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This is a true copy of the thesis, including final revisions.

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SPECTRUM POLICY AND THE PUBLIC INTEREST STANDARD IN THE UNITED STATES

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Abstract

The public interest standard is often used as a foundation for policy-making in the communications arena in the United States, yet the definition of the concept is continually evolving. Through a historical review of its application in spectrum policy, and an analysis of the current policy debates concerning Network Neutrality and Spectrum Allocation, this paper will provide additional clarity to existing literature on how the public interest concept is developing in this new age of communications policy-making.

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Part I

Introduction

We are in the midst of a seismic shift in communications policy-making. Globalization has radically changed business models, telecommunications and traditional media has converged and there is a move towards pragmatic policy-making and away from normative decision-making. The rise of civil society and consumerism has radically changed societal expectations of the state. These external pressures have given rise to a new era of media regulation, one that is marked by shifting notions of the public interest, which has been the foundation of communications policy-making in democratic societies.

This evolving nature of public interest is, perhaps, something to be expected. In 2003, scholars Jan van Cuilenburg and Denis McQuail released a study chronicling the three media policy paradigm shifts, and noticed that each phase had related but distinct perceptions of what was perceived to be in the publics' interest. The current phase, beginning in the late 80s/early 90s, was still too nascent for the authors to define. It was impossible at that point to differentiate a new public interest paradigm, they believed, because of "...new political ideas and social values..., new and powerful technologies with unclear potential for development", the "vast commercial and industrial interests at stake and governments struggling to keep abreast of change" (198). Much has happened since those statements were made however, and at this point it may be possible to gain a better understanding of the boundaries which are beginning to define the new public interest paradigm. In an environment which places so much emphasis on the economic development of the communications sector, understanding

how this concept may be applied is fundamentally important for policy-makers.

Though van Cuilenburg and McQuail's thesis analyzes general communications policy-making trends in the United States and Europe, this paper will contribute to the literature through a much more restricted but focused analysis of the application of the public interest standard in policy-making around the electromagnetic spectrum in the United States. By necessity, this paper must be quite narrow in scope. While this subject could easily be discussed in the context of civil society, economic movements, legislative history or democratic theory, this text focuses specifically on how public interest has been tied to regulatory mechanisms. There is a clear logic to this: the concept of public interest is at the very heart of the mandate given by Congress in establishing the Federal Communications Commission, which is the regulatory body in charge of overseeing all communication activities in America. Because of the unique placement of the United States in the global economy, how this regulatory agency perceives the public interest concept may exert singular power in the way the communications industry develops globally.

Structure

This paper is divided into three sections. The remainder of this section encompasses a brief discussion on methods, followed by an introduction to important terms discussed throughout the text. To gain an understanding of the birth and evolution of the concept, Part II provides a historical narrative of the public interest mandate and its application to spectrum policy. Part III looks at the contemporary issues of Network Neutrality and Spectrum Allocation and discusses the ramifications these policy decisions may have for a new interpretation of the public interest concept. Finally, conclusions will be drawn about the larger policy implications of these events, and a summary presented of the findings.

Method

This thesis was inspired and relies upon the seminal theory of Communication Policy Paradigms designed by van Cuilenburg and McQuail in 2003. There is a wide range of literature surrounding the concept of public interest in academia; scholars from public policy, political science, media studies and law have all informed this paper. Further, the concepts inherent in Network Neutrality and Spectrum Allocation is richly debated in communications studies. Much of the contemporary section is drawn from primary sources, including speeches, position papers, blogs or newspapers. Statements made by regulators charged with managing the spectrum have particularly been identified as key texts.

<u>Terms</u>

"The Spectrum"

While detailed technical knowledge of the how the electromagnetic spectrum works is not required to understand the contents of this paper, some background is helpful. The electromagnetic spectrum in fact describes a range of radiation, but in practice when referring to the 'spectrum', policy makers are referencing the range of frequencies available for wireless transmissions (Ponappa 2010). Historically certain types of services were relegated to specific areas of the spectrum, and while certain characteristics make some frequencies more desirable for specific uses than others, this is a false construct (Ponappa 2010). Every frequency is capable of being utilized for more than one service. A good example of this is the recent analogue to digital TV switchovers, in which television was moved wholescale from one piece of the spectrum to another. This was done to increase efficiency. Technology had increased to the point where stations no longer had to broadcast at a frequency that took up so much space - or bandwidth - on the spectrum, which had made that space and neighboring spaces unusable for other uses (Benjamin et.al 2010).

In principle, the spectrum itself is infinite and continuous; in practice only a fraction of it is capable of being utilized due to technological restraints. As can be imagined, however, its usability has greatly expanded over the past century (Werbach 2004). The electromagnetic spectrum has historically been thought of as a precious and scarce resource, and has been called many things – waves, bands; in the early days it was called "the ether" (Benjamin <u>et.al</u> 2010). This paper will generally simply utilize the term "spectrum".

"The Public Interest"

Why Public Interest?

The term public interest is tossed around so loosely that some scholars have accused it of becoming "meaningless" (Amadae 2003). Indeed there is a remarkable number of ways in which to contextualize the concept. Pundits and politicians seem more than comfortable adopting the phrase for their own purposes. Public interest groups reign large in political discussions, as do public interest lawyers, who do not defend a body of law but seek to use legal tools to "work in the public interest" (GNPI 2011). There is a public interest conception of economics, which holds that regulation is needed to correct inefficient or inequitable market practices. The "Public Interest" is central to most debates in policy, politics, and indeed possibly democracy itself. What this indicates is that there is a broad adoption of the term in the public sphere.

While this may provide some difficulties for the purpose of this thesis, the importance the standard has played in law, theory and the public mind reinforces the power it has in determining the policy decisions of our day. Studies have shown that the framing of this discourse – how the public interest has been contextualized over time and space – has largely coincided with the policy positions of the day (see Gustafson 2006, Quail & Larabie 2010). In what manner policy-makers are interpreting this

concept greatly impacts the direction of communications policy development.

For the purpose of this text, however, the concept of the public interest is firmly embedded within communications theory and law, and it is to these venues to which we turn.

The Public Interest in Communications Theory

The concept of public interest is at the core of democratic theory of government, and it is a foundational principle for communications policy theory (Napoli 2001: 63). How scholars have perceived this principle, however, has varied . Downs seemed to divide the scholarship into three schools of thought: public interest as the 'will of the people', public interest as an absolute value standard, or public interest in the 'results of certain *methods* of decision-making', or a 'pragmatic outcome, involving no ethical implications' (as cited by McQuail 1992: 22, original emphasis). McQuail in 1992 previews his work with van Cuilenburg in later years by drawing on the works of Virginia Held, who identifies the main variants of public interest as 'preponderance', 'common interest' and 'unitary' theories. These in many ways fit with Downs conception; preponderance theory hold that majority rules. The mechanisms for how this may be determined are varied, but in all ways include the weight of public opinion, whether though market reaction or some democratic analysis. The problems with determining this is deemed to be an essential weakness of this theory. Common Interest theory, in a conception that is often associated with the public goods concept, assumes that decisions that most positively impact the greatest amount of people will best serve the public interest. The final variant is unitary theory, which holds that the public interest is a normative concept that is derived from a overarching social goal or ideology (Napoli 2001: 75).

In joining with van Cuilenburg in 2003, McQuail clarifies these theoretical conceptions. The authors

simplify the concept by changing the frame, seeing public interest as a policy goal rather than a type of governance. In this manner they have identified three distinct measures of public interest policy types that, as shall be seen, may be distinguished throughout different timeperiods. The first type is 'political welfare'. Policy goals associated with political welfare objectives may be normative in nature. Governments may pursue policies related to universal or equal access to technologies, or the promotion of democratic institutions and civic participation. 'Social welfare' varies according to national context (as indeed do all these classifications), but generally seeks to ensure the promotion of positive social and cultural objectives and strives to prevent harm or public offense through public communication. 'Economic welfare' is concerned with efficiency, employment and profitability. Public interest goals that focus on economic welfare will work to ensure a functional infrastructure and favorable market conditions.

The Public Interest in Law

A full analysis of the public interest standard as applied in American law is well beyond the capabilities of this paper. However, it is necessary to review how the concept made its way into communications law.

In American communications, the public interest standard is founded in English common law; it is there that we find that owners of any type of property that "affected" public interests - like wharves or bridges, were responsible for taking on certain types of social responsibilities (Schultze 2008: 5). It was the State of Illinois which first incorporated these concepts through judicial review of a railroad statute that concerned common carriage of public utilities. The American federal government adopted the concept wholesale in the creation in 1887 of the Interstate Commerce Commission, the very first American regulatory agency in which power was granted to the authority to regulate commerce in the

"public interest, convenience and necessity" (May 2001: 445). This terminology, for reasons which will be detailed later, was adopted in 1927 by legislators designing a regulatory authority (the eventual Federal Communications Commission) for the burgeoning radio industry. The ambiguous nature of the terminology would prove to be fertile ground for legal challenges, and indeed it remains so to this day. This vagueness, however, was somewhat by design; leaving the "public interest, convenience and necessity" largely undefined in the legislation would leave regulators ample ground to interpret, (and reinterpret), their mandate.

Law in the United States if often standardized through the process of judicial review, and in this respect the United States Supreme Court has set a strong precedent of granting the FCC a great deal of deference in the interpretation of this phrase. Judge E. Barrett Prettyman of the Washington D.C. Circuit Court gives the following explanation for this leniency, which is largely relevant here:

It is... true that the Commission's view of what is best in the public interest may change from time to time. Commissions themselves change, underlying philosophies differ, and experiences often dictates changes. Two diametrically opposite schools of thought in respect to the public welfare may both be rational; e.g., both free trade and protective tariff are rational positions. All such matters are for the Congress and the executives and their agencies. They are political, in the high sense of that abused term.¹

How public interest has manifested through law will be flushed out more thoroughly throughout the context of this thesis. First, however, it is necessary to investigate the public interest concept and the regulatory relationship to the origins of spectrum communications.

¹ Pinellas Broadcasting Company, Appellant v. Federal Communications Commission, Appellee, The Tribune Company, Intervenor., 230 F.2d 204 (D.C. Cir. 1956)

Part II

Historical Analysis

Utilizing the framework set out by van Cuilenburg and McQuail, this section describes the historical underpinnings of spectrum policy in the United States as it has transformed through three phases. The first phase, or the "Emergent Period", takes place before World War II and has singular characteristics (van Cuilenburg & McQuail 2003). This was a chaotic period in technology development, and government response in the U.S. was somewhat unregulated and piecemeal (Robb 2009). Different types of media were classified in different manners, specifically in reference to distribution methods (Wu 2010). The era was also, however, notable for the degree of international cooperation in which nations stood together to encourage the development of global communications systems (Howeth 1963). The second phase, described as "Public Service Media" policy, lasted roughly from the 1940s through 80/90s (van Cuilenburg & McQuail 2003). This was a normative stage of policy-making, where, flush with the spirit of patriotism post-WWII and democratic fervor in the face of the Cold War, policy reflected a collectivist spirit and emphasized responsibility in the role of media (Slotten 2000, Snider 2004). The current, as yet unnamed stage is categorized by deregulation, convergence of technologies, pragmatism and globalization (Powell 1998). The following paragraphs will detail how the public interest conception is reflected in these policy phases.

Phase I

The development of radio is the first type of communications of note which utilizes spectrum. As in many technologies, the first discoveries were made by tinkerers, some with names easily recognizable even today: Hertz, Tesla and Edison (Walker 2001). Despite these independent beginnings, much of the advancement of radio development in America must be attributed to the Navy, who early on saw the clear tactical advantages and were concerned by the growth of radio monopolies outside of the United States. The Navy utilized its vast procurement powers to encourage in-country development and advancement in general; they bought equipment from as many operators as possible under an interoperability condition – the devices needed to be able to communicate with each other. When patent wars stymied development, the Navy developed its own research institute to further the science, making their own patents free for any further development under the condition that they, too, be open systems (Howeth 1963).

The Navy lobbied heavily for some semblance of control of the airwaves, arguing particularly that monopolistic control over ship-to-shore stations were detrimental to the security and commerce of the nation. Their philosophy was simple: monopolies were dangerous because they restricted "the development of the art, the sale of apparatus at reasonable prices in competition to the public, and service to ships" (Howeth 1963).² The Navy was also responsible for leading the American delegation at the International Radio Telegraph Conventions of 1904, 1906 and 1908. These efforts standardized international ship-to-shore communications.

Entrance into World War I intensified Navy action. During this timeperiod the United States nationalized all communication systems, and the country absorbed all patents held by combatant nations (Winkler 2008). It was largely due to the Navy's efforts that the Marconi monopoly was pushed

² This text is an html transcription of a Government Printing Office text. There are no page numbers. See bibliography.

out of the United States, and the Radio Corporation of America (RCA) was born (Wenass 2007).

Van Cuilenburg and McQuail call the above history Phase I of communications policy-making. The development of new communication technology was seen to clearly be an imperative of national interest and, in the United States, a competitive, anti-trust environment was the mechanism from which to ensure quality and innovation (Howeth 1963). While Europe would move quickly to state monopolies, the U.S. would resist this tendency at this stage, preferring a capitalist model or, at least, public-private partnerships (van Cuilenburg & McQuail 2003). Although there was no legal framework, the public interest goals were clear: encourage the economic welfare by blocking the monopolistic takeover by a foreign entity, ensure the safety of the state and encourage competition. Public policy, particularly through international and military action, made these goals evident.

To be clear, America's desire to prevent monopolies at this time did not extend to types of communication technologies outside of the spectrum. Indeed, in many ways the government preferred them; at this point, Western Union clearly dominated cable, and AT&T was well on its way to controlling telephony; the difference is, these were American companies (Sidak 1997).

This focus on competition in the public interest, largely encouraged by military actors, would only fade following the creation of the Radio Corporation of America (RCA). RCA was essentially a spinoff of a handful of larger more established American companies, including General Electric, AT&T and Westinghouse, and would soon gather together an incredible patent portfolio, including, (in a deal negotiated by the Navy), all the American-Marconi Company patents (Wenass 2007). This consolidation of power and the subsequent state sanction of the manner of which it was wielded leads us to what van Cuilenburg and McQuail call the bridge between Phase I and Phase II of

communications policy making, where the focus on the public interest turns from economic to social and political, and where America codifies the concept of public interest.

The Codification of the Public Interest Standard

The rapid diffusion of radio across America in the 1920s is due in many ways to the aforementioned efforts of the Navy coupled with the expiration of key patents (Howeth 1963). To say that the commercial potential of the technology was miscalculated is an absolute understatement. In 1921 there were five broadcasting stations; by the end of 1925, two million broadcast capable sets had been sold (Wu 2010: 35). Much of this growth could be attributed to amateurs or nonprofit and noncommercial groups who quickly grasped the potential public service opportunities of the medium (McChesney 1993).

Prior to 1927, licenses for commercial use had been distributed by the Department of Commerce through the mandate delineated in the Radio Act of 1912. This statute was written in such a manner that, post-legal challenges, there was little room for the Department to establish guidelines and procedures; the department had little cause not to approve all licences. As instances of interference rose, this was quickly identified as a problem (Hazlett 1990), and one that would serve as the context for the design of the legal public interest mandate.

It was then-Secretary of Commerce Herbert Hoover who, in a series of conferences held between 1922 and 1926 to address these problems, first assigned the role of radio as a public good:

The ether is a public medium, and its use must be for public benefit. The use of a radio channel is justified only if there is public benefit. The dominant element for consideration in the radio field is, and always will be, the great body of the listening public, millions in number, countrywide in distribution. There is no proper line of conflict between the broadcaster and the listener, nor would I attempt to array one against the other. Their interests are mutual, for without the one the other could not exist" (May 1998: 608).

It should be noted, however, that at the same time as the Secretary was describing his vision for a spectrum policy devoted to the public, he was also emphasizing the importance of protecting major capital already invested in radio enterprises (Robb 2009). Hoover intrinsically imposed a commercial-driven ideal onto the concept of public interest.

This ideal of the airwaves being a public good and therefore something that must serve the public interest was adopted by the drafters of the legislation that was to become the Radio Act of 1927. In this statute, most of the power to regulate and license the airwaves was transferred to the Federal Radio Commission (FRC), later the Federal Communications Commission (FCC). The regulators were given a mandate to rule the waves "in the public interest, convenience and necessity". The legislation's authors neglected to codify the definition of these things, believing the ambiguity to be a strength. The failure of the 1912 legislation was that it allowed no room for interpretation in the courtroom. This chosen language was so vague, it was hoped, that it would allow the regulatory body room to create new standards to meet ever-evolving conditions and subsequent legal challenges (Hazlett 2001).

The legislators responsible for the authorship of the 1927 Act would later say that they envisioned the FRC to act as the equivalent of traffic cops (McChesney 1993: 18). Early commissioners clearly interpreted their mandate differently. Looking back on history, it would be simple to say that the FRC Commissioners were the product of *capture* from the moment they were appointed. Many scholars seem to think so (see Streeter 1996, Hazlett 1996/1997) and surely the end result – the shouldering out

of amateurs and the professionalizing of radio, the convenient alliance of policy positions to the goals of the oligopolic broadcasters and the monopolistic RCA – all seem to point in this direction. Robert McChesney seems to indicate that this is the case, noting that, from the beginning of licensing hearings, the broadcasters like the National Broadcasting Company (NBC), a subsidiary of RCA, revealed a "smug confidence" (McChesney 1993: 19). Yet it is surely not incorrect to note that the actions taken by these men were, at the time, completely in line with the public interest policy goals of their time.

In 1928 when the FRC released the documentation which would illustrate the first guidelines for the legal public interest standard, the Commissioners made it clear that they believed the concept applied to content as well as infrastructure (Robb 2009). They were keenly concerned that broadcasters not be permitted to utilize the spectrum for private interests. They would make their licensing decisions based upon which station they believed would provide the most service to the most people with whatever was most attractive. It is interesting to note that the FRC had studied and considered the British Broadcasting Company model of "giving people what they need, not necessarily what they want", but this paternalistic concept was rejected in favor of populist and commercial notions (McChesney 1993). This decision, however, automatically catapulted large-scale entities with generic programming and large antennas to the top of consideration for spectrum allotment, and all but ensured that small local stations with niche programming had little chance of renewal.³

Thus the application of the public interest concept by this first board of Commissioners centered around a principle similar to the universal service concept, and a desire to bar the public radio waves from being utilized as a propaganda tool. As a few of the first Commissioners were retired Naval

³Unsurprisingly, many smaller stations challenged these decisions based not only upon first amendment protection rights but on the 1927 Act itself, which included a constraining anti-censorship clause (section 29). The court would side with the FRC, claiming that because of the limited spectrum available for usage, the "...character and quality of the service to be rendered" is paramount to the public interest (May 2001: 613).

officers, and nearly all of the original staff were borrowed from the Navy, these original goals are not entirely surprising (Howeth 1963). With historically jaundiced vision, we see the throttling of free speech, a grave modern-day crime; it should be noted that in their present, they may have felt they were serving their nation's best interests.

This may also explain the development – or retardation in the advancement – of television in America. Television prototypes sprung up as early as the mid-20s, but the FRC would largely stymie inventors and investors from pursuing projects by hindering licensing procedures (Wu 2010). The Commissioners seemed largely convinced by entrenched radio executives' arguments that only an orderly and planned entrance into the television market would be beneficial to the health and safety of the public. This may also, however, be perceived as what Stephan Lippman calls ideological capture, where the frame presented by the broadcasters aligned with the intentions of the regulators (2005). Television would not enter the American mainstream until the 1940s, when the radio broadcasters – and their owners, transferred their model almost complete from one piece of the spectrum to another.

Phase II: Social Welfare

Van Cuilenburg and McQuail see radio as the bridge between the first two phases of communications policy development, and indeed the application of the public interest standard described above is evidence of this. The FRC (beginning in 1932 to be called the FCC) Commissioners clearly saw the economic growth of the industry and universal service as a salient goal (Howeth 1963), but this goal began to be eclipsed by the desire to regulate in the perceived benefit of social welfare (May 1998). The latter would only increase in urgency following World War II.

Public interest in Phase II is marked by the transition of policy goals and shifting of relations between corporations and the government. What started out as a partnership began turning sour and mistrustful. Broadcasters resented the continued increase of responsibilities put upon them in the form of regulation (Slotten 2000). At this beginning of Phase II, the concept of stations being a "public trustee of the public airwaves" was a resonant concept; even though American broadcasting quickly grew to be a commercial enterprises run by monopolies, these were "enlightened monopolies" who developed "sustaining" programs, those which were unprofitable but were seen to serve a public good (Wu 2010: 84). As the demands on broadcasters to serve the public's moral interests became greater, however, broadcasters' willful participation decreased (244).

Perhaps the strongest indicators of the shift of the public interest conception lies in the increase of content regulation, the rise of cross-ownership restrictions and in the breakup of monopolies. During Phase I, government officials were relatively happy (and indeed in many ways encouraged) the creation of communications monopolies once foreign interests were eradicated (Sidak 1997). Their public interest goals centered around economic growth. This was not the case in Phase II where, beginning in 1943, the FCC began supporting a series of efforts that limited monopolistic and oligopolic power, using instead the concepts of "diversity, competition and localism" as the calling card of the public interest standard (Friedrich 1998). NBC was ordered to split in 1943, creating the network ABC, and in 1946, the FCC released "The Public Service Responsibility of Licensees", also known as the "Bluebook", which was to help broadcasters understand the necessary components of programming necessary to ensure licensing renewals every three years (Stilwel 2005). They described how the FCC would measure broadcasters' public affairs programming, and commitment to local affairs. They refined the book in the 50s by adding the elements of "opportunities for local self-expression", "news programs" and "services to minorities" (Slotten 2000). By the 1960s, the FCC had developed a strong

and codified preference for "localism", in which national broadcasters were expected to to recognize the particular needs to individual communities – and cater to those needs (Robb 2009). By 1969, the concept of stations and broadcasters being a "public trustee" took on a new facet when the FCC made these entities responsible for everything presented on their airwaves. In other words, if a advertiser was found to be misleading the public, it was the broadcaster who would be fined (Snider 2004). By the 70s, social welfare goals had completely eclipsed economic objectives when it came to regulatory public interest design.

Phase III

Public Policy and Political Science scholars has deemed the Phase II era the time of the positivist state (Seidman and Gilmour 1986), one in which "...unfettered policy discretion came to be regarded as prerequisites of effective governance" (Majone 1997: 141). The model of the state in what is to follow has been called multiple things, including neoliberalism (Evans & Shields 2000) and the New Public Management era (Dunleavy et. all 2005). Each of these typifies the same characteristics – privatization, deregulation (and subsequent reregulation), liberalization of markets and welfare reform. Phase III of communication policy-making parallels these characteristics.

Much of the policy developed during the following timeperiod stemmed from Public Choice scholarship, led by academics like Stigler and Friedman who had become disillusioned with the New Deal economy (Amadae 2003). It is worth a small detour to acknowledge the role that spectrum had in developing that theory. In 1959, the FCC invited a young scholar named Ronald Coase to testify about his proposal for market allocation of radio spectrum rights. Such was the outlandishness of the idea at the time that his testimony prompted a Commissioner to reply "Is this all a big joke?" (Hazlett 2001). When the article explaining his was published, his fellow scholars politely deemed it ridiculous. Coase

was invited to respond to those criticisms. His follow-up article, "The Problem of Social Cost", would become the most cited piece of scholarship in the history of social sciences (Coase 1960), and is a foundation for the economic principles which still guide many of the policy decisions made today (Hazlett 2009).

As is often the case, scholarship precedes policy. What began as ideas at the University of Chicago slowly filtered their way into policy experimentations. In telecommunication, these changes began as early as Nixon but were truly embraced by President Reagan (Amadae 2003). Yet Phase II did not end with his election, even if it could be argued that Phase III began with it. Entrenched policy advocates that held to the concept that regulating in the public interest meant social welfare restrictions were still in place, and actions taken by previous administrations were still in motion. The breakup of the AT&T telephone monopoly in 1984 exemplifies the predominant phase II public interest model, even if it is sometimes hidden under the incorrectly labeled banner of "deregulation" (Wu 2010).

Van Cuilenburg and McQuail are quick to note the similarities between the trends of Phase III and the history of Phase I: there are new and previously unimaginable technologies emerging with vast commercial potential – and governments are, by and large, struggling to keep up. Just as the Navy can claim credit for pushing the development of the radio, so too can the U.S. military can credit for the creation of the Internet (Wu 2010), and just as before there has been an extraordinary amount of international cooperation to ensure global connection. There are, however, key differences, including technology convergence, changing socio-political factors, and economic pressures.

During Phase III, it is becoming difficult to differentiate the boundaries between different types of technologies. We watch television on our computers, read newspapers on our phones, and write emails

through on our televisions (Negroponte 1995). For regulators who had historically attempted to separate these types of media, convergence presents a unique problem. These issues are further complicated by the frontier-resistant nature of modern technology and the many industries flourishing in the "peace dividend" environment following the end of the Cold War (Arnback 1997). This increase of global communication is inextricably linked to the globalization of economies, decrease in normative decision-making and subsequent drive toward pragmatic policy making (Thompson 1984) and push for deregulation (Lee & Sawhney 2002). Governments and corporations are aligned in wishing to take advantage of the potential economic benefits that may come from facilitating the growth of new technologies.

Describing the characteristics of this phase in communications public interest policy-making is not an easy task, for the simple reason that we have almost reached the outer limits of established scholarship. Van Cuilenburg and McQuail have provided a sketch of trends, but note that at the time of their writing the development of a simple framework was almost impossible. This is "...not only because of continuing contradictions", but also about "unresolved dilemmas facing policy-making, not to mention the general uncertainty about the viability of any coherent national communications policy under present conditions" (2003: 201). While still believing that public interest goals are the foundation for policy decisions in this realm, they note that, as before, the "...balance of component values that shape the definition of 'public interest" has changed (*ibid*). They do, however, find tendencies, noting that the concept is "...being significantly redefined to encompass economic and consumerist values", and that while "there is certainly a political wish to incorporate as large a proportion of the population as possible within the scope of new communication services, [] the motivations have more to do with commerce and control than with 'social equality' as a valued end in itself" (200). The watchwords of the public interest of this timeperiod are competition, innovation, and consumer welfare as opposed to

the quality and social welfare of phase II and the access and accountability of phase I. These new concepts are becoming entrenched with each passing administration. FCC officials have become "competition apostles", with "boilerplate" narratives that tout open markets, rapid technological innovation and consumer choice (Wu 2010: 243). It is this context of "fierce competition" (243) and a focus on consumer welfare that provides the context for the analysis of the contemporary policy issues to which this paper soon turns.

Thus far we have seen the concept of public interest in spectrum policy evolve from an ephemeral notion to a legal construct of social responsibility to its present inchoate form. In Phase I, the drive to secure the ether in the public interest was driven by the Navy, who lobbied tirelessly to protect against foreign monopolistic ownership of radio on American soil (Howeth 1963). As the airwaves began to be seen as a public good in Phase II, the concept of public interest was codified into law and morphed into a mechanism of social order and control. As the arguments of spectrum as a public good began to lose their potency in the current Phase III, we begin to see new interpretations of the public interest, and subsequently new regulatory styles. As will be seen, however, the history of these the first two phases still very much informs the present.

Part III

Contemporary Policy Issues and the Public Interest

The following section will look at three inter-related policy decisions which were made during van Cuilenburg and McQuail's Phase III of communications policy-making, and are thus useful events from which to explore the implications for the state of the present day public interest standard. This section first describes the issue and the debate surrounding them, before presenting the policy mechanisms taken to address them. Network Neutrality is discussed first, while the auction of the "C" Block spectrum and the 'white spaces' unlicensing allocation is discussed in tandem, for reasons that will become clear presently.

Network Neutrality

In September of 2010, the Federal Communications Commission released a set of rules that defined their vision for network – or 'net', neutrality. FCC Chairman Julius Genachowski described the move as "evolutionary" rather than "revolutionary", yet the move was quickly criticized by critics both in favor of the principle and against it (Anderson 2010a).

The term network neutrality was coined by scholar Tim Wu, who provides a very basic definition for the concept: "...Internet that does not favour one applications (say, the world wide web), over others (say, email)" (Wu 2003: 145). While this definition has been expanded and expounded upon by numerous scholars, politicians, activists and pundits, the common theme is the principle of non-discrimination; no Internet Service Provider (ISP), whether they be a root server or a content provider, shall preference one type of data over another.

The debate on this issue has largely divided around those that are, in principle, for net neutrality and those that are against it. The reasoning behind these stances are, however, sometimes complex. Many that would argue against net neutrality are arguing from a market perspective. Fundamentally those individuals or groups are not so much against the principle of net neutrality as they are against the idea of government regulation of business (Globerman 2008). Companies that have these constraints forced upon them, it is thought, will restrain investment, thus impeding innovation and restricting future infrastructure development (Hahn & Wallsten 2006). Indeed, those with this theoretical belief may argue that regulating a medium created in freedom would be contrary to its ethos (Globerman 2008).

Those that support the concept believe that this minimal "rules of the road" type of regulation is, indeed, the only way *to* ensure the unique democratic spirit of the technology. Much of this is a normative argument, framing the debate in terms of freedom of speech (Blevins & Barrow 2009) or stressing the critical importance the internet has begun to play in democratic societies (Meinrath & Pickard 2008). Lack of some government regulation would all but ensure discriminatory service that would arise from service providers in this point of view (see Wu 2003 & Lessig 2001), and thus many of the groups that have formed in support of net neutrality base their arguments upon democratic principles.

Those in support of the concept have also framed the Internet as a public utility, like electricity or water (Barratt & Shade 2007). This argument may have interesting legal applications. As discussed previously, the legal foundation for the concept of public interest is derived from British common law and common carrier provisions (Schultze 2002), which may bolster arguments that all telecommunications should be reclassified as a public good or (at the very least), be deemed to have

public good characteristics, which would ease regulatory restrictions (Melody 1990).

The FCC first addressed the concept of network neutrality in 2004, when Democratically-appointed Chairman Michael Powell articulated the "Four Freedoms" concept. These emphasized the connection between Internet freedom and consumers:

As we continue to promote competition, we must preserve the freedom of use that broadband consumers expect...[that] consumers should have their choice of legal content... [that] consumers should be able to run applications of their choice... [that] consumers should be permitted to attach personal devices they choose to the connections that they pay for in their homes... [and that] finally, and most importantly, consumers must receive clear and meaningful information regarding their service plans and what the limits are (Powell 2004).

The succeeding Republican-appointed Chairman Kevin Martin would soon assume these principles as an official FCC position, noting that while they were not being adopted as official rules, the agency would incorporate them in all of its ongoing policy-making activities. To Powell's original text Martin added one important notation: that each of the principles were "subject to reasonable network management" (FCC 2005). The agencies commitment to these concepts are reinforced by their decision to sanction Comcast, the nation's second largest internet provider, after it was proven to be throttling customers using a great degree of bandwidth on sites associated with illegal downloading (Kang 2010a).

The new rules issued in late 2010 were precipitated from a court ruling which decreed that the FCC had overstepped its mandate with the Comcast decision. Though cognizant that these new rules would too be subject to judicial review, the FCC hoped that the newly crafted doctrine would provide additional

legal clarity (Kang 2010b). Fundamentally, the rules create two classes of service: fixed broadband networks and wireless networks (Reardon 2010). Both are expected to be transparent in their management and operational processes, and both prohibit the blocking of traffic on the Internet. How this last provision is applied, however, is different for the two types of services. While fixed networks are prohibited from all blocking, wireless networks are only prohibited from blocking access to applications that specifically compete with their carrier's telephony or video service. Further, while fixed networks are banned from engaging in "unreasonable discrimination", this clause is omitted for wireless carriers. The Commission separated the two services under the notion that allowing wireless more room to offer specialized services would help spur investment in fledgling industries and thus benefit consumers (FCC 2010). The belief was that mobile broadband requires special considerations due to its rapidly evolving nature. The FCC recognized that, by creating this division, they were potentially "displac[ing] the open Internet", and pledged to "closely monitor their development and any effects they have on broadband services to ensure that they supplement, but do not supplant, the open Internet" (Open Internet 2011).

In analyzing the public interest ramifications of this decision, there is obvious evidence of the trends observed by van Cuilenburg and McQuail. The decision largely seems to focus on two principles: preserving consumer freedoms and protecting an innovative economic environment. In separating wireless from wired, the agency was making what it determined to be a pragmatic decision in balancing the need for growth with consumer rights. Despite the arguments presented for and against net neutrality, there seems to be little evidence of a normative social argument or a purely market-based approach in the regulatory mechanism applied. This phenomenon will be more fully discussed following the conclusion of the discussion of the next policy issue section.

Spectrum Allocation

The next two policies discussed may be separate policy rulings, but they both stem from the same theoretical debate concerning spectrum allocation. In both Phase I and Phase II of communications policy-making, spectrum was treated as a public good and policy was managed by the centralized regulatory agency in a process called the 'command and control' method (Freyens 2009). Phase III has seen two new management concepts arise. The first centers around a 'property rights' approach, which was conceptualized by Ronald Coase under the theory that spectrum should be treated as any other scare resource to be bought, traded and sold on the open market (Coase 1959). The second is a 'commons' approach, which holds that private property rights and government licenses are unnecessary because technology has advanced to such a degree that wireless devices can largely share the spectrum without concern for interference (Werbach 2004).

The debate between these two theoretical concepts has been fierce, and both utilize free-market language to advocate for their approach while condemning the other. Those in favor of property rights maintain that the commons model is a "utopian" vision that harbors little understanding of what it takes to run large-scale infrastructure endeavors (Hazlett 2005). This open-access would, in this view, lead to a "tragedy of the commons" - permanently congested, permanently useless, airwaves. Conversely, those perpetuating the commons model warn against the "tragedy of the anti-commons", where protective fences built around entrenched business models in a reduced government oversight environment all but ensure the rise of the "spectrum squatter" and decreased innovation (Werbach 2009). Such is the nature of this argument that scholar Benoit Freyens has declared that they are "...both mostly right" (2009: 129). The FCC seems to be coming to this same assessment.

In the early 80s and 90s, the property rights approach had made the largest gains with the FCC

(Rosston & Steinberg 1997/1998). Largely developed under the banner of deregulation, beginning in 1993 the FCC asked for and was given the authority by Congress to auction spectrum licenses as opposed to their previous method entitled "beauty contests", in which applicants set out their cases against a set of public interest criteria and were measured comparatively (Goodman 2009). The commons proposal did not really enter the public debate until the early 2000s, but it was quickly adopted by policy-makers and economists who feared the long-term consequences and irreversibility of propertizing the spectrum (Marks & Williams 2007), and by those who were impressed by the exploding development of WiFi (Powell 2002).

The birth of WiFi begins in 1985, when the FCC made the decision to unlicense what they deemed the "garbage bands", areas of the spectrum which was cluttered with junk (things like excess medical equipment feedback and microwave radiation) (Genachowski 2010c). These were frequencies which could only travel short distances and were filled with interference, assumed to be useless for commercial use. During the late 80s and 90s, a host of small commercial devices utilizing this space cropped up in the form of items like baby monitors and garage door openers (Economist 2004). But it was the development of WiFi, the term utilized for the protocol to beam internet frequencies over short distances, which would revolutionize the industry and create a vast new business market. An industry that did not exist ten years ago now generates tens of billions of dollars and is all pervasive (Mottl 2009). This knowledge provided the context for the release of the FCC 2002 Spectrum Policy Task Force Report, which endorsed both the concept of property rights and suggested that a commons model may be appropriate for certain types of frequencies (FCC 2002).

"C" Block Auction

In early 2008, an auction was conducted in which the "C" Block, part of a distribution of 700 MHz of frequencies considered prime cellular "real estate", was released. The sale yielded approximately \$20 billion in the largest single auction of public property in United States history (Goodman 2009).

What made this auction particularly unique was the introduction of new rules that required the winning bidders to abide by "open platform conditions", which included a "right to attach" provision. These were deemed by the FCC to be public interest goals, and were concepts pushed by advocates of net neutrality (Albanesius 2008). This was a highly controversial position for regulatory agency to take; while the commissioners were not officially allowed to intentionally market the spectrum specifically for monetary benefit, members of congress had made it clear that the financial windfall from previous auctions was highly desirable (Schultze 2008). Implementing these open platform conditions all but ensured lower bidding prices. In defending the decision, the Commissioners held that they believed the requirements would "result in a net gain of efficiency, given the potential that it holds for encouraging the development of new and innovative development of new and innovative devices and applications in connection with such spectrum use" which would outweigh "...whatever possible negative effect [the conditions] have with respect to the other objectives" (Goodman 2009). To protect themselves from unintended consequences of these new rules, the FCC set a reserve price of \$4.6 billion on the "C" Block, stating that if bidders failed to meet this price, the agency would remove the open platform conditions and re-open the bidding process.

From the outset, incumbent cellular corporations like AT&T and Verizon made it clear that they were staunchly opposed to the rules. Proponents of the conditions, which included public interest advocates, newly-minted President Obama and Internet Corporations like Google, saw clear benefits (Yoo 2009).

Google made it early-on that they intended to become bidders in this open platform process, all but admitting later that they were "bluffing" - intentionally forcing the reserve price to ensure that the principles became adopted on the desired spectrum (Sacca 2007a).

White Spaces

In a related decision, in September of 2010 the FCC finalized new rules that had been set in motion in 2008 for the use of "white spaces", which refers to the unused spectrum that lies between the channels that traditionally had served as buffers between frequencies, or more recently the space vacated in from the television transition from analogue to digital. The space freed up by the analog/digital switchover is on a lower frequency, which means that they have tremendous carrier capabilities. Transmissions can cover vast amounts of space at great speeds, creating hopes that the move will spur the creation of a "wifi on steroids" or "super Wi-Fi" (Fenlon 2010). Remembering the successes and innovation that stemmed from unlicensing spectrum in the past, the FCC declared that: "...the potential uses of this spectrum are limited only by the imagination" (Genachowski 2010b).

Perhaps one of the largest surprises with the final ruling was the relative lack of restrictions or regulations. In the initial proposals of 2008, the FCC had entertained the idea of requiring difficult to attain experimental licenses (Luna 2010). This concept provoked fear in many white space advocates, a valid concern to those that remember the part that experimental licenses played in quelling television development in the early 20s (Wu 2010). The FCC had also taken under advisement the concept of requiring all devices to have geo-location spectrum sensing technology to ensure non-interference with incumbent users, such as TV channels (Fenlon 2010). Both these concepts were highly lobbied for by groups such as the National Association of Broadcasters. Both concepts were omitted from the final ruling. In making this decision, the Commissioners made it clear that they had crafted these goals to be

as consumer and innovation friendly as possible. Genachowski stated that the opening would provide "a powerful platform for innovation... and as we've seen time and time again, when we unleash American ingenuity, great things happen" (2010d).

Analysis

In all three of these decisions, criticism was fairly universal from all sides. Those that hold to a commons approach to spectrum management were infuriated at Network Neutrality decision, which allowed wireless networks to practice discriminatory site blockage (Anderson 2010b). They similarly held that the open standards criteria in the auctioning of the "C" Block did not reach nearly far enough, and that the FCC should have included provisions that would have allowed consumers to be able to download any software or content regardless of platform and permitted resale of wireless spectrum on wholesale, nondiscriminatory commercial terms (Sacca 2007). Those that approach spectrum regime management from a property rights perspective believe the Net Neutrality rules to be a vast legal overreach, and fully expect the standard to be overturned during the process of judicial review (Anderson 2010b). Further, they were appalled at the concept of applying any type of restrictions or criteria in the licensing of the "C" Block, and feel that the unlicensing of white space infringes upon the legal rights of the incumbent license holders already occupying adjacent space.

The policy decisions taken in the net neutrality decision, the "C" Block auction and the white space release may be indicative of many things. The current FCC, surely aware that the courts have been less likely to address antitrust issues in the past decade, seem to be redesigning their rules to reflect a preference for *ex ante* policy rather *ex poste* (Neuchterlein 2009). Rules designed around such principles as open standards and interconnectivity may help prevent the buildup of monopolistic

tendencies and help ensure a continued environment for innovation (Wu 2010: 246 - 247). It may also serve as a notice of a civil society more capable and prepared in battling for their desired outcomes (Edwards 2004).

For the FCC, these policy actions are indicative of the larger paradigm shift that has been discussed throughout this paper. The legal conception of the public interest during Phases I and II were codified as a public good, putting the spectrum on par with electricity and water. In the current Phase III, this foundation has shifted. Neither the property rights advocates nor those who lobby for a commons view label their model of spectrum allocation in public good terminology; both use market-based arguments. The decisions issued by the FCC make it clear that they as well have moved away from the public good conception. It is, as we can see from Chairman Powell's words in 2002, part of an intentional realignment of the public interest concept:

"...in the 1912 Act... the "public interest, convenience and necessity" became a standard by wich to judge between competing applicants for a scare resource - and a tool for ensuring interference did not occur. The public interest under the command and control model often decided which companies or government entities would have access to the spectrum resource. At that time, spectrum was not largely a consumer resource - but rather was accessed by a relatively select few. However, Congress wisely did no create a static public interest standard for spectrum allocation and management. Indeed, if the Commission is to do its job, the public interest must reflect the realities of the marketplace and current spectrum use. **Today, I would suggest that full and complete consumer choice of wireless devices and services is the very meaning of the public interest.**" (Powell 2002, emphasis added).

The elevation of consumerist values in the interpretation of the public interest is a key developing trend of Phase III identified by van Cuilenburg and McQuail (2003: 200-201). This value, as well as those of

innovation, competition and investment, are echoed in the policy positions presented above, and in the rhetoric of FCC Commissioners (FCC 2005b, Copps 2010, Genachowski 2010a,b 2011a,b). Yet as should be abundantly clear, the public interest is an ever-evolving concept. Even if recent spectrum policies are indicative of a trend towards openness, there is no way of measuring the strength or longevity of these changes. This problem has been detailed in the book The Master Switch, wherein Tim Wu details the process he calls "the Cycle", in which information technology development follows a pattern of open innovation, strangulation, centralization, and finally an encircling of corporate control. He traces this cycle throughout the 20th and 21st century, and notes that we are in the point of the cycle today where the anarchic growth of innovation otherwise known as the birth of the internet should be ending, and the process of consolidation and corporate control, beginning. Indeed, he clearly finds signs of this occurring. Writes Professor Wu: "here in the 21st century, these firms and their allies are fighting anew the age-old battle we've recounted time and time again. ...It is the perennial Manichaean contest... the struggle between the partisans of the open and of the closed, between the centralized and the consolidated visions of a proper order". Yet he notes "...this time around, as compared with any other, the sides are far more evenly matched" (2010: 237).

While this last statement is referencing the relative power of corporations (i.e., Google vs. AT&T), Wu's narrative makes it clear that, historically, the cycles that resulted in these closed systems of the telegraph, radio and television could not have occurred without the active assistance of the nation state. The question of whether or not new communication tools will remain "open" versus "closed" remains, therefore, firmly in the hands of government officials. It is not difficult to imagine the current conceptions of public interest, which may for the moment in the United States lean towards a tendency of openness, transformed into one more dedicated to social control. Such is the language of "reasonable network management" (FCC 2005a) and a "civilized" internet (Pfanner 2011).

Indeed maintaining a political agenda based upon principles of openness is, in certain ways, antithetical to the very nature of government. Helga Nowotny particularly has noted the ironic nature of governance based upon the elevation of scientific and technologic innovation, which necessitates a degree of turmoil; states, after all, are usually dedicated to stability and the status quo (2008: 125). The current manifestation of the public interest in America, however, is perpetuated by a cadre of acutely aware policy-makers. In speeches, Commissioner Copps has cautioned against the dangers of allowing entrenched interests to gain the power to stymie new growth and ideas, specifically citing Tim Wu's "Cycle" concept (Copps 2010), and Chairman Genachowski repeatedly cites Clayton Christensen's book <u>The Innovator's Dilemma</u>, which celebrates the concepts of disruptive technologies and competitors (Genachowski 2011a,b,c). Their cognizance of the pitfalls in creating a regulatory environment which leads to market dependencies and practices is based in an informed knowledge of history.

Yet as Nowotny notes, maintenance of such a political agenda is impossible in a vacuum. There must be a shared "...common idea of the future" (126) in which the concept of disruption is celebrated in the mainstream, even if it comes at the expense of entrenched interests. This is quite evident in America today, where Congressmen are honored to receive a "Disruptive Innovation" award (Markey 2011) and authors who warn of the dangers of the Cycle are appointed to the Federal Trade Commission (Ante & Catan 2011). In his most recent State of the Union speech, President Obama used the term "innovate", "innovation" or "reinvent" 19 times (Obama 2011). Funders like the Gates Foundation seek out "disruptive" ideas in which to invest (Thompson 2011) and one of the hottest social events in New York and San Francisco is the "Disrupt" TechCrunch Conference, a challenge hosted annually for the express purpose of providing forums and competitions for unknown hackers and entrepreneurs to share ideas and seek investment. "Innovate or Die" has become a management mantra (DeBord 2011). The regulators of the spectrum and the drivers of culture are aligned.

Conclusion

This thesis has traced the evolving definition of the public interest standard in spectrum communications policy-making in the United States in an effort to clarify the paradigm introduced by van Cuilenburg and McQuail. The U.S. Navy first molded the ideological concept in an effort to prevent a monopolistic takeover from foreign companies and encourage domestic production. The concept then turned into a mechanism for social control when it was codified into law as a public good. In recent decades the idea that the spectrum was a public good has diminished, and in recent policy decisions we can note distinct evidence in contemporary policy decisions of the trends predicted by van Cuilenburg and McQuail, such as the rise of consumerist values and premiums placed on innovation. Understanding these changes to the public interest standard is critical for policy-makers in the public and private realm, as these ideals will largely guide the direction of regulation.

Yet there are obviously further issues to be explored. What role does civil society play in these shifting regulatory notions? What does the parallel nature present in the current manifestation of public interest and popular culture represent? How does the diminished notion of the spectrum as a public good impact the legal ability of the FCC to conceptualize a public interest standard? As global pressures become more acute, how do foreign conceptions of the public interest impact the decisions of the domestic regulatory body? The Federal Communications Commission's construct of the public interest is directly tied to economic growth and innovation both in the United States and the world. How the FCC chooses to regulate these burgeoning industries will have a great impact on the future development of communications technologies.

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