenting behaviors and home structures that are more conducive to children's achievement outcomes (Linver, Brooks-Gunn, & Kohen, 2002; Yeung, Linver, & Brooks-Gunn, 2002). Thus, the level of education attained by one's parents – or what can be called "legacy," may be an appropriate operationalization of inferred ability.

Similarly, involvement with one's social network also likely contributes to information acquisition, as one may learn indirectly about political or about current events from friends, and thus prompting them to pursue information on their own via mass media. This is particularly plausible in today's technological environment where access to social media and online media sharing have become the new norm among teens and young adults (Lenhart & Madden, 2007). As noted by Southwell and Yzer (2007), this type of interpersonal conversation and interaction can influence the effects of mass media, such as the acquisition of information and formation of attitudes and beliefs. Therefore, an individual's interaction with his or her social network should also be taken into account when considering one's ability to learn about politics.

Finally, the degree of an individual's level of community involvement, such as volunteering or attending community events, have also been noted by many scholars to increase engagement in politics (e.g., Galston, 2001; Milner, 2008). Since studies have found that individuals may acquire information and form attitudes or identities through actual participation (cf. Bem, 1967, 1972; Dillard, 1990; Freedman & Fraser, 1966), engagement in politics therefore provides opportunities to learn about politics. Taken together, one's level of interaction with his or her friendship social network and the degree of involvement with his or her community can both be thought of as the indicators for a person's "social capital," defined as "the ability of actors to secure benefits by virtue of membership in social networks or other social structures" (Portes, 1998, p. 6). According to Putnam (1993), social capital is a critical component in democracy, as it helps to build and maintain an informed and participatory populace.

In sum, the ability construct also plays an important role in the political learning process identified by Delli Carpini and Keeter (1996). The original knowledge gap hypothesis also pointed to the ability construct as the primary factor responsible for differences in individual's knowledge acquisition. Table 4-3 below summarizes the three aspects of the ability construct and the operationalizations I chose to empirically assess each aspect.

Table 4-3

Ability Construct

Ability Construct	Definition	Possible Components
Actual Ability	Ability to receive information physically and through material possessions, and be able to understand and process such information into knowledge.	Physical disability Level of education Access to media (e.g., Internet access)

| Perceived Ability | Individual's belief about his or her capacity to utilize his or her actual abilities and tools effectively. | Internet self-efficacy Political self-efficacy |
| Inferred Ability | Factors exist outside of the individual that may indirectly contribute to individual's ability to engage in political learning or serve as proxy measures of one's actual ability. | Legacy Social capital |

RESEARCH HYPOTHESES

The opportunity, motivation, and ability constructs and their components presented here are all critical to the manifestation of horizontal and vertical knowledge gaps in today's media environment. Based on the theoretical foundation discussed in Chapter 2, a number of research hypotheses can be constructed to provide a better picture of this knowledge gap phenomenon. Let us start with the idea of "vertical knowledge gap," that is, an individual's level of political knowledge, indicated by objective civic information or political facts, will vary according to his or her patterns of media use.

Thirty years ago the number of information resources available to the public was relatively small and the content was rather homogenous (Prior, 2007). As such, an individual's media usage was largely based on whether that person could afford to have access to a certain medium (e.g., newspaper, television or radio), and whether that person could understand media content (e.g., the ability to read and write). Therefore, one can argue that actual, perceived, and inferred ability to receive and process relevant political new information likely was a central antecedent of political knowledge. This was what the original knowledge gap hypothesis suggested; the theory argued that individuals with better education tend to have better communication skills and more resources or

opportunities to engage with information. A person's socio-economic status (SES) was considered in this theory as a good proxy measure for ability, as SES reflects education and income.

However, the contemporary media environment is vastly different from thirty years ago. Television is no longer a luxury for the average American household, and neither are personal computers, broadband Internet, or mobile phones. In addition, with the expansion of education in the U.S. over the past few decades, the number of people in the U.S. who completed college degrees has also dramatically increased (Baker & Velez, 1996). Taken together, it appears that the barriers to acquiring information presented by an individual's SES has been "flattened" – that is, the gap between those who have high ability and those have low ability to receive political information from mass media is shrinking. This is not to say that the ability gap does not exist anymore, or that the notion of ability does not matter and can be dismissed entirely. Rather, as the cost for technology has gone down and the number of consumer choices has gone up, compared to thirty years ago the importance of ability as a determinant of an individual's level of media use will have decreased, and ability likely will not be the only determinant of media use.

If we assume that the effect of "ability" is indeed less pronounced in driving people's media use today, is it plausible to suggest that "motivation," the other factor in the OMA framework for political learning, has become a relatively stronger predictor for an individual's media usage? Given the important role that an individual's motivation plays in political learning and information processing (see the discussion in the literature review), as well as the high choice, high control media environment that allows

individuals to engage with different media content according to their desire and preference, the answer is likely to be yes. Therefore, a research hypothesis can be generated to posit that: *H1: motivation to learn about politics, rather than ability to learn about politics, will best predict levels of media use*. Further, if we accept that an individual's motivation is likely to influence how much and how often he or she engages with media, it is reasonable to suggest that motivation will also determine what type of media content to be consumed. My second hypothesis therefore posits that: *H2: motivation to learn about politics, rather than ability to learn about politics, will predict media genre choice*.

Together, H1 and H2 can be illustrated using the diagram below (Figure 4-1):
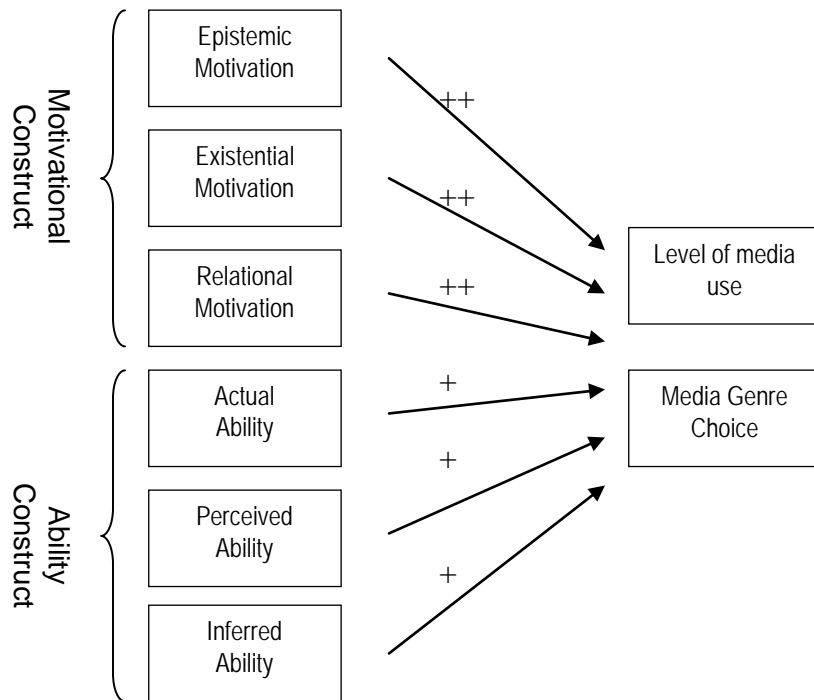
Figure 4-1. Motivation, Ability and Media Use. This figure illustrates the first two research hypothesis, which posit that motivation to learn about politics, rather than ability to learn about politics, will predict media level usage (H1) and media genre choice (H2).

What, then, is the relationship between media use and political knowledge? Recall from our earlier theoretical discussion that mass media is an important source of political information. As such, an individual's media usage pattern should be correlated with his or her level of political knowledge – in the context of this study, knowledge about the health care reform legislation. More specifically, since media use is operationalized into two measures, media level usage and media genre choice, I expect: a) greater level of media use, and b) preference for news genre, will lead to greater levels of knowledge about the health care reform legislation. Taken together, my third hypothesis posits that:

H3: media genre choice and level of media use will predict levels of knowledge about a public affairs issue in the news – in this case, the health care reform legislation. The following diagram illustrates this relationship between media use and levels of political knowledge.
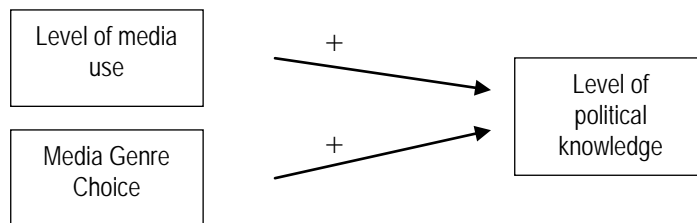
Figure 4-2. Media Use and Political Knowledge. This figure illustrates the third research hypothesis, which posit that media use pattern will predict media level usage (H3).

Hypotheses 1-3 propose how motivation influences the frequency and intensity to use mass media and to engage with particular types of information. In turn, the differences in an individual's media usage patterns are expected to influence his or her *level* of political knowledge. All in all, the picture that emerges from the first three hypotheses delineates the relationships between motivation, ability, media use, and levels

of political knowledge (see Figure 4-3). Consistent with this line of reasoning, my fourth

hypothesis predicts: *H4: motivation to learn about politics, rather than ability to learn*

about politics, will predict levels of knowledge about the health care reform legislation.
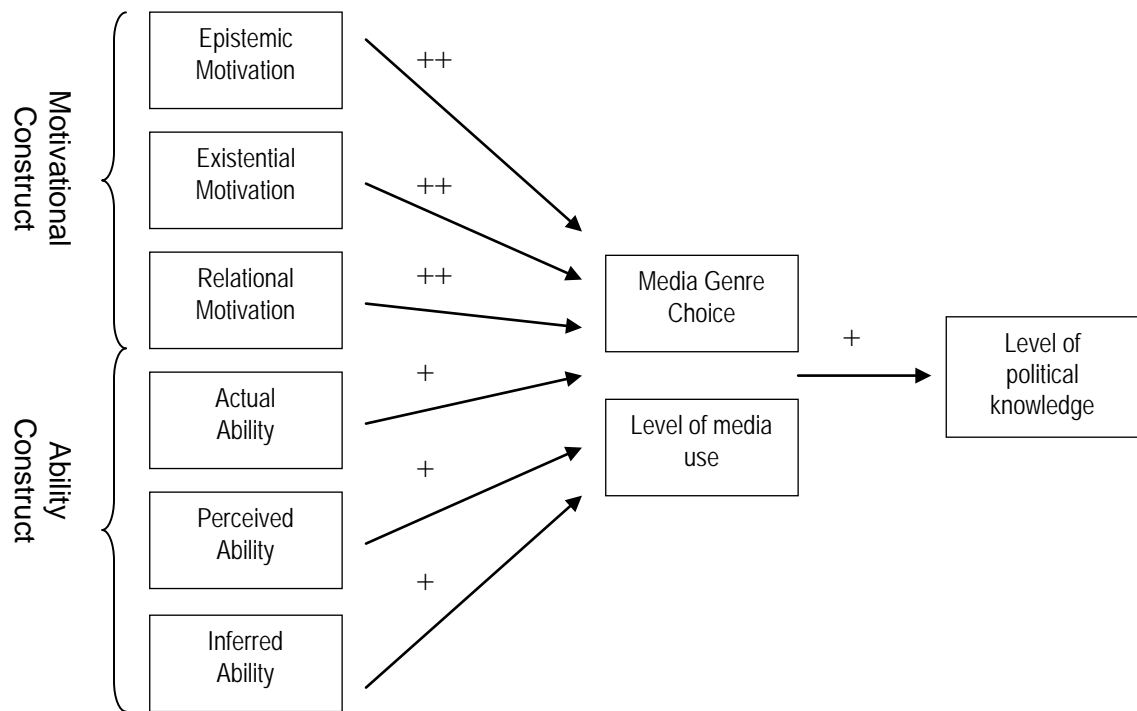
Figure 4-3. Motivation, Ability, Media Use, and Political Knowledge. This figure
illustrates the forth research hypothesis, which posits that motivation will predict levels
of knowledge about the health care reform legislation (H4).

Hypotheses 1-4 focus on the idea of a "vertical knowledge gap". Let us now turn

our attention to the idea of a "horizontal knowledge gap", that is, the notion that an

individual's structure of political knowledge will vary according to his or her media

choice and political ideology. As discussed in the literature review section, existing

studies have noted that individuals are inclined to pay more attention and be more

receptive to information that is more relevant to his or her sense of self and social

identity. Thus, it is reasonable to argue that one's existential motivation and relational

motivation in particular will be the best predictors for media outlet choice (defined as the specific media outlets that provide content), because these two types of motivations may lead people to pay more attention to information that is relevant to maintain their self-identity, group-identity, or even physical survival. For example, those who have stronger self-reported political party affiliation (e.g., Democrats or Republicans) will gravitate toward media outlets that are known to have partisan leanings as well (e.g., Fox News or MSNBC). Taken together, my fifth hypothesis posits that: *H5: existential motivation and relational motivation, rather than ability to learn about politics, will predict media outlet choice.* The fifth hypothesis can be illustrated using the diagram below.
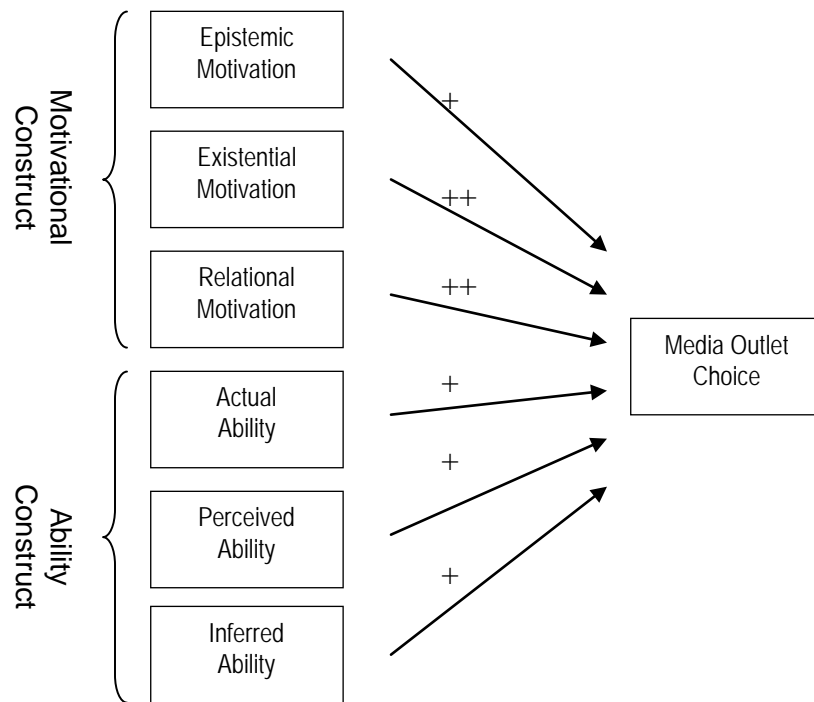
Figure 4-4. Motivation, Ability, and Media Outlet Choice. This figure illustrates the fifth research hypothesis, which posits that existential motivation and relational motivation, rather than ability to learn about politics, will predict media outlet choice (H5).

From previous research on media effects, we know that an individual's perception of social reality or knowledge of a certain issue can be influenced by his or her information source (e.g., Gerbner et al., 1980; McComb & Shaw, 1972). In other words, if mass media tell us what think about, how to think about it and why, then it follows that our knowledge about certain things will "match" how it is portrayed in our information source. Recall that the content analysis conducted in Study 1 revealed that different media outlets offered different "media frames" in their coverage of the health care reform legislation. As such, we can expect that individuals who rely on different media outlets for information (and thereby consuming different media frames) would consequently have different "individual frames," defined as "mentally stored clusters of ideas that guide individuals' processing of information" (Entman, 1993, p. 53), about the issue of health care reform legislation. Since people may have different individual frames depending on their media consumption, the different "configuration" of their mental cluster, representing the "structure" of an individual's knowledge about a certain public affairs issue, may also be different. As illustrated by the diagram below, my sixth hypothesis posits that: *H6: structure of knowledge about the health care reform legislation will be correlated with media outlet choice.*
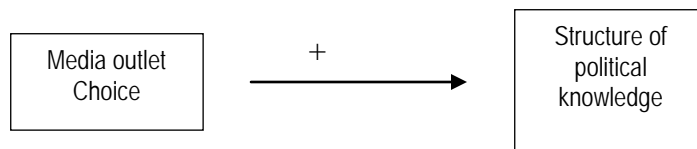
Figure 4-5. Media Outlet Choice and Structure of Knowledge. This figure illustrates the sixth research hypothesis, which posits that structure of knowledge about the health care reform legislation will be correlated with media outlet choice (H6).

Hypothesis 5 and 6 propose how motivation, particularly existential motivation (i.e., self-identity motivation) and relational motivation (i.e., social-identity motivation), drives people's selection of particular media outlets. Consequently, as individuals rely on their chosen media outlet for news and information – in this case news about the health care reform legislation, we can expect their knowledge structure (or individual frames) about this issue may be shaped by how it is covered by these news organizations. Putting these two ideas together, my last hypothesis thus predicts: *H7: existential and relational motivation will predict structure of knowledge about the health care reform legislation.*
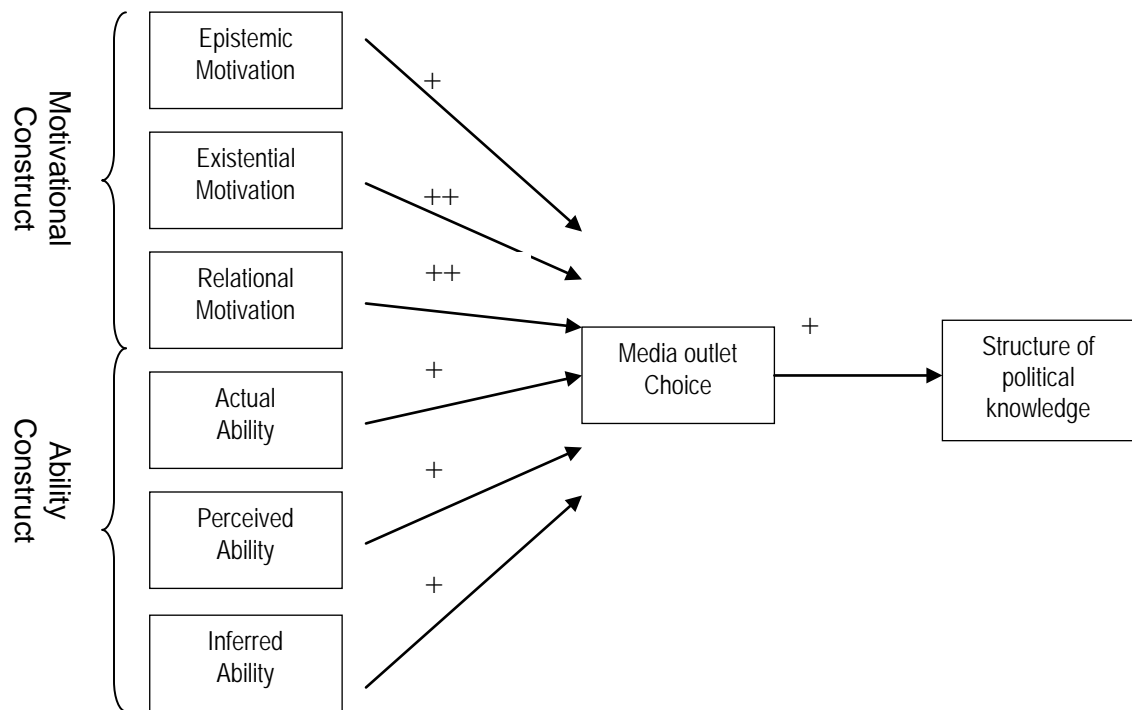
Figure 4-6. Motivation, Ability, Media Outlet Choice, and Structure of Knowledge. This figure illustrates the seventh research hypothesis, which posits that existential and relational motivation will predict structure of knowledge about the health care reform legislation (H7).

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METHODS

Survey methodology was used to test the hypotheses. Survey methods systematically collect information about existing phenomena in order to offer descriptions or explanations (DeVaus, 2002). Surveys can be useful when a researcher wants to collect data on phenomena that usually cannot be directly observed (Busha & Harter, 1980). As the purpose of this study was to demonstrate the existence of the horizontal and vertical knowledge gap phenomena while offering insights into the possible antecedents at the individual level, survey research was an appropriate method.

Subjects and Data Collection

Subjects for this study were recruited from a national online panel provided by *Zoomerang*, a company that specializes in market research and online survey deployment. The *Zoomerang* panel includes over two million survey takers and is matched to the U.S. population on age, ethnicity, income, and census regions. For this study, I aimed to draw a diversified sample in terms of the subject's personal and social economic backgrounds. Therefore, the only sampling criteria used were gender and age so that I could conduct additional comparative analyses based on these two demographic indicators. I requested a minimum of 300 completions, and *Zoomerang* delivered a final number of 333 completed surveys. Table 4-4 below illustrates the final sample population in terms gender and age:

Table 4-4

Age and Gender Distribution in Sample

Gender	Age	Frequency	Percent
Female	18-24	30	17.0
	25-34	35	19.9
	35-44	46	26.1
	45-54	35	19.9
	55+	30	17.0
	Total	176	100.0
Male	18-24	32	20.4
	25-34	35	22.3
	35-44	29	18.5
	45-54	38	24.2
	55+	23	14.6
	Total	157	100.0

An invitation to participate in the survey research was sent to all members of the online panel during the week of September 20, 2010. Subjects who participated in the study received a compensation of 50 ZoomPoints that they could exchange for various rewards from *Zoomerang.* Subjects were asked to complete a 100-item survey questionnaire that included questions drawn from the measures and variables for the opportunity-motivation-ability framework discussed previously. In addition, subject's knowledge of health care reform was tested using both close-ended (true/false and multiple choice) questions as well as open-ended responses.

Measures

Opportunity. As described in the research hypotheses, the opportunity construct was conceptualized as media level usage, media genre choice, and media channel choice. *Media level usage* was measured using three items. First, a "General Internet Use" item

asked respondents how often they log-on to the Internet in a typical day, using a five-point scale that anchored at Never (1) and Always (5). Second, an "Hours of Internet Use" item asked respondents the approximate hours they spend online everyday, using a five-point scale that anchored at Less than One Hour (1) and Six Hours or More (5). Finally, an "Online News Consumption" item asked respondents how much time they devote to searching or consuming news information. Reponses were solicited in terms of the percentages of the total time spent online using a five-point scale anchored at Less than 10% (1) and 60% or more (5). *Media genre choice* was measured by asking whether the respondents would prefer to consume entertainment or public affairs oriented programming when given a choice, using a five-point Likert scale anchored at Strongly Disagree (1) and Strongly Agree (5). Finally, *media outlet choice* was measured using two items. First, an open-ended question asked respondents to specifically name their primary online destination for US news under five possible categories – news aggregator (e.g., Google News), new media organizations (e.g., foxnews.com; cnn.com), blogs (e.g., Hoffington Post), and other (e.g., Twitter, Wikipedia, etc.). A second question asked respondents to rate how frequently they use television, newspaper, Internet, magazine, and radio on five-point Likert scales, anchored at Never Use (1) and Very Often Use (5).

Motivation. *Epistemic motivation* was measured using three established psychometrics – the Need for Cognition, Need for Cognitive Closure, and Need to Evaluate, as discussed previously. Since the original scales are quite lengthy and for participant burden and budget reasons could not be included in the questionnaire in its entirety, for each scale I used only the five highest loading items as reported by scholars who have conducted factor analyses on these scales (e.g., Cacioppo & Petty, 1982; Jarvis

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& Petty, 1996; Neuberg, Judice &West, 1997). As such, *Need for Cognition* was measured using the following items on a five-point Likert scale anchored at Strongly Disagree (1) and Strongly Agree (5): (a) I would prefer complex to simple problems; (b) I like to have the responsibility of handling a situation that requires a lot of thinking. There were also three reversed items: (c) Thinking is not my idea of fun; (d) I would rather do something that requires little thought than something that is sure to challenge my thinking abilities; (e) I try to anticipate and avoid situations where there is likely a chance I will have to think in depth about something. *Need for Cognitive Closure* was measured using the following items, also on a five-point Strongly Disagree-Strongly Agree Likert scale: (a) I find that a well-ordered life with regular hours suits my temperament; (b) I find that establishing a consistent routine enables me to enjoy life more; (c) I enjoy having a clear and structured mode of life; (d) I don't like to go into a situation without knowing what I can expect from it; (e) I don't like situations that are uncertain. Finally, *Need to Evaluate* was measured using the following items on a five-point Strongly Disagree-Strongly Agree Likert scale as well: (a) It is very important to me to hold strong opinions; (b) I like to have strong opinions even when I am not personally involved; (c) I would rather have a strong opinion than no opinion at all; (d) I form opinions about everything; (e) I have many more opinions than the average person.

To measure ***existential motivation*** (or self-concept), I used the empathy scale developed by Davis (1980). Once again due to the length limitation of the questionnaire, only two sub-scales were used. The *Perspective Taking* sub-scale consisted of seven items that included the following questions measured on a five-point Strongly Disagree-Strongly Agree Likert scale: (a) Before criticizing somebody, I try to imagine how I

would feel if I were in their place; (b) If I'm sure I'm right about something, I don't waste much time listening to other people's arguments; (c) I sometimes try to understand my friends better by imagining how things look from their perspective; (d) I believe that there are two sides to every question and try to look at them both; (e) I try to look at everybody's side of a disagreement before I make a decision; (f) When I'm upset at someone, I usually try to "put myself in his shoes" for a while. Finally, a revered item was included: (g) I sometimes find it difficult to see things from the "other person's" point of view. Similarly, the *Empathetic Concern* sub-scale also consisted of seven items that included the following questions measured on a five-point Strongly Disagree-Strongly Agree Likert scale: (a) When I see someone being taken advantage of, I feel kind of protective toward them; (b) I often have tender, concerned feelings for people less fortunate than me; (c) I would describe myself as a pretty soft-hearted person; and (d) I am often quite touched by things that I see happen. Additionally there were three reversed items: (e) When I see someone being treated unfairly, I sometimes don't feel very much pity for them; (f) Sometimes I don't feel sorry for other people when they are having problems; and (g) Other people's misfortunes do not usually disturb me a great deal.

　　Self-interest was measured by asking respondents to rate on a five-point scale (5 = most interested) how personally interested they were in a range of news topics, including health care reform, economic crisis, immigration reform, oil spill in the Gulf of Mexico, War in Afghanistan, Same-sex marriage, and Global warming. In addition, respondents reported their *political apathy* by answering five questions using five-point Likert scales with Strongly Disagree (1) and Strongly Agree (5) as anchors: (a) I consider myself to be

politically engaged; (b) I feel that I have a pretty good understanding of the important political issues facing our country; (c) I think that I am better informed about politics and government than most people; (d) Voting in each election is important to me; and (e) I would feel guilty if I did not vote.

For **relational motivation**, *political cynicism* was measured using the scale developed by Pinkleton, Um, & Austin (2002), which combined items commonly used in previous studies (e.g., Austin & Pinkleton, 1995; Craig, Niemi, & Silver, 1990; Jennings & Niemi, 1978). The scale included the following items on a five-point Likert scale anchored at Strongly Disagree (1) and Strongly Agree (5): (a) Politicians lose touch with people once elected; (b) Candidates for political office are only interested in people's votes, not in their opinions; (c) Too many politicians only serve themselves or special interests; (d) It seems our government is run by a few big interests who are just looking out for themselves; and (e) Politicians lie to the media and the public. In addition, *social dominance orientation* was measured using the scale developed by Sidanius and Pratto (2001). Since the full scale consisted of 16 items and could not be used in its entirety due to practical constraints discussed previously, only five items were included. Participants were asked to respond to the following statements using a five point Likert scale anchored at Strongly Disagree (1) and Strongly Agree (5): (a) Some groups of people are simply inferior to other groups; (b) In getting what you want, it is sometimes necessary to use force against other groups; (c) It's OK if some groups have more of a chance in life than others; (d) To get ahead in life, it is sometimes necessary to step on other groups; and (e) We would have fewer problems if we treated people more equally.

Further, an individual's belief on *individualism* was measured using selected items from the Individualism-Egalitarianism scale developed by Michaud, Carlisle, and Smith (2009). Participants were asked whether they agree with the following statements using a five point Likert scale anchored at Strongly Disagree (1) and Strongly Agree (5): (a) What our country needs is a fairness revolution to make the distribution of goods more equal; (b) Government regulation of business is necessary to keep industry from becoming too powerful; (c) Competitive markets are almost always the best way to supply people with the things they need; (d) Society would be better off if there were much less government regulation of business. People who are successful in business have a right to enjoy their wealth as they see fit; and (e) Competition, whether in school, work, or business leads to better performance and desire for excellence. Finally, *political ideology* was measured by asking the respondent where they would place themselves in terms of their political affiliation on a five point scale, where 1 indicated Strong Democrat and 5 indicated Strong Republican.

Ability. For ***perceived ability***, *political self-efficacy* was measured using items selected from the scale developed by Caprara et al. (2009). Participants responded to the following statements also using a five point Likert scale anchored at Strongly Disagree (1) and Strongly Agree (5): (a) I feel confident stating my own political opinion openly, even in clearly hostile settings; (b) I feel confident I can make certain that the political representatives I voted honor their commitments to the electorate; (c) I feel confident playing a role in the choice of the leaders of a political party or movement to which I belong, or to which I believe in; (d) I feel confident promoting information and mobilization in my own community (of work, friends, and family), to sustain political

programs in which I believe; and (e) I feel confident using the means I have as a citizen to critically monitor the actions of my political representatives. Further, perceived *Internet self-efficacy* was measured using selected items from the scale developed by Eastin and LaRose (2000), which included the following four items using five-point Likert scales with Strongly Disagree (1) and Strongly Agree (5) as anchors: (a)I feel confident understanding terms/words relating to Internet technologies; (b) I feel confident trouble shooting computer problems; (c) I feel confident using the Internet to gather information; and (d) I feel confident that I can turn to an online discussion group when help is needed.

For **inferred ability**, *parent's educational level* (e.g., legacy) was measured by asking the participant the highest level of education completed by their father and mother using a five-point scale, anchored at Less than High School (1) and Graduate Degree (5). Further, individuals' *social capital* was examined using five items selected from the scale developed by Bullen and Onyx (1998). The first three items asked participants to report how often they participate in community events by responding to the following questions using a five-point Likert scale anchored at Not at All (1) and Very Often (5): (a) Have you attended a local community event in the past 6 months (e.g., art exhibition, school concert, athletic events, and so on)? (b) Are you actively participating in any local organization or club (e.g., sport, craft, social club)? (c) In the past 3 years, have often have you participated in community organizations as a volunteer? In addition, participants were asked to indicate their level of *interaction with their social networks* by responding to the following questions using also using a five-point scale: (d) In the past

week, how many phone conversations have you had with friends? (e) How many people did you talk to yesterday?

Finally, ***actual ability*** was measured by asking participants to report whether they have any physical disability (yes or no), as well as to indicate the highest level of education that they completed on the same five-point scale used to measure parent's education attainment. In addition, participants were asked to report their level of access to the Internet also using a five-point Likert scale with Strongly Disagree (1) and Strongly Agree as anchors: (a) I have full Web access (i.e., you can browse whatever content you want) at home; and (b) I have full Web access (i.e., you can browse whatever content you want) at school or at work. Participants were asked to report their Internet connection speed when applicable, ranging from dial-up, DSL, cable, to fiber-optic, and whether they own a smart phone with data plan (yes or no).

Political knowledge. The main dependent measure for this study was "political knowledge." As discussed previously, political knowledge is a multi-dimensional construct that includes objective facts, knowledge of relationships among objective facts, and subjective interpretation (e.g., opinion) of facts. In this study political knowledge was therefore measured based on these dimensions. First, *level* of knowledge, which refers to the individual's possession of objective factual knowledge, was measured. In line with previous scholarship on political knowledge, this was examined using basic civic information or political facts. Therefore, three civic knowledge items were posted in an open-ended fashion to the respondents. The question were: a) Do you know what political office is now held by Joe Biden; b) How much of a majority is required for the U.S.

Senate and House to override a presidential veto; and c) Do you know which party has the most members in the House of Representatives right now?

In addition, a number of issue specific questions, ranging from the oil spill in the Gulf, the economic crisis, to the health care reform, were also included in the questionnaire to assess whether the respondents were paying attention to current events. Compared to the general civic knowledge items, these questions require a greater level of understanding. For example, respondents were asked to recognize the "public option" concept being debated in the health care reform legislation, or to identify the correct level of Dow Jones Industrial Average during the time of the survey. All issue knowledge questions were constructed in either true/false or multiple-choice format and only have one correct answer. Participants' response to both civic and issue knowledge questions were scored and tallied into an index score accordingly, with one correct answer earning the respondent one point, out of a maximum of 10 points.

Finally, I also measured *structure* of knowledge, or an individual's possession of subjective opinion and/or information that are open to interpretation. This was accomplished by asking the respondents a number of open-ended questions. First, respondents were asked to name the five most important issues facing the U.S. at the moment in their opinion. They were also asked to come up with key words and phrases associated with the health care reform and the economic recovery. Lastly, I also included questions that asked the respondents who should accept more responsibility on the handling of the oil spill in the Gulf.

Media Level Use. In addition to political knowledge, a person's media usage pattern was the other dependent variable. As discussed in the literature review, an

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important aspect of media use was the "level" of usage. In the specific context of this study, this refers to how often do individuals use the Internet, for how long, and to engage with what online content or activity? Media use was therefore measured using three questions. First, respondents were asked to report how often they log-on to the Internet and engage in some kind of online activities, using a five-point Likert scale anchored at Never (1) and Always (5). Respondents were then asked to indicate approximately how many hours they spend online on a five-point Likert scale anchored at Less than one hour (1) and Six hours or more (5). Finally, the last question asked respondents to report the approximate times they devote to the search and consumption or news information among the total time that they spend online everyday, also using the a five-point Likert scale anchored at Less than one hour (1) and Six hours or more (5).

Media Genre Choice. Another important aspect of a person's media usage pattern was the concept of media genre choice – that is, what type of media content would one prefer. Media genre choice was measured by asking the respondents if they would agree with the following statement, using a five-point Likert scale anchored at Strongly Disagree (1) and Strongly Agree (5): When given a choice, I would prefer reading/watching news about entertainment, sports, or lifestyle rather than news about current events or public affairs.

Media Outlet Choice. Finally, a person's specific choice of news and information outlet – media outlet choice, was measured. Media outlet choice was measured by an open-ended question asking respondents to list their primary online destination for US news. Respondents were asked to name as many online news and media outlets as they can under four categories: a) News Aggregator – aggregator sites or

services such as *Google News*; b) News Media Web site – Web platform of traditional news media organization such *as CNN.com*; c) Blogs – news oriented blogs such as *The Huffington Post*; and d) Other – other online news and information outlets that do not fall under any of the three categories, this could include social networking sites such as *Facebook*, or social media sites such as *Twitter* or *Wikipedia*.

Demographic information. Participants were asked to provide their demographic information, which included gender, ethnicity, age group, approximate household income, and five-digit ZIP code. They were also asked to indicate whether English is the primary language spoken at home.

Scale Reliability

The motivation and ability constructs include several measures that are made up of multiple scales in the questionnaire. To ensure that these scales were reliable and internally consistent, Cronbach's alpha was calculated. As seen in Table 4-5 below, the majority of these items had an Alpha level greater than .7, which is the acceptable benchmark for reliable psychometric instruments (George & Mallery, 2003). Social dominance orientation measures ($\alpha = .619$) and Individualism measures ($\alpha = .629$) both have a slightly lower alpha value but are still considered satisfactory (Nunnally, 1978).

Table 4-5

Scale Reliability

Scale	Cronbach's Alpha	N of Items
Epistemic Motivation – Need for Cognition	.753	5
Epistemic Motivation – Need for Cognitive Closure	.830	5

Epistemic Motivation – Need to Evaluate	.807	5
Existential Motivation – Self Concept	.810	14
Existential Motivation – Self Interest	.777	7
Existential Motivation – Political Apathy	.838	5
Relational Motivation – Political Cynicism	.908	5
Relational Motivation – Social Dominance Orientation	.619	5
Relational Motivation – Individualism	.629	5
Perceived Ability – Political Self Efficacy	.777	5
Perceived Ability – Internet Self Efficacy	.783	4
Inferred Ability – Legacy	.781	2
Inferred Ability – Social Capital	.796	5

Note: Scale reliability for the Political Ideology measure, which only had a single item response in the questionnaire, was not calculated.

The complete survey instrument used in this study, including statement of consent, participant instruction, and the questionnaire, is included in Appendix A.

Data Analysis

After the collection of survey questionnaire was completed, quantitative data was examined using *SPSS* (version 15) and *AMOS* (version 7.0) while qualitative data was analyzed using *NVivo* (version 9.0).

With regards to analytical strategies, I should note here again that because the OMA framework provides no measurement recommendations, I chose a number of variables that could serve as proxies of the opportunity, motivation and ability constructs of the OMA framework. However, it should be clear that these indicator variables were not originally developed to represent broad opportunity, motivation and ability constructs. That is, even though at an abstract level these variables should indicate some

aspect of opportunity, motivation or ability, these variables may not empirically load well

together on three separate factors.

Consistent with this, my analytical strategy was to first test this possibility and

examine whether the factor structure of motivation and ability variables,[5] as developed

through my review of literature, would remain valid using confirmatory factor analysis.

This analysis will tell me whether I can include indicator variables in composite factors

or treat each indicator variable as a separate indicator. If the confirmatory factor analysis

would not support the three broad factors, I planned to treat the indicators independently

and submit them to multiple linear regression analysis in order to test my research

hypotheses.

RESULTS

Bivariate Correlations

To begin the analysis, it would be useful to consult the bivariate correlations

among the variables first. As shown in Table 4-6, the Pearson's correlation matrix

indicated generally weak to moderate correlations among all of the variables with several

instances of strong correlations. Looking specifically at the individual predictors that

made up for the different latent variables (e.g., Epistemic Motivation, and so on), the r

values were weak to moderate regarding indicators of Epistemic Motivation (~.2 range),

Existential Motivation (~.3 range), Relational Motivation (~.3 range), Perceived Ability

(~.2 range), Inferred Ability (~.3 range), and Actual Ability (~.2 range). While this

pattern did not necessarily refute the theoretical ideas that this study attempts to address,

the relatively low r values among the observed variables chosen as indictors of the latent

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5   The Opportunity indicators were not submitted to factor analysis. In contrast to the motivation and
ability constructs, to operationalize opportunity for obtaining political information I did not have to
draw on proxy variables that were developed in other literatures. Instead, I could develop measures that
have sufficiently strong face-validity and analytical linkage to the latent opportunity construct.

motivation and ability variables suggested that the internal structure of these latent

variables may not be as unidimensional as per the OMA theory. To further examine this

issue, I turned to confirmatory factor analysis.

Confirmatory Factor Analysis

To test the latent factor structure, a confirmatory factor analysis (CFA) was

conducted using *AMOS* (version 7.0). CFA is an appropriate tool for testing whether data

fit a particular factor model, and can also be used to pit alternative models against one

another (Yzer, Hennessy, & Fishbein, 2004), both of which may lead to valuable insights

that inform the investigator how to modify the structure of latent variables.

Table 4-6

Bivariate Correlation

	Need for Cognition	Need for Cognitive Closure	Need to Evaluate	Self Concept	Self Interest	Political Apathy	Political Cynicism	Social Dominance Orientation	Individualism	Political Ideology	Political Efficacy	Internet Efficacy	Legacy	Social Capital	Internet Access	Internet Speed	Mobile Internet	Education
Need for Cognition	1	-.199(**)	.112(*)	.256(**)	.171(**)	.240(**)	.105	-.130(*)	.035	-.043	.165(**)	.296(**)	.131(*)	.250(**)	.204(**)	.037	.068	.264(**)
Need for Cognitive Closure	-.199(**)	1	.246(**)	.091	.016	-.007	.370(**)	.229(**)	.104	.107	-.012	.079	-.079	-.091	.121(*)	-.007	-.055	.004
Need to Evaluate	.112(*)	.246(**)	1	.003	.199(**)	.302(**)	.220(**)	.268(**)	.144(**)	.067	.324(**)	.218(**)	.036	.066	.167(**)	.021	.021	-.019
Self Concept	.256(**)	.091	.003	1	.320(**)	.172(**)	.200(**)	-.136(*)	-.065	-.073	.135(*)	.116(*)	-.064	.202(**)	.172(**)	-.059	.001	.012
Self Interest	.171(**)	.016	.199(**)	.320(**)	1	.495(**)	.153(**)	.048	.069	-.063	.405(**)	.182(**)	-.055	.246(**)	.172(**)	.066	.033	.038
Political Apathy	.240(**)	-.007	.302(**)	.172(**)	.495(**)	1	.186(**)	.072	.200(**)	.042	.619(**)	.248(**)	.079	.328(**)	.148(**)	.124(*)	.101	.200(**)
Political Cynicism	.105	.370(**)	.220(**)	.200(**)	.153(**)	.186(**)	1	.080	.261(**)	.245(**)	.059	.147(**)	-.204(**)	-.049	.144(**)	-.061	-.086	-.030
Social Dominance Orientation	-.130(*)	.229(**)	.268(**)	-.136(*)	.048	.072	.080	1	.040	.040	.208(**)	.226(**)	.075	.089	.004	.180(**)	.110(*)	.058
Individualism	.035	.104	.144(**)	-.065	.069	.200(**)	.261(**)	.040	1	.342(**)	.188(**)	.140(*)	.072	.038	.122(*)	-.091	.045	.018
Political Ideology	-.043	.107	.067	-.073	-.063	.042	.245(**)	.040	.342(**)	1	.134(*)	.070	.043	.044	.074	-.029	-.054	-.083
Political Efficacy	.165(**)	-.012	.324(**)	.135(*)	.405(**)	.619(**)	.059	.208(**)	.188(**)	.134(*)	1	.275(**)	-.007	.257(**)	.209(**)	.097	.089	-.003
Internet Efficacy	.296(**)	.079	.218(**)	.116(*)	.182(**)	.248(**)	.147(**)	.226(**)	.140(*)	.070	.275(**)	1	.124(*)	.184(**)	.399(**)	.122(*)	.204(**)	.250(**)
Legacy	.131(*)	-.079	.036	-.064	-.055	.079	-.204(**)	.075	.072	.043	-.007	.124(*)	1	.366(**)	.124(*)	.083	.249(**)	.430(**)
Social Capital	.250(**)	-.091	.066	.202(**)	.246(**)	.328(**)	-.049	.089	.038	.044	.257(**)	.184(**)	.366(**)	1	.124(*)	.089	.175(**)	.351(**)
Internet Access	.204(**)	.121(*)	.167(**)	.172(**)	.172(**)	.148(**)	.144(**)	.004	.122(*)	.074	.209(**)	.399(**)	.124(*)	.124(*)	1	.130(*)	.213(**)	.254(**)
Internet Speed	.037	-.007	.021	-.059	.066	.124(*)	-.061	.180(**)	-.091	-.029	.097	.122(*)	.083	.089	.130(*)	1	.138(*)	.203(**)
Mobile Internet	.068	-.055	.021	.001	.033	.101	-.086	.110(*)	.045	-.054	.089	.204(**)	.249(**)	.175(**)	.213(**)	.138(*)	1	.237(**)
Education	.264(**)	.004	-.019	.012	.038	.200(**)	-.030	.058	.018	-.083	-.003	.250(**)	.430(**)	.351(**)	.254(**)	.203(**)	.237(**)	1

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

The goal of the CFA was twofold. First, I wanted to test whether the items that I thought could represent the epistemic, existential, and relational components of motivation loaded well together, and whether the perceived, inferred, and actual components of ability loaded well together. Second, I wanted to explore whether motivation and ability were best seen as comprised of these sub-components, or if a simpler model with fewer sub-components and a different factor structure will have a stronger factor loading. To that end, the CFA tested for both the motivation and ability constructs:

(1) The proposed motivation model – three separate but correlated sub-components labeled epistemic, existential, and relational motivations load on an overarching latent variable labeled motivation.

(2) An alternative two-factor motivation model – the motivation variables load on two separate but correlated factors.

(3) An alternative one-factor motivation model – the motivation variables load on one overarching motivation factor.

(4) The proposed ability model – three separate but correlated factors labeled perceived, inferred, and actual ability load on an overarching latent variable labeled motivation.

(5) An alternative two-factor ability model – the ability variables load on two separate but correlated factors.

(6) An alternative one-factor ability model – the ability variables load on one factor labeled ability.

As seen in Table 4-7 below, results of the CFA for the motivation construct suggested that the three-factor model originally proposed by this study did not outperform the alternative two-factor model, but was superior to the one-factor model. However, it should be noted that the three fit indices reported here still indicated a poor fit with the data. χ^2 (1188.066, p =.000) was significant, while GFI (.219) was below the recommended minimum level of .95 and RMSEA (.283) was above the recommended maximum level of .05 (Arbuckle, 2005). It should be noted that the factor model also appeared to be problematic as evident by a warning from the *AMOS* program that a covariance matrix with the three latent variables was not positive definite. This error can be a result of several problems but is likely due to grouping the observed variables into three latent factors, when in fact the relationship among them could be more complex. If the correlation between the three latent variables were not calculated, the problem of a positive definite covariance matrix disappeared but the model-fit measures remained an issue.

Table 4-7

Confirmatory Factor Analysis: Motivation Construct

Original Items	
Proposed model	χ^2 (43) = 1188.066, p = .000, RMSEA = .283 and GFI = .219
Two-factor model	χ^2 (44) = 712.481, p = .000, RMSEA = .214 and GFI = .656
One-factor model	χ^2 (45) = 1150.239, p = .000, RMSEA = .272 and GFI = .160

The factor loadings seen in Figure 4-7 below indicate that the three observed indicators for epistemic motivation fell below the recommended lower level boundary for acceptable factor loading of .4 (Guadagnoli & Velicer, 1988). One observed indicator (political apathy) showed good factor loading for existential motivation, while the other two did not. Finally, among the four observed indicators for relational motivation, only

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one (political ideology) had an acceptable factor loading of .49. The factor loadings,

along with the results of the model comparison shown in Table 4-7, appeared to suggest

that the originally proposed model structure did not hold together very well.
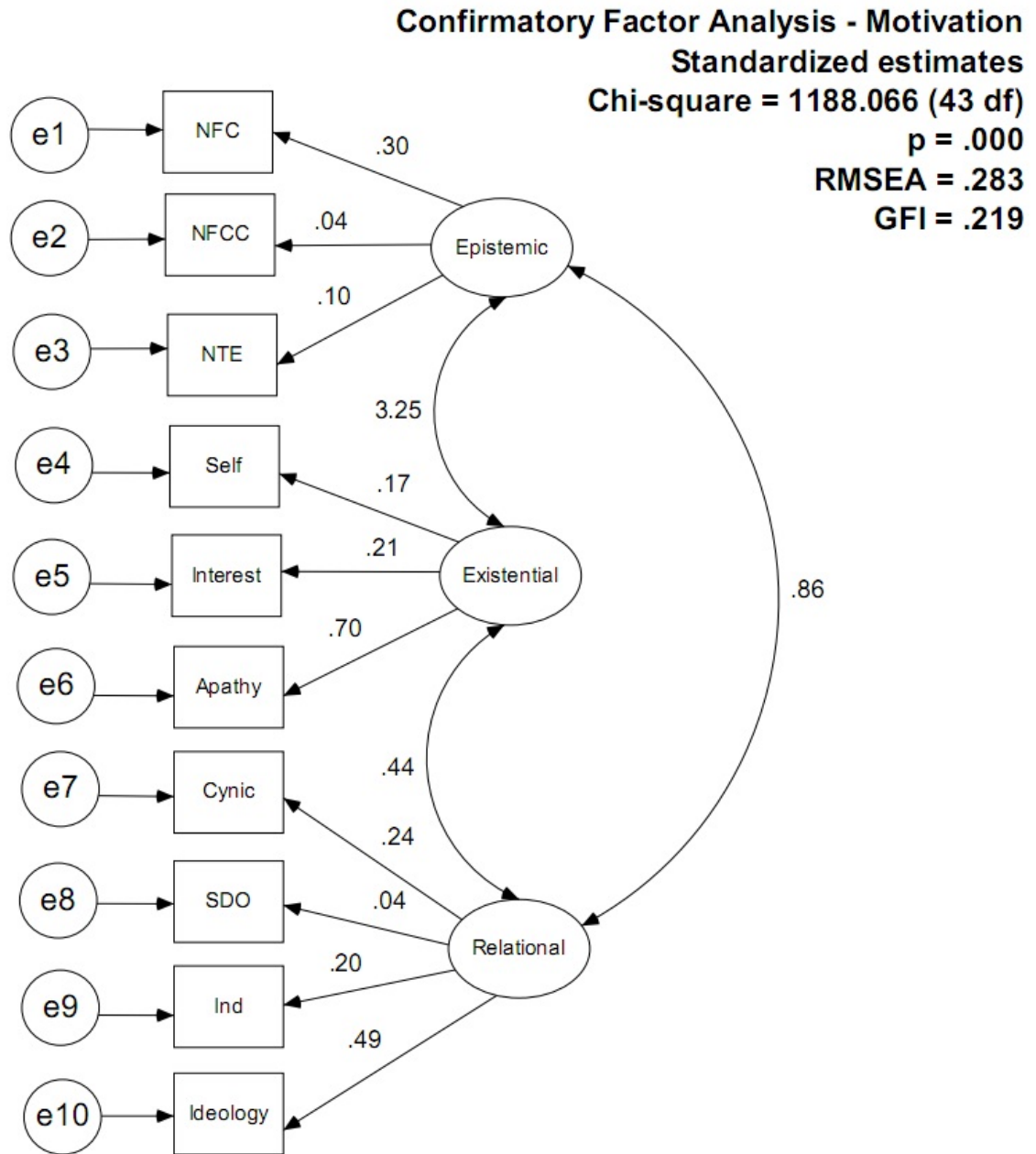
Figure 4-7. Confirmatory Factor Analysis: Motivation Construct. This figure illustrates
the results of the confirmatory factor analysis for the motivation construct.

For the ability construct, as seen in Table 4-8 below, results of the CFA suggested that the three-factor model originally proposed by this study did not outperform the alternative two-factor and one-factor models. In fact, the two-factor model had the best GFI, χ^2 and RMSEA values. However, similar to the motivation constructs, the three fit indices for the one-factor model still indicated a poor fit with the data. Since the scales that fall under the ability construct all appeared to have sound reliability, no modification was made to exclude any items.

Table 4-8

Confirmatory Factor Analysis: Ability Construct

Original Items	
Proposed model	χ^2 (26) = 690.532, p = .000, RMSEA = .277 and GFI = .547
Two-factor model	χ^2 (27) = 600.338, p = .000, RMSEA = .253 and GFI = .579
One-factor model	χ^2 (22) = 627.767, p = .000, RMSEA = .254 and GFI = .466

The factor loadings seen in Figure 4-8 below suggest that Internet efficacy epistemic was an acceptable indicator for perceived ability, while political efficacy was not. In terms of inferred ability, parent's educational attainment (i.e., legacy) as well as a person's social capital were both good indicators. Finally, with regards to actual ability, a person's own educational attainment and his or her access to the Internet were good indicators of actual ability, while Internet speed and mobile Internet access were not. Taken together, the factor loadings and the results of the model comparison shown in Table 4-8 suggest that the originally proposed model structure also did not hold together very well.
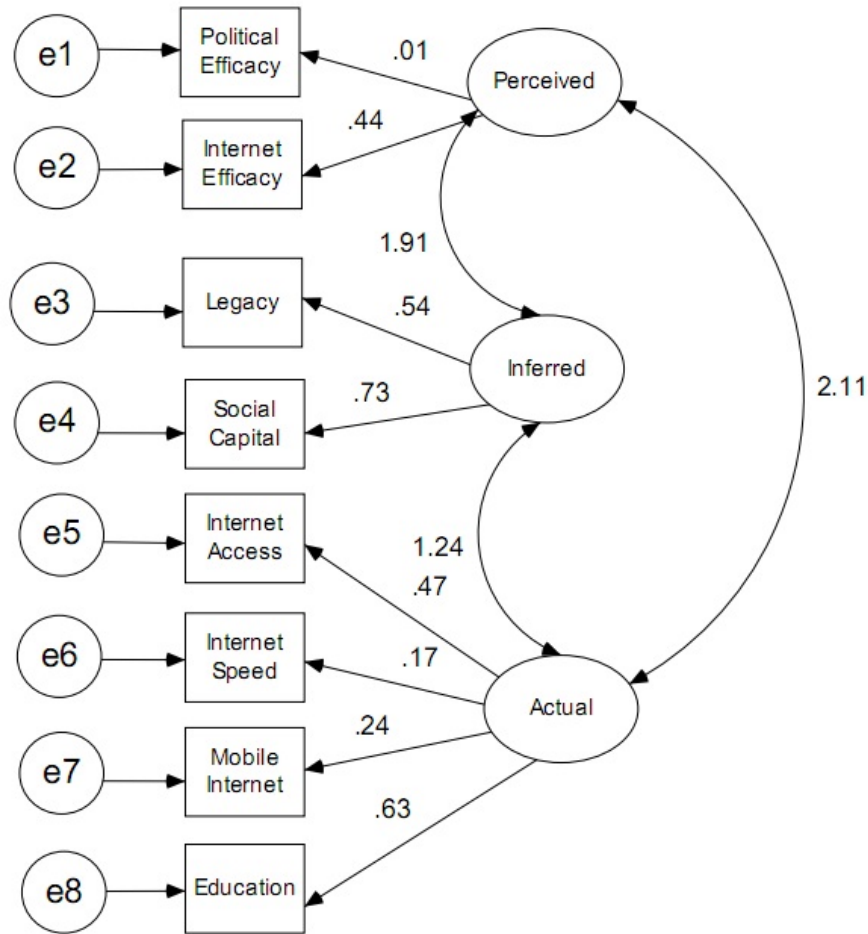
Figure 4-8. Confirmatory Factor Analysis: Ability Construct. This figure illustrates the results of the confirmatory factor analysis for the ability construct.

In sum, the CFA confirmed my concern that my grouping of the observed variables may not be the best way to represent the latent motivation and ability constructs. As the results suggested, my original three-factor model structure for both the motivation and ability construct did not hold very well. Instead, a two-factor model may

be more appropriate for both constructs. That being said, as the less than optimal fit-indices and the *AMOS* warnings indicated, the factor models for motivation and ability constructs, even after I attempted to modify the grouping structures, still fell below the commonly acceptable standards.

At this point of the data analysis, it is useful to pause and think about the situation at hand. My initial analysis using the CFA suggested that the structure of the latent variables was problematic. The cause of poor model-fit appeared to be that, while it made theoretical sense to categorize the observed variables into six latent constructs based on the nature of these variables, there may be other layers of relationships among them that I did not address. Thus, at first glance, the empirical evidence that was collected did not seem to support my theoretical assumptions. However, before jumping to the conclusion that my ideas were completely flawed, I considered these alternative explanations. First, perhaps the observed variables could be categorized differently, as suggested by the CFA? Second, is it possible that some observed variables are better indicators of the latent constructs than others? Finally, it is also plausible that while the constructs do not hold together as a *model*, the hypothesized relationships between the individual independent and dependent variables may very well still be present.

Evaluating the three alternative explanations and the analytical choices associated with them, I recognized that at this point of the dissertation, I did not have sufficient theoretical basis to re-categorize the observed variables as noted by the first option. I also did not have a strong empirical basis to compare the superiority of the observed variables as noted by the second option, because the factor weights were derived from models with poor fit indices. Given the situation, the most appropriate way to approach data analysis

was the third option – treating the observed variables as independent predictors that generally fell under either the motivation or the ability category based on both face-validity as well as the review of literature presented earlier in this chapter. With this in mind, I then proceeded to use multiple regression models to test the research hypotheses.

Hypotheses Testing - Motivation, Ability, and Media Use

Multiple linear regressions were conducted using SPSS (version 15.0) to test the relationship between motivation, ability, and the level of media use. More specifically, I wanted to examine the first research hypothesis that **motivation, rather than ability, will best predict levels of media use**. As discussed previously, level of media use was assessed using three measures: "General Internet Use," "Hours of Internet Use", and "Online News Consumption." The correlations between the three questions are shown in Table 4-9 below. As the correlation coefficient suggested, General Internet Use was moderately correlated with Hours of Internet Use ($r = .517$, $p < .001$). This was expected, as an individual's overall use the Internet would translate into specific measurable hours of usage. In contrast, Online News Consumption only showed a weak correlation with Hours of Internet Use ($r = .145$, $p < .001$) and no statistically significant correlation with General Internet Use. This was also expected, as consuming news is a very specific action among many possible activities that people can engage in online, but it does require individuals to be *using* the Internet in the first place. Based on these results I combined General Internet Use and Hours of Use into an **Internet Use Index** scale and analyzed the Online News Consumption item separately.

Table 4-9

Correlation Matrix (Media Use Measures)

	General Internet Use	Hours of Internet Use	Online News Consumption
General Internet Use	1	.517(**)	.045
Hours of Internet Use	.517(**)	1	.145(**)
Online News Consumption	.045	.145(**)	1

** Correlation is significant at the 0.01 level (2-tailed).

First, the Internet Use Index was regressed on the individual motivation and ability indicator variables As Table 4-10 illustrates, the variables collectively accounted for 25 percent of the variance in level of general Internet use, $(F (18, 314) = 5.711, p < .001)$.

Table 4-10

Multiple Linear Regression Model (Internet Use Index)

R	R Square	Adjusted R Square	Std. Error of the Estimate	df1	df2
.497[a]	.247	.203	.82113	18	314

a. Predictors: (Constant), Education, Political Efficacy, Need for Cognitive Closure, Self Concept, Political Ideology, Internet Speed, Mobile Internet, Social Dominance Orientation, Individualism, Internet Access, Need to Evaluate, Legacy, Need for Cognition, Self Interest, Internet Efficacy, Social Capital, Political Cynicism, Political Apathy

To ensure that the multiple-linear regression conducted here had sufficient statistical power, a post-hoc power analysis was also conducted using the *G*Power* software (version 3.1). Result of the power analysis revealed that the test achieved valid statistical power $(\delta = 7.07, t = 1.97, df = 315, Power = .99)$, indicating that sample size was sufficient.

To compare the relative impact of the motivation and ability constructs as posited by the first research hypothesis, we could first look at the regression coefficients in Table

4-11, which suggested that Internet Efficacy (β = .223, t = 3.780, p < .001), Internet

Access (β = .198, t = 3.422, p < .05), and Mobile Internet Access (β = .151, t = 2.856, p <

.01) were associated with an individual's Internet use. This result did not bode well for

my hypothesis, as these variables indicated the ability construct. Nevertheless, there was

one motivational variable that was statistically significant – Need to Evaluate (β = .128, t

= 2.238, p < .05), indicating that those with stronger needs to evaluate objects, issues, or

information around them are also more likely to spend a greater amount of time on the

Internet looking for information.

Table 4-11

Regression Coefficients (Internet Use Index)

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.981	.570		1.723	.086		
	Need for Cognition	-.065	.078	-.049	-.841	.401	.705	1.419
	Need for Cognitive Closure	.111	.079	.081	1.401	.162	.712	1.405
	Need to Evaluate	.168	.075	.128	2.238	.026	.733	1.364
	Self Concept	.010	.109	.005	.096	.924	.734	1.362
	Self Interest	.113	.070	.097	1.611	.108	.658	1.520
	Political Apathy	-.015	.076	-.014	-.198	.843	.456	2.192
	Political Cynicism	.072	.070	.063	1.030	.304	.648	1.544
	Social Dominance Orientation	.003	.077	.003	.045	.964	.736	1.358
	Individualism	-.017	.078	-.012	-.223	.824	.782	1.279
	Political Ideology	-.041	.046	-.050	-.900	.369	.790	1.266
	Political Efficacy	-.128	.092	-.097	-1.386	.167	.493	2.027
	Internet Efficacy	.265	.070	.223	3.780	.000	.689	1.451
	Legacy	.057	.051	.066	1.105	.270	.674	1.484
	Social Capital	-.034	.059	-.034	-.573	.567	.676	1.480
	Internet Access	.209	.061	.198	3.422	.001	.716	1.397

Internet Speed	-.028	.057	-.025	-.482	.630	.881	1.135
Mobile Internet	.301	.105	.151	2.856	.005	.856	1.168
Education	.024	.053	.028	.448	.655	.628	1.592

a. Dependent Variable: Internet Use Index

In addition, collinearity statistics were calculated. As shown in Table 4-11, the Tolerance measures for all predictor variables were well above the commonly accepted .20 threshold (Menard, 1995), and the VIF measures were well below the 10 boundary established by scholars (e.g., Hair, Anderson, Tatham, & Black, 1998; Mason, Gunst, & Hess, 1989), suggesting that the predictor variables did not suffer from any serious multicollinearity issue.

Next, Online News Consumption was regressed on the individual motivation and ability indicator variables. As Table 4-12 illustrates, the variables collectively accounted for 25 percent of the variance in level of online news consumption, $(F (18, 314) = 5.978$, $p < .001)$.

Table 4-12

Multiple Linear Regression Model (News Consumption)

R	R Square	Adjusted R Square	Std. Error of the Estimate		df1	df2
.505(a)	.255	.213	.914		18	314

a Predictors: (Constant), Education, Political Efficacy, Need for Cognitive Closure, Self Concept, Political Ideology, Internet Speed, Mobile Internet, Social Dominance Orientation, Individualism, Internet Access, Need to Evaluate, Legacy, Need for Cognition, Self Interest, Internet Efficacy, Social Capital, Political Cynicism, Political Apathy

To compare the relative impact of the motivation and ability constructs as posited by the first research hypothesis, regression coefficients were calculated. As shown in Table 4-13 below, Social Capital $(\beta = .246, t = 4.144, p < .001)$ has the strongest association with an

individual's level of online news consumption, followed by Self Interest (β = .202, t = 3.358, p < .05) and Mobile Internet Access (β = .167, t = 3.179, p < .05). Collinearity statistics for this test were also within the acceptable range.

Level of Internet use thus was predicted by different variables than online news consumption. Interestingly, unlike level of Internet use, Online News Consumption was predicted by the ability proxies Mobile Internet Access and Social Capital. Further, Self Interest in the public affairs topic was also another important factor that motivated people to engage in news consumption on the Internet. Taken together, the difference suggested that perhaps, news consumption may be something that is different from other general online activities.

Table 4-13

Regression Coefficients (News Consumption)

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	.384	.634		.606	.545		
Need for Cognition	.007	.086	.004	.076	.939	.705	1.419
Need for Cognitive Closure	-.037	.088	-.024	-.416	.678	.712	1.405
Need to Evaluate	.129	.084	.088	1.547	.123	.733	1.364
Self Concept	-.148	.122	-.069	-1.215	.225	.734	1.362
Self Interest	.261	.078	.202	3.358	.001	.658	1.520
Political Apathy	.102	.085	.087	1.204	.229	.456	2.192
Political Cynicism	-.145	.078	-.112	-1.857	.064	.648	1.544
Social Dominance Orientation	.157	.086	.104	1.828	.068	.736	1.358
Individualism	.054	.086	.034	.624	.533	.782	1.279
Political Ideology	.003	.051	.003	.062	.950	.790	1.266
Political Efficacy	-.057	.103	-.038	-.553	.581	.493	2.027
Internet Efficacy	-.008	.078	-.006	-.096	.923	.689	1.451
Legacy	-.104	.057	-.108	-1.813	.071	.674	1.484
Social Capital	.270	.065	.246	4.144	.000	.676	1.480
Internet Access	-.041	.068	-.035	-.611	.541	.716	1.397

Internet Speed	.096	.064	.078	1.505	.133	.881	1.135
Mobile Internet	.373	.117	.167	3.179	.002	.856	1.168
Education	.076	.059	.079	1.290	.198	.628	1.592

a Dependent Variable: Question 89: Among the total time you spent online everyday, approximately how much time (in terms of percentages) are devoted to searching or consuming news information?

Based on the hypothesis testing of the three operationalizations of media use as presented above, we can conclude that the first research hypothesis that **motivation to learn about politics, rather than ability to learn about politics, will best predict levels of media use (H1)** was not supported. However, there was a caveat to this conclusion. First, the variables that fell under the ability construct, specifically Internet Access and Internet Efficacy, were strong predictors for level of Internet use. As one cannot use the Internet without: a) having actual access to the Internet, and b) having the belief that him/herself would be able to navigate and use the technology, this result only reflected the basic assumption of levels of Internet use. If we were to accept this assumption as a given and ask what might explain an individual's Internet usage level and pattern beyond having basic access and efficacy, the answer turned out to be a person's motivation to learn about politics. For example, I found that Need to Evaluate motivated Internet use, and Self Interest motivated online news consumption – both of which provided some validation to the theoretical idea that motivation drives Internet use, and particularly the consumption of new information online. Another insight worthy of noting was the three variables associated with online news consumption – an individual's Self Interest about the news topic, Social Capital, and Mobile Internet Access. The combination of these variables may suggest a reciprocal pattern of *mobile* online news consumption and social sharing, in which individuals may send and receive news information that are relevant to their interests to and from their social networks.

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Hypotheses Testing – Motivation, Ability, and Media Genre Choice

We now turn our attention to the second research hypothesis, that is, **motivation to learn about politics, rather than ability to learn about politics, will predict media genre choice (H2)**. Recall from our earlier discussion that media genre choice was operationalized as the preference for hard or soft news – that is, whether an individual would gravitate toward consuming news about entertainment rather than news about current events or public affairs. To test the relationship between motivation, ability, and an individual's media genre choice, Media Genre Choice was regressed on the individual motivation and ability indicator variables. As Table 4-14 below illustrates, the variables collectively accounted for 27 percent of the variance in an individual's media genre choice, $(F_{(18, 314)} = 6.599, p < .001)$.

Table 4-14

Multiple Linear Regression Model (Media Genre Choice)

R	R Square	Adjusted R Square	Std. Error of the Estimate		df1	df2
.524(a)	.274	.233	.937		18	314

a Predictors: (Constant), Education, Political Efficacy, Need for Cognitive Closure, Self Concept, Political Ideology, Internet Speed, Mobile Internet, Social Dominance Orientation, Individualism, Internet Access, Need to Evaluate, Legacy, Need for Cognition, Self Interest, Internet Efficacy, Social Capital, Political Cynicism, Political Apathy

To compare the relative impact of the motivation and ability constructs as posited by the second research hypothesis, we once again turn to the regression coefficients. As shown in Table 4-15 below, Media Genre Choice was best predicted by Political Apathy ($\beta = -.354$, $t = -4.972$, $p < .001$). This was followed by other motivational variables such as Social Dominance Orientation ($\beta = .187$, $t = 3.344$, $p < .05$), Need for Cognition ($\beta = -$

.153, t = -2.675, p < .05), and Self Interest (β = -.135, t = -2.270, p < .05). Two ability

variables – Social Capital (β = .146, t = 2.507, p < .05) and Internet Efficacy (β = .124, t

= 2.143, p < .05) were found to have statistically significant association as well. Once

again, there was no multi-collinearity issue among the predictor variables.

Table 4-15

Regression Coefficients (Media Genre Choice)

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	2.611	.650		4.017	.000		
Need for Cognition	-.237	.089	-.153	-2.675	.008	.705	1.419
Need for Cognitive Closure	.015	.091	.010	.169	.866	.712	1.405
Need to Evaluate	.161	.086	.105	1.876	.062	.733	1.364
Self Concept	.125	.125	.056	1.001	.318	.734	1.362
Self Interest	-.181	.080	-.135	-2.270	.024	.658	1.520
Political Apathy	-.434	.087	-.354	-4.972	.000	.456	2.192
Political Cynicism	.140	.080	.105	1.756	.080	.648	1.544
Social Dominance Orientation	.295	.088	.187	3.344	.001	.736	1.358
Individualism	-.118	.088	-.073	-1.336	.182	.782	1.279
Political Ideology	-.033	.052	-.034	-.636	.525	.790	1.266
Political Efficacy	-.080	.105	-.052	-.762	.446	.493	2.027
Internet Efficacy	.199	.080	.145	2.496	.013	.689	1.451
Legacy	.063	.059	.063	1.077	.282	.674	1.484
Social Capital	.173	.067	.151	2.589	.010	.676	1.480
Internet Access	.003	.070	.002	.036	.971	.716	1.397
Internet Speed	.059	.065	.046	.906	.366	.881	1.135
Mobile Internet	.050	.120	.021	.412	.681	.856	1.168
Education	.013	.060	.013	.214	.830	.628	1.592

a Dependent Variable: Question 78: When given a choice, I would prefer reading/watching news about
entertainment, sports, or lifestyle rather than news about current events or public affairs.

Although media genre choice was predicted both by ability and motivational

variables, the set of predictors included more motivational than ability variables and the

weights of the motivational variables (in particular of political apathy) were larger. These

findings thus are in support of the hypothesis that motivation in particular predicts media genre choice.

Hypotheses Testing – Media Use, Genre Choice, and Political Knowledge

In terms of the third research hypothesis, that is, **media genre choice and level of media use will predict levels of knowledge about a public affairs issue in the news – in this case, the health care reform legislation** (**H3**), we can first look at the correlation between Internet Use, Online News Consumption, Media Genre Choice, and Political Knowledge. As Table 4-16 below shows, Media Genre Choice ($r = -.193$, $p < .01$), Internet Use ($r = .196$, $p < .01$), and Online News Consumption ($r = .199$, $p < .01$) all showed a weak to moderate relationship with Political Knowledge.

Table 4-16

Correlation Matrix (Media Use, Media Genre Choice, and Level of Political Knowledge)

	Internet Use Index	Online News Consumption	Media Genre Choice	Political Knowledge
Internet Use Index	1	.112*	.069	.196**
Online News Consumption	.112*	1	-.065	.199**
Media Genre Choice	.069	-.065	1	-.193**
Political Knowledge	.196**	.199**	-.193**	1

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

To further test these relationships, political knowledge was regressed on media genre choice, Internet use, and online news consumption. As Table 4-17 below shows, this model was statistically significant ($F (3, 329) = 13.267$, $p < .001$), with an *R* square value of .108, suggesting that the Media Genre Choice and Media Use variables

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collectively accounted for roughly 11% percent of the variance in level of political

knowledge.

Table 4-17

Multiple Linear Regression Model (Media Genre Choice, Media Use, Political Knowledge)

R	R Square	Adjusted R Square	Std. Error of the Estimate	df1	df2
.329[a]	.108	.100	.20159	3	329

a. Predictors: (Constant), Internet Use Index, Media Genre Choice, Online News Consumption

To explore the relative impact of the different operationalizations of Media Genre Choice

and Media Use, we once again turn to the regression coefficients. As shown in Table 4-

18 below, Media Genre Choice (β = -.195, t = -3.735, p < .001), Internet Use (β = .191, t

= 3.625, p < .001), and Online News Consumption (β = .165, t = 3.146, p < .01) were all

associated with level of political knowledge. Based on the result of the multiple linear

regressions, we can conclude that the third research hypothesis was supported.

Table 4-18

Regression Coefficients (Media Genre Choice, Media Use, Political Knowledge)

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.548	.058		9.512	.000		
	Online News Consumption	.034	.011	.165	3.146	.002	.982	1.018
	Media Genre Choice	-.039	.010	-.195	-3.735	.000	.990	1.010
	Internet Use Index	.044	.012	.191	3.625	.000	.981	1.019

a. Dependent Variable: PolKnowIndex_Facts

Hypotheses Testing - Motivation, Ability, and Political Knowledge

Taking the third research hypothesis one step further, the fourth research

hypothesis posited that **motivation to learn about politics, rather than ability to learn**

about politics, will predict levels of knowledge about the health care reform

legislation (H4). To see if this hypothesis is supported, political knowledge was

regressed on the individual motivation and ability indicator variables. As Table 4-19

below shows, the variables collectively accounted for 38 percent of the variance in level

of knowledge about the health care reform legislation (F (18, 314) = 10.708, p < .001).

Table 4-19

Multiple Linear Regression Model (Motivation, Ability, and Political Knowledge)

R	R Square	Adjusted R Square	Std. Error of the Estimate		
				df1	df2
.617(a)	.380	.345	.17198	18	314

a Predictors: (Constant), Education, Political Efficacy, Need for Cognitive Closure, Self Concept, Political Ideology, Internet Speed, Mobile Internet, Social Dominance Orientation, Individualism, Internet Access, Need to Evaluate, Legacy, Need for Cognition, Self Interest, Internet Efficacy, Social Capital, Political Cynicism, Political Apathy

To compare the relative impact of the motivation and ability constructs as posited

by the fourth research hypothesis, we can examine the regression coefficients. As shown

in Table 4-20 below, Political Apathy (β = .418, t = 6.356, p < .001) best predicted an

individual's level of political knowledge, suggesting that the less politically apathetic a

person was, the more he or she would know about the issues surrounding the health care

reform legislation. This was followed by an ability variable, Level of Education (β =

.328, t = 5.859, p < .001) and its corollary variable – Legacy (β = -.113, t = -2.093, p <

.05). However, there were several other motivational variables, such as Political Ideology

(β = .117, t = 2.339, p < .05), Self Interest (β = .122, t = 2.234, p < .05) were all

significantly associated with level of political knowledge. This result indicated that

individuals who were politically engaged, had a general interest on various current events

topics, and whose own and parental education attainment was relatively high had higher

levels of political knowledge.

Table 4-20

Regression Coefficients (Motivation, Ability, and Political Knowledge)

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	.017	.119		.145	.885		
Need for Cognition	-.013	.016	-.043	-.817	.414	.705	1.419
Need for Cognitive Closure	.029	.017	.092	1.739	.083	.712	1.405
Need to Evaluate	-.016	.016	-.054	-1.047	.296	.733	1.364
Self Concept	.025	.023	.056	1.079	.281	.734	1.362
Self Interest	.033	.015	.122	2.234	.026	.658	1.520
Political Apathy	.102	.016	.418	6.356	.000	.456	2.192
Political Cynicism	.026	.015	.096	1.742	.083	.648	1.544
Social Dominance Orientation	-.013	.016	-.042	-.812	.417	.736	1.358
Individualism	-.012	.016	-.036	-.724	.469	.782	1.279
Political Ideology	.022	.010	.117	2.339	.020	.790	1.266
Political Efficacy	-.016	.019	-.053	-.839	.402	.493	2.027
Internet Efficacy	-.007	.015	-.025	-.475	.635	.689	1.451
Legacy	-.023	.011	-.113	-2.093	.037	.674	1.484
Social Capital	-.006	.012	-.026	-.477	.633	.676	1.480
Internet Access	.003	.013	.011	.208	.836	.716	1.397
Internet Speed	-.023	.012	-.092	-1.941	.053	.881	1.135
Mobile Internet	.039	.022	.085	1.761	.079	.856	1.168
Education	.065	.011	.328	5.859	.000	.628	1.592

a Dependent Variable: PolKnowIndex

Hypotheses Testing - Motivation, Ability, and Media Outlet Choice

Next, I examined the fifth research hypothesis, that is, **existential motivation and relational motivation, rather than ability to learn about politics, will predict media outlet choice** (**H5**). As discussed in the methods section, an individual's media outlet choice was measured by an open-ended question asking respondents to indicate their primary online destinations for news and information in four categories where applicable: a) Online News Aggregators; b) News Media Web sites; c) Blogs; and d) Social Media and other. The nature of the open-ended question turned out to be somewhat problematic in practice, as respondents could enter gibberish or incomplete sentences in their responses and move on to the next question. To remedy this issue, I decided to focus on the News Media Web sites category as the only operationalization for media outlet choice, because the problem appeared to be less pronounced for responses that fell under this particular category.

To further prepare the text-based responses for analysis with the quantitative measures of motivation and ability variables, the responses were re-coded into a Media Outlet Choice variable using the following scale based on the participants self-reported media outlet choice: 0) No response – respondent indicated none or entered unrecognizable response; 1) Liberal source – respondent indicated mostly liberal leaning media outlets; 2) Neutral sources – respondent indicated ideologically neutral news media outlets, or a balanced set of news media outlets that included both liberal and conservative leaning sources; and 3) Conservative source – participant indicated mostly conservative leaning media outlets.

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To examine the fifth research hypothesis, Media Outlet Choice was regressed on the individual motivation and ability indicator variables. As Table 4-21 below shows, the variables collectively accounted for 18 percent of the variance in a person's media outlet choice ($F_{(18, 314)} = 3.836$, $p < .001$).

Table 4-21

Multiple Linear Regression Model (Motivation, Ability, and Media Outlet Choice)

R	R Square	Adjusted R Square	Std. Error of the Estimate		df1	df2
.425(a)	.180	.133	1.031		18	314

a Predictors: (Constant), Education, Political Efficacy, Need for Cognitive Closure, Self Concept, Political Ideology, Internet Speed, Mobile Internet, Social Dominance Orientation, Individualism, Internet Access, Need to Evaluate, Legacy, Need for Cognition, Self Interest, Internet Efficacy, Social Capital, Political Cynicism, Political Apathy

If we examine the regression coefficients in Table 4-22 below, we could see that Need for Cognitive Closure ($\beta = -.122$, $t = -2.046$, $p < .05$) and Mobile Internet ($\beta = .136$, $t = 2.104$, $p < .05$) were the only two variables that predicted Media Outlet Choice. The rest of the ability and motivation predictors did not produce statistically significant association with the outcome variable. Based on this result, there was insufficient evidence to suggest that a person's motivation, rather than ability, will best predict his or her media outlet choice. Therefore, the fifth research hypothesis was not supported.

Table 4-22

Regression Coefficients (Motivation, Ability, and Media Outlet Choice)

	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	-2.166	.715		-3.030	.003		
Need for Cognition	.020	.097	.012	.201	.841	.705	1.419
Need for Cognitive Closure	.058	.100	.035	.582	.561	.712	1.405
Need to Evaluate	-.193	.094	-.122	-2.046	.042	.733	1.364
Self Concept	.033	.137	.014	.241	.810	.734	1.362
Self Interest	.167	.088	.120	1.902	.058	.658	1.520
Political Apathy	.167	.096	.132	1.740	.083	.456	2.192
Political Cynicism	.048	.088	.034	.542	.588	.648	1.544
Social Dominance Orientation	-.001	.097	-.001	-.015	.988	.736	1.358
Individualism	.071	.097	.042	.727	.467	.782	1.279
Political Ideology	.100	.057	.100	1.743	.082	.790	1.266
Political Efficacy	-.040	.116	-.025	-.343	.732	.493	2.027
Internet Efficacy	.125	.088	.087	1.419	.157	.689	1.451
Legacy	-.050	.064	-.048	-.770	.442	.674	1.484
Social Capital	.050	.073	.043	.684	.494	.676	1.480
Internet Access	.142	.077	.112	1.861	.064	.716	1.397
Internet Speed	.025	.072	.019	.344	.731	.881	1.135
Mobile Internet	.202	.132	.084	1.528	.128	.856	1.168
Education	.140	.067	.136	2.104	.036	.628	1.592

a. Dependent Variable: MediaOutlet_Choice

Hypotheses Testing – Media outlet Choice and Structure of Knowledge

I now turn to the sixth research hypothesis, which posited that **structure of knowledge about the health care reform legislation will be correlated with media outlet choice (H6)**. Since an individual's structure of knowledge was measured by an open-ended question asking survey respondents to come up with keywords or phrases associated with the health care reform legislation, *NVivo* software (Version 9.0) was

utilized to analyze the text-based response. To begin the analysis, responses were first

sorted into four groups based on the respondents' Media Outlet Choice. For example, the

responses by those who indicated liberal leaning media outlet choice were grouped

together. The same procedure was repeated for those who indicated conservative media

outlet choice, neutral media outlet choice, and those who did not clearly report their

media outlet choice.

After the responses were categorized, they were submitted to *NVivo* for analysis.

The same coding nodes used in Study 1 (see Table 3-4) to analyze news stories were

applied to code the responses, group by group, in order to find out: a) whether the coding

nodes appear in the responses; and b) if they do, which coding nodes appear the most

often. Answering these questions would shed lights on *whether* and *what* important

concepts about the health care reform legislation that were reported in the news media, as

represented by the coding nodes, were actually received by the media audience. The

results of this coding were then tabulated into bar charts for comparison purposes. As

Figure 4-9 below shows, 8 out of the 18 coding nodes were mentioned by participants

who reported that they relied on multiple or ideologically neutral news sources, with

"insurance companies" appearing most frequently, followed by "public option."
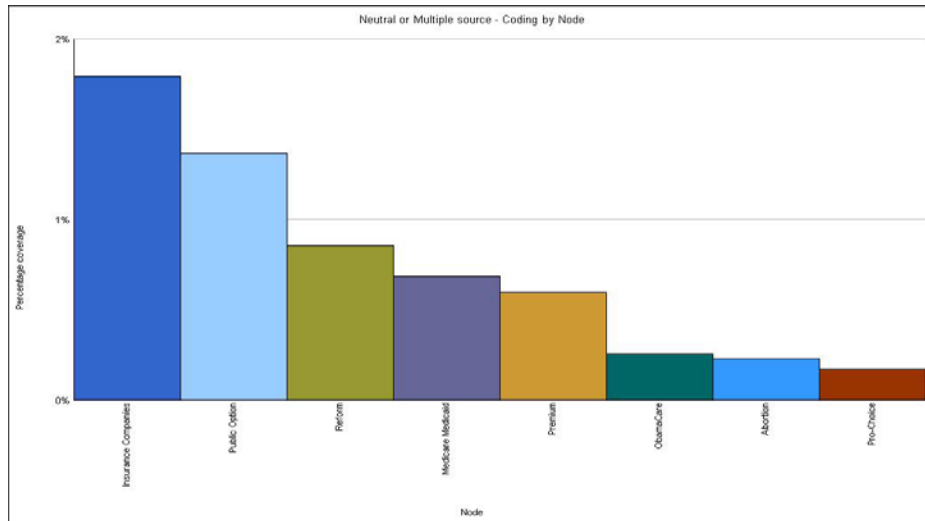
Figure 4-9. Frequency of References – Neutral or Multiple Source. This figure illustrates how often the different coding nodes were mentioned by respondents who indicated they used multiple or ideologically neutral media outlets for news and information.

Similarly, as Figure 4-10 below shows, for those participants who did not clearly indicate their news sources, they collectively mentioned 7 out of 18 coding nodes, with "insurance companies" also appearing the most often, followed by "Medicare/Medicaid."
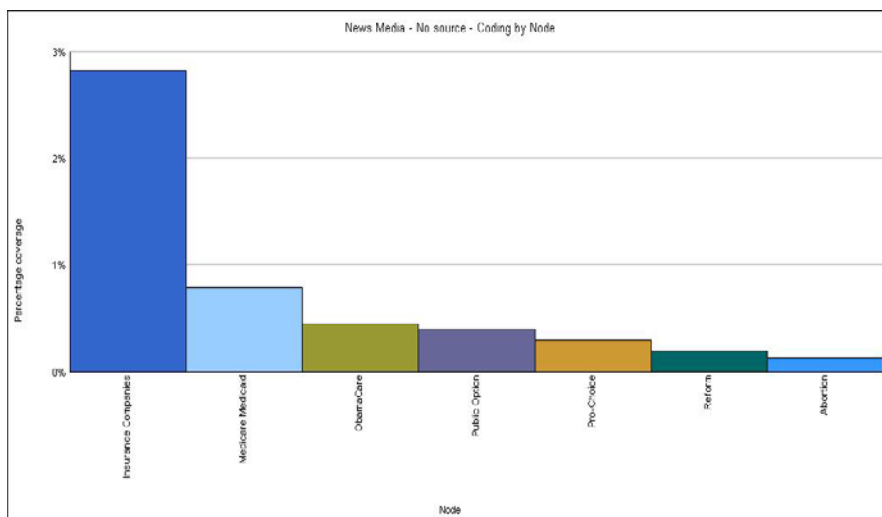
Figure 4-10. Frequency of References – No Source. This figure illustrates how often the different coding nodes were mentioned by respondents who did not clearly indicate their media outlets choices for news and information.

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In contrast to participants who relied on ideologically neutral news sources or did not indicate their news outlet choice, those who turned to more partisan and ideological leaning news sources had a different pattern in their responses. As Figure 4-11 below shows, only 4 out of the 18 nodes were mentioned by participants who reported using conservative media outlets as their news sources, with "Medicare/Medicaid" receiving most mentions, followed by "insurance companies."
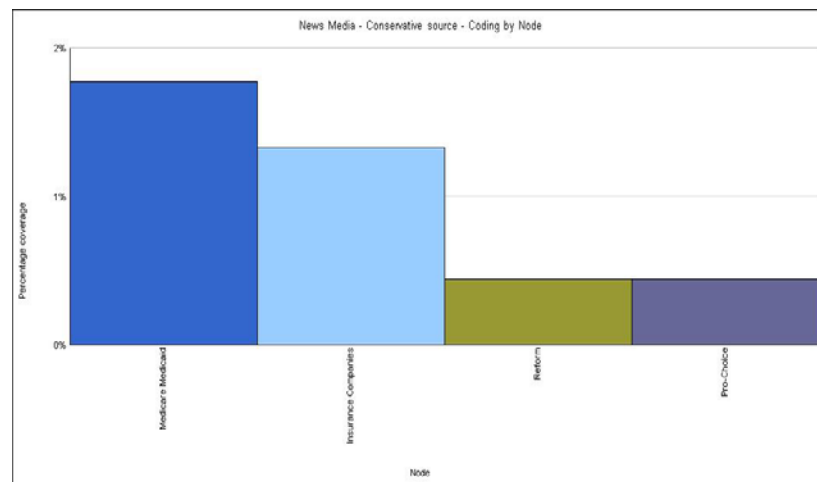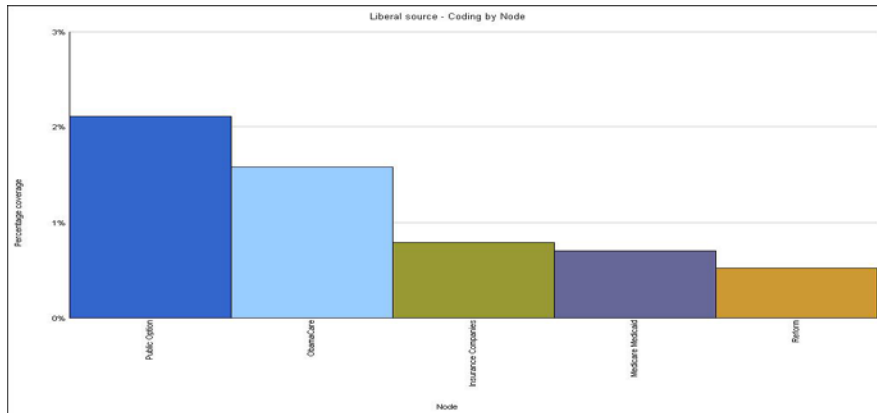

Figure 4-11. Frequency of References – Conservative Source. This figure illustrates how often the different coding nodes were mentioned by respondents who indicated they used conservative leaning media outlets for news and information.

On the other hand, for those participants who turned to more liberal leaning media outlets for news and information, they mentioned 5 out of 18 nodes in their responses (see Figure 4-12). Not surprisingly, the "public option" plan that was supported by the Democrats received the most mention. Interestingly, however, this was followed by "Obamacare," a term commonly used by conservatives when referring to the health care reform legislation.

Figure 4-12. Frequency of References – Liberal Source. This figure illustrates how often the different coding nodes were mentioned by respondents who indicated they used liberal leaning media outlets for news and information.

The comparisons drawn from these bar graphs were useful because they showed that the coding nodes, representing the media frames provided by various media outlets about the health care reform legislation, were actually *received* by the media audience. Further, media audiences who relied on different media outlets as their primary sources of news and information came up with different media frames (both in terms of number and content) when asked to freely come up with terms and concepts associated with the health care reform issue, suggesting that they may have differently interpreted and perceived the same issue.

To analyze the participants' responses, a cluster analysis was performed to see whether and how the different categories would converge together. As Figure 4-13 below illustrates, the dendrogram showed multiple branches, where similar response categories were clustered together on the same branch and different categories further apart. The dendrogram also showed three levels, with the lowest level consisted of the responses from participants who reported to use ideologically neutral or multiple media outlets for news and information, and from participants who did not clearly indicate their media

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outlet choice. Moving up one level, these two categories were considered the same entity

when comparing to the responses from participants who reported to rely on conserved

leaning media outlets. Finally, at the highest level, responses from conservative source,

multiple/neutral source, and no source were seen as one entity in comparison to responses

from participants who used mostly liberal leaning media outlets for news and

information.

Figure 4-13. Source Cluster (Survey Responses). This figure illustrates the results of the
cluster analysis.

Taken together, these tests provided evidence for the hypothesis that **an**

individual's structure of knowledge about the health care reform legislation will be

correlated with his/her media outlet choice, as participants who relied on different

media outlet for news and information recalled different concepts and ideas associated

with the health care reform. Based on the result of these test, it can be concluded that the

sixth research hypothesis was supported.

Hypotheses Testing – Motivation, Ability, and Structure of Knowledge

Finally, we turn to the last research hypothesis, that is, **existential and relational**

motivation will predict structure of knowledge about the health care reform

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legislation (H7). This particular research hypothesis was challenging to test, because

while the survey respondents' motivation and ability to learn about politics were

measured using various scales discussed previously, their structure of knowledge about

the health care reform legislation was measured using an open-ended question. In

addition, the open-ended nature of the question sometimes led to responses that either did

not make sense, such as unidentifiable gibberish, or did not necessarily represent a

person's knowledge structure, such as an emotional rant toward the government.

Consequently, the text-based measure of knowledge structure were re-coded into a

Knowledge Structure measure that consists of three categories: (1) responses that indicate

opposition or an "against" position toward the health care reform legislation; (2)

responses that indicate a "neutral" stance toward the issue; and (3) responses that indicate

support or a "pro" position toward the issue.

Next, the Knowledge Structure variable was regressed on the individual

motivation and ability indicator variables. As Table 4-23 below illustrates, the variables

collectively accounted for 16 percent of the variance in structure of knowledge on the

health care reform legislation, $(F (18, 314) = 3.404, p < .001)$.

Table 4-23

Multiple Linear Regression Model (Motivation, Ability, and Knowledge Structure)

R	R Square	Adjusted R Square	Std. Error of the Estimate		df1	df2
.404[a]	.163	.115	.659		18	314

a. Predictors: (Constant), Education, Political Efficacy, Need for Cognitive Closure, Self Concept, Political Ideology, Internet Speed, Mobile Internet, Social Dominance Orientation, Individualism, Internet Access, Need to Evaluate, Legacy, Need for Cognition, Self Interest, Internet Efficacy, Social Capital, Political Cynicism, Political Apathy

To further examine whether existential and relational motivation will best predict a person's structure of knowledge on the health care reform issue, I turn to the regression coefficients. As shown in Table 4-24 below, an individual's structure of knowledge is best predicted by Political Ideology ($\beta = -.204$, $t = -3.505$, $p < .01$), followed by Social Capital ($\beta = .136$, $t = 2.17$, $p < .05$) and Individualism ($\beta = -.116$, $t = -1.986$, $p < .05$). Two of these three variables that were found to be associated with a person's knowledge structure fall under the relational motivation category, and none of the existential motivation variables revealed statistically significant results. Taken together, it can be concluded that the last research hypothesis was partially supported.

Table 4-24

Regression Coefficients (Motivation, Ability, and Knowledge Structure)

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	2.295	.457		5.022	.000		
Need for Cognition	-.095	.062	-.094	-1.526	.128	.705	1.419
Need for Cognitive Closure	-5.72E-005	.064	.000	-.001	.999	.712	1.405
Need to Evaluate	.061	.060	.061	1.004	.316	.733	1.364
Self Concept	.071	.088	.048	.805	.422	.734	1.362
Self Interest	.081	.056	.092	1.439	.151	.658	1.520
Political Apathy	-.011	.061	-.014	-.182	.856	.456	2.192
Political Cynicism	-.102	.056	-.116	-1.811	.071	.648	1.544
Social Dominance Orientation	.067	.062	.065	1.078	.282	.736	1.358
Individualism	-.124	.062	-.116	-1.986	.048	.782	1.279
Political Ideology	-.128	.037	-.204	-3.505	.001	.790	1.266
Political Efficacy	.024	.074	.024	.330	.742	.493	2.027
Internet Efficacy	-.034	.056	-.038	-.612	.541	.689	1.451
Legacy	-.078	.041	-.120	-1.904	.058	.674	1.484

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Social Capital	.102	.047	.136	2.170	.031	.676	1.480
Internet Access	-.007	.049	-.009	-.144	.886	.716	1.397
Internet Speed	.019	.046	.023	.423	.672	.881	1.135
Mobile Internet	.056	.085	.037	.659	.510	.856	1.168
Education	.060	.043	.092	1.408	.160	.628	1.592

a Dependent Variable: Healthcare_Coding

DISCUSSION

As presented in the sections above, results from the online survey revealed interesting insights into the relationship between an individual's motivation/ability to acquire information about politics, their media use patterns, and the resulting knowledge about the health care reform legislation. By focusing on the media audience, the findings of this study complement the first study that examined these issues from the perspective of media content. To conclude Study 2, I will discuss some of the key findings in light of existing literature and address several issues and questions that deserve further attention in future studies.

Motivation, Ability, and Media Use

Mass media is an important source from which people can learn about the world and the environment that surrounds them. In the OMA framework for political learning, mass media represent the "opportunity" for people to engage with politically relevant information and acquire political knowledge. Through the review of literature, I have argued that an individual's level of motivation and ability to acquire information about politics might influence his or her media usage patterns, and the results from the online survey appeared to confirm this claim.

As presented previously, the motivation and ability indicator variables explained a fair amount of variance in a person's *level of media use*. For example, the variables collectively accounted for roughly 25 percent of the variance in both general Internet use (including frequency and length of usage), as well as the frequency of online news consumption. Given the vast amount of variables that could play a role to influence individual behavior and level of engagement with mass media, the explanatory power

that these 18 variables demonstrated was rather impressive. In terms of *media genre choice*, that is, whether a person would prefer to consume news or entertainment media content when given a choice, the results of multiple regression analysis were positive as well. The motivation and ability variables collectively accounted for 27 percent of the variance in an individual's media genre choice. Once again, this represents a fairly large amount of variance explained, given all the possible factors that could play a role in determining individual choices. Finally, with regards to media outlet choice, that is, the specific news and information outlet of a person's choice, the motivation and ability variables accounted for a slightly smaller percentage – roughly 18 percent, but still represent a fair amount of the variance explained.

Taken together, these findings show that this study's indicators of motivation and ability regarding obtaining political knowledge were in fact important factors that determine what drives people to use mass media. Further, they lend empirical support to the idea that an individual's motivation to seek out political information and the ability to process that information may influence his or her media consumption patterns. However, this idea is not particularly surprising, given that scholars have long noted the role of individual-level variables in a person's media use. For example, the uses and gratification theory suggests that media audience play an active role in choosing and using the media based on their individual needs in order to fulfill specific gratifications (Blumler & Katz, 1974). What is more interesting when considering the results, is to think about what among the individual motivation and ability factors would matter more in influencing media usage patterns. Let us consider this question next.

Motivation versus Ability in Predicting Media Use

I have argued that, in the contemporary media environment where individuals have greater control and choices over what media content they engage with, a person's motivation will be *a relatively stronger* predictor for both the level of media use and the specific type of content that people choose to consume. The result of multiple-linear regression provided mixed support for this claim. For example, regression analysis failed to provide adequate statistical evidence to support the idea that **motivation to learn about politics, rather than ability to learn about politics, will best predict levels of media use**.

As mentioned previously, this may be attributed to how this research hypothesis was conceptualized in the first place – that is, the idea of media use is building upon a person having access to the technology and possessing the know-how to operate the technology. It should not be a surprise that Internet Access and Internet Efficacy most strongly explained level of media use and online news consumption. However, if we were to acknowledge that the first research hypothesis was poorly worded and look to see what might explain an individual's Internet usage pattern beyond having basic access and efficacy, then the effect of a person's motivation to learn about politics becomes much more pronounced. More specifically, Need to Evaluate was found to motivate general Internet use, and Self Interest was found to motivate online news consumption.

In terms of a person's preference for news or entertainment oriented content – that is, media genre choice, regression analysis revealed that the motivation variables identified by this study – particularly, a person's level of political apathy, social dominance orientation, need for cognition, and self-interest were found to be correlated

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with a person's media genre choice. The statistical analysis therefore supported the second research hypothesis that posited **motivation to learn about politics, rather than ability to learn about politics, will predict media genre choice**. Finally, with regards to the specific news and information outlets – that is, an individual's media outlet choice, regression analysis only found two predictors that were statistically significant. While one predictor, Need for Cognitive Closure, fell under the motivation construct, the other, Mobile Internet access, fell under the ability construct. As such, the idea that **motivation, rather than ability to learn about politics, will predict media outlet choice**, was not supported.

Taken together, results from my statistical analysis provided *some* empirical support for the theoretical contention that a person's motivation to seek out and acquire information will be a more important predictor for one's media usage patterns, compared to his or her ability to access or process media information. As discussed here and in previous sections, with the mixed results partly due to how the research hypothesis was conceptualized originally, it should be noted that future studies should approach this question more cautiously. Perhaps a more appropriate way to frame the research question or hypothesis is to add more nuances to the description. For example, the first research hypothesis could be re-written as "among those individuals who have access to media technology, their motivation to learn about politics, rather than ability to process political information, will better predict levels of media use." In doing so, I take into account the assumption of access in media use, and can subsequently better examine the theoretical question that I hope to address.

Media Frame versus Individual Frame

With regards to learning about politics from mass media, let us further examine the finding that some of the media frames offered by various media outlets about the health care reform legislation as noted in Study 1 were mentioned by survey respondents when asked about the words, phrases, and concepts that they associated with the issue of health care reform in Study 2. This finding was remarkable in two ways. First, since the response was solicited in the survey using open-ended question format, it was not possible for the researcher to provide any prompts or aids that could possibly guide the respondents in their answers. As such, respondents could respond in whichever ways and write whatever came to their minds at the time of taking the survey,. The fact that their responses coincided with the media frames coded in the news stories thus offers evidence for the argument that the information sources that media audiences rely on will help shape his or her interpretation of current events or public affairs issues.

Second, it is worth noting that the survey was deployed in September 2010, roughly six months *after* the health care reform legislation was passed. Given the time lapse between the issue was heavily reported in the news and the time when respondents took the survey, it was rather impressive to see that the individual frames expressed by the survey respondents still matched up with media frames offer by news media outlets to a certain extent, given the wide range of factors, such as memory, news salience, and etc., that could contribute to the erosion of people's ability to recall or effectively express the ideas and phrases that they associate with the health care debate. Therefore, one would think that if the survey was conducted earlier in the year, or at the time when the debate over health care reform was still ongoing, perhaps an even stronger connection between

media frames and individual frames would have been found, as news about the issue would be fresh in the minds of the media audience. Nevertheless, the time factor discussed here still provides further evidence that supports the idea that mass media may shape the views of the media audience.

Finally, another aspect of finding about the individual frame that warrants further discussion is the fact that respondents who indicated that they relied on different media outlets for news and information also associated different concepts and ideas that they had about the health care reform legislation. The differences seen in this instance were not only in support of the horizontal knowledge gap phenomenon, they may also underscore a number of issues. For example, respondents who did not clearly indicate their news source and those who indicated that they relied on multiple or ideologically neutral news sources both expressed greater number of individual frames that matched with the media frames, compared to respondents who embraced more ideologically partisan media outlets for news and information. In addition, in my own reading of the responses, I also noticed that respondents who relied on partisan media outlets also tended to use more emotionally charged phrases in their responses. This was especially true for those who were against the legislation, as they would use phrases such as "sucky" or "lame" when asked about the concepts they associate with the issue. On the other hand, those who used multiple or ideologically neutral media sources were more likely to respond in more "objective" manner and when asked the same question.

Taken together, these patterns may suggest that perhaps, partisan media consumption could make media audiences become more narrow-minded, and yet more susceptible to mobilization effort or persuasive messages since they are emotionally

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aroused. This may only be a speculative claim at this point, but looking at anecdotal evidence from listeners of political talk radio that are known to share these partisan tendencies, it is not difficult to see why the same kind of partisan polarization may also happen to audiences of online media as well. In fact, as noted in Chapter 3, this trend of the polarization of news consumption has been observed by a number of studies conducted in recent years, and is believed to continue in the future. Therefore, the differences between partisan and non-partisan media use, and their subsequent impact on a range of individual level outcomes (e.g., political attitudes, behaviors, and so on) represent an interesting and important area of inquiry that can be examined in future studies.

The Role of Social Networks

Finally, it should be noted that the regression analysis revealed a trend that pointed to a person's involvement with his or her social capital and social network as a one of the important factors that drive media use. For example, an individual's Self Interest about the news topic, Social Capital, and Mobile Internet Access were all found to be associated with a person's online news consumption. The combination of these variables may suggest a reciprocal pattern of *mobile* online news consumption and social sharing, in which individuals may send and receive news information that are relevant to their interests to and from their social networks. While this claim may be a speculation at best, as the present study was not adequately designed to fully examine this question, this issue may be worthy of investigation in future studies, as news media outlets are

increasingly developing mobile platforms to publish their content while encouraging media audience to share online news stories with their social network.

In addition to online news consumption, the social capital measure was also found to be associated with an individual's media genre choice. More specifically, those with greater levels of social capital tended to have stronger preference for soft-news, that is, news and information about entertainment, lifestyle, or sports. Interestingly, this result concurs with several existing research findings, in which scholars have noted that much of the content that are being circulated via social media could be classified as entertainment. In other words, media audience do not use these social media or mobile communication platforms to share serious material (foreign policy news, for example) with their social networks, but only contents that they either find interesting or worthy of conversational values. Once again, this observation may only be a speculation, as the present research only addressed a limited number of activities are known to contribute to a person's social capital. As such, future studies may further pursue this line of inquiry to examine a wider range of activities or factors that are positively linked to a person's level of social capital.

On a related note, the idea that greater levels of social capital leads to stronger preference for soft news stands in stark contrast with the assertion previously made by scholars (e.g., Putnam, 1995; 2000) that a person's level of social capital subsequently have a positive contribution to the society's collective level of civic engagement and social trust – and is therefore fundamental to the functioning and maintenance of a democracy. This argument may be sound, but it builds on the assumption that social capital are utilized in activities (e.g., receiving information about politics, volunteering in

community organizations, etc.) that are known to have a positive influence on a person's level of civic engagement and participation. However, if people are tapping into their social capital and interacting with their social networks, but as the present research finds, only to be receiving or engaging with content that are mainly *entertainment* in nature, then this assumption cannot stand. As such, the implication of this particular finding is that perhaps, contrary to what several sociologists had believed, social capital has never disappeared or is in decline in America. In fact, one could argue that with the increasing popularity of social media and various mobile communication devices, the average person's level of social network and social capital should be on the rise. The real question to be asked is what people do with their social capital – whether they are using it in ways that may contribute to their political life or not.

In sum, as social media, social networks, and peer-to-peer sharing continue to become the hallmarks of today's media environment, and more traditional media outlets are merging their content through these platforms, scholars should also pay more attention to what the implication of these trends might be to a range of issues, concepts, and arguments that are originally constructed in a different context – such as the one discussed here with regards to social capital. To that end, the results found by the present study may help inspire future research.

CHAPTER V
GENERAL DISCUSSION

This dissertation set out to investigate the implications of the contemporary media environment on an individual's political knowledge through the lens of a horizontal and vertical knowledge gap framework. Using two complementary studies, I examined the existence of the two types of knowledge gap and also explored the possible macro-level (e.g., media content) and micro-level (e.g., media audience) factors that may contribute to their emergence. Results from the two studies were mixed. On one hand, there were some positive findings that provided empirical support to theoretical premise of this research. On the other, a number of research hypotheses were not fully supported, but they revealed important issues that could be addressed or improved upon in future research. In the final chapter of the dissertation, I offer a discussion that contextualizes the findings in light of existing literature while addressing several issues and areas of inquiry that deserve more attention in future studies.

To begin, I briefly review the key findings from Study 1 and Study 2 and discuss the important issues that they raised. I then revisit the conceptualization of the motivation and ability constructs, and consider the methodological and conceptual limitations involved in designing the two studies. Further, I discuss the theoretical contribution of this dissertation as well as the practical implication on journalism and strategic communications. Finally, I reflect on my experience in conducting this research and offer some closing thoughts on several issues that are critical to advancing political communication research in the contemporary media environment.

Key Findings – Differing Realities in Media Coverage

First, a study was designed to examine whether the theorized two types of knowledge gap actually materialize in the coverage of a public affairs issue, using the health care reform legislation in 2010 as a case. Drawing from the existing media bias and media effects literature, Study 1 aimed to investigate: a) the media frames associated with the issue of health care reform legislation; and b) whether the media frames identified differ for various media outlets. Content analysis conducted over a period of 30 days found interesting results that not only illustrated how different news organizations reported the event differently, but also revealed evidence that this difference in coverage had a pattern of polarization. This pattern of polarization could be observed from two perspectives. First, media outlets that share similar technological characteristics (e.g., print or broadcast oriented versus Web only media organization) were found to produce similar news stories on the health care reform legislation. Second, media outlets that share similar ideological stance (e.g., conservative versus liberal leaning) also produced stories with a remarkable degree of similarity.

What exactly did this pattern of polarization lead to in terms of the content of the coverage? Liberal leaning media tended to offer media frames that emphasized the potential benefits of the health care reform legislation and projected the Obama administration and congressional Democrats under favorable lights, while casting the Republicans as ideologues who refused to collaborate and negotiate for the greater goods. In contrast, conservative leaning media offered media frames that highlighted the polar opposite. Not only did they underscore the potential problems with the health care

overhaul, they also portrayed the Obama administration as irresponsible to increase spending at a time when the economy is recovering and the government deficit is high.

In short, these media frames projected different interpretations of the health care reform legislation to the media audience by highlighting certain aspects of this issue in their reporting over others. Combining this polarization in new content with the diverging pattern of news consumption by media audience discussed earlier, that is – people are increasingly turning to news and information outlets that are compatible with their ideological beliefs (see Figure 3-1 and Figure 3-2), we then have the basis for the formation of a horizontal knowledge gap, where individuals surround themselves with homogenous information sources according to their existing ideologies, and thus strengthen the beliefs that they already hold on to or arrive at an interpretation of a public affairs issue based on what these media outlets portray. In addition, if people were empowered to have greater control and choices over what media outlets they rely on for news, it follows that they could also choose *not* to consume any news and information sources because they simply are not interested. This is the basis for the formation of a vertical knowledge gap, where individuals who are motivated to learn about public affairs issues or current events may easily do so by tuning into a vast amount of information afforded by Internet and other communication channels, and those with less interest and motivation to learn about politics may also gravitate toward other media content that better fits with their interests or tastes. Over time, a gap in knowledge about politics may thus be observed between these two groups. To further examine the existence of these two knowledge gaps and explore the possible micro-level antecedents that may contribute to their formation, a second study was conducted to focus on the relationship between

individuals' motivation, ability, their media consumption pattern, and the subsequent knowledge about the health care reform legislation.

Key Findings – Motivation, Ability, and Level of Political Knowledge

Building on the opportunity-motivation-ability framework of political learning and the high choice/high control characteristics of the contemporary media environment, I argued that, in terms of media usage patterns and the resulting acquisition of political knowledge, *individuals' various motivational drives to learn about politics, rather than abilities to process such information, will be a stronger predictor of his or her political knowledge.* To investigate this general argument, Study 2 constructed a series of research hypotheses and deployed an online survey to a national panel consisted of 333 participants. Results from the survey showed a mixed support for this claim.

For example, the length and frequency of a person's Internet use and whether or not the person engages in the consumption of news online were all best predicted by variables that indicate ability. This does not support the hypothesized superior strength of motivation, which was in part based on a review of the literature. However, media genre choice, which refers to the preference to consume public affairs rather than entertainment type of programming, was best predicted by variables related to a person's motivation to acquire news and information about politics. More specifically, Political Apathy had the strongest predictive power, followed Social Dominance Orientation, Need for Cognition, and Self Interest. All the predictor variables, including motivation and ability variables, accounted for 27 percent of the variance in an individual's media genre choice, which arguably is substantial.

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Finally, my analysis also showed that an individual's preference for public affairs content (media genre choice) and the length and the frequency of online news consumption (level of media use) collectively predicted political knowledge regarding the issue of health care reform. Taken together, these results lend some empirical support to my contention that, in the high control, high choice media environment today, level and type of motivation have a more profound impact on the tendency to engage with relevant media content or other media related activities compared to the person's socio-economic background.

The Knowledge Gap Hypothesis Revisited

If we accept the notion that motivation is now more important than ability when it comes to predicting media usage patterns and political knowledge, does that mean that the original knowledge gap hypothesis as proposed by the Tichenor team is no longer accurate? That would not be the appropriate interpretation of the findings of this dissertation. While mostly a macro-level analysis, the original knowledge gap hypothesis did leave the window open for micro-level influences. Indeed, knowledge gap research conducted by Ettema and Kline (1977) and other scholars offered evidence why individual level variables may play a role in the acquisition of information and knowledge.

Further, although the original knowledge gap idea pointed to education attainment as the primary factor responsible for differences in political knowledge, it was an accurate observation given the disparity of education in the U.S. population at that time (see statistics discussed in Chapter 2). However, as education level among American

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adults has steadily increased over the last few decades, it becomes more and more difficult to find those in the population that, say, did not finish high school. Whereas disparities in, for example, literacy and numeracy, will never disappear, basic abilities to read and write have now so much advanced since Tichenor's early work. Therefore, it is possible that the explanatory power of educational attainment on individual's level of political knowledge will be less pronounced today, compared to that of the 1970s.

Second, at the time that the original knowledge gap hypothesis was formulated, the media landscape was dominated by newspapers, which, as scholars (e.g., Kleinnijenhuis, 1991) have pointed out, requires higher level of cognitive and intellectual ability from the readers to comprehend its complex content. The rise of network and later cable television was noted by scholars (e.g., Hobbs, 1987; Perloff, Wartella, & Becker, 1982) as one of the reasons why knowledge gaps in our society may be closing because of television's audio and visual cues. The media landscape today, as discussed in Chapter 2, is one that is characterized by increased number of media choices and greater audience control, and a saturated and unfiltered information environment. It can therefore be argued that media audiences today are dealing with a completely different media environment than 30 years ago.

Finally, the cultural shift that accompanied the change in the larger technological landscape should also be recognized. Many scholars have noted that media audiences today are more "active"– in the sense that there is a greater demand and expectation for interaction and participation in the media production process. The term "prosumer" has been used widely to describe the blurring boundary between those who produce media content and those who consume them – a feature noted by Ritzer and Jurgenson (2010) as

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the salient characteristic of the Web 2.0 era. A good example of this trend is the sheer number of user-generated content that have not only populated online video sharing channels such as *Youtube*, but are now increasingly being adopted by media conglomerates in more traditional media outlets. This kind of "participatory culture" is the bi-product of the empowered media audience, and is one of the reasons why the "individual" should receive more attention when considering the question of media use and political knowledge.

All in all, it stands to reason that knowledge gaps may manifest themselves differently than initially conceptualized, given the evolution of the media environment as well as the changes in the audience's media consumption behavior, and this dissertation set out to examine just that.

Vertical versus Horizontal Knowledge Gaps

So what can we say about the knowledge gap phenomenon based on the result of this dissertation? The findings of this dissertation indicated that, while the original knowledge gap idea is still very much relevant, the "source" from which the disparity is derived is different because of the changing socio-technological environment. This source consists of a person's *motivation*, which may include epistemic, existential, and relational components, as well as *ability*, which may include perceived, actual, and inferred components. I argued that the set of motivational factors would be the stronger predictors for media usage patterns, and consequently, political knowledge compared to ability factors,

In addition, I proposed that as a result of the motivation driven media consumption pattern, we would also see an emergence of a vertical knowledge gap, an idea that is similar to the original knowledge gap concept, based on individual's media genre preference for news or entertainment. This phenomenon was also found in the survey sample: Individuals who possessed higher level of general political knowledge as well as specific issue knowledge about the health care reform tended to be more inclined to engage with information cognitively and also have stronger preference for public affairs programming over entertainment. The evidence for a vertical knowledge gap found in this study illustrated my contention that the original knowledge gap phenomenon is still very much alive today – only that the source that causes the disparity may be different.

Finally, within the confines of news consumption, the findings also suggested that we would see an emergence of a horizontal knowledge gap, an idea that individual would gravitate toward news content based on his or her existing political ideologies. The content analysis conducted in Study 1 found evidence that, from the media perspective, "news with an angle" – that is, news coverage based on the news organization's ideological leanings, is becoming more prevalent. The audience survey deployed in Study Two suggested that individuals are selecting media outlets based on their ideological preferences. Not surprisingly, their knowledge about the health care reform also matched with the coverage of the issue from the respective news outlets. In other words, the media frames projected by the news organizations matches well with the individual frames found in the citizens' knowledge. In both cases (individual and media frames), the

knowledge and coverage appeared to be polarized, indicating that the horizontal

knowledge gap phenomenon may be taking place.

In sum, the vertical and horizontal knowledge gap framework represent an

interpretation of the original knowledge gap idea in the context of today's media

environment. The existence of this phenomenon and the individual level motivational

antecedents that contribute to its emergence are extensions of previous research findings.

For example, scholars have noted that while education (or ability) may predict the

existence of a knowledge gap, the *development* of knowledge gap can only be explained

by motivation, as people with higher motivation tended to learn and process knowledge

faster than those with lower motivation (Ettema et al., 1983; Gaziano et al., 1998).

Therefore, although I do not argue that education (or ability) is of no importance or that it

should be neglected when considering the formation of knowledge gap today, it is my

contention based on this dissertation research that motivational factors contributing to

media consumption play a *relatively* stronger role and deserves more scholarly attention.

Motivation and Ability Variables Reconsidered

As summarized above, while I found some support for motivational factors in

explaining knowledge gaps, the findings were not strong and consistent enough to

unequivocally establish the claim that motivation is more powerful than ability. The

reason why the findings were less than conclusive may be traced back to the fact that the

OMA framework, albeit offering a useful way of thinking about how people learn about

politics, does not offer a set of specific measures that can be used to observe differences

at the individual level. As a consequence, I operationalized the OMA concepts using existing measures in order to test the theoretical idea.

The six sub-constructs of the motivation and ability constructs and their indicators were identified from relevant literature. The indicator variables had good face validity as proxies of desire to acquire information about the world, but it is also true that they were originally developed as specific motivational aspects. Consequently, the scales designed to measure these variables have been demonstrated to have strong discriminant validity. This explains why the various indicator variables did not load well together on single factors (see Study 2). This, of course, does not necessarily falsify the OMA framework. Indeed, there may be variables that better tap motivation and ability as conceptualized in the OMA framework that were not assessed in this dissertation.

The implications are that not all variables have tapped motivation to obtain political knowledge, which my regression results also indicate, and that if the variables group together, they group together differently than I anticipated. To explore alternative grouping, I conducted an exploratory factor analysis (EFA). EFA was a particularly useful tool in this situation because it could help "explain the variance in the observed variables in terms of underlying latent factors" (Habing, 2003, pp. 2) and therefore gain a clear view of the empirical (rather than preconceived) structure of the data. I conducted two separate EFAs, one for the motivation construct and the other for the ability construct, in order to see how might the variables form different grouping patterns under the parameter of the OMA framework.

Using principal component extraction, I found that the motivation indicators indicated four factors that cumulatively explained 63.6% of the variance in the original

variables. The first factor consisted of Need for Cognition (factor loading = .609), Self

Interest (factor loading =.737), and Political Apathy (factor loading =.770). The second

factor consisted of Individualism (factor loading =.786) and Political Ideology (factor

loading =.780). The third factor consisted of Need to Evaluate (factor loading =.622) and

Social Dominance Orientation (factor loading =.785). Finally, the fourth factor consisted

of Need for Cognitive Closure (factor loading =.763), Self Concept (factor loading

=.557), and Political Cynicism (factor loading =.699). These results are clearly different

from the factor structure that I specified originally, and thus require a new interpretation.

For example, the first factor generally related to the motivational interests toward politics

caused by perceived importance of engaging in politics or paying attention to public

affairs. I therefore labeled this type of motivation as the motivation for **political**

engagement. The second factor revolved around an individual's political views and

ideological leanings and could be combined into what one might call **ideology**.

Interpretation of the third factor is less straightforward, but it might work to consider an

individual who has high needs to evaluate or form opinions, and who also happens to

hold strong views about where inferior/minority groups belong in society, and be able to

express these ideas when being asked in a survey. Arguably, this person has little

reservation to express his or her internal values and beliefs. Thus, this type of motivation

could possibly be labeled as **expressive control** over opinion expression. Finally, the last

factor centered on cognitive processing styles, and flexibility of thinking about issues, or

trust in others. This type of motivation could therefore be labeled as **cognitive flexibility**.

Turning to the ability construct, I found two factors that together explained 46%

of the variance in the original variables. The first factor consisted of Legacy (factor

loading =.804) and Education (factor loading =.778), while the second factor consisted of

Political Efficacy (factor loading =.731), Internet Efficacy (factor loading =.715), and

Internet Access (factor loading =.657). The first factor basically had to do with "self" and

parent's educational level, and as these relate to academic achievement, this factor could

be labeled **intellectual aptitude**. The second factor revolved around perceived ability to

use the Internet, ability to contribute to politics and also to actual access to the Internet.

As one could not comfortably use the Internet to participate in political activities or

information consumption without a) having actual access; and b) feel comfortable about

engaging in these activities, this group of indicators could be described as **engagement**

propensity.

Although the clustering patterns were different from the original factor structure

that I proposed, they did affirm the broader thematic outlines of the motivation and

ability construct in the context of political learning. For example, a person's motivation

to learn about politics may have something to do with his or her cognitive style,

ideological values, and the inherent interest to become politically engaged. Likewise, a

person's ability to process and understand political information may be related to his or

her innate and learned intellectual capacities, as well as the basic access to the said

information, and the belief that he or she can put it to use. While the results of the EFAs

cannot be said to represent the best operationalization of the OMA framework for

political learning, it offered opportunities to think about future exploration into the OMA

framework.

For example, when I grouped the individual motivation and ability variables into

six factors, as suggested by the EFA, and then re-submitted the six factors to multiple

regression models, the results did not significantly differ from what I had obtained

originally when the variables were submitted independently. Among all the dependent

variables in media use and political knowledge that I had tested earlier, the amount of

variance explained by the six factors remained at the low-moderate level. However, it is

worth noting that one of the motivational factors, political engagement, was a

consistently strong predictor across the board. This may imply that perhaps the three

variables that made up the political engagement factor, Need for Cognition, Self Interest,

and Political Apathy, deserve more attention in future studies. On the other hand, the two

ability factors were strong and significant predictors in some instances, but not in others,

suggesting that perhaps a more nuanced approach for examining the influence of ability

on media use and political knowledge is needed in future research.

Methodological Limitations

While this dissertation employed a mixed-methods approach that offered insights

from qualitative and quantitative data, there were some methodological and conceptual

limitations associated with each study that must be acknowledged. For Study 1, the use of

computer assisted qualitative data analysis software had the advantage of allowing me to

analyze over a thousand news stories. However, the potential drawback of this method

was that the context in which the knowledge items or the media frames appeared within

the news stories may be lost. Given the purpose of Study 1 was to "survey" the field of

news coverage on the health care reform legislation, the emphasis on breadth over depth

was therefore necessary in order to collect a large amount of data.

Another methodological limitation with Study 1 that should also be noted was that it only analyzed *one* public affairs issue in the news. While examining additional issues would undoubtedly increase the external validity of the results and provide further insights into patterns of news coverage, this was not possible due to the time and resource constraints. As such, one should be mindful of interpreting the findings of this study within the confines of the health care reform issue. These limitations could be addressed in future studies by investigating additional public affairs issues, which would allow comparisons between different subject matters to see whether the patterns found in this study may apply to all stories, or only to issues that are contentious in nature. In addition, a more in-depth textual analysis could be conducted on selected news stories in order to complement the computer assisted coding technique and provide a fuller view of the construction and perpetuation of media frames.

With regards to Study 2, due to several practical constraints the survey was not deployed when the issue of health care reform was receiving the greatest amount of media attention. With this time lapse, respondents may have possibly forgotten about some of the concepts or ideas centered on the debate over health care reform that was once fresh in their minds. It is also possible that their responses were influenced by the subsequent media coverage of issues that were current after the time period that the content analysis of Study 1 covered. Therefore, time and memory factors were methodological limitations worth noting when considering the individual frames discovered in Study 2 and the media frames identified in Study 1.

Contribution – Why This Line of Research Matters

As noted by Tewksbury (2005), little research has explicitly examined the concerns that the Internet and digital communication technologies might fragment national audiences and polities because the medium is particularly conducive to specialized use. This dissertation therefore begins to fill this void by testing a vertical and horizontal knowledge gap framework, as well as by examining the possible antecedents that could lead to the emergence of this phenomenon. Perhaps one of the most important contributions of the dissertation is that it connects several well-established mass communication research traditions, such as knowledge gaps, media bias, and political learning, to the contemporary media environment.

Given that the majority of these research studies originated from a time when the make-up of the media landscape was much different, the dissertation therefore offers insights into how some of the "old questions" that mass communication scholars are concerned with might play out today. For example, scholars have been concerned with the consequence of a dominant world view or ideology over others being perpetuated in our culture, whether intentionally or unintentionally. Likewise, many studies have also argued for the importance "political knowledge" in the healthy functioning of a democratic system. In both cases, mass media, and particularly media organizations and professionals, are considered to be social institution responsible for much of the success (but more often failure) in promoting diversity of ideas or increasing the level of knowledge in the populace.

While such macro, structural-level approach is not without merit, the findings of this research raise the point that "individuals" – as active participants who enjoy and

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expect greater level of control and choices both in terms of the production and consumption of media content, should also be considered. This, of course, is not an attempt to discharge the mass media or media professionals from the responsibilities or standards that are expected to be held. Certainly, as the content analysis in Study 1 had illustrated, it is problematic that news coverage of a public affairs issue *can* be polarized according to the media organization's ideological leaning. However, what may be more alarming is the fact that, in line with recent research findings, the results of the survey conducted in Study 2 also revealed that individual's motivational drives are now prompting them toward media content. The resulting vertical and horizontal knowledge gap phenomena examined here therefore represent one possible negative consequence that the culmination of this process could lead to.

Further, the dissertation contributes to the emerging field of new media studies, where the question about the impact of new communication technologies on society and individual, as discussed in Chapter 2, has generated a stream of research that either examined the integration or the polarization nature of the Internet. The dissertation contributes to this ongoing discussion about this topic by presenting empirical evidence and theoretical explanation that lends support to the claim that – while the Internet and Web-related technologies have connected individuals and groups together, they also created ample opportunities for them to remain in isolated silos that only serve to. The idea that we live in a society increasingly connected by communication technologies and share a disconnected perception about many common issues may not only be theoretical proposition, but possibly an emerging reality that should not be taken lightly.

In addition to the theoretical contributions, the findings of this dissertation also bear practical implications to media and communication professionals. First, as the result highlights the importance of individual's motivational factors in predicting media usage patterns and the subsequent knowledge level about a public affairs issue, it implies that the key to the dissemination of information in today's media environment is not necessarily to cast the widest net possible in order to reach the greatest number of people. Instead, with media audiences actively choosing what they wish to consume, where to consume them, and through what medium, the key for any strategic communication campaigns hoping to "get the word out" about a product, an issue, or a candidate would be to find the appropriate outlets where the audiences are and to customize the message according to their interests. As discussed previously, this idea of "narrow-casting" is not new to media professionals, but is certainly something that would take a more prevalent role in today's communication campaigns.

On a related note, motivation-driven media consumption pattern also raises the question in terms of persuasion. If media audiences are selecting media content (i.e., their information source) based on their existing preferences and values, then it may become difficult for individuals to become exposed to new ideas and thereby changing the beliefs or behaviors that they already subscribe to. A possible way to make dent into this circle of information flow would be through interpersonal communications. In recent years, scholars have noted the role of interpersonal conversation in affecting the outcome of strategic communication campaigns (cf. Yzer & Southwell, 2007). Findings from the survey conducted in Study 2 also pointed to involvement with social networks as a predictor for level of political knowledge. With the plethora of social media tools

becoming available to the public in the Web 2.0 era, it is therefore worthwhile for media professionals to consider tapping into the potential of conversation in persuasive communication campaigns.

Possible Directions for Future Research

The horizontal and vertical knowledge gap processes examined in this dissertation may help explain how the acquisition of political knowledge may differ among individuals with different motivational interests, political ideologies, or socioeconomic backgrounds. While the results were not overwhelmingly positive, they were encouraging as they open the door for many future studies. I will briefly describe a number of areas that deserve future scholarly attention. First, since political knowledge is known to decline overtime, either as a function of memory or when exposure to such information is stopped (Prior, 2007), one possible direction for future research is to explore whether such a gap in the level and structure of knowledge represent a short-term phenomenon, or a much more enduring effect that has a stronger influence over longer periods of time. The significance of the two knowledge gaps would be greatly increased if it can be shown that they not only exist, but also have a lasting impact on a variety of political behaviors. In addition, since this dissertation uses only one public affairs issue as a case study for political knowledge, I cannot argue that the two knowledge gaps can also be seen in other situations. However, as many scholars who research the original knowledge gap hypothesis have pursued a wide variety of news topics and categories to test its existence and effect, another possible direction for future research is to examine not only a greater number of public affairs issues or news topics, but also issues that are different

in nature, in order to expand the number of cases and samples from which the observation can be made.

In addition, with the EFA results providing new insights into how the variables may group together, future research should re-visit the motivation and ability constructs. For example, how do researchers conceptualize the motivational and ability factor in the context of political learning? And what might be the best indicators that can be used to measure them? With many factors that can contribute to a motivation and ability to engage with information, what might be other indicators not selected by this study that can also be included? These are some of the questions that the present study was not able to adequately address, but deserve more attention in future work. The findings from this research would serve as a foundation that can inform the conceptualization and operationalization of motivation and ability constructs in future endeavors.

Finally, given the finding that involvement with social networks may predict one's level of political knowledge, it would be interesting to further investigate *how* this process is materialized. To that end, this research may provide an opportunity to revisit Gerbner's cultivation ideas in the contemporary context. For example, with a wide array of new communication technologies, one could forward news stories to a friend, post thoughts and opinions via blogs or other social media, engage in online discussions with others, or participate in different kinds of virtual communities. All of these possibilities suggest that media content can now easily become part of the interpersonal communication process via the Internet and other related Web-based technologies. Since individual differences in thoughts and opinions are known to decrease through frequent interaction and conversation (e.g., Esser, 1998; Janis, 1972), it can be said that a new

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form of the *resonance* process may be observed. Whether or not these interpersonal processes would manifest differently, and to what extent they influence a person's level and structure of political knowledge, are therefore appropriate subjects for future inquiries.

Closing Thoughts – The Needs and Challenges for Multilevel Thinking

I began this dissertation with a quote that describes what the media environment looked like more than 30 years ago. The pace and degree through which the ensuing changes in media and information landscape has occurred over the past few decades is not only astounding, but it produces more questions about media and the individuals who experience them faster than scholars can answer. Rather than examining the impact of a specific communication technology (e.g., social media, mobile phone, etc.) on an existing political behavior of phenomenon (e.g., voting, volunteering, etc.), I decided to take a step back and consider what the prevalent *characteristics* of the contemporary media might be, and investigate their potential consequences on one of the most important foundations of an individual's political life – his or her political knowledge.

As argued previously, the questions that this research tries to address indeed deserve continued scholarly attention in the future. However, the process of designing a study that captures the complex interaction between micro-level individual variables and macro-level media influences was not without difficulties. The challenges that directly applied to the execution of the present study were already acknowledged and discussed in the limitations section. In closing the dissertation, I draw upon my experience in conducting this research to reflect on some of larger conceptual and methodological

issues that are pertinent to advancing political communication research in the age of "new" media.

As Slater et al (2006) had rightfully noted, the field of communication research has suffered from communication researchers tending to work within a particular level, as if they are psychologists or sociologists or anthropologists. Consequently, researchers may also tend to conceptualize problems that reside within that particular level, and use appropriate theories and methods to address them accordingly. Of course, there is nothing wrong with this approach, until we acknowledge that communication, and particularly mediated communication, is by nature a multi-level phenomenon. According to Price and Ritchie (1991), communication is "understood as individual action that both is constrained by and generates social organization within a cultural context" (p.134). To fully address the communication process and the corollary issues that arise from it, communication research must crosses multiple levels of analysis. However, despite a need for cross-level research in communication, ''the theoretical and methodological implications of the cross-level ideal have proven difficult to accommodate'' (Price & Ritchie, 1991, p. 134).

My journey with this research started pretty much the same way. Like a sociologist, I began by constructing a narrative that recognizes the changes in the socio-economic and media environment over the last few decades. I then tried to connect the macro-level factors with an individual's acquisition of political knowledge from mass media by introducing the OMA framework for political learning. Finally, I conceptually and operationally defined a set of individual level indicators for the motivation and ability construct, and used them to investigate people's media usage patterns and political

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knowledge, as if I were a psychologist. In other words, to adequately address the questions I had about the acquisition of political knowledge in the contemporary media environment, it was necessary for me to move from the macro, mezzo, and finally to the micro level of analysis.

However, as noted by Price and Ritchie (1991), crossing multiple levels could be a challenging endeavor. For instance, I ran into difficulties in this particular research during the development of the measures and indicators for the motivation and ability constructs, as well as the subsequent analysis of the data. So what does that leave me, and perhaps many mass communication scholars who have recognized the need for multi-level thinking, but yet faced challenges executing them in practice? The answer certainly is not to throw the white towel and give up. Surely one can argue that the theoretical and methodological foundation of the present research would have been more tightly-knit, and the result would have been "cleaner" if I had decided to stay within the same level – and pursue the study from either a psychological or sociological perspective. However, such approach would not allow me to answer the questions that I wanted to ask, which were questions about a communication phenomenon that is multi-level in nature.

To that end, perhaps the advice offered by Pan and McLeod (1991) may help guide myself and other scholars to conduct multi-level communication research in the future. They suggested a number of issues to be taken into consideration when engaging in multi-level thinking and research. First, one must decide whether the properties of the phenomena that are under investigation are concerned with a level, and not the components of the level. Second, one must take into account the time frame appropriate to examine potential levels thoroughly. Finally, one must consider the theoretical

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linkages that connect the proposed levels. Thinking about this project in light of these suggestions, I recognize that there are areas of improvements to be made, or issues that I should have thought of, particularly with regards to the last point. That being said, the result of two studies nevertheless provided some support for my theoretical argument concerning the vertical and horizontal political knowledge gaps in the contemporary media environment. I have learned plenty from conducing this research, and with the knowledge and experience that I acquired, I hope to further pursue this line of research in future studies.

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Media Usage Survey

IMPORTANT INFORMATION - PLEASE READ

About the study

You are invited to be in a research study on media use and political knowledge. We ask that you read this information and ask any questions before proceeding with the survey.

If you agree to be in this study, we would ask you to fill out the following survey. The survey will take about 25-30 minutes to complete, and you will receive 50 ZoomePoints as compensation.

We do not collect any personal information, and the records of this study will be kept private. In any sort of report that we might publish, we will not include any information that will make it possible to identify a subject. Research records will be stored securely and only researchers will have access to the records. Participation in this study is entirely voluntary and you are free to withdraw at any time.

Contacts and Questions:

This study is being conducted by Kevin Wang, Ph.D. Candidate, and supervised by Marco Yzer, Associate Professor, both in the School of Journalism and Mass Communication at the University of Minnesota-Twin Cities. The researchers can be reached at Kevin Wang (wangx908@umn.edu) or Marco Yzer (mcyzer@umn.edu). This study is approved by the university's Institutional Review Board (IRB #1004E80854).

If you have questions or concerns regarding this study and would like to talk to someone other than the researcher(s), you are encouraged to contact the Research Subjects' Advocate Line, D528 Mayo, 420 Delaware St. Southeast, Minneapolis, Minnesota 55455; (612) 625-1650.

Statement of Consent

By clicking on the Submit button below and proceeding with the survey questionnaire, I acknowledge that I have read the above information, asked any questions, and received answers. I consent to participate in this study.

Welcome

Thank you for agreeing to participate in our study! This questionnaire has three parts, each containing roughly 30 questions, and should take about 25-30 minutes to complete.

We will start off by asking a few demographic questions about yourself. Please read the following questions carefully - all questions are required.

Media Usage Survey

Questions marked with an asterisk (*) are mandatory.

1.
* What is your gender?

●   Male

●   Female

2.
* How would you classify yourself?

●   Caucasian

●   African American

●   Asian

●   Hispanic

●   Native American

●   Other, please specify

3.
* Which of the following age groups do you belong to?

●   18-24

●   25-34

●   35-44

●   45-54

●   55+

4.
* What is your approximate household income?

●   <$35K

● $35K-$49.9K

● $50K-$74.9K

● $75K-$99K

● $100K+

5.
* What is your five-digit zip code?

[   ]

6.
* Is English the primary language you use at home?

● Yes ● No

Media Usage Survey

Part I

The first part of the survey contains a series of questions about your personality and the way you like to think and behave.

Please read the following questions carefully and answer them using the scale provided - all questions are required.

7.
* I would prefer complex to simple problems.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

8.
* I like to have the responsibility of handling a situation that requires a lot of thinking.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

9.
* Thinking is not my idea of fun.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

10.
* I would rather do something that requires little thought than something that is sure to challenge my thinking abilities.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

11.
* I try to anticipate and avoid situations where there is likely a chance I will have to think in depth about something.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

12.
* I find that a well-ordered life with regular hours suits my temperament.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

13.
* I find that establishing a consistent routine enables me to enjoy life more.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

14.
* I enjoy having a clear and structured mode of life.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

15.
* I don't like to go into a situation without knowing what I can expect from it.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

16.
* I don't like situations that are uncertain.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

17.
* It is very important to me to hold strong opinions.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

18.
* I like to have strong opinions even when I am not personally involved.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

19.
* I would rather have a strong opinion than no opinion at all.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

20.
* I form opinions about everything.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

21.
* I have many more opinions than the average person.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

22.
* Before criticizing somebody, I try to imagine how I would feel if I were in their place.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

23.
* If I'm sure I'm right about something, I don't waste much time listening to other people's arguments.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

24.
* I sometimes try to understand my friends better by imagining how things look from their perspective.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

25.
* I believe that there are two sides to every question and try to look at them both.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

26.
* I sometimes find it difficult to see things from the "other person's" point of view.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

27.
* I try to look at everybody's side of a disagreement before I make a decision.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

28.
* When I'm upset at someone, I usually try to "put myself in his shoes" for a while.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

29.
* When I see someone being taken advantage of, I feel kind of protective toward them.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

30.
* When I see someone being treated unfairly, I sometimes don't feel very much pity for them.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

31.
* I often have tender, concerned feelings for people less fortunate than me.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

32.
* I would describe myself as a pretty soft-hearted person.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

33.
* Sometimes I don't feel sorry for other people when they are having problems.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

34.
* Other people's misfortunes do not usually disturb me a great deal.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

35.
* I am often quite touched by things that I see happen.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

PART II

Thank you, we are 1/3 through the survey! The second part of the questionnaire contains questions about current events and your political views.

Please read the questions carefully and answer them using the scale provided - all questions are required.

Media Usage Survey

To start off, we will ask you a series of questions about current events and general civic knowledge. This is not a quiz and you will not be penalized for wrong answers, so try the best you can!

36.
* Do you know what political office is now held by Joe Biden?

- ●   Supreme Court Justice

- ●   Vice President

- ●   US Senetor

- ●   Radio Talk Show Host

- ●   Don't know

37.
* How much of a majority is required for the U.S. Senate and House to override a presidential veto?

- ●   1/2

- ●   2/3

- ●   3/4

- ●   Congress cannot override presidential veto

- ●   Don't know

38.
* Do you know which party has the most members in the **House of Representatives** right now?

- ●   Democratic Party

- ●   Republican Party

39.
* In your opinion, what are the **five most important** issues concerning our country right now?
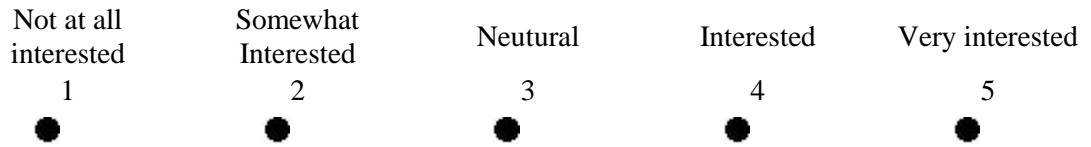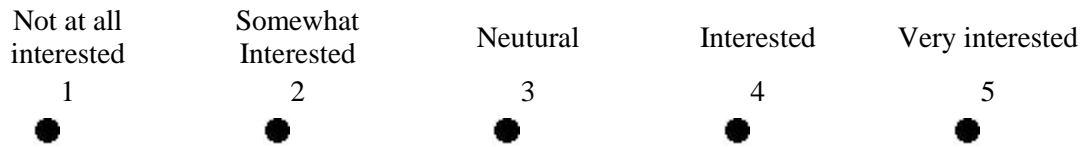
40.
* How personally interested are you on the following news topics
Health care reform

Not at all interested	Somewhat Interested	Neutural	Interested	Very interested
1	2	3	4	5
●	●	●	●	●

Economioc crisis

Not at all interested	Somewhat Interested	Neutural	Interested	Very interested
1	2	3	4	5
●	●	●	●	●

Immigration reform

Not at all interested	Somewhat Interested	Neutural	Interested	Very interested
1	2	3	4	5
●	●	●	●	●

Oil spill in the Gulf

Not at all interested	Somewhat Interested	Neutural	Interested	Very interested
1	2	3	4	5
●	●	●	●	●

War in Afghanistan

Not at all interested	Somewhat Interested	Neutural	Interested	Very interested
1	2	3	4	5
●	●	●	●	●

Same-sex marriage

Not at all interested	Somewhat Interested	Neutural	Interested	Very interested
1	2	3	4	5
●	●	●	●	●

Global warming

Not at all interested	Somewhat Interested	Neutural	Interested	Very interested
1	2	3	4	5

41.
* Which of the following better describes the **public option** that we heard a lot during the health care reform discussion refers to?

● A government-run health insurance plan that eliminates private competitions

● A government-run health insurance plan that competes with private health insurance companies

42.
* The **public option** proposal is generally favored by which political party during the health care reform discussion?

● Democrats

● Republicans

43.
* Soon after the passage of the health care legislation, several states have jointly filed litigation challenging the health insurance mandate.

● True

● False

44.
* If you were asked to come up with a list of keywords associated with **health care reform**, what comes to mind? List as many keywords or phrases as you can.

45.
* Which of these people connected with the BP oil spill received the most coverage in the media?

● Thad Allen

● Tony Hayward

● Ken Salazar

● Bobby Jindal

● I don't know

46.
* Oil spill coverage introduced a whole lexicon of new terms to Americans. Which of the terms below refers to pumping solids mixed with drilling fluid into the well head?

● Top kill

● Junk shot

● Pick 'n roll

● Blind shear ram

● I don't know

47.
* In your opinion, who should accept more responsibility on the handling of the Gulf oil spill disaster?

● BP corporation

● The Obama administration

48.
* If you were asked to come up with a list of keywords associated with the **economic crisis and recovery**, what comes to mind? List as many keywords or phrases as you can.

49.
* Congress recently voted to extend which of the following legislations?

● Clean Air Act

● Federal unemployment benefits

- Troubled Asset Relief Program (TARP)
- President Bush's tax cut

50.
* Do you recall reading or seeing any major news about **global warming/climate change** over the past year?

● Yes ● No

If yes, what was the news about? Very briefly - do you believe global warming is real? Why/why not?

Great! We are now going to ask you a few questions about your political views. Please read the following questions carefully and answer them using the scale provided - all questions are required.

51.
* I consider myself to be politically engaged.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

52.
* I feel that I have a pretty good understanding of the important political issues facing our country.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

53.
* I think that I am better informed about politics and government than most people.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

54.
* Voting in each election is important to me.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

55.
* I would feel guilty if I did not vote.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

56.
* Politicians lose touch with people once elected.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

57.
* Candidates for political office are only interested in people's votes, not in their opinions.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

58.
* Too many politicians only serve themselves or special interests.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

59.
* It seems our government is run by a few big interests who are just looking out for themselves.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

60.
* Politicians lie to the media and the public.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

61.
* In my opinion, some groups of people are simply inferior to other groups.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

62.
* In getting what you want, it is sometimes necessary to use force against other groups.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

63.
* It's OK if some groups have more of a chance in life than others.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

64.
* To get ahead in life, it is sometimes necessary to step on other groups.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

65.
* We would have fewer problems if we treated people more equally.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

66.
* What our country needs is a fairness revolution to make the distribution of goods more equal.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

67.
* Government regulation of business is necessary to keep industry from becoming too powerful.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

68.
* Competitive markets are almost always the best way to supply people with the things they need.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

69.
* Society would be better off if there were much less government regulation of business. People who are successful in business have a right to enjoy their wealth as they see fit.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

70.
* Competition, whether in school, work, or business leads to better performance and desire for excellence.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

71.
* On a scale of one to five (1 = Strong Democrat; 5 = Strong Republican), where would you place yourself in terms of your political party affiliation?

Strong Democrat	Democratic Leaning	Independent	Republican Leaning	Strong Repulican
1	2	3	4	5
●	●	●	●	●

72.
* I feel confident stating my own political opinion openly, even in clearly hostile settings.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

73.
* I feel confident I can make certain that the political representatives I voted honor their commitments to the electorate.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

74.
* I feel confident playing a role in the choice of the leaders of a political party or movement to which I belong, or to which I believe in.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

75.
* I feel confident promoting information and mobilization in my own community (of work, friends, and family), to sustain political programs in which I believe.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

76.
* I feel confident using the means I have as a citizen to critically monitor the actions of my political representatives.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

77.
* When you get together with your friends, how often do you discuss political matters?

Not at all	Rarely	Sometimes	Often	Very often
1	2	3	4	5
●	●	●	●	●

78.
* When given a choice, I would prefer reading/watching news about entertainment, sports, or lifestyle rather than news about current events or public affairs.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

Part III

Thank you! We're almost done! The final part of the survey contains questions about your media usage preference and your social network.

Please read the following questions carefully and answer them using the scale provided - all questions are required.

SUBMIT

79.
* I feel confident trouble shooting computer problems.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

80.
* I feel confident understanding terms/words relating to Internet technologies.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

81.
* I feel confident using the Internet to gather information.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

82.
* I feel confident that I can turn to an online discussion group when help is needed.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

83.
* I have full Web access (i.e., you can browse whatever content you want) at home.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

Media Usage Survey

84.
* I have full Web access (i.e., you can browse whatever content you want) at school or at work.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
●	●	●	●	●

85.
* My primary Internet connection speed is:

Dial-up	DSL	Cable	Fiber-optic	Don't know
1	2	3	4	5
●	●	●	●	●

86.
* I own a smart phone (i.e., Black Berry, iPhone or equivalent) with a data plan.

● Yes ● No

87.
* In a typical day, how often do you log-on to the Internet and engage in some kind of online activities?

Not at all	Rarely	Sometimes	Often	Very often
1	2	3	4	5
●	●	●	●	●

88.
* Approximately how many hours do you spend online everyday?

<1 hr	1-2 hrs	2-4 hrs	4-6 hrs	6 hrs +
1	2	3	4	5
●	●	●	●	●

Media Usage Survey

89.
* Among the total time you spent online everyday, approximately how much time (in terms of percentages) are devoted to searching or consuming **news information**?

<10%   10-20% 20-40% 40-60% 60% +
1   2   3   4   5
●   ●   ●   ●   ●

90.
* What are your primary online destinations for **US news**?

Please list as many as you can under each category. Fill in **N/A** if you do not use any sites in that specific category.

News Aggregator (i.e., Google news)	
News Media (i.e., foxnews.com)	
Blogs (i.e., Huffington Post)	
Other (i.e., Twitter)	

91.
* How frequently do you use the following media types to receive news information?
TV

Never use	Rarely use	Sometimes use	Often use	Very often use
1	2	3	4	5
●	●	●	●	●

Newspaper

Never use	Rarely use	Sometimes use	Often use	Very often use
1	2	3	4	5
●	●	●	●	●

Internet

Never use	Rarely use	Sometimes use	Often use	Very often use
1	2	3	4	5
●	●	●	●	●

Magazine

Never use	Rarely use	Sometimes use	Often use	Very often use
1	2	3	4	5

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Radio

●	●	●	●	●
Never use	Rarely use	Sometimes use	Often use	Very often use
1	2	3	4	5
●	●	●	●	●

92.
* Do you have some kind of physical or mental impairment that has a substantial and long-term impact on your ability to carry out day-to-day activities?

● Yes ● No

93.
* What is the highest level of education that **you** have completed?

< High school	High school	Some college	Bachelors degree	Graduate degree
1	2	3	4	5
●	●	●	●	●

94.
* What is the highest level of education that **your father** has completed?

< High school	High school	Some college	Bachelors degree	Graduate degree
1	2	3	4	5
●	●	●	●	●

95.
* What is the highest level of education that **your mother** has completed?

< High school	High school	Some college	Bachelors degree	Graduate degree
1	2	3	4	5
●	●	●	●	●

96.
* Have you attended a local community event in the past 6 months (e.g., art exhibition, school concert, athletic events, and so on)?

Not at all	Rarely	Sometimes	Often	Very often
1	2	3	4	5
●	●	●	●	●

97.
* Are you actively participating in any local organization or club (e.g., sport, book, social club)?

Not at all	Rarely	Sometimes	Often	Very often
1	2	3	4	5
●	●	●	●	●

98.
* In the past 3 years, have often have you participated in community organizations as a volunteer?

Not at all	Rarely	Sometimes	Often	Very often
1	2	3	4	5
●	●	●	●	●

99.
* In the past week, how many non-work related **phone conversations** have you had with friends?

Not at all	1-5	6-10	11-15	16 or more

1	2	3	4	5
●	●	●	●	●

100.

* How many people did you talk to **yesterday**, including conversations you had in person, online, or on the phone?

Not at all	1-3	4-6	7-9	10 or more
1	2	3	4	5
●	●	●	●	●