TESTING THE AGENDAMELDING THEORY: HOW AUDIENCES TAILOR AGENDAS TO SUIT THEIR NEEDS

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ABSTRACT

Milad Minooie: Testing the Agendamelding Theory How Audiences Tailor Agendas to Suit Their Needs (Under the direction of Donald L. Shaw and Francesca Dillman Carpentier)

Technological advancements have lowered the cost of information dissemination, resulting in the proliferation of media sources ranging from the traditional daily newspaper to streaming services and social media. The exponential growth of media sources raises questions about the agenda setting power of the media in the digital age. The present study reexamines the first and second levels of agenda setting as well as the contribution of need for orientation in our evolving media environment in an effort to shed light on how audiences "meld" agendas from various media sources with their own personal preferences to form a coherent picture of society.

A survey of American adults (N = 1,069) was combined with a content analysis of traditional and social media sources to evaluate agendamelding, which predicts that, depending on the characteristics of individuals, audiences give more weight to certain media sources when melding their agenda. Correlation analyses indicated that respondents echoed the most prominent issues and most prominent attributes describing those issues depicted in both the traditional and social media they consumed. Higher need for orientation resulted in a stronger reflection of the media. A regression analysis indicated that younger audiences and Democrats give more weight to social media than traditional media when melding their agendas. Individuals with a higher need for orientation give more weight to traditional media and their own personal preferences than they give social media. Republicans generally allow their personal preferences to impact their agenda more than all Democrats and most Independents. The impact is more pronounced in

those with professional training and without a college degree. However, young, educated, female Independents allow their personal preferences to impact their agenda most. Income tends to impact agendamelding in minorities more than Caucasians.

The findings support the agendamelding theory that predicts differences in the way various individuals mix media messages to form, or join, agenda communities. While the results bode well for the nascent field of agendamelding, more research is needed to replicate the findings.

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TABLE OF CONTENTS

LIST OF TABLES	ix
LIST OF FIGURES	ix
CHAPTER 1: INTRODUCTION	1
CHAPTER 2: LITERATURE REVIEW	
Agenda Setting	5
First-Level Agendas Setting	
Second-Level Agenda Setting	
Third-level agenda setting	
A Need for Orientation	
Agendamelding	
The Study of Agendamelding	
Hypotheses and Research Question	
H1a	
H1b	
Н1с	
H1d	
Н2а	
Н2b	
Н2с	
H2d	
Н3	
H4	

RQ	
CHAPTER 3: METHOD	
Overview	
Survey Sample	
Content Analysis	
Traditional Media Sample	
Social Media Sample	
Concepts and Measures	
Media Agenda	
Public Agenda	
Community Agenda	
Personal Agenda	
Media Attributes	
Audience Attributes	
Media Consumption	
Need for Orientation	
Coding	
Survey responses	
Procedure	
Data Analysis Strategy	
CHAPTER 4: RESULTS	
CHAPTER 5: DISCUSSION AND CONCLUSIONs	
Summary of Findings	
Theoretical Contributions	
Implications	
Limitations	
Future Research	

Conclusions	92
TABLES	94
FIGURES	118
APPENDICES	122
Appendix 1 – SURVEY INSTRUMENT	123
Appendix 2 – IRB APPLICATION	140
REFERENCES	169

LIST OF TABLES

Table 2-2: Matrix of Candidate Attributes Based on Content Analysis.	94
Table 2-3: Matrix of Candidate Attributes Based on Voter Survey.	94
Table 3-1: Distribution by Sex	95
Table 3-2: Need for Orientation Distribution	96
Table 3-3: Kendall's tau Compared with Spearman's Rho	97
Table 4-1: Top Ten Public Agenda Issues Compared with Media and Community Agendas	
Table 4-2: Result of Correlations and Attribute Distribution.	99
Table 4-3: Top Public Agenda Issues compared with Top Personal Agenda issues	
Table 4-4: Age Groups Distribution	
Table 4-5: Income Groups Distribution	104
Table 4-6: Ethnicity Distribution	105
Table 4-7: Political Affiliation Distribution	106
Table 4-8: Ordinal Logistic Regression Analysis of Public Agenda	107
Table 4-9: Multicollinearity Tests Between Independent Variables	
Table 4-10: Results of Two-Way Interactions Between Independent Variables.	112
Table 4-11: Multiway Interactions Between Independent Variables	114

LIST OF FIGURES

Figure 2-1: Second-Level Agenda Setting and the Framing Process	118
Figure 2-2: Need for Orientation Flow Chart	119
Figure 2-3: Three Sources of Information	120
Figure 4-1: The main effect of the predictors on the likelihood of selecting the top issue on the agenda	121
Figure 4-2: The effect of two-way interactions on the likelihood of selecting the top issue on the agenda	122

CHAPTER 1: INTRODUCTION

"No Society has ever existed, or ever could exist, without a well-ordered system of communication, and no individual could survive for long without knowing how that system operates" (Trenholm, 2017, p. 3). As such, scholars from various disciplines have attempted to study human interaction and communication. The theories that have emerged from their efforts either view communication as a "practical art of discourse" (Rhetorical Tradition), an "intersubjective mediation by signs" (Semiotic Tradition), "the experience of otherness" (Phenomenological), "information processing" (Cybernetic Tradition), "expression, interaction, and influence" (Socio-psychological Tradition), "reproduction of social order", (Socio-cultural Tradition), or "as discursive reflection" (Critical Tradition) (Craig, 1999).

In psychology, communication generally falls within the framework of human cognitive architecture, which relates to the mind, the brain, and human behavior (Newell, 1994). Psychologists study attention, comprehension, and retention (Cameron, 2009) to explain the cognitive processes of messages and intentions and subjective norms (Ajzen & Fishbein, 1977; Fishbein & Ajzen, 1974), interactional synchrony (Kendon, 1970), expectancy violations (Burgoon, 1978), susceptibility, and efficacy (Bandura, 1982), among others, to explain human behavior within the boundaries of face-to-face, mediated, or mass communication.

Political scientists, following findings that identified mass media as the most powerful "influencer" on gains in political information, began to pay special attention to mass media (Chaffee, Ward, & Tipton, 1970). This is why theories of democracy and democratic citizenship

increasingly focus on the sources and consequences of political information (Beck, Dalton, Greene, & Huckfeldt, 2002). In their studies of voter behavior, political scientists analyze variables like party identification, ideology, socioeconomic status, and gender alongside media content (Dalton, Beck, & Huckfeldt, 1998). They also study interpersonal communication by "analyzing the availability of discussion partners in one's immediate environment and the amount of selectivity exercised in the choice of partners" (Mutz & Martin, 2001).

At any given time and in any given place, audiences encounter various sources of information: Their own personal networks of social interaction and political communication, particular newspapers, television channels, radio programs, a range of electronic media outlets, and a variety of organized efforts at persuasion (Beck et al., 2002). There are merits to studying each of these sources discretely as communication, political science, and psychology scholars have done for decades (Trenholm, 2017). However, in a modern society all of these sources compete for the audience's attention at the same time and studying one or even a couple of sources in isolation may not yield a complete picture of reality. The present study aims to bridge this gap by acknowledging the contribution of each of these sources to an individual's agenda – or a set of issues that are the subject of decision-making and debate within a given political system at any one time – within a larger societal context and treating them as only a part of a bigger body of information that represents all the knowledge available to individuals.

The present study attempts to utilize the agendamelding theory which builds on the framework of the agenda-setting theory. Agenda setting posits that by placing emphasis on certain topics, the media tell audiences what to think about (McCombs & Shaw, 1972). While agenda setting studies focus on the power of one-to-many, mass media to set the agenda for

audiences, agendamelding¹ takes into consideration the contribution of all types of media –i.e. one-to-many (mass media), many-to-many (social media), and one-to-one (inter-personal) – in setting the agenda.

Whereas agenda setting falls within the socio-cultural tradition (Littlejohn & Foss, 2008), which deals with problems arising from technological change and the breakdown of social order (Craig, 1999), agendamelding falls between the socio-cultural tradition and socio-psychological tradition, in which human judgment is believed to be influenced by immediate social context (Craig, 1999). The socio-psychological tradition considers communication as the process by which "individuals interact and influence each other" through "one-to-one, one-to-many, or many-to-many" interactions that involve "interposed elements that mediate between individuals" (Craig, 1999).

"Communication theorized in this way explains the causes and effects of social behavior and cultivates practices that attempt to exert intentional control over those behavioral causes and effects. Communication problems in the sociopsychological tradition are thus thought of as situations that call for the effective manipulation of the causes of behavior in order to produce objectively defined measured outcomes" (Craig, 1999, p. 143).

Agendamelding is concerned with the cause-effect relationship that Craig attributes to the socio-psychological tradition, but uses the method typically employed in agenda-setting research to study how various media and non-media communicators impact individuals and estimates the contribution of various categories of communicators to one's agenda. In doing so,

¹ McCombs, Shaw, and Weaver (2014) recommend using a single word, "agendamelding," rather than two words, "agenda melding," to refer to this phenomenon, "because the process is so intimate and personal that we are not aware we are doing it."

agendamelding identifies the category of media that is more effective in influencing the audience's agenda on certain topics and the category of media that are more successful in influencing audiences on other topics.

Agendamelding's contribution to the field lies in its power to measure the portion of public agenda explained by each media category, which has several implications. First and foremost, it sheds light on agenda communities, or characteristics of people who use the same category of media and share a similar agenda, and the structure of society. By drawing attention to sources of information previously left out of agenda-setting research, it provides a new way for other theories derived from agenda setting or other media effects theories to be used and tested. And finally, it can be used to estimate the amount of emphasis communicators should place on each category of media to effectively communicate their messages to their audience as various types of media may be more suited to set certain agendas than others (Shaw, Terry, & Minooie, 2015).

The present study expands on agendamelding by attempting to understand how different audiences are oriented toward different types of media. To that end, the present study analyzes the attributes used by various types of media and respondents to describe various topics to see whether certain topics and attributes tend to cluster around one media category and why.

CHAPTER 2: LITERATURE REVIEW

Agenda Setting

Political scientists and communication scholars have been tinkering with the idea that mass media influence public opinion since the publication of Walter Lippmann's Public Opinion (1922/1997). To Lippmann, the media were the link between "the world outside and the picture in our head." Like a "beam of searchlight," Lippmann (1922/1997) argued, the media shine light on issues and topics audiences will perceive as important. More than forty years later, Bernard Cohen (1963) claimed the media "may not be successful much of the time in telling people what to think, but [they are] stunningly successful in telling [the audience] what to think about." Maxwell McCombs and Donald Shaw (1972) found support for this proposition in their study of the 1968 presidential election, calling it the agenda setting function of mass media.

McCombs and Shaw (1972) defined agenda setting as a process that transfers issue salience from media to audiences thus setting the agenda for the public. An agenda is a combination of issues presented in order of their importance, where an issue is "a social problem, often conflictual, that has received mass media coverage" (Dearing & Rogers, 1996). Salient issues are those that "come to be regarded by the public as being important" (McCombs, 2014, p. 4).

Although public issues during a presidential campaign have been at the heart of traditional agenda setting research, the scope of the field is not restricted to public issues (Lopez-Escobar, Llamas, & McCombs, 1998; McCombs, 2005, 2014). In addition to issues being

discussed in society, Cobb and Elder (1972) identified the "institutional agenda," a set of issues being discussed in a particular government institution, which is commonly referred to as the *policy* agenda. Policy agenda setting is a research tradition carried forward mostly by political scientists and sociologists for whom the key question is "how does an issue get on the policy agenda?" (Rogers, Dearing, & Bregman, 1993). Measures of policy agenda vary from study to study and include actions such as introduction of legislation about an issue, budget appropriation, and the amount of time dedicated to debating an issue in Congress (Dearing & Rogers, 1996). Kingdon (1984/2011), for example, identified three streams of *problems* (issues), *proposals* (solutions), and *politics* (political climate and national mood) and posited that the policy agenda is set when at least two of these streams come together during what he calls a *policy window*. Kingdon based his model on hundreds of interviews with politicians. Baumgartner and Jones (1993/2009), however, relied on media indices and congressional records to observe the rise and fall of certain issues in the post-World War II era and their relation with longstanding policy changes. The two scholars found that policy agenda is often set when an issue reaches high salience and dramatic changes upset routines of behavior and power. The issue then loses salience, allowing the newly empowered political institutions and policymakers to settle into stable routines of behavior that persist for decades at a time (Baumgartner, 2001).

Aside from public and policy agendas, scholars have also investigated how the *media* agenda is set (Rogers et al., 1993). Often referred to as intermedia agenda setting, this tradition is concerned with one medium's impact on other media's agendas (McCombs, 2005). Intermedia agenda setting received attention after scholars began wondering who sets the media agenda, if the media sets the public agenda (Megwa & Brenner, 1988). Early evidence of intermedia agenda setting came from correlations between news wire services and newspaper stories

(Blondheim, 1994; Breed, 1955; Gold & Simmons, 1965; Horvit, Gade, & Lance, 2013; Lim, 2011; Whitney & Becker, 1982). Wire services are not the only ones setting media agendas: the *New York Times* was found to set the agenda for the *Washington Post*, the *Los Angeles Times* (Reese & Danielian, 1989), and even television networks (Rogers & Chang, 1991; Semetko, Blumler, Gurevitch, & Weaver, 1991). More recent studies have found that in some cases online media set the agenda for print media (Ku, Kaid, & Pfau, 2003) and wire services (Lim, 2006), while in other cases, print media set the agenda for online media (Lee, Lancendorfer, & Lee, 2005). Members of the public are also found to set the interpersonal agenda among themselves (McCombs & Snow, 1974). A four-month study of 227 Charlotte voters compared the agenda setting effect of interpersonal communication with the *Charlotte Observer* and found that "the month-by-month agendas of the local paper were insignificantly and at times somewhat negatively related to voters' agenda" (Shaw, 1977, p. 80). This finding suggests that interpersonal agenda setting competes with media agenda setting.

As mentioned earlier, the concept of agenda setting started with the work of Lippmann (1922/1997) and went through several transformations (Cohen, 1963; Lazarsfeld & Merton, 1948/2000; Schattschneider, 1960/1975) – although it was not called "agenda setting" until 1972. The tradition of combining a media content analysis with an audience survey of the ranking of agendas was sparked by the 1968 Chapel Hill study (Rogers et al., 1993). Since its introduction, the agenda-setting theory has been supported and refined in more than 400 empirical studies (Griffin, Ledbetter, & Sparks, 2014).

One of the main reasons that communications scholars became so interested in this line of research was that agenda setting appeared to offer an alternative to the scholarly search for direct media effects on attitude and behavior change, with many agenda setting researchers citing an

attempt to solve the apparent paradox of "no effect" findings in a world where the media were ubiquitous and consonant as the main justification for their work (Rogers et al., 1993).

Another contributing factor to the development of agenda setting as a theory was a string of longitudinal studies finding a causal relationship between the media agenda and the public agenda such as the 1972 follow-up study in Charlotte, NC (Shaw & McCombs, 1977), the panel studies of the 1976 presidential election in Lebanon, NH, Evanston, IL, and Indianapolis, IN (Weaver, Graber, McCombs, & Eyal, 1981), Funkhouser's 10-year study of three major news media of the 1960s (Funkhouser, 1973), and the 22-year study of civil rights issues (Winter & Eyal, 1981).

Iyengar and Kinder (1987) reconfirmed that the media agenda sets the public agenda rather than reflecting the public's priorities in a series of lab experiments by altering the media agenda to test its effects on individuals' public agendas. Furthermore, many scholars used crosslagged correlations to determine how long it would take for the agenda setting effect to transfer salience (Dillman Carpentier, 2014). The length of this period depends on factors such as the nature of the issue and the amount of media coverage it receives and can range from as long as several months to only a few weeks (Dearing & Rogers, 1996; Rogers, Dearing, & Chang, 1991).

Nearly half a century after the Chapel Hill study, agenda setting, also known as first-level agenda setting, has evolved and matured, sparking new propositions along the way: Second-level agenda setting, third-level agenda setting, intermedia agenda setting, need for orientation and agendamelding.

First-Level Agendas Setting

The basic theoretical proposition behind first-level agenda setting is the transfer of the salience of objects, often public issues, from the media to the public (Dearing & Rogers, 1996;

McCombs, 2005). The term "object" is used here in the same way that social psychologists use the phrase "attitude object" to designate the thing that an individual has an attitude or opinion about (McCombs, 2005). The public agenda is typically measured by public opinion surveys in which respondents are asked a variation of the *most important problem* (MIP) question originally devised by the Gallup poll: "What is the most important problem facing this country today?" (Dearing & Rogers, 1996; Dillman Carpentier, 2014; Lopez-Escobar et al., 1998; McCombs, 2014; McCombs, Llamas, Lopez-Escobar, & Rey, 1997; Weaver et al., 1981). Although the MIP question and its variations assessing issue salience remain a popular measure, there are other ways to measure object salience on the public agenda (McCombs, 2014). Among the creative alternatives to MIP are: Recognition and recall of news stories that had appeared in the newspaper and ranking their importance (Althaus & Tewksbury, 2002); a combination of issue importance scales and behavioral measures (Einsiedel, Salomone, & Schneider, 1984); and a combination of open-ended MIP questions and multiple choice issue categories (Dillman Carpentier, 2014).

Some scholars argue that measures of perceived importance do not accurately reflect the actual salience of issues (Nelson, Oxley, & Clawson, 1997). This is partly because the measures of perceived importance are constructed on the assumption that respondents make conscious assessments about issues, while the memory-based model operates on the assumption that information retrieval is unconscious (Hastie & Park, 1986). One possible way to resolve the discrepancies between measures of perceived importance and actual salience is through the measurement of attitude accessibility, or response latency (Bassili, 1995). However, random measurement error and the elaborate technical set up required to measure response latency render this method unfeasible (Kim, Scheufele, & Shanahan, 2002). To guard against the drawbacks of

using perceived importance measures, Kim, Scheufele, and Shanahan (2002) advocate using an open-ended MIP question – as opposed to multiple choice questions – and asking about the respondent's opinion on the issue in a follow-up question.

In their seminal study, McCombs and Shaw (1972) tested the agenda setting process during the United States presidential election in 1968 when Democrat Hubert Humphrey ran against Republican Richard Nixon. Through content analysis of media reports, they monitored the topics in all the major news media available in Chapel Hill, NC. They compared the data with results from a survey of a random sample of 100 citizens of Chapel Hill and Carrboro in North Carolina. Participants were interviewed in their homes and were asked a series of questions about what media they used, how often they used them and what they regarded as the most important problem. Through their content analysis, McCombs and Shaw (1972) identified foreign policy (the Vietnam War), law and order, fiscal policy (economy), public welfare, and civil rights as the major issues discussed in the media. Having identified the issues, the researchers counted the frequency of each issue and ordered them by rank. Then they rank-ordered issues mentioned by subjects based on frequency and conducted a Spearman's Rho correlation, reporting an extremely strong and statistically significant correlation ($\rho = .97$) between media topics and participant topics.

As pioneered by McCombs and Shaw (1972) and Funkhouser (1973), as a parallel to the MIP measure of the public agenda, the media agenda is usually measured by a content analysis of news media to determine the frequency of stories about the objects – or issues being studied (Dearing & Rogers, 1996; McCombs, 2005, 2014; Rogers et al., 1993; Weaver et al., 1981).

The advent of the Internet and proliferation of new communication channels such as email, online newspapers, chat rooms, social media, and websites representing every ideological,

commercial and personal niche changed how millions, or perhaps billions, of people from around the world communicate and opened new areas for research to communication scholars (McCombs, 2005). Chaffee and Metzger (2001) argue that the idea that "on the Internet anyone can be an author" has diminished the "mass-ness" of mass media, casting doubt over the media's agenda-setting power on public opinion. They claimed that the diversification of sources, resulting from the proliferation of the Internet, has produced fragmented and competing media agendas that challenge a fundamental assumption of the agenda setting theory: that people get their information from a uniform media agenda (Chaffee & Metzger, 2001). Yue Tan and Weaver compared forty-eight years of Gallup's MIP question with a random sample of the New York Times Index to study agenda diversity and the strength of the agenda setting effect (Tan & Weaver, 2013). While they found that agenda diversity fluctuated over the years – declining from the 1950s to 1980s and picking up again thereafter – they found no indication of "a weaker agenda-setting effect over time." Rather they maintained "an alternative hypothesis predicting that the agenda-setting effect between the New York Times and public opinion has remained mainly constant over time seems more valid" (Tan & Weaver, 2013, p. 781).

Second-Level Agenda Setting

As explained earlier, agenda setting is the process of salience transfer from the media to the public and first-level agenda setting refers to the transfer of "object" salience. In contrast, the focus of second-level agenda setting is the transfer of "attributes" from media to audience, a notion that was first tested during the 1976 primaries (Becker & McCombs, 1978). Attributes are characteristics, traits, perspectives, or frames that journalists and the public use to think about each object – or to "fill out the picture," in a manner of speaking (Ghanem, 1997; McCombs, Lopez-Escobar, & Llamas, 2000). Attributes draw attention to certain perspectives and

characteristics of an object and direct away from others (McCombs & Estrada, 1997). "When the news media talk about an object – and when members of the public talk and think about an object – some attributes are emphasized, while others are mentioned only in passing. For each object on the agenda, there is an agenda of attributes that influences our understanding of the object" (McCombs, 2005, p. 546). In the maiden second-level agenda setting study, Becker and McCombs (1978) found that not only did the media set the agenda for voters by transferring object salience, but they also did so by transferring attributes, such as describing Vice President Hubert Humphrey in terms of his age and vice presidential candidate Sargent Shriver in terms of his connection to the Kennedys. The discovery of the second-level agenda setting, sometimes called attribute agenda setting (McCombs, 2014), prompted McCombs and Shaw (1993) to revise their original assessment of agenda setting:

"New research exploring the consequences of agenda setting and media framing suggest that the media not only tell us what to think about, but also how to think about it, and, consequently, what to think" (p. 65).

Subsequent attribute agenda setting research, such as the study of attributes surrounding the Southwest Park commercial development in New York by Kim, Scheufele, and Shanahan (2002), have also found support for this notion.

Second-level agenda setting extends our understanding of how the news media shape public opinion and is also closely linked to first-level agenda setting. In the context of political campaigns, mass media coverage of candidates or campaigns can sometimes shape voter perceptions concerning the object's attributes. For example, Golan and Wanta (2001) found that in the media coverage of the 2000 primary in New Hampshire, John McCain was mentioned more than George W. Bush in terms of seven of the nine attributes that journalists used to

describe the candidates. The authors concluded media coverage and second-level agenda setting may have been a factor in McCain's upset victory in New Hampshire (Golan & Wanta, 2001).

During the 1993 Japanese general election, the issue of political reform accounted for 80 percent of news coverage in the country's top two newspapers and three television networks, resulting in a high transfer of object salience (Toshio & Shunji, 1995 as cited in McCombs, 2014). "Systems-related" attributes and "ethics-related" attributes of the reform were discussed in the news media, but the former was discussed more frequently. This resulted in a positive correlation between public political attentiveness and systemsrelated reforms and a near zero correlation between political attentiveness and ethicsrelated reforms – a manifestation of second-level agenda setting at work (Toshio & Shunji, 1995).

Another example of how second-level agenda setting can add to the understanding of agenda setting research is the study of the federal budget crisis of the 1990s. The study compared the content of 19 different newspapers with the MIP question of 12 different public opinion tracking polls between 1994 and 1996 (Jasperson, Shah, Watts, Faber, & Fan, 1998). While the coverage of the budget deficit increased over time, intriguingly, the number of respondents who cited the issue as the most important problem facing the nation fluctuated. Jasperson et al. (1998) found that only one attribute of the budget deficit – i.e. fight, or paragraphs where "the tone of the debate was more intense, signifying a more immediate concern about the budget conflict" (p. 212) – significantly contributed to a change in public opinion. In the study, first-level agenda setting approach accounted for 85 percent of variance in public agenda on its own and 92 percent of variance when combined with second-level agenda setting (Jasperson et al.,

1998). The agenda-setting effect of the media on public opinion depends to a "great degree" on the sub-issues, attributes, or news frames (Wanta & Hu, 1993).

McCombs et al. (2000) have identified two types of attributes (i.e. "substantive" attributes and "affective" attributes) that contribute to understanding of the agenda setting effect, while Ghanem (1997) identifies four types of attributes: "Subtopics," independent attributes within a particular issue; "framing mechanisms," which are the manners in which the media place emphasis on various issues (e.g. photographs, pull quotes, and subheads); "affective" and "cognitive," which McCombs and colleagues call substantive (Ghanem, 1997; Golan & Wanta, 2001; Kiousis, Bantimaroudis, & Ban, 1999). Affective attributes refer to the valence characteristics of an object (i.e. positive, neutral, or negative) in the media content that elicit emotional responses from the audience (Kiousis et al., 1999; Kiousis, Popescu, & Mitrook, 2007; McCombs et al., 2000). Substantive attributes refer to cognitive characteristics that describe an object (e.g. the age of a candidate, or a candidate's connection to a former president) in a manner that helps structure the news and differentiate among various topics (Kiousis et al., 1999, 2007; McCombs et al., 2000). A sub-category of substantive attributes, candidate image attributes (e.g. ideology, issue positions, biographical information, perceived qualifications, personality, and integrity), has received special attention in the literature (Kiousis, Mitrook, Wu, & Seltzer, 2006; McCombs et al., 1997, 2000).

Second-level agenda setting is closely associated with framing to such an extent that some even consider the terms *attribute* and *frame* interchangeable (Kiousis et al., 1999). Some communication scholars define framing as the act of "select[ing] some aspects of a perceived reality and mak[ing] them more salient in a communicating text, in

such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described" (Entman, 1993, p. 52). Others have defined it as "the central organizing idea for news content that supplies a context and suggests what the issue is through the use of selection, emphasis, exclusion, and elaboration" (Tankard, Hendrickson, Silberman, Bliss, & Ghanem, 1991, p. 3). Scheufele and Tewksbury (2007) argue that the term framing refers to the assumption that how an issue is presented and galvanized by the media has an impact on how the issue is perceived by the audience. Yet in cognitive psychology, framing is defined as "a function that specifies the relations that hold among the arguments comprising a particular conceptual bundle at a particular level of abstraction" (Friedman, 1979, p. 321). Friedman argues that frames go beyond mere appearance and presentation. She describes frames as packages that contain sub-frames, for example the "head," is a frame that contains the sub-frames "eyes" and "nose," although the latter two may not be explicitly mentioned by the communicator (Friedman, 1979).

Weaver (2007, p. 143) observed that even in a single issue of the *Journal of Communication*, authors employed a wide range of "definitions of framing, including problem definitions, causal interpretations, moral evaluations, and treatment recommendations, as well as key themes, phrases, and words." Stephen Reese (2007) noted that many studies in the field only have the term "framing" in common. "Authors often give an obligatory nod to the literature before proceeding to do whatever they were going to do in the first place" (Reese, 2007, p. 151). Weaver (2007) cites this chasm as the reason behind the proliferation of framing studies in recent history. Despite the similarities between framing and second-level agenda setting, they are not identical

processes (Weaver, 2007). McCombs (1997) believes that conceptualizing frames as attributes and bringing framing under the umbrella of agenda setting "brings some order and parsimony to the vast literature on framing whose popularity led to highly diverse even incompatible – applications and definitions" (p. 6). Figure 2-1 displays the placement of framing with respect to second-level agenda setting.

Third-level agenda setting

Although not directly pertinent to the present study, third-level agenda setting will be briefly discussed since it is closely related to second-level agenda setting, which the present dissertation will explore. The main idea behind third-level agenda setting is that each object is usually described in the media by more than one attribute. Moreover, objects are often frequently mentioned with a certain set of attributes, creating a linked network of objects and attributes. As a result, the salience of the networks of objects and attributes are transferred to audiences in a bundle (Guo, Vu, & McCombs, 2012).

Third-level agenda setting, also known as Network Agenda Setting (NAS), is based on the foundations of the associative network model of memory (Anderson, 2016; Anderson & Bower, 1980) as well as the cognitive network model (Santanen, Briggs, & de Vreede, 2000). NAS posits that the audience's cognitive representation of objects and attributes is akin to a network-like structure, in which any given node (e.g. object, or attribute) is connected to numerous other nodes (Guo et al., 2012).

In short, the NAS model asserts that issues can be either implicitly or explicitly linked in news coverage resulting in the construction of contextual meanings in the audience's mind (Vargo, Guo, McCombs, & Shaw, 2014). While first- and second-level agenda setting focus on discrete objects and attributes of a bigger picture, third-level agenda setting aims to paint the whole picture of reality constructed by the news media and individuals' cognitive maps using network analysis tools (Guo, 2012). Instead of examining the prominence of issues through frequency counts, the network agenda setting model turns to the centrality of issues, the location of individual issue nodes in terms of how close they are to the center of a network (Vargo et al., 2014). As a result, the unit of analysis in third-level agenda setting is a dyad – two issues or attributes mentioned together (Guo et al., 2012). The NAS model "hypothesizes that news media have the capability to construct the connections among agendas, thereby constructing the centrality of certain agenda elements in the public's mind" (Guo et al., 2012, p. 56).

The first study of the NAS model (Guo & McCombs, 2011) reanalyzed Kim and McCombs' (2007) attribute agenda setting data collected during the 2002 gubernatorial and senatorial Texas election and measured the co-occurrence of objects and attributes (dyads) in media coverage and survey responses, devising two 10×10 matrices for network analysis (Guo, 2012). Kim and McCombs' (2007) identified 83 attributes used by the Austin-American Statesman to describe the four candidates (Rick Perry (R) and Tony Sanchez (D) for governor, and John Cornyn (R) and Ron Kirk (D) for the US Senate) over a four-week period. They collapsed the attributes into six major categories of general political descriptions, specific issue positions, personal qualifications and character, biographical information, campaign conduct, and support and endorsements. Then, they asked a representative sample to describe the candidates as if they were talking to a friend who "has been away a long time and knows nothing about the candidates for governor of Texas and US Senator from Texas." Kim and McCombs (2007) compared public attributes with media attributes using rank-ordered correlations and found that "the public's attribute agenda for a political candidate reflects the media's attribute agenda."

Using the data collected during the Texas gubernatorial and senatorial election, Guo and McCombs (2011) employed a Quadratic Assignment Procedure (QAP) to analyze the dyadic data. The authors devised matrices for media and audience agenda attributes with attributes on the first row and first column and the frequency of the co-occurrence of the two attributes in the cell where the two meet (see Table 2-1 and Table 2-2). The QAP is most commonly implemented for network data by using the observed occurrences to generate a distribution of possible alternative outcomes and computing the statistical significance of the observation against the generated distribution (Martin, 1999). Guo and McCombs (2011) found that "the rank-order correlation coefficient (Spearman's Rho = .65) between the media and public attribute agendas reported by Kim and McCombs corresponded closely with the QAP correlation (Pearson's r = .67) between the media and public network agendas" (Guo et al., 2012, p. 59).

Aside from the 2002 Texas elections study (Guo & McCombs, 2011), scholars have found support for the NAS model by studying media coverage and public opinion in nonpresidential election years (Guo et al., 2012), Twitter data during the 2012 presidential election (Guo & Vargo, 2015; Vargo et al., 2014), and the media coverage and public opinion in Hong Kong (Cheng, 2016).

A Need for Orientation

The three levels of agenda setting discussed so far focus on the process of salience transfer from the media to audiences, especially the transfer of salient political information during election campaigns, but they do not focus on why this process happens. The concept of need for orientation was developed to address this question. Borrowing from the uses and gratification theory (Blumler, 1979; Katz, Blumler, & Gurevitch, 1973), Weaver (1980) argued that audiences use media according to their motivations and are not passive recipients of media

agendas. McCombs and Weaver (1973) introduced the audience's need for orientation (NFO) in a 1972 study of the US presidential election in Charlotte, NC. The concept of NFO is developed based on the utilitarian theories' premise that individuals are problem solvers, who approach any situation as an opportunity to acquire useful information or new skills for coping with life's challenges (Weaver, 1980). NFO is based on the assumption "that each person feels some need to be familiar with his surroundings" (Weaver, 1991, p. 132). McCombs and Weaver (1973) suggest that higher need for orientation leads to increased media use, which in turn results in increased agenda setting effects. Two factors of *relevance* and *uncertainty* determine the audience's need for orientation (McCombs & Weaver, 1973).

Uncertainty occurs when audiences do not feel they have all the information they need about a topic and relevance refers to a person's interest in a subject matter (Camaj & Weaver, 2013). When encountering new information, audiences experience one of four conditions: 1-High relevance and high uncertainty, 2- low relevance and high uncertainty, 3- high relevance and low uncertainty, and 4- low relevance and low uncertainty.

Relevance must occur first (Hester & Gibson, 2007). In the typology of need for orientation, low relevance results in low need for orientation, regardless of the level of uncertainty; high relevance and low uncertainty results in a moderate need for orientation; while high relevance and high uncertainty results in a high need for orientation (Weaver, 1991). See Figure 2-2. The Charlotte study (Shaw & McCombs, 1977) measured the agenda-setting effect of news coverage during the 1972 US presidential election campaign. In October, the correspondence between the media agenda and public agenda of issues was only .29 for voters with a low need for orientation, while among voters with a high need for orientation that coefficient stood at .68 (Weaver, 1991).

An analysis of the psychology behind agenda setting has identified need for orientation as part of the cause of agenda setting effect and accessibility and applicability as other parts (McCombs & Stroud, 2014). The study concluded that audiences who are passive consumers of media generally have lower levels of NFO compared to those consuming media actively. The authors also found that audiences whose media consumption is rated "moderate-active" in the high relevance and low uncertainty condition use partisan media more than those in the high relevance and high uncertainty condition (McCombs, Shaw, & Weaver, 2014). According to McCombs and Stroud (2014), this finding means that the former group is motivated by *directional goals* and the latter by *accuracy* goals. In contrast to audiences with low and moderate-passive NFO – those in the low relevance and high uncertainty condition – who process mediated information passively and use the news media infrequently (and thus resulting in limited agenda setting effects), those with moderate-active NFO and high NFO engage in information seeking and are less susceptible to an accessibility (top of the mind) bias, which results in higher agenda setting effects (McCombs et al., 2014). However, the strength of the first- and second-level agenda setting is not the same among the latter two groups. Audiences with moderate-active NFO consume more partisan media, which results in high first- and second-level agenda-setting effects, while audiences with high NFO seek more mainstream, and less partisan, media, which results in strong first-level agenda-setting effects, but only moderate second-level effects (McCombs et al., 2014).

In the context of politics, relevance is usually measured by a question that assesses the political interest of respondents: "How interested are you in information about government and/or politics?" Uncertainty, on the other hand, is measured by asking questions about the strength of the respondent's political party identification (Camaj, 2014). However, "since the

NFO measure is meant to predict agenda-setting effects in regard to specific issues, items should be formulated for specific issues only" (Matthes, 2005, p. 427). Therefore, for non-elections- and non-politics-related issues, Matthes (2005) recommends the following three questions: "I want to be instantly informed about recent developments" toward this issue, "It is important for me to observe this issue constantly," and "I would like to hear something about the issue every day" (p. 433). Matthes (2005) tested three variations of each question in three different studies and found them to be a better predictor of NFO than the traditional questions.

Agendamelding

Although Shaw et al. (1999) conceived agendamelding over a decade before the increasing awareness of the role of audiences in agenda setting effects (McCombs et al., 2014; McCombs & Stroud, 2014), the audience is the locus of agendamelding scholars' attention. Agendamelding centers on the receivers of media messages and their motivations for selecting their information sources, adopting agendas, and affiliating with other people (Weaver, Wojdynski, McKeever, & Shaw, 2010). The uses and gratification theory is heavily incorporated in agendamelding. Uses and gratification operates under the assumptions that audiences are not passive consumers of media and actively seek out media to gratify certain needs (Katz et al., 1973; McQuail, Blumler, & Brown, 2000), audience members take the initiative to link their need for gratification to specific media choices (Katz et al., 1973; West & Turner, 2010), the media compete with other sources for audience satisfaction (Katz et al., 1973; West & Turner, 2010), audiences are self-aware and can provide data about their media use (Katz et al., 1973; West & Turner, 2010), and value judgments of media content should be assessed by audiences themselves (Katz et al., 1973; West & Turner, 2010). Similarly, agendamelding is audience-

oriented and strives to study the culmination of the effects of various media used by audiences that prompts them to join agenda communities (Shaw et al., 1999).

The audiences' strong impulses to affiliate with others influence their media choice, which is an indicator of their membership in various groups. Groups play a central role in the human experience, serving as the foundation upon which society is built (Hogg, Hohman, & Rivera, 2008). Groups may be based on physical attributes such as ethnicity and gender or more abstract attributes such as political ideology and hobbies. Social psychologists believe that individuals join groups to reduce feelings of uncertainty about themselves and the world they live in (Hogg, 2000; Hogg et al., 2008). The social identity theory (Hogg, 2016; Tajfel & Turner, 1979) posits that individuals understand groups as a series of interrelated attributes such as attitudes, behaviors, and customs that capture overall similarities within groups and overall differences between groups and the extent to which a group appears distinct from other groups. According to the uncertainty-identity theory, as a result of this self-categorization process, individuals actually perceive themselves and the world through the lens of these attributes – e.g. attitudes, feelings, and behaviors – which helps them predict how others will think of and interact with them, thus reducing uncertainty (Hogg et al., 2008).

One situation where uncertainty arises, is when an individual faces contradictory information. The theory of cognitive dissonance posits that in the face of contradictory cognitions, individuals feel an unpleasant state, called *dissonance*, and they move to resolve dissonance either by rejecting the contradictory information or by altering their beliefs (Festinger, 1957). Festinger (1962) argued that individuals prefer to maintain internal psychological coherence in order to function in the real world, in that they would rather keep their knowledge of themselves and their knowledge of the world consistent. He later elaborated on his theory, saying that "if a person knows various things that are not psychologically consistent with one another, he will, in a variety of ways, try to make them more consistent" (Festinger, 1962, p. 93). He added that cognitive dissonance was a "motivating state of affairs," prompting individuals to "exaggerate the attractiveness of their choice and unattractiveness of the alternative" (p. 95).

Since its introduction in 1957, cognitive dissonance has been used to explain human behavior ranging from evaluating and devaluating the attractiveness of objects, to why people donate to charity or eat grasshoppers (Harmon-Jones & Mills, 1999).

In modern psychology, social groups and social relations are considered one of the main sources of dissonance or its resolution (Matz & Wood, 2005). Dissonance begins when an individual engages in a behavior and then evaluates that behavior "against a standard for judgment" (Stone & Cooper, 2001). The standard for judgment can stem from personal considerations such as self-expectancies (Thibodeau & Aronson, 1992) and self-affirmation (Steele, 1988), or perceived social factors such as societal and normative standards for behavioral conduct (Cooper, 1999).

Moreover, an individual's discrepant behavior can trigger discomfort in observers and result in an attitude change to resolve the socially shared dissonance (Norton, Monin, Cooper, & Hogg, 2003; Sakai, 1999). Some of the mechanisms that groups adopt to resolve shared dissonance include diffusion of responsibility for a dissonance-producing act to others in a group and the misattribution of dissonance arousal to dislike for an out-group (Cooper & Mackie, 1983; Zanna & Sande, 1987).

Collectively the various methods adopted to reduce dissonance are known as "selective processes," including selective exposure (attention), selective retention, and selective perception,

and are considered to be "defense mechanisms we routinely use to protect ourselves from information that would threaten us" (Baran & Davis, 2012, p. 154).

Shaw et al. (1999) originally described agendamelding as a "theory of social dissonance," basing their description on Bellah's (1985/2008) finding that individuals have a strong desire to belong to groups and communities, as well as on Festinger's (1957) finding that individuals, on their own or in groups strive to reduce dissonance – or information that is inconsistent with a person's attitudes, belief and values.

For example, individuals who perceive themselves as conservatives will seek out conservative media, when faced with information about a candidate they support that contradicts their beliefs. The notion that audiences overwhelmingly prefer media messages that are consistent with their attitudes – especially when it comes to political information – has found empirical support in recent years (Knobloch-Westerwick, 2015). Klapper (1960) argued that people tend to expose themselves to messages that are in line with their existing opinions to avoid "unsympathetic material." This "systemic bias in audience composition" is often referred to as selective exposure (Sears & Freedman, 1967), congeniality bias (Eagly & Chaiken, 1993), or confirmation bias (Jonas, Schulz-Hardt, Frey, & Thelen, 2001).

Agendamelding also involves "disequilibration," a process similar to selective exposure that prompts individuals to avoid information from other people or the media that could significantly alter their views in an unanticipated manner and place them in a state of dissonance (Chaffee et al., 1996) and fits earlier findings that individuals try to keep their attitudes toward outside objects in balance with others (Heider, 1958; Newcomb, 1960).

Therefore, relevance and uncertainty – two concepts closely associated with need for orientation – play an important role in how individuals meld agendas. Weaver, who along with

McCombs developed the concept of need for orientation, finds agendamelding the next step in the evolution of this concept:

"Agendamelding offers an explanation for why some persons might find some agendas more relevant than others—a felt need to affiliate with certain groups—and predicts that those who desire to join a group or community, but who have little information about it, will be the most likely to seek information about its agenda from other persons or from various media such as newspapers and magazines" (Weaver et al., 2010, p. 3).

Originally, Shaw et al. (1999) conceived agendamelding as a process that contained six stages: 1- A decision to belong (need for group affiliation), 2- information on hand (about the group that the individual belongs to), 3- a need for orientation, 4- the medium of communication (that the individual uses for information), 5- agenda setting level 1, and 6- agenda setting level 2. If the authors were aware of network agenda setting effects at the time, they probably would have included it as a seventh stage.²

In the first stage of this model, Shaw et al. (1999) argued that individuals either consciously choose to be part of a group or community, or become part of a group by accident (like being born into a certain family). When one joins a group, there is a need for information about the group and its agenda – either one has that information, or one seeks it out from various media or other people. "No group [be it a political party, church, or a purely social group like family or a bridge club] is without at least a loose agenda of issues on some topics" (Shaw et al.,

² Shaw confirms this. In conversation with the author, July 22, 2018.

1999, p. 11). Next comes one's need for orientation toward the agenda of the groups to which one belongs or wants to belong. This need for orientation depends on the level of uncertainty, interest and whether the individual is an active or passive consumer of media. The last stage of agendamelding before the occurrence of various agenda setting effects is the individual's choice of medium and source of information (whether the information is obtained from traditional mass media, also called *vertical media*, interpersonal and social media, also called *horizontal media*, or from *personal* observations or experience), which are at the heart of the agendamelding process and will be discussed in depth in the following section. The final stages of the agendamelding process are agenda setting levels 1 through 3. In short, "Whereas agenda setting research has concentrated, for the most part, on what people learn from the media, agendamelding incorporates media agenda setting as part of a larger ongoing social learning process from various media, including other persons" (Weaver et al., 2010, p. 4).

Vertical and Horizontal Media

Agendamelding is an audience-centric process; as such, the media that particular audience members use are important components of this theory. Rather than concerning themselves solely with mass media that disseminate information to the public as a whole, agendamelding scholars also takes into consideration other media such as social networking websites. Traditional mass media such as newspaper, radio, and network television relay messages from a single source (the printing press or the point of broadcast) to a large number of people, and the audience-source relationship is similar to a vertical hierarchy, where information flows from top to bottom – that is why Shaw, Hamm, and Terry (2006) called these media traditional/vertical. On the other hand, Facebook, Twitter, and other social media, or social interactions (e.g. face-to-face or

mediated interpersonal interactions) fit the horizontal label as information can flow back and forth and both the sender and receiver have control over the context and manner in which messages are transferred – leading Shaw et al. (2006) to call these media social/horizontal.

This categorization, however, is not the same as "old media" and "new media." The term "new media" is not new; communication scholars have been using this term since the 1960s (Dance & Gerbner, 1967; McLuhan, 1962; Schramm, 1963). McLuhan (1962) used the term to distinguish between media forms like radio, television, tape recorder and even the gramophone, and print media such as newspaper, novels, written poems and paintings (p. 59). Some of the "new media" McLuhan talks about are considered old or traditional today, some even obsolete. In fact, some "old media" like specialized magazines, novels and poems would fall under the horizontal categorization, while some "new media," such as network television news are identified as vertical.

McLuhan's hot and cool media categorization also does not mirror the categorization that Shaw et al. (2006) had in mind, although it is somewhat more in line with their conception than old and new media. McLuhan (1962) defines hot media as those that extend a single sense in high definition (i.e. have more granularity), engender specialization and fragmentation, exclude certain audiences, extend space, and are horizontally connecting – all characteristics that are associated with Shaw's horizontal media. But McLuhan maintains that hot media are typically low in audience participation and cites books, radio, and lectures as examples of hot media, which do not necessarily fall under Shaw's horizontal category. By contrast, McLuhan argues that cool media have

low definition (i.e. less granularity), include more audiences and are high in audience participation, engender holistic patterns, collapse spaces and create vertical associations. While the latter is true about Shaw's vertical media, Shaw contends that audience participation is low in this category and considers most of the cool media examples offered by McLuhan (e.g. cartoons, comic, telephone, interpersonal communication) to be horizontal.

Today, the term new media is used to denote a host of media that include new information communication technologies (ICTs), such as the Internet, social networking websites and even video games, and owes its popularity to its inclusiveness that avoids technical definitions such as "digital," "electronic," "interactive," or "computer-mediated communication" (Fenton, 2009). Some scholars have argued that new media revolutionizes the way people consume different content and will eventually lead to the death of traditional media (Coffey & Stipp, 1997; Ferguson & Perse, 2000; McMillan, 2006; Stephens, 1998), while others believe that they play a complementary role and there is congruence between consumption of new and traditional media within a specific content domain (Dutta-Bergman, 2004; Lin & Dutta, 2017; Sin & Kwon, 2017). The former contention is incompatible with the assumption of agendamelding that posits there are multiple sources of information; if the new media were to completely replace the old media, and if "new media" were what Shaw et al. (1999) refer to as horizontal, then there would be no place for vertical media. Complementarity, however, is compatible with agendamelding, but would not mean that the new and old labels would fit vertical and horizontal media in the model. While there are horizontal media that complement the

vertical agenda (e.g. heavily partisan talk shows or news outlets that focus on vertical media agendas, or *objects*, but offer a different spin, or *attributes*), there are also horizontal media that promote their own agenda independent of the vertical media (e.g. niche magazines that focus on specialized topics like fishing, cars, or gardening). Therefore, legacy-modern, or old-new, analog-digital and similar dichotomies do not reflect the vertical-horizontal relationship in agendamelding.

Another media categorization used by communication scholars is *mainstream* versus *alternative*, or community, media (Carpentier, Lie, & Servaes, 2003). Mainstream media are generally defined as "the media most usually available in the area, or media organized in the usual way" (Lewis, 1993, p. 12). These media are "large scale and geared towards large, homogeneous (segments of) audiences... [they are] state-owned organizations or commercial companies... vertically structured organizations staffed by professionals... [and] carriers of dominant discourses and representations" (Carpentier et al., 2003, p. 56). Alternative media are in stark contrast with mainstream media in as many as ten different ways: Their motive or purpose, their source of funding, regulation and supervision, organizational structure, message content, professional practices, their relationship with the audience, composition of their audience, range of diffusion (market reach), and their research methodology (Lewis, 1993). Due to these differences between mainstream and alternative media, Carpentier and colleagues (2003) classify alternative media as "community media" because they encourage a higher level of participation of different societal groups and communities.

McNair (1998) argues that mainstream media are more oriented toward the elites, using government bodies and officials as their source, which results in "structural bias." On the other hand, alternative media tend to give voice to various social movements, minorities, and sub-, or, counter-cultures, resulting in a more diverse content, underlining the multiplicity of societal voices (Carpentier et al., 2003). The mainstream-alternative classification is very close to the vertical-horizontal classification. The problem with using this classification lies in part with the fragmented definition of alternative media.

An early explication of the term alternative media described it as noncommercial with a focus on social responsibility, which may simply self-identify as alternative (Task Force on Alternatives in Print American Library Association, 1980). Others have contested this definition for being too broad, arguing that it can lend itself to an expression of lifestyle politics or a tool for branding (Duncombe, 2008; Rauch, 2015; Sandoval & Fuchs, 2010). Some scholars argue the term "alternative media" places too much legitimacy on mainstream media, while others have questioned the term alternative itself, since everything is an alternative to something else (Downing, 2001; Kenix, 2011). Some scholars have taken issue with definitions that describe the term alternative in light of other concepts such as mainstream media instead of attempting to establish a precise definition:

When alternative has been defined, it has been in terms of what alternative is not. It is not the established order, it is not the capitalist system: it is not the mainstream view of a subject-say in social work or educational practice; or it is

simply not the conventional way of doing something (Landry, Morley, & Southwood, 1984, p. 95).

Rather than defining vertical and horizontal media in relation to one another, an attempt is made here to define the two discretely – although the two are connected and not completely independent of one another. Vertical media disseminate media agenda the agenda of issues that impact a large number of the audience as elaborated by the agenda setting literature. These issues range from politics and elections to the economy, unemployment, foreign policy and so on. The term media agenda is used in contrast with *community agenda* – which refers to issues that have implications only for a select group of people. Community agendas include such issues as a town hall meeting over a planned Wegmans grocery store, or school board elections that impact some families in certain neighborhoods, or issues pertaining to a fictional universe (e.g. the Upside Down, Hogwarts, and Middle Earth) that has garnered a cult following. Community agendas are disseminated by horizontal media. This is not to say that issues discussed in vertical and horizontal media are mutually exclusive. In fact, issues may start from one and find common grounds in the other and be promoted in both vertical and horizontal media. Other issues may start in one and shift 90 degrees to end up in the other like Occupy Wall Street (Tremayne, 2014) and Ferguson (Bonilla & Rosa, 2015) that started out as community agendas in horizontal media, but soon dominated the media agenda in vertical media. Or like Deflategate – an NFL controversy involving the allegation that the New England Patriots deliberately under-inflated footballs in their win against the Indianapolis Colts in 2015 – that continued to spread in horizontal media like an "infectious disease"

long after it stopped dominating the media agenda through vertical media (Eberle, Eager, & Peirce, 2015). When overlaps occur, the overlapping portion of the effect is attributed to traditional/vertical media (Shaw et al., 2006; Shaw, Minooie, Cole, & Vargo, 2016; Weaver et al., 2010). While the terms media agenda and community agenda denote the agenda of various media (vertical and horizontal, respectively), the term *public agenda* refers to the audience's agenda, or the issues that audiences find to be salient.

Over the years various adjectives have been used to describe vertical and horizontal media classification. Shaw et al. (2006) described vertical media as "mass media" and horizontal media as "niche media." Most college-level introductory texts define mass media as a set of media institutions with organizational structure that transmit content through various channels and identify the following mass media industries: newspapers, magazines, books, film, radio, television, and their "support" industries, advertising and public relations, or strategic communication (Chaffee & Metzger, 2001, p. 366). The technologies that enabled mass dissemination of media content were, at one time, expensive, allowing only a handful of organizations to dominate each media industry. Therefore, mass media – which Schramm (1957) characterized by their "bigness and fewness" - were mass produced, lacked individual control, and were finite in available channels (Chaffee & Metzger, 2001). While vertical media have organizational structure and lack individual control, they need not be massproduced or be finite in available channels. For example, the White House Office of the Press Secretary is considered a vertical medium because it disseminates media agenda rather than mass-producing content.

Similarly, the term "niche media" did not age well. Shortly after Shaw and colleagues (2006) used the term to describe horizontal media, advances in technology made it possible for niche media to disseminate their content to masses and blur the line between niche and mass media with niche audiences now exerting control over "mass media" (for some examples, see: Slade, Narro, & Givens-Carroll, 2016).

Shaw et al. (2015) updated the description and chose the term "traditional" to refer to vertical media in the sense that vertical media, regardless of their platform, function in the same way that traditional media (e.g. newspaper, radio, and television, among others) did in the past to set the public agenda. By that definition, the New York Times, for example, is considered traditional/vertical whether it is distributed on paper, their official website, or through their official Twitter account. The authors described horizontal media as "social" in the sense that these operate with the needs of certain audiences (social groups) in mind and may have a reciprocal relationship with their audiences. Horizontal media may or may not be classified as mass media, they may include well-established organizations as well as private individuals that audiences know and interact with. These interactions may be mediated or face-to-face. In other words, community agenda includes two-step agenda setting and interpersonal agenda setting, a concept that McLeod, Becker and Byrnes (1974) labeled "community issue salience" (p. 139). The messages exchanged do not necessarily go through gatekeepers and may represent a particular point of view and have certain attributes. Partisan media that sacrifice objectivity to promote a particular ideology are considered social/horizontal media because they target certain social groups rather than society as a whole – they may use legacy media (e.g. Rush

Limbaugh on radio, Rachel Maddow on television) or ITCs (e.g. Buzzfeed), or both, as their platform.

Moreover, agendamelding is audience-centered and, as discussed earlier, borrows from the uses and gratification theory. According to uses and gratification (Katz et al., 1973), audiences are active and self-aware and can self-report data about their media use, therefore, it stands to reason that they can provide information which could help researchers understand whether certain media are perceived as vertical or horizontal by audiences.

Which media audiences are more attuned to is primarily a result of habit. There is evidence that "habit strength" is the greatest predictor of news media use (Diddi & LaRose, 2006; LaRose & Eastin, 2002, 2004; LaRose, Lin, & Eastin, 2003; Vishwanath, 2015) and that over half of all media behaviors result from habitual and automated acts (Wood, Quinn, & Kashy, 2002). Habit forming in media consumption has its roots in neurology, as certain cognitive and behavioral tasks are assigned to nonconscious, automatic processes to protect individuals from being overwhelmed when processing information about routine activities (LaRose, 2010). Habits are initially intentional and conscious behavior that over time and through the repeated association of a behavior and a situation become increasingly accessible to memory (Aarts & Dijksterhuis, 2000). As people grow up, they tend to become socialized into the habit of consuming what, for them, is considered the dominant media of the day (Shaw et al., 2015). That is because at first, they consciously choose the dominant media of the day and over time, automaticity

takes over and the processes of choosing the media happens by force of habit regardless of which media is dominating at the time.

Despite the shift toward horizontal media, most agenda setting research has been oriented toward the vertical media, such as television and newspapers (Coleman & McCombs, 2007; Moeller, Trilling, Helberger, Irion, & De Vreese, 2016), although more recently some attention is being paid to social networking websites such as Twitter (Vargo, 2011; Vargo, Basilaia, & Shaw, 2015; Vargo, Guo, & Amazeen, 2017).

According to the agenda building theory, media agendas are a subtle form of social control by powerful groups and the elite that result from limited time and resources available to journalists. This prompts them to allow external sources to become involved in the gatekeeping process (Cobb & Elder, 1972; Cobb, Ross, & Ross, 1976; Lee & Riffe, 2017). Media agendas can be influenced by "outside initiatives" (grievances expressed by non-government actors in response to government policies or plans), or "mobilization model" (situations where political leaders initiate policy but require public support for its implementation) through information subsidies such as press releases and media kits (Cobb & Elder, 1972; Cobb, Ross, & Ross, 1976; Lee & Riffe, 2017). It can be argued that traditional/vertical media relay the agenda of the elites to the wider public and in doing so create a one-way channel from the elite to the people. Social/horizontal media, on the other hand, connect people with friends as well as the distant world, although they are also used for transmission of vertical agenda via opinion leadership and two-step flow of information. The two-step model was first introduced by Lazarsfeld et al. (1944) and developed by Katz and Lazarsfeld (1955/2006). It has since received special attention

from scholars, who have observed its influence on the agenda setting effect (Brosius & Weimann, 1996; Weimann & Brosius, 1994). The two-step flow underlines the importance of social/horizontal media in agendamelding.

On Twitter, many users follow news, celebrities, and trending topics, but they are also exposed to news that their friends follow. YouTube may be used to view a diverse collection of videos ranging from presidential addresses and documentaries to DIY tutorials to "cat fails." People create personal communities on Facebook, Instagram and Snapchat. They post about topics that interest them, share their opinions through words, sounds, images, and videos, while at the same time filtering out those they do not want to be exposed to (Shaw et al., 2016).

The Study of Agendamelding

As noted, agendamelding is a large process at societal level through which individuals join groups. Shaw (2018) calls these groups agenda communities – communities built around shared *media agendas*, *community agendas* (not to be confused with agenda communities), and *personal agendas*. In other words, agenda communities are formed by the unique way in which audiences "meld" agendas from different types of media.

Agenda communities can be broad or narrow. Through agendamelding, audiences combine information from different sources to form an agenda (or, join the community of people who have the same agenda), such as voting for a particular candidate, donating to a cause, or selecting a new gaming console. There are three ways to acquire information that is then melded into a picture of civic life. Information may come from 1- traditional,

or vertical media, (which disseminate media agenda); 2- social, or horizontal, media (which include friends, and other people and disseminate community agenda); and finally, 3- the individual's personal experiences, which is the source of their personal agenda (Shaw et al., 2015). An individual's personal agenda is the collection of agendas an individual holds independent – or, even in spite – of vertical media and horizontal media agendas. For example, an unemployed individual may find the issue of unemployment most salient, even at a time when this issue is not dominating either vertical or horizontal media agendas. Figure 2-3 depicts the three sources of information.

If agendamelding were to be applied to a presidential election, potential voters could form an opinion about the presidential candidates by using these three sources: 1newspaper, television, or other traditional/vertical sources, that aim for broad general audiences; 2- the official campaigns, niche magazines that cater to a particular audience, social media of all types, friends, or from other observers, who are looking at events from a more specialized point of view (e.g. humor, parody, and partisan lens, among others); or 3- the individual's personal feelings, experiences, and attitudes. In other words, individuals may tune in to their local broadcast to learn about candidates, they may use their Facebook connections to find out what their friends think about these candidates, and they may remember their grandfather, who always believed in voting Republican regardless of the candidates' qualifications. Individuals process the messages that they receive from these various sources and meld them to form their own agenda.

In one of the few empirical studies of agendamelding, Ragas and Roberts (2009) looked at Chipotle's agenda and the brand's community agenda by conducting a content

analysis of vertical media reports about Chipotle and comparing it with responses to a survey of members of a horizontal media outlet (Chipotlefans.com, a web-based community of Chipotle fans). They found that when individuals join groups, even though these individuals may have different backgrounds, they tend to "meld their agendas with the overall agenda of the group, in this case, the most salient brand attributes as perceived by the community" (Ragas & Roberts, 2009). In other words, the contribution of social/horizontal media is moderated by joining like-minded social groups.

In another study, Iranian citizens were found to be more oriented toward social/horizontal media on issues pertaining to social justice and individual freedoms, while relying on traditional/vertical media for economic issues (Minooie, 2016).

The present study attempts to shed light on how American audiences meld agendas from various sources of information. By studying the first-level and second-level agenda setting effect of different sources of information on audiences of various demographic backgrounds and their need for orientation, the present study attempts to identify the variables driving the orientation of audiences to different types of media.

Hypotheses and Research Question

As discussed earlier agendamelding is about the agenda setting power of various media types – or how audiences meld the agenda of various sources of information to form their own community agenda. Agendamelding uses first-level agenda setting correlations to paint a broader picture of how various audiences' agendas on various issues areset. Therefore, inherent in any agendamelding study is an agenda setting study. As such the first hypothesis of the present study predicts:

H1a- There is a strong positive correlation between emphasis on issues by traditional/vertical media (media agenda) and perceived importance of issues by audiences (public agenda).

As explained earlier, McCombs and Weaver (1973) found that an increase in media use results in a greater agenda setting effect. Therefore, the present study hypothesizes that:

H1b - The correlation between media agenda and public agenda is stronger for high traditional/vertical media users, compared with low traditional/vertical media users.

Traditional/Vertical media are the greatest predictors of political information (Chaffee & Frank, 1996; Chaffee, Zhao, & Leshner, 1994; Weaver & Drew, 1995). Therefore, from a need for orientation perspective, it is expected that:

H1c - The correlation between media agenda and public agenda is stronger for audiences with a high need for orientation compared to those with moderate or low need for orientation.

Second-level agenda setting occurs when attributes about an issue are transferred along with objects from the media to audiences. Therefore, it is expected that:

H1d -There is a strong positive correlation between attributes used to describe issues by traditional/vertical media and the attributes used by audiences to describe the same issues.

Hypotheses **1a** through **1d** deal with traditional/vertical media. To complete the picture and gain insight into how audiences meld agendas, social/horizontal media also need to be studied. The following hypotheses are very similar to a traditional agenda setting study, with one notable difference – instead of using traditional media content as the agenda indicator, horizontal media content will be used.

H2a- There is a positive correlation between emphasis on issues by social/horizontal media (community agenda) and perceived importance of issues by audiences (public agenda).

H2b- The correlation between community agenda and public agenda is stronger among high social/horizontal media users, compared with low social/horizontal media users.

H2c – The correlation between community agenda and public agenda is stronger among audiences with a high need for orientation compared to those with moderate or low need for orientation.

H2d -There is a strong positive correlation between attributes used to describe issues by social/horizontal media and the attributes used by audiences to describe the same issues.

McCombs and Shaw (1972, 1993) argue that social order and a functioning society depend on a strong, dominant vertical media agenda. This suggests that the correlation between media agenda and public agenda is stronger than the correlation between community agenda and public agenda.

H3 - The correlation between emphasis on issues by traditional/vertical media (media agenda) and perceived importance of issues by audiences (public agenda) is stronger than the correlation between emphasis on issues by social/horizontal media (community agenda) and perceived importance of issues by audiences (public agenda).

Agendamelding posits that there is a third source, apart from traditional/vertical and social/horizontal media, that individuals draw on in creating their community: Personal preferences (personal agenda) – a concept that refers to what people think about independent of what they read, listen to, or talk about and which Eugene Shaw (1977, p. 85) describes as *intrapersonal agenda*, and McLeod and colleagues (1974, p. 139) call "individual issue salience." Research has found that people who are most personally involved with mass mediated issues are also the ones most sensitive to the media agenda (Weaver, Zhu, & Willnat, 1992). While by itself personal experience is found to inhibit media conformity, it can strengthen conformity if people experiencing an issue turn to media for more information (Lasorsa & Wanta, 1990).

Unlike the first two hypotheses which test a relationship between a type of media emphasis and audience perception of importance, the third hypothesis will test a relationship between audience perception of importance – which, as explained earlier, is generally called public agenda – and audience preference for issue importance. Perceived importance, or public

agenda is generally measured by asking the MIP question, while preferred importance (object salience independent of traditional media, or *personal* agenda) is measured by inquiring about audience preference independent of media. A member of the audience may say that an issue like the economy is important (perhaps because the economy received a lot of media attention), but believe that LGBTQ rights is as important as the economy, if not more, due to personal experience or interest in the issue. As a result, when asked "what is the most important problem facing the country?" they will say the economy. However, if the question is posed as a hypothetical that gives the respondent an imaginary power to set the agenda, in a manner of speaking, the respondent is more likely to express an opinion based on personal experience and independent of the media. When the individual is given the power to set the agenda, whatever opinion expressed by the individual will become dominant therefore, eliminating the fear of being in the minority and reducing the likelihood of a spiral of silence.³ This hypothetical could be phrased as: "You have a magic wand that compels everyone in the country to care about an issue that is personally important to you. What is that issue?" or, "If you had a magic wand that would make any issue that you personally care deeply about a top priority for everyone in the country, what issue would you have everyone care about?" In this case, even though the individual's response to the MIP question was economy, they may be more inclined to name LGBTQ as the issue they want everyone to care about. This is, while an individual who is personally affected by the economy may cite it in response to both questions. In the latter case the personal and public agenda overlap. This overlap – the correlation between "perceived" and

³ See: Elisabeth Noelle-Neumann, "Return to the Concept of the Powerful Mass Media. Studies of Broadcasting 9, (1973), 405-413; The Spiral of Silence – Our Social Skin (Chicago: University of Chicago Press, 1984); and "The Spiral of Silence: A Response," K. R. Sanders, L. L. Kaid, and D. D. Nimmo, eds. (Political Communication Yearbook, 1984. Carbondale, Southern Illinois University Press, 1984).

"preferred" – represents the contribution of personal agenda to public agenda. (See Chapter 2 for more information about public agenda and personal agenda.)

H4- There is a correlation between perceived importance of issues (public agenda) and preferred importance of issues (personal agenda) by audiences.

This correlation is not expected to be a strong one in most cases, as the agenda setting literature attributes the bulk of agenda setting effect to the media (Shaw et al., 1999, 2016; Weaver et al., 2010). However, in cases where one's preferences are not reflected either in traditional/vertical media or social/horizontal media, this correlation is expected to be strong.

Based on the information gathered to test **H1** through **H4**, the research question of the present study attempts to find out how audiences meld media agendas (**H1a**), community agendas (**H2a**) and personal agendas (**H4**) to form their public agenda.

RQ – How do audiences meld agendas from different sources of information?

To address this question, an ordinal logistic regression model will be constructed with *public agenda* as the outcome variable and a number of variables including *media agenda*, *community agenda*, *personal agenda*, demographic variables, media use variables and NFO variables as predictors. The logit model will shed light on the strongest predictors of the public agenda and the extent to which a combination of certain variables explains changes in *public agenda*.

CHAPTER 3: METHOD

Overview

The purpose of this work is to build theory that quantifies the size of mass media effects with respect to media and non-media influences in society. More specifically, the present study tests for the transfer of salience from traditional/vertical media (media agenda), social/horizontal media (community agenda) and personal preferences (personal agenda) to the individual's public agenda. Following in the footsteps of a long line of salience transfer research (for some examples, see: Coleman & McCombs, 2007; Iyengar & Kinder, 1987; McCombs, 2014; McCombs & Shaw, 1972, 1993), the present study relies on survey responses and content analysis of media to achieve its goals. Amazon's Mechanical Turk (MTurk), which pays participants to complete tasks such as participating in a study, was used to recruit a representative sample of American adults.

MTurk is an online portal that provides a marketplace for "requesters" to identify and hire people to complete virtual tasks for wages based on their qualifications. The convenience of MTurk has prompted computer engineers, psychologists and social scientists to use it as a large participant pool to conduct research at a low cost (Paolacci & Chandler, 2014). The popularity of MTurk has prompted researchers to study the reliability of MTurk samples.

These studies have generally found that, for the most part, MTurk workers provide reliable and quality data on well-established measures and that the data meet the reliability standards of the same measures for offline studies (Shank, 2016). Among the traditional

measures tested with MTurk samples are studies of priming, framing, and personal preference, which are very similar to the premise of the present study (Horton, Rand, & Zeckhauser, 2011). MTurk data are also found to be within millisecond range of offline cognitive reaction times, giving social scientists confidence in the reliability of data collected via MTurk (Crump, McDonnell, & Gureckis, 2013). On the other hand, studies of the Mechanical Turk population have found MTurk workers to be younger, female, more liberal, and more educated than the general US population (Berinsky, Huber, & Lenz, 2012). While these deviations from the general population can pose potential external validity issues, they can also be controlled for both during the recruitment and analysis phases of the study.

Survey Sample

Tan and Weaver (2013) reported that in 194 agenda setting observations over fifty-two years, the mean rank-ordered correlation between media agenda and public agenda was .51. Based on a G*Power analysis for $\rho = .51$ (two-tailed), with 95% confidence interval and p < .05, a sample of 44 respondents would suffice to detect the effect of traditional/vertical media (H1a) on the public agenda. However, the scope of the present study extends beyond the effect of traditional/vertical media and includes social/horizontal media (H2a). A recent study of social/horizontal media agenda setting effect found that on average among "low frequency users" of social media, the average correlation between social/horizontal media agenda and public agenda was .34; the figure was higher for moderate- (.48) and high-frequency users (.64) (McGregor & Vargo, 2017). A G*Power analysis for $\rho = .34$, with a 95% confidence interval and p < .05 (two-tailed), indicated that a sample of 106 respondents would be able to effectively capture the effect of social/horizontal media (H2a). One of the few studies of agendamelding found the correlation between public agenda and personal agenda to be .49 at its highest

(Minooie, 2018). A G*Power analysis for $\rho = .49$ (two-tailed), with 95% confidence interval and p < .05 found that a sample of 48 respondents would enough to detect this effect (**H4**) on public agenda. Lazzeroni and Ray (2012) reported that to maintain the same significance level and effect size, the sample size should increase by *m* (where m = 1.8) with each additional hypothesis test. Using this method, they concluded that "even a rigorous application of the Bonferroni correction that accounts for every one of a large number of tests is unlikely to change actual hypothesis test results" (p. 112).

The present study tests for ten hypotheses; four of the ten hypotheses use results of a traditional/vertical media content analysis akin to the Tan and Weaver (2013) study. Thus, the sample size required for these hypotheses is $44 \times 4m$, according to Lazzeroni and Ray (2012) guidelines, or N = 317, when rounded up. Five of the remaining six hypotheses (including H3) use the results of social/horizontal media content analysis, which based on the most conservative power analysis require a sample size of $106 \times 5m$, or N = 954. Taking into account the adjustment recommended by Lazzeroni and Ray (2012), the sample size for the last hypothesis (H4) is 49m or N = 89, when rounded up. Therefore, the sample required for this study stands at N = 1,360. Based on the required sample size, a convenience sample of 1,909 adults residing in the United States was drawn, using Amazon's Mechanical Turk. However, 840 responses were disqualified due to incomplete responses or incorrect responses to instrument manipulation checks, resulting in a sample of N = 1,069. Two questions were included in the survey instrument asking respondents to select a particular choice to indicate that they were paying attention to the survey. Respondents who failed to select the correct response were removed from the sample.

A smaller sample size reduces the power of statistical analyses, however, Lazzeroni's and Ray's (2012) method is conservative and a slightly smaller sample is unlikely to increase Type II error.

The participants' age ranged from 18 to 85 years (M = 38.28, SD = 12.7). According to the latest US Census data the median age in the United States stands at 37.2,⁴ which means that the age of the sample closely mirrors the general population, given those under 18 years of age were not recruited for this study. Females (N = 584, or 54.6%) were slightly over represented compared to the latest US Census data,⁵ which puts the female population of the United States at 50.8%. Table 3-1 displays the distribution of sex in the sample.

The majority of participants identified as Caucasian or European (N = 821), followed by Asian (N = 79), African or African-American (N = 79), Latino or Hispanic origin (N = 55), Native American or Alaskan Native (N = 7), and Hawaiian or Pacific Islanders (N = 5). The rest of the participants identified as "other" (N = 23). According to US census data, 76.6% of the US population is comprised of Caucasians, which closely mirrors the 76.8% of the sampled population.

Individuals sampled in this study were more educated than the general public. While all participants had at least some high school education, According to US census data only 87% of the US population falls under this category. A large number of participants had bachelor's degree (N = 437), followed by some college credit (N = 226), associate's degree (N = 119), master's degree (N = 103), GED (N = 95), trade, technical, or vocational training (N = 33), professional

⁴ https://www.census.gov/newsroom/releases/archives/2010_census/cb11-cn147.html

⁵ https://www.census.gov/quickfacts/fact/table/US/PST045217

degree (N = 30), doctoral degree (N = 15), and some high school education with no degree (N = 11).

The median income of the participants was between \$50,000 and \$74,999 (N = 264), closely reflecting the median household income in the United States, which, according to latest census data, stands at \$55,322. Participants also reported incomes between \$35,000 and \$49,999 (N = 181), less than \$25,000 (N = 177), between \$25,000 and \$34,999 (N = 158), between \$75,000 and \$99,999 (N = 148), between \$100,000 and \$ 149,999 (N = 99), and over \$150,000 (N = 42).

A vast majority of respondents said they had lived in the United States all their lives (N = 994). The rest of the participants had either spent more than 10 years in the United States (N = 68), or less than five years (N = 7). However, all participants identified English as their "best language for reading, writing, and speaking."

Content Analysis

As discussed in Chapter 2, accessibility and applicability of information, along with need for orientation, have been identified as the causes of the agenda setting effect (McCombs & Stroud, 2014). In other words, audiences cannot be influenced by messages they have not received nor can they be influenced by messages that do not apply to them. Agenda setting scholars have implicitly or explicitly acknowledged this notion in their methodology and their choice of media samples for content analysis – for example, McCombs and Shaw (1972) chose to analyze the content of *local* print media and television networks available in the area in their Chapel Hill study. Chapter 2 also discussed that among the assumptions of agendamelding is the notion that audiences are aware of their media use and can report their media habits accurately. The present study, therefore, analyzes content that respondents report to have consumed prior to

the study in addition to a more conventional content analysis of popular media – i.e. highly circulated newspapers, widely viewed news broadcasts and websites, and trending topics on social media.

Lists of media sources most frequently consumed by respondents were compiled by asking each respondent to name the top three newspapers, news websites, television programs, news broadcast, magazines, and various social media sources they consumed prior to the survey. The lists were then combined into two aggregate lists of all media sources – one containing traditional/vertical media and another containing social/horizontal media sources. The top three sources on the traditional/vertical media list (i.e. the *New York Times* website, the *Huffington Post* website, and the *BBC* website) and the top three sources on the social/horizontal media (i.e. the *Daily Show with Trevor Noah*, the *Rachel Maddow Show*, and *Last Week Tonight with John Oliver*) were also selected for content analysis.

Previous studies have found that it takes a month for traditional/vertical media agendas to transfer to audiences for maximum effect (Winter & Eyal, 1981), while the lag for social media (Twitter) ranges from zero to seven days (Conway, Kenski, & Wang, 2015). The present study, therefore, sampled media content accordingly.

Traditional Media Sample

Independent of traditional/vertical media consumed by respondents, three print newspapers, three network television news, and three news websites were selected as a measure of traditional/vertical media agenda. *USA Today*, the *New York Times*, and the *Wall Street Journal* were selected for content analysis as they occupy the top three spots of the most popular daily newspapers in the US by circulation (Misachi, 2017). For each newspaper, one constructed week from the month leading up to the survey (May 4-June 4) was sampled. Riffe, Lacy, and Fico (2014) recommend two constructed weeks of daily newspapers for one year – three percent of the population, which is significantly lower than the 20% considered in the present study.

To draw a constructed week sample, all Mondays of the population are identified and one is randomly selected, then all Tuesdays are identified and one is randomly selected, then all Wednesdays, Thursdays, and other days are identified and one is randomly sampled until a week is "constructed" (Hester & Dougall, 2007; Lacy, Riffe, Stoddard, Martin, & Chang, 2001). Constructed week sampling controls for sources of "systematic variation" (Riffe, Lacy, & Drager, 1996). Using this method, one week for each of the three newspapers was constructed and the headline and leads of the stories appearing on the front page were sampled for content analysis (N = 211).

The most efficient way to sample a year of television news is by randomly selecting two days per month for a total of 24 days (Riffe et al., 2014), as this method will result in a more representative sample compared to constructed weeks (Riffe, Lacy, Nagovan, & Burkum, 1996). This method randomly samples 6.6% of the population. Two random evening news broadcasts from each of the three networks with the highest number of viewers, namely *ABC*, *NBC*, and *CBS* (Ariens, 2018), were selected and all the stories in each broadcast were content analyzed (N = 110).

Hester and Dougall (2007) found that at least two, and as many as five constructed weeks are required for online news content to capture variations in a six-month period – in other words, seven percent to 20% of the population needs to be sampled for online news content. Therefore, for a one-month period, one constructed week would capture the variation. The top three news

websites by traffic from the United States⁶ (i.e. *CNN*, the *Washington Post*, and *Fox News*), were sampled, using the same method, and the headlines and leads of their top stories⁷ were content analyzed (N = 314).

In addition to the independent traditional/vertical media sample, an issue of *Time*, ranked first among the magazines that respondents read, was also randomly selected from a sampling frame of the four issues that were released in the month leading up to the survey. The headline and leads of stories in the sampled issue were content-analyzed. *People* and *National Geographic* ranked second and third respectively, but they were classified under social/horizontal media.

Social Media Sample

Trending of topics in social media provides an important source for current information about world events, but how these trends are determined is very important. As a prime example of social media, Twitter uses an algorithm that determines trending based on the frequency count of hashtags and the period the tweets were posted (Sapul, Aung, & Jiamthapthaksin, 2017). Volume by itself is not enough to send a topic to the trending list; "velocity and kurtosis (i.e. 'spiky-ness')" are also important factors that Twitter takes into account when calculating trending topics (Lotan, 2015). Facebook uses a similar algorithm that looks at the number of publishers posting articles about the same topic, and the engagement around that group of

⁶ The rankings are based on data from Alexa Internet, a subsidiary of Amazon that provides web traffic data. News aggregate websites such as Yahoo News and Google News were ignored and only news websites that generate original content were taken into consideration. For the complete list see https://www.alexa.com/topsites/category/News

⁷ For *CNN*, all stories appearing under the header "Top Stories" were samples. For, *Fox news*, all the stories appearing under the double-wide middle column were sampled. For the *Washington Post*, all the stories appearing on the double-wide left column were sampled.

articles (Cathcart, 2017). Trending analysis shows that the more tweets are posted about a news story the longer it will remain in the trending list, provided the initial critical mass necessary for reaching the trending topics list (Lu & Yang, 2012).

While the experience of each user is unique on Twitter and Facebook due to their exposure to posts by people in their network and the accounts they follow, the trending list can provide some insight into the topics users are exposed to. Of the 44 instances of agenda setting on Twitter observed by Conway et al. (2015), the authors reported an average of 2.2 days lag, but the majority of their sample (54%) displayed lags of zero days (N = 17) or one day (N = 7). For each of the top 10 trending topics on Twitter, 100 tweets with most number of retweets were sampled for the three days leading up to the survey. Tweets that did not contain meaningful texts (e.g. only contained emojis or images) were removed from the sample (N = 2,088).

To compile the self-reported social/horizontal media sampling frame, participants were asked to name the top three public social media accounts that they follow in addition, the top three magazines that they read, and the top three news-related programs they watch. Two magazines (i.e. *People* and *National Geographic*) and three news-related programs (i.e. the *Daily Show with Trevor Noah*, the *Rachel Maddow Show*, and *Last Week Tonight with John Oliver*) received the highest rankings, surpassing any social media account or opinion websites.

One issue of *People* magazine was randomly selected from a sampling frame of the four issues that were released in the month leading up to the survey as well as the most recent issue of *National Geographic*. All headlines and leads of the stories in the two issues were content analyzed (N = 39)

Finally, two episodes of the *Daily Show with Trevor Noah*, the *Rachel Maddow Show*, and *Last Week Tonight with John Oliver* aired within a month of the survey were randomly selected and all stories discussed in each episode were content analyzed (N = 79).

Concepts and Measures

The primary objective of the present study is quantifying the contribution of traditional/vertical media (media agenda), social/horizontal media (community agenda) and personal preference (personal agenda) to an individual's public agenda. To that end, salient issues in traditional/vertical media and social/horizontal media were first identified along with their attributes. Then, audience perception of issue salience and issue attributes in the said media were identified. In addition to issue and attribute salience, the participants' media consumption habits and their need for orientation were measured. Finally, the issues that audiences prefer to be salient were also identified.

Media Agenda

In their seminal agenda setting study, McCombs and Shaw (1972), identified *media agenda* as the objects (public issues) that the media talk about (see Chapter 2). Media agenda is the independent variable in **H1a**, and has been traditionally measured via a content analysis of the dominant media of the day (for some examples, see: Funkhouser, 1973; Iyengar & Kinder, 1987; McCombs, 2014; McCombs & Shaw, 1972). In keeping with this tradition, the present study conducted a content analysis of the sampled media artifacts. The unit of analysis for media agenda is headlines and leads for written news, individual tweets for Twitter content, and individual story or segment for broadcast content. Based on the content analysis of traditional/vertical media, a rank-ordered variable of issues called media agenda was created for analysis (N = 749). This variable includes every instance of issues mentioned in the

traditional/vertical media cited by participants as the top sources they consume as well as the media independently selected for content analysis. For example, if a segment of a newscast discussed the stock market, one instance of "economy" was added to the media agenda variable. A subsample (n = 100) was double coded and Krippendorff's alpha revealed that the media content was coded reliably ($\alpha = .981$).

Public Agenda

The dependent variable in **H1a**, **H2a** and **H4**, public agenda, as defined by McCombs and Shaw (1972), refers to the perceived salient issues of the day, and is usually measured by asking respondents to name the most important problem (MIP) facing the country. The present study measured this concept by asking a similar question. The question was open-ended to alleviate concerns raised by Kim, Sheufele, and Shanahan (2002). The responses were merged into a composite rank-ordered variable called public agenda for analysis (N = 1,068). This variable contains every instance of issues mentioned by the respondents as the most important problem. For example, if a respondent cited the rising health insurance premiums as the most important problem, an instance of "healthcare" was added to the public agenda.

Community Agenda

In Chapter 2, community agenda was defined as the agenda of social/horizontal media. Community agenda is the independent variable in **H2a** and is measured by a composite variable that includes content analysis of social/horizontal media and self-reported behavior. Since social/horizontal media include anything from niche magazines, to social networking websites and blogs, to interpersonal (face-to-face or mediated) communication between individuals and others in their social circle, the unit of analysis depends on the type of social/horizontal media sampled. The unit of analysis for social/horizontal media artifacts that are presented in the form

of an article (e.g. magazines, blogs, and articles posted on Facebook) is the headline and the lead of the article. For artifacts that are concise in nature (e.g. tweets and posts on Facebook), the unit of analysis is individual communication and for television programs the unit of analysis is a segment or story. The social/horizontal media sample was analyzed for objects, or public issues, (see Chapter 2) as well as attributes similar to the traditional/horizontal media agenda.

One of the main assumptions of agendamelding is that audiences are aware of the media content they consume and can self-report their consumption (Shaw et al., 1999). To capture the contribution of interpersonal communications – of which there is no public record and which cannot be independently measured – in a follow-up to the MIP question, respondents were asked to select on a Likert-scale the extent to which they base their response on information gained from each of the following sources: Traditional/vertical media, social/horizontal media, interpersonal communication, and their personal beliefs and experiences.

Based on the content analysis of social/horizontal media, a rank-ordered variable of issues called community agenda (social/horizontal media agenda) was created for analysis (N = 2,330). This variable combined issues from the media that participants cited as the top social/horizontal sources they consume as well as social/horizontal media independently selected for content analysis. Similar to media agenda and public agenda, this variable contained every instance of issues mentioned in social/horizontal media. For example, if a segment of an opinion or satirical show made claims about the competence of President Trump, an instance of "Trump as an issue" was added to this variable. A Krippendorff's alpha test of reliability based on a subsample (n = 100) of social/horizontal media content revealed that the media content was coded reliably ($\alpha = .975$).

Personal Agenda

The independent variable in H4 is a measure of issues that audiences prefer to be salient in the country. As explained in Chapter 2 (also see Shaw et al., 1999), audiences form their personal preference (personal agenda) through their first-hand experiences with the world around them. It is not possible to independently measure the personal preferences and experiences of participants. Therefore, personal agenda was measured by asking participants to self-report the issues they would like to be salient in a hypothetical situation in which whatever issue they name would become salient for the entire nation (N = 1,063). This variable was created exactly like the public agenda variable with the exception that it used responses to the personal preference question as opposed to responses to the MIP question.

Media Attributes

The independent variables in **H1d** and **H2d** are traditional/vertical media and social/horizontal media attributes, respectively. Attributes used to describe objects (issues) coded as part of traditional/vertical media agenda (N = 1,073) and social/horizontal media (N = 1,878) were recorded and every instance of each attribute was placed in the respective variable. For example, if a newspaper discussed the issue of economy in terms of the gap between the high-income and low-income members of society, an instance of "income disparity" was added to the traditional/vertical media attributes variable. If a tweet claimed that the media depict President Trump and his supporters unfavorably most of the time, an instance of "liberal bias" was added to the social/horizontal media attributes variable. Agreement on a double coded subsample (n = 100) of social/horizontal media attributes was high ($\alpha = .932$), while Krippendorff's alpha for traditional/vertical was at an acceptable level ($\alpha = .855$).

Audience Attributes

The dependent variables in **H1d** and **H2d** are traditional/vertical media and social/horizontal media attributes, respectively. To measure these variables, in a series of openended questions participants were asked to describe issues that they named as most important in a few sentences. For any issue mentioned by respondents as the most important, every attribute used to describe it was coded and recorded in the audience attribute variable (N = 2,001). For example, if a respondent described President Trump as an incompetent person, who has abused his power, and should be impeached, an instance of "presidential incompetence," an instance of "abuse of power," and an instance of "impeachment" were added to the audience attribute variable.

Media Consumption

Hypotheses **1b** and **2b** have a media consumption factor – a variable measuring the amount of time respondents have spent on a given medium over the past seven days. For traditional/vertical media consumption, participants were asked a number of questions inquiring about the amount of time they spend on reading newspapers, watching news programs on television, or consuming traditional/vertical media online. The response to these questions were averaged and dichotomized to form a composite traditional/vertical media consumption variable with two levels of low (N = 564) and high (N = 505). The high and low levels were determined based on the amount of time average Americans spend on each medium (McNair, 2017), with those who spend more time on a particular medium than the national average coded high and the others coded low.

For social/horizontal media consumption, respondents were asked a number of questions about the amount of time they spent on watching social/horizontal television programs (see

Chapter 2), reading social/horizontal material in print or online, discussing current affairs with others, and accessing social networking websites or apps. The responses to these questions were averaged and dichotomized to form a composite social/horizontal media consumption variable with two levels of low (N = 682) and high (N = 387).

Need for Orientation

Hypotheses 1c and 2c predict a stronger agenda setting effect for respondents with a greater need for orientation. Several measures of uncertainty and relevance are used to determine need for orientation. In accordance with the findings of McCombs and Weaver (1973), uncertainty and relevance are determined based on whether respondents are interested in politics and how strongly they identify with a political ideology. For other topics -i.e. the economy, law and order, arts and culture, entertainment, sports, technology, fashion/style, travel, and science and medicine – a series of questions based on Matthes' (2005) recommendations were used to determine need for orientation. These questions generally asked participants to rate on a Likerttype scale the extent to which they wanted to be "instantly informed" about the topic, "constantly" observe stories about the topic, and hear about the topic "every day." The responses were then categorized either as high NFO (N = 783) or low NFO (N = 283) using the method employed by Camaj and Weaver (2013). None of the respondents indicated low uncertainty, but high relevance which would qualify them for the moderate NFO category. This is partly because the present study measured relevance by taking into account the nature of the issue each participant cited as the most important problem facing the country. For example, relevance was considered to be high for a respondent who indicated interest in sports and cited a sports related issue as the most important problem facing the country regardless of the relevance of other topics like politics – which Camaj and Weaver (2013) used as the single indicator of relevance. Table 3-2 displays the distribution of need for orientation.

Coding

Survey responses

Due to the potential presence of typographical and grammatical errors, as well as potential use of abbreviated language and Internet slang by participants in their response to the open-ended questions, the responses were hand-coded to improve accuracy and avoid unintended mis-categorization by computer-assisted textual analysis software.

A coding protocol was devised based on The Global Database of Events, Language, and Tone (GDELT) themes for coding issues. GDELT "is the largest event dataset ever created, totaling more than 300 million georeferenced event records stretching back thirty years" (Leetaru, 2015, p. 46). GDELT monitors news around the world every day and identifies people, locations, themes, emotions, narratives, and events (Leetaru, 2015; Vargo et al., 2017). GDELT's Global Knowledge Graph (GKG) offers themes that "cover a broad range of issues, topics, and attributes, many of which are similar to those studied in agenda-setting studies" (Vargo et al., 2017, p. 7). The GKG provides the terms it uses to categorize news events. For example, events categorized under Education contain at least one of the following terms: education, academics, diploma, diplomas, schoolteacher, schoolteachers, teacher, teachers, professor, professors, educator, educators, teaching, educating, classroom, classrooms, school, schools, preschool, preschools, middleschool, middleschools, highschool, highschools, university, universities, college, colleges, madrassa, madrassas, yeshiva, and yeshivas.⁸

⁸ The complete list of themes and their descriptions is available on GDELT's official website. For the list of themes see: http://data.gdeltproject.org/documentation/GDELT-Global_Knowledge_Graph_CategoryList.xlsx For the terms

The protocol was further refined, by removing GDELT themes that did not appear in the corpus and by modifying certain categories to better fit the data. For example, 214 participants named President Donald Trump as the most important problem facing the country, explaining that they see the president himself as the problem, rather than his stance on particular issues, or the office of the president and the leadership of the country in general. Based on the unmodified GDELT themes, however, these responses would have been categorized under "leader," which also accounts for "political leader," "congressman," "politician," "mayor," and "governor," among others. Using the unmodified themes would have resulted in loss of granularity, so President Trump (i.e. "Trump as an issue") was added as a separate category. Overall 49 categories were selected for coding objects (issues).

For each category, the attributes used to describe it in the responses were recorded and added to the protocol. For example, the issue of "border security" was discussed in terms of its relation to "crime and terrorism," the necessity of building a "wall," the need to increase or decrease "ICE" agents, the "travel ban" put in place to prevent entry of travelers from certain countries, and "draining the resources" of the United States to accommodate those who illegally cross the border.

A subsample (n = 94) was double coded for comparison and reliability purposes. Krippendorff's alpha indicated that both issues (α = .952) and attributes (α = .755) were coded reliably. The size of the subsample was determined by Riffe, Lacy, and Fico's (2014) formula:

$$n = \frac{(N-1)(SE^2) + PQN}{(N-1)(SE^2) + PQ}$$

where N = the population size (number of content units in the study)

associated with the themes see: https://github.com/ahalterman/GKG-Themes/blob/master/SET_EVENTPATTERNS.xml

P = the population level of agreement Q = (1 - P)n = the sample size for the reliability check

$$n = \frac{(1069 - 1)(.0009).09(1069)}{(1069 - 1)(.0009) + .09}$$

n = 92.44

Procedure

Qualtrics, an online survey management software, was used to develop the survey instrument, and Amazon's Mechanical Turk (MTurk), which offers a large online workforce who complete human intelligence tasks (HITs), was utilized to recruit respondents for the present study. MTurk allows "requesters" to set qualification requirements ranging from the location of participants to their demographic information and HIT acceptance rates. The qualifications required for participating in the present study were location (United States), a HIT approval rating of 95 percent or higher and a total approved HITs of at least 100. HIT workers were offered \$2 for their participation in a "media consumption survey."

After agreeing to participate in the survey each HIT worker received a unique URL to the survey hosted on Qualtrics servers. By clicking on the URL, respondents were redirected to the consent form, which explained that the purpose of the study was to investigate the ways in which individuals consume media and communication messages. Participants were also informed about the measures taken to ensure their privacy as well as the potential risks involved.

Respondents were urged to read the questions carefully and respond accurately. For open-ended questions, respondents were encouraged to include as much detail as possible. Two instructional manipulation checks were included in the survey, to ensure that participants were paying attention to the survey. The manipulation checks asked respondents to select a particular

answer. The survey was launched on June 4, 2018, and remained open for a few hours before the desired sample size was reached.

The top ten trending topics on Twitter were identified for each of the three days leading up to the survey (June 1-3), using Trendo Gate,⁹ a Twitter trends archive. For each trending topic, tweets with most number of retweets posted during the three-day period were gathered using a Python script. Sampling frames of all weekday issues of the three newspapers selected for content analysis were drawn from May 3 to June 3, 2018, and a constructed week of each newspaper was randomly sampled. Similarly sampling frames of all days in the month leading up to the survey were drawn for each news website and TV news broadcast. One constructed week for each news website and two random TV broadcasts from each network were sampled. The top three traditional/vertical and social/horizontal media sources reported by participants were also sampled using the same methodology.

After data collection, responses to open-ended survey questions as well as content of media sources sampled were hand-coded according to the coding protocol devised for content analysis.

Data Analysis Strategy

The present study attempted to find support for ten hypotheses and address one research question. **H1a**, **H2a**, and **H3** are all variations of the original agenda setting hypothesis, which were addressed via rank-ordered correlations. Two-tailed Kendall's tau tests were used to determine whether Hypotheses **1a**, **2a**, and **3**, were supported. Kendall's tau-b is preferred over Spearman's Rho for rank-ordered data because it has more tolerance for wide differences

⁹ https://trendogate.com

between ranks and its ability to account for tied ranks. Kendall's tau is a nonparametric correlation coefficient used to test correlations between non-interval scaled ordinal variables (Bolboaca & Jäntschi, 2006) calculated by the following formula:

$$\tau_{\scriptscriptstyle b} = \frac{Concordant \ pairs - Discordant \ pairs}{Concordant \ pairs + Discordant \ pairs}$$

A concordant pair is the number of observed ranks below a particular rank which are larger than that particular rank. In other words, (a_k^i, a_k^j) and (a_l^i, a_l^j) is concordant if $a_k^i > a_l^i$ and $a_k^j > a_l^j$ or $a_k^i < a_l^i$ and $a_k^j < a_l^j$. Conversely, a discordant pair is the number of observed ranks below a particular rank which are smaller than that particular rank. In other words, (a_k^i, a_k^j) and (a_l^i, a_l^j) is discordant if $a_k^i > a_l^i$ and $a_k^j < a_l^j$ or $a_k^i < a_l^i$ and $a_k^j > a_l^j$ (Signorino & Ritter, 1999). The benefits of Kendall's tau-b compared to Spearman's Rho become apparent when the discrepancies between the ranks themselves are small, but the differences between the values associated with non-conforming ranks are large. For example, suppose that two ranks exist for items *a* through *l* (N =12). The two ranks are in agreement on all items (*b* through *k*) except for *a* and *l*. Where the first set ranks *a* first and *l* last, the second set does the opposite (*j* first and *a* last). In Kendall's tau, the difference between the concordant and discordant pairs for item *a* is 11, this is while Spearman's Rho ($r_s = 1 - \frac{6\Sigma d_l^2}{n(n^2-1)}$) squares this difference and assigns a value of 121 to the difference between the two sets on item *a* (see Table 3-3). For this particular example:

$$\tau_{\rm b} = \frac{45 - 21}{45 + 21} = \frac{24}{66} = .364$$

while

$$r_{s} = 1 - \frac{6\sum 242_{i}^{2}}{12(12^{2} - 1)} = 1 - \frac{1452}{1716} = .154$$

While Kendall's tau-b is more forgiving of few but major discrepancies, it is generally considered more conservative as in most cases it produces a smaller correlation coefficient than Spearman's Rho (Bolboaca & Jäntschi, 2006). Unlike Spearman's Rho, Kendall's coefficient of concordance (W) allows for correlations among more than two variables. Therefore, to test hypotheses that compare more than one rank order lists, pairwise correlations will be followed by a Kendall's W test to determine whether the differences in correlational values are significant. Kendall's W is a measure of the agreement among several groups that rank a given set of n objects (Legendre, 2005). The null hypothesis in Kendall's W is that the group rankings are not independent of one another. Therefore, a non-significant p-value means that group rankings are not correlated.

To address the research question of the present study an Ordinal Logistic Regression model was used with public agenda as the dependent variable and various predictors such as age, sex (binary), ethnicity, income, media agenda, community agenda, personal agenda, and need for orientation as independent variables.

CHAPTER 4: RESULTS

H1a predicts a positive correlation between the media agenda and the public agenda. A Kendall's tau test revealed that the media agenda was positively correlated with the public agenda (r_{τ} = .61, p < .001), supporting H1a. H2a predicts that there is a positive correlation between the community agenda and the public agenda. Similar to H1a, a Kendall's tau test revealed a positive correlation between the community agenda and the public agenda (r_{τ} = . 40, p< .001). Therefore, H2a was also supported. Table 4-1 compares the top ten issues on the public agenda with the media agenda (issues mentioned by traditional/vertical media) and community agenda (issues mentioned by social/horizontal media). While all 49 issues were included in the analysis, only the top ten were included in Table 4-1 for parsimony.

H3 predicts that the traditional media agenda setting effect is stronger than the social/horizontal media agenda setting effect. A comparison between the media agenda-public agenda correlation and community agenda-public agenda correlation indicates that the former correlation is stronger. A follow-up Kendall's W test revealed that the media agenda, community agenda, and public agenda were not significantly correlated ($W = .006, X^2_{(2)} = .585, p = .74$). As explained in Chapter 3, a non-significant W indicates differences between the groups, whereas a significant p-value indicates an absence of difference. Therefore, Hypothesis 3 that predicts the media agenda-public agenda correlation ($r_{\tau} = .61$) is stronger than the community agenda-public agenda correlation ($r_{\tau} = .40$) is supported.

Hypotheses 1b, and 2b predict that various levels of media use interact with the agenda

setting effect. Composite variables of traditional/vertical and social/horizontal media use were created based on questions that asked participants how many hours they spent consuming particular media over the previous seven days. The variables were then dichotomized into high or low media use – i.e. two variables called "vertical_media_use" and "horizontal_media_use" with two levels of high and low. Data from a recent report about the media consumption of American adults (McNair, 2017) was used to determine how much time an average person spends consuming a particular medium per week. Then, above-average responses were coded 1 for high and the rest 0 for low. For example, the average digital viewing time per day in the United States is 77 minutes (McNair, 2017), or just under nine hours per week; therefore, only respondents who reported consuming "10 hours or more" of video sharing websites or apps were coded as high.

Using the media use variables, a rank-ordered list of issues was created by selecting only cases who reported heavy consumption of traditional/vertical media and placed in a variable called "high_vertical_public_agenda." A rank-ordered list of issues was created by selecting only cases who reported light consumption of traditional/vertical media and placed in a variable called "low_vertical_public_agenda." Similarly rank-ordered variables were created based on heavy and light consumption of social/horizontal media and placed in variables called "high_horizontal_public_agenda," and "low_horizontal_public_agenda." These four new variables represent public agenda only among respondents with the corresponding level of media use.

To test **H1b**, which states that the correlation between the media agenda and the public agenda is stronger for high traditional/vertical media users compared with low traditional/vertical media users, Kendall's tau tests were conducted between the three variables of media agenda,

"high_vertical_public_agenda," and "low_vertical_public_agenda." Media agenda was significantly and positively correlated with high traditional/vertical media users (r_{τ} = .61, p < .001) as well as with low traditional/vertical media users (r_{τ} = .60, p < .001). While the former correlation was slightly stronger than the latter, a Kendall's W test revealed that there were no significant differences between the high and low traditional/vertical media consumers (W = .31, $X^{2}_{(2)}$ =30.868 p < .001). Therefore, **H1b** was not supported.

H2b predicts that the correlation between the community agenda and the public agenda is stronger among high social/horizontal media users compared with low social/horizontal media users. To test this hypothesis, Kendall's tau tests were conducted between the three variables of community agenda, "high_horizontal_public_agenda," and "low_horizontal_public_agenda." Community agenda was significantly and positively correlated with high social/horizontal media consumers ($r_{\tau} = .40, p < .001$) and low social/horizontal media consumers ($r_{\tau} = .40, p < .001$). While neither correlation is stronger than the other, a Kendall's W test ($W = .01, X^2_{(2)} = 1.613, p =$.44) revealed that high social/horizontal media users and low social/horizontal media consumption may not influence the extent to which audiences agree with social/horizontal media consumption may not influence the extent to which audiences find salient.

H1c and H2c predict that need for orientation impacts the agenda setting effect. To test these hypotheses, a composite variable was created based on participants' responses to need for orientation questions. Then the variable was dichotomized with two levels of high and low need for orientation. Based on the dichotomized need for orientation variable, two rank-ordered variables of "high_NFO_public_agenda" and "low_NFO_public_agenda" were created, representing public agenda only among respondents with corresponding need for orientation.

H1c predicts a stronger correlation between the media agenda and the public agenda among participants with a higher need for orientation. To test this hypothesis, Kendall's tau tests were conducted with the media agenda, "high_NFO_public_agenda," and "low_NFO_public_agenda." The media agenda was significantly and positively correlated with the public agenda of respondents with a high need for orientation ($r_{\tau} = .77$, p < .01), but less strongly so with respondents who had a low need for orientation ($r_{\tau} = .23$, p < .05). A Kendall's W test was not significant indicating that there are differences between the two correlations (W =.03, $X^2_{(2)} = 2.967$, p = .22), and thus providing support for H1c.

H2c predicts a stronger correlation between the community agenda and the public agenda among participants with a higher need for orientation. To test this hypothesis, Kendall's tau tests were conducted with the community agenda, "high_NFO_public_agenda," and "low_NFO_public_agenda." The community agenda was significantly and positively correlated with the public agenda of respondents with a high need for orientation ($r_{\tau} = .48$, p < .01), but not with respondents who had a low need for orientation ($r_{\tau} = .21$, NS). A Kendall's W test (W = .05, $X^2_{(2)} = 5.496$, p = .06) revealed that the two correlations were independent of one another Therefore, **H1c** was also supported.

H1d and H2d predict that the traditional media and social media, respectively, have the power to transfer attribute salience to public agenda. Three rank-ordered variables of "traditional_media_attribute," "social_media_attribute," and "public_attribute" were created. During the coding process, attributes were coded in a manner that no two issues shared the same attributes, eliminating the possibility of an attribute relating to more than one issue. H1d predicts a positive correlation between traditional/vertical media attributes and public attributes. To test this hypothesis, a Kendall's tau test was conducted with "traditional_media_attribute" and

"public_attribute." The result indicated that the attributes used by traditional/vertical media to describe issues significantly correlated with attributes used by audiences to describe issues (r_{τ} = .29, *p* < .01). **H2d** predicts a positive correlation between social/horizontal media attributes and public attributes. A Kendall's tau test did not find a significant correlation between attributes used by social/horizontal media to describe issues and attributes used by audiences (r_{τ} = .08, *NS*) on aggregate.

To determine the effect of agenda setting level 2 on each issue, attributes used to describe each of the top ten issues cited by participants were combined into 10 different variables and attributes used by traditional/vertical and social/horizontal media to describe those issues were also combined into 20 different variables (10 variables for each type of media). Zero-order correlations indicated an improved agenda setting level 2 effect (see Table 4-2). Kendall's tau correlations between audience attributes and traditional/vertical media attributes were all significant and above the .70 levels. Audience attribute and social/horizontal media attribute correlations also saw improvements across the board except for attributes used to describe healthcare. **H1d** was supported as all correlations (on aggregate- and individual issue-level) were statistically significant. **H2d**, however, was partially supported as only individual issue-related attributes were significantly correlated and no significant correlation was observed on aggregate for attributes used by the social/horizontal media and attributes used by audiences to describe issues.

H4 predicts a correlation between the respondents' personal preferences (personal agenda) and the public agenda. To test this hypothesis, "personal_agenda" – which was measured using responses to the hypothetical questions asking respondents to name an issue they would want to become salient for the rest of the country – was used in a Kendall's tau test with

public agenda (used in **H1a** and **H2a**). The results indicated a positive correlation between issues that audiences find to be important and issues they would like to become important (r_{τ} = .51, p < .01), providing support for **H4**. Table 4-3 compares the rank of the top ten personal issues with public agenda.

The research question of the present study asks how do audiences meld agendas from different sources of information? To address this question, a rank ordered outcome variable called was created based on the responses of participants to the MIP question to represent public agenda. Using the public agenda variable used in **H1a** and **H2a** analyses, the rank of each possible response (i.e. issue, or object) was determined. Then for each participant the written response to the MIP question was replaced by the rank of the issue in the public agenda variable. For example, respondents who cited President Trump (Trump as an issue) as the most important issue (the top issue of the public agenda) were coded 1, while those who reported the economy as the most important issue (the second issue of the public agenda) were coded 2.

The same principle was applied to code traditional/vertical media agenda, social/horizontal media agenda and personal preference. For traditional/vertical media agenda (media agenda), a new variable called "traditional_media_agenda" was created and participant responses to the MIP question were coded based on the rank of issues in the media agenda variable (used in **H1a**). For example, respondents who cited guns as the most important issue (third on the public agenda, but 14th on the media agenda) were coded 14 in the traditional_media_agenda. For social/horizontal media agenda (community agenda), a new variable, "social_media_agenda" was created and participant responses to the MIP question were coded based on the rank of issues in the community agenda variable (used in **H2a**). For example, respondents who cited social division as the most important issue (fourth on the public agenda,

but eighth on the community agenda) were coded 8 in the "social_media_agenda." Finally, for personal agenda a new variable called "personal_preference" was created and participant responses to the MIP question were coded based on the rank of issues in the personal agenda variable (used in **H4**). For example, respondents who cited racism and discrimination as the most important issue (fifth on the public agenda, but fourth on personal agenda), were coded 4 in the "personal_preference."

A composite scaled variable was created based on responses to questions that asked participants to self-report the extent to which they based their answers on information from traditional/vertical media or social/horizontal media. The variable was coded in a manner that 1 represented a complete reliance on traditional/vertical media and 5 represented a complete reliance on social/horizontal media.

Formal education enhances cognitive skills, instills feelings of civic duty, and generally reflects family background all of which have an impact on one's civic engagement (Wolfinger & Rosenstone, 1980). Through formal education, students acquire communication skills, organizational skills, and an interest in politics (Verba, Schlozman, & Brady, 1995). Non-formal education, such as vocational and professional training, however, has a strong influence on an individual's occupation, which in turn determines the type of civic skills used and honed along with the type of social networks to which they are exposed (Kuenzi, 2006). As a result, those with professional training, as opposed to formal education, have a different set of expectations from the economy and job market among other things. Moreover, as feelings of civic duty, communication skills and interest in politics are associated with formal education, it stands to reason to expect differences in terms of worldview and judgement between individuals with formal education and those with professional training. Therefore, in addition to various levels of

formal education, professional training was considered as a separate category in the present study. Since all of the respondents had at least some level of high school education, the 11 education categories were collapsed into four categories of 1- those who have not completed college (i.e. some high school, high school graduates, and some college); 2- those who have received professional or trade training; 3- those with an associate degree, or bachelor's degree; and 4- those with a master's or doctoral degrees.

While age had been found to impact the agenda setting function of the media (for a summary of the literature on the effect of age on agenda setting see Lee & Coleman, 2014), the relationship is curvilinear (Lopez-Escobar, Llamas, & McCombs, 1998). As a result, scholars have long used age breaks to address their research questions. Early agenda setting studies used young (younger than 45) and old (45 and older) dichotomies (Shaw & Martin, 1992), but later studies resorted to generation brackets such as the "civic generation," "baby boomers," and "Generation Y" as suggested by Coleman and McCombs (2007). The rationale behind these brackets reflects the unique experiences of people in certain generations (Klecka, 1971). In the present study, age was collapsed into a variable with four levels: 1- Younger than 25 years old (Generation Z); 2- 26-35 years old (late Generation Y); 3- 36-45 years old (early Generation Y); and 4- older than 45 years old (Generation X). Generation Y was divided into two groups, as younger millennials share more commonalities with Generation Z in terms of their experiences than older millennials. For example, they became accustomed to using the Internet at a younger age, but they are also more likely to consume traditional media sources on the Web. Older millennials are more likely to be interested in education because their children are more likely to be in K-12 schools (Lee & Coleman, 2014). Table 4-4 displays the distribution of age groups.

While income has been found to impact agenda setting, no consistent dollar amount has been used to categorize it (Bratton & Haynie, 1999; Erbring, Goldenberg, & Miller, 1980; Shaw & Martin, 1992). For example, Shaw and Martin (1992) considered as low-income, anyone who reported earning less than \$30,000 a year and considered everyone else as high-income. Erbring et al. (1980) considered anyone making under \$8,000, low-income; anyone making more than \$15,000, high-income; and anyone in between, middle-income. The present study uses the median household income in the United States as the yardstick. According the most recent US Census data, the median household income in the country stands at \$55,322.¹⁰ The closest category (\$50,000) used to collect income data was used to dichotomize income into low (less than \$50,000 a year) and high (\$50,000 or more).¹¹ Table 4-5 displays the distribution of income groups.

Due to the absence of variation in ethnicity, the variable was collapse into two categories of 1- Minorities (N = 133), and 2- Caucasian or European (N = 818). Table 4-6 displays the distribution of ethnicity.

A nominal variable called "Party_ID" was created based on participant responses to questions about their political affiliation. The variable was coded 1 for Democrat (N = 451), 2 for Republican (N = 210), and 3 for Independent or undecided (N = 396). Table 4-7 displays the distribution of political affiliation.

An ordinal logistic regression model was fitted to the data to measure the likelihood that the public agenda, or what audiences perceived to be the most important issues of the day (which

¹⁰ https://www.census.gov/quickfacts/fact/table/US/SEX255217

¹¹ Incidentally, when accounted for inflation, \$30,000 used by Shaw and Martin (1992) amounts to \$54,740.55 in 2018, according the US Department of Labor at https://data.bls.gov/cgibin/cpicalc.pl?cost1=30000&year1=199201&year2=201806.

was coded into "Issue_1"), can be predicted by the 11 variables of traditional/vertical media agenda (media agenda), social/horizontal media agenda (community agenda), personal preference (personal agenda), sex (as a binary variable), vertical/horizontal orientation of participants, education, political affiliation (party ID) income, age, ethnicity, and need for orientation (the same variable used in **H1c** and **H2c**). Since no significant difference was detected between heavy and light consumers of traditional/vertical media and social/horizontal media consumers, media consumption variables were not entered as predictors into the model.

Table 4-8 presents the results of the ordinal logistic regression analysis. The model was statistically significant ($X^2_{(17)} = 247.98$, Nagelkerke Pseudo $R^2 = .21$, p < .001), therefore the null hypothesis that non-intercept parameters are zero was rejected. According to the model, the log of the odds of an individual selecting the top public agenda issue as the most important issue facing the country was positively related to media agenda (p < .001), personal agenda (p < .05), sex (p < .05), education (p < .05), political affiliation (p < .01), need for orientation (p < .05), income (p < .05) and age (p < .05), but was negatively related to community agenda (p < .001), and vertical/horizontal orientation (p < .05) – lower vertical/horizontal levels indicate vertical orientation as the variable was coded on a completely vertical (1) to completely horizontal (5) scale. The pseudo R^2 suggests that the model explains 21% of variation in the public agenda. However, due to the large number of terms in the model, this figure should be interpreted as inflated. Figure 4-1 graphs the main effect of the predictors on the likelihood of selecting the top issue on the agenda in ascending order.

The media agenda (traditional/vertical media agenda) increases the odds of an individual perceiving the top public agenda issue as the most important problem facing the country by almost 19% percent, whereas community agenda (social/horizontal media agenda) decrease the odds by 10.5%. Personal agenda's contribution, as expected, is small at about 1%. Female

audiences are 21.3% more likely to name the top issue on the agenda as the most important one. Being oriented toward traditional/vertical media also increased the odds by about 14%. Those without a college degree, and those with associate's or bachelor's degree see their odds of selecting the top issue on the public agenda increased by 63.4% and 60.2%, respectively. Being a Democrat ups the odds by 40.2%, while being a Republican decreased the odds by 58.8%. Audiences with a low need for orientation are also 22.4% less likely to pick the top issue on the public agenda, but lower income audiences are 33.8% more likely to do so. While age generally increases the odds of selecting the top issue, it is only significant for those between 26 to 35 years of age, who see a 39.4% surge in their odds.

Multiple multicollinearity tests were conducted to examine the variance inflation factor (VIF) measures and tolerance value of all 11 independent variables. The results of the multicollinearity tests are presented in Table 4-9. VIF values for all variables ranged from 1.009 to 2.639 that were below the threshold value of three (< 3) and tolerance value of all variables were ranged between 0.379 to 0.991 that is substantially more than 0.10. The VIF and tolerance of the variables did not indicate multicollinearity between the independent variables.

A post-hoc analysis to study two-way interactions between all independent variables was conducted ($X^{2}_{(59)} = 475.56$, Nagelkerke Pseudo $R^{2} = .36$, p < .001). Main effects emerged for the impact of media agenda (Odds Ratio = 1.446, p < .001); community agenda (OR = .737, p <.01); political affiliation-Democrat (OR = 21.65, p < .001); high need for orientation (OR = 127.485, p < .001); age – younger than 25 (OR = 5.109, p < .05); age – 25-36 (OR = 4.336, p < .05); age – 36-45 (OR = 5.371, p < .01); education – no college (OR = .054, p < .01); education – professional training (OR = .086 p < .05); and education – associate's or bachelor's degree (OR

= .01, p < .05) on the public agenda. Table 4-10 presents the result of post-hoc analysis. (Note: non-significant interactions were dropped from the table.)

The results indicate that being 25 years of age or younger decreases the impact of traditional/vertical media (media agenda) on the public agenda by 16.8%, but increases the impact of social/horizontal media agenda (community agenda) by 19.7%. Those between 26 and 35 years of age experience a 15% decrease in the effect of media agenda on public agenda, and an 18.6% increase of the effect of community agenda on their public agenda. For those between 36 and 45 the effect of media agenda on the public agenda decreases by 18.9%, while the effect of community agenda increases by 23.4%.

Being Democrat decreases the impact of the media agenda and personal agenda on the public agenda respectively by 8.7% and 12.9%, while increasing the effect of the community agenda by 10.1%. High need for orientation improves the effect of the media agenda by 21.4% and the effect of the personal agenda by 14% while decreasing the effect of the community agenda by 13.5% (as mentioned earlier high NFO was coded 0, therefore lower scores indicate higher impact). Minorities see an 8.2% increase in the effect of the media agenda on the public agenda and a decrease of 9.6% in the effect of the community agenda. Those who have some education, but no college degree, experience an increase of 19.7% in the effect of the media agenda on the public agenda, while those who have received professional training or an associate's or bachelor's degree see an increase of 17.7% and 17.4% respectively. Finally, being vertically-oriented increases the effect of the media agenda by 42%. Figure 4-2 graphs the effect of two-way interactions on the likelihood of selecting the top issue on the agenda in ascending order.

A Bonferroni adjustment was not made to the significance values as Lazzeroni and Ray (2012) argue that by following their sample size recommendations "the critical value in the context of extreme multiple testing is not affected much by typical changes in the number of tests" (p. 112). Moreover, "the Bonferroni method is concerned with the general null hypothesis (that all null hypotheses are true simultaneously), which is rarely of interest or use to researchers" (Perneger, 1998, p. 1236). Therefore, Perneger (1998) recommends using the correction only when the null hypothesis is of interest to researchers (i.e. to verify that there is no relationship between the variables) or when analysis is conducted without an a priori hypothesis that the primary association should differ between these subgroups. Agendamelding operates under the assumption that there *are* differences between subgroups and that various audiences meld their agenda differently.

Further post-hoc analysis was conducted to study multi-way interactions between independent variables. Overall, the multi-way interaction model was statistically significant $(X^{2}_{(59)} = 1453.29, Nagelkerke Pseudo R^{2} = .75, p < .001)$. Main effects for the traditional/vertical media agenda (media agenda), the social/horizontal media agenda (community agenda), sex, vertical/horizontal orientation, political affiliation, need for orientation, age, and ethnicity were statistically significant, but not for education, income, and personal preference (personal agenda). Table 4-11 presents significant interactions. Political affiliation and income interacted with other variables more than any other variable. The interactions indicated how various subgroups deviate from the majority in melding their agenda.

Political Affiliation × Education × Age × Sex × Personal Agenda

Male Democrats with an associate's or bachelor's degree, between the ages of 36 and 45 allow their personal agenda to impact their public agenda. This impact generally reduces the

likelihood of selecting the top public agenda as the most important issue by 1.4%. On the other hand, both male and female Republicans without a college degree, older than 45, experience the same reduction by 3.5% and 3.3%, respectively. Male Republicans without a college degree, or with professional training, who are younger than 25, see a 2% reduction.

Male Republicans with professional training who are between 36 and 45 years of age, see their personal agenda negatively impact their public agenda by 3.9%. Those older than 45, experience a 1.3% reduction.

Female Independents with an associate's or bachelor's degree who are younger than 25 years of age, experience the most inverse impact (4.3%) on their public agenda by their personal agenda. By contrast male Independents with the same level of education, between the ages of 26 and 35, only see a 1.5% reduction in the likelihood that they would select the top public agenda as their most important issue.

Political Affiliation × Education × Age × Sex × Community Agenda

The youngest and oldest male Republicans without a college degree see an inverse impact of the community agenda (social/horizontal media agenda) on their public agenda of 2.9% and 4.1%, respectively. Male Republicans with professional training of all age groups – younger than 25 (by 3.7%), 26-35 (by 1.7%), 36-45 (by 4.6%), and 45 and older (by 2%) – see the community agenda reducing their chances of voting with the majority on the most important issue facing the country.

Male Independents with professional training, who are older than 45 years of age experience an inverse effect of the community agenda on their public agenda of 1.3%. Female Independents with an associate's or bachelor's degree allow the community agenda to reduce

their likelihood of selecting the top public issue as the most important one on their agenda by 3.9%, if they are younger than 25, and by 1.5% if they are younger than 36.

Political affiliation, education, age, and sex did not significantly interact with the media agenda.

Income × Ethnicity × Age × Vertical/Horizontal Orientation × Media Agenda

Among low-income, horizontally-oriented audiences older than 45, minorities are inversely affected by the media agenda (traditional/vertical media agenda) in selecting their public agenda by .08% and Caucasians are affected by 3.3%.

Income × Ethnicity × Age × Vertical/Horizontal Orientation × Community Agenda

Low-income, horizontally-oriented minorities between 26 and 35, and older than 45 see the community agenda (social/horizontal media agenda) inversely impact their likelihood of selecting the top issue on the public agenda as the most important problem facing the country by 1.2% and 1.7%, respectively. The oldest Caucasians experience a 5% impact of the community agenda on their chance of picking the top public agenda issue.

High-income, horizontally-oriented minorities also experience a negative impact of the community agenda on their public agenda in most age groups – younger than 25 (by 1.4%), 36-45 (by 1%), older than 45 (by 2.7%).

Income × Ethnicity × Age × Vertical/Horizontal Orientation × Personal Agenda

The personal agenda of horizontally-oriented, low-income minorities between 26 and 35 years of age reduces their likelihood of selecting the top public issue as the most important problem facing the country by 1%. The minorities older than 45 in the same group experience a reduction of 1.7%, while Caucasians experience a 3.3% reduction.

High-income, horizontally-oriented minorities of all age groups see their personal agenda reduce their likelihood of choosing the top issue on the public agenda as their most important issue. The reduction is 1.2% for the youngest, .6% for 26- to 35-year-olds, 1% for 36- to 45-year-olds and .8% for those older than 45.

CHAPTER 5: DISCUSSION AND CONCLUSIONS

Summary of Findings

The present dissertation researched how audiences meld agendas by reexamining first, and second levels of agenda setting as well as the contribution of need for orientation and media consumption in our evolving media environment. The findings support the propositions of the agenda setting theory both in traditional/vertical media such as daily newspapers, long the subject of agenda setting studies, and in social/horizontal media that include social networking websites, opinionated news programs, and people in various social groups.

Daily newspapers, television news and other traditional/vertical media remain a dominant force in setting the agenda for audiences. While the effect found in the present study was not as strong as the early days of the agenda setting research, which yielded correlation values in the high .90s (McCombs & Shaw, 1972; Shaw & McCombs, 1977), it is on par with the more recent studies that have reported correlation values in the high .50s and .60s (Djerf-Pierre & Shehata, 2017; Shehata & Strömbäck, 2013; Tan & Weaver, 2013). The findings also run counter to the notion that changes in the media environment, demassification of traditional media, and emergence of new, democratized, and crowd-sourced media are diminishing the agenda setting effect (Bennett & Iyengar, 2008; Chaffee & Metzger, 2001; Holbert, Garrett, & Gleason, 2010). Instead, social/horizontal media were found to have an agenda setting power of their own, but their power is not as strong as the agenda setting power of traditional media.

While some issues gain salience in both traditional/vertical and social/horizontal media, the traditional/vertical media agenda is distinct from that of social/horizontal media. Sports-related issues dominated the social/horizontal media sampled in this study, while politics and more specifically issues pertaining to President Trump dominated the traditional/vertical media sampled. Of the top five salient issues, traditional/vertical and social/horizontal media only had the issue of economy in common – a testament to the differences between the two categories of media.

The distinct power of traditional/vertical and social/horizontal media to set the agenda bodes well for the agendamelding theory, which identifies these media categories along with personal preferences as the three sources of information that audiences draw on to meld agendas and form their personal community (Shaw, Hamm, & Terry, 2006; Shaw, Terry, & Minooie, 2015; Shaw & Weaver, 2014). Personal preference (personal agenda) was also positively correlated with the public agenda.

There is consensus among media effects scholars that heavy exposure to media content strengthens the effect (Ferguson & Perse, 2000; Gerbner, Gross, Signorielli, & Morgan, 1980; McCombs & Weaver, 1973; Perse, 1986). However, no significant difference was detected between heavy and light consumers of media in the present study. While the correlation between the public agenda of heavy consumers of traditional/vertical media and the media agenda was slightly stronger than the correlation between the public agenda of light consumers and the media agenda, both correlations were statistically significant – as was the case for heavy and light social/horizontal media consumers' public agenda and community agenda. The fact that all correlations were positive and significant does not run counter to the assumption that heavy exposure to media strengthens the media effect. Rather, it suggests even light exposure to media

can facilitate the agenda setting function of the media. One possible explanation for the absence of any significant difference between heavy and light consumers of media is the non-probability sample of the present study, which resulted in recruitment of participants with a relatively high baseline of media consumption to begin with. The majority of participants (N = 687) reported that they spend at least five to nine hours consuming news on the Internet, even more participants (N = 741) reported watching news on television between one to five hours.

Need for orientation was found to strengthen the agenda setting power of both traditional/vertical media and social/horizontal media. Relevance and uncertainty were measured using a scale that included questions about political affiliation (McCombs & Weaver, 1973; Weaver, 1980) and questions about audience interest in being instantly informed about various issues (Matheson, 2006). The findings confirm the well-documented proposition that the agenda setting effect is strongest when an issue is relevant to audiences and it is surrounded by uncertainty for an issue or an event that is evolving, or developing to such an extent that interested parties would need to seek frequent updates about it to stay informed (for some examples, see Camaj, 2014; Camaj & Weaver, 2013; McCombs & Stroud, 2014; Weaver, 1991).

Next, the present study found support for the proposition that "the media not only tell us what to think about, but also how to think about it, and, consequently, what to think" (McCombs & Shaw, 1993, p. 65). As discussed in Chapter 2, this process is called attribute agenda setting or agenda setting level 2. The attributes used by traditional/vertical and social/horizontal media to describe issues were correlated with the attributes used by audiences to describe the same issues. Attributes significantly improved the agenda setting power of traditional/vertical and social/horizontal media 19 out of 20 times. Traditional/vertical media were more successful in telling audiences "what to think" than social/horizontal media – partly to due to the overall

stronger first level agenda setting power of traditional/vertical media and partly due to more variance in social/horizontal media issues and attributes. As traditional/vertical media follow a hierarchical structure, there is more homogeneity in the attributes they use to describe issues. Social/horizontal media, however, do not follow a strictly hierarchical structure which allows for a more diverse range of issues and attributes. Overall, the results reaffirm the findings of agenda setting level two studies.

The basic idea underpinning agendamelding is that various factors contribute to how audiences form their public agenda. Principle among these factors are the media agenda (traditional/vertical media agenda), the community agenda (social/horizontal media agenda) and the personal agenda (personal preferences) of audiences. The results of an ordinal regression model support this idea. But what factors impact these contributions?

Being older (above 45) generally impacts how audiences meld their agendas. Republicans are also more likely to meld agendas differently than Democrats and Independents. Female audiences are more likely to give more weight to social/horizontal media when melding their agenda, while individuals with a higher need for orientation give more weight to traditional/vertical media. Education seems to impact the way Republicans meld their agendas more than Democrats and Independents. Income tends to impact the agendamelding of minorities more than Caucasians.

Theoretical Contributions

The present study makes a number of important contributions to the fields of agenda setting and agendamelding. Generality and scope is one of the criteria used to assess the overall value of a theory (Littlejohn & Foss, 2008). Theories with a broader scope can be applied to a wider range of settings and are considered of higher value. The media effects literature is rife

with studies finding support for the agenda setting power of media. Many of these studies have taken place during presidential election campaigns (both within the United States and abroad). Others have focused on particular issues over time, while some have examined the effect in experimental settings. Few have studied it in non-election years. The overall support this study found for the notion that the media set the agenda for audiences, even half a century after the first agenda setting study, suggests that the scope and applicability of this theory is not bound by high impact events such as elections, extended coverage of a particular issue over time, or other stimuli (in the case of experiments). That the support still holds even in an evolving media landscape and despite the proliferation of traditional/vertical and social/horizontal media sources, suggests that agenda setting is not time-bound and not limited to an environment with a few dominant media sources.

Another criterion identified by Littlejohn and Foss (2008) for gauging the value of a theory is testability. Since the introduction of agendamelding in 1999, most scholarly work surrounding it has been theoretical mainly due to the lack of a clear definitions of the concepts and operationalization of the variables involved. The present work is the first empirical study of agendamelding using a large survey sample to find support for the theory. To achieve its objectives, the present study developed the agendamelding theory further, by explicating concepts such as traditional/vertical media, social/horizontal media, personal preferences, community agenda, and personal agenda, offering practical solution to operationalize them. In doing so, the present study increased the parsimony of the agendamelding theory, yet another criterion used to judge theories according to Littlejohn and Foss (2008). The findings of the present investigation found support for agendamelding's predictive and explanatory powers, thus successfully meeting all criteria used to assess a theory (Littlejohn & Foss, 2008).

From a methodological perspective, the present study reduced common source bias by supplementing its conventional media sample (i.e. sources with highest circulations, or viewership) with a sample of media sources audiences claim they use most frequently. It also adopted the more conservative Kendall's tau test rather than the commonly use Spearman's Rho test to improve the validity of its findings.

The present study found a second-level agenda setting effect for social/horizontal media in addition to traditional/vertical media, which had been studied in the past. This finding opens a new horizon for future researchers to study transfer of attribute salience from social/horizontal media to audiences. This is important because agendamelding is conceptualized on the assumption that social/horizontal media are capable of transferring issue salience and if agendamelding is to be extended to attributes as well as objects (issues), there needs to be a theoretical basis for attribute transfer between social/horizontal media and audiences.

Implications

The present study found differences in how audiences meld agendas from traditional/vertical media, social/horizontal media, and their personal preferences. Although the basic idea that various factors impact public opinion – which is essentially what the public agenda is based on – is not new, the present study hypothesized that these factors interact differently with the sources of information audiences use to form their agendas. For example, female participants are found to be susceptible to social/horizontal media influence to some extent, but older audience members are more susceptible to traditional/vertical media to an even greater extent.

The findings, and the agendamelding line of research in general, have great implications for agenda setters. By identifying susceptibility in various audience groups, agenda setters may

devise a strategy to reach out to particular segments of the audience via the media type most likely to influence them. For example, candidates not polling well with a particular demographic, marketers who struggle to reach a certain target audience; and even public health and safety organizations who have difficulty informing particular at-risk individuals can all benefit from agendamelding designs to discover how to initiate a focused and targeted object and attribute salience transfer.

Limitations

Research into why the agenda setting effect takes place has identified need for orientation and media consumption as possible explanations, but the present study only found support for the former. The absence of support for the widely accepted impact of media consumption is the result of one of the limitations of the present study, namely the sample. The convenience sampling method left out participants without Internet access, the less tech-savvy participants, and generally people who do not take surveys professionally (those not HIT workers). This resulted in a liberal bias and a bias toward users with a heavy media consumption baseline habits.

While the use of the sampling method is defensible as differences between the sampling method used in this study and truly random samples have been found to be negligible (Shank, 2016), the present investigation studies novel and innovative variables that have not been tested before. Therefore, no reference random sample exists for a meaningful comparison. This casts a shadow over the external validity of the present study. While care was taken in conceptualizing and measuring the variables by relying on multiple measures tested in earlier studies to improve the internal validity of the study, the findings should not necessarily be generalized to all adults residing in the United States. It is recommended that replications of the present study be

conducted with random samples to alleviate concerns over skewedness and improve generalizability.

Another concern about the findings of the present study pertains to the political climate in which it was conducted. It may be argued that the findings of the study were influenced by the amount of attention President Trump was receiving in the media prior to and during the study, especially given that he emerged as one of the main objects on the agenda. However, most prominent agenda setting studies (McCombs, 2014) have been conducted in the presidential election seasons, when media and audiences pay considerable attention to candidates and issues. Therefore, while the media coverage of the president might be considered high for a non-election year, it is perhaps on par with the media coverage of presidents and presidential candidates during election years, when many agenda setting studies have taken place in the past.

Some of the variable in the present study relied on self-reported data, generally considered a limitation as they can rarely be independently verified. Some of the pitfalls of reliance on self-reported data include selective memory (failure to remember certain experiences or events), telescoping (misattribution of timing of experiences and events), attribution (associating positive experiences with one's agency while associating negative experiences with external factors), and exaggeration (placing more emphasis on experiences or events than they actually deserve). Selective memory and telescoping may have resulted in over-statement of media consumption, which in turn rendered any difference between light and heavy consumers of media non-significant, while exaggeration may have impacted the self-reported public agenda. while the former two could pose potential validity problems for the findings of the present study, the latter is generally considered part of the natural agenda setting function of the press.

Finally, regression analyses reveal relationships among variables, but do not necessarily imply that the relationship is of a causal nature – a strong relationship between variables could stem from many other causes including the influence of other unmeasured variables (Nunkoo & Ramkissoon, 2012). Decades of agenda setting studies have found support for the causal relationship between the media agenda and the public agenda through panel studies and experimental designs. The present study relied on the literature to draw sound and logical inferences compatible with the existing agenda setting literature. However, the jury is still out on the causal nature of the relationship between the variables used in an agendamelding study.

Future Research

The present investigation is perhaps the most comprehensive study (and test) of agendamelding in the theory's 19-year history, however it only scratches the surface regarding the contribution of the sources of information to the audience's public agenda and the various factors influencing those contributions. Future research can build upon the present study and expand the literature through replications, as well as methodological, design and theoretical improvements.

Any generalization of the present study (which is the first using survey data to test agendamelding) is pending rigorous replications of the findings, ideally with representative samples. Moreover, the present study adopted a cross-sectional approach, similar to most agenda setting studies. By conducting longitudinal and time series studies, future researchers can shed more light on the lasting effects of agendamelding. To improve the explanatory power of agendamelding and establish causal relationships, experiments, panel studies, and case studies should be used.

The present investigation focused on the aggregate agenda of various media types and the public. Future studies may focus on just one item on the agenda. By holding the issue constant, variations in the salience and prominence among various sources of information can be observed and factors contributing to those variations identified.

The present study found a second-level agenda setting effect for social/horizontal media in addition to traditional/vertical media, which is generally studied. This finding opens a new horizon for future researchers to study transfer of attribute salience from social/horizontal media to audiences. This is important because agendamelding is conceptualized on the assumption that social/horizontal media are capable of transferring issue salience and if agendamelding is to be extended to attributes as well as objects (issues) there needs to be a theoretical basis for attribute transfer between social/horizontal media and audiences. The present study did not explore attribute agendamelding, but the results provide enough promise to merit hypothesizing that audiences *do* meld attributes as well as objects. Future research is needed to explore how audiences meld attributes. This will further aid agenda setters to not only identify the media type that is more likely to influence certain segments of the audience, but also how to package messages intended for dissemination on those media types.

Moreover, the distribution of issues and attributes in the present study indicates that certain subcategories tend to cluster around certain issues, which paves the way for network agendamelding (or the study of how audiences meld networks of issues rather than just one issue). As discussed in Chapter 2, agenda setting level 3 or network agenda setting, posits that media construct connections among agendas, thereby constructing the centrality of certain agenda elements in the public's mind. Given the findings of the present study, it is reasonable to

hypothesize that when audiences meld agendas they also meld other elements associated with those agendas.

Conclusions

We live in the digital age. Technological advancements have allowed anyone with an Internet-enabled electronic device to communicate with a large number of people. Audiences now have access to an ever-increasing array of media to choose from and have the ability to access only the information they want and at a time of their choosing. This newfound power of audiences to "gatekeep" their own content was perceived as a threat to the agenda setting power of media. Over the years, the correlation between the media agenda and public agenda has dropped from .97 in the Chapel Hill Study to an average in the .50s and .60s.

While some scholars view this trend as a sign that the media are losing their agenda setting power, the agendamelding theory offers a rival explanation: That audiences meld their agenda from various sources of information as opposed to having their agenda set by just one. In fact, audiences have always melded their agenda from different sources, but the absence of a diverse buffet of sources to choose from had, for a long time, masked the melding process and resulted in attribution of the entire public agenda to the agenda setting function of the mass media.

As audiences become more autonomous in choosing the content they want to be exposed to, the hierarchical structure of society begins to rattle. In *How Democracies Die*, Harvard political scientists Steven Levitsky and Daniel Ziblatt argue that "the weakening of our democratic norms is rooted in extreme polarization—one that extends beyond policy differences into an existential conflict over race and culture" (p.9). As the reason behind it, they cite "the

explosion of alternative media, particularly cable news and social media" (Levitsky & Ziblatt, 2018, p. 56).

Levitsky's and Ziblatt's argument can be explained by agendamelding. Social/horizontal media (that encompass opinionated media, social media and niche media) promote an agenda that is distinctly different than the traditional/vertical media (as evidenced by the findings of the present study). The competing agendas of traditional/vertical and social/horizontal media along with the influence of the personal agenda (personal preferences) of audiences (manifesting itself in various degrees in different individuals) have resulted in a society that looks different than it did 50 years ago at the time of the first agenda setting study.

At a time when changes in the media-audience dynamic have left political scientists and communication scholars challenged, agendamelding is a promising theory that can be used to organize and make sense of a chaotic media landscape.

TABLES

	Α	В	С	D	Ε	F	G	Н	I	J
Α		4	2	3	3	0	1	2	0	3
В	4		9	11	7	5	7	2	4	17
С	2	9		7	6	3	4	1	2	8
D	3	11	7		6	4	3	1	1	12
Ε	3	7	6	6		1	1	1	1	8
F	0	5	3	4	1		3	0	2	6
G	1	7	4	3	1	3		1	2	5
Н	2	2	1	1	1	0	1		0	1
	0	4	2	1	1	2	2	0		2
J	3	17	8	12	8	6	5	1	2	

Table 2-2: Matrix of Candidate Attributes Based on Content Analysis

Note: A= Leadership; B= Experience; C= Competence; D= Credibility; E= Morality; F= Caring about people; G= Communication Skills; H= Pride in family/backgrounds, roots, and race/ethnicity; I= Non-politician; J= "Other" comments about the candidates' personal qualification and character.

	Α	В	С	D	Ε	F	G	Н	I	J
Α		6	8	2	2	2	0	1	2	10
В	6		50	26	24	6	5	2	11	64
С	8	50		19	19	5	11	3	7	43
D	2	26	19		12	5	4	2	7	22
Ε	2	24	19	12		6	1	1	7	19
F	2	6	5	5	6		0	1	2	11
G	0	5	11	4	1	0		0	0	2
Н	1	2	3	2	1	1	0		0	3
I	2	11	7	7	7	2	0	0		13
J	10	64	43	22	19	11	2	3	13	

Table 2-3: Matrix of Candidate Attributes Based on Voter Survey

Note: A= Leadership; B= Experience; C= Competence; D= Credibility; E= Morality; F= Caring about people; G= Communication Skills; H= Pride in family/backgrounds, roots, and race/ethnicity; I= Non-politician; J= "Other" comments about the candidates' personal gualification and character.)

Table 3-1: Distribution by Sex

Sex	Frequency	Percent		
Male	481	45		
Female	582	54.4		
Not Listed	1	0.1		
Missing	5	0.5		
Total	1069	100		

NFO	Frequency	Percent
Low	279	26.1
Moderate	0	0
High	783	73.2
Missing	7	0.7
Total	1069	100

Table 3-2: Need for Orientation Distribution

Items	Set 1	Set 2	Kendall Concordant	Kendall Discordant	Spearman Difference	Difference squared
а	1	12	0	11	11	121
b	2	2	9	1	0	0
с	3	3	8	1	0	0
d	4	4	7	1	0	0
е	5	5	6	1	0	0
f	6	6	5	1	0	0
g	7	7	4	1	0	0
h	8	8	3	1	0	0
Ι	9	9	2	1	0	0
j	10	10	1	1	0	0
k	11	11	0	1	0	0
l	12	1	_		11	121

Table 3-3: Kendall's Tau Compared with Spearman's Rho

Issues	Public Agenda		Media Agenda		Community Agenda	
	Ν	percentage bc	N	percentage ^b	Ν	percentage ^b
1- Trump as an issue	468	43.8	167	22.3	30	1.3
2- Economy	345	32.3	91	12.1	291	12.5
3- Division	147	13.8	123	16.4	95	4.1
4- Guns	228	21.3	39	5.2	5	0.2
5- Discrimination and Racism	119	11.1	60	8.0	173	7.4
6- Environment	155	14.5	37	4.9	75	3.2
7- Border Security	143	13.4	11	1.5	1	0.0
8- Healthcare	125	11.7	12	1.6	0	0.0
9- Media	57	5.3	32	4.3	24	1.0
10- National Security	67	6.3	115	15.4	10	0.4

Table 4-1: Top Ten^a Public Agenda Issues Compared with Media and Community Agendas

a. Overall, 49 issues were identified and used in analysis, but table only displays the top ten.

b. Percentages do not add up to 100 as some issues are left out of the table.

c. Refers to the percentage of respondents who cited an issue as the most important problem.

Public Agenda Attributes	Public Agenda Attributes Media Agenda Attributes			ty Agenda butes	
Issues and Attributes	Ν	rτ	Ν	rτ	Ν
Trump as an issue	468	.91***	167	.67***	30
Presidential Incompetence	148		30		4
Abuse of Power	69		27		7
Impeachment	19		3		1
Foreign Affairs	25		14		0
Unconventional President	0		3		0
Bigotry	66		9		5
Political Corruption	48		7		5
Russian meddling in US Presidential Election	34		43		8
Presidential Competence	14		5		0
US Trade Agreements with Other Countries	22		16		0
Effective Policies	10		1		0
2018 Mid-term elections	6		8		0
2020 Election	1		1		0
Education Budget	6		0		0
Economy	345	.86***	91	.59***	291
Income Disparity	113		3		97
Poverty	65		3		97
Taxes	30		3		0
Debt	11		3		0
Unemployment	49		7		1
Stock Market	4		15		0
Social Security	2		1		0
Housing Market	15		4		0
Corporations	15		46		95
Inflation	26		5		1
Trade Deficit	2		1		0
Division	147	.85***	123	.75***	95
Electoral Process	9		25		75
Two Party System	3		0		0
Polarization	66		29		12
Bipartisanship	50		43		7
Electoral College	2		1		0
Selective Exposure	5		3		1

Table 4-2: Result of Correlations and Attribute Distribution

Religion and Morality	12		5		0
GOP Divide	0		17		0
Guns	228	.99***	39	.45***	5
Second amendment	24		3		0
Stricter gun laws	94		11		5
Other Preventative Measures	14		1		0
Politicized	5		1		0
Evidence of Violence	91		23		0
Discrimination and Racism	119	.86***	60	.78***	173
Religious Intolerance	1		1		1
Equal Opportunity	37		16		1
Racial Profiling	7		6		1
Race Relations	56		33		82
Human Biodiversity	1		0		0
Hate Crime	4		2		0
LGBTQ	5		0		88
White Privilege	8		2		0
Environment	155	.70***	37	.35***	75
Climate Change	59		1		0
Paris Accord	3		0		0
Natural Disasters	28		20		75
Cost of Energy	0		0		0
Hoax (e.g. Global Warming, Flat Earth)	9		0		0
CO ₂ Footprint	23		5		0
Renewable Energy	8		1		0
Protecting Natural Resources	24		2		0
Overpopulation	1		0		0
Border Security	143	.70***	11	.41***	1
Wall	15		0		0
Muslims	0		0		0
ICE	62		8		1
Crime & Terrorism	27		1		0
Travel Ban	5		0		0
Draining Resources	21		2		0
Stealing Jobs	13		0		0
Healthcare	125	.89***	12	0	0
Healthcare Reform	48		6		0
Healthcare Cost	41		4		0
Universal Healthcare	24		1		0

Rising Premiums	10		1		0
Preexisting Conditions	0		0		0
GMO	2		0		0
Media	57	.98***	32	.85***	24
Media as a Useful Source of Information	8		9		4
Liberal Bias	10		1		0
Media in terms of accuracy	34		8		15
Social Media	5		14		5
National Security	67	.76***	115	.73***	10
ISIS	2		3		0
Intelligence	3		27		1
Extremism	2		0		0
Terrorism	17		8		1
Safety	7		4		5
Military and War	10		13		1
Military Spending	3		0		0
Civilian Casualties	1		1		0
Military Casualties	0		4		0
Veterans Affair	0		2		0
Torture and Black Sites	0		7		0
Nuclear Weapons	11		12		1
North Korea War	2		3		0
Peace Talks	9		31		1

Note: Public Agenda Attributes is a rank-ordered variable comprised of attributes used by audiences to describe the issues they perceived to be the most important. Media Agenda Attributes is a rank-ordered variable comprised of attributes used by traditional/vertical media to describe issues they emphasized on. Community Agenda Attributes is a rank-ordered variable comprised of attributes used by social/horizontal media to describe issues they emphasized on. *** p < .001

Issues	Audience		Trad	litional/Vertical Media
Top Public Agenda Issues	N	percentage ^a	Ν	percentage ^a
1- Trump as an issue	468	43.8	33	3.1
2- Economy	345	32.3	192	18.1
3- Division	147	13.8	63	5.9
4- Guns	228	21.3	47	4.4
5- Discrimination and Racism	119	11.1	89	8.4
6- Environment	155	14.5	124	11.7
7- Border Security	143	13.4	1	0.1
8- Healthcare	125	11.7	102	9.6
9- Media	57	5.3	8	0.8
10- National Security	67	6.3	22	2.1
Top Personal Agenda Issues				
1- Economy	190	17.8	192	18.1
2- Environment	69	6.5	124	11.7
3- Healthcare	59	5.5	102	9.6
4- Racism and Discrimination	76	7.1	89	8.4
5- Guns	101	9.5	63	5.9
6- Equality	0	0.0	58	5.5
7- Moral Standards	0	0.0	55	5.2
8- Immigration	26	2.4	50	4.7
9- Division	93	8.7	47	4.4
10- Education	20	1.9	34	3.2

Table 4-3: Top Public Agenda Issues compared with Top Personal Agenda issues

a. Percentages do not add up to 100 as some issues are left out of the table.

Age Groups	Frequency	Percent
Younger than 25 years old	270	25.3
26-35 years old	400	37.4
36-45 years old	233	21.8
older than 45 years old	166	15.5
Total	1069	100

Table 4-4: Age Groups Distributions

Income Groups	Frequency	Percent
High Income (More than \$50,000)	155	14.5
Low Income (Less than \$50,000)	914	85.5
Total	1069	100

Table 4-5: Income Groups distributions

Ethnicity	Frequency	Percent
Caucasian or European	818	76.5
Minorities	133	12.4
Other	118	11
Total	1069	100

Table 4-6: Ethnicity Distributions

Political Affiliation	Frequency	Percent
Democrat	451	42.2
Republican	210	19.6
Independent or undecided	396	37
Missing	12	1.1
Total	1069	100

Table 4-7: Political Affiliation Distribution

Predictors	β	SE β	Wald's	df	р	e^{eta} (odds
			χ2			ratio)
Media Agenda	0.173	0.013	172.281	1	0.0***	1.189
Community Agenda	-0.111	0.014	62.002	1	0.00***	0.895
Personal Agenda	0.009	0.011	0.614	1	0.043*	1.009
Sex	0.193	0.111	3.014	1	0.008**	1.213
Vertical/Horizontal Orientation	-0.15	0.048	9.619	1	0.002**	0.861
Education						
No College	0.491	0.255	3.7	1	0.005**	1.634
Professional Training	0.328	0.254	1.661	1	0.197	1.388
Associate or Bachelor's	0.471	0.238	3.914	1	0.048*	1.602
Master's or PhD	0			0		1
Political Affiliation						
Democrat	0.338	0.132	6.561	1	0.01**	1.402
Republican	-0.886	0.162	29.947	1	0.00***	0.412
Independent or undecided	0			0		1
Need for Orientation						
High	-0.253	0.134	3.545	1	0.049**	0.776
Low	0			0		1
Income						
Low	0.291	0.158	3.406	1	0.045**	1.338
High	0			0		1
Age						
Younger than 25	0.255	0.177	2.083	1	0.149	1.29
26-35	0.332	0.166	3.978	1	0.046*	1.394
36-45	0.269	0.181	2.199	1	0.138	1.309
46 and Older	0			0		1
Ethnicity						
Minorities	-0.188	0.183	1.062	1	0.303	0.829
Caucasian or European	-0.061	0.23	0.071	1	0.791	0.941

Table 4-8: Ordinal Logistic Regression Analysis of Public Agenda

Note: Model $X_{(17)}^2 = 247.98$, Nagelkerke Pseudo $R^2 = .21$, p < .001. Coding as follows: Sex (1 = male, 2 = female), Vertical/Horizontal Orientation (1 = strongly vertical, 2 = somewhat vertical, 3 = neither vertical nor horizontal, 4 = somewhat horizontal, 5 = completely horizontal), Education - No College (0 = other categories, 1 = no college), Education – Professional Training (0 = other categories, 1 = Professional Training), Education - Associate or Bachelor's (0 = other categories, 1 = Associate or Bachelor's), Education - Master's or PhD (0 = other categories, 1 = Master's or PhD), Political Affiliation – Democrat (0 = other categories, 1 = Democrat), Political Affiliation – Republican (0 = other categories, 1 = Republican), Political Affiliation – Independent or undecided (0 = other categories, 1 = Independent or undecided), Need for Orientation – High (0 = High, 1 = other categories), Need for Orientation – Low (0 = Low, 1 = other categories), Income – High (0 = other categories, 1 = High), Income – Low (0 = other categories, 1 = Low), Age - Younger than 25 (0 = other categories, 1 = Younger than 25), Age -26-35 (0 = other categories, 1 = 26-35), Age – 36-45 (0 = other categories, 1 = 36-45), Age – 46 and older (0 = other categories, 1 = 46 and older), Ethnicity – Minorities (0 = other categories, 1 = Minorities), Ethnicity – Caucasians or European (0 = other categories, 1 = Caucasian or European). Media Agenda is measured by assigning ranks (from the media agenda variable used in **H1a**) to issues named by audiences in response to the MIP question. Community Agenda is measured by assigning ranks (from the community agenda variable used in **H2a**) to issues named by audiences in response to the MIP question. Personal Agenda is a rank-ordered variable of the issues that audiences found important based on their personal preferences (the same variable used in **H4**). Dependent variable is Public Agenda, a rank-ordered variable of the issues perceived to be the most important by audiences (the same

Model 1 ^a	Tolerance	VIF
Community Agenda	0.648	1.544
Sex	0.965	1.037
Vertical/Horizontal Orientation	0.95	1.052
Education	0.964	1.037
Income	0.974	1.026
Ethnicity	0.985	1.015
Age groups	0.986	1.015
Political Affiliation	0.864	1.157
Need for Orientation	0.855	1.169
Personal Agenda	0.63	1.588

Table 4-9: Multicollinearity Tests Between Independent Variables

a. Dependent Variable: Media Agenda

Model 2ª	Tolerance	VIF
Sex	0.966	1.035
Vertical/Horizontal Orientation	0.945	1.058
Education	0.966	1.035
Income	0.975	1.026
Ethnicity	0.983	1.018
Age groups	0.985	1.015
Political Affiliation	0.864	1.157
Need for Orientation	0.855	1.17
Personal Agenda	0.846	1.182
Media Agenda	0.889	1.124

a. Dependent Variable: Community Agenda

Model 3 ^a	Tolerance	VIF			
Vertical/Horizontal Orientation	0.95	1.052			
Education	0.964	1.037			
Income	0.977	1.024			
Ethnicity	0.978	1.023			
Age groups	0.985	1.015			
Political Affiliation	0.872	1.147			
Need for Orientation	0.855	1.169			
Personal Agenda	0.618	1.617			
Media Agenda	0.52	1.922			
Community Media Agenda	0.38	2.634			
a. Dependent Variable: Sex					

Model 4 ^a	Tolerance	VIF	
Education	0.964	1.037	
Income	0.974	1.026	
Ethnicity	0.979	1.022	
Age groups	0.986	1.014	
Political Affiliation	0.88	1.137	
Need for Orientation	0.858	1.166	
Personal Agenda	0.618	1.617	
Media Agenda	0.526	1.9	
Community Agenda	0.381	2.622	
Sex	0.976	1.025	

a. Dependent Variable: Vertical/Horizontal Orientation

Model 5ª	Tolerance	VIF
Income	0.989	1.011
Ethnicity	0.975	1.026
Age groups	0.987	1.013
Political Affiliation	0.866	1.154
Need for Orientation	0.857	1.167
Personal Agenda	0.618	1.617
Media Agenda	0.52	1.922
Community Agenda	0.38	2.633
Sex	0.965	1.036
Vertical/Horizontal Orientation	0.939	1.065

a. Dependent Variable: Education

Tolerance	VIF
0.975	1.026
0.986	1.014
0.864	1.157
0.857	1.166
0.618	1.617
0.52	1.922
0.379	2.638
0.967	1.034
0.939	1.065
0.979	1.021
	0.975 0.986 0.864 0.857 0.618 0.52 0.379 0.967 0.939

Model 7 ^a	Tolerance	VIF
Age groups	0.991	1.009
Political Affiliation	0.864	1.157
Need for Orientation	0.856	1.169
Personal Agenda	0.619	1.617
Media Agenda	0.526	1.901
Community Agenda	0.382	2.618
Sex	0.968	1.033
Vertical/Horizontal Orientation	0.943	1.06
Education	0.964	1.037
Income	0.974	1.026

a. Dependent Variable: Ethnicity

Model 8ª	Tolerance	VIF
Political Affiliation	0.864	1.157
Need for Orientation	0.855	1.17
Personal Agenda	0.62	1.614
Media Agenda	0.52	1.921
Community Agenda	0.379	2.639
Sex	0.965	1.037
Vertical/Horizontal Orientation	0.94	1.064
Education	0.966	1.035
Income	0.976	1.025
Ethnicity	0.98	1.02

a. Dependent Variable: Age groups

Model 9 ^a	Tolerance	VIF
Need for Orientation	0.94	1.064
Personal Agenda	0.624	1.602
Media Agenda	0.52	1.922
Community Agenda	0.379	2.638
Sex	0.973	1.028
Vertical/Horizontal Orientation	0.956	1.046
Education	0.966	1.035
Income	0.975	1.026
Ethnicity	0.975	1.026
Age groups	0.986	1.015
a. Dependent Vari	able: Political Affiliation	

Model 10 ^a	Tolerance	VIF
Personal Agenda	0.638	1.567
Media Agenda	0.521	1.921
Community Agenda	0.379	2.638
Sex	0.965	1.036
Vertical/Horizontal Orientation	0.942	1.061
Education	0.967	1.035
Income	0.977	1.023
Ethnicity	0.976	1.025
Age groups	0.986	1.015
Political Affiliation	0.95	1.053

a. Dependent Variable: Need for Orientation

Model 11 ^a	Tolerance	VIF
Media Agenda	0.53	1.887
Community Agenda	0.519	1.928
Sex	0.965	1.037
Vertical/Horizontal Orientation	0.939	1.065
Education	0.964	1.037
Income	0.974	1.026
Ethnicity	0.975	1.025
Age groups	0.987	1.013
Political Affiliation	0.872	1.147
Need for Orientation	0.882	1.134

a. Dependent Variable: Personal Agenda

Predictors	β	SE β	Wald's χ2	df	р	e^{β} (odds ratio)
Media Agenda	0.369	0.106	12.073	1	0.001**	1.446
Community Agenda	-0.305	0.118	6.636	1	0.01**	0.737
Personal Agenda	0.004	0.087	0.002	1	0.961	1.004
Sex	-0.513	0.417	1.516	1	0.218	0.599
Vertical/Horizontal Orientation	0.036	0.175	0.043	1	0.836	1.037
Education						
No college	-2.922	1.017	8.258	1	0.004**	0.054
Professional Training	-2.451	0.995	6.062	1	0.014*	0.086
Associate or Bachelor's	-2.299	0.95	5.85	1	0.016*	0.1
Master's or PhD	0			0	•	1
Political Affiliation						
Democrat	3.075	0.548	31.453	1	0***	21.65
Republican	-0.46	0.532	0.747	1	0.387	0.631
Independent or undecided	0			0		1
Need for Orientation						
High	4.848	0.546	78.894	1	0***	127.48
Low	0			0		1
Income						
Low	0.634	0.607	1.09	1	0.634	1.885
High	0	•	•	0	0	1
Age						
Younger than 25	1.631	0.667	5.988	1	0.014**	5.109
26-35	1.467	0.624	5.521	1	0.019**	4.336
36-45	1.681	0.644	6.815	1	0.009**	5.371
46 and Older	0	•		0	•	1
Ethnicity						
Minorities	-0.02	0.632	0.001	1	0.974	0.98
Caucasian or European	0.979	0.817	1.434	1	0.231	2.662
Younger than 25 × Media Agenda	-0.184	0.051	12.858	1	0***	0.832
26-35 × Media Agenda	-0.162	0.049	10.964	1	0.001**	0.85
36-45 × Media Agenda	-0.209	0.05	17.271	1	0***	0.811
Younger than $25 \times Community$	0.10	0.051	10.04		0.00144	1 1
Agenda	0.18	0.054	10.961	1	0.001**	1.197
$26-35 \times \text{Community Agenda}$	0.171	0.051	11.093	1	0.001**	1.186
$36-45 \times \text{Community Agenda}$	0.21	0.054	15.394	1	0***	1.234
Democrat × Media Agenda	-0.091	0.033	7.702	1	0.006**	0.913

 Table 4-10: Results of Two-Way Interactions Between Independent Variables

Democrat × Community Agenda	0.096	0.035	7.569	1	0.006**	1.101
Democrat × Personal Agenda	-0.138	0.028	23.905	1	0***	0.871
High NFO × Media Agenda	0.241	0.035	46.746	1	0***	1.786
High NFO × Community Agenda	0.127	0.034	13.679	1	0***	1.135
High NFO × Personal Agenda	-0.151	0.027	30.667	1	0***	0.86
Minorities × Media Agenda	0.079	0.04	3.947	1	0.047*	1.082
Minorities × Community Agenda	-0.101	0.047	4.596	1	0.032*	0.904
Media Agenda × Vertically-						
Oriented	0.041	0.012	11.81	1	0.001**	1.42
No college × Media Agenda	0.18	0.068	6.978	1	0.008**	1.197
Professional Training × Media						
Agenda	0.163	0.067	6.005	1	0.014*	1.177
Associate's or Bachelor's × Media						
Agenda	0.16	0.061	6.802	1	0.009**	1.174

Note: Model $X^2_{(59)} = 475.56$, Nagelkerke Pseudo $R^2 = .36$, p < .001. Coding as follows: Sex (1 = male, 2 = female), Vertical/Horizontal Orientation (1 = strongly vertical, 2 = somewhat vertical, 3 = neither vertical nor horizontal, 4 = somewhat horizontal, 5 = completely horizontal), Education - No College (0 = other categories, 1 = no college), Education – Professional Training (0 = other categories, 1 = Professional Training), Education - Associate or Bachelor's (0 = other categories, 1 = Associate or Bachelor's), Education - Master's or PhD (0 = other categories, 1 = Master's or PhD), Political Affiliation – Democrat (0 = other categories, 1 = Democrat), Political Affiliation – Republican (0 = other categories, 1 = Republican), Political Affiliation – Independent or undecided (0 = other categories, 1 = Independent or undecided), Need for Orientation – High (0 = High, 1 = other categories), Need for Orientation – Low (0 = Low, 1 = other categories), Income – High (0 = other categories, 1 = High), Income – Low (0 = other categories, 1 = Low), Age - Younger than 25 (0 = other categories, 1 = Younger than 25), Age -26-35 (0 = other categories, 1 = 26-35), Age - 36-45 (0 = other categories, 1 = 36-45), Age - 46 and older (0 = other categories, 1 = 46 and older), Ethnicity – Minorities (0 = other categories, 1 = Minorities), Ethnicity – Caucasians or European (0 = other categories, 1 = Caucasian or European). Media Agenda is measured by assigning ranks (from the media agenda variable used in **H1a**) to issues named by audiences in response to the MIP question. Community Agenda is measured by assigning ranks. (from the community agenda variable used in **H2a**) to issues named by audiences in response to the MIP question. Personal Agenda is a rank-ordered variable of the issues that audiences found important based on their personal preferences (the same variable used in **H4**). Dependent variable is Public Agenda, a rank-ordered variable of the issues perceived to be the most important by audiences (the sam

Predictors	β	SE β	Wald's χ2	df	р	e^{β} (odds ratio)
Media Agenda	-769.797	274.702	7.853	1	0.005*	42.658
Community Agenda	708.051	246.084	8.279	1	0.004*	31.816
Personal Agenda	-20.663	74.815	0.076	1	0.782	0
Sex	-1756.822	658.996	7.107	1	0.008*	0
Vertical/Horizontal Orientation	-0.293	0.076	14.95	1	0***	0.746
Education						
No college	-9.817	12.225	0.645	1	0.422	0
Professional Training	-19.429	12.412	2.451	1	0.117	0
Associate or Bachelor's	-14.181	11.924	1.414	1	0.234	0
Master's or PhD	0 ^a			0		1
Political Affiliation						
Democrat	-8707.734	5074.15	2.945	1	0.086*	0
Republican	15.714	524.148	0.001	1	0.976	667.58
Independent or undecided	0 ^a			0		1
Need for Orientation						
High	-16029.21	1867.37	73.682	1	0*	0
Low	0 ^a		•	0		1
Income						
Low	-65.061	4041.01	0	1	0.987	0
High	0 ^a			0		1
Age						
Younger than 25	-8557.679	3228.12	7.028	1	0.008*	0
26-35	-14226.34	5395.58	6.952	1	0.008*	0
36-45	-6534.701	2305.72	8.032	1	0.005*	0
46 and Older	0 ^a			0		1
Ethnicity						
Minorities	-9146.692	3136.54	8.504	1	0.004*	0
Caucasian or European	5115.939	1790.16	8.167	1	0.004*	0
Democrat × Associate's or						
Bachelor's \times 36-45 \times Male \times	-0.014	0.006	5.77	1	0.016*	0.986
Personal Agenda						
Republican \times No college \times 46 and Older \times Mala \times Personal A conda	-0.036	0.014	6.636	1	0.01*	0.965
Older × Male × Personal Agenda Republican × No college ×						
Younger than $25 \times Male \times Personal Agenda$	-0.02	0.008	6.106	1	0.013*	0.98

Table 4-11: Multiway Interactions Between Independent Variables

Republican \times No college \times 46 and	-0.034	0.014	5.757	1	0.016*	0.967
$Older \times Female \times Personal Agenda$						
Republican × Professional Training	0.00	0.000	6.005		0.01.44	0.00
\times Younger than 25 \times Male \times	-0.02	0.008	6.027	1	0.014*	0.98
Personal Agenda						
Republican × Professional Training	-0.04	0.016	6.106	1	0.013*	0.961
\times 36-45 \times Male \times Personal Agenda	0.0.	01010	01100	-	0.010	0.701
Republican × Professional Training						
\times 46 and Older \times Male \times Personal	-0.013	0.006	4.617	1	0.032*	0.987
Agenda						
Independent × Associate's or						
Bachelor's \times Younger than 25 \times	-0.044	0.02	4.926	1	0.026*	0.957
Female × Personal Agenda						
Independent × Associate or						
Bachelor's \times 26-35 \times Male \times	-0.015	0.006	6.075	1	0.014*	0.985
Personal Agenda						
Republican \times No college \times 46 and						
Older × Male × Community	-0.042	0.017	6.214	1	0.013*	0.959
Agenda						
Republican × No college ×						
Younger than $25 \times Male \times$	-0.029	0.012	6.087	1	0.014*	0.971
Community Agenda						
Republican × Professional Training						
\times Younger than 25 \times Male \times	-0.038	0.016	5.958	1	0.015*	0.963
Community Agenda						
Republican × Professional Training						
\times 26-35 \times Male \times Community	-0.017	0.007	6.348	1	0.012*	0.983
Agenda	0.017	0.007	0.010	-	0.012	0.900
Republican × Professional Training						
\times 36-45 \times Male \times Community	-0.047	0.02	5.594	1	0.018*	0.954
Agenda	0.017	0.02	0.091	•	0.010	0.901
Republican × Professional Training						
\times 46 and Older \times Male \times	-0.02	0.008	6.292	1	0.012*	0.98
Community Agenda	0.02	0.000	0.272	1	0.012	0.70
Independent × Professional						
Training \times 46 and Older \times Male \times	-0.013	0.006	5.092	1	0.024*	0.987
Community Agenda	-0.015	0.000	5.092	1	0.024	0.987
Independent × Associate's or						
	-0.04	0.018	5.087	1	0.024*	0.961
Bachelor's \times Younger than 25 \times	-0.04	0.018	3.087	1	0.024	0.901
Female × Community Agenda						
Independent \times Associate or	0.015	0.007	4 (00	1	0.02*	0.005
Bachelor's \times 26-35 \times Female \times	-0.015	0.007	4.699	1	0.03*	0.985
Community Agenda						
Low Income \times Minorities \times 46 and	0.000	0.000	(4	0.01*	0.000
Older × Media Agenda ×	-0.008	0.003	6.552	1	0.01*	0.992
Vertical/Horizontal Orientation						

Low Income \times Caucasian or						
European \times 46 and Older \times Media	-0.034	0.015	5.024	1	0.025*	0.967
Agenda × Vertical/Horizontal Orientation						
Low Income \times Minorities \times 26-35						
× Community Agenda ×	-0.012	0.003	16.082	1	0***	0.988
Vertical/Horizontal Orientation	0.012	0.005	10.002	1	0	0.900
Low Income \times Minorities \times 46 and						
Older × Community Agenda ×	-0.017	0.004	15.355	1	0***	0.983
Vertical/Horizontal Orientation	0.017	0.001	10.500	1	Ũ	0.905
Low Income \times Caucasian or						
European \times 46 and Older \times		0.010	0.400		0.00444	.
Community Agenda ×	-0.051	0.018	8.428	1	0.004**	0.95
Vertical/Horizontal Orientation						
High Income × Minorities ×						
Younger than $25 \times Community$	0.014	0.002	17 244	1	0***	0.000
Agenda × Vertical/Horizontal	-0.014	0.003	17.344	1	0***	0.986
Orientation						
High Income × Minorities × 36-45						
× Community Agenda ×	-0.01	0.002	17.511	1	0***	0.99
Vertical/Horizontal Orientation						
High Income \times Minorities \times 46 and						
Older \times Community Agenda \times	-0.013	0.004	14.275	1	0***	0.987
Vertical/Horizontal Orientation						
Low Income \times Minorities \times 26-35						
× Vertical/Horizontal Orientation ×	-0.01	0.003	16.756	1	0***	0.99
Personal Agenda						
Low Income \times Minorities \times 46 and						
Older × Vertical/Horizontal	-0.017	0.004	16.51	1	0***	0.983
Orientation × Personal Agenda						
Low Income \times Caucasian or						
European \times 46 and Older \times	-0.034	0.011	8.904	1	0.003**	0.967
Vertical/Horizontal Orientation ×	0.051	0.011	0.901	1	0.005	0.907
Personal Agenda						
High Income × Minorities ×						
Younger than 25 ×	-0.012	0.003	18.724	1	0***	0.988
Vertical/Horizontal Orientation ×				-	·	
Personal Agenda						
High Income \times Minorities \times 26-35	0.007	0.000	4 5 2 5	1	0.022*	0.004
\times Vertical/Horizontal Orientation \times	-0.006	0.003	4.525	1	0.033*	0.994
Personal Agenda						
High Income × Minorities × 36-45	0.01	0.002	10 551	1	0***	0.00
× Vertical/Horizontal Orientation ×	-0.01	0.002	18.554	1	0***	0.99
Personal Agenda						

High Income \times Minorities \times 46 and						
Older × Vertical/Horizontal	-0.008	0.003	9.096	1	0.003**	0.992
Orientation × Personal Agenda						

Note: Model $X^2_{(59)} = 1453.29$, Nagelkerke Pseudo $R^2 = .75$, p < .001. Coding as follows: Sex (1 = male, 2 = female), Vertical/Horizontal Orientation (1 = strongly vertical, 2 = somewhat vertical, 3 = neither vertical nor horizontal, 4 = somewhat horizontal, 5 = completely horizontal), Education - No College (0 = other categories, 1 = no college), Education – Professional Training (0 = other categories, 1 = Professional Training), Education - Associate or Bachelor's (0 = other categories, 1 = Associate or Bachelor's), Education - Master's or PhD (0 = other categories, 1 = Master's or PhD), Political Affiliation – Democrat (0 = other categories, 1 = Democrat), Political Affiliation – Republican (0 = other categories, 1 = Republican), Political Affiliation – Independent or undecided (0 = other categories, 1 = Independent or undecided), Need for Orientation – High (0 = High, 1 = other categories), Need for Orientation – Low (0 = Low, 1 = other categories), Income – High (0 = other categories, 1 = High), Income – Low (0 = other categories, 1 = Low), Age - Younger than 25 (0 = other categories, 1 = Younger than 25), Age -26-35 (0 = other categories, 1 = 26-35), Age – 36-45 (0 = other categories, 1 = 36-45), Age – 46 and older (0 = other categories, 1 = 46 and older), Ethnicity – Minorities (0 = other categories, 1 = Minorities), Ethnicity – Caucasians or European (0 = other categories, 1 = Caucasian or European). Media Agenda is measured by assigning ranks (from the media agenda variable used in **H1a**) to issues named by audiences in response to the MIP question. Community Agenda is measured by assigning ranks (from the community agenda variable used in **H2a**) to issues named by audiences in response to the MIP question. Personal Agenda is a rank-ordered variable of the issues that audiences found important based on their personal preferences (the same variable used in **H4**). Dependent variable is Public Agenda, a rank-ordered variable of the issues perceived to be the most important by audiences (the sam

FIGURES

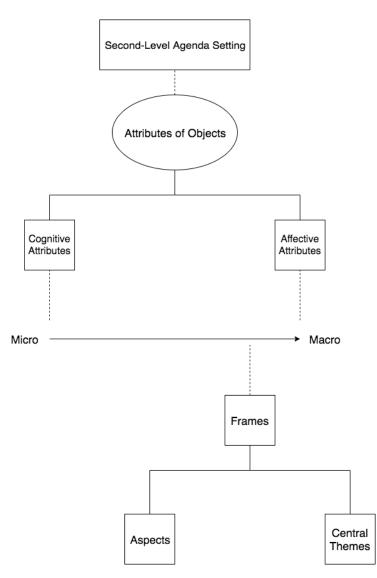


Figure 2-1- Second-Level Agenda Setting and the Framing Process. Adopted from McCombs, M., & Ghanem, S. I. (2001). The convergence of agenda setting and framing. Framing public life: Perspectives on media and our understanding of the social world, 71.

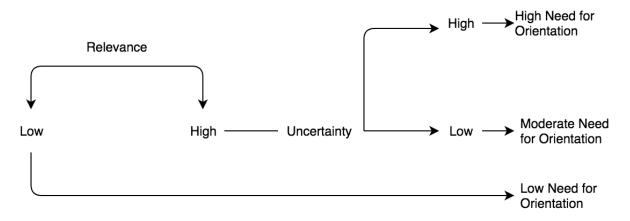


Figure 2-2 - Need for Orientation Flow Chart. Adopted from Weaver, D. H. (1991). Political Issues and Voter Need for Orientation. In D. Protess & M. E. McCombs (Eds.), Agenda setting: readings on media, public opinion, and policymaking (pp. 131–139). Hillsdale, N.J: Erlbaum.

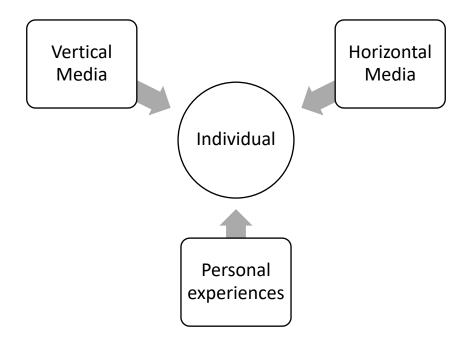
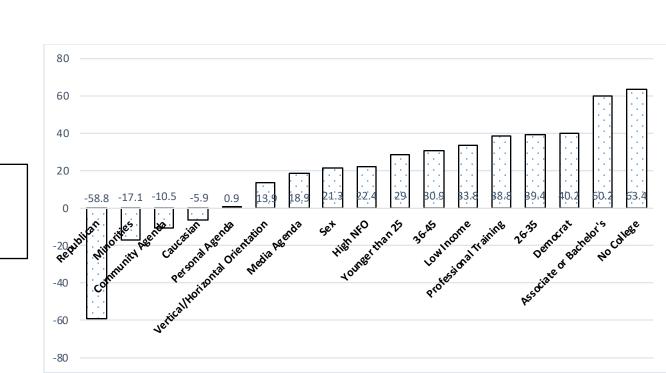


Figure 2-3 - Three Sources of Information. Adapted from "Military Communication Strategies Based on How Audiences Meld Media and Agendas" by D. Shaw, T. Terry, M. Minooie, 2015, *Military Review*, 95 (6), 21.



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1

Figure 4-1 - The main effect of the predictors on the likelihood of selecting the top issue on the agenda in ascending order.

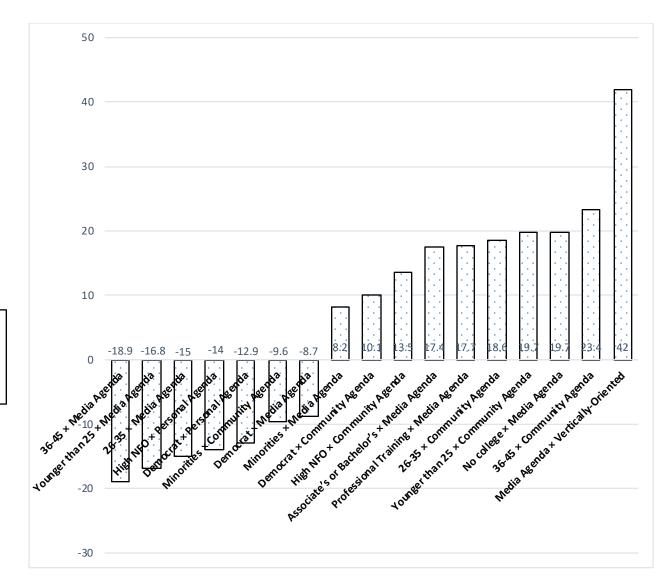


Figure 4-1 - The effect of two-way interactions on the likelihood of selecting the top issue on the agenda in ascending order.

APPENDICES

Appendix 1 – SURVEY INSTRUMENT

The purpose of this research study is to see how American audiences select and consume their media content. You are being asked to take part in a research study because you are an adult residing in the United States.

Being in a research study is completely voluntary. You can choose not to be in this research study. You can also say yes now and change your mind later. If you agree to take part in this research, you will be asked to respond to some questions as accurately as you can. Your participation in this study will take between 15-20 minutes.

You can choose not to answer any question you do not wish to answer. You can also choose to stop taking the survey at any time. You must be at least 18 years old to participate. If you are younger than 18 years old, please stop now. The possible risks to you in taking part in this research are:

- Feeling overwhelmed by, or getting bored due to, the number of questions.
- While Mturk worker IDs are linked to Amazon.com public profiles, making it possible to trace responses back to participants, the worker IDs will removed from the data set and will not be shared with anyone.

To protect your identity as a research subject, MTurk worker IDs will not be shared with anyone outside of the research team, will be removed from the data set, and will not be linked to survey responses. Note that Amazon.com has stated that the MTurk platform is NOT meant to support participant anonymity. MTurk worker IDs are linked to Amazon.com public profiles. Amazon.com may disclose worker information. Additionally, worker information may be available to others (who submit a request) for tax reporting purposes. MTurk worker IDs will only be collected for the purposes of distributing compensation and will not be associated with survey responses.

No other identifiable information will be collected, the research data will not be stored with your name, the researcher(s) will not share your information with anyone. In any publication about this research, your name or other private information will not be used.

If you have any questions about this research, please contact the Investigator named at the top of this form via email: 2018mediaconsumption@gmail.com. If you have questions or concerns about your rights as a research subject, you may contact the UNC Institutional Review Board at 919-966-3113 or by email to IRB subjects@unc.edu.

Leave now (1) Proceed to Survey (2) Thank you. At the end of this survey, you will receive a unique survey completion code to enter into MTurk for your compensation.

1- How old are you? Please enter your age as a number in the space below.

2- For how long have you lived in the United States of America? All my life (1) More than 10 years (2) 5 to 10 years (4) Less than 5 years (3)

3- Which language is your best language for reading, writing, and speaking? Spanish (1) English (2) French (3) Other (4)

4- What was your gender assigned at birth?Male (1)Female (2)Not listed above (3)

5- What is the highest degree or level of school you have completed? If currently enrolled, highest degree received.

No schooling completed (1) Nursery school to 8th grade (2) Some high school, no diploma (3) High school graduate, diploma or the equivalent (for example: GED) (4) Some college credit, no degree (5) Trade/technical/vocational training (6) Associate degree (7) Bachelor's degree (8) Master's degree (9) Professional degree (10) Doctorate degree (11)

6- If you had to choose, which category (or categories) would you most likely place yourself with respect to race or ethnicity? Please check all that apply.

African or African-American (1) Asian (2) Caucasian or European (3) Hawaiian or Pacific Islander (4) Latino or Hispanic origin (5) Native American or Alaskan Native (6) Other (7)

7- What was your total household income before taxes during the past 12 months? Less than \$25,000 (1) \$25,000 to \$34,999 (2) \$35,000 to \$49,999 (3) \$50,000 to \$74,999 (4) \$75,000 to \$99,999 (5) \$100,000 to \$149,999 (6) \$150,000 or more (7)

8- Are you a member of any social groups (such as book clubs, athletic teams, volunteer groups, music clubs etc.)?

Yes (1) No (2)

9- How many social groups are you a member of?

1 (1) 2 (2) 3 (3) 4 (4) 5 (5) 6 (6) 7 (7) 8 (8) 9 (9) 10 or more (10)

10- Over the past 7 days, how much time per day did you spend on each of the following media.

	I did not spend any time on this (1)	Less than an hour (2)	1-5 hours (3)	5-9 hours (4)	10 hours or more (5)
The Internet in general (1)					
Social media website/apps (including but not limited to Facebook, Google+, Instagram, iMessage, Kik, LinkedIn, Skype, Snapchat, and Twitter) (2)					
Listening to, reading, or watching news on the Internet (3)					
Watching television (including but not limited to network TV, cable TV, streaming services such as Netflix and Hulu, and television content on DVD and/or BluRay) (4)					
Video sharing websites/apps (including but not limited to DailyMotion, Veoh, Vimeo, and YouTube) (5)					
Watching news broadcast (including live or time shifted local					

newscast, and news cycles on network and cable channels, BUT EXCLUDING news-related shows, news analysis, discussion panels, political commentary programs, and satirical programs) (6) We want to make sure that you are paying attention to the questions and providing accurate responses. For this purpose, please select the response indicating that you have spent over ten hours on this item. (7) Watching NEWS-RELATED SHOWS on television (including but not limited to shows such as Alex Jones' Inforwars, Anderson Cooper 360°, the Daily Show with Trevor Noah, Fareed Zakaria GPS, The Five, Fox and Friends, Late Night with Seth Meyers, Jimmy Kimmel Live!, Last Week

Tonight with John Oliver, and the Rachel Maddow Show) (8)
Reading print newspaper (9)
Reading print magazines, or periodicals (10)
periodicals (10) Discussing news (any news ranging from politics and economy to entertainment and celebrity updates) with others in person, or over the phone and on the internet (including chat rooms, social media, and
media, and messaging apps) (11)

- 11- Please list and rank three newspapers or news website that you most frequently consume. If you consume fewer than 3 newspapers and or websites combined please write the ones you consume and write N/A in the remaining empty fields.
- 1- (1)_____ 2- (2) 3- (3)

I don't ever read newspapers or visit news websites (4)

- 12- Please list and rank three newscasts on television or on the Internet/apps (e.g. CBS Evening News, NBC Nightly News, or local newscast in your area) that you most frequently watch. If you consume fewer than 3 newscasts please write in the ones you watch and write N/A in the remaining empty fields. 1- (1) 2- (2)

13- Please list and rank three news-related programs on television or on the Internet/apps (e.g. The Daily Show with Trever Noah, The Rachel Maddow Show, and The Sean Hannity Show) that you most frequently watch. If you consume fewer than 3 news-related programs please write in the ones you watch and write N/A in the remaining empty fields.

1-(1)		
2- (2)		
3- (3)		
I don't	aver wetch news related programs on TV or on the Internet (1

I don't ever watch news-related programs on TV or on the Internet (4)

14- Please list and rank three magazines or periodicals that you most frequently read. If you consume fewer than 3 periodicals or magazines please write in the ones you consume and write N/A in the remaining empty fields.

1- (1)			
2- (2)			
3-(3)			
T 1	1	 - (1)	

I don't ever read magazines or periodicals (4)

15- Do you ever use social media as a means to stay up-to date about the news of the day?

Yes (1)

No (2)

16- Please list and rank three social media platforms that you most frequently use to stay up-to date about the news of the day. If you consume fewer than 3 social media platforms please write in the ones you consume and write N/A in the remaining empty fields.

1- (1)	
2- (2))
3- (3))

17- For each of the social media platforms you mentioned earlier please write the top three public accounts that you follow (If the accounts are public, but belong to people you personally know, please write "a friend's/family member's account" next to the account. If you don't know whether an account it public do not include it). If you follow fewer than 3 public accounts on each social media platform please write in the ones you consume and write N/A in the remaining empty fields.

1 - (1)

2 - (2)

3 - (3)	
1 - (4)	
2 - (5)	
1 - (7)	
2 - (8)	
3 - (9)	

For the following questions, please tell us about your opinion on important issues facing the country and why you think they are important.

18-What would you say is the most important issue facing our nation today?

19- Imagine that you are talking to a friend who has been out of the country for a few years without access to any American media. Please describe the prominent aspects of this issue in a paragraph, explaining why this issue is important and how it should be addressed.

20- Is there anything else you want to add about this issue? If so, please write it in the box here.

21- To what extent do you agree with the following statements about this issue?						
	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Strongly disagree (5)	
The information I gained from news media (e.g. newspapers, news websites/apps, TV						

newscasts, etc.) led me to name this issue as the most important issue facing the nation today. (1) The information I gained from newsrelated media (e.g. opinion pieces, news analysis programs, political satire, etc.) led me to name this issue as the most important issue facing the nation today. (2) The information I gained from my IN-PERSON contact with my friends, family members, and acquaintances led me to name this issue as the most important issue facing the nation today. (3) The information I gained from my VIRTUAL contact with my friends, family members, and acquaintances (via social media, messaging apps and similar platforms) led me to name this issue as the most important issue facing the nation today. (4) My personal experience with this issue and my beliefs led me to name it as the most important

- 22- Imagine that you have a magic wand that would compel everyone in the country to deeply care about whatever issue you name. What issue would you have everyone care about? (choose carefully, the wand only works once.)
- 23- Now imagine that you are talking to a friend who has been out of the country for a few years without access to any American media. Please describe the prominent aspects of this issue in a paragraph, explaining why this issue is important and how it should be addressed.

24- Is there anything else you want to add about this issue? If so, please write it in the box here.

	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Strongly disagree (5)
The information I gained from news media (e.g. newspapers, news websites/apps, TV newscasts, etc.) led me to name this issue as the most important issue					

25-To what extent do you agree with the following statements about this issue?

facing the nation today. (1)

The information I gained from newsrelated media (e.g. opinion pieces, news analysis programs, political satire, etc.) led me to name this issue as the most important issue facing the nation today. (2)

We want to make sure that you are paying attention to the questions and providing accurate responses. For this purpose, please select the response indicating that you strongly agree with this statement (3)

The information I gained from my IN-PERSON contact with my friends, family members, and acquaintances led me to name this issue as the most important issue facing the nation today. (4)

The information I gained from my VIRTUAL contact with my friends, family members, and acquaintances (via social media, messaging apps and similar platforms) led me to name this issue as the most important issue

facing the nation today. (5)
My personal experience with this issue and my beliefs led me to name it as the most important issue facing the nation. (6)

	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Strongly disagree (5)
I trust information in the news media to be true. (1)					
I am very interested in politics (e.g. Congress, the Supreme Court, and international affairs.) (2)					
I identify as a Democrat. (3)					
I identify as a Republican. (4)					
I do not identify with a political party. (5)					
I want to be instantly informed about recent developments regarding the economy (e.g. unemployment, stock market, and national debt). (6)					
It is important for					

26- For these next items, please indicate how much you agree or disagree with each

economy constantly. (7) I would like to hear something about the economy every day. (8) I want to be instantly informed about recent developments regarding the issue of law and order (e.g. shootings, homicide, drugs, and other crimes). (9) It is important for me to observe stories about law and order constantly. (10) I would like to hear something about the issue of law and order every day. (11) I want to be instantly informed about recent developments regarding arts and culture (e.g. art exhibitions, plays, ethnic food, and dance). (12) It is important for me to observe stories about arts and culture constantly. (13) I would like to hear something about arts and culture

every day. (14)

I want to be instantly informed about recent developments regarding entertainment (e.g. celebrities, award shows, movies and TV shows, and popular music). (15) It is important for me to observe stories about entertainment constantly. (16) I would like to hear something about entertainment every day. (17) I want to be instantly informed about recent developments regarding sports (e.g. sports teams, drafts, athletes, various sports leagues). (18) It is important for me to observe stories about sports constantly. (19) I would like to hear something about sports every day. (20)I want to be instantly informed about recent developments regarding technology (e.g. computers, smartphones/tablets, smart home devices). (21)

It is important for me to observe stories about technology constantly. (22) I would like to hear something about technology every day. (23) I want to be instantly informed about recent developments regarding fashion (e.g. fashion shows, latest styles, stealthis-look type stories). (24) It is important for me to observe stories about fashion constantly. (25) I would like to hear something about fashion every day. (26)I want to be instantly informed about recent developments regarding travel (e.g. exotic destinations, hotels and resorts, and places to visit). (27) It is important for me to observe stories about travel constantly. (28) I would like to hear something about travel every day. (29)

And finally...

27- Please rank the following issues from most important to least important.

e 1
 Crime (1)
 Drugs and addiction (2)
 Healthcare (3)
 _ Immigration (4)
 Border security (5)
US trade agreements with other countries (6)
 Russian meddling in US Presidential election (7)
2018 Mid-term elections (8)
 [Iran (9)
Renewable energy (10)
North Korea (11)
Syria (12)
Natural disasters (13)
 Unemployment (14)
 LGBTQ (15)
 Gender equality (16)

28- If there is any other issue that is important to you please write them here. Please write each issue on a new line.

Thank you for completing this survey.

Your unique MTurk survey completion code is:

Please enter this code into the MTurk window to receive your compensation.

Thank you again for your willingness to participate in this study!

Appendix 2 – IRB APPLICATION

RB Number: 18-1191 PI: Milad Minooie

General Information

1. General Information

1.

Project Title

Testing the Agendamelding Theory: How Audiences Tailor Agendas to Suit Their Needs

2.

Brief Summary. Provide a **brief non-technical description** of the study, which will be used in IRB documentation as a description of the study. Typical summaries are 50-100 words. Please reply to each item below, retaining the subheading labels already in place, so that reviewers can readily identify the content. PLEASE NOTE: THIS SECTION MAY BE EDITED BY THE IRB FOR CLARITY OR LENGTH.

Purpose:

The present study attempts to expand the agendamelding theory by understanding what category of media is more effective in setting what kind of agenda – or a set of issues that are the subject of decision-making and debate within a given political system at any one time. In other words, the present study first attempts to find commonalities between users of traditional and social media who share the same agenda. Then it attempts to determine whether the success of a platforms in influencing audiences' agenda depends on the type of issue – e.g. is television more successful in influencing viewers when it comes to the issue of economy? Or is twitter more successful in influencing audiences on the same issue? Finally, the present study will draw conclusions about suitability of platforms for the types of issues and on how audiences combine – or meld – the information they receive from various media to shape their own picture of reality.

Participants:

Participants of the study are adults, who are residing in the United States. Participants will be recruited using Amazon's Mechanical Turk (MTurk), which pays participants to complete takes such as participating in a study. MTurk allows the "requester"— the principal investigator – to set "qualifications" – or eligibility

140

criteria – for the task. The qualifications set for this survey will bar anyone residing outside the United States or anyone younger than 18 years of age from participating.

Procedures (methods):

Content of three major newspapers, three major broadcast news, and trending topics on twitter will be analyzed prior to the survey. A Human Intelligence Task (HIT) will be created on MTurk that contains the survey questions. Each participant will receive \$2 for completing the survey, which is consisted of four parts: Demographic information, media use, opinion on important issues of the day, and level of interest in various topics. No identifying information, including name, contact information, and social security, will be collected.

3.

Is this new study similar or related to an application already approved by a UNC-Chapel Hill IRB? Knowing this will help the IRB in reviewing your new study.

No

2. Project Personnel

1.

Will this project be led by a STUDENT (undergraduate, graduate) or TRAINEE (resident, fellow, postdoc), working in fulfillment of requirements for a University course, program or fellowship?

Yes

This study will require the identification of a single faculty advisor, who should be added in Project Personnel on this page. This should be the faculty member who will mentor this research, who may or may not be your academic faculty advisor.

The faculty advisor will be required to co-certify with the student/trainee PI. You should also make sure this person has a chance to review and edit the submission before you submit.

Choose the status of the student/trainee:

graduate or professional

2.

List all project personnel beginning with principal investigator, followed by faculty advisor, co-investigators, study coordinators, and anyone else who has contact with subjects or identifiable data from subjects.

- List ONLY those personnel for whom this IRB will be responsible; do NOT include collaborators who will
 remain under the oversight of another IRB for this study.
- If this is Community Based Participatory Research (CBPR) or you are otherwise working with community
 partners (who are not functioning as researchers), you may not be required to list them here as project
 personnel; consult with your IRB.
- If your extended research team includes multiple individuals with limited roles, you may not be required to list them here as project personnel; consult with your IRB.

The table below will access campus directory information; if you do not find your name, your directory listing may

need to be updated.

If a change to the Principal Investigator is requested during the course of the study, a <u>PI Change Form</u> must be

submitted.

Liaison	Last Name	First Name	Department Name	Role	Detail
University of North Carolina at Chapel Hill (UNC-CH)					
*	Minooie	Milad	School of Media and Journalism	Principal Investigator	<u>view</u>
	Dillman Carpentier	Francesca	School of Media and Journalism	Faculty Advisor	<u>view</u>
	Shaw	Donald	School of Media and Journalism	Study Coordinator	<u>view</u>

NOTE: The IRB database will link automatically to <u>UNC Human Research Ethics Training database</u> and the UNC Conflict of Interest (COI) database. Once the study is certified by the PI, all personnel listed (for whom we have email addresses) will receive separate instructions about COI disclosures. The IRB will communicate with the personnel listed above or the PI if further documentation is required.

3.

If this research is based in a center, institute, or department (Administering Department) other than the one listed above for the PI, select here. Be aware that if you do not enter anything here, the PI's home department will be AUTOMATICALLY inserted when you save this page.

Department

School of Media and Journalism

3. Funding Sources

1.

Is this project funded (or proposed to be funded) by a contract or grant from an organization EXTERNAL to UNC-Chapel Hill? No

2.

Is this study funded by UNC-CH (e.g., department funds, internal pilot grants, trust accounts)?

Yes

Internal UNC Chapel Hill funding

C	Department Name	Account Number	Detail
1	N/A	N/A	view

3.

Is this research classified (e.g. requires governmental security clearance)?

No

4.

Is there a master protocol, grant application, or other proposal supporting this submission (check all that apply)?

X Grant Application	
X Industry/Federal Sponsor Master Protocol	
Student Dissertation or Thesis Proposal	
X Investigator Initiated Master Protocol	
X Other Study Protocol	

4. Screening Questions

The following questions will help you determine if your project will require IRB review and approval.

The first question is whether this is RESEARCH (click for details)

1.

Does your project involve a systematic investigation, including research development, testing and evaluation, which is designed to develop or contribute to generalizable knowledge? PLEASE NOTE: You should only answer yes if your activity meets all the above.

Yes

The next questions will determine if there are HUMAN SUBJECTS (click for details)

2.

Will you be obtaining information about a living individual through direct intervention or interaction with that individual? This would include any contact with people using questionnaires/surveys, interviews, focus groups, observations, treatment interventions, etc. PLEASE NOTE: Merely obtaining information FROM an individual does not mean you should answer 'Yes,' unless the information is also ABOUT them.

Yes

3.

Will you be obtaining identifiable private information about a living individual collected through means other than direct interaction? This would include data, records or biological specimens that are currently existing or will be collected in the future for purposes other than this proposed research (e.g., medical records, ongoing collection of specimens for a tissue repository).

Will you be using human specimens that are not individually identifiable for <u>FDA-regulated in vitro diagnostic (IVD)</u> <u>device investigations</u>?

No

The following questions will help build the remainder of your application.

4.

Will subjects be studied in the Clinical and Translational Research Center (CTRC, previously known as the GCRC) or is the CTRC involved in any other way with the study? (If yes, this application will be reviewed by the CTRC and additional data will be collected.)

No

5.

Does this study directly recruit participants through the UNC Health Care clinical settings for cancer patients <u>or</u>does this study have a focus on cancer or a focus on a risk factor for cancer (e.g. increased physical activity to reduce colon cancer incidence) <u>or</u> does this study receive funding from a cancer agency, foundation, or other cancer related group? (If yes, this application may require additional review by the Oncology Protocol Review Committee.)

No

Are any personnel, organizations, entities, facilities or locations in addition to UNC-Chapel Hill involved in this research (e.g., is this a multi-site study or does it otherwise involve locations outside UNC-CH, including foreign locations)? You should also click "Yes" if you are requesting reliance on an external IRB, or that UNC's IRB cover another site or individual. <u>See guidance</u>.

No

6.

Exemptions

Request Exemption

Some research involving human subjects may be <u>eligible for an exemption</u> which would result in fewer application and review requirements. This would not apply in a study that involves drugs or devices, involves greater than minimal risk, or involves medical procedures or deception or minors, except in limited circumstances.

Additional guidance is available at the <u>OHRE website</u>. Exemptions can be confusing; if you have not completed this page before, please <u>review this table with definitions and examples</u> before you begin.

1.

Would you like your application evaluated for a possible exemption?

Yes

Will your study either involve prisoners as participants or be FDA-regulated?

No

In order to be eligible for exemption, your research must fit into one or more of the following categories. Check all of the following that apply, understanding that most research falls into one or two categories.

Category 1 (click here for guidance and examples)

 \times The research is to be conducted in established or commonly accepted educational settings.

Note: This applies to the location where education research will actually be conducted (e.g.,

public schools) and NOT to your location at a university.

And the research will involve normal educational practices, such as:

Kesearch on regular and special education instructional strategies.

 \times Research on the effectiveness of or the comparison among instructional techniques, curricula,

or classroom management methods.

Category 2: (click here for guidance and examples)

Does your study involve minors under the age of 18?

No

The research involves the use of one or more of the following

K Educational tests (cognitive, diagnostic, aptitude, achievement).

Survey procedures.

X Interview procedures

X Observation of public behavior.

And either or both of the following is true:

The information to be obtained will be recorded in such a manner that participants cannot be identified, directly or indirectly through identifiers linked to the participants.

Any disclosure of the participants' responses outside the research would not reasonably place the participants at risk of criminal or civil liability or be damaging to the participants' financial standing, employability, or reputation.

<u>Explain</u>

Participants are only asked to provide information about their demographic background, media use, opinion on important issues of the day, and their level of interest in various topics. The survey will not ask participants to disclose any private information, such as whether they have ever broken the law or other information that could place them at risk of criminal or civil liability or be damaging to the participants' financial standing, employability, or reputation.

Category 3 (click here for guidance and examples)

Research involves the use of one or more of the following:

K Educational tests (cognitive, diagnostic, aptitude, achievement)

X Survey procedures

X Interview procedures.

X Observation of public behavior.

And

X The participants are elected or appointed public officials or candidates for public office.

K Federal statute(s) require(s) without exception that the confidentiality of the personally

identifiable information will be maintained throughout the research and thereafter.

Category 4 (click here for guidance and examples)

 \times The research involves the collection or study of existing data, documents, records,

pathological specimens, or diagnostic specimens.

And either of the following is true:

X The sources of data are publicly available.

X The investigator records information in such a manner that participants cannot be identified, directly or indirectly through identifiers linked to the participants.

Category 5 (click here for guidance and examples)

X The project is a research or demonstration project.

Additionally the following must also be true.

The program under study delivers a public benefit (e.g., financial or medical benefits as provided under the Social Security Act) or service (e.g., social, supportive, or nutrition services as provided under the Older Americans Act).

imes The research is conducted pursuant to specific federal statutory authority.

X There is no statutory requirement that an IRB review the research.

X The research does not involve significant physical invasions or intrusions upon the privacy of participants.

The research is designed to study, evaluate, or otherwise examine one or more of the following:

- X Public benefit or service programs.
- × Procedures for obtaining benefits or services under those programs.

X Possible changes in or alternatives to those programs or procedures.

X Possible changes in methods or levels of payment for benefits or services under those programs.

Category 6 (click here for guidance and examples)

 \times The research involves taste and food quality evaluation or is a consumer acceptance study.

Either of the following is true:

K Wholesome foods without additives are consumed.

K If a food is consumed that contains a food ingredient or an agricultural chemical or environmental contaminant, the food ingredient or agricultural chemical or environmental contaminant is at or below the level and for a use found to be safe by one of the following agencies:

Please check which of following

X The Food and Drug Administration.

X The Environmental Protection Agency.

X The Food Safety and Inspection Service of the U.S. Department of Agriculture.

Consent Process for Exemptions

1.

While the full regulatory requirements for consent do not apply, some exempt research does involve talking to or interacting with human participants. Under these circumstances, there is still the expectation that you will tell people what you are doing and why, and invite their voluntary participation. If this describes your study, then describe the process for obtaining consent from the subjects. This may or may not include a written consent document or script; if you plan to use a written document, please upload as an attachment as the end of this application process. Example consent document for exempt research.

Before beginning the survey, participants will be asked for their electronic consent. The first page of the survey will explain that "the purpose of this research study is to see how American audiences select and consume their media content." They will be informed that participation is completely voluntary and they may choose to leave the survey at anytime. after reading the consent form, the participant must either indicate that they have read and understood the consent form to continue to survey or decline to consent, in which case they will be redirected to a page thanking them for their interest.

A copy of the consent form is attached under "other" material.

Part A. Questions Common to All Studies

A.1. Background and Rationale

A.1.1.

Provide a summary of the background and rationale for this study (i.e., why is the study needed?). If a complete background and literature review are in an accompanying grant application or other type of proposal, only provide a brief summary here. If there is no proposal, provide a more extensive background and literature review, including references.

The agenda setting theory posits that the media are successful in telling people what to think about – a notion that has been tested and supported in hundreds of scientific studies. However, with the proliferation of media platforms and large-scale availability of a medium for virtually every niche interest and special topic, audiences are exposed to multiple sources of information — each vying to set the agenda for masses. The agendamelding theory posits that audiences mix, or "meld," agendas from various sources to form their own personal community.

The present study will measure and compare the agenda setting power of various sources of information as well as media habits of users to understand how audiences meld agendas. While the agendamelding theory was introduced almost two decades ago, it has never been empirically tested and its key variables have never been systematically operationalized. By explicating the concepts used in agendamelding and clearly operationalizing variables that can be measured and tested, the present study will advance the field of communication by contributing to theory development and opening a new horizon for future empirical scientists who wish to use agendamelding to explain the dynamics of modern media platforms. Moreover, by

150

performing the first empirical test of the agendamelding theory, the present study attempts to shed light on how traditional media agendas interact with social media agendas and individuals' unique personal experiences, and what variables can predict how audiences meld these agendas.

A.2. Subjects

A.2.1.

Total number of subjects proposed across all sites by all investigators (provide exact number; if unlimited, enter 9999):

1360

A.2.2.

Total number of subjects to be studied by the UNC-CH investigator(s) (provide exact number; if unlimited, enter 9999):

1360

A.2.3.

If the above numbers include multiple groups, cohorts, or ranges or are dependent on unknown factors, or need any explanation, describe here:

The sample does not include multiple groups, cohorts, or ranges or are dependent on unknown factors.

A.2.4.

Do you plan to enroll subjects from these vulnerable or select populations:

If you will include children, prisoners or nonviable neonates or neonates of uncertain viability, please check the appropriate category below and complete the additional sections.

You should check "Pregnant women" if you specifically intend to recruit women who are pregnant or are not excluding pregnant women in biomedical research that is greater than minimal risk. Do not check if you are conducting a survey of the general public or conducting secondary data analysis or chart review not aimed at pregnant women.

Only check UNC-CH Student athletes, athletic teams, or coaches if you have specific plans to enroll these subjects. This is not applicable for intramural or club sports. For definitions and guidance see SOP 1201: Vulnerable subjects in research. K Children (under the age of majority for their location)

Any minor subject who attains the age of majority during the course of the research study must provide consent as an adult, unless consent has been waived, which is requested in section D.3.1.

× Pregnant women

X Nonviable neonates or neonates of uncertain viability

× Prisoners, others involuntarily detained or incarcerated (this includes parolees held in treatment centers as a condition of their parole)

If an enrolled participant becomes incarcerated during the course of the research, they must be removed from the research project until such time as the IRB (and OHRP for NIH funded projects) approves the study to include prisoners, unless there is an immediate risk to the participant from ending treatments under the protocol.

X UNC-CH Student athletes, athletic teams, or coaches

A.2.5.

Based on your recruitment plan and target sample population, are you likely to include any of the following as subjects? Select all that apply. This is not applicable to secondary data analysis or chart review.

Based on your responses, the consent form builder will insert the required text into your consent form template.

X Decisionally impaired individuals

(e.g., Mini mental state examination (MMSE), Montreal cognitive assessment (MOCA))

K Children who are wards of the State (Foster children)

X Non-English-speaking individuals

X UNC-CH Students

Some research involving students may be eligible for waiver of parental permission (e.g., using departmental participant pools). See SOP 32.9.1

X UNC-CH Employees

imes People, including children, who are likely to be involved in abusive relationships, either as

perpetrator or victim.

This would include studies that might uncover or expose child, elder or domestic abuse/neglect.

(See SOP Appendix H)

A.2.6.

If any of the above populations are checked (excluding 'Decisionally impaired individuals' and 'Children who are wards of the State (Foster children)'), please describe your plans to provide additional protections for these subjects. No participant from a vulnerable population will be recruited.

A.2.7.

Age range of subjects:

Minimum age of subject enrolled	18
	years
Maximum age of subject enrolled	99
» If no maximum age limit, indicate 99	
	years

A.4. Study design, methods and procedures

Your response to the next question will help determine what further questions you will be asked in the following sections.

A.4.1.

Will you be using any **methods or procedures commonly used in biomedical or clinical research** (this would include but not be limited to drawing blood, performing lab tests or biological monitoring, conducting physical exams, administering drugs, or conducting a clinical trial)?

No

A.4.2.

Describe the study design. List and describe study procedures, including a sequential description of what subjects will be asked to do, when relevant.

Participants will be drawn from Amazon's Turk research panel (http://www.mturk.com). It allows for participants to be recruited and paid in straightforward and anonymous ways. Mechanical Turk is an online site that has been used to study political behavior in the past (see, for example, Huber et al, 2012; Chambers et al, 2013; Healy and Lenz, 2014). Data will be collected in one wave over a 1-week period. Data will be collected between June 4-11. The survey instrument will include measures regarding the respondents demographic information, media use, topics of interest and their opinion about important issues facing the United States.

The above dates are subject to slight change relative to IRB approval timelines.

The general procedure of the study is as follows:

1. Potential participants will evaluate recruitment materials placed on MTurk site. These recruitment materials will explicate the criteria for participation and compensation associated with participation.

2. Participants will evaluate the informed consent statement.

3. Those who do not consent will screened out of the study and thanked for their interest.

5. Those who consent will evaluate the full questionnaire.

6. After completing the questionnaire, participants will be thanked for their time.

A.4.3.

Will this study use any of the following methods? X Audio Recording X Video Recording K Behavioral observation - (e.g., Participant, naturalistic, experimental, and other observational methods typically used in social science research) × Pencil and paper questionnaires or surveys Electronic questionnaires or surveys X Telephone questionnaires or surveys X Interview questionnaires or surveys X Other questionnaires or surveys **X** Focus groups X Diaries or journals × Photovoice X Still photography A.4.4.

If there are procedures or methods that require specialized training, describe who (role/qualifications) will be involved

and how they will be trained.

No specialized training is required.

A.4.5.

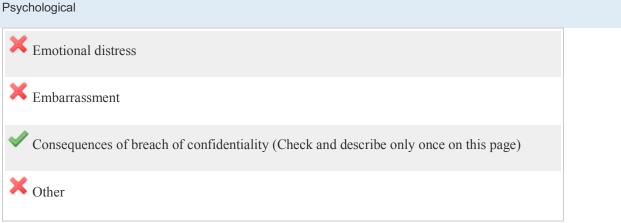
Are there cultural issues, concerns or implications for the methods to be used with this study population?

No

A.6. Risks and measures to minimize risks

For each of the following categories of risk you will be asked to describe any items checked and what will be done to minimize the risks.

A.6.1.



A.6.2.

Describe any potential psychological risks checked above and what will be done to minimize these risks MTurk IDs are linked to worker's public Amazon account and Amazon may make worker information available upon request. However, worker IDs will not be recorded in the data set used for analysis and a unique respondent ID generated by Qualtricts will be used to distinguish between subjects instead. Although this approach may not completely eliminate the possibility of a breach of confidentiality, it will significantly reduce the possibility. The consent form is revised to reflect the existence of this possibility. Moreover, due to the benign nature of questions, even in the unlikely event of a breach of confidentiality, psychological harm is expected to be minimal.

A.6.3.

Social

K Loss of reputation or standing within the community

X Harms to a larger group or community beyond the subjects of the study (e.g., stigmatization)

K Consequences of breach of confidentiality (Check and describe only once on this page)



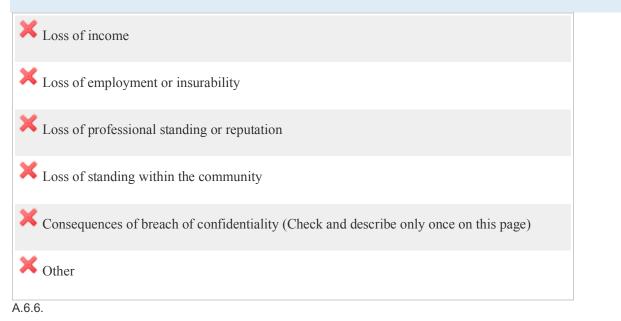
A.6.4.

Describe any potential social risks checked above and what will be done to minimize these risks

I do not believe that the current study presents any potential social risks to participants.

A.6.5.

Economic



Describe any potential economic risks checked above and what will be done to minimize these risks.

I do not believe that the current study presents any potential economic risks to participants.

A.6.7.

Legal

X Disclosure of illegal activity

X Disclosure of negligence

X Consequences of breach of confidentiality (Check and describe only once on this page)

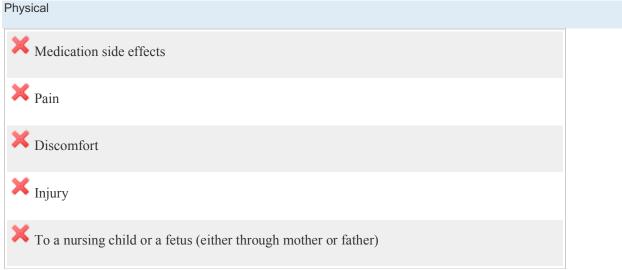
× Other

A.6.8.

Describe any potential legal risks checked above and what will be done to minimize these risks

I do not believe that the current study presents any potential legal risks to participants.

A.6.9.





Describe any potential physical risks checked above, including the category of likelihood and severity, and what will

be done to minimize these risks. Where possible, describe the likelihood of the risks occurring, using the following

terms:

- Very Common (approximate incidence > 50%)
- Common (approximate incidence > 25 50%)
- Likely (approximate incidence of > 10 25%)
- Infrequent (approximate incidence of > 1 10%)
- Rare (approximate incidence < 1%)

Describe severity of risks using the following grading scale:

- Mild- No disruption to the subject's ability to perform daily activities; may include non-prescription intervention only
- Moderate- Temporary interference with daily activities; may include prescription intervention
- Severe- Interference with daily activities; medically significant but not life threatening
- Life threatening

Examples:

Rare (<1%) and Severe: blindness

Rare (<1%) and Mild: dry skin, dry mouth, transient headache

If you are using these terms differently than described above, please provide your study-specific definitions.

Phase 1 trials: Due to limited experience, incidence may be better described as the number of events that have occurred in the total number of animals/humans studied.

I do not believe that the current study presents any potential physical risks to participants.

A.6.11.

Unless already addressed above, describe procedures for referring subjects who are found, during the course of this study, to be in need of medical follow-up or psychological counseling

As the present study relies on an online survey to elicit responses from participants, there is no procedure in

place to detect a need for medical follow-up or psychological counseling.

A.6.12.

Are there plans to withdraw or follow subjects (or partners of subjects) who become pregnant while enrolled in this study?

No

A.9. Identifiers

A.9.1.

Check which of the following identifiers you already have or will be receiving, or select "None of the above."

X Names (this would include names/signatures on consent forms)

X Telephone numbers

Any elements of dates (other than year) for dates directly related to an individual, including birth date, admission date, discharge date, date of death. For ages over 89: all elements of dates (including year) indicative of such age, except that such ages and elements may be aggregated into a single category of age 90 and older

X Any geographic subdivisions smaller than a State, including street address, city, county, precinct, zip code and their equivalent geocodes (e.g. GPS coordinates), except for the initial three digits of a zip code

X Fax numbers

× Electronic mail addresses
X Social Security numbers
X Medical record numbers
X Health plan beneficiary numbers
X Account numbers
Certificate/license numbers
X Vehicle identifiers and serial numbers (VIN), including license plate numbers
X Device identifiers and serial numbers (e.g., implanted medical device)
X Web universal resource locators (URLs)
X Internet protocol (IP) address numbers
X Biometric identifiers, including finger and voice prints
K Full face photographic images and any comparable images
Any other unique identifying number, code, or characteristic, other than dummy identifiers
that are not derived from actual identifiers and for which the re-identification key is maintained
by the health care provider and not disclosed to the researcher
× None of the above
A.9.2.
For any identifiers checked, how will these identifiers be stored in relationship to the research data?

X with the research data (i.e., in the same data set and/or physical location)

separate from the research data (i.e., coded with a linkage file stored in a different physical location)

Provide details about the option you selected above:

MTurk stores worker IDs for payment and tax purposes. However, the actual data collection process will take place via Qualtrics and worker IDs will not be stored in the data set used for analysis. Qualtrics will generate a separate unique identifier for each respondent.

A.9.3.

Are you collecting Social Security Numbers to be used as a unique identifier for study tracking purposes for national registry or database? (Do not check yes if collecting SSN *only* for payment purposes; this will be addressed later.) No

A.10. Confidentiality of the data

A.10.1.

Describe procedures for maintaining confidentiality of the data you will collect or will receive (e.g., coding, anonymous responses, use of pseudonyms, etc.).

MTurk provides worker IDs that can be used to identify participants. However, the worker IDs will not be recorded in the dataset used for analysis. Instead, a unique identifier generated by Qualtrics will be used and no direct identifiers (i.e. SSN, names, phone numbers, or email addresses) to any specific person will be collected either. Once the dataset is downloaded, it would not be possible to trace responses back to participants. Therefore, release of study data – accidental or otherwise – is unlikely to cause any harm or embarrassment to any participant. Downloaded data will be stored on a password-protected computer only accessible the PI. All datasets will similarly be stored on a password protected machine using a password known only to the PI.

A.10.2.

Will any of the groupings or subgroupings used in analysis be small enough to allow individuals to be identified?

Part B. Direct Interaction

B.1. Methods of recruiting

B.1.1.

Check all the following means/methods of subject recruitment to be used:*		
×	In person	
×	Join the Conquest	
~	Participant pools	
×	Presentation to classes or other groups	
	Letters	
	Flyers	
	Radio, TV recruitment ads	
	Newspaper recruitment ads	
	Website recruitment ads	
	Telephone script	
	Email or listserv announcements	
	Follow up to initial contact (e.g., email, script, letter)	
× B.1.2	Other	

Describe how subjects will be identified

The survey instance id will be used as the main variable to distinguish between respondents. No direct

identifiers (i.e. SSN, names, phone numbers, or email addresses) to any specific person will be collected.

B.1.3.

Describe how and where subjects will be recruited and address the likelihood that you will have access to the projected number of subjects identified in A.2.

Subjects will be recruited using Amazon's Mechanical Turk. Academic laboratories estimate that populations of about 7,300 workers are available on MTurk at any given time (Stewart et al., 2015). Reward, or compensation, is the main factor influencing response rate on MTurk (Stoycheff 2016). For HITs that offer at least \$1.00, researchers have witnessed an impressive 74.9% response rate, after 72 hours of data collection (Christenson and Glick, 2013).

Given that the present study needs a sample 1,360 and the population of Mturk is estimated at 7,300, a response of rate of 18.7% would be enough to meet the required sample size. Also, given that the reward allocated for this survey is twice the amount in Christenson's and Glick's 2013 study, I am fairly confident that I will have access to the projected number of subjects identified in A.2.

Part C. Existing Data, Records, Specimens

C.1. Data Sources

C.1.1.

What existing records, data or human biological specimens will you be using? (Indicate all that apply or select 'None of the above'):

X Medical records in any format.

ALERT: You must check both boxes: 1) Medical records in any format and 2) Electronic

medical record using Epic, or you/your study team will not be granted access to Epic for research

purposes.

K Electronic medical records using Epic, WebCIS or other electronic system

X Carolina Data Warehouse for Health (CDW-H) (for UNC and its affiliates only)

X Carolinas Collaborative Data Request and Review Committee (DRRC)

× Paper medical records

If you access the medical records of fewer than 50 patients under a full or limited waiver of

HIPAA, submit a copy of your IRB approval letter and a completed Research Disclosure

Form to Health Information Management (HIM). <u>Do not</u> submit this information to the IRB.

For additional information about this process, you should contact HIM directly at : 919-595-5591 or 919-966-1225 or 919-595-5580.
X Data already collected from another research study
Were the investigators for the current application involved in the original collection?
X Patient specimens (tissues, blood, serum, surgical discards, etc.)
Has the clinical purpose for which they were collected been met before removal of any excess?
X Data already collected for administrative purposes
Student records (<u>You will need to satisfy FERPA requirements: see SOP 2301, section 1.1</u> for guidance)
X UNC Dental Records
X Data coming directly from a <u>health plan, health care clearinghouse</u> , or health care provider?
× Publicly available data
× Other
✓ None of the above
For EACH data source checked above, provide a description of the data, proposed use, how data were collected (including consent procedures), and where data currently reside. No existing record, data or human biological specimen will be used.
C.1.2. Describe your plans for obtaining permission from the custodians of the data, records or specimens (e.g.,

dept, tissue bank, original researcher):

No existing record, data or human biological specimen will be used.

C.1.3.

Do the custodians of the data, records or specimens require a data use agreement?

No

C.2. Coding and Data Use Agreements

C.2.1.

When you receive these data, records or human biological specimens will they be coded? Coded means identifying information that would enable the research team to readily ascertain the individual's identity has been replaced with a number, letter, symbol, or combination thereof (i.e., a code). If you will not be using existing materials, check "No."

No

Data Security Requirements

Data Security

Level II Data Security Requirements:

Based on the information the PI provided in the IRB application, this study will be collecting sensitive data that require additional security measures to ensure that they are adequately protected from inadvertent disclosure. Due to the nature of these data, the PI is required to implement the following security measures on any computer(s) that will store or access information collected for this study. The PI should coordinate efforts in this area with the unit's IT data security personnel receiving this email.

Required Measures for Level II Data Security

- 1. Access to study data must be protected by a username and password that meets the complexity and change management requirements of a <u>UNC ONYEN</u>.
- 2. Study data that are accessible over a network connection must be accessed from within a secure network (i.e., from on campus or via a <u>VPN connection</u>).
- 3. Computers storing or accessing study data must have <u>Endpoint Protection</u> (AntiVirus/AntiSpyware) installed and updated regularly where technologically feasible.
- 4. Patch management and system administration best practices should be followed at all times on systems storing or accessing your data.
- 5. Users should be granted the lowest necessary level of access to data in accordance with ITS Security's Standards and Practices for Storing or Processing Sensitive Data (when technologically feasible).

**These requirements do not replace or supersede any security plans or procedures required by granting agencies or sponsors. Questions or concerns about compliance with these requirements should be directed to the administering department's IT support staff.

Additional IT Security Resources

- ITS Security
- <u>Carolina Population Center Security Guidelines</u>
- SOM Information Security
- ITS Research Computing

Due to the nature of this research study, the senior IT official in the administering department is receiving this email about the study and may contact the PI or technical contact(s) to discuss any data security questions on concerns they may have. If the PI has indicated that the research will take place in another unit on campus (i.e., a Center or Institute), that group will also be notified.

1.

Data Security Level Acknowledgement

I understand that this data security level is determined automatically based on the information that I have entered into my application. Data security contacts are assigned based on the administering department. If others are responsible for data management, I should contact the data security contacts listed on this page and notify them.

The Data Security Level contact(s) for your administering department (School of Media and Journalism - 350100):

- Michael Sharpe (michael.sharpe@unc.edu)
- John Turner (<u>turnerj@live.unc.edu</u>)
- Dennis Dennis (<u>dennis@unc.edu</u>)
- Danny Kohring (<u>dkohring@live.unc.edu</u>)

>> Consent Forms:

This submission requires the following consent forms

Template Name

There are no required consent forms with this submission.

This submission includes the following consent forms

File Name	Document Type
There are no consent forms attached to this submission.	
>> <u>Attachments:</u>	
This submission requires the following attachments	
Document Type	
Student Dissertation or Thesis Proposal	
Electronic Questionnaire Survey	
Recruitment Ad for Participant Pool	
This submission includes the following attachments	
File Name	Document Type
Minooie - Proposal 10.docx	Student Dissertation or Thesis Proposal
Uploaded by: Milad Minooie On: 05/10/2018 At: 03:41 PM	
recruitment material.docx	Recruitment Ad for Participant Pool
Uploaded by: Milad Minooie On: 05/10/2018 At: 03:43 PM	L

Questions.docx	
	Electronic Questionnaire Survey
Uploaded by: Milad Minooie On: 05/10/2018 At: 03:42 PM	
UNC-Exempt-Research-Information-Sheet.doc 🔛 NEW	
	Other
Uploaded by: Milad Minooie On: 05/31/2018 At: 03:31 PM	

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