The Importance of Network Neutrality to the Internet's Role in the Public Sphere

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ABSTRACT

Network Neutrality, the principle by which Internet Service Providers transmit data equally without consideration to its source, type, content or destination, is important to the creation and preservation of effective democratic communication on the Internet. While there are many faults which can be found with discussion and debate on the Internet, the Internet still represents an improvement over traditional media and media distribution networks and should be carefully protected.

For the political economy scholar, the existence of something which can reasonably be called a public sphere is very important. The public sphere is "the 'space' in which ideas, opinions, and views freely circulate" (Croteau and Hoynes 16). A vibrant and inclusive public sphere is crucial to the development of a vibrant and inclusive democracy. While the Internet is far from a perfect venue for public discussion, it will be argued that it is significantly better suited to the existence of a public sphere than other media. One of the qualities of the Internet which makes it an effective medium for public discussion is network neutrality. Network neutrality is a principle which states that Internet service providers (ISPs) should "transport bits of data without discrimination, preference, or regard for content" (Geist "Telecommunications Policy" 4). Simplified, ISPs should be neutral in their transmission of information. Regardless of whether content originated from an individual's server, a non-profit group, or a global corporation, data should be treated with equal priority across the network. Recently,

North American[1] ISPs have begun to contemplate abandoning the network neutrality principle. This has taken the form of the blocking of protocols as well as the blocking of specific content. This paper seeks to show the Internet's function in supporting a public sphere and to examine the role of network neutrality in creating and maintaining that public sphere.

The Internet has previously been examined from a public sphere framework, notably by Dahlgren, Dahlberg, Salter, and Papacharissi. These scholars have dismissed the overly optimistic and technologically deterministic popular view of the Internet in favour of a more nuanced and critical view of cyberspace which takes into account issues of access, audience share, fragmentation, and power. Network neutrality has received significant coverage in non-academic circles, notably by Geist, (Michael Geist) and Wu ("Network Neutrality FAQ") as well as grassroots groups (Save The Internet, Neutrality.ca) and has recently begun to be discussed in academe. Much of the research done has focused on economic implications of network neutrality (Cheng, Bandyopadhyay, and Guo, Wu "Broadband Discrimination"), and comparatively little has dealt with the effects of network neutrality on communication. Barratt and Shade provide an overview of network neutrality in Canada and briefly touch on the implications for public communication, but this aspect of network neutrality needs to be investigated more thoroughly.

The public sphere as a concept was popularized by Jürgen Habermas who showed the "importance of a vibrant public sphere for democratic societies" (Croteau and Hoynes

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[1] A note on jurisdiction: This paper will examine events that have taken place in both the United States and Canada. While these two countries obviously differ in telecommunications policies, laws, and market structure, they have had similar experiences involving ISPs violating network neutrality principles and both have seen events transpire which illustrate the importance of network neutrality.

22). The argument for the importance of the public sphere, a system which allows free and widespread communication and debate, is relatively intuitive; if citizens of a democracy are to make wise choices, they must have access to a variety of information and opinions. Many scholars have noted a diminishing of the public sphere and democratic participation in past decades (Dahlgren 147). It has been noted that the Internet possesses many of the same qualities detrimental to the public sphere as other forms of mass media. One such concern is the increasing corporate colonization of the online world (Dahlberg). Unsurprisingly, large commercial websites are extremely popular; of the top 10 most visited websites, as calculated by the Alexa traffic monitoring service, 9 are commercial ventures. Furthermore, these top 10 popular websites include some of the largest corporations in the world. Myspace.com, currently ranked as the 5th most popular website, is owned by News Corporation and two of the top 10 most popular websites, google.com and youtube.com are both owned by Google Inc.

It has been argued that the enormous corporate presence online is "recreating and reinforcing through the Internet the dominant discourses and instrumentalist practices of consumer capitalism, marginalizing critical communication that is central to a strong democratic culture" (Dahlberg 93-94). Rather than being a tool for citizens to engage in "critical-reflexive" communication, the Internet is largely dominated by opportunities for commerce (Dahlberg 95). Examples of this can be seen at major portals such as sympatico.msn.ca. This portal is a joint venture between Microsoft's MSN brand and Bell Canada's Sympatico brand. Alexa.com lists it as the 10th most popular web destination for Canadians. Much of the content would fall into the category of what Croteau and Hoynes call "trivial media" due to its focus on light human interest stories,

celebrity gossip, and product reviews (157). There is also a significant amount of

advertising, mostly from Bell Canada. This serves as an excellent illustration of the issues

many scholars have with the Internet. While the popularity of this website gives it

tremendous potential for creating discussion and debate between citizens, this potential is

not realized due to a lack of focus on substantive news and inability for citizens to

comment on or discuss stories.

Despite these problems, the Internet is not a completely commercial, corporate-

dominated space. There are a great many non-commercial, democratic oriented, and

alternative voices on the Internet which would not be found in other forms of mass

media. Many sites reject the corporate-dominated soft news approach in favour of

marginalized voices. The Independent Media Center, commonly referred to as

indymedia, is one such example. It is "an interactive news website, a global network and

a radically democratic organization" (Pickard 317). Indymedia's news coverage has a

noticeably different perspective than mainstream media outlets; it is much more

concerned with social justice issues than with celebrity gossip. Al Jazeera English is

another alternative voice which is made more accessible through the Internet. Al Jazeera

English is a professional international news network which is not centered in the West. It

adds a valuable source of non-Western voices to the media sphere. Unfortunately, Al

Jazeera English is currently unavailable through the major cable and satellite providers in

Canada: Bell ExpressVu, Starchoice and Rogers Cable ("Channel Lineup," "Personal

TV," "Star Choice"). It is, however, available free over the Internet ("TV News Now").

While these services are not as popular as the large commercial web portals discussed

earlier, they are available, which is a crucial difference between the Internet and other

forms of mass media such as television.

While criticisms of the Internet's role in maintaining a public sphere are valid and

important, the Internet does create a space for voices which are absent from previous

forms of mass media. This is not, in any way, to say that the Internet represents ideal

democratic communication and debate. This is simply saying that the Internet, at the very

least, offers hope for the future existence of a robust public sphere envisioned by

Habermas and others. The ability of non-commercial and alternative voices to be heard

on the Internet is possible largely because of the level of innovation that the Internet

encourages. Lessig identifies three major reasons for the high level of innovation that

exists on the Internet:

- "First, because applications run on computers at the edge of the network, innovators with new applications need only connect their computers to the network to let their applications run. No change to the computers within the network is required" (36)
- "Second, because the design [of the Internet] is not optimized for any particular existing application, the network is open to innovation not originally imagined" (37)
- "Third, because the design effects a neutral platform—neutral in the sense that the network owner can't discriminate against some packets [of data] while favouring others—the network can't discriminate against a new innovator's design" (37)

While Lessig discusses new applications, such as Internet telephony, the same principles

apply to communication on the Internet. The contrast to traditional forms of mass media

is obvious; while radio, television, newspaper and film all depend on large distributors to

decide what is available on a given media network, the Internet is lacks a central decision

maker.

The basis for the decentralized authority structure of the Internet which Lessig

discusses is the Internet Protocol (IP) system. At its most basic level, the Internet relies

on the IP system; this is a system for sending packets of data which is "indifferent both to the physical communications medium 'below' it, and the applications running 'above' it" (Wu "Broadband Discrimination" 146). This means that IP can run over a variety of media, from copper phone lines to fibre optic cable, as well as transmit any kind of data, from text to voice to video. While the communications medium indifference is technologically impressive, it is of much less concern to the discussion of the public sphere than IP's application indifference. Application indifference allows for an extremely wide range of communication from extremely diverse sources. IP is equally well-suited to transmitting information from a large corporation or from an individual's basement server. IP removes the need for an online gatekeeper.

Lessig also mentions the importance of neutrality within the Internet; a network which does not discriminate between packets of data from different sources is important to foster innovative software applications, and by extension, foster a diverse selection of viewpoints. However, this principle, now commonly known as network neutrality, has come under attack. It was reported in the Washington Post that:

> William L. Smith, chief technology officer for Atlanta-based BellSouth Corp., told reporters and analysts that an Internet service provider such as his firm should be able, for example, to charge Yahoo Inc. for the opportunity to have its search site load faster than that of Google Inc. Or, Smith said, his company should be allowed to charge a rival voice-over-Internet firm so that its service can operate with the same quality as BellSouth's offering. (Krim).

This would violate one of the basic principles under which the Internet has functioned and opens up the possibility of ISPs selecting what content is made available online. Smith only mentions the least intrusive possibility of a non-neutral network; as we will see later, ISPs have engaged in not just the prioritizing of certain data, but in the complete

blocking of some data. If ISPs are free to speed up, slow down or even block packets of data, what is the effect on democratic communication?

There are many concerns regarding network neutrality; as mentioned earlier, economic effects have been the primary area of research. Although economic issues are important, our primary concern is the ability for diverse voices to be heard. Currently, a wide variety of voices and opinions are available on the Internet; without network neutrality, there is significant theoretical and empirical evidence that the diversity of opinions presented will suffer.

In terms of network design, the fear is that the Internet will become more like a television network, with decision makers at the 'top' who determine what is available at the 'bottom' as opposed to everyone existing at the 'edge.' One of the differences between a traditional television network and the Internet is the amount of "gates" which stand between content providers and content consumers (Lewin 145). Gates are points in an information channel where a unit of content must be approved in order to reach the content consumer. A gate is generally governed by a gatekeeper, which is "an individual or group that is 'in power' for making the decision between 'in' and 'out' (Lewin 145). On the Internet, under strict network neutrality, there is not a single gate between someone who produces content, whether they are a single blogger, a non-profit entity or a wealthy corporation, and someone who wishes to view that content. A content provider's server makes packets of data available and the content viewer's computer downloads them. Compare this to the amount of gates and gatekeepers which exist in a traditional mass media network, like television or newspapers. There are multiple editors who select content on the basis of space, time, profitability, feel and numerous other factors.

Eliminating network neutrality allows ISPs to make decisions, subject to market logic, about where gates will be placed. The creation of additional gates and gatekeepers, especially under the control of a profit-seeking entity, can only reduce the amount of information that is available to citizens.

Abandoning network neutrality also raises concerns due to the structure of the broadband service provision industry. Currently, "the extent of competition in the local broadband services market is very limited in the United States, so much so that in many places, a single broadband service provider is often a de facto monopolist" (Cheng, Bandyopadhyay and Guo 7). AT&T's recent acquisition of BellSouth will make it the local phone company for a full 22 states, comprising over half of the population of the United States (Bailey 122). In Canada the situation is similar; just five companies control 84% of Canadian broadband connections, and in many cases consumers in a single geographic area face a "duopoly" of only two services providers to choose from (Doyle, Meisner as qtd. in Doyle). Most large broadband service providers are also involved in the content industry, making them highly vertically integrated. Two of Canada's largest broadband service providers, Rogers and Bell, are also two of Canada's largest television distribution network operators. Under a network neutrality rule, the concentration of ownership in the broadband service industry would not hinder the development of the public sphere, although a lack of competition would result in higher prices to consumers. Without network neutrality, however, a barely competitive industry has little incentive to ensure customers have unfettered access to the Internet at the expense of profitability. If a customer lives in an area with only one or two choices of broadband providers, basic economic theory states that the supply and demand equilibrium will under-provide

services, such as open access to the Internet, compared to a more competitive market.

Vertical integration is also problematic, since ISPs which also own content companies

have a clear incentive to promote their own content at the expense of others. This can be

accomplished by speeding up their content and slowing down other content, or by

completely blocking competing content providers.

What if these concerns are merely academic? Perhaps, as opponents of network

neutrality tend to say, network neutrality is "a solution looking for a problem" (Sachs as

qtd. in Lessig and Wu 7). The National Cable & Telecommunications Association

(NCTA), the "principle trade association of the cable television industry in the United

States," has voiced considerable opposition to network neutrality ("About"). A recent

video created by the NCTA states that network neutrality is "all just clever mumbo

jumbo" and is "a scheme by the multi-billion dollar Silicon Valley tech companies to get

you, the consumer, to pay more for their services" ("Mumbo Jumbo"). The NCTA further

argues that net neutrality regulations are not necessary because NCTA members "have

not, and will not, block the ability of their high-speed Internet service customers to access

any lawful content, application, or services available over the public Internet" ("Net

Neutrality Talking Points"). Unfortunately for citizens, net neutrality concerns are not

merely academic. Internet service providers are already abandoning network neutrality

principles to increase their profits at the expense of consumer choice and free speech.

Opponents of network neutrality, such as the NCTA, argue that ISPs would not

block or degrade existing content or applications if they abandoned the network neutrality

principle. This, however, has proved to be untrue. In February of 2005, the Federal

Communications Commission (FCC) began an investigation of Madison River

Communications, a provider of both traditional phone service and broadband Internet access, for blocking the network ports required for its customers to use voice over-IP (VoIP) services. VoIP allows customers to make low-cost long distance phone calls over the Internet. Madison River Communications came to an agreement with the FCC to pay a $15 000 fine and discontinue its practices of preventing customers from using VoIP services to avoid further prosecution ("Consent Decree"). While it is impossible to know the rationale for Madison River Communications' port blocking, it seems extremely likely that they were trying to force customers to use their traditional landline phone service in order to increase revenue and profits. In Canada, Rogers Communications severely limits the bandwidth allowed on certain ports, primarily those required for file sharing (Doyle). In addition to preventing customers from using valuable Internet services, service restrictions also impact the public sphere. By suppressing VoIP service, customers are forced to use extremely costly traditional phone service to make overseas calls to family, friends and colleagues. The cost of this could easily limit the amount of communication between Madison River Communications customers and citizens of other nations. Rogers Communications' file sharing restriction negatively impacts the distribution ability of many non-profit or low-budget content producers, such as Julien McArdle who created the documentary On Piracy and uses the BitTorrent file sharing protocol to distribute his work.

Even more dangerous than service blocking is the selective content blocking that ISPs could engage in. By eliminating network neutrality, ISPs would have the power to selective eliminate content that they, or their business partners, did not agree with. This too is not just a theoretical fear. In July of 2005 the Telecommunications Workers Union

entered into a strike against the Telus Corporation, a telecommunications firm whose

products include Internet access. Shortly afterwards, customers who used Telus for

Internet access could no longer reach a pro-union website located at www.voices-for-

change.com (Austen). A similar situation arose involving AOL. When AOL began to

contemplate a "two-tiered" email system, where mass mailers who paid a fee would

bypass spam filters, they were heavily criticized by a group called DearAOL.com (Bailey

122). On April 12th, 2006, email messages sent to AOL subscribers which contained the

phrase 'dearaol.com' stopped being delivered to recipients (Olsen). In both cases, the

ISPs claimed they were not engaging in intentional censorship; Telus said it was

protecting the safety of its replacement workers, and AOL blamed a technical glitch for

the rejected emails (Austen, Olsen). Whether intentional or not, Telus and AOL censored

voices which were critical of them, illustrating the importance of maintaining network

neutrality and allowing those who dissent from mainstream media to be heard.

Opponents of net neutrality generally ignore discussions of the public sphere and

instead focus on economic benefits to consumers. They argue that net neutrality "could

have serious repercussions to continued network innovation and investment" ("Net

Neutrality Talking Points"). The argument continues that customers of the ISP would

benefit from the variety of new services that improved infrastructure makes possible,

such as high definition video. This argument has recently been questioned by a

University of Florida study by economists Cheng, Bandyopadhyay and Guo. The study

uses a game theory model to determine who benefits when network neutrality is

abandoned, as well as examining the incentives that exist for ISPs to invest in

infrastructure. The study predicts that abandoning network neutrality would strongly

benefit ISPs, harm content producers, and benefit or harm consumers, depending on the media they consume. Effectively, abandoning network neutrality would represent a transfer of profits from content providers to ISPs. The effect on consumers is predicted to be mixed; some consumers would benefit from a move away from network neutrality at the expense of the welfare of other consumers (20-21). Once again, the move away from network neutrality is injurious to the public sphere; in order for consumers to benefit from a non-neutral network in Cheng, Bandyopadhyay and Guo's model they must be a large consumer group and enjoy content from providers with the ability to create an effective revenue stream from page views. This means that the consumers who benefit from eliminating network neutrality are those who enjoy content from large commercial enterprises. Conversely, consumers who enjoy niche or non-commercial content will suffer.

While the Internet is currently far from an ideal forum for public discussion, it is a space which includes traditionally marginalized voices and those who dissent from mainstream media. Much of the reason for this is that unlike traditional media networks, such as television, radio or print, anyone is able to communicate with anyone else, although clearly this does not always take place. The Internet lacks a central authority which determines what speech is allowed and what is not. Abandoning net neutrality would allow Internet service providers, most of whom are large profit-seeking corporations, to become that central authority of what is permitted. While not all ISPs would engage in practices that harm free speech and discussion online, the fact that some would, and some already have, should provide a serious reason to protect the network neutrality principle. This is especially important when the primary beneficiary of

abandoning net neutrality is the Internet service provision industry, and to a lesser extent,

consumers of very popular commercial media, while companies and individuals who

create content, as well as those who enjoy niche or non-commercial content, will be

harmed. Democratic communication on the Internet may not be ideal, but it is still worth

protecting.

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