Lessons from the Net Neutrality lobby: Balancing openness and control in a networked society

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1. Introduction

As much of everyday life becomes mediated by networked Web technologies, our communication, decision-making, and social lives depend on infrastructures designed, built, and maintained by a variety of stakeholders. This has made the structure and regulation of the internet, for example, into a battle of words unfolding between regulators, advocates, journalists, and politicians. At stake are claims about the most desirable design for internet networks.

Between 2005 and 2007, a battle of words transformed into a citizen and consumer movement, which focused on efforts to legislate for, or against, "Net Neutrality" in the US Congress. The issue, previously a policy goal discussed primarily by legal academics (Wu, 2004), policy scholars (Gillett et al 2004; Gillett 2006), and economists (Sirbu, 2006; Aronson, 2006) became a policy goal of a coalition of media reform advocates including Google, the National Rifle Association, and the American Civil Liberties Association (Save the Internet Coalition, 2006). However, as network operators understand, neutrality is a technical principle, not a rule. How did the principle of network neutrality become a political issue? How has it been developed and applied in different regulatory contexts, and what does this imply for the balance between openness and control on the internet?

The first section of this paper describes the history of Net Neutrality's politicization in the US between 2005 and 2007. After establishing this context, the next section describes the relevant legislation in the North American, UK and EU contexts. The third section of the paper develops a theoretical perspective on this negotiation, arguing that politicized discourses about Net Neutrality conflate various types of political, economic, and consumer issues, and proposing an analysis based on "network power" (Castells, 2009) that can connect these various interpretations. The paper concludes with recommendations for further research.

2. Network Neutrality in the US 2005-2007

The battle of words over Net Neutrality began with a precedent-setting case in 2005: the National Cable and Telecommunications Association vs. Brand X Internet services. The court found that internet service providers were selling *information services* rather than *telecommunications services* (Brand X decision, 2005). Therefore, the cable companies operating internet services were not bound to the common carriage regulations that governed telecommunications services – internet services were thus deregulated.

This decision set the precedent for cable and DSL operators to shift their business models to take advantage of the fact that internet service was exempt from common carriage rules. An obvious approach for infrastructure owners was to begin to charge for access to broadband – including differential access for different speeds. Another industry response to the Brand X decision was to advocate charges for use of internet infrastructure based on the type of data being transferred. This would have allowed infrastructure owners to charge more for peer-to-peer file sharing, or provide their own content (in the case of cable operators) for less than competitors' content.

The Brand X decision sparked a well-publicized debate in the United States, with industry spokespeople like AT&Ts CEO Ed Whitacre quoted as saying "why should you use my pipes for free?" (interview in Business Week, Oct 30 2005). As the debate grew, the phrase Net Neutrality began to refer to several related political goals: stopping ISPs from prioritizing traffic based on content, origin, or destination, and preventing them from throttling bandwidth or changing the terms of service without notifying their customers. These plans represented a significant departure from the self-regulation of the internet and its end-to-end, neutral architecture. While traffic management and network protocols (Galloway, 2004) have always been ways of negotiating efficient ways of transferring bits across networks, the potential outcome of a completely deregulated internet - a series of ISP-owned "walled gardens" with different means of 1. transferring data and 2. charging for that data transfer - would present a fundamentally different configuration for internet networks.

2.1 Net Neutrality as Political Issue

The new paradigm for internet regulation seemed to reinforce a consolidation of power and influence by companies who owned both internet service providers and media outlets. A broad coalition concerned with communication and media reform in the USA began to raise awareness of the political implications of this change in rules, and the necessity of maintaining Net Neutrality. The Save the Internet coalition, organized by media advocacy lobby group Free Press and co-ordinated using online advocacy organizer MoveOn.org, assembled a diverse group of political actors, including Google, the National Rifle Association, the Peer-to-Peer foundation, and the American Civil liberties association. The coalition used "Net Neutrality" very broadly to refer to the political

aspects of internet structures and capacities.

In particular, it framed neutrality as essential to maintaining free speech and consumer choice. The Save the Internet website reads: "On the Internet, consumers are in ultimate control -- deciding between content, applications and services available anywhere, no matter who owns the network. There's no middleman . . . the free and open Internet brings with it the revolutionary possibility that any Internet site could have the reach of a TV or radio station. The loss of Net Neutrality would end this unparalleled opportunity for freedom of expression" (Save the Internet Coalition, 2007). As the debate expanded, consumer and advocacy organizations including Public Knowledge and the Center for Democracy and Technology (CDT) published white papers detailing the need for regulation on Net Neutrality in order to protect freedom of speech (Windhausen, 2006) and to preserve the important qualities of the internet: openness and freedom from control. A CDT white paper argues, "a retreat from neutrality could open the door to both greater government regulation of Internet speech and greater legal responsibility on service providers for the content of third parties' Internet communications" (Center for Democracy and Technology, 2006).

While the main axis of the US debate concentrated on free speech and openness, other attempts to frame policy discourses seemed to understand the principle as protecting consumer choice. The Annenberg Center Principles for Net Neutrality (Aronson et al, 2006) developed by communication scholars and industry specialists, treat neutrality as a competition issue, favouring regulation that enables operators to benefit from their investments, recommending "light touch" regulation that only regulates neutrality in markets where operators have significant market power and sets a minimum standard for broadband above which operators can prioritize third party traffic, and encourages transparency of billing and competitive market entry for a variety of operators.

3. International Regulatory Frameworks

3.1 The United States

The politicized Net Neutrality lobby, particularly through the Save the Internet coalition, mobilized significant popular support for a change in US regulation. The Internet Freedom Preservation Act (2008) is now before Congress, along with several other similar bills. The Act's preamble reads "It is the policy of the United States to maintain the freedom to use for lawful purposes broadband telecommunications networks, including the Internet, without unreasonable interference from or discrimination by network operators, as has been the policy and history of the Internet and the basis of user expectations since its inception" (line 19-25). After this evocation of the inherent freedom of neutral broadband networks, the Act also states that "it is US policy to guard against unreasonable discriminatory favouritism for, or degradation of, content by network operators based upon its source, ownership, or destination on the Internet" (line 13-16). The bill proposes that a series of broadband summits be held in order to determine the best way of maintaining freedom of speech, competition, and consumer choice. The idea that freedom of speech could be protected by legislating how traffic is managed on the internet contrasts with perspectives from other jurisdictions which frame net neutrality as a consumer protection or competition issue.

3.2 The United Kingdom

Ofcom, the UK's telecommunications regulator explicitly states that they do not take responsibility for regulating the internet. However, Ofcom has mandated local loop unbundling, which means that there is the potential for competition at the local service level. This mandating of infrastructure-level competition has meant that net neutrality has not been discussed as a public interest or political issue. Ofcom's (2006) summary of future issues in communication frames Net Neutrality as a consumer issue: "the real issue is about the extent to which network operators should be free to offer (and charge for) differentiated levels of service to access their networks" (Richards et al. 2006 p. 4). From Ofcom's perspective, by mandating local loop unbundling, the regulator has gone as far as is necessary in securing equal access for consumers to products and services. Civil society discussion of network neutrality in the UK also uses consumer-based rhetoric. The Open Rights Group, a group of digital advocates, writes that "Currently the people who control the Internet's 'backbone' consider all traffic to effectively have equal rights. All bits going over the network are treated the same by the network in terms of who gets priority " (Open Rights Group 2008).

3.3 The European Union

The European Parliament's Framework Directive on electronic communications lays down the policy objectives and regulatory principles that apply to Net Neutrality. It notes that users should be fully informed about restrictions placed on their service, and that access should not be unreasonably restricted (2002, Recital 3, Article 20 (3b)). The goal of this Article is to protect the rights of consumers to access and distribute content and use the applications of their choice.

In November 2008 the European Commission published new texts on telecommunications reform that mentioned net neutrality for the first time: within a paragraph on consumer rights. The Commission states: "The Commission therefore reaffirms these consumer rights in its modified proposal . . . national telecoms authorities will be able to take action in order to secure minimum quality of service for internet users in order to maintain, if necessary and appropriate, "net neutrality" in Europe. The Commission's modified proposals ensure that any national requirements are set in a consistent way that does not create barriers to the internal market" (European Commission 2008).

The EU is not interested in regulating the mechanisms of networks, but instead applies a general principle of non-restriction, and disclosure of restrictions. These proposals focus on full disclosure to consumers, rather than discussing the issue from a free speech perspective. Andrea Renda, of the Centre for European Policy Studies writes: "A company might abuse its dominant position to block access to a rival, particularly if that dominant company provides both content and Internet service" (2008). He argues that this an issue for post-hoc competition regulation rather than ex ante "neutrality" regulation. This position goes further to solidify the European perspective on Net Neutrality as primarily an issue of competition.

4. Political aspects of the Net Neutrality debate

The politicization of Net Neutrality began by connecting consumer issues with free speech, and has resulted in regulations that draw on both of these framings. However, they continue to raise questions about whether these regulations are an appropriate means of creating the balance between openness and control. Table 1 outlines how technical, political and social aspects of the debate are discussed as either competition issues or free speech issues, and how some political mobilizations conflate these two separate aspects. The bottom row of the table describes the future technical structures that would be favoured by each framing of Net Neutrality.

Table 1: Discourses of Net Neutrality

Frames for Net Neutrality	**Consumer/ Competition issue**	**Free speech issue**
Key discourses	Fair competition, transparency, consumer rights	Equal treatment, freedom, openness, reciprocal communication without the necessity for permission
Legislation	Existing US, UK and EU competition law (EU Universal Service directive 2002)	1996 *ACLU* v *Reno* (First Amendment protection for speech on the internet' US Internet Freedom Preservation Act (2008)
Public mobilizations	Save the Internet campaign; Open Rights Group	Save the Internet campaign, Center for Democracy and Technology
Desirable outcomes	ISPs as bit carriers only	Publicly owned infrastructure using open standards

5. Discussion

The politicization of Net Neutrality in the US and the expansion of the issue into new regulatory contexts confuses the underlying issues of free speech and competition. The Save the Internet coalition's multi-stakeholder position created broad interest in political aspects of neutrality, but by necessity had to include both consumer protection and free speech discourses. However, confusion about how these different issues are related to the original technical principles of open access, end to end networks may weaken the outcomes of this politicization. The internet has matured into an increasingly ubiquitous communication infrastructure, and its function and reach will be contested by diverse stakeholders. At issue among these stakeholders are indeed the issues of control and openness that have always been at the core of debates about the structure and function of the internet – but instead of being discussed primarily by network engineers or international governing bodies such as ICANN or the IETF, a much broader set of stakeholders engages in this debate: from lobby groups to citizens media organizations and even a parodic underground internet art project called "We are the Web" that posted a bizarre pro-Net Neutrality video on YouTube.

This broader mobilization has both advantages and risks. The advantages are the broadening of the discussions about network structures, as evidenced by the variety of different political associations in the chart above. The disadvantages are both the confusion between different political elements, and the superficiality of any resulting policy that does not take technical nuances into account. The broad participation in Net Neutrality mobilizations suggest that network experts and regulators should not expect to make closed-door decisions about regulation or governance of the internet. Further, the existing governance bodies may transform as new forms of advocacy emerge and new stakeholders present themselves. New forms of advocacy about internet infrastructures are likely to be recursive: they are likely to use online platforms and distributed modes of communication/information management to organize around these issues. The next section discusses how the concept of network power can be used to transcend this confusion and understand the deeper issues at stake.

5.1 Network power

The issues underlying the Net Neutrality debate are not only related to fair consumer choice and free speech. They concern how much power certain entities can exert, and what impact that power will have over the long term. Castells (2009) argues that in contemporary network society, the most power is exerted at points of contact (switches) where different spheres of influence overlap. Therefore, the most powerful point for a government or connectivity provider would be closest to the point at which control over infrastructure also intersects with control over media messages and control over finances. The consolidation of this type of power influences the paths of future technological development. As Bar et al. (2008) ask, "If the TNCOs [telecommunication network connection operators, here "operators"] decide to optimize the next

generation infrastructure for video distribution, what are the paths of innovation that will remain open for Web 3.0?" (p. 121). This question highlights the potential impact of network power: a company acting as both a telecom operator and a source of video content would accumulate more network power by optimizing their network to deliver video. This consolidation of power would restrain the paths available to developing alternative forms – minimizing the opportunities for different forms of resistance (counterpower) to develop. Choices about network development are political, not technical, but they require an understanding of the technical possibilities and constraints that underpin network power.

5.2 Network Power in 3 scenarios for the future of the internet

To illustrate, this final section applies the principles of network power to the three scenarios for future network connectivity proposed by Bar, et al (2008). These scenarios project the possible outcomes of three different regulatory regimes for networked communication in the US: in one, net neutrality is prescribed by law, in the second, operators retain the right to prioritize traffic over the network and to inspect packets while the third envisages a pervasive, ubiquitous network of ad-hoc devices. Each scenario contains both positive and negative elements: in the first, investment in telecommunications infrastructure declines as telecom operators become mere bit transmitters and news and feature film content decline as most people get their news from blogs, and the telecom infrastructure is eventually nationalized. In the second, the current broadband duopoly remains, speeds and reliability increase, but political expression and artistic exchanges are constrained by costs of access to higher speed networks. In the third, development the intelligent mesh architecture inspires the development of cars that drive themselves, and other intelligent machines. Media companies create special content for viewing in cars optimized for mesh nodes.

Each of these scenarios also describes a different organization of network power. In the first scenario, network power is concentrated with the government and regulators. Little power is available to the network operators, leaving less incentive to invest in maintaining the infrastructure. Instead, power is distributed to all of the competitive resellers, content producers, and operators of local Wi-Fi networks. This broad distribution of power may inspire innovation, but it may also remove stability from the system.

In the second scenario, where power rests primarily with operators and their associated content providers, the telecommunication system in the US is stabilized by the division of the internet into fast-lane and slow-lane segments. Content providers with the ability to pay gain more network power as they are able to deliver their messages faster and to more profitable markets. Monopolies spanning both network provision and content development become attractive as ways to further consolidate power over both the transfer of information and it content and meaning.

The third scenario illustrates how network power might operate in connection with a distributed, open standards based communication infrastructure. While social filtering means that diverse content and ideas can all find their audiences, no matter how small – representing a radical distribution of network power - the scenario describes how power eventually becomes concentrated in the devices themselves: these portable devices store large amounts of audio and video data, and advertisers shape public opinion by using product placement on essential software or anti-virus updates.

Network power is not a zero-sum proposition. It is a way of understanding and critiquing the relationships between structural, regulatory, and economic choices. The application of network power to Bar et al's scenarios for various decisions about net neutrality illustrates how regulations, if not well considered, may have unintended consequences that result in problematic imbalances of power. Superficial regulation based on only one political aspect of neutrality may increase the chance of these unintended consequences.

6. Conclusion and Future Research Directions

The Net Neutrality debate is far from over. The US legislation will undoubtedly be vigourously debated in Congress. In other countries such as Canada, stakeholders debate what type of regulation to develop while gathering data about non-neutral practices (Parsons, 2009).

Debates about network neutrality reflect a key phase in debates about openness and control of communication networks. As network infrastructure begins to underpin and connect with many other sources of power (including market power (Sassen, 2001), media power (Couldry and Curran 2003), spatial (Zook, 2004; Forlano, 2008) and political power (Papacharissi, 2002; Calhoun, 1998; Dean, 2002) these debates become more public. Instead of operating only at the level of standards, they become sites for battles of words. The battles of words are not less important: the structure of not only networks, but much of society may be at stake in debates about network neutrality. The decisions made must balance the consolidation and distribution of network power, through code and through regulation. Important and pressing questions remain about how best to achieve this balance across the global internet within individual regulatory regimes, and in the context, particularly as network power shifts from the Western nations discussed in this paper to emerging powers such as India and China.

The move towards distributed processing and storage of information (sometimes called "cloud computing) also introduces possible shifts in network power. Future research could focus on the influence of different regulatory regimes on the global function of the internet, or investigate

the implications of Net Neutrality on developing infrastructures like mobile internet services or cloud computing.

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