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Title of Thesis:	Contesting the Future: Media Convergence and Contentious Stakeholder Frames on Net Neutrality
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Abstract

The proliferation of the internet as an innovative communication technology has brought into question several assumptions of traditional media theory. This thesis critically evaluated the assumptions of the cascading activation model of framing through application of the theory to the debate surrounding the issue of net neutrality. A mixed method approach which combined manual frame analysis and computer-assisted frame mapping enabled a multi-stage analysis of the messages conveyed by elite stakeholders, news media, and members of the public. Analysis of these messages resulted in the identification of two main framing groups, *Team Internet* and *Team ISP*, which each conveyed distinctive frames. Differences in power, strategy, motivation, and cultural congruence were important in determining the outcomes of the frame contest between Team Internet and Team ISP. Team Internet was motivated by a desire to protect the public good and conveyed more culturally congruent frames by utilizing superior strategy despite possessing less power than Team ISP. Team ISP, motivated by financial self-interest, enacted poor strategy which left a power vacuum which was able to be filled by Team Internet. The analysis of the framing process in the case of net neutrality suggested a need for changes in the theoretical assumptions regarding the role of the news media as well as the assumed stratification among elite stakeholders, news media, and members of the public.

The Graduate Committee has reviewed the thesis of the above named student and participated in the oral defense. The committee finds:

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Contesting the Future: Media Convergence and Contentious Stakeholder Frames on Net Neutrality

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Abstract

The proliferation of the internet as an innovative communication technology has brought into question several assumptions of traditional media theory. This thesis critically evaluated the assumptions of the cascading activation model of framing through application of the theory to the debate surrounding the issue of net neutrality. A mixed method approach which combined manual frame analysis and computer-assisted frame mapping enabled a multi-stage analysis of the messages conveyed by elite stakeholders, news media, and members of the public. Analysis of these messages resulted in the identification of two main framing groups, *Team Internet* and *Team ISP*, which each conveyed distinctive frames. Differences in power, strategy, motivation, and cultural congruence were important in determining the outcomes of the frame contest between Team Internet and Team ISP. Team Internet was motivated by a desire to protect the public good and conveyed more culturally congruent frames by utilizing superior strategy despite possessing less power than Team ISP. Team ISP, motivated by financial self-interest, enacted poor strategy which left a power vacuum which was able to be filled by Team Internet. The analysis of the framing process in the case of net neutrality suggested a need for changes in the theoretical assumptions regarding the role of the news media as well as the assumed stratification among elite stakeholders, news media, and members of the public.

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Introduction

On June 1st 2014 John Oliver compared Tom Wheeler, Chairman of the FCC and former cable industry lobbyist, to a dingo serving as a babysitter then framed net neutrality in terms of "preventing cable company fuckery" (*Last Week Tonight*, 2014). Oliver called his audience to action by urging viewers to write to the FCC using the comment function available on FCC.gov. Oliver states "for once in your lives, focus your indiscriminant rage in a useful direction (2014)." By the next day, the FCC website was overwhelmed by traffic and crashed. Following these events, the FCC extended the deadline for comment submission.

While such events cannot be entirely attributed to the John Oliver segment, they do illustrate the potential for media institutions to stimulate interest, influence debate, and inspire action with respect to public policy issues. Although seemingly successful in bringing attention to an otherwise uninteresting issue of public policy, Oliver's segment distorted and polarized the debate by conveying and highlighting a single viewpoint. While this appears to have had meaningful influence, it is important to note that net neutrality is a complex issue with a number of differing perspectives as well as interests at stake.

Background

The term net neutrality refers to the concept that all information traveling through a network should be treated equally regardless of source, destination, application, or content. The origination of the term is often attributed to Wu (2003) who defines a neutral network as "an Internet that does not favor one application (say, the World Wide Web), over others (say, email)" (p. 45). While net neutrality may appear to be a common sense rule, the issue is complicated by the technical complexity of the internet as a communication technology, the social and economic interests involved, and the changing state of telecommunication regulation in the United States.

Experts, public officials, lobbyists, consumer advocacy groups, and members of the public have all voiced perspectives on net neutrality. These stakeholders, segments of the population holding competing interests, have something to gain or lose with respect to policy outcomes. The perspectives conveyed by these groups, as well as those of news media, compete for public attention and support. Together, these various perspectives, developed and conveyed through the framing process by competing interests, constitute the net neutrality debate.

Stakeholders frame information about relevant policy issues in a way that supports their preferred policy outcome. Framing is the process by which some aspects of a perceived reality are selected and "made 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). Stakeholders, then, select and highlight the aspects of an issue that support their desired outcomes while downplaying or excluding those that do not. Certain stakeholders possess greater economic means and/or social status and thus have an advantage in communicating their frames to others. These elite stakeholders, such as public officials, lobbyists, consumer advocacy groups, and experts, are key players in policy debates.

The debate surrounding net neutrality involves multiple contentious stakeholders vying for support of their respective positions. ISPs, internet content/application companies, and end-users all have interests at stake in the regulatory policy outcomes of the debate. Each of these stakeholders has conveyed their perspective through a variety of channels. Compared to other issues of public policy, net neutrality is of interest due to the large amount of direct public involvement through the comments on the FCC website despite the relative lack of traditional

news media coverage. These circumstances provide a unique opportunity for investigation of frame contests between elite stakeholders, the news media, and members of the public.

Rationale

The debate, or frame contest, surrounding net neutrality is best understood in terms of change and resistance to it. Several key changes occurring concurrently produce circumstances under which an "information revolution" (Fang, 1996) can occur. Changes in available communication technology, changes in the contemporary business models, and changes in regulatory policy all interact, impacting the roles of legacy social institutions as well as the way individuals interact with cultural content and one another. This public policy debate is about change as well as a result of it.

The news media are an exemplar of a social institution with an evolving role in the U.S. A major function often attributed to journalism has been that of a "watchdog," critiquing the dominant institutions of society. Journalism, as one role of the media institution, is practiced through a balance between the competing interests among the business aspect of the news media, the professional standards of journalists, and the watchdog function said to be performed. Conflict sometimes emerges between these elements, which can influence coverage of certain issues. Factors such as ownership, journalistic function and motivations, and government intervention have influenced the development and evolution of the news media as a social institution within the U.S.[1] Information revolutions occurring during the adoption of new communication technologies influence the evolving role of social institutions such as the news media as well as others such as regulatory agencies.

Through the Communications Act of 1934, Congress chartered the FCC for the purpose of protecting and enforcing the public good as it relates to communication services. This

[1] Starr (2005) and Sloan (1991) offer historical discussions of the development of the news media.

legislation codified the regulatory power and legal authority of the FCC for protection of public interest, convenience, and necessity. The Telecommunication Act of 1996 updated the previous law and exemplifies the deregulatory shift in telecommunication policy that started in the late 1970s. This shift maintains the claim of protecting public interest while suggesting free market forces of competition are more effective than government regulation and justify the forbearance of much of the FCC's regulatory power.

As the news media are a ubiquitous social institution in the U.S, scholars have developed numerous theories for their study. Framing is one commonly used theory for examination of the news media. Myriad formulations of framing theory have been developed, however these formations focus primarily on legacy media institutions. While hyperbolic at best, the common assertion that the internet "changed everything" brings into question the assumptions of traditional media theories such as framing about the role and motivations of the news media. These changes, taken together with changes in the relationships between the public and cultural content, beg for a critical review of the situation.

Purpose

This study examines the flow of public policy information through contemporary communication networks. Specifically it examines messages containing perspectives on net neutrality as presented through various channels by elite stakeholders, news media, and members of the public using framing processes.

This examination serves multiple purposes. First, assessing framing as a methodological tool for investigating news media this research assists future researchers in choosing effective tools when investigating contemporary issues. In addition, identifying and describing the competing net neutrality frames leads to a greater understanding of the power, strategy, and

motivations of the stakeholders involved as well as the cultural congruence of the frames themselves.

Overall, mapping these frames allows for a detailed understanding of the net neutrality debate, the policy outcomes at stake through the debate, as well as the relevance of contemporary framing theory in a changing media environment. Through critical investigation the researcher hopes to improve framing theory and promote a holistic understanding of the perspectives and circumstances surrounding the net neutrality debate.

Organization of Study

The thesis presents an overview of the research topic and consists of five parts: the literature review, method, results, discussion, and conclusion.

Chapter one: The literature review explores the main themes of the study. Relevant historical context during the development over time of the internet as communication tool well as the associated telecommunication policies in the U.S. are discussed. This chapter also includes background information related to the development of net neutrality as a topic in the U.S. policy agenda. In addition to this issue focused information, an overview of contemporary news media related theories is included. This review focuses primarily on framing theory with brief comparisons to the related theories of agenda-setting and priming.

Chapter two: The second chapter outlines the research purpose, the methodology, and the procedures used in the study. Framing theory is used to critically investigate the process by which contentious stakeholders compete for public support of their respective interests. Frames conveyed to the FCC by members of the public are manually coded and discussed in context and frames conveyed through texts by elite stakeholders and the media are parsed and compared through a computer-assisted content analysis approach known as frame mapping.

Chapter three: The third chapter presents the frames extracted from the text. This chapter informs the reader of the various frames conveyed by each of the elite stakeholder groups, the news media, as well as members of the public through the chosen texts.

Chapter four: The fourth chapter informs the reader of the researcher's interpretation of the results in fulfilment of the purposes of the research.

Chapter five: The fifth chapter provides a general summary of the research focusing on the findings, describes the limitations of the study, and provides suggestions and directions for future researchers.

Literature Review

Key background information is necessary for a thorough understanding of net neutrality as an issue and the frames analyzed though this research. The following examination of literature focuses on concepts and terminology related to internet technology, changes that occur through the diffusion of new communication technologies, the events related to the internet's development, key telecommunication and internet regulations with historical context, as well as pertinent literature related to framing theory. Prior framing research informs the procedures of the study by providing a framework for understanding the process by which elite stakeholders, news media, and members of the public communicate and understand information about public policy in the case of net neutrality.

Information Revolutions

Communication is a vital part of daily human life. Contemporary society developed into its current form due to language and the ability for humans to communicate. The very nature of abstract thought depends on the available means of communication. In order to understand these processes communication scholars study the ways in which humans use symbols to create, send, receive, and respond to messages in a variety of contexts using oral, written, visual, or mediated channels. Scholars are concerned with following questions: Who? Says what? In which channel? To whom? With what effect? (Lasswell, 1948). The available communication technologies as well as the related social forces at work are also important to consider when researching communication.

Both in the past and at present, various communication technologies have provided the channels required for the communication process to occur. The invention of language first orally, then written, provided the foundation upon which later mass media could be built. Fang (1997)

identifies six changes in communication technologies, information revolutions, which played a role in “creating a qualitative difference in society” which “lead toward an equalizing of the status of members of society” (p. xvii). Starr (2004) suggests that these “radical changes in the framework of communication, whether precipitated by technology, politics, cultural shifts, or other causes” (p. 4) help to instigate these revolutions and affect the constitutive choices made during the diffusion of innovative communication technology.

Fang (1997) defines information revolutions as “profound changes involving new means of communication that permanently affect entire societies, changes that have shaken political structures and influenced economic development, communal activity, and personal behavior” (p. xvi). While innovations in communication technology enable the occurrence an information revolution and the subsequent outcomes, they do not automatically incite one; other factors are involved.

A convergence of political, social, economic, and/or technological factors are required for an information revolution to occur. Fang (1997) explains, “inventions by themselves do not change society. When people want change enough to take action, an invention helps” and that “one or more new communication technologies arriving in the midst of social change can lead to an information revolution that adds to the turmoil and, more importantly, leaves permanent marks on the society” (p. xvi).

Starr (2004) refers to these permanent marks on society as “constitutive choices” which develop into more elaborate systems that once started in a particular direction strongly favor continuing in that direction (p. 4). Starr states that “mechanisms of entrenchment such as constitutions, laws and regulations as well as private organizations with a vested interest in their perpetuation, make it difficult to change these decisions” (p. 4). Information revolutions, then,

occur during periods of time in which there exists a desire for change and an innovation is present that has the potential to enable change. These changes have long-lasting effects on the society in which they take place.

While occurring during time periods with differing social, political, and technological environments, each information revolution tends to share certain characteristics with the others (Fang, 1997). Each information revolution shares similar antecedent conditions, is based upon a convergence of the invention of various communication tools, and produces similar outcomes.

Information revolutions share antecedent conditions. They tend to occur "where change of a different sort was stirring the society and where a social structure existed that enabled change to occur" (Fang, 1997, p. xviii). A convergence in the invention of communication tools is also a shared condition. The communication tools involved in respective information revolutions share certain characteristics.

Each communication tool has one or more hardware components and at least one software component. Once adopted, they tend to become more complex but easier to manage. In addition, they typically become cheaper, smaller, and more efficient. The adoption of a new communication technology displaces an older technology that was previously thought to be sufficient; the new tool extends the ability to communicate in some ways, but misses out on some of the value offered by the displaced communication tool.

The communication tools continue to evolve throughout the revolution. Marketing considerations shape the communication tool in order to meet the users' needs. The tools diffuse first to elites then by them allowing access to those who wish it. As the technology diffuses, new literacies and new experts develop to accommodate the technology. While communication

technology evolves, people's tastes and interests in communication content remain the same. As Fang (1997) puts it "The old wine is poured into the new bottles" (p. xix).

Information revolutions also share characteristics in terms of outcomes. They tend to lead to a "greater degree of democratization or sharing of influence than previously existed" (Fang, 1997, p. xix). The need for physical transportation of information is reduced as new technology is adopted. Fang states that as an information revolution runs its course content broadens; "more producers sen[d] a greater amount of information on a greater variety of subjects over more channels to more and more receivers (p. xviii). These changes lead toward a "greater sharing and more specialization of knowledge than previously existed" as well as "an overloading of information and to an increase in misinformation" (p. xviii).

Changes resulting from information revolutions occur with opposition as there are those who, for political or financial reasons, oppose the changes as they would need to surrender a share of their influence and power. These stakeholders respond by using the new technology themselves or trying to control its use by others.

The overall trend is that advances in communication tools during times of social change lead to a revolution in the way society communicates. The potential for social protest increases as the tools for communication proliferate. If these tools are constrained however, perhaps due to monopolistic control or overregulation, this revolutionary potential can be stifled.

The Network Layers

The internet is a major component of the sixth information revolution which Fang (1997) refers to as "The Highway." It may seem redundant to define the internet due to its ubiquity; however, the specific terminology used to describe its operation may not be as well-known or understood. For example, one may understand how to post photos to Facebook without

understanding the intricacies occurring behind the scenes of this seemingly simple action. Guadamuz (2011) provides a concise description of the internet stating “in its most basic form, the internet is a communications network made up of hardware and software which connects computers that fall under two types, hosts and routers (p. 71).” Hosts are basically any computer that acts as the source or destination for a packet of information. Routers are the computers in between that simply relay the data forward.

It is also important to understand that the internet operates as a network of networks. It consists of many sub-networks known as autonomous systems which are connected, through gateways, to the global infrastructure using standard protocols (Guadamuz, 2011). For example, an internet connected organization such as a university has their own Local Area Network (LAN) which consists of the computers in the computer labs, libraries, offices, as well as users connected via Wi-Fi. This autonomous system is then connected to the internet at large through a gateway, typically an Internet Service Provider (ISP).

Internet engineers created open standards for network communication, the “network layers model,” in order to more easily discuss different aspects of network communication and internet operation. This has since evolved into a framework for discussing public policy issues such as content control, user access, etc. There are several variations on the network layers model with numbers of layers ranging from three to seven (e.g. Zimmerman; 1980). With respect to discussion of internet policy issues, a four layer model is typically recommended (McTaggart, 2003; Whitt, 2004). While the specific number and names of the layers varies from model to model, the overall conceptualization of the layers remains similar. Whitt (2004) suggests a model based on Solum’s “layers principle” which consists of the physical, logical, application, and

content layers.[2] This framework helps to expound upon the intricacies of internet regulation and clarify the role of each component layer and the consequences of their regulation.

The physical and logical layers together comprise the lower network layers. The physical layer is the lowest network layer in the model. It consists of the copper wire, fiber-optic cables, satellite links, etc. and other infrastructure used to transfer data over the internet.[3] The logical layer consists of the various protocols which break data into packets, handle the flow of data over the network, and interface between users' computers and the physical layer. The development and ownership of these layers, with historical context, are important in understanding net neutrality.

The upper levels of the network layers model consist of the content and application layers. The content layer consists of the data that is transported through the internet such as text, images, movies, and music. The application layer is made up of protocols that handle the details of a particular application such as HTTP for Web communication, SMTP for email, and FTP for file transfers (Solum & Chung, 2003).

Development of the Physical and Logical Layers

One of the most important yet often ignored pieces of information about the internet is that researchers funded by the U.S. military conceived of and developed much of the technology. Tim Berners-Lee and Robert Caillau are often mistakenly attributed with the invention of the internet in 1990 with their research at CERN (Guadamuz, 2013). However, what these researchers actually proposed is a protocol which would eventually be used for a specific application of the internet: the World Wide Web (Berners-Lee & Cailliau, 1990). The internet

[2] Solum & Chung (2003) offer an in-depth discussion of the network layers.
[3] Starosielski (2014) provides further information on internet infrastructure.

itself was developed in a piecemeal fashion; researchers developed the various protocols and infrastructure behind the internet semi-independently and, in some cases, redundantly.

A concept very similar in spirit to what is now known as the internet was envisioned by J.C.R Licklider as the “galactic network” at MIT in 1962 which referred to a “globally interconnected set of computers through which everyone could quickly access data and programs from any site” (Leiner et al., 2009, p. 2). While merely a conceptual vision, the galactic network offered a glimpse of things to come.

The origins of the technology behind the internet can be traced back to research during the cold war. During this time period, there was concern about the U.S. communication infrastructure being unreliable in the event of Soviet nuclear attack. Traditional communication networks (telephone systems) had command and control points at their center in a hub and spoke design which left them vulnerable to disruption in the event of a nuclear attack (Ryan, 2010). Under this design, messages needed to be transferred in their entirety and relied upon an expensive centralized system operating pre-defined routes from the sender through central hubs to the receiver.

Baran (1964), a researcher at the RAND Corporation, developed a packet switching technique which would allow for a message to be broken into smaller parts to be sent independently of one another which removed the need for a central hub to route the message. Baran’s distributed network of low cost and redundant relays would monitor transfer time between network nodes and choose the most efficient route for the transfer which allowed for the system to bypass damaged nodes (Ryan, 2010). The packet switching method would require a large number of nodes to operate between the sender and the receiver of the message. Due to the

limits of analog technology, this many switches would result in significant signal degradation. AT&T was contacted to test the concept, but there was difficulty in acquiring their assistance.

The concept of a distributed network conflicted with AT&T's interests. Owning a centralized analog communication system offered AT&T tremendous power and control. This digital distributed network of communication threatened market share. According to Ryan (2010) one AT&T official stated "Damn it, we're not going to set up a competitor to ourselves." The technology was shelved. Other researchers[4] developed similar theories independently during the same time period (Leiner et al., 2009). One of these theories would be used in the development of ARPANET.

In 1962, academic institutions supported by military funds for research, implemented ARPANET, the direct predecessor to the internet (Guadamuz, 2011). There is a myth that ARPANET was constructed to protect the U.S. against nuclear attack which is false (*Inside the Internet*, 1997). This confusion may be due to the simultaneous development of packet switching theories. Baran's theory, which was intended for this purpose, was not used in ARPANET. Instead, ARPANET made use of Kleinrock's (1961; 1964) packet switching theory. ARPANET began small, consisting as a network of computers between four academic institutions: UCLA, Stanford Research Institute, UC Santa Barbara, and the University of Utah (Leiner et al., 2009).

APRANET was not a truly distributed network at this point. Only those with academic and/or military ties had access the network. Due to these access restrictions another network, Usenet, arose using the Unix-to-Unix Copy Protocol (UUCP) to connect computers through home-made dial-up modems (*Inside the Internet*, 1997). While some of the computers on Usenet were also part of ARPANET, Usenet was its own network; the two were not directly linked.

[4] Kleinrock (1961;1964) and Davies, Bartlett, Scantlebury, and Wilkinson (1967) developed digital networking theories independently.

Many organizations took interest in networking technology and its many uses. Organizations such as the U.S Department of Energy, and NASA purpose built independent computer networks (Leiner et al., 2009). The National Science Foundation, for example, funded the creation of NSFNET in order to serve the higher education community regardless of discipline (Leiner et al., 2009). These myriad networks were not necessarily compatible with one another, however. A new protocol needed to be developed before the "network of networks" known as the internet would emerge.

Throughout the 70s and early 80s ARPANET continued to grow and increase in complexity. Additional problems arose due to this growth, chief of which was the need for a standard set of protocols to allow communication between the varied networks. The initial ARPANET host-to-host protocol was called the Network Control Protocol (NCP) and was implemented during the period of 1971-1972 (Leiner et al., 2009). This protocol was limited in scope and capabilities. New protocols, the Transmission Control Protocol (TCP) and Internet Protocol (IP), part of the internet suite[5] were developed. TCP/IP officially replaced NCP on ARPANET in 1983 (Leiner et al., 2009). The NSF mandated that NSFNET also adopt TCP/IP. The adoption of these standardized protocols allowed for interconnection between networks.

Network interconnection allowed federal agencies to share the maintenance costs of common infrastructure and several agreements were made and coordinated through a Federal Networking Council (Leiner et al., 2009). In order to lower subscription costs, the NSF encouraged regional networks of NSFNET to seek commercial customers. The national portion of the network, the backbone was still governed by the acceptable use policy of the NSF which prohibited use that was not in support of research and education (Leiner et al., 2009). Private long haul network infrastructure was then constructed to support commercial traffic at the

[5] Kahn and Cerf (1974) detail these protocols.

national scale. A private internet continued to grow as ARPANET was decommissioned in 1990 and the NSF defunded their backbone in 1995 (Leiner et al., 2009). Through these developments, the internet had become privatized, with corporate ownership and control and access limited to the technologically proficient.

Controlling the Net

Control of the media and communication networks has been an ongoing concern between public and private systems. As the internet has transformed from a publicly owned and operated communication network for researchers and government employees to a privately owned and operated communication network for anyone willing to pay for access, various regulations have been implemented to ensure that the network continues to operate for the public good. Starr highlights this idea, stating "the government's role in the development of the Internet is only the latest example of policies that have not only restrained the power of the state but also made positive use of it to promote communications – and ended up, albeit without an deliberate plan in this and other instances, generating new economic and social possibilities" (2004, p. 3).

The privatization of the internet reduced access restrictions and enabled more widespread adoption of the technology by private businesses as well as the public, likely enabling the subsequent information revolution. During this period constitutive choices were made regarding the internet's relationship to existing communication technologies. Several of these choices were aimed at the upper network layers and were related specifically to content and applications that were deemed problematic by dominant social institutions.

Early internet regulation was concerned primarily with access to problematic content. Digital "piracy" as well as the potential access of "indecent" material by minors was an initial

focus. In addition to the content itself, applications that enabled access to content were also of concern.

During the advent of the internet in the early 1990s, only a handful of major music labels had virtually total control over the distribution of music, were well-connected to officials in Congress, and had no interest in changing the status quo (Goldsmith & Wu, 2006, p. 106). New developments in technology such as the internet and music compression algorithms such as mp3 presented obstacles in maintaining this control over distribution. The raw audio stored on a CD is fairly large and requires significant hard drive space to store and bandwidth to transmit. Audio compression codecs allowed for these file sizes to be decreased dramatically with a debatably minor loss in fidelity.[6] Using this compression allowed for the audio contents of CDs to be copied, stored, and played without the need to possess the original.

The internet of the 1990s was based primarily upon appropriation of legacy infrastructure. Dial-up modems leveraged the telephone infrastructure in order to form the first wave of the net. Moving into the 2000s however, broadband services became increasingly more common. These services offered much higher transfer speeds and enabled more and higher quality content to be exchanged. Tandem advances in compression algorithms and network infrastructure improved the ease of transmission of high-quality multimedia content.

The internet also offered new applications for distribution of content. While FTP and other similar protocols had already existed, a college student named Shawn Fanning wrote a program that made the process of peer-to-peer distribution of these files simple for the end-user (Goldsmith & Wu, 2006, p. 107). This program, dubbed Napster, allowed users to access a centralized database of music that users could browse and download free of charge. This presented a significant threat to recording industry control over content distribution.

[6] Sterne (2006; 2013) offers a detailed discussion of audio compression technologies.

Congress implemented the Digital Millennium Copyright Act (DMCA) in October of 1998 which included many provisions for the management and enforcement of copyright protections with certain exemptions from liability for service providers. This legislation contains significant regulatory power over internet content.

In December of 1999, the industry filed suit against Napster which was found to be a contributory infringer under DMCA and ordered to shut down (Goldsmith & Wu, 2006). Due to the centralized database and servers involved in the operation of Napster and the fact that they operated within U.S borders, the order was easily enforced.

Later programs would emerge that offered a similar experience to Napster without the centralized database. These programs such as Grokster and Kazaa allowed users to interface with other users directly and attempted to bypass the contributory infringement charge that was used to shut-down Napster. By remaining decentralized, it was also possible to avoid certain types of government control. More recently new bills[7] have come to Congress attempting to solve copyright infringement with many potential side effects.

Piracy has not been the only content layer concern that has led to regulation. Concerns over children gaining access to indecent materials through the internet have also lead to regulatory attempts such as the Communication Decency Act of 1996 which offered a vague definition of indecency and threatened punishment for offering this content in way that it could be obtained by someone under the age of 18 (Goldsmith & Wu, 2006). Consistent with a common theme among regulations aimed at control of media content, this law was challenged on the basis of free speech. On June 26 1997, the Supreme Court found the act to be an unconstitutional violation of the First Amendment (2006).

[7] For example, the Electronic Frontier Foundation (n.d) discusses the failed SOPA/PIPA regulations.

In addition to issues of problematic content and applications, concerns over ownership of the logical and physical layers as related to the public good were salient during the proliferation of the internet. These concerns were addressed primarily through the FCC's update of existing telecommunications regulations. Since the privatization of the internet in the 1990s and the implementation of various related public policies, there have been several key developments which have led to concerns over net neutrality and internet regulation. In addition, a change in the business model on the side of the application and content companies had not been embraced by traditional media companies that "coincidentally" own large portions of the physical layer and are thus able to influence other layers.

The debate surrounding net neutrality is ongoing and has been intensifying for some time. Evolving attitudes toward the role of the FCC in regulating telecommunication services, evolving business practices of internet companies, as well as evolving relationship between members of the public and the content with which they interact are precursors to the debate over net neutrality.

From the establishment of the FCC through the Communications Act of 1934 to the update in 1996 with the Telecommunications Act and beyond, there has been a shift in ideology for the role of the FCC. The FCC was established initially:

> For the purpose of regulating interstate and foreign commerce in communication by wire and radio so as to make available, so far as possible, to all the people of the United States, without discrimination on the basis of race, color, religion, national origin, or sex, a rapid, efficient, Nationwide, and world-wide wire and radio communication service with adequate facilities at reasonable charges, for the purpose of the national defense, for the purpose of promoting safety of life and property through the use of wire and radio

> communication, and for the purpose of securing a more effective execution of this policy by centralizing authority heretofore granted by law to several agencies and by granting additional authority with respect to interstate and foreign commerce in wire and radio communication, there is hereby created a commission to be known as the "Federal Communications Commission," which shall be constituted as hereinafter provided, and which shall execute and enforce the provisions of this Act (Communications Act of 1934).

This act clearly established the FCC to protect and enforce the public good as it relates to communication services. It codified into law the FCC's power and legal authority in developing and enforcing regulations needed for protection of *public interest, convenience, and necessity*.

The 1996 update exemplifies a shift in public policy rationale that started in the late 1970s. The stated role of the FCC is: to promote competition and reduce regulation in order to secure lower prices and higher quality services for American telecommunications consumers and encourage the rapid deployment of new telecommunications technologies (Telecommunications Act of 1996). The act maintains the FCC's role of protecting public interests while suggesting that free market forces such as competition are effective enough justify the forbearance of some of the FCC's regulatory power. In addition to the forbearance of FCC regulatory power, the act prevents enforcement of these provisions at the state level.

As can be seen, the regulatory environment has been in flux since the establishment of the FCC. Even after the changes codified in the 1996 act, the deregulation trend has continued with respect to the classification of the internet. The internet was initially regulated similarly to telephone, as a common carrier. "The term 'common carrier' or 'carrier' means any person engaged as a common carrier for hire, in interstate or foreign communication by wire or radio or

in interstate or foreign radio transmission of energy" (Communications Act of 1934). This classification carries specific requirements which are salient to the discussion of net neutrality:

> It shall be unlawful for any common carrier to make any unjust or unreasonable discrimination in charges, practices, classifications, regulations, facilities, or services for or in connection with like communication service, directly or indirectly, by any means or device, or to make or give any undue or unreasonable preference or advantage to any particular person, class of persons, or locality, or to subject any particular person, class of persons, or locality to any undue or unreasonable prejudice or disadvantage (Communications Act of 1934).

In 2002, the FCC reclassified the broadband internet as an 'information service.' This reclassification removed many of the protections offered by the previous common carrier classification. An information service is defined as:

> The offering of a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications, and includes electronic publishing, but does not include any use of any such capability for the management, control, or operation of a telecommunications system or the management of a telecommunications service (Telecommunications Act of 1996).

This change in classification set off a series of legal battles between the FCC and various stakeholders over proposed questionable activities by ISPs and the resulting policy changes recommended by the FCC.[8]

In addition to these legal battles, extensive debate has occurred over net neutrality among experts of various fields; each offering their own perspectives on the issue in meetings with rule-makers. Economists, network engineers, legal scholars, and other experts of various specialties

[8] Comcast v. FCC (2010) and Verizon v. FCC (2014) are the two most significant cases.

have offered value laden frames on the issue.[9] The legal battles over Section 706 authority, open internet rules, along with the expert perspectives offered on the issue have informed the current focus on Title II and Common Carrier reclassification. These battles informed and defined the terms of the frame contest under investigation.

In addition to these regulatory measures, many early constitutive choices impacted the diffusion of the internet as an innovative communication technology. Changes in business practices and the way the public interacts with content resulted from the proliferation of the internet.

Web 2.0 and Media Convergence

Web 2.0, a term first popularized by Doherty in 2004, signaled a change in the web. Release 1.0 had been revolutionary but limited, allowing users to view what others had put on the Web, but early sites were simply another way to broadcast information to an audience (Ryan, 2010, p. 137). Web 2.0 has been referred to as a meaningless buzzword, but the basic assumptions behind the concept provide insight into the business models adopted by web companies following the dotcom crash in 2001. O'Reily (2005) identifies several key ideas wrapped up in the term suggesting that web 2.0 companies offer scalable services to which users add value as a side effect of ordinary application use. A social media platform such as Facebook, for example, aggregates user data and offers marketers and others the ability to target very specific demographics with their messages. Through regular use of the application users provide demographic information, information about what they like, etc. Applications such as these are improved as their user base grows[10].

[9] Cheng, Fleischmann, Wang, & Oard (2012) discuss several of these frames from both perspectives.
[10] O'Reilly and Battelle (2009) updated and expanded the web 2.0 concept.

Coinciding with the way tech companies operate is a shift in the way users interact with the media. O'Reilly (2005) describes a shift in the way businesses develop applications that use the internet while others describe differences in the way users interact with content. Social media (starting with Friendster, then Myspace, now Facebook, Twitter, Reddit, Tumblr, etc.) have enabled a shift from one-way communication to a two-way model through which the internet users have become more than mere consumers of content. Rather than viewers of the media, passive audiences, the public has become users of the media by producing original content.

Jenkins (2006) describes a convergence in which multiple media systems coexist and media content flows fluidly across them. This convergence falls at the interstices between old and new media and the migration of media audiences between platforms in search of their desired entertainment experiences (p. 282). Convergence culture involves three related concepts: media convergence, participatory culture, and collective intelligence. Jenkins refers to collective intelligence as a new form of power exercised by virtual communities through collaboration and deliberation on a large-scale leveraging the various knowledge and expertise of their members (p. 280). Jenkins also discusses a participatory "culture in which fans and other consumers are invited to actively participate in the creation and circulation of new content" (p. 290)" Not only can users leverage their collective intelligence to analyze and predict the outcomes of shows[11], they remix media objects to create their own[12]. Through web 2.0 data analytics, this user-generated content can be narrow-cast to interested individuals through applications such as YouTube rather than created for mass consumption by the mainstream through traditional media channels.

[11] See Jenkins (2006), especially Chapter 1 (p. 25-57), for an example of this use of collective intelligence.
[12] Lessig (2008) discusses this remix culture and its relation to copyright policy.

It is important to note that user-generated content has not entirely usurped the mainstream media. Much of the content of early YouTube was produced by the mainstream media industry and uploaded, usually without permission, by individual users (Ryan, 2010). Streaming services such as Netflix and Hulu which distribute mainstream content have become ubiquitous. Web 2.0 applications, however, have offered an alternative medium through which the voice of members of the public can be heard.

As can be seen, there has been a convergence as the old media have attempted to withstand the shift in business paradigm to web 2.0. Users are able to seek their desired content wherever available and/or create their own. Advances in the hardware and the software of the internet and web have made possible this shift in the relationship between businesses and users as well as the public and media objects. Web 2.0 platforms provide the capability of interacting with traditionally produced content and content creators as well as the ability to leverage collective intelligence to remix existing content and create new content. Simultaneous increases in the efficiency of the network infrastructure as well as compression of the content to be transmitted multiplied the overall efficiency of content distribution over the internet. These advances likely extend beyond entertainment purposes into the realm of public debate.

It is clear that the advent of the internet enabled an information revolution. Whether that revolution is still in motion during the web 2.0 era of media convergence or a new revolution is occurring is debatable. Using the shared criteria for information revolutions described by Fang as a template, it could be argued that web 2.0 and media convergence are an expansion of the highway rather than a discrete revolution. It could also be argued that in the same way that the printing press helped literacy and the written proliferate, so too did this diffuse the internet to the masses. The outcome of such a debate, however, is not particularly relevant for the purposes of

this research. Clearly change is occurring and the constitutive choices made in the midst of these changes, especially with respect to the net neutrality debate and the related areas of privacy, intellectual property, and freedom of speech, have the potential to impact the public good both in the U.S. and globally. While the internet has truly been revolutionary, it is but one of several communication tools to have encouraged and enabled radical change.

Radical change does not occur without opposition, however. Control of end-user access to the internet holds the potential to undermine progress and innovation in these areas. As legacy media conglomerates lobby to protect their current financial interests and web 2.0 innovators push for a new business model, the “public good” is caught in the crossfire. The question that remains, however, is how and to what extent these innovations have impacted the power structure and control over media messages.

The traditional role of the FCC is to protect public interest, convenience, and necessity. Enforcement of the principles of net neutrality presumably falls within this role. Reclassification of broadband internet as a Title II service would return to the FCC the legal authority disputed against Section 706 of the Telecommunications Act and allow for broadband regulation and enforcement of net neutrality.

Media theories help researchers to understand the way information is assumed to spread among various stakeholders, the media, and members of the public. An understanding of these theories, specifically the framing process, is necessary in understanding the debate surrounding net neutrality and its outcomes.

There are a variety of theoretical approaches that can help us to understand news media effects in general as well as the net neutrality debate in particular. These theories are compared

generally and narrowed to provide the theoretical lens used to inform the methodological procedures.

Traditional Media Theory

Communication is a diverse academic discipline; numerous, and often contradictory, theories are used to study a variety of topics. The communication discipline is also methodologically diverse, making use of both qualitative and quantitative research strategies. Supporters and critics of both methodologies exist within the field. One area of great interest within communication research is the study of the news media; especially in terms of its effects on the public.

Three related theories: agenda-setting, framing, and priming have often been used to research traditional news media. Agenda-setting and priming differ from framing with respect to their premises and assumptions (Scheufele, 2000). Due to these differences, each of these related theoretical approaches may be used for different purposes depending on the topic under discussion and the research questions to be answered. Agenda-setting and priming rely on the concept that mass media have the power to influence levels of importance assigned to issues by audience members whereas framing is based on the assumption that subtle changes in the wording of descriptions of a situation affects the way audience members interpret the issue (Scheufele, 2000). This study is concerned with public and media interpretations of the net neutrality issue based on framing terms conveyed by elites. Therefore, framing theory is the most appropriate theoretical lens for this investigation.

There are several related areas of framing theory that can be studied in order to make sense of the flow of frames: how media frame issues, how individuals frame and reframe issues within their minds, how information flow is controlled, and how individual act based on the

frames they encounter. Several framing theorists have focused upon one or more of these questions, but rarely does current research consider all of them.

Framing and Frame Analysis

Framing, as a term, is used in a variety of disciplines. It has both everyday usage as well as more involved definitions. It has been used in photography and video production to literally describe what is "in frame." Framing has roots in several social science disciplines. Goffman (1974) is commonly credited with popularizing frame analysis.

There are two main types of framing definitions, general definitions without guidelines for operationalization, and those that specify what frames generally do and lend themselves toward operationalization (Matthes, 2009). Generally, framing refers to the construction of meaning through a process of inclusion, exclusion, and emphasis. Individual researchers define framing in a way that suits their specific study or choose an existing definition from the literature. The works of Goffman (1974), Gitlin (1980), Gameson and Modigliani (1987; 1989) Gameson (1992), Iyengar (1991), and Entman (1993; 2004) are most commonly cited for the definitions of framing used in frame analysis (Matthes, 2009). Each of these researchers uses framing to describe a portion of the overall framing process, but often the terms are used to describe different things.

Entman (1993) argues that these disparate definitions and methodologies should be unified through the discipline of communication into a universal framing paradigm. D' Angelo (2002) suggests that the multi-faceted and incompatible definitions of framing are necessary to allow research in different areas and ultimately develop the theory further. While there are multiple perspectives that can be used successfully to study framing, a consistent vocabulary in the field is pertinent for advancement of the theory. Entman (2003; 2004) provides these

consistent definitions while building a new model of framing by combining aspects of previous framing research, indexing, and hegemony. While this model is designed specifically to address foreign policy framing, the terminology defined and the theoretical lens it provides is useful for other types of framing research.

Framing occurs in at least four places in the communication process: the communicator, the text, the receiver, and the culture (Entman, 1993). Communicators, through mental processes, frame the issue/event, construct a text framing the issue/event, and convey their text to the receiver through a medium, then the receiver uses mental processes to reframe the issue/event. The receiver may then become a communicator and convey their own frame through another text such as a conversation or letter to the editor. The administration, elites, news media, and members of the public all contribute to the framing process (Entman, 2003; 2004). Each of these groups embeds their own frames into texts in order to convey their messages.

Schemes/schemata. The framing process begins in the mind of the communicator. Goffman (1974) describes the individual's construction of meaning of an event through use of "schemata of interpretation" that serve as frameworks, "rendering what would otherwise be a meaningless aspect of the scene into something that is meaningful (p. 21)." This definition of framing is concerned with the way individuals make sense of the world through the existing concepts within their minds and how they are related. Entman (2004) uses the term schemas to refer to these "interpretive processes that occur in the human mind (p. 6-7)." Schemas are mentally stored clusters of ideas used to guide processing of information by members of society (Entman, 1993, p. 53). This distinction avoids confusion between other ways the term framing has been used.

Scripts. Once a communicator has made sense of an event, they often share their interpretation through some sort of communication text. Another technique within framing process is involved in the construction of these texts. News media, for example, use scripts to make sense of a story and help create the frames they portray through the news. Media framing has been used to describe "standardized information processing rules that journalists use in covering certain categories of events, actors, or issues (p. 26)" for which Entman (2004) uses the term "script."

Once a communicator makes sense of an event mentally through the use of schemas and constructs a text has through the use of scripts, the frame is transmitted through some medium to be received by others. Not all individuals have equal power in distributing these messages, an issue that is addressed in the cascading activation model of framing.

Cascading activation. The cascading activation model assumes that ideas flow through a network of influence, activating existing concepts within the minds of the audience. Entman (2003) uses the metaphor of a cascading waterfall to describe the way in which ideas may flow and frames may be spread between stratified levels. These levels range from the Administration at the top whose frames have the most strength, to the public at the bottom with elites and media outlets in between. Figure 1 illustrates the cascade.

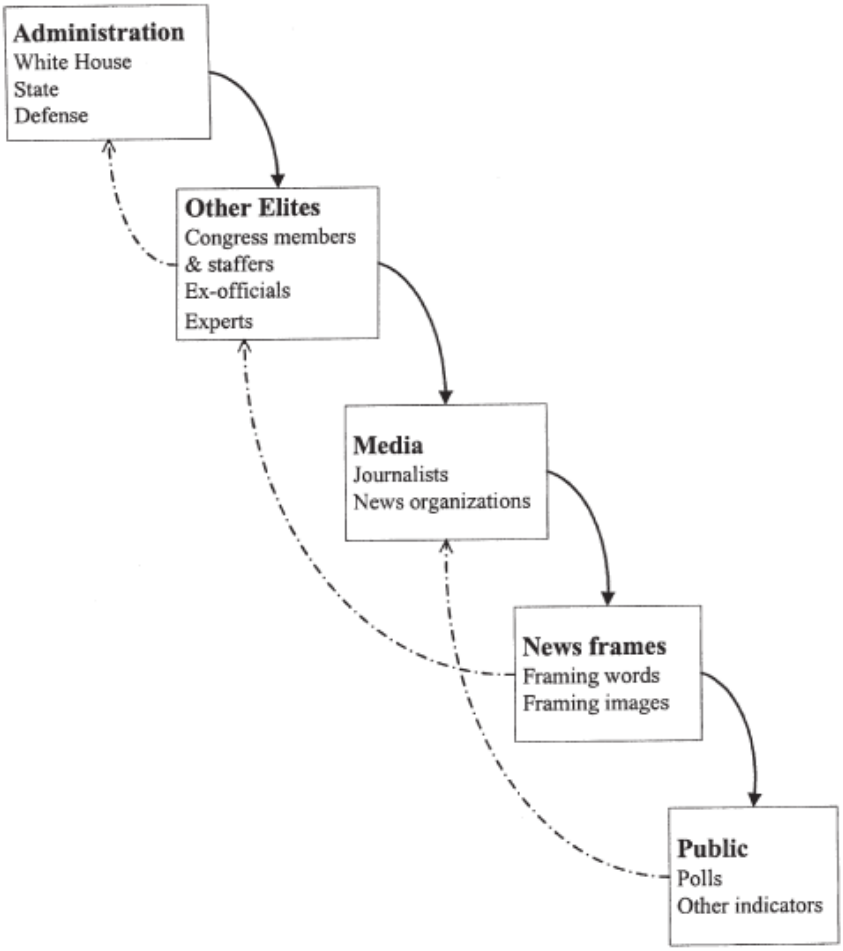

Figure 1. Cascading Network Activation.

Note. From "Cascading activation: Contesting the White House's Frame after 9/11," by R. M. Entman, 2003, *Political Communication,* 20, p. 419. Copyright 2003 Taylor & Francis Inc.

There is a significant power differential between different levels of the cascade. It requires extra effort to spread ideas from lower levels to higher ones (2003). While the cascading activation model is designed to specifically address the way information about foreign policy flows from the administration through the media and to the public, it provides useful tools for investigating the flow of policy information in other contexts; the relative involvement of the administration is one key difference. The premise of the cascading activation model is that there are stratified levels within the flow of ideas with differing efficacy in spreading ideas and manipulating the dominance of respective frames.

Frame contests. Individuals come into contact with numerous messages about an event or issue. The main premise of framing is "that an issue can be viewed from a variety of perspectives and be construed as having implications for multiple values or considerations (Chong & Druckman, 2007, p. 104)." In other words there are multiple stances that can be taken on any issue depending upon what considerations about that issue are considered most and least important to the communicator creating the message. Frames and counter-frames each emphasize different aspects of an issue and compete for dominance within public opinion.

Conflicting frames exist along a continuum ranging from frame dominance to frame parity (Entman, 2003; 2004). Frame dominance occurs when one frame becomes so pervasive in the media that other potential frames become irrelevant to the debate. On the other end of the spectrum, frame parity occurs when the frame and counter-frames are equally pervasive in the media. Between frame dominance and frame parity lies frame contestation. Figure 2 illustrates this continuum.

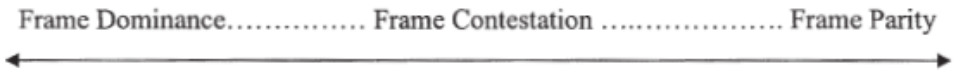

Figure 2. Frame contestation continuum.

Note. From "Cascading activation: Contesting the White House's frame after 9/11," by R.M. Entman, 2003, *Political Communication*, 20, p. 418. Copyright 2003 by Taylor & Francis Inc.

Frame contestation usually falls toward the frame dominance side of the spectrum (Entman, 2003). There typically exists a mostly dominant frame with one or more counter-frames contesting the dominant frame and one another.

Four key variables - motivations, power, strategy, and cultural congruence - acting together explain the emergence and outcomes of frame contests (Entman, 2003). Each framer of messages works toward an agenda using the power their position within the cascade allows. Frames of the elite are strategically created in the attempt to both promote the framer's position

as well as align with existing cultural schemata within the minds of the audience. These four interrelated variables describe not the frame itself, but rather explain the reasons frames are constructed the way they are and why the audience accepts or rejects them.

Motivation is a key variable in understanding frame contests and their outcomes. Motivations vary based on the communicator involved. Members of the public are motivated by a desire to participate in public life and citizenship as well as a desire to maintain interpersonal relationships through discussion of current events and issues; elites are motivated by substantive policy goals and potential political influence; journalists are motivated by seeking professional success (Entman, 2004). While these are important to consider, other motivations certainly exist and motivation is only one of the variables involved in frame contests.

Power and strategy are related variables that are important in the understanding of frame contests.[13] According to Entman (2003; 2004), communicators toward the top of the cascade hold the greatest power to influence and are able to spread their frame more easily than those toward the bottom who hold less power. For example, in discussing a foreign policy issue, the Administration serves as the source of information, relaying and framing the policy first. Elites in turn offer frames which will in turn agree with and/or contest the Administration's frame to varying degrees. The frames conveyed by the administration and elites can then be reframed by the news media. Their role as the originators of the message as well as their possession of a greater number of connections to others in the communication network provides these groups with greater power to influence the debate. In addition, planned strategies of framing are typically the province of elites and are important in maintaining frame dominance, as a poor strategy can create a power vacuum which may be filled by opposing frames (Entman, 2003).

[13] Power as a term has been defined in a variety of ways (e.g. O'Sullivan, Hartley, Saunders, Montgomery, & Fiske, 1994, p. 235-236). While the meanings can vary, the focus here is on Entman's (2003; 2004) use of the term.

Situations of poor strategy give those with less power an opportunity to critique the dominant position and spread alternative frames.

Cultural congruence is also an important factor in determining the outcome of frame contests. “Cultural congruence measures - all else being equal - the ease with which a news frame can cascade through the different levels of the framing process and stimulate similar reactions at each step” (Entman, 2004, p. 14). As stated previously, schemas are mentally stored clusters of ideas used to guide processing of information by members of society (Entman, 1993). Frames which are congruent with these schemas are more easily taken up by others and thus more likely to be dominant than those which are ambiguous or incongruent. Habitual responses are more likely for frames which are congruent with cultural schemas. Ambiguous frames evoke contested responses from the message receivers. Frames that are incongruent with cultural schemas are more likely to be blocked or ignored. Figure 3 illustrates this relationship.

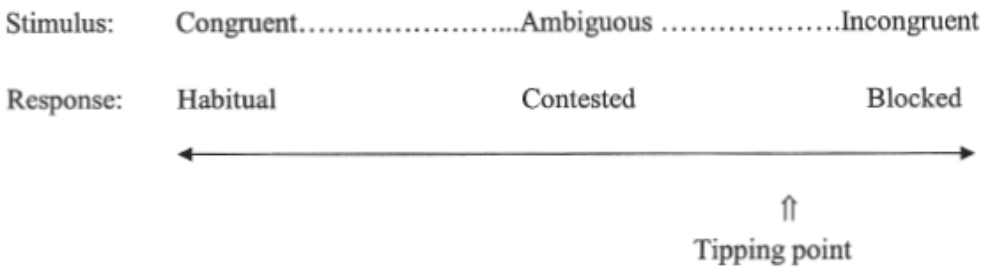

Figure 3. Cultural congruence and elite, media, and public responses.

Note. From "Cascading activation: Contesting the White House's frame after 9/11," by R. M. Entman, 2003, *Political Communication,* 20, p. 423. Copyright 2003 Taylor & Francis Inc.

As Entman (2004) states, “These distinctions can be arrayed along a continuum, with an imaginary ‘tipping point’ where contradictions among dominant schemas start to become dissonant or perhaps too complex for most people to handle and therefore call forth a blocking response (p. 14-15).” For a frame to become dominant, therefore, it must be clear and congruent with schemas embedded in the culture and in the minds of members of society.

The cascading activation model of framing describes the different components of a news event or issue frame as well as the way public opinion messages spread from multiple conflicting sources. Motivation, power, strategy, and cultural congruence form the basis by which frame contests are resolved. While the powerful elite are more easily able to cascade frames through the network and activate schemas in order to influence public opinion, poor strategy and lack of cultural congruence of these frames allow influence from lower strata to move up the network and influence public opinion.

Summary

The news media are a powerful and ubiquitous institution in contemporary society. Since Gutenberg's invention of the printing press, the flow of information within society has expanded significantly. Further technological innovations have changed the way information flows throughout society. The printing press, the postal system, telegraphs, telephone, radio, television, and now the internet, have all impacted society greatly. Each of these innovations has changed the status quo and enabled a shift in everyday communication practices. With each of these shifts has come a power struggle between elites, who desire to maintain their positions of power through control over the flow of information, and the liberating potential of the technological advances. These advances provide the opportunity for the general public to have an increasing amount of agency in public debate. Through institutional control and/or government regulation, elites have historically maintained much of their monopoly on information despite the potential for liberation offered by the innovative technology.

Framing, as a theory, has primarily been concerned with traditional news media such as the press and cable news. The advent of the internet has provided a new distribution channel with the potential to bypass the elite control possessed over traditional media. Optimistic scholars

suggest the internet will usher in a new era of democracy allowing everyone to have a voice. Whether or not this vision has been or ever will be realized remains to be seen. The status quo has been maintained in the past despite the possibilities offered by new communication technologies. By testing a traditional model of framing on a contemporary issue discussed during the “internet age,” further insights into this situation can be made.

Method

Purpose

The purpose of this study is to identify the competing frames of the net neutrality debate and describe the flow of frames through the levels of the cascade between elite stakeholders, the news media, and the public. The researcher investigated the relationships between elite stakeholder frames, news media frames, and public frames respectively. Mapping these frames allowed for a better understanding of the net neutrality debate as well as the relevance of traditional framing theory in examination the framing of contemporary issues. Through this examination the researcher was able to describe and explain the framing process in a changing media environment and holistically examine the net neutrality debate as a case of contemporary issue framing.

Methodology

Frame analysis makes use of a range of techniques found in content and discourse analysis in identifying the various frames being promoted (Kitzinger, 2007, p. 140). The most significant distinction between different methods of framing research is whether they make use of qualitative or quantitative approaches. Framing researchers must also decide: (a) whether the analysis is to be text-based or number-based, (b) whether frames are to be determined inductively or deductively, (c) whether coding is manual or computer-assisted, and (d) whether data-reduction techniques are used to reveal frames or whole frames are coded as such (Matthes, 2009). Many of these decisions depend on whether the researcher is making use of a qualitative or a quantitative approach.

In addition to the coding approach, frame analysis tends to focus upon one or more of the following areas: production, content, and/or audience. Most frame research focuses on content

while some studies examine audiences or production processes with some analysis of content (Kitzinger, 2007). Multi-level research projects that address all three levels are uncommon but can be especially revealing (Kitzinger, 2007).

Entirely qualitative approaches of content analysis are often criticized as merely being the opinion of the researcher whereas entirely quantitative approaches are criticized for lacking context or significance. One approach, frame mapping, attempts to bridge this divide by offering quantitative measurements of the relationship between framing terms while still allowing researcher judgment to the extent necessary to add context. As such, a modified form of frame mapping was an appropriate method for this study.

Miller and Riechert (2001) suggest that "frame mapping is applicable in situations in which contentious stakeholders articulate competing positions to solidify support from their sympathizers and to win converts… and that texts are available" (p. 64). Frame mapping was ideal for studying the net neutrality debate as multiple stakeholder groups with competing positions in the debate clearly articulated these positions through a variety of easily accessible texts. Elites articulated their positions through various trade and press releases, the news media conveyed net neutrality information though media channels and members of the public expressed their perspectives through comments to the FCC.

The net neutrality debate has been ongoing for several years in the U.S. policy agenda and is rife with conflicting frames and controversy. In terms of potential outcomes, the debate offers far reaching policy implications for the internet, a facet of daily life for most Americans. In addition, a large and diverse sample of framing texts was available. Texts were easily accessible for analysis of elite stakeholder frames through press releases and trade publications. News frames were available through newswires available through the Lexis-Nexis database.

Frames conveyed by members of the public, which are often difficult to obtain, were easily accessible in the form of public comments available on the FCC web site. The vast number of responses from the public presented a unique opportunity for exploration of the framing process in the internet age by analyzing elite stakeholder frames, those of the news media, and those of the public.

Research Design

A mixed-method approach utilizing both frame analysis and frame mapping techniques was most appropriate for this study. The method used for this study was influenced by techniques described by Riechert and Miller (2001) as well as Vlieger and Leydesdorff (2011). The method as employed previously (e.g. Miller, 1997) involved two steps. During the first step, the researcher identified the framing terms used by each stakeholder group. During the second, the researcher investigated the degree to which news frames reflect the respective frames of elite stakeholder groups. This present study employed an initial stage of qualitative analysis in order to better understand the public discourse in context prior to performing a variant of the frame mapping methodology.

The researcher investigated three separate groups of texts to identify and compare the frames offered by various elite stakeholder groups, news media, and members of the public. This investigation into the net neutrality frame contest focused on the time period from April 17th 2014 to September 15th 2014. During this time the FCC accepted public comments related to net neutrality regulation, the net neutrality debate was at its peak, and web 2.0 practices were commonplace. For these reasons, texts from this time period provided the best opportunity for frame analysis of the debate surrounding net neutrality.

Stage one: Public texts. Frame analysis was conducted on the public texts in order to add to the understanding of the framing terms in context and aid in term identification during stages two and three. Researcher judgment was used to identify and analyze frames in context rather than computer-assisted analysis of framing terms which was used in later stages. This analysis added context for understanding the framing terms identified and factored into frames during in the second and third stages of analysis.

Individual public comments submitted to the FCC served as the unit of analysis for investigation. These comments were received by the FCC during the open comment periods April 17th 2014 to September 15th 2014. The texts used for the analysis of public discourse on net neutrality consisted of publicly submitted comments about "Proceeding 14-28: Protecting and Promoting the Open Internet" gathered from the Electronic Comment Filing System on the FCC website. These texts came in the form of XML files containing comments as well as associated metadata. Due to the number of submissions it was not feasible to address each of the comments individually. The software used for frame mapping was incompatible with the inconsistent formatting and the amount of the text. For these reasons the researcher performed manual frame analysis during this stage.

The researcher manually identified key excerpts from these texts that were then used for analysis. The majority of the comments were form letter responses with occasional additions. As such, the researcher manually identified the myriad form filled responses and extracted examples of each. Researcher judgment was used to identify examples of key frames as well as counter-frames. These frames were identified, coded, and analyzed based on four criteria: definition of the problematic situation/event, interpretation of the causes of the problematic situation/event, moral evaluation of these causes, as well as the treatment/solution recommendation. These

excerpts were used to provide examples of the various key terms used throughout the debate surrounding net neutrality and add context for understanding the later stages of analysis.

Stage two: Elite frames. During the second stage, the researcher utilized frame mapping in order to reveal elite stakeholder frames. Elite texts in the form of press releases,[14] issued during the same time period, were gathered from the respective stakeholder web sites and PR Newswire and served as the unit of analysis for mapping elite frames. These texts were saved and manually parsed into .txt files, removing titles and metadata and leaving only the content of the press releases.

Case identifier terms were manually inserted into the texts based on the source of the text. The tags *Team Internet* and *Team ISP* were used to designate texts based on the source. Texts representing elite stakeholders such as online content providers, web 2.0 companies, trade organizations representing these companies, and public interest groups were tagged Team Internet. Texts representing elite stakeholders such as broadband internet/wireless service providers, trade organizations representing these companies, and free market think tanks, were tagged Team ISP. These tags were used later in the analysis.

These texts were then analyzed using frqlist.exe[15] which searched for high frequency terms in the texts while ignoring commonly used terms called stop-words which were not relevant to the discussion.[16] A large number of high-frequency terms from the texts belonging to each respective stakeholder groups served as candidates to represent the frames for each of the stakeholder groups. Prepositions, articles, auxiliary verbs, and overly ambiguous words not included in the stop-word list were manually eliminated from consideration. Researcher judgment was then used to narrow the list to 50 terms. High frequency terms were considered

[14] Appendix A lists the elite stakeholder groups from which the texts were drawn.
[15] Frequency sorting software available freely from http://www.leydesdorff.net/software/ti/frqlist.exe
[16] See Appendix B for a list of stop-words.

first, however, some terms with slightly lower frequency were included when judged to be exceedingly important to the debate based on the stage one analysis.

These 50 terms were then analyzed using fulltext.exe[17] to create a word/document co-occurrence matrix which listed the count of each of the terms within each of the respective cases. This matrix was then imported into SPSS. A principle component extraction method, with Varimax rotation, sorting by size, excluding cases list-wise, extracting only eigenvalues greater than three, and suppressing small coefficients below .3 was used to factor the key terms that tended to most co-occur into separate components. This information was conveyed in the form of a rotated component matrix. The components shown in this matrix were used to represent the various elite stakeholder frames. In order to ensure internal consistency of the scale used to represent the frames, a reliability analysis was performed by calculating Cronbach's Alpha for each of the revealed components.

In order to visualize the relationship between the revealed frames and stakeholder groups, a frame map was created using Pajek.[18] The co-occurrence matrix created through fulltext.exe with the top 50 terms as well as the identifier tags served as the input for Pajek. A visual representation of the degree of co-occurrence among these terms was generated by interpreting the eigenvectors as coordinates for plotting the terms on a multi-dimensional space. The terms were color coded based on the identified frames. This visualization, or frame map, showed the relationships between framing terms and stakeholder groups. A similar process was used to in stage 3 to analyze news media frames.

Stage three: News media frames. News texts were also analyzed through frame mapping. News texts were gathered by performing a key word search in the Lexis-Nexis

[17] Text analysis software available freely from http://www.leydesdorff.net/software/fulltext/fulltext.exe
[18] Free network mapping software available from http://mrvar.fdv.uni-lj.si/pajek/

database for “net neutrality” in the text and titles of articles published during the time period under investigation by The Associated Press, Associated Press International, and Associated Press Online news wires. These texts served as the unit of analysis for investigating news media frames. These texts were parsed manually by removing titles and metadata, duplicate articles, as well as articles only tangentially related to net neutrality. As the news texts all came from the same upper-level newswire organization they were not tagged Team Internet or Team ISP. The wordfrq.exe software was again used to identify high frequency terms and automatically remove stop-words. These terms were narrowed to the top 50 terms once again through researcher judgment and manual removal of prepositions, articles, auxiliary verbs, and overly ambiguous words not included in the stop-word list.

A word/document co-occurrence matrix was once again created using fulltext.exe. This matrix was imported into SPSS for analysis. A principle component extraction method, with Varimax rotation, sorting by size, suppressing coefficients below .3, excluding cases list-wise, and extracting only eigenvalues greater than 3 revealed the various news media frames in the form of a rotated component matrix. The terms that tended to most co-occur were factored into separate components which were used to represent the various news media frames.

The relationships between framing terms were then visualized in a frame map generated by Pajek. The co-occurrence matrix created through fulltext.exe served as input for Pajek. The eigenvectors were interpreted as coordinates for plotting the terms on a multi-dimensional space. Terms were color-coded into the frames identified in the rotated component matrix. This map provided a visual representation of the relationships between frames and framing terms. In addition, it allowed for visual comparison to the elite frames previously identified.

Through the use of these procedures, the various frames used throughout the debate surrounding net neutrality were revealed. Through this mixed method approach, the researcher was able to utilize use of aspects of both quantitative and qualitative analysis, allowing for a deeper understanding through context using subjective judgment supported by objective quantitative data. Use of this methodology addressed typical concerns over each methodological paradigm by using the strengths of one to supplement the weaknesses of the other. As such, these procedures were appropriate for this study.

Results

Stage One: Public Frames

During the first stage of the method, the researcher analyzed the frames presented by the public to the FCC. Two diverging groups of frames were presented through these texts: those that supported FCC action for protecting net neutrality, Team Internet, and those that opposed any such action and/or regulations, Team ISP. Both of these groups conveyed frames containing information defining a problem or set of problems, the cause(s) of those problems, moral evaluations of the problem causer(s), and/or recommended solution(s). The results of this stage of the investigation were used to add context for choosing framing terms to include in second and third stages of the methodology as well as for making sense of the frame maps during the discussion.

In defining the problematic situation/event, Team Internet used specific framing terms. They discussed “new rules,” “proposed rules,” and “pay-to-play rules” that “allow discrimination on the internet” and that this type of rule “violates the principles of net neutrality.” They described the potential damages caused by these rules by suggesting that “erecting toll booths or designating fast lanes” would “stifle free speech,” “limit consumer choice,” and “thwart innovation.” In addition, they suggested that these rules would be “far reaching” and “erect new barriers to entry” by allowing ISPs to “manipulate or control what we do on the internet” and “hand the internet over to the highest bidders” as ISPs would be able to charge more for “special access.” They suggested that this “corporate pressure to ruin the internet” would negatively impact “independent and non-profit voices” which would be “relegated to second-tier, slow lane service.” Ultimately, they suggested that “fast lanes for the few harm all of us” and would result in “fewer voices in the public square” and “harm the internet’s roles in driving innovation in the

modern economy and promoting small-d democratic ideas." A less dominant frame also coexisted with the dominant Team Internet frame. A subsection of Team Internet condemned the procedures used in rulemaking process by suggesting that "the American public wants to have a voice in this debate." In addition to defining the problematic situation, Team Internet frames interpreted the causes of the problematic situation and placed moral evaluation on those causes.

Team Internet frames identified ISPs and Telecom companies as well as Chairman Wheeler and the FCC as the causes of the problems and conveyed moral judgment against them. The FCC and "FCC commissioners" were described as causing problems by proposing the problematic new rules in the first place. In addition, "wealthy internet companies," "greedy ISPs," and "telecom giants" were said to be responsible for rules that would favor "corporate voices." Having defined the problem, the causes of the problem, and conveyed moral evaluation of those responsible, the frames suggested a solution to the problem.

In order to prevent a corporate takeover of the internet and prevent fast lanes, several related solutions were suggested. The Team Internet frames urged the FCC "protect net neutrality, and fight for the free and open internet" by "scraping any proposed 'pay-to-play' rule." They suggested that the FCC should "assert full authority under the Telecommunications Act" and "reclassify the internet as a common carrier" as they had an "obligation to regulate it as a utility." These members of the public wanted the FCC to "uphold net neutrality and classify broadband as a telecommunications service" as "the internet should be viewed as a public good and should be operated consistent with our rights to Freedom of Speech and Freedom of the Press." Overall, they wanted the FCC to "protect consumers and enshrine net neutrality." The less dominant subset of the group also urged the FCC to "schedule meetings in communities

throughout the country" before the FCC voted on the plan in order to "give the public a real opportunity to meet with you face to face."

Some members of the public, Team Internet, identified strongly with frames concerned with protecting the public good through regulation. They desired to prevent moneyed corporate interests from having influence over internet traffic. Reclassification of broadband internet service from an information service to a common carrier telecommunication service using authority granted by Title II of the Communications Act of 1934 was the most prevalent treatment recommendation. Other members of the public, Team ISP, contested this dominant frame with their own counter-frame, however.

Team ISP offered opposing frames to the ones invoked by Team Internet. These frames opposed any form of government regulation and criticized the FCC and members of the public who supported such regulation.

Team ISP frames defined government regulation as problematic. They suggested that there was "simply no evidence" of a problem, that the "Internet is not broken and does not need to be fixed," and that "imposing Title II" was a "solution in search of a problem." They suggested that these "crippling new regulations," "monopoly utility regulations," and "dangerous new regulations" were a "power grab" by the FCC and that the left was "demanding a government takeover of the internet." They referred to Title II authority as a "blank check to regulate the internet at a whim." They suggested that these actions were a "move backward in time to 1930s-era phone regulation" and "would be a job killer" which would "chase[] billions of dollars of investments away." They suggested that government regulations in general create "economic and human wreckage in their wake," and that regulating the internet would "turn it into just another slow-moving government-controlled mess." In addition to describing internet

regulations as problematic, Team ISP frames identified those believed to be the cause of the problem and conveyed moral evaluation of them.

Team ISP frames identified Chairman Wheeler and the FCC as well as opposing members of the public as the cause of the problems they described. They referred to members of the FCC as “federal bureaucrats,” “powerful government regulators,” and “Washington bureaucrats;” and the FCC as “very expensive, largely irrelevant, and power-hungry.”

Team ISP frames also identified and morally evaluated those members of the public who supported internet regulation. They described the opposition as “millions of liberal fools,” “socialist,” “ignorant, angry left-wing political faction,” and a “small fringe of the extremist left.”

Team ISP frames conveyed a simple treatment recommendation: “do not regulate the internet.” They urged the FCC to “protect the future of internet freedom here in America” by maintaining a “hands off the net” approach. They suggested that the FCC needed to make use of “vigilant restraint” in order to “focus regulation on real problems” such as “providing more spectrum for wireless users or deregulating wireline telephone service.” In addition, a less dominant subset of Team ISP frames suggested that congressional authority should be invoked rather than that of the FCC. They stated that it was “time to consider whether the agency should continue to exist in its present form,” and that Congress should “cut off [the FCC’s] funding and place its necessary duties in the hands of agencies that will act responsibly.”

As can be seen, the frames of two dominant groups competed within the public debate surrounding net neutrality. Team Internet’s frames were most prevalent while the Team ISP counter-frames conveyed an alternate perspective. Several themes were prevalent within these

frames which discussed various problems, problem causers, moral evaluations, and treatment recommendations.

Stage Two: Elite Frames

Frequency analysis of the texts representing the elite stakeholder groups identified fifty frequently used terms that were salient to the debate surrounding net neutrality. Framing terms were assigned through factor analysis to five separate components (frames) to which they most related. These terms factored into five distinct frames and were coded by color as shown in Table 1. While many terms possessed some level of cross-loading between components, this was expected. Terms that related to multiple frames were placed into the frame they correlated to with the highest coefficient and designated as secondary framing terms of the frames with which they cross-loaded.

Table 1

Rotated Component Matrix for Factor Loadings of Elite Stakeholder Framing Terms

Framing Term	Frame 1	Frame 2	Frame 3	Frame 4	Frame 5
OPEN	.927				
RULES	.907				
COMPETITION	.883				
ORDER	.839				
ENFORCEABLE	.812				
COURT	.788				
INTERNET	.723		.490		
NETWORK	.655				
PROTECT	.456				-.341
INNOVATION	.447				
LEGAL	.365	.315		.323	
COMMON		.933			
CARRIER		.911			
COMMUNICATION		.808			
TITLE	.442	.735			
II	.469	.715			
COMPANIES		.682	.394		
INVESTMENT		.657	-.377		.302
FEDERAL	-.406	.625			
FREE	.531	.540			
SERVICE		.442	.355		.407
PUBLIC		.315			
LANE			.739		
FAST			.715		
USER	.372		.663		
PROVIDER	.551		.652		
CONTENT			.646		
TRAFFIC	.372		.633		
ISP			.532		
ACCESS			.493		
NEUTRALITY			.476		
NET			.445		
ONLINE			.424	-.314	
POLICY		.389		.770	
REGULATION			-.386	.698	
MARKET	.336			.675	
ISSUE				.631	
GOVERNMENT				.625	
TELECOMMUNICATIONS				.616	
ACT	.503		.341	.583	
FCC				.581	
AUTHORITY	.377			.490	
CONGRESS				.463	
REGULATORY		.389		.428	
INFRASTRUCTURE					.848
PRIORITIZATION					.833
PAID					.756
SECTION 706				.407	.728
CONSUMER					.620
BROADBAND	.370	.339			.568

Note. Varimax rotation; principal component extraction method; eigenvalues of 3 or greater extracted; coefficients less than .3 suppressed; cases excluded list wise.

Elite Stakeholder Frame 1 *(legal rules frame)* consisted of the following primary terms and their respective correlation coefficients: OPEN .927, RULES .907, COMPETITION .883, ENFORCEABLE .812, COURT .788, INTERNET .723, NETWORK .655, PROTECT .456, INNOVATION .447, and LEGAL .65. Cronbach's Alpha for these terms of Elite Frame 1 was .844. In addition to the primary terms comprising Elite Frame 1, the following secondary terms were identified and noted with their corresponding coefficients: TITLE .442, II .469, FEDERAL -.406, FREE .531, USER .372, PROVIDER .551, TRAFFIC .372, MARKET .336, ACT .503, AUTHORITY .377, and BROADBAND .370.

Elite Stakeholder Frame 2 *(common carrier frame)* consisted of the following primary terms and their respective correlation coefficients: COMMON .933, CARRIER .911, COMMUNICATION .808, TITLE .735, II .715, COMPANIES .682, INVESTMENT .657, FEDERAL .625, FREE .540, SERVICE .442, and PUBLIC .315. Cronbach's Alpha for these terms of Frame 2 was .871. In addition to the primary terms comprising Elite Frame 2, the following secondary terms were identified and noted with their corresponding coefficients: LEGAL .315, POLICY .389, REGULATORY .389, and BROADBAND .339.

Elite Stakeholder Frame 3 *(user access frame)* consisted of the terms: LANE .739, FAST .715, USER .663, PROVIDER .652, CONTENT .646, TRAFFIC .633, ISP .532, ACCESS .493, NEUTRALITY .476, NET .445, and ONLINE .424. Cronbach's Alpha for the terms comprising Elite Frame 3 was .817. The secondary framing terms for Elite Frame 3 were identified and noted with their corresponding coefficients: INTERNET .490, COMPANIES .394, INVESTMENT -.377, SERVICE .355, REGULATION -.386, and ACT .341.

Elite Stakeholder Frame 4 *(regulatory authority frame)* consisted of the following primary terms and their respective correlation coefficients: POLICY .770, REGULATION .698,

MARKET .675, ISSUE .631, GOVERNMENT .625, TELECOMMUNICATIONS .616, ACT .583, FCC .581, AUTHORITY .490, CONGRESS .463, and REGULATORY .428. Cronbach's Alpha for these components of Elite Frame 4 was .776. The following secondary framing terms of Elite Frame 4 were identified and noted with their corresponding coefficients: LEGAL .323, ONLINE -.314, SECTION 706 .407.

Elite Stakeholder Frame 5 *(consumer broadband frame)* consisted of the following primary terms and their respective correlation coefficients: INFRASTRUCTURE .848, PRIORITIZATION .833, PAID .756, SECTION 706 .728, CONSUMER .620, and BROADBAND .568. Cronbach's Alpha for these components of Elite Frame 5 was .722. The following secondary framing terms were identified and noted with their corresponding coefficients: PROTECT -.341, INVESTMENT .302, and SERVICE .407.

Stage Three: News Media Frames

Frequency analysis of the texts representing the news media revealed the fifty terms shown in Table 2. The researcher identified the 50 most relevant terms based on frequency of term usage as well as researcher judgment. These terms factored into five frames each containing a portion of the terms from the list. Some of these terms are related to more than one frame; however the frames identified through principle component analysis were classified based on the highest coefficient identified among terms. Figure 5 was used to visualize news media frames as well as the relationships among framing terms. Discussed below are the five frames identified in the news media texts, their component terms, and Cronbach's Alpha of the primary terms as a scale.

Table 2

Rotated Component Matrix for Factor Loadings of News Media Framing Terms

Framing Term	Frame 1	Frame 2	Frame 3	Frame 4	Frame 5
COMPETITION	.909			.325	
SPEECH	.905				
RULES	.899				
CONSUMER	.868				
FREE	.854				
POLICY	.834				
PRIORITY	.742				
CHARGE	.733	.548			
ACCESS	.690				.589
COURT	.686			.538	
CONNECTION	.679	.574			
FCC	.657	.356	.353	.468	
CUSTOMER	.613	.612			
PAY	.592	.522	.421		
BUSINESS	.455				.394
NETFLIX		.967			
COMCAST		.949			
VERIZON		.921			
VIDEO		.887			
WEBSITE		.854		-.350	
SERVICE		.824		.430	
TRAFFIC		.788		.318	
ONLINE		.726	.562		
CONTENT		.656		.487	
PROVIDER		.607	.391	.524	
INTERNET	.365	.599	.405	.395	.386
DEAL	.517	.540			-.363
COMMON			.901		
CARRIER			.901		
II			.834	.409	
TITLE			.834	.409	
COMMUNICATION			.788	.382	
REGULATION	.329		.779		
NET	.491	.409	.696		
COMPANIES	.547		.629		
NEUTRALITY	.493	.522	.622		
PUBLIC				.849	
NETWORK		.353		.807	
OFFICIAL				.766	
OPEN	.409			.636	.403
BROADBAND	.516	.351		.608	
AGENCY	.425		.347	.581	
FEDERAL	.305			.549	
WHEELER	-.464	.405		.534	
LANE					.770
FAST			.443		.716
USER	.323			-.395	.708
PRIORITIZATION					.686
PAID			-.310	.507	.641
CABLE	-.437				.622

Note. Varimax rotation; principal component extraction method; eigenvalues of 3 or greater extracted; coefficients less than .3 suppressed; cases excluded list wise.

News Media Frame 1 *(consumer access frame)* consisted of the following primary terms and their respective correlation coefficients: COMPETITION .909, SPEECH .905, RULES .899, CONSUMER .868, FREE .854, POLICY .834, PRIORITY .742, CHARGE .733, ACCESS .690, COURT .686, CONNECTION .679, FCC .657, CUSTOMER .613, PAY .592, and BUSINESS .455. Cronbach's Alpha for these terms of News Frame 1 as a scale was .912. The following secondary framing terms were identified and noted with their corresponding coefficients: INTERNET .365, DEAL .517, REGULATION .329, NET .491, COMPANIES .547, NEUTRALITY .493, OPEN .409, BROADBAND .516, AGENCY .425, FEDERAL .305, WHEELER -.464, USER .323, and CABLE -.437.

News Media Frame 2 *(online service frame)* consisted of the following primary terms and their respective correlation coefficients: NETFLIX .967, COMCAST .949, VERIZON .921, VIDEO .887, WEBSITE .854, SERVICE .824, TRAFFIC .788, ONLINE .726, CONTENT .656, PROVIDER .607, INTERNET .599, and DEAL .540. Cronbach's Alpha for these terms of News Frame 2 as a scale was .924. The following secondary framing terms of News Frame 2 were identified and noted with their corresponding coefficients: CHARGE .538, CONNECTION .574, FCC .356, CUSTOMER .612, PAY .522, NET .409, NEUTRALITY .522, NETWORK .353, BROADBAND .351, and WHEELER .405.

News Media Frame 3 *(communication regulation frame)* consisted of the following primary terms and their respective correlation coefficients: COMMON .901, CARRIER .901, TITLE .834, II .834, COMMUNICATION .788, REGULATION .779, NET .696, COMPANIES .629, and NEUTRALITY .622. Cronbach's Alpha for these terms was .917. The following secondary framing terms were identified and noted with their corresponding coefficients: FCC

.353, PAY .421, ONLINE .562, PROVIDER .391, INTERNET.405, AGENCY .347, FAST .443, and PAID -.310.

News Frame 4 (p*ublic official frame)* consisted of the following primary terms and their respective correlation coefficients: PUBLIC .849, NETWORK .807, OFFICIAL .766, OPEN .636, BROADBAND .608, AGENCY .581, FEDERAL .549, and WHEELER .534. Cronbach's Alpha for these terms as a scale was .859. The following secondary framing terms relate to this frame with the corresponding coefficients: COMPETETION .325, COURT .538, FCC .468, WEBSITE -.350, SERVICE .430, TRAFFIC .318, CONTENT .487, PROVIDER .524, INTERNET .395, TITLE .409, II .409, COMMUNICATION .382, USER -.395, and PAID .507.

News Frame 5 *(paid prioritization frame)* consisted of the following primary terms and their respective correlation coefficients: LANE .770, FAST .716, USER .708, PRIORITIZATION .686, PAID .641, and CABLE .622. Cronbach's Alpha for these terms as a scale was .784. In addition to the primary terms identified above, the following secondary framing terms correlate with the corresponding coefficients: ACCESS .589, BUSINESS .394, INTERNET .386, DEAL -.363, and OPEN .403.

Summary

Two main groups conveyed frames related to net neutrality: Team Internet and Team ISP. The frames consisted of the terms used most frequently together within texts under analysis. Of the framing terms used throughout the net neutrality debate, many were shared between both groups. The cross-loading terms served as the general terms of the debate and were used across frames even when used more commonly within specific frames. The context gathered through manual analysis of the public texts enabled the researcher better understand the terms of the debate. Elite frames, news media frames, and public frames shared many of the same terms while

highlighting some and excluding others. These researcher inferences are discussed further in the next section along with a critical evaluation of the theoretical model utilized.

Discussion

The mixed method approach used for this study analyzed the frames that emerged through the frame contest over net neutrality and describes the process by which they are created and diffused. Through utilization of this method the researcher was able to analyze the frames and describe the relationships between different groups investigated based on the similarities and differences in the frames conveyed. While this information was of interest by itself, it also provided an opportunity to evaluate the cascading activation model of framing as a methodological and theoretical tool in contemporary media research.

Periodic review of contemporary research methodologies and theoretical perspectives are warranted during periods of social flux. As the information revolution surrounding the internet has enabled changing methods of doing business and relationships between members of the public and cultural/media content, the assumptions of the cascading activation model of framing must be reevaluated. The frames conveyed by the groups Team Internet and Team ISP can be discussed under the lens of cascading activation model. Maps of elite stakeholder frames and news media frames provided important insights into the process; with the public frames by adding context for the understanding these frame maps and their relationship to one another. A side-by-side comparison of the elite stakeholder and news media frame maps is shown in Appendix B.

Elite Stakeholder Frames in Context

Five frames emerged through analysis of the elite stakeholder texts with some aligning closely with Team ISP, some aligning closely with Team Internet, and others frames falling in between the two containing the shared general terms that formed the basis of the debate.

The elite stakeholder groups conveyed various frames. Some framing terms were shared while others were emphasized or excluded depending on the group. Figure 4 illustrates the relationships between framing terms and their usage by each of the stakeholder groups. Elite Frames 4 and 5 appear to have aligned more closely with Team ISP while Elite Frame 3 appears to have aligned more closely with Team Internet. Frames 1 and 2 contained many terms that were shared between both of the stakeholder groups (with some exceptions).

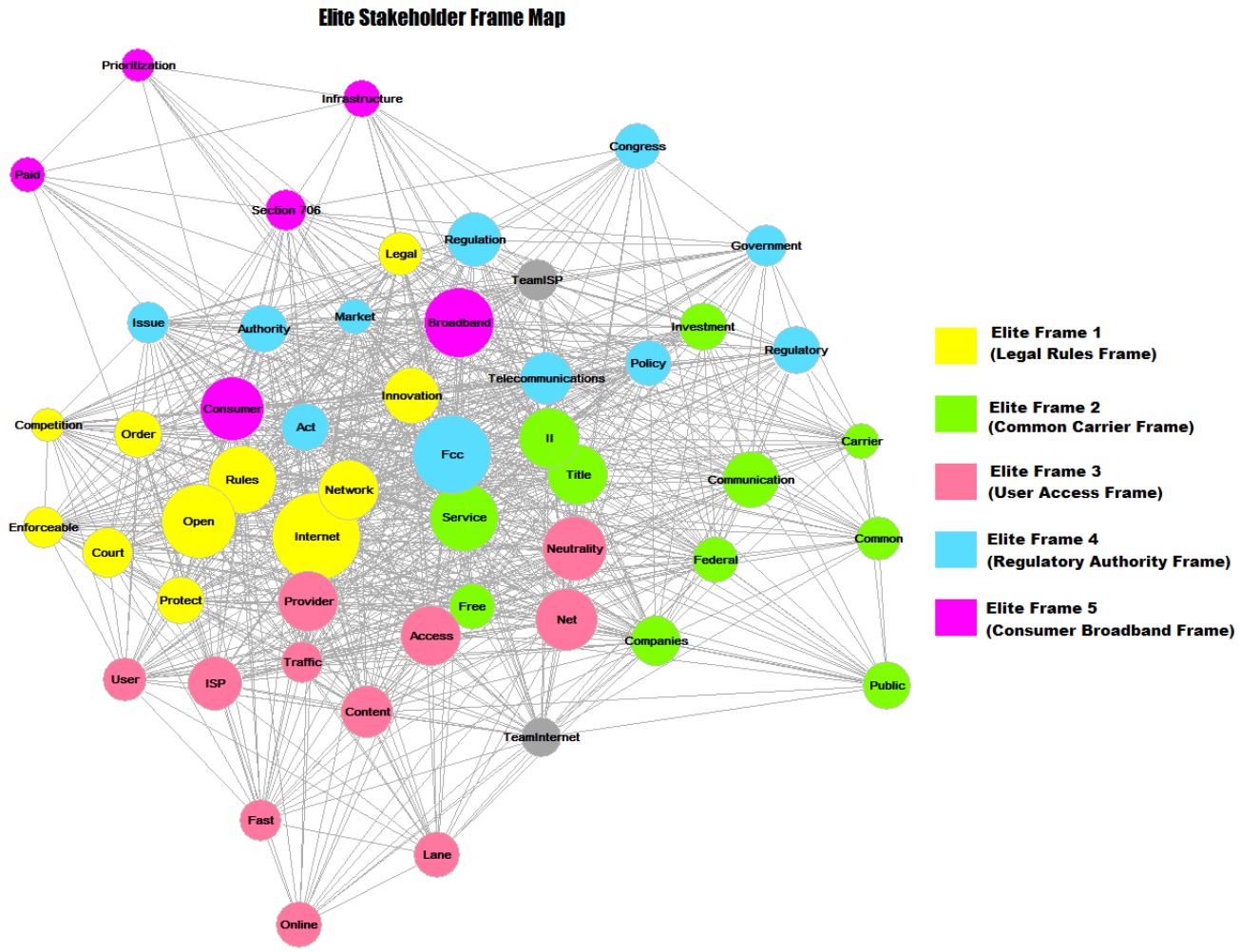

Figure 4. Map of Elite Stakeholder Frames and Framing Terms

The shared terms are best understood through the context offered from the first stage of the methodology. Title II, and Common Carrier appear to be relevant shared terms in Elite Frame

1. As described in stage one, Team ISP identified attempts to enact Title II and Common Carrier regulation as problematic. Team Internet, conversely, identified Title II and Common Carrier as the solution to the problem rather than the problem itself. Both of these stakeholder groups utilized these terms but in differing contexts.

Frame 1 also contained other terms that were utilized by both Team Internet and Team ISP. General terms such as open, internet, order, rules, and protect were used throughout the debate. These terms referred to previously attempted legislation and the outcome of the legal battles surrounding it. The open internet rules of 2010 attempted to provide net neutrality protections but were struck down in court. The FCC docket about net neutrality "Protecting and Promoting the Open Internet" set the terms of the debate to include several of these terms. As such, it is understandable that frames from both contentious stakeholder groups used these terms.

Elite Stakeholder Frames 4 and 5 aligned most closely with Team ISP and identified; as conveyed by these stakeholders; the situation considered problematic, the causes of the problematic situation, as well as the treatment recommendation. Elite Stakeholder Frame 4 contained the terms policy, regulation, telecommunications, act, FCC, regulatory, authority, and congress; which is consistent with Team ISPs frames identified in Stage 1. Frame 5 contained the terms section 706, paid prioritization, consumer, broadband, and infrastructure. The inclusion of paid prioritization within Team ISP's frame is of interest as this concept was identified as belonging to Team Internet as a problematic situation. This may be explained as Team ISP acknowledging and responding to the opposition's concerns. Team ISP was also concerned with decreased infrastructure investment as a potential cost of market regulation.

As discussed in Stage 1, Team ISP described the FCC's and other government regulatory policy to be problematic. They emphasized issues of regulatory authority granted by the

Telecommunications Act, specifically Section 706. One of the key treatment recommendations identified relates to the FCC's authority. Team ISP suggested that Congress should instead have the authority in deciding regulation. As can be seen, Elite Frames 4 and 5 related most closely to Team ISP. However, Elite Frame 3 related most closely to Team Internet.

Team Internet discussed the problematic situation and identified the problem causers through Elite Frame 3. This frame contained terms such as fast, lane, user, access, content, provider, net, neutrality, and ISP. Team Internet focused on internet service providers causing issues of user access to content, attempting to create online fast lanes, and violating the principles of net neutrality. The treatment recommendation was absent from this particular frame but was addressed in the shared frames. These terms are consistent with the frames identified in Stage 1 and address the issues emphasized by Team Internet about net neutrality.

Beyond identification of the terms used and understanding of their usage in context, an especially telling aspect of framing is the way some terms are emphasized by one group and excluded by another. One salient example of this was the difference between usages of the term "consumer" versus "user." Team Internet referred to internet subscribers as "users." Team ISP, conversely referred to internet subscribers as "consumers." This differentiation is especially telling in understanding the differences between how both these elites and their supporters viewed the relationship between members of the public and private businesses. Members of Team ISP appear to have viewed internet subscribers as consumers who exist to provide monetary incentives for infrastructure investment. Members of Team Internet, conversely, appear to have viewed internet subscribers as users of a service who deserve access to the content of their choosing.

Through comparison of the elite stakeholder frame map to the context provided by analysis of the public frames, it is clear that the two are highly related. Team Internet and Team ISP frames were conveyed at both levels and the examples identified during the first stage helped in understanding the differences and similarities between the elite frames mapped during Stage 2. The frames conveyed by members of the news media are also important to understand however.

News Media Frames in Context

As discussed previously, much of the terminology of the net neutrality debate was used by both sides. The news media frames shared many of these common terms while also covering both sides of the issue in the debate. By emphasizing some terms of one side over some terms of the other, the news media frames appear to have acted similarly to elite stakeholders rather than as mediators between elites and the public.

Some news media frames appear to have favored one side over the other; containing perspectives provided exclusively by one contentious stakeholder group or the other. Several examples of these competing perspectives are visible in Figure 5. News Media Frame 1 discussed issues of competition and free speech and charging for priority access, and described subscribers as “customers,” a Team ISP perspective. News Frame 5, however, discussed the issue of paid prioritization and fast lanes while discussing subscribers as users, a Team Internet perspective.

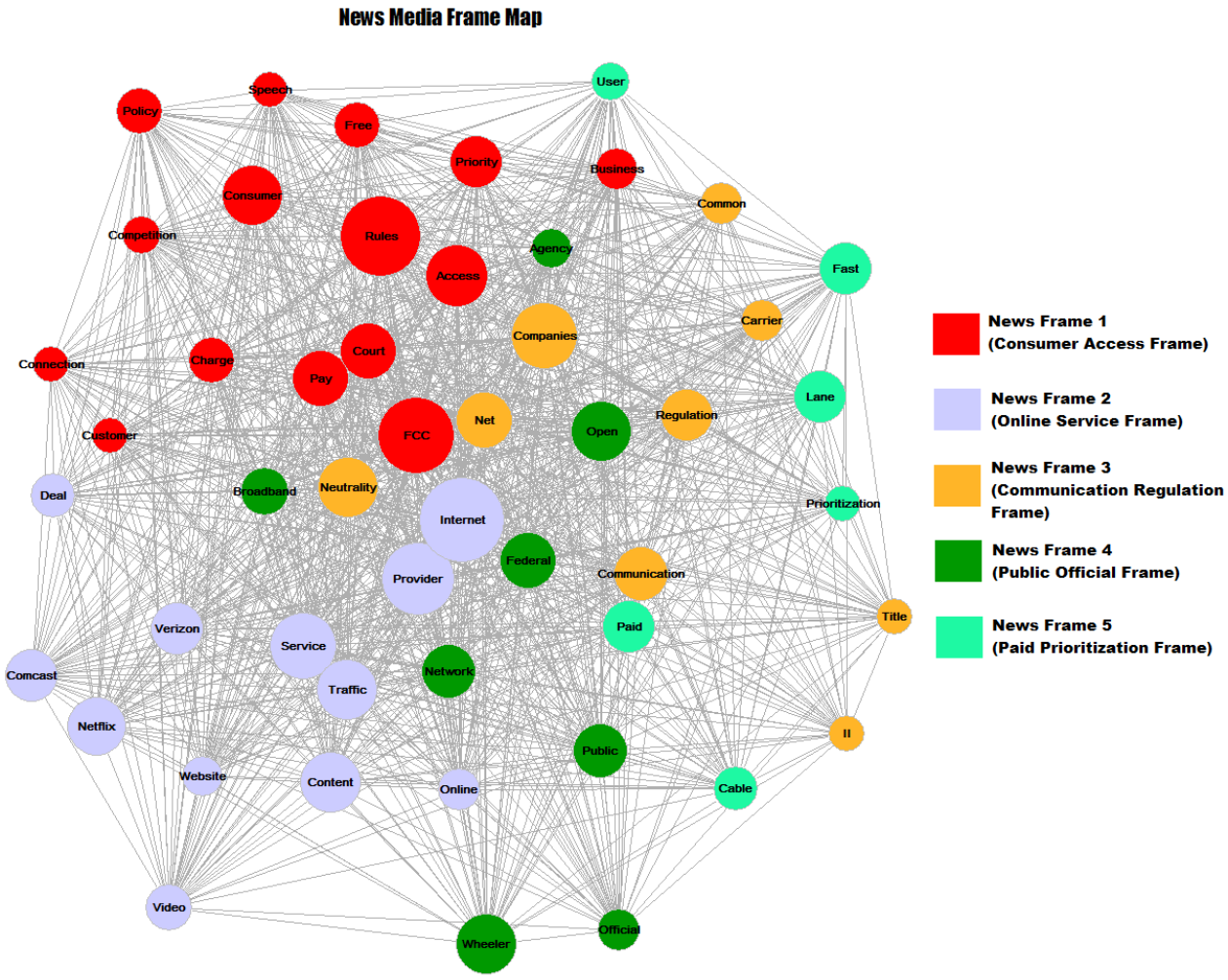

Figure 5. Map of News Media Frames and Framing Terms

Other frames conveyed by the news media appear to have focused on identification of the key issues of the debate. For example News Frame 2 identified the various stakeholders in the debate: content providers such as Netflix and other video websites, as well as internet service providers such as Comcast and Verizon. News Frame 3 discussed the various areas of contention among the stakeholder groups. In discussing net neutrality, this frame highlighted Common Carrier, Title II, and communication regulation. News Frame 4 discussed Chairman Wheeler as a public official and representative of a federal agency.

As can be seen, news media frames used similar terms to the elites and members of the public. Some of these frames focused more on terms used by one side or the other, while others focused on general information about the issue; they discussed the key actors/stakeholders in the debate as well as the key areas of contention. While moral evaluation is difficult to locate using frame mapping techniques alone, the selective use of the terms users as compared to customer and consumer helped to clarify to which stakeholder group the frame likely belonged and the corresponding evaluation attached to the terms belonging to the frame.

These observations are interesting and were important in understanding the debate surrounding net neutrality. In order to evaluate the theoretical perspective utilized, it is also important to understand the outcome of the debate especially with reference to the variables involved in the cascading activation model of framing.

Outcomes of the Debate

The Team Internet frames that recommended Common Carrier regulation of the internet through Title II authority were more represented within the public discourse investigated than the Team ISP counter-frame condemning regulation as problematic. Team Internet appears to have "won" the debate over net neutrality by garnering more public support for their frames which can be explained by differences in power, strategy, motivations, cultural congruence.

Power, strategy, motivation and cultural congruence. Team ISP and Team Internet had varying degrees of power in influencing the debate which can help explain the outcomes. One would assume that powerful cable companies would be better able influence public debate through monetary and political capital as well as institutional entrenchment through lobbying efforts. New forms of power however have been introduced with the potential to undermine these assumptions. By utilizing the data analytics offered by web 2.0 applications, other

companies, many of which supported Team Internet, may have held a new power advantage. In addition, by utilizing collective intelligence, members of the public may have possessed new power in influencing the public debate. Differences in the strategy utilized also may have created a power vacuum that was able to be utilized by the opposition.

Strategy is often a factor in deciding the outcomes of frame-contests. As stated previously, strategy is typically found only within the realm of elites. The Team ISP and Team Internet elites appear to have practiced significantly different strategies that may have impacted these outcomes.

Team Internet elites appear to have had a consistent strategy. Many of these elites represented the public interest, combined their efforts into a unified message, and worked together in distributing it. Rather than developing individual frames, these various groups instead appear to have formed a coalition in which communications from individual member groups referred back to a common frame to which they pledged their support. While there was more than one of these coalitions, the strategy of concerted effort allowed for a consistent overall message.

Team ISP elite frames appear to have been less consistent resulting from poor strategy. Members of this group, primarily ISPs such as Comcast, AT&T, and Verizon, each presumably desired specific policy outcomes to support their market niche. While some of these elites were represented by coalitions in the form of lobbying groups such as CTIA, the individual companies themselves also produced and distributed messages in the form of press releases. These press releases offered conflicting frames and may have been an ineffective strategy. The cascading activation model predicts that poor strategy leaves a power vacuum which counter-frames can fill. This appears to have been the case in this instance.

Motivation may have also played an important role in determining the outcome of this frame contest. The motivations behind the choice of frames produced and conveyed by various groups appear to have differed. Team ISP elites appear to have been motivated by a desire to maintain their market share and extract additional profits from their existing infrastructure. This can be seen in the frames conveyed which called for less regulation of their interests. The two forms of Team Internet elites likely possessed different motivations: internet application and content companies such as Netflix, Facebook, and Mozilla were likely motivated by self-interest whereas consumer advocate groups such as Fight for the Future and Demand Progress were presumably motivated by a desire to protect public welfare.

Team ISP motivations may also have been involved with the breakdown in strategy as these companies hold interests in differing infrastructures. Verizon an ISP but also a mobile phone service which may have influenced which interests their frames emphasized. AT&T possesses mobile phone as well as landline telephone holding along with DSL service which, depending on the speed classification, may not even be considered ‘broadband’ and thus not subject to broadband regulation. Comcast primarily offers cable internet and television services which compete against streaming applications such as Netflix. The differences in these interests may have motivated these companies to convey conflicting frames resulting in poor strategy. In addition, these conflicting motivations may have influenced these communicators to convey frames that were not culturally congruent by virtue of ambiguity and/or running contrary to schemas commonly held by members of the public.

The motivations along with the strategy utilized by Team Internet as compared to Team ISP may help explain the cultural congruence of the frames conveyed and ultimately the outcomes of the debate. Team ISP elites appear to have been motivated by self-interest and

individual elite groups desired different outcomes. As such, members of this group conveyed multiple frames which may have been inconsistent and/or ambiguous resulting in contested or blocked responses. Motivations may have influenced members of Team Internet to develop frames which aligned more closely with the schemas held by members of the public and therefor were more culturally congruent. Team Internet, being motivated by a desire to prevent members of the public from paying more or having their service degraded likely conveyed more culturally congruent frames. It follows logically that the majority of the public would be interested in protecting their own interests as stakeholders in the internet. This, along with a superior strategy with potentially reduced ambiguity, and appears to have resulted in habitual responses to the frames conveyed by Team Internet.

Frames that presented regulation as a way to protect free speech may have been more consistent with the interests of members of the public than those that want to avoid regulation to protect the free market. These frames thus appear to have been more culturally congruent. This may suggest changing public opinions toward deregulation and free market economic principles, but it is beyond the scope of this research to speculate.

As can be seen, Team Internet frames appear to have been more dominant. Power, strategy, motivations, and cultural congruence help to explain the outcomes of the debate surrounding net neutrality. While helpful for understanding the outcomes of this debate, the cascading activation model of framing can be improved and expanded upon.

Expectations versus observations. While the variables of power, strategy, motivation, and cultural congruence helped to explain the outcomes of the frame contest between Team ISP and Team Internet, changes in the dynamics between communicators in a converging culture suggest a need to critically evaluate traditional media theory with these changes in mind.

Framing theory, as one of many traditional media theories, invites this critique and may require some modification. The cascading activation model in particular may require modifications based on the differing dynamic between members of the assumed cascade and their power to influence the outcomes of frame contests. The hierarchy offered by the model may be stratified differently than previously assumed.

Assumptions of traditional media theory such as agenda setting assume that the media largely ignore, or present in less favorable locations when covered, issues that run counter to their own interest or those of their advertisers. The ability of independent sources, such as bloggers, to offer alternative perspectives may impact this dynamic. The ability of elites to directly target members of the public with strategic information may also reduce the ability of news media to set the agenda, act as watchdogs, and serve as gatekeepers.

The role has changed to a degree, albeit less than assumed by early advocates of the democratization of the internet. Individual members of the public often lack the resources required to act as elites. Those who do possess these resources are able to become elites themselves, such as experts or internet celebrities, or band together with others to form an elite organization. This can be seen in the case of net neutrality with the public interest groups such as Fight for the Future. These already influential members of the tech community appear to have banded together in order to share resources and thus became elites themselves. They then possessed the requisite power for development and enactment of a framing strategy in order to support the interests they represented.

Beyond the development of new elites, the role of existing elites has also appeared to have changed. Traditionally, elites needed to present frames that resonated with members of the news media in order to garner coverage while also balancing this with the aim of garnering

public support. This step can be bypassed to a degree with direct targeting of individuals. The data analytics or "value added" offered by web 2.0 applications enables a new dynamic of framing in which elite organization no longer must mass produce a frame to support their view in the general public. Elites can now produce multiple frames, each emphasizing different aspects of the issue that are congruent with particular segments of the public. It would appear that in addition to offering more resources to the general public in distributing their own frames, elites gain even more power over debates by utilizing those technologies. These strategies were likely best utilized by the tech companies comprising Team Internet member groups as these groups routinely make use of web 2.0 strategies and are well aware of their benefits.

In a convergence culture, members of the public can locate desired content through a variety of channels. Through convergence, there is less of a monopoly of information and individuals can locate the content they desire even if not offered through legacy channels. While assumed to explain audience relationship to entertainment content, this capability can logically be applied to political content as well. Individuals who possessed the cultural schemas most congruent with Team Internet were able to find frames that supported them. Individuals who possessed cultural schemas most consistent with Team ISP were able to locate frames that supported them. Of particular interest is the ability of various groups to encourage public action rather than in any ability to influence their particular views on the issue.

Several outcomes are suggested based on analysis of the results. The relationship between the public, news media, and elite stakeholders appears to have changed. Rather than the top down hierarchy suggested by the cascading activation model, there appears to be a more level or intertwined communication landscape. This is consistent with the assumptions of media convergence. News media appear to act less as an intermediary between elites and the public and

more like an additional elite. The frames conveyed by communicators at each level; elite, news media, and public; appear quite similar and share many of the same concepts. Team Internet conveyed a dominant frame that was culturally congruent. Team ISP conveyed a counter-frame which appears to have been less effective in stimulating public support.

Summary

As can be seen, throughout the debate there had been consistent usage of many of the main framing terms. The specific words emphasized by various groups seem to have changed based on stakeholder group and desired policy outcomes. The public comments to the FCC were mostly fed directly through elite organizations, while others appear to have been spurred to action by news media groups. The role of the elite appears to have been to set the terms of the debate. The media brought attention to the issue and stimulated action (or inaction) on the part of the public. The public itself picked up the mantle of whichever elite stakeholder group frame was way most consistent with their existing schemas.

Assertions that the internet “changed everything” are overstated. While offering a new channel for distributing a message or frame, the internet has not outmoded other fundamental differences between members of the public, news media organizations, and elite stakeholders. Elite organizations have the finances to hire writers to create expertly crafted frames. News media organizations have large public followings willing to receive their messages. While hypothetically able to distribute their messages more easily through the internet than through traditional media, the public appears to accept what has been presented to them or seek out frames that are consistent with their existing perspective rather than formulating completely new frames of their own.

Conclusion

Limitations

Every research project, including this thesis, has limitations. Factors related the methodology as well the topic under investigation limit the generalizability, utility, and application of these findings. While these limitations are significant, they do not invalidate the findings and their ability to inform future research.

The specific topic under investigation limits the generalizability of the findings. Net neutrality is a complex policy issue with many factors involved. At the same time, it is a specific issue with potentially unique circumstances surrounding it. As discussed in the literature review, the issue has grown out of a complex interplay of technological advancement, regulatory policy, and cultural changes both historical and contemporary. In addition, the policy outcomes of the net neutrality debate have the potential to impact the daily lives of most Americans. These circumstances limit the ability to apply any conclusions gained about this case to other dissimilar situations.

The theoretical lens utilized further limits generalizability. The cascading activation model of framing was designed for use in explaining the outcomes of frame contests over issues of foreign policy. Frame contests over issues of public policy; while involving many of the same groups such as the Administration, news media, elites, and the public; are distinctly different in terms of the influence these groups have over both the information conveyed through the framing process as well as the implementation of policy outcomes. Much of the terminology and many of the concepts conveyed through this model were still relevant in this case, however key assumptions may not have been applicable to this specific case. For example, the model assumes

that the Administration is a key gatekeeper over information which may be true in cases of foreign policy, but not necessarily in issues of public policy.

The methodology and procedures utilized for investigation of net neutrality present further limitations. The validity of purely quantitative research is sometimes criticized for missing the context offered by qualitative investigation while the validity of purely qualitative research is often criticized for being overly subjective and based entirely on researcher judgment. The mixed method approach utilized in this research was intended to address these criticisms, however it also had the potential to succumb to both rather than overcome them. While this does not appear to have been the case, the potential exists nonetheless.

As can be seen, there are significant limitations to this research. While acknowledging limitations in the generalizability and potential concerns of validity, this project advances framing theory as a methodological tool. As such, the conclusions reached through this investigation can be used to inform future research and further improve the theory and method.

Implications for Future Research

Framing theory remains a useful tool in investigating mediated communication. While several assumptions of the cascading activation model of framing have been challenged, continued use of framing theory is recommended with certain modifications in methodological procedure as well as the model as a theoretical lens for understanding.

The method used in this study for investigation of the debate surrounding net neutrality produced meaningful results, however improvements can be made. The multi-stage approach utilized was intended to bridge the gap left between quantitative and qualitative content analysis. A modified method, however may more effectively address the common criticisms associated with each of these perspectives.

Rather than conducting separate investigations of the public frames for context and the elite and news media frames for mapping, each producer of texts should be investigated using both approaches. The frequency list of terms should be used to inform the frames that are identified and analyzed qualitatively. Rather than using principle component analysis of individual framing terms, groups of related terms identified through researcher judgment should be used to create factors. Cronbach's Alpha should continue to be used to assess the internal consistency of the emergent frames as a scale. The frame maps developed should also make use of these groups of related terms rather than individual terms. A name describing the overall theme surrounding the framing terms can be used in the visualization. This recommendation returns to a method that more closely resembles Reichert and Miller's than Leydesdorf's. Different software may be necessary for this approach.

In addition to this change in methodological considerations, changes for framing as a theoretical lens are also recommended. As mentioned previously, the cascading activation model of framing was not originally designed for investigation of issues of domestic public policy. In addition, media convergence resulting from the ongoing information revolution surrounding the internet resulted in questioning key assumptions of this model. As such, a new model is recommended.

The cascading activation model assumes stratification among the communicators who frame messages which did not appear to be reflected in this case. The Administration is not a powerful gatekeeper in this type of issue and the news media do not appear to mediate messages in the way assumed. In this particular case, the administration was less involved than in cases of foreign policy and they acted more as an additional elite perspective. The news media, while still active in the cascade appear to have lost some of their gatekeeping power, acting less as

mediators and more like a different form of elite. New communication technologies not only assist members of the public in communicating and distributing their messages, but also offer elites the same opportunities. Elite status offers increased social and monetary capital, allowing them to better able to utilize these technologies to strategically convey their desired frames.

There appears to be a different dynamic between the spread of frames and activation between members of the public, elites, news media, and the administration. While their motivations, power, strategy, and the cultural congruence of their messages differed; each of these groups appears to have communicated directly with the public as well as each other. Rather than a cascading waterfall with information flowing from the administration to elites, through the media to the public; a vortex or whirlpool may be a more appropriate metaphor. The social process is evident regardless of the metaphor, however more accurate discursive form will aid in the understanding of such processes.

Conclusion

In the case of net neutrality it appears that elites conveyed targeted and polarized frames, to the public, through the internet utilizing web 2.0 applications, with the effect of stimulating interest and action on behalf of the public in support of their preferred policy outcomes. In addition, members of the public sought out information consistent with pre-existing schemas and made use of the information and tools provided by elite sources to take action. The elites that were best able to utilize new communication technologies with motivations and frames most congruent with their respective audiences appear to have ‘won’ the frame contest.

Team Internet stimulated public action in contacting the FCC to support the preferred policy outcome of utilizing Title II authority to regulate broadband internet service as a common carrier with forbearance of legacy provisions of Title II. Several years of discussion and political

action by millions of members of the public has resulted in a return to a state of internet policy similar to that which was held between 1996 and 2002. The debate surrounding net neutrality as an issue is far from over, however. Further legal contestation[19] and congressional intervention will likely inform further debate.

[19] The D.C. Circuit Court recently denied permission for review of the reclassification of internet service in United States Telecom v. FCC (2016), but an appeal is likely to occur.

Appendix A

Elite Text Sources

Team Internet Text Sources:

The White House
Free Press
The Mozilla Foundation
Netflix
New America's Open Technology Institute
Public Knowledge
The Electronic Frontier Foundation
AARP of New York
Sum-of-us.org
The Online Publisher's Association
The Computer & Communications Industry Association
The Internet Association

Team ISP Text Sources:

The FCC
AT&T
Verizon
Comcast
Broadband for America
Alliance for Innovation and Development
The Hudson Institute
The Caucus for Producers Writers and Directors
CTIA: The Wireless Association
The Internet Freedom Coalition
The Phoenix Center
The Council for Citizens against Government Waste
The Telecommunications Industry Association

Appendix B

Stop Words

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needs
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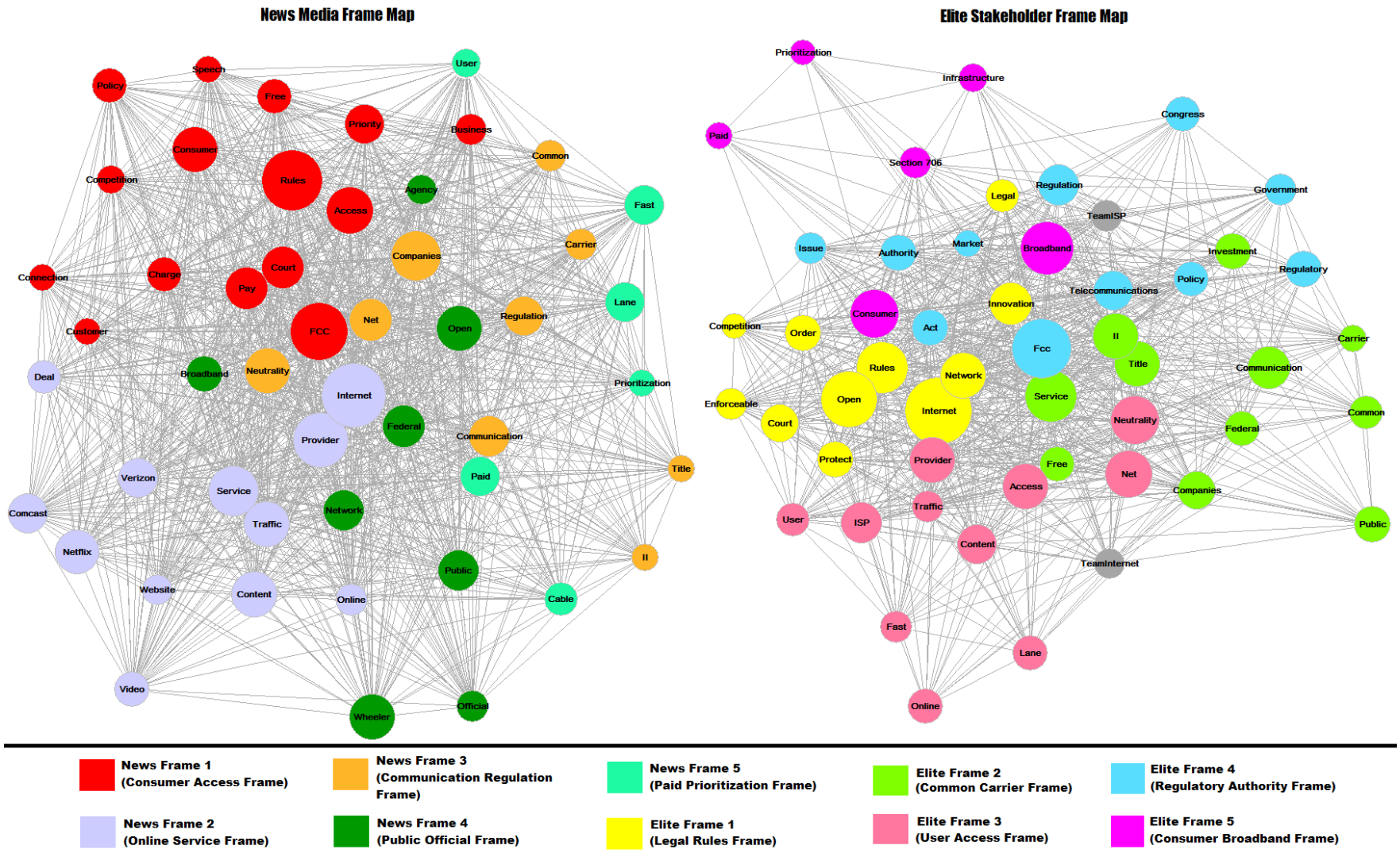
Appendix C

News Media and Elite Stakeholder Frame Maps on Net Neutrality Side-by-side



References

Baran, P. (1964). On distributed communications networks. *Communications Systems, IEEE Transactions on, 12*(1), 1-9.

Cappella, J.N., & Jamieson, K.H. (1997). *Spiral of cynicism: The press and the public good.* New York, NY: Oxford University Press

Cheng, A.S., Fleischmann, K.R., Wang, P., Ishita, E., & Oard, D.W. (2012). The role of innovation and wealth in the net neutrality debate: A content analysis of human values in congressional and FCC hearings. *Journal of the American Society for Information Science and Technology*, *63*(7), 1360-1373.

Chong, D., & Druckman, J.N. (2007). Framing theory. Annual Review of Political Science, 10, 103-126.

Comcast Corp. v. FCC, 600 F.3d 642 (D.C. Cir. 2010).

Communications Act of 1934, 47 U.S.C. § 202(a) (1982 and Supp. V 1987).

Davies, D.W., Bartlett, K.A., Scantlebury, R.A., & Wilkinson, P.T. (1967, January). A digital communication network for computers giving rapid response at remote terminals. In *Proceedings of the first ACM symposium on Operating System Principles* (p. 2-1). ACM.

Digital Millennium Copyright Act, H.R. 2281, 105th Cong. (1998).

Electronic Frontier Foundation. (n.d.) *SOPA/PIPA: Internet blacklist legislation.* Retrieved from https://www.eff.org/issues/coica-internet-censorship-and-copyright-bill

Entman, R.M. (1993). Framing: Toward clarification of a fractured paradigm. Journal of Communication, 43(4), 51-58.

Entman, R.M. (2003). Cascading activation: Contesting the White House's frame after 9/11. Political Communication, 20(4), 415-432.

Entman, R.M. (2004). Projections of power: Framing news, public opinion, and U.S. foreign policy. University of Chicago Press.

Gamson, W.A. (1992). *Talking politics.* New York, NY: Cambridge University Press.

Gamson, W.A., & Modigliani, A. (1987). *The changing culture of affirmative action. In* R. G. Braungart & M. M. Braungart, (Eds.), Research in political sociology. Greenwich , CT : JAI Press.

Gamson, W.A., & Modigliani, A. (1989). Media discourse and public opinion on nuclear power: A constructionist approach. *American journal of sociology*, 1-37.

Gitlin, T. (1980). *The whole world is watching: Mass media in the making & unmaking of the new left*. Berkley and Los Angeles, CA: University of California Press.

Goffman, E. (1974). *Frame analysis: An essay on the organization of experience*. New York, NY: Harper & Row.

Goldsmith, J.L., & Wu, T. (2006). *Who controls the Internet?: illusions of a borderless world*. New York: NY. Oxford University Press.

Guadamuz, A. (2011). *Networks, complexity and internet regulation scale-free law*. Cheltenham: UK. Edward Elgar.

Inside the internet [Video file]. (1997). In *Films On Demand*. Retrieved February 12, 2015, from http://digital.films.com/PortalPlaylists.aspx?aid=7768&xtid=9277

Iyengar, S. (1994). *Is anyone responsible?: How television frames political issues*. Chicago, IL: University of Chicago Press.

Jenkins, H. (2006). *Convergence culture: Where old and new media collide*. New York: NY. NYU Press.

Kahn, R.E., & Cerf, V.G. (1974). A protocol for packet network interconnection. *IEEE*

COM, 22.

Kitzinger, J. (2007). Framing and frame analysis. In *Media studies: Key issues and debates*, 134-161.

Kleinrock, L. (1961). Information flow in large communication nets. *RLE Quarterly Progress Report*, *1*.

Kleinrock, L. (1964) *Communication nets: Stochastic message flow and delay*, New York: NY. McGraw-Hill

Lasswell, H.D. (1948). The structure and function of communication in society. *The communication of ideas, 37*, 215-228.

[Last Week Tonight with John Oliver]. (2014, June 1). *Last week tonight with John Oliver: Net neutrality (HBO)* [Video File]. Retrieved from https://www.youtube.com/watch?v=fpbOEoRrHyU

Lessig, L. (2014). *Remix: Making art and commerce thrive in the hybrid economy*. New York: Penguin Books.

McTaggart, C. (2003). Layered approach to Internet legal analysis, A. *McGill LJ*, *48*, 571.

Miller, M.M. (1997). Frame mapping and analysis of news coverage of contentious issues. *Social Science Computer Review*, *15*(4), 367-378.

O'Reilly, T. (2005) What is web 2.0: Design patterns and business models for the next generation of software. Retrieved from http://www.oreilly.com/lpt/a/1

O'Reilly T., & Battelle, J. (2009). Web squared: Web 2.0 five years on. Retrieved from http://assets.en.oreilly.com/1/event/28/web2009_websquared-whitepaper.pdf

O'Sullivan, T., Hartley, J., Saunders, D., Montgomery, M, & Fiske, J. (1994). Key concepts in communication and cultural studies. New York: NY. Routledge

Riechert, M.M., & Miller, B.P. (2001) Frame mapping: A quantitative method for investigating issues in the public sphere. In M.D. West (Ed.), *Computer content analysis: Theory, methods, applications.* Westport, CT: Ablex Pub.

Ryan, J. (2010). *A history of the internet and the digital future*. London: UK. Reaktion Books.

Scheufele, D.A. (2000). Agenda-setting, priming, and framing revisited: Another look at cognitive effects of political communication. *Mass Communication & Society, 3*(2-3), 297-316.

Sloan, W.D. (1991). *Perspectives on mass communication history*. Hillsdale, N.J: L. Erlbaum Associates.

Solum, L.B., & Chung, M. (2003). The layers principle: Internet architecture and the law. *Notre Dame L. Rev., 79*, 815.

Starr, P. (2005). *The creation of the media: Political origins of modern communications*. New York: NY. Basic Books.

Starosielski, N. (2015). *The undersea network.* Duke University Press. Durham: NC.

Sterne, J. (2012). *MP3: The meaning of a format (sign, storage, transmission).* Durham: NC.

Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (1996).

U.S. Telecom Association v. FCC, No. 15-1063 (D.C. Cir. 2016).

Verizon v. FCC, 740 F.3d 623, 629 (DC Cir. 2014).

Vlieger, E., & Leydesdorff, L. (2011). Content analysis and the measurement of meaning: The visualization of frames in collections of messages. *Public Journal of Semiotics, 3*(1), 28-50.

Whitt, R.S. (2004). A horizontal leap forward: Formulating a new communications public policy

framework based on the network layers model. *Federal Communications Law Journal*: Vol. 56: Iss. 3, Article 5. Retrieved from http://www.repository.law.indiana.edu/fclj/vol56/iss3/5

Wu, T. (2003). Network neutrality, broadband discrimination. Journal on Telecommunication & High Tech Law, 2, 141.

Zimmermann, H. (1980). OSI reference model--The ISO model of architecture for open systems interconnection. *Communications, IEEE Transactions on*, *28*(4), 425-432.