TRADITIONAL NEWS MEDIA’S USE OF SOCIAL MEDIA AND BLOGS IN ARTICLES ON CLIMATE CHANGE

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Abstract

Social media and blogs allow people and organizations to post content online for anyone with an Internet connection to access and read. Climate change is an environmental and political issue that is covered by the news media to inform the public. McCombs and Shaw (1972) theorize that the media determines which issues the public deems most imperative, commonly known as Agenda-Setting theory. To discover who sets the media’s agenda, Intermedia Agenda-Setting theory (McCombs, 2004) suggests that prominent news media set the agenda for other news media. To expand on this theory, this study examined if online media content about climate changes influences how traditional news outlets report on the issue. A content analysis was conducted to determine how frequently blogs or social media were referenced in traditional news articles on climate change. The results show that Twitter and blogs were cited the most frequently within the news articles that were collected and coded. It was also discovered that social media or blogs were used within the news articles to provide quotes, facts, or images. These findings will contribute to future communication studies about how social media and blogs are changing the news media landscape.
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Chapter 1 – Introduction

Importance of the Study

In January 2016, the U.S. National Oceanic and Atmospheric Administration and NASA reported that 2015 was the hottest year on record (Miller, 2016). NASA cited that the reason behind increasing temperatures is from high levels of carbon dioxide and other anthropogenic emissions (NASA, 2016). Climate change is a threat to the planet and increased knowledge of the issue is crucial to activism and change. Most Americans learn about the news through traditional news outlets, such as newspapers or TV broadcast, but social media is becoming a popular platform to learn about the news (American Press Institute, 2014). According to agenda-setting theory, the more a topic is covered in the media, the more important the topic becomes to the public (McCombs & Shaw, 1972). Agenda-setting theory suggests that if climate change is reported on more frequently, it will be considered an important issue. This theory sparked an interest for scholars to ask ‘Who sets the media’s agenda?’ (McCombs, 2004). One development is that prominent news outlets influence each other’s agenda, commonly known as intermedia agenda-setting.

The media landscape is changing with the emergence of technology, the internet, and social media. There is not currently research on whether online media coverage of climate change, such as social media or blogs, influences the agenda of traditional media. Online media’s impact on communication patterns is constantly evolving, and requires new studies to understand the scope of the phenomenon. Social media and blogs are both avenues for people and organizations to share information and opinions to anyone with access to the internet. Consequently, online media is a unique opportunity for ordinary people to have a voice about which topics are important to them. This has the potential to dilute “gatekeeping,” where news
editors decide what is considered newsworthy (Griffin, 2012). This study seeks to understand whether online activity on social media or blogging websites has the power to influence what the mainstream news reports on.

**Statement of the Problem**

Climate change is one of the most pressing issues for the planet and humanity, but some people still deny the science and more action needs to be taken to combat climate change. It is crucial that the public is informed about climate change, and one of the major ways people learn about an issue is by reading the news. A better understanding of how the public learns about climate change can be accomplished through studying the interplay between traditional news media and online media.

**Definition of Terms Used**

Major terms used in this study include: *traditional media, online media, blog, and social media.*

Traditional Media: Print publications, such as newspapers or broadcast television. It is also referred to as “mainstream media” within the study.

Online media: Overarching term to indicate social media and blog websites that are accessed online.

Blog: A webpage where internet users can publish their own content immediately and can be accessed by internet users.

Social Media: A website or application where users can share and post their own content, which can be accessed by other people who use the website or application. The main platforms used in the study are: Facebook, Twitter, and YouTube.
Organization of Remaining Chapters

The study is organized into five chapters that study and analyze intermedia agenda-setting and climate change. The second chapter looks at the communication theory intermedia agenda-setting in depth and gives an overview of previous research that informs this study. Chapter three outlines the methodology used to gather data to answer the research questions. In chapter four, the results of the study are presented and discussed. Chapter five addresses the limitations of the study, recommends further studies, and reviews the key outcomes of the study.
Chapter 2 – Literature Review

Climate Change Reporting

Climate change is a scientific and political topic that is significant to study because it is an ongoing topic covered in the media. The primary way the public is informed about climate change is through the media, which is why media research on climate change is crucial to understanding how this topic is reported on (Schäfer & Schlichting, 2014). Research on news coverage of climate change began in the late 1980’s (Hansen, 2011) and according to Schäfer and Schlichting’s (2014) meta-analysis, more than two thirds of climate change media research focuses on print media. This indicates that more research should examine digital media platforms. Digital or online media can be categorized as blogs, social media, and discussion forums (Schäfer, 2012). What makes online media unique from traditional media is that anyone can participate and share their stories or opinions, not just journalists. Climate change reporting is often politicized in traditional news media because the news story lacks multiple angles or is not framed as social issue (Debrett, 2011). The internet is an avenue for citizens and activists to discuss climate change and counter the politicization of the topic that appears in traditional media (Koteyko, Jaspal & Nerlich, 2013; Porter & Hellsten, 2014). There is a high frequency of online activity about climate change, with more than 1,400 “climate change” blogs (Shäfer, 2012). It is not only laypeople who publish blogs, but scientists also write blogs to share their findings. Colson (2011) argues, “Most of the scientists who blog think that the quality of science coverage in the traditional media has declined and consider that the media is no longer able to play its role as a watchdog in the world of science” (p. 900). In a study comparing environmental bloggers and journalists, Tandoc and Takanasi (2014) found that there are many similarities between the two, but that bloggers take on more activist roles and are free to choose a wider range of topics compared to journalists.
Issue-Attention Cycle

Climate change is an on-going issue that is well-suited for a media study because there are opportunities to observe trends about how and when it is reported on. Hansen (2011) questions why some environmental topics that are covered by the news become issues of concern and why other environmental issues, with the same level of importance, fall off the traditional media’s agenda and then become forgotten by the public. Downs (1972) applies the theory of “the issue-attention cycle” to the American public’s cycling interest in environmental issues. The public loses interest if it does not currently pose a hazard and therefore, journalists are more concerned with reporting events (Shanahan, 2009). Climate change is an issue that is omnipresent, signifying it can easily fall off the traditional media’s agenda. Studies on the issue-attention cycle found that media coverage on climate change is most high when there is a focused event, such as the 2009 Climate Change Conference in Copenhagen, and when new scientific evidence is discovered (Liu, Lindquist, & Vedlitz, 2011; Lörcher & Neverla, 2015). One study found that the mass media’s coverage of extreme weather patterns, such as hurricanes or snow-storms, prompted Twitter users to discuss climate change more frequently in their posts (Kirilenko, Molodtsova, & Stepchenkova, 2015). This indicates that specific events related to climate change can influence traditional media and online media’s attention to the issue.

Intermedia Agenda-Setting Theory

The media sets the agenda for how the public thinks about environmental issues like climate change (Dirikx & Gelders, 2009), signifying the importance of keeping climate change as part of traditional media’s agenda. Olausson and Bergletz (2014) suggest that the next step in climate change media research should examine how online media might set traditional media’s agenda. Intermedia agenda-setting theory stems from agenda-setting theory, which theorizes that
the mass media determines what issues are the most important for the public to learn and know about (McCombs & Shaw, 1972). Instead of affecting the salience of issues to the public, intermedia agenda-setting theory is concerned with the salience of issues between different media (McCombs, 2004). Meraz (2011) writes, “Intermedia agenda-setting seeks to examine how the media's agenda is set by sources, and intermedia agenda-setting explains the flow of influence among media entities” (p.177). For example, *The New York Times* has been found to frequently influence what other newspapers across the country report on (Gilbert, Eyal, McCombs, & Nicholas, 1980; Reese & Danielean, 1989). Intermedia agenda-setting is concerned with studying how journalists look to others in their field to determine if a topic is significant and it is most frequently studied by looking at which sources form the media’s agenda or through time series analysis (Messner & Garrison, 2011; Meraz, 2011).

There have been numerous studies on how blogs and traditional media set each other’s agenda. In a study on intermedia agenda-setting during the 2004 Presidential election between John Kerry and George W. Bush, researchers Sweetser, Golan, and Wanta (2008) found there was multidirectional intermedia agenda-setting between the candidates’ blogs and broadcast television news. The candidates’ blog posts were often a response to a topic covered on the news, and television stations also picked up on story ideas from the candidates’ blogs (Sweetser et al., 2008). There is some research on intermedia agenda-setting and blogs concerning the environment and climate change. Holliman (2007) discovered that: “Citizen media recently led the global environmental news agenda through user-generated blogs about the 2004 Indian Ocean tsunami” (p.277). Furthermore, Hellsten and Vasileiadou (2015) conducted an intermedia agenda-setting study about the email hacking controversy at the Climate Research Unit prior to the Copenhagen Climate Conference, also known as ‘climategate’. In their findings, they argue
that “blogs operate as forums initiating the debate whereas newspapers are the mainstream media that pick up the issue from the blogs” (p.601). These studies suggest that there is evidence of the public using blogs to discuss environmental issues, which impacts the traditional news agenda. Social media is also contributing to intermedia agenda-setting (McCombs, 2004). Waters, Tindall, and Morton (2010) studied how social media is changing the landscape for the public relations field and found that, “Journalists are experimenting with Twitter to collect sources and to find story ideas, and public relations professionals are interacting with journalists via Twitter and Facebook” (p.258). The literature provides evidence that intermedia agenda-setting occurs between online media and mainstream media. However, there is a gap in the literature on intermedia agenda-setting research and climate change that this study seeks to explore.

**Rationale**

Online media is still a relatively new landscape that is being studied among communication scholars. Blogs have appeared most frequently in intermedia agenda-setting studies, indicating that what is missing from the literature is more studies on social media, for example Twitter or Facebook. Intermedia agenda-setting has intersections with the issue-attention cycle because it has the potential to explain how climate change fits into the news agenda. The literature provided examples of how people utilize online platforms to share their opinions about environmental, social, and political issues. This research will explore how the mainstream media uses online media within their news article on climate change. The research questions that emerge focus on social media and blogs to fill the gap in the literature.

**Research Questions**

*RQ1:* How frequently do traditional news media reference blogs in articles on climate change?
**RQ2:** How frequently do traditional news media cite social media as a reference in articles on climate change?
Chapter 3 – Scope and Methodology

Scope

This study focuses on intermedia agenda-setting between online and traditional news media. It will examine how frequently social media and blogs are cited in traditional news articles about climate change. While some previous research has studied the multi-directional flow of intermedia-agenda setting, this study will only cover online media’s presence in traditional news. To narrow down the scope of traditional news articles covering climate change, the study is restricted to news articles from the online websites of CNN and USA TODAY published in 2015. Both websites have a search engine capability, which will be the most efficient way to search through the archives for articles on climate change. The choice to focus on CNN and USA TODAY is based on their popularity as news sources and their tendency to stay unbiased. Since climate change is a political issue, the news outlets should be in the middle of the spectrum for audience bias. According to a study done by Business Insider, both CNN and USA TODAY have a mixed readership, rather than mostly conservative or mostly liberal readers (Engel, 2014). USA TODAY is one of the top three newspapers in circulation and CNN’s website receives an average of 60 million views per month (Yu, 2014; Bilton, 2015).

The social media platforms included in the study are Facebook, Twitter, and YouTube. Facebook and Twitter are platforms where people and organizations can share opinions and view popular “trending” topics, which makes them suitable for an intermedia agenda-setting study. YouTube is a popular platform that allows users to share informational or opinion based videos. Other social media websites, such as Instagram or Pinterest, were not chosen for the study because they are image based. Any blog will be considered for the study and there will be no restrictions on the type of platform the blog was published on. Overall, this is an exploratory
study to determine if there is any indication that traditional media look to online media for the story, frame, or sources.

**Methodology**

Intermedia agenda setting is most frequently studied through content analysis, which is a form of nonreactive research where the content of a text is studied and analyzed (Messner & Garrison, 2011; Neuman, 2011). Quantitative measurement will be used to count the occurrence of measurable content within a text, which will require a coding system that systematically records the content (Neuman, 2011). This method is best suited to studying intermedia agenda-setting theory because the content of traditional news media articles must be examined to answer the research questions. The study’s population will be all articles in the year 2015 that cover climate change from two mainstream news outlets: CNN and USA TODAY. The sample size will be 30 articles from each outlet. To locate the articles, the researcher will use the search function on both websites and search the terms “climate change” and “global warming” to ensure that all articles on the topic are archived. All articles that fall under this sampling frame will be archived by the researcher prior to the data gathering process. Then, the researcher will randomly code 30 archived articles from each news outlet.

**Data collection.** To gather the data, coding categories will be listed on a recording sheet to identify the variables of interest in each article within the sample size. The three coding categories will be blogs, social media, and no reference to online media. The variables of interest within the social media category will include: Facebook, Twitter, and YouTube. Each time a traditional news article contains one of these variables, the researcher will mark it on the coding sheet. A copy of the coding sheet is in Appendix 1.
Data analysis. The information indicated on the coding sheets is the data and statistical analysis will be used to determine the percentage of traditional news articles on climate change that contain references to online media. First, a raw data table will be created to organize the data from the coding sheets into one clear presentation of the overall numerical results. Then, a percentage table will be constructed to determine the percentage of traditional news articles that contain online media references. The independent variables, CNN and USA TODAY, will be placed on the rows of the table and the dependent variables, blogs and social media, will be in the columns. Using the numbers in the raw data table, percentages from the rows and columns will be calculated to discern how often traditional news cite online media. The row-percentage table will be able to answer questions like: what percent of CNN articles contain a blog as a source? The results of the percentage table will allow the researcher to compare CNN to USA TODAY, and compare blogs with social media. High percentages in the dependent variable categories will indicate that there may be intermedia agenda-setting because it will signify that a significant number of articles do contain references to blogs or social media. Lower percentages will indicate that intermedia agenda-setting does not likely occur. Additionally, the cases where there are references to online media will be analyzed further to determine if there are any patterns for the types of articles that do contain online media. This study is exploratory in nature, so the analysis of the percentages and the content will be used to gain basic insights into this topic and will not provide analysis of correlations or causation.
Chapter 4 – The Study

The study examined articles on climate change to determine if intermedia agenda-setting occurs between online media and traditional media. There were over 100 articles published in 2015 covering climate change from the news sources CNN and USA TODAY. Only 30 articles from each news platform were chosen at random to be coded. Content analysis was used to count the occurrence of blogs and social media platforms cited within the articles, and the coding process was completed in October 2016. In this chapter, the results are presented and the findings are explained per intermedia agenda-setting theory.

Results

In this study, 61 articles were read and coded out of 100 archived articles. To be archived, the articles needed to be published in the year 2015 and have climate change be the main subject of the article. Articles that were generated in the search results that were letters to editor or opinion pieces were not archived. Letters to the editor about climate change were not considered because readers wrote them. Opinion pieces were not used because they are not hard news reported on by a journalist. The purpose of the study to was to see if traditional news articles are influenced by online media, so an article must be a traditional news story written by a journalist to fall within the parameters of the study.

Raw Data. First, 31 CNN articles were coded at random to ensure that all articles came from a variety of months throughout the year. If an article contained one of the variables of interest, it was marked on the coding sheet. When an article did not contain any references to online media, it was also indicated on the coding sheet. Once the articles were read and coded, the coding sheets were reviewed and the number of occurrences for each variable of interest were recorded in the Raw Data Table (Table 1) to organize the results. The same procedure was repeated for 30 articles from USA TODAY. Table 1 outlines the raw data results of the coded
articles and summarizes the occurrences of online media present in CNN and USA TODAY articles. It also displays how many articles did not contain any references to online media.

Table 1 – Raw Data

<table>
<thead>
<tr>
<th>News Source</th>
<th>Variable of Interest</th>
<th># of Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNN</td>
<td>Blog cited</td>
<td>4</td>
</tr>
<tr>
<td>CNN</td>
<td>Facebook</td>
<td>3</td>
</tr>
<tr>
<td>CNN</td>
<td>Twitter</td>
<td>10</td>
</tr>
<tr>
<td>CNN</td>
<td>YouTube</td>
<td>1</td>
</tr>
<tr>
<td>CNN</td>
<td>No blog or social media</td>
<td>16</td>
</tr>
<tr>
<td>CNN</td>
<td>Total Articles</td>
<td>31</td>
</tr>
<tr>
<td>USA TODAY</td>
<td>Blog cited</td>
<td>1</td>
</tr>
<tr>
<td>USA TODAY</td>
<td>Facebook</td>
<td>0</td>
</tr>
<tr>
<td>USA TODAY</td>
<td>Twitter</td>
<td>6</td>
</tr>
<tr>
<td>USA TODAY</td>
<td>YouTube</td>
<td>1</td>
</tr>
<tr>
<td>USA TODAY</td>
<td>No blog or social media</td>
<td>22</td>
</tr>
<tr>
<td>USA TODAY</td>
<td>Total Articles</td>
<td>30</td>
</tr>
</tbody>
</table>

Table 1 gives an overview of the results and provides a snapshot of what the results mean in association to intermedia agenda-setting. For both CNN and USA TODAY, most of the articles did not contain a reference to a blog or a social media website. It also shows that CNN had more occurrences of Blogs, Facebook, and Twitter than USA TODAY. To analyze the data further, a percentage table was constructed.

Percentage Calculations. Table 2 calculates the percentage of each variable of interest compared to the total number of articles. For CNN, 51.62% of articles did not contain any reference to blogs or social media, which is starkly different compared to 73.33% of USA TODAY articles. This indicates that about half of CNN articles contained a reference to online media. For both traditional news outlets, Twitter was the variable of interest that occurred most frequently, with a total of 26.22% compared to only 4.90% percent for Facebook. Blogs had a
total percentage of 8.2%, which is higher than the totals for YouTube and Facebook. There were no references to Facebook in the USA TODAY sample, while CNN had three occurrences. YouTube was the variable of interest that had the fewest occurrences, with only 3.27% of the total. Overall, 62.29% of articles did not contain any reference to online media, indicating that most articles did not contain references to online media.

Table 2 – Percentage Table

<table>
<thead>
<tr>
<th></th>
<th>Blog cited</th>
<th>Facebook</th>
<th>Twitter</th>
<th>YouTube</th>
<th>No blog or social media</th>
<th>(N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNN</td>
<td>12.90%</td>
<td>9.68%</td>
<td>32.26%</td>
<td>3.23%</td>
<td>51.61%</td>
<td>31</td>
</tr>
<tr>
<td>USA TODAY</td>
<td>3.33%</td>
<td>0.00%</td>
<td>20.00%</td>
<td>3.33%</td>
<td>73.33%</td>
<td>30</td>
</tr>
<tr>
<td>Total</td>
<td>8.20%</td>
<td>4.90%</td>
<td>26.22%</td>
<td>3.27%</td>
<td>62.29%</td>
<td>38</td>
</tr>
<tr>
<td>(N)</td>
<td>5</td>
<td>3</td>
<td>16</td>
<td>2</td>
<td>38</td>
<td>61</td>
</tr>
</tbody>
</table>

To learn more about the data, the articles that did contain social media or blogs were examined. In the CNN category, four articles that contained a reference to Twitter were articles about President Obama. In the USA TODAY category, three articles that contained a reference to Twitter were articles about Pope Francis. Of the ten CNN articles referencing Twitter, two articles were both about major weather events: floods and wildfires. Each article that referenced online media was examined further to discern if online media played a vital role in shaping the article, which might provide further insights into intermedia agenda-setting.

Discussion

Twitter and Facebook. Intermedia agenda-setting is when elite news media can influence the agenda of other new media (McCombs, 2004). Online media is becoming more prevalent in society, and it is crucial to determine if the online news environment is influencing traditional news media. In a study done by the Pew Research Center, six-in-ten Americans get their news from social media and 59% of Twitter users visit the site to get the news (Gottfried & Shearer, 2016). Twitter is a leading social media website and it had the most occurrences in this
study. One of the USA TODAY articles that was coded is titled, “Pope Francis lights up Twitter feed with climate change truth bombs” and a CNN article that was coded is titled “Obama takes to Twitter to answer questions on climate change.” Both articles are centered around how Pope Francis and President Obama used Twitter to spread their messages on climate change. Similarly, a coded article from CNN is titled: “President Barack Obama joins Facebook, addresses climate change in his first post”. Another occurrence of Facebook cited within a coded CNN article was a quote from the British Prime Minister’s Facebook page. These articles may indicate intermedia agenda-setting because the social media usage of public figures inspired the subject of the news stories. These occurrences show that activity on social media by world leaders is deemed newsworthy by traditional news outlets.

Social media is a way for people and organizations to post updates. There were two tweets in a coded CNN article about floods in Texas and their relation to climate change. One tweet was from the National Weather Service in Fort Worth and the other tweet was from the National Hurricane Center. The tweet posted by the National Weather Service in Fort Worth was embedded within the article and is pictured below:

![Twitter Tweet](image)

The title of the article is: “Texas floods: Enough rain to cover entire state with 8 inches of water in May,” which resembles the content within the tweet. Comparing the two, the title of the article comes directly from the information provided in the tweet. Within the article, the
journalist paraphrases the same tweet: “In all, 37.3 trillion gallons of water have fallen over the state of Texas in the month of May, the National Weather Service said. That translates to 8 inches of water over the entire state, the service said” (Martinez & Brumfield, 2015). This provides evidence that the journalist gathered key information for the news story by finding creditable information on Twitter. The title of the article’s relation to the tweet, as well as the journalist citing the data from the tweet, show that the tweet by the National Weather Service in Fort Worth helped frame the article and was a major source of data for the article. Intermedia agenda-setting studies have looked at sources and framing to provide a link between two news media (Meraz, 2011), indicating that this occurrence can signify intermedia agenda-setting.

The National Oceanic and Atmospheric Administration (NOAA) is a government agency that uses Twitter to share their environmental research. In a coded CNN article titled “New temperature records highlight global warming's continued rise” there are two tweets from NOAA used to supplement the article. The first tweet announces that another greenhouse gas benchmark has been reached for March 2015 and there is an image of a climate model to supplement the tweet. Within the tweet there is a link to NOAA’s published research results, which outline that March was the warmest month on record since NOAA first began collecting data on carbon dioxide in the atmosphere. This information is all summarized in the article and is the main subject of the article, indicating that the journalist may have referenced the study within the tweet to write the article. Then, the article transitions to discuss the risk of droughts in connection to climate change, and the second tweet from NOAA is about the severe drought in California. An image of a color-coded map of the state of California is used within the tweet to show which areas of California are the most desperate for water. The tweet is the last part of the article and serves as a visual for how severe the drought is. The article is evidence that
journalists use Twitter to gather information, provide visuals, and highlight a credible scientific resource, such as NOAA. Similarly, in a coded *USATODAY* article about November 2015 breaking the record for the hottest month in history, the article cited a NOAA study and tweet. The tweet is below:

The image from NOAA provides a visual for how warm the planet was between January 2015 and November 2015. This example gives some reason to believe that journalists may want to use an image from a research organization, like NOAA, to help the credibility of the article. Climate change is a controversial issue, where some people do not believe that it is occurring or that it is anthropogenic. The power of this visual from Twitter may be another reason journalists use online media to help strengthen the facts and information they present in their articles.
Citizens can share posts about their lives on Twitter. In a coded *CNN* article about climate change and wildfires, the story is framed from a personal standpoint based on a tweet. Journalist Mariano Castillo writes:

“Rick Tryder isn’t a firefighter, but he found himself deployed for a few days this week to help suppress one of the 105 uncontained large wildfires burning in the United States, mostly in the West. ‘Rick is fighting a wildfire in Wyoming and I’m a nervous wreck,’ Tryder’s girlfriend, Chrissy Macholl, shared on Twitter. ‘How do families of firefighters do it?!’” (Castillo, 2015).

The article goes on to provide more information about Rick Tryder and Chrissy Macholl. In this news story, the journalist may have noticed Chrissy Macholl’s tweet about her boyfriend being deployed and then contacted her for further information to help frame the story in a more personal way. While it cannot be certain that this occurred, there is enough evidence in this example to suggest intermedia agenda-setting because the journalist used Macholl’s personal tweet to build the humanity of the story. There is a second tweet in the article that comes from the U.S. Forest Service. Within the tweet, the Forest Service provides a link to a report that details how climate change has contributed to longer fire seasons. The *CNN* article references this report multiple times, which may indicate that the journalist learned about the extreme fires and their connection to climate change by accessing the report within the tweet. This article points to some evidence that journalists might research topics, frames, and facts from Twitter to build their articles.

Twitter’s capability of sharing images is another way citizens can use social media platforms to post what is going on in their world. In China, people shared images of how dense the smog was one day. This turned into a *USATODAY* article about how severe the pollution is
in the China. The article is titled, “Apocalyptic China scenes ahead of climate talks” and the journalist begins the article by writing, “China probably doesn't want you looking at these photos right now, especially since the world is less than three weeks away from the much-anticipated UN climate change conference in Paris” (Jackson, 2015). Then, there are multiple images of tweets from people sharing pictures of what it looked like outside. Here is one example:

The man who published the tweet is Donald Knoblet, and his Twitter profile says that he is an American who is teaching in China. Journalists can use Twitter to access powerful images that they can use to tell a story. The images shared on Twitter by people living in China provide evidence of what is going on in another country without a journalist or a photo journalist needing to travel to the country to take their own pictures. Online media is changing the traditional news landscape by offering immediate access to images and information that can be used to build news stories.
**Blogs.** Blogs had the second highest number of occurrences in the study after Twitter. Organizations and scientists use their websites and blogs to publish information for the public. In a coded *CNN* article by Jareen Imam, titled “NASA: 10,000-year-old Antarctic ice shelf will disappear by 2020,” the journalist cites a blog called *The Slate*, a news blog run by a magazine called *The Slate*. The author of the blog is meteorologist Eric Holthas and the blog bears a very similar title to the *CNN* article: “NASA: 10,000-year-old Antarctic ice shelf will soon be completely gone.” Information in the blog is used within the *CNN* article, indicating that Imam used it as a reference point for her own story. Another example comes from a coded *USA TODAY* article called: “Fact check: Bernie Sanders on climate link to terrorism” by Robert Farley. The blog cited comes from The Center for Climate & Security, which is a nonpartisan institution that examines how climate change relates to security and foreign policy. Farley (2015) writes, “But in a blog post and a Washington Post interview, they warned not to assign a direct causal link between the drought and the Syrian civil war, because the underlying dynamics of the Syrian crisis are too complex.” There is a hyperlink in the article, which directs to The Center for Climate & Security’s blog (Werrell & Femia, 2015). In both of these instances where blogs were cited in traditional news articles, it appears that the blogs were used as sources to support the story. These cases prove that journalists look to blogs for facts or information when writing a news story. Meraz (2011) describes intermedia agenda-setting as the “flow of influence among media entities” (p. 177). There is some evidence that blogs are a new avenue for journalists to learn more about a topic they are covering.

In a coded *CNN* article, the article cites Hillary Clinton’s blog as a source. Dan Merica, the author of the article, writes, “A day after announcing her opposition to the Keystone XL pipeline, Hillary Clinton is explaining how she came to her decision, writing in a post on
Medium, that ‘the effects of climate change have grown more acute since the application for the project was filed’” (Merica, 2015). Medium is a popular blogging platform that people and organizations use. There is a hyperlink within the article that links to Clinton’s Medium blog. Merica (2015) directly quotes from the blog several times in the article, proving that blogs are a credible source of information for journalist at traditional news outlets. This example is evidence that online media is changing the way journalists get quotes for their stories. It also suggests that journalists may prefer to use online media to get quotes and information when they can because it can save time when it is not necessary to request an interview or a quote.

**YouTube.** YouTube had the fewest occurrences in the study. One explanation is that news sites like CNN and USATODAY produce their own footage about a topic if they want a video to supplement an article. In a coded CNN article, a YouTube video from NASA Goddard Space Flight Center’s YouTube channel is embedded at the end of the article. In the video, NASA climate scientist Ben Cook describes his study’s findings accompanied with footage and graphs. The article quotes Cook multiple times, and each quote comes directly from the video. This relates to intermedia agenda-setting because the journalist likely did not have to contact Ben Cook for further quotes to support the story, because he only used quotes from NASA’s YouTube video. This example highlights that journalists can use various forms of online media to access quotes for their news stories. In the second coded article with a reference to YouTube, the video that was imbedded in the article was supplemental and did not have any influence within the article itself because it was never explicitly mentioned or quoted. This instance does not suggest intermedia agenda-setting as strongly.

This study sought to explore if online media sets traditional news media’s agenda by examining how many times online media was referenced within traditional news articles. Based
on the data outlined in Table 1 and Table 2, most of the articles on climate change did not contain any references to online media. Overall, there is not strong evidence of intermedia agenda-setting because of the low percentages for each variable of interest. The variable of interest with the strongest evidence of intermedia agenda-setting was Twitter. Examining the content of articles that contained references to Twitter proved that public figures, organizations, and citizens can all provide content and sources for traditional news articles. Blogs were used in traditional articles as sources of information, while YouTube and Facebook had the lowest occurrences in the study.
Chapter 5 – Summaries and Conclusions

Limitations of the Study

While this study found that there are some indications of intermedia agenda-setting between online media and traditional news articles on climate change, there are several limitations. The most significant is that this study was exploratory and was not designed to discover if there is a cause and effect relationship between online and traditional media. The study also only focused on online media’s influence on traditional media, and did not examine if there is a two-way flow between the two news entities. The results of this study provide evidence that traditional news media reference and use online media in articles on climate change, but does not prove or disprove if there is an actual causation. Similarly, another limitation of the study was that the researcher only utilized a content study and previous research has used time series analysis to study intermedia agenda-setting. Time series analysis would provide further evidence of intermedia agenda-setting because it would be able to show a stronger cause and effect relationship between the publication of an online post and how quickly it was picked up by the traditional news media outlet. Another way to discover more conclusive results on intermedia agenda-setting might be to interview journalists about their story building process to discover how they use online media to supplement or inspire news articles.

The final limitation is the scope of the study. The study looked at articles from a one year time-period and focused on two mainstream news media: CNN and USATODAY. The sample size was relatively small and can be expanded by increasing the time frame and by including more mainstream news sources. This would increase the number of articles that would be coded and analyzed, as well as cover a larger spectrum of traditional news sources. Additionally, because this study was exploratory, it included many variables of interest: Facebook, Twitter,
YouTube, and blogs. A more expansive sample size can allow a study to focus on one online media platform to uncover more specific results.

**Recommendations for Further Study**

This study was exploratory in nature, and the results suggest that there is value in studying the topic further. The data indicates that there may be intermedia agenda-setting for articles on climate change, but a future study can build upon this to prove whether there is a cause and effect relationship between online and traditional media. Twitter and blogs had the highest occurrences in the study, indicating that future studies should focus on one of these online platforms to gain specific insights.

Intermedia agenda-setting and online media in general should be studied further. This study focused on climate change, but there are other topics and issues that can be applicable. One recommendation is to study politics or an election season to discover if people using blogs or social media influence what traditional news media report on. Gaining knowledge of online media’s potential to influence the way traditional news media reports on issues is essential to understanding how journalism is evolving in the technology age.

**Conclusions**

The objective of the study was to learn about how climate change is reported on through the theory of intermedia agenda-setting. While there was not a high percentage of traditional news articles that contained references to online media, the articles that did contain online references suggest intermedia agenda-setting. In some instances, the tweet or the blog was the main subject of the article. Other cases proved that some quotes used in articles come directly from content published on Twitter, YouTube, or a blog. Additionally, photos on Twitter that were posted by citizens and organizations were used in the articles. These instances point to
intermedia agenda-setting because traditional news articles relied on online media to build or support the story. Consequently, there is reason to believe that online media might help climate change remain in the news agenda. In this study, communication about climate change online appears to impact how mainstream media reports on the topic. The articles in the study that relied heavily on blogs or social media may indicate that online media contributed to keeping climate change in the news agenda. This is because without the online media content, the traditional news articles may not have been written. The strongest examples of this were the articles about how public figures used Twitter to discuss climate change. Another notable example was when the title of the article was virtually identical to the tweet about the floods in Texas.

Climate change is an ongoing issue that will continue to remain in the mainstream media’s agenda because it is a threat to the planet. The problem is that the effects of climate change are not always newsworthy if they are not directly impacting lives through events or new discoveries. This study found that online media content on climate change is valuable and useful for journalists to use. It can be used to locate sources, images, facts, and quotes. Because it is used within traditional news articles, there is some indication that online activity about climate change contributes to keeping it a part of the traditional news media’s agenda. This is because journalists can find enough information to be inspired to write and build a story using information they found online. This study shows that organizations and people, who use blogs or social media to share information, can influence traditional news articles on climate change. This study is important because it has wider implications for how people and organizations can utilize online platforms to spread their message, which can influence what the traditional news agenda is.
References


Appendix

Coding Sheet

USA TODAY _____  CNN _____  Date of article ___________  Coder # _______

Name of Article: ____________________________________________

No Reference to Blogs or Social Media: __________

<table>
<thead>
<tr>
<th>Social Media</th>
<th>Blogs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facebook</td>
<td>Blog as source</td>
</tr>
<tr>
<td>Twitter</td>
<td>Blog quoted</td>
</tr>
<tr>
<td>YouTube</td>
<td>Author</td>
</tr>
</tbody>
</table>
MENTOR AGREEMENT (To be submitted with Thesis or Project Proposal)

Mentoring: A deliberate pairing of a more skilled or experienced person with a lesser skilled or experienced one, with the agreed-upon goal of having the lesser skilled person grow and develop specific competencies.

You have been asked to serve as a Mentor for Jennifer Davis, who is completing the requirements for her/his Masters Degree in Communication and Leadership Studies. As a mentor you are asked to share ideas with this student and read the next to final draft of their thesis. You are not expected to directly supervise this student’s work but rather meet with them as a “young colleague.” If you are willing to serve as a Mentor for him/her, please sign this agreement.

I am willing to serve as a Mentor for Jennifer Davis as she/he completes her/his thesis or project. As a Mentor I will provide help in the way of suggestions, ideas and resources and am willing to review drafts of their written work. I also agree to read the next to last draft of the student’s thesis or project and will sign my name on the signature page of their final draft. My signature on the thesis only indicates that I have read it and is no indication of the quality of the work. I will not be asked to assign a grade or make any evaluative comments to the course convener.

Signature

Title

Email and telephone number

Date