



1-28-2020

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Recommended Citation

Buresh, D. L. (2020). Would John Rawls support or reject net neutrality?. *IJCMS*, 6 (a). Retrieved from https://touro scholar.touro.edu/tuw_pubs/16

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RESEARCH ARTICLE

WOULD JOHN RAWLS SUPPORT OR REJECT NET NEUTRALITY?

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ARTICLE INFO

Received 13th October, 2019
Received in revised form 11th
November, 2019
Accepted 8th December, 2019
Published online 28th January, 2020

Keywords:

John Rawls
Net Neutrality
Open Internet
Telecommunications Act of 1996

ABSTRACT

This paper examines net neutrality with respect to John Rawls' principles of greatest liberty and equality. According to Rawls, a government can restrict liberty for the sake of liberty. The paper examines seven arguments in favor of net neutrality, including competition and innovation, data control, the end-to-end principle, preventing pseudo services, preserving standards of the Internet, the rights and freedoms in a digital world, and user prejudice against slow loading websites, arguing that Rawls would support these arguments. The essay discusses eight arguments against net neutrality, including counterweight to the non-neutrality of servers, discouraging competition, Internet traffic not allocated efficiently, Internet access not available to the poor, investment reductions, possible increases in taxes, significant growth in investment competition, and unnecessary regulations. It is projected that Rawls would be opposed to these arguments. The article concludes by stating that Rawls would change the positions argued in this paper if the reasons presented by net neutrality opponents were logical, convincing, and maximized the benefits to the least advantaged. The paper suggests that Rawls would conclude that net neutrality is a fair and reasonable mechanism to help the poor, or in some sense, where the highest good goes to the highest number.

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INTRODUCTION

This paper is sub-divided into eight sections. The first section defines net neutrality and outlines the principles of net neutrality. The second section provides a short history of net neutrality and how the Internet has evolved in a short period. The third section offers seven arguments that favor net neutrality. The fourth section lists five different ways that net neutrality can be violated. The fifth section gives eight counterarguments, arguing that net neutrality has significant economic disadvantages. The "sixth" briefly highlights Rawls' position on liberty. This seems to be the natural place to introduce Rawls' philosophy. In the seventh section, the essay attempts to interweave Rawls' philosophy with the arguments for and against net neutrality. Finally, the eighth section concludes the essay, offering additional insights and comments regarding this controversial topic.

DEFINITION OF NET NEUTRALITY

According to the Merriam-Webster's Dictionary, net neutrality is "the idea, principle, or requirement that Internet service providers should or must treat all Internet data as the same

regardless of its kind, source, or destination."¹ According to the principles of net neutrality, Internet services providers cannot discriminate or charge different fees based on user, content, website, platform, application, type of equipment attached, or communication method.² For example, under net neutrality, Internet service providers could not intentionally block, slow down, or charge a premium for displaying particular websites and online content.³ The regulations are known as "common carrier" regulations.⁴ However, Internet service providers are

¹ *Net Neutrality*, Merriam Webster's Dictionary, n.d., <https://www.merriam-webster.com/dictionary/net%20neutrality> (last visited August 15, 2018).

² Angele A. Gilroy, Access to Broadband Networks: The Net Neutrality Debate (Report), *Congressional Research Service*, June 22, 2018, <https://fas.org/sgp/crs/misc/R40616.pdf> (last visited August 16, 2018).

³ Id.
⁴ Cory Jensen, Net Neutrality, *Gale Virtual Reference Library*, 2016, http://go.galegroup.com/ps/i.do?p=GVRL&u=mcc_pv&id=GALE|CX3629100443&v=2.1&it=r&sid=GVRL&asid=4d1b573d (last visited August 16, 2018).

permitted to sell opt-in/opt-out to their customers.⁵ Filtering sensitive content for minors can also be achieved under net neutrality rules.⁶ The idea behind net neutrality rules is to protect against misuse.⁷

The term “net neutrality” was created in 2003 by Tim Wu, at that time, a University of Virginia law professor.⁸ The idea behind the term was to extend the notion of a common carrier, much like how telephone systems are characterized.⁹ Some principles that are related to net neutrality include:

Device neutrality – Under this device-neutral principle, a user should be able to use or remove applications of their choosing;¹⁰

Dumb pipe – The term refers to a network where there is little or no control or management regarding how users employ the network;¹¹

End-to-end principle – Under this principle, a communications protocol operation should occur either at the end-points of a communication system or as close to the resources being employed as possible;¹²

Open Internet – All of the Internet resources should be should be effortlessly available to individuals, companies, and other organizations;¹³

Over-provisioning – Here, a network should have more bandwidth than the data that is entering the system;¹⁴ and

Traffic shaping – The idea behind traffic shaping is to optimize performance, decrease Internet response times or

latency, and increase bandwidth by delaying the transmission of packets under some circumstances.¹⁵

A SHORT HISTORY OF THE INTERNET AND NET NEUTRALITY

On October 29, 1969, the first interconnected network was established between the University of California, Los Angeles, and the Stanford Research Center.¹⁶ It was entitled ARPANET.¹⁷ In 1973, Robert Kahn of the Defense Advanced Research Projects Agency (“DARPA”), Vinton Cerf from Stanford University, and others developed the TCP/IP protocol, the foundation of the modern-day internet.¹⁸

In the 1980s, TCP/IP went global when the *Organisation européenne pour la recherche nucléaire* (“CERN”)¹⁹ installed TCP/IP to connect its computer systems and workstations. In 1994, Marc Andreessen established Netscape Communication Corp. released Netscape Navigator, its Internet browser.²⁰ During the early 2000s, mobile cellular telephones provided virtual universal access to the Internet, and social media was born.²¹ All during this time, there was almost no regulation by the government of the Internet.

On April 23, 2014, *The New York Times* reported that the Federal Communications Commission (“FCC”) backed a new rule whereby Internet content providers would be given the ability by cable companies to fast-track their content.²² On May 15, 2014, the FCC decided that the following two options were available: (1) permit fast and slow broadband lines, abandoning net neutrality, and (2) reclassify broadband as a telecommunication service, thereby preserving net neutrality.²³

⁵ Id.

⁶ Id.

⁷ Id.

⁸ Tim Wu, Network Neutrality, Broadband Discrimination, 2 *Journal on Telecommunications and High Technology Law*, 2003, 141-76, http://www.jthtl.org/content/articles/V2I1/JTHTLv2i1_Wu.PDF (last visited August 16, 2018).

⁹ Id.

¹⁰ George Ou, Now they want Device Neutrality?, *High Tech Forum*, April 1, 2011, <http://hightechforum.org/now-they-want-device-neutrality/> (last visited August 17, 2018).

¹¹ Adam Wajnberg, What does Dumb Pipe mean, and why do you care?, *Compare Broadband*, January 18, 2013, <https://www.comparebroadband.com.au/broadband-articles/latest-news-id3/what-does-dumb-pipe-mean-and-why-do-you-care-id1009/> (last visited August 17, 2018).

¹² Jerome H. Saltzer, David P. Reed, & David D. Clark, End-To-End Arguments In System Design, *ACM Transactions in Computer Systems*, November 1984, <http://web.mit.edu/Saltzer/www/publications/endtoend/endtoend.pdf> (last visited August 17, 2018).

¹³ Tom Wheeler, What is the Open Internet Rule?, *Brookings Institute*, September 15, 2017, <https://www.brookings.edu/blog/unpacked/2017/09/15/what-is-the-open-internet-rule/> (last visited August 17, 2018).

¹⁴ SSD Over-Provisioning And Its Benefits, *Seagate*, n.d., <https://www.seagate.com/tech-insights/ssd-over-provisioning-benefits-master-ti/> (last visited August 17, 2018).

¹⁵ Traffic shaping, *Computer Hope*, April 26, 2017, <https://www.computerhope.com/jargon/t/traffic-shaping.htm> (last visited August 17, 2018).

¹⁶ Jonathan Strickland, How ARPANET Works, *Computer Is Us*, n.d., <http://computer-is-us.blogspot.com/2008/09/how-arpamet-works.html> (last visited August 17, 2018).

¹⁷ Id.

¹⁸ Barry M. Leiner, Vinton G. Cerf, David D. Clark, Robert E. Kahn, Leonard Kleinrock, Daniel C. Lynch, Jon Postel, Larry G. Roberts, & Stephen Wolff, Brief History of Internet, *Internet Society*, 1997, https://www.internetsociety.org/wp-content/uploads/2017/09/ISOC-History-of-the-Internet_1997.pdf (last visited August 17, 2018).

¹⁹ This is the French name for the *European Organization for Nuclear Research*, commonly known as “CERN”.

²⁰ Sean Cooper, Whatever happened to Netscape?, *engadget*, May 10, 2014, <https://www.engadget.com/2014/05/10/history-of-netscape/> (last visited August 17, 2018).

²¹ Ken Hu, How can we achieve universal internet access?, *World Economic Forum*, September 28, 2015, <https://www.weforum.org/agenda/2015/09/how-can-we-achieve-universal-internet-access/> (last visited August 17, 2018).

²² Edward Wyatt, F.C.C., in a Shift, Backs Fast Lanes for Web Traffic, *The New York Times*, April 23, 2014, <https://www.nytimes.com/2014/04/24/technology/fcc-new-net-neutrality-rules.html> (last visited August 17, 2018).

²³ Editorial, Searching for Fairness on the Internet, *The New York Times*, May 15, 2014,

On February 26, 2015, the FCC decided in favor of net neutrality, applying Title II (common carrier) of the Communications Act of 1934 and Section 706 of the Telecommunications Act of 1996 to the Internet.²⁴ On April 13, 2015, the FCC officially released its new net neutrality regulations.²⁵ On December 14, 2017, the FCC rescinded its March 12, 2015 decision regarding its net neutrality rules.²⁶

ARGUMENTS IN FAVOR OF NET NEUTRALITY

The arguments in favor of net neutrality have much to do with preserving the Internet status quo and with ensuring that the Internet is not a vehicle for increased monopoly by the Internet service providers. The arguments for net neutrality include:

- ✓ Competition and innovation;
- ✓ Data control;
- ✓ End-to-end principle;
- ✓ Preventing pseudo services;
- ✓ Preserving the standards of the Internet;
- ✓ Rights and freedoms in a digital world; and
- ✓ User prejudice against websites that load slowly.

The supporters of net neutrality include consumer advocates such as Lawrence Lessig²⁷ and former President Barack Obama;²⁸ human rights organizations such as the American Civil Liberties Union (“ACLU”)²⁹ and the Electronic Frontier Foundation (“EFF”);³⁰ and Internet application companies such as Amazon,³¹ Google³², and Microsoft.³³

COMPETITION AND INNOVATION

Advocates of net neutrality opine that if cable companies could demand premium delivery rates based on an individual’s or company’s ability to pay, the result would be an exploitative business model because Internet service providers could engage in fraudulent billing and price gouging without FCC oversight.³⁴ By allowing ISPs to charge for access to the Internet, ISPs could block the websites of its competitors and refuse entrance to the Internet to those who were too poor to pay.³⁵ In effect, by allowing ISPs to charge for access, the government is creating an oligopoly where the Internet would resemble cable TV where large monopolistic companies are the norm.³⁶ For example, in 2005 when YouTube was a startup company, had it experienced a limited supply of Internet services, it is unlikely that the company would have been successful.³⁷

DATA CONTROL

The proponents of net neutrality overwhelming want cable companies to be designated as common carriers.³⁸ This would prevent cable companies from filtering, interrupting, or screening the content of the Internet short of a court order.³⁹ By classifying a cable company as a common carrier, the FCC would have the legal authority to enforce net neutrality.⁴⁰ In other words, the FCC would be the government agency tasked to protect net neutrality instead of it being at the mercy of the free market.⁴¹ The reason is that capitalism has a historical tendency to evolve from a competitive environment into

<https://www.nytimes.com/2014/05/16/opinion/searching-for-fairness-on-the-internet.html> (last visited August 17, 2018).

²⁴ Rebecca R. Ruiz & Steve Lohr, In Net Neutrality Victory, F.C.C. Classifies Broadband Internet Service as a Public Utility, *The New York Times*, February 26, 2015, <https://www.nytimes.com/2015/02/27/technology/net-neutrality-fcc-vote-internet-utility.html> (last visited August 17, 2018).

²⁵ Don Reisinger, Net neutrality rules get published – let the lawsuits begin, *CNET*, April 13, 2015, <https://www.cnet.com/news/fccs-net-neutrality-rules-hit-federal-register-lawsuit-underway/> (last visited August 17, 2018).

²⁶ Cecilia Kang, F.C.C. Repeals Net Neutrality Rules, *The New York Times*, December 14, 2017, <https://www.nytimes.com/2017/12/14/technology/net-neutrality-repeal-vote.html> (last visited August 17, 2018).

²⁷ Lawrence Lessig & Robert W. McChesney, No Tolls on The Internet, *The Washington Post*, June 8, 2006, <http://www.washingtonpost.com/wp-dyn/content/article/2006/06/07/AR2006060702108.html> (last visited August 17, 2018).

²⁸ Obama backs net neutrality plan, *BBC News*, November 10, 2014, <https://www.bbc.com/news/technology-29990453> (last visited August 17, 2018).

²⁹ What Is Net Neutrality?, *American Civil Liberties Union*, December 2017, <https://www.aclu.org/issues/free-speech/internet-speech/what-net-neutrality> (last visited August 17, 2018).

³⁰ Katharine Trendacosta, Net Neutrality Did Not Die Today, *Electronic Frontier Foundation*, April 25, 2018,

<https://www.eff.org/deeplinks/2018/04/net-neutrality-did-not-die-today> (last visited August 17, 2018).

³¹ Defeat for net neutrality backers, *BBC News*, June 9, 2006, <http://news.bbc.co.uk/2/hi/technology/5063072.stm> (last visited August 17, 2018).

³² Todd Shields, Microsoft, Google Back Strong Net Neutrality Rules, *Bloomberg*, July 17, 2017, <https://www.bloomberg.com/news/articles/2017-07-17/microsoft-google-back-strong-net-neutrality-on-broadband-firms> (last visited August 17, 2017).

³³ Id.

³⁴ Gigi Sohn, The FCC’s plan to kill net neutrality will also kill internet privacy, *The Verge*, April 11, 2017, <https://www.theverge.com/2017/4/11/15258230/net-neutrality-privacy-ajit-pai-fcc> (last visited August 17, 2018).

³⁵ Lawrence Lessig & Robert W. McChesney, *supra*.

³⁶ Id.

³⁷ Ali Breland, What killing net neutrality means for the internet, *The Hill*, April 28, 2017, <http://thehill.com/policy/technology/331012-what-killing-net-neutrality-means-for-the-internet> (last visited August 17, 2018).

³⁸ Lawrence Lessig & Robert W. McChesney, *supra*.

³⁹ PETER PHILLIPS, CENSORED 2007: THE TOP 25 CENSORED STORIES (CENSORED: THE NEWS THAT DIDN’T MAKE THE NEWS -- THE YEAR’S TOP 25 CENSORED STORIES) (Seven Stories Press 2007).

⁴⁰ Adi Robertson, Federal court strikes down FCC net neutrality rules, *The Verge*, January 14, 2014, <https://www.theverge.com/2014/1/14/5307650/federal-court-strikes-down-net-neutrality-rules> (last visited August 17, 2018).

⁴¹ Id.

monopolies.⁴² By requiring the FCC to be the guardian of net neutrality, these evolutionary market forces would remain at bay.⁴³

END-TO-END PRINCIPLE

For net neutrality to be useful, all content must be treated equally, moving at the same speed throughout the Internet.⁴⁴ Under the end-to-end principle, the Internet is a “dumb network,”⁴⁵ where there is neither intermittence nor scarcity.⁴⁶ What this means is that the Internet remains an information highway, where the economic assumptions of scarcity do not apply.⁴⁷ Even so, when checking inbound data for errors, there are instances of intermittence and scarcity, but the reason is technological rather than economic.⁴⁸

PREVENTING PSEUDO SERVICES

Pseudo services are violations of net neutrality that occur when cable companies leverage the quality of service to extract a competitive advantage.⁴⁹ For example, when Netflix proclaimed that it was paying Comcast and Verizon to avoid *throttling*,⁵⁰ these payments can appear to be extortion payments to achieve faster Internet speed, mainly when there is no reasonable technological reason for the slowdown.⁵¹

PRESERVING THE STANDARDS OF THE INTERNET

There are four layers to the TCP/IP protocol, including the network access layer, the internet layer, the transport layer, and the application layer.⁵² The network access layer is the lowest

layer of the TCP/IP protocol stack.⁵³ It encapsulates IP packets to be transmitted and relates IP address to physical MAC addresses.⁵⁴ The internet layer creates the IP packet which contains both the source and destination addresses.⁵⁵ The transport layer ensures reliable transmission of the IP packets and warrants that the packets are transmitted correctly.⁵⁶ The application layer provides network services to applications such as browsers.⁵⁷ The application guarantees that the desired webpage appears on a user’s display.⁵⁸ The advocates of net neutrality have introduced and sponsored legislation that prevents cable companies from altering the TCP/IP protocol for economic gain.⁵⁹

RIGHTS AND FREEDOMS IN A DIGITAL WORLD

Proponents of net neutrality argue that a neutral Internet promotes free speech, which in turn fosters democratic participation of the citizenry.⁶⁰ Fundamentally, net neutrality means that everyone has equal access to one another, independent of their ability to pay.⁶¹ According to the advocates of net neutrality, the Internet should not be akin to *Citizens United*, where the ability to speak is directly proportional to the ability to pay for the speech.⁶² In other words, net neutrality presumes that all people are equal in their ability to speak and that this fundamental First Amendment right should be the foundation of the Internet.⁶³

USER PREJUDICE AGAINST WEBSITES THAT LOAD SLOWLY

Like Tom Cruise’s character Maverick in the movie entitled, *Top Gun*,⁶⁴ Internet users have a need for speed.⁶⁵ Individuals

⁴²Barry C. Lynn, America’s Monopolies Are Holding Back the Economy, *The Atlantic*, February 22, 2017, <https://www.theatlantic.com/business/archive/2017/02/antimonopoly-big-business/514358/> (last visited August 17, 2018).

⁴³Id.

⁴⁴Lawrence Lessig & Robert W. McChesney, *supra*.

⁴⁵Adam Wajnberg, *supra*.

⁴⁶Hazel Henderson, Information-The World’s New Currency Isn’t Scarce, 8 *World Business Academy Perspectives* 2, 1994, <https://worldbusiness.org/wp-content/uploads/2013/04/Information-The-Worlds-New-Currency-Isnt-Scarce.pdf> (last visited August 17, 2018).

⁴⁷Id.

⁴⁸Jerome H. Saltzer, David P. Reed, & David D. Clark, *supra*.

⁴⁹Alok Bhardwaj, Against Fee-Based and other Pernicious Net Prejudice: An Explanation and Examination of the Net Neutrality Debate, *Scribd*, November 27, 2007, <https://www.scribd.com/document/938752/Against-Fee-Based-and-other-Pernicious-Net-Prejudice-An-Explanation-and-Examination-of-the-Net-Neutrality-Debate> (last visited August 17, 2018).

⁵⁰Brian Nadel, Internet Throttling: What Is It and What You Can Do About It, *tom’s guide*, February 16, 2018, <https://www.tomsguide.com/us/internet-throttling-what-to-do,review-5154.html> (last visited August 17, 2018).

⁵¹Id.

⁵²LO4: Implement Basic Networks and Security, *HN Computing*, n.d., https://www.sqa.org.uk/e-learning/HardOSEss04CD/page_06.htm (last visited August 16, 2018).

⁵³Id.

⁵⁴Id.

⁵⁵Id.

⁵⁶Id.

⁵⁷Id.

⁵⁸Id.

⁵⁹Id.

⁶⁰ Julian Hattem, Franken: Net neutrality is ‘First Amendment issue of our time’, *The Hill*, July 8, 2014, <http://thehill.com/policy/technology/211607-franken-net-neutrality-is-first-amendment-issue-of-our-time> (last visited August 17, 2018).

⁶¹Lawrence Lessig & Robert W. McChesney, *supra*.

⁶²See *Citizens United v. Federal Election Commission*, 558 U.S. 310 (2010) Here, the Court opined that the Freedom of the Press clause of the First Amendment protects associations of individuals (i.e., corporations and unions) as well as individual speakers; and that the First Amendment does not prohibit speech based on the identity of the speaker. Although not specifically stated in *Citizens United*, the implication of the opinion is that corporations which have deep can promote a particular point of view, usually the view of the Board of Directors or the Chief Executive Officer.

⁶³Lawrence Lessig & Robert W. McChesney, *supra*.

⁶⁴ In the movie entitled, *Top Gun*, Tom Cruise’s character Maverick is riding a motor as fast as he can as fighter jet is landing in the background. As the jet is landing, Maverick boldly proclaims, “I have a need for speed.”

who become accustomed to a fast Internet have no desire to be relegated to the “slow lane.”⁶⁶ Research indicates that as users adapt to fast Internet speeds, they become increasingly intolerant of delays.⁶⁷ If delays were to occur because net neutrality is violated, the evidence demonstrates that people become quickly impatient.⁶⁸ The results can be dramatic financial downturns for companies that are the victims of slow-loading websites, regardless of whether the firm is responsible for the declining performance.⁶⁹

Potential Net Neutrality Issues for Discrimination

Before discussing the arguments against net neutrality, it is essential to appreciate how net neutrality can be compromised. The following are the net neutrality issues involving the different types of discrimination that may occur:

1. Discrimination by internet protocol;
2. Discrimination by IP address;
3. Discrimination favoring private networks;
4. Discrimination favoring peering; and
5. Discrimination favoring fast-loading websites.

Discrimination by Internet Protocol

Discrimination by internet protocol is the act of promoting or obstructing Internet data packets based on the communication protocol being employed.⁷⁰ The dominant Internet protocol in use today is IPv4, which is applied when accessing websites.⁷¹ Because of the sheer volume of the Internet websites in existence today, IPv6 was created to expand the number of Internet protocol addresses that are available.⁷² A third Internet protocol that is used by videos that are transmitted over the Internet is the UDP protocol.

In contrast to IPv4 and IPv6, the packets in the UDP protocol need not be received in the exact order in which they were sent.⁷³ A fourth protocol is the FTP protocol that is used when sending and receiving files over the Internet.⁷⁴ If the FCC permits discrimination by Internet protocol, the Internet service providers (“ISP”) can charge different transmission rates depending on which protocol is being employed.

In 2009, the FCC sued Comcast for illegally preventing customers from employing BitTorrent, a popular file-sharing program.⁷⁵ Although Comcast did not admit any wrongdoing, the company settled for \$16 million.⁷⁶ In 2010, a U.S. Court of Appeals overturned the District Court decision, ruling for Comcast.⁷⁷ Incredibly, in October 2011, *Measurement Labs* confirmed that Comcast had effectively immobilized the BitTorrent throttling procedures.⁷⁸

Discrimination by IP Address

Each website on the Internet either has a unique IP address, or a router temporarily assigns the IP address.⁷⁹ A router acts as a Dynamic Host Configuration Protocol (“DHCP”) server that assigns IP, Data Name Server (“DNS”), and default gateway addresses to all computer that is connected to the machine.⁸⁰ Some IP addresses are permanently assigned to specific websites.⁸¹ For example, the IP address of ABCNews.com is 199.181.132.248, while the IP address of Utica College is 72.237.4.113. These are fixed IP addresses.⁸²

⁶⁵How Much Internet Speed Do You Need? Data Speeds Deciphered!, *Leap Frog*, March 4, 2018, <https://leapfrogservices.com/how-much-internet-speed-do-you-need-data-speeds-deciphered/> (last visited August 17, 2018).

⁶⁶Christopher Muther, Instant gratification is making us perpetually impatient, *The Boston Globe*, February 2, 2013, <https://www.bostonglobe.com/lifestyle/style/2013/02/01/the-growing-culture-impatience-where-instant-gratification-makes-crave-more-instant-gratification/q8tWDNGeJB2mm45fQxtTQP/story.html> (last visited August 17, 2018).

⁶⁷Id.

⁶⁸Id.

⁶⁹Roger Dooley, Don't Let a Slow Website Kill Your Bottom Line, *Forbes*, December 4, 2012, <https://www.forbes.com/sites/rogerdooley/2012/12/04/fast-sites/#3572d80553cf> (last visited August 17, 2018).

⁷⁰Saul Hansell, F.C.C. vote sets precedent on unfettered web usage, *The New York Times*, August 2, 2008, https://www.nytimes.com/2008/08/02/technology/02fcc.html?_r=1&mtrref=en.wikipedia.org&gwh=6B186BA99500BC34D2D63E2E487BF246&gwt=pay (last visited August 16, 2018).

⁷¹CHARLES M. KOZIEROK, *TCP/IP GUIDE* (No Starch Press, Inc. 2005).

⁷²Id.

⁷³ Id.

⁷⁴ Id.

⁷⁵ M. Chris Riley & Ben Scott, Deep packet inspection: The end of the Internet as we know it, *FreePress.net*, March 2009, https://web.archive.org/web/20160304051141/http://www.freepress.net/sites/default/files/fp-legacy/Deep_Packet_Inspection_The_End_of_the_Internet_As_We_Know_It.pdf (last visited August 16, 2018) and Geoff Duncan, Comcast to pay \$16 million for blocking P2P applications, *Digital Trends*, December 23, 2009, <https://www.digitaltrends.com/computing/comcast-to-pay-16-million-for-blocking-p2p-applications/> (last visited August 16, 2018).

⁷⁶ Geoff Duncan, *supra*.

⁷⁷ Amy Schatz, Court backs Comcast over FCC on ‘net neutrality’, *The Wall Street Journal*, April 7, 2010, <https://www.wsj.com/articles/SB10001424052702303411604575167782845712768> (last visited August 16, 2018).

⁷⁸ David Kravets, Comcast no longer choking file sharers' connections, study says, *Wired*, October 2, 2011, <https://www.wired.com/2011/10/bittorrent-throttling-comcast/> (last visited August 16, 2018).

⁷⁹ Charles M. Kozierok, *supra*.

⁸⁰ Id.

⁸¹ Id.

⁸² To discover the IP address of ABCNews.com or Utica.edu, one should bring up a DOS window using the “CMD” command in the *Search programs and files* edit box at the bottom of the *Start* menu. Once the DOS window appears, at the “C:” prompt, execute the command “ping www.abcnews.com” or “ping www.utica.edu.” The IP address should immediately appear in the DOS window.

If an Internet service provider were to discriminate based on IP address, what would be accomplished is that a user would pay a higher fee for accessing one or more IP addresses or websites than the user would pay if he or she accessed another IP address or site.⁸³ Probably for ease of billing IP addresses or websites would be classified based upon criteria established by the Internet service provider. For example, non-profit educational institutions could be one category of IP addresses or websites, online news websites (e.g., ABC News, Reuters, etc.) could be another category.

The problem with IP address discrimination occurs when Internet service providers want to promote their Internet services rather than the Internet services of their competition.⁸⁴ For example, if the Internet service provider owned Fox News and it desired to promote its conservative political perspective, it could charge its customers more money if they accessed MS NBC or the Huffington Post websites, both of which have a noticeably politically liberal and progressive persuasion. The problem with IP address discrimination is that it probably violates the Sherman Anti-Trust Act as amended because such behavior by an Internet service provider could be construed to be an example of predatory pricing and unfair trade practices, both of which are illegal.⁸⁵ These examples are only a few of the IP address discrimination possibilities. There are many more examples, being limited only by human creativity.

DISCRIMINATION FAVORING PRIVATE NETWORKS

Discrimination favoring private networks occurs when Internet service providers discriminate based on what kinds of data are counted when calculating bandwidth caps.⁸⁶ For example, Comcast and Microsoft agreed that users could access televised programs through the Xfinity application on their Xbox 360 box without hitting their bandwidth limit.⁸⁷ However, Comcast did not provide the same courtesy to Netflix, HBO Go, or Hulu because Comcast runs Xfinity for Xbox as a private Internet protocol network.⁸⁸ When one looks back at history, this is the same behavior that John D. Rockefeller (Oil Baron) used with the help of Cornelius Vanderbilt (Railroad Baron) to starve out his competition and create the Standard Oil Trust of the late 19th Century.⁸⁹

DISCRIMINATION FAVORING PEERING

There is some disagreement regarding whether “peering” is a net neutrality issue.⁹⁰ Peering is a voluntary interconnection whose function is to exchange data between separate networks. In what is known as “settlement-free peering,” “bill-and-keep,” or “sender-keeps-all” peering, one party does not pay another party but generates revenue from only its customers.⁹¹

In 2014, Netflix signed an agreement with Comcast to improve its service quality by increasing transmission speeds.⁹² In 2013, Netflix users experienced a 25 percent drop in their connection speeds.⁹³ After the contract was signed, Netflix users observed a 66 percent increase in performance.⁹⁴ Although Netflix came to a similar arrangement with Verizon, in 2014 the connection speed for DSL users connected to Netflix dropped to less than one megabit per second.⁹⁵ Netflix then displayed a message on its website indicating that users accessing Netflix via Verizon might experience very slow connection speeds.⁹⁶ Verizon obtained a cease order against Netflix. A senior executive in Verizon probably had no objections to breaching the company’s contract with Netflix.

DISCRIMINATION FAVORING FAST-LOADING WEBSITES

Because users have little or no tolerance for slow-loading websites, when a site does not appear promptly, many individuals close the window in frustration.⁹⁷ Performance is the name of the game. In 2009, *Foster Research* discovered that online shoppers want the website to appear instantaneously.⁹⁸ Another study reported that a one-second delay in loading a site results in a 16 percent decline in customer satisfaction, in 11 percent fewer hits, and a seven percent conversion loss.⁹⁹ For

⁹⁰ Joshua Brustein, (2014, *Netflix’s deal With Comcast isn’t about net neutrality—Except that it is*, Bloomberg March 4, 2014, <https://www.bloomberg.com/news/articles/2014-02-24/netflix-s-deal-with-comcast-isn-t-about-net-neutrality-except-that-it-is> (last visited August 16, 2018).

⁹¹ Ryan Waniata, Comcast jumps up in Netflix speed rankings after payola-style agreement, *Digital Trends*, April 14, 2014, <https://www.digitaltrends.com/home-theater/comcast-jumps-netflix-speed-rankings-payola-style-agreement/> (last visited August 16, 2018).

⁹² Id.

⁹³ Id.

⁹⁴ Id.

⁹⁵ Ryan Waniata, Netflix calls Verizon out on the big red screen [Update: Netflix backs off], *Digital Trends*, June 9, 2014, <https://www.digitaltrends.com/home-theater/netflix-calls-verizon-right-big-red-screen/> (last visited August 16, 2018).

⁹⁶ Id.

⁹⁷ Steve Lohr, Impatient web users flee slow-loading sites, *The New York Times*, February 29, 2012, <https://www.nytimes.com/2012/03/01/technology/impatient-web-users-flee-slow-loading-sites.html?mtrref=en.wikipedia.org&gwh=725DE54F92B39ADE980640F1F4147EB7&gwt=pay> (last visited August 16, 2018).

⁹⁸ Id.

⁹⁹ Roger Dooley, Don’t let a slow website kill your bottom line, *Forbes*, December 12, 2012,

⁸³ Samantha Masunaga & Jim Puzanghera, Here’s who’ll benefit — and who might not — if net neutrality is repealed as expected, *The Los Angeles Times*, December 13, 2017, <http://www.latimes.com/business/la-fi-net-neutrality-20171213-htlstory.html> (last visited August 16, 2018).

⁸⁴ Id.

⁸⁵ Predatory Pricing, *Investopedia*, n.d., <https://www.investopedia.com/terms/p/predatory-pricing.asp> (last visited August 16, 2018).

⁸⁶ Dan Mitchell, Is Comcast violating net-neutrality rules?, *Fortune*, May 17, 2012, <http://fortune.com/2012/05/16/is-comcast-violating-net-neutrality-rules/> (last visited August 16, 2018).

⁸⁷ Id.

⁸⁸ Id.

⁸⁹ HOWARD ZINN, *A PEOPLE’S HISTORY OF THE UNITED STATES* (HarperCollins Publishers 1999).

innovative startups who are introducing new technologies, slow-loading website results in unnecessary market failure.¹⁰⁰ The consequence is that larger and more mature organizations have a competitive advantage over their smaller counterparts because of increased Internet performance rather than because their products and services are better.¹⁰¹ The outcome is that the market shares of large companies are protected by collateral market forces, leaving a new entrepreneur little opportunity to succeed.¹⁰²

ARGUMENTS AGAINST NET NEUTRALITY

The arguments against net neutrality are typically concerned with the adverse economic consequences of net neutrality. The arguments against net neutrality include:

1. Counterweight to the non-neutrality of servers;
2. Discourages competition;
3. Internet traffic not allocated efficiently;
4. Internet access not available to the poor;
5. Investment reductions;
6. Possible increase in taxes;
7. Significant growth in investment competition; and
8. Unnecessary regulations.

The opponents of net neutrality are made up of Internet service providers and broadband telecommunications companies such as AT&T,¹⁰³ Comcast,¹⁰⁴ Time-Warner,¹⁰⁵ and Verizon;¹⁰⁶ computer hardware manufacturers such as Cisco,¹⁰⁷ Intel,¹⁰⁸ International Business Machines (“IBM”),¹⁰⁹ and Nokia;¹¹⁰

<https://www.forbes.com/sites/rogerdooley/2012/12/04/fast-sites/#6af5735253cf> (last visited August 16, 2018).

¹⁰⁰ Patrick Henry, Why some startups succeed (and why most fail), *Entrepreneur*, February 18, 2017, <https://www.entrepreneur.com/article/288769> (last visited August 16, 2018).

¹⁰¹ Id.

¹⁰² Id.

¹⁰³ Aaron Pressman, Net Neutrality Repeal Stirs Passions on Both Sides, *Fortune*, December 14, 2017, <http://fortune.com/2017/12/14/net-neutrality-verizon-netflix-comcast/> (last visited August 18, 2018).

¹⁰⁴ Id.

¹⁰⁵ Marguerite Reardon, Why net neutrality supporters are cringing at the AT&T-Time Warner merger, *CNET*, June 15, 2018, <https://www.cnet.com/news/why-net-neutrality-supporters-are-cringing-at-the-at-t-time-warner-merger/> (last visited August 18, 2018).

¹⁰⁶ Jon Brodtkin, Verizon has a new strategy to undermine online privacy and net neutrality, *ARS Technica*, October 31, 2017, <https://arstechnica.com/tech-policy/2017/10/verizon-asks-fcc-to-preempt-any-state-privacy-or-net-neutrality-law/> (last visited August 18, 2018).

¹⁰⁷ Buster Hein, IBM, Intel and Cisco come out against net neutrality, *Cult of Mac*, December 11, 2014, <https://www.cultofmac.com/305821/ibm-intel-cisco-come-net-neutrality/> (last visited August 18, 2018).

¹⁰⁸ Id.

¹⁰⁹ Id.

¹¹⁰ Richard Trenholm, Nokia knocks Net neutrality: Self-driving cars 'won't get the service you need', *CNET*, March 1,

economists such as the late Gary Becker,¹¹¹ and other well-known economists;¹¹² and notable technologists such as the TCP/IP inventor Bob Kahn,¹¹³ Netscape founder Marc Andreessen,¹¹⁴ and Sun Microsystems founder Scott McNealy.¹¹⁵ Some of the civil rights groups against net neutrality include the National Urban League¹¹⁶ and Jesse Jackson's Rainbow/PUSH.¹¹⁷ These organizations feel that net neutrality harms people of color in underserved areas.¹¹⁸

COUNTERWEIGHT TO THE NON-NEUTRALITY OF SERVERS

The argument presented by the non-neutral advocates observes that the Internet was never a level playing field.¹¹⁹ These individuals pointed out that big companies possessed a performance advantage when compared to smaller competitors.¹²⁰ If non-net-neutrality results in reduced prices for lower access levels, then this would meet the needs of people who desire different tiers of service, thereby ensuring more equality rather than less equality.

2015, <https://www.cnet.com/news/nokia-knocks-net-neutrality-self-driving-cars-wont-get-the-service-you-need/> (last visited August 18, 2018).

¹¹¹ Gary S. Becker, Dennis W. Carlton & Hal S. Sider, Net Neutrality And Consumer Welfare, 6 *Journal of Competition Law & Economics* 3, 497–519, 2010, <https://pdfs.semanticscholar.org/8195/893e84945028efb2f1062ac5aea509b8dfab.pdf> (last visited August 18, 2018).

¹¹² Net Neutrality II, *IGM Forum*, May 6, 2014, <http://www.igmchicago.org/surveys/net-neutrality-ii> (last visited August 18, 2018).

¹¹³ Andrew Orłowski, Father of internet warns against Net Neutrality, *The Register*, January 18, 2007, https://www.theregister.co.uk/2007/01/18/kahn_net_neutrality_warning/ (last visited August 18, 2018).

¹¹⁴ Mathew Ingham, Marc Andreessen says more net neutrality laws are not the answer, *GigaOM*, February 23, 2014, <https://gigaom.com/2014/02/24/marc-andreessen-says-more-net-neutrality-laws-are-not-the-answer/> (last visited August 18, 2018).

¹¹⁵ Brian Edmonson, The Case Against Net Neutrality, *The Balance*, September 9, 2016, <https://www.thebalancesmb.com/the-case-against-net-neutrality-2531680> (last visited August 18, 2018).

¹¹⁶ Id.

¹¹⁷ Id.

¹¹⁸ Steven Melendex, Why civil rights groups are siding with telecom giants in the net neutrality fight, *Fast Company*, n.d., <https://www.fastcompany.com/4030687/why-civil-rights-groups-are-siding-with-telecom-giants-in-the-net-neutrality-fight> (last visited August 18, 2018).

¹¹⁹ Richard Patterson, The internet is not a level playing field, *Smart Industry*, May 25, 2017, <https://www.smartindustry.com/blog/smart-industry-connect/the-internet-is-not-a-level-playing-field/> (last visited August 18, 2018).

¹²⁰ Samuel Edwards, 3 Companies Using Speed as a Competitive Advantage, *Entrepreneur*, January 5, 2016, <https://www.entrepreneur.com/article/253372> (last visited August 18, 2018).

DISCOURAGES COMPETITION

According to small Internet service providers, net neutrality is forcing these organizations to raise prices, delay the expansion of services, or both.¹²¹ Net neutrality is anathema to small competitors because they typically have no in-house counsel, nor do they have the financial resources to purchase outside counsel. In essence, small Internet service providers see little benefit to net neutrality because under its principles, the firms cannot deliver any benefit to its customers.¹²²

INTERNET TRAFFIC NOT ALLOCATED EFFICIENTLY

The opponents of net neutrality opine that its rules encourage a misallocation of resources because critical Internet traffic must be treated the same as non-critical traffic.¹²³ This occurs when there are traffic surges, and all Internet traffic is delayed, rather than non-critical traffic, or even harmful such as spam, viruses, and worms, provided that these applications can be identified in transit before they arrive at a particular computer.¹²⁴

INTERNET ACCESS NOT AVAILABLE TO THE POOR

The opposition to net neutrality observes that net neutrality regulations thwart Internet service providers from making Internet access more affordable or free to the poor.¹²⁵ The reasoning is that low-income users cannot afford “bandwidth hogging” services such as video streams.¹²⁶ Due to net neutrality rules, ISPs cannot discriminate against Internet traffic, making Internet services regressive.¹²⁷

INVESTMENT REDUCTIONS

According to those against net neutrality, net neutrality makes it more difficult for ISPs to recoup their investments in

broadband networks.¹²⁸ From a financial perspective, what this means is that discounted breakeven payback period is longer with net neutrality than without net neutrality.¹²⁹ The breakeven payback period is defined to be the number of years needed for a company to receive net discounted cash inflows that aggregate to the amount of an initial cash investment.¹³⁰ Typically, the discounted payback period calculation is performed because it takes into account the time value of money.¹³¹

According to Verizon, there is no incentive for the company to invest substantially in advanced fiber optics networks because under net neutrality the firm would be prevented from charging premium fees to its customers.¹³² The issue is that even though cable companies are investing on average \$20 billion a year on capital expenditures, the companies need to know that there will be a reasonable return on further network investment.¹³³ With that said, the United States invests 50 percent more money than the European Union in telecommunications infrastructure.¹³⁴ Only South Korea and Japan have Internet connection speed equal to or greater than 10 megabits per second.¹³⁵

POSSIBLE INCREASE IN TAXES

According to *Free Press*, a proponent of net neutrality found that the additional taxes under net neutrality for American citizens is approximately \$4 billion a year.¹³⁶ On the other hand, the *Progressive Policy Institute*, an opponent to net neutrality, estimated that additional tax to be at most \$11 billion per year.¹³⁷ Given that there are 327 million Americans,¹³⁸ the tax

¹²¹Jacob Kastrenakes, The FCC Says Net Neutrality Destroys Small ISPs. So Has It?, *The Verge*, July 13, 2017, <https://www.theverge.com/2017/7/13/15949920/net-neutrality-killing-small-isps> (last visited August 18, 2018).

¹²²Id.

¹²³Robert E. Litan & Hal J. Singer, Unintended Consequences of Net Neutrality Regulation, *Research Gate: Journal of Telecommunications and High Technology Law*, November 2006, https://www.researchgate.net/publication/228256498_The_Unintended_Consequences_of_Net_Neutrality (last visited August 18, 2018).

¹²⁴David Farber & Michael Katz, Hold Off On Net Neutrality, *The Washington Post*, January 19, 2007, <http://www.washingtonpost.com/wp-dyn/content/article/2007/01/18/AR2007011801508.html> (last visited August 18, 2018).

¹²⁵Brian Fung, Jesse Jackson is lobbying the FCC against aggressive net neutrality rules, *The Washington Post*, November 18, 2014,

https://www.washingtonpost.com/news/the-switch/wp/2014/11/18/jesse-jackson-is-lobbying-the-fcc-against-aggressive-net-neutrality-rules/?utm_term=.73aca1386921 (last visited August 18, 2018).

¹²⁶Id.

¹²⁷Id.

¹²⁸Arshad Mohammed, Verizon Executive Calls for End to Google's 'Free Lunch', *The Washington Post*, February 7, 2006, <http://www.washingtonpost.com/wp-dyn/content/article/2006/02/06/AR2006020601624.html> (last visited August 18, 2018).

¹²⁹Discounted Payback Period, *Investopedia*, n.d., <https://www.investopedia.com/terms/d/discounted-payback-period.asp> (last visited August 16, 2018).

¹³⁰Id.

¹³¹Id.

¹³²Arshad Mohammed, *supra*.

¹³³Tyler Cowen, Marc Andreessen on net neutrality, *Marginal Revolution*, May 23, 2014, <https://marginalrevolution.com/marginalrevolution/2014/05/marc-andreessen-on-net-neutrality.html#sthash.FJbueb6O.dpuf> (last visited August 18, 2018).

¹³⁴Everett Ehrlich, The State of U.S. Broadband: Is It Competitive? Are We Falling Behind?, *Progressive Policy Institute*, 2014, http://www.progressivepolicy.org/wp-content/uploads/2014/06/2014.06-Ehrlich_The-State-US-Broadband_Is-it-competitive-are-we-falling-behind.pdf (last visited August 18, 2018).

¹³⁵Id.

¹³⁶Matt Wood, Claims That Real Net Neutrality Would Result in New Internet Tax Skew the Math and Confuse the Law, *The Free Press*, December 2, 2014, <https://web.archive.org/web/20150301070752/http://www.freepress.net/blog/2014/12/02/claims-real-net-neutrality-would-result-new-internet-tax-skew-math-and-confuse-law> (last visited August 18, 2018).

¹³⁷Lauren Carroll, Effect of net neutrality rules on taxes is uncertain, *PolitiFact*, February 26, 2015,

increase ranges from \$12.23 per year per person¹³⁹ to \$33.64 per year per person,¹⁴⁰ or from one to three meals at a decent restaurant.

SIGNIFICANT GROWTH IN INVESTMENT COMPETITION

In a 2010 paper by the late Gary Becker, a Nobel laureate in economics, with Dennis Carlton and Hal Sider, these economists discovered that the number of high-speed access lines in the United States grew from 16 million to 133 million from mid-2002 to mid-2008.¹⁴¹ During the same period, residential broadband lines expanded from 14 million to almost 80 million.¹⁴² From 2007 to 2009, Internet traffic tripled.¹⁴³ Even so, the profit margins for cable companies are about one-sixth to one-eighth of the profit margins for the companies that use the Internet.¹⁴⁴ According to the *Progressive Policy Institute*, almost every American can select from between five and six broadband ISPs.¹⁴⁵ According to Becker et al., the FCC observed in 2008 that 99.8 percent of zip codes in American could choose between two or more high-speed Internet providers, with 94.6 percent of zip codes having four or more providers.¹⁴⁶

UNNECESSARY REGULATIONS

The opponents to net neutrality aptly observe that the Internet grew substantially in the last 15 years without any government intervention.¹⁴⁷ FCC Commissioner Ajit Pai argued that the Internet is not broken, so there is no need to fix it.¹⁴⁸ However, this argument assumes that the future will resemble the past

and that the Internet will continue its growth unabated.¹⁴⁹ Only under the circumstances of unlimited growth does this argument have merit.¹⁵⁰ If economic signals indicate that the Internet is maturing, then its growth rate will decline to probably a steady state.¹⁵¹ This means that the argument is not taking into consideration the fact that as a technology matures, its S-curve trajectory tends to flatten out.¹⁵² When an S-curve becomes more or less flat, it indicates that an industry has matured, and government regulations may be appropriate.¹⁵³

JOHN RAWLS' PHILOSOPHY ON LIBERTY RAWLS ADVOCATED THE FOLLOWING TWO IMMUTABLE PRINCIPLES

Principle of greatest liberty that states that every individual has an equal right to basic liberties, such as "the right to vote and be eligible to hold public office, freedom of speech and assembly; liberty of conscience and freedom of thought; freedom of the person, along with the right to hold personal property; and freedom from arbitrary arrest and seizure";¹⁵⁴

Principle of equality affirms that social and economic conditions must be available to all individuals fairly and equally, and the social and economic conditions must maximize the benefit to the least advantaged people in society.¹⁵⁵

According to Rawls, the only time that a government can restrict liberty is for the sake of liberty and is limited to the basic liberties outlined above.¹⁵⁶

The strength of Rawls' position on liberty is that his principles are immutable. It is as if Rawls is creating a "moral geometry," where his two principles are the assumptions behind his theorems and corollaries.¹⁵⁷ Like all of mathematics, Rawls'

<https://www.politifact.com/truth-o-meter/statements/2015/feb/26/mike-lee/effect-net-neutrality-rules-taxes-uncertain/> (last visited August 18, 2018).

¹³⁸U.S. Population (LIVE), *WorldoMeters*, n.d., <http://www.worldometers.info/world-population/us-population/> (last visited August 18, 2018). As of August 18, 2018 and according to WorldoMeters, the population of the United States is 327,073,940 people.

¹³⁹ \$12.23 per year per person = \$4 billion per year / 327 million people.

¹⁴⁰ \$33.64 per year per person = \$11 billion per year / 327 million people.

¹⁴¹Gary S. Becker, Dennis W. Carlton & Hal S. Sider, *supra*.
¹⁴²Id.
¹⁴³Id.

¹⁴⁴Everett Ehrlich, *supra*.
¹⁴⁵Id.

¹⁴⁶Gary S. Becker, Dennis W. Carlton & Hal S. Sider, *supra*.

¹⁴⁷National Review Interview, Back to the Future with Peter Thiel, *National Review*, January 20, 2011, <https://www.nationalreview.com/2011/01/back-future-peter-thiel-interview/> (last visited August 18, 2018).

¹⁴⁸Ajit Pai & Joshua Wright, The Internet isn't broken. Obama doesn't need to 'fix' it., *Chicago Tribune*, February 18, 2015, <http://www.chicagotribune.com/news/opinion/commentary/ct-internet-regulations-fcc-ftc-obama-broadband-perspec-0219-20150218-story.html> (last visited August 18, 2018). Note that at the time the article was written, Joshua Wright worked for the Federal Trade Commission ("FTC").

¹⁴⁹DAVID HUME, AN ENQUIRY CONCERNING HUMAN UNDERSTANDING SECTION IV (Hackett Publishing Co. 2nd ed. 2011) (1776).

¹⁵⁰Internet Growth Statistics, *Internet World Stats*, n.d., <https://www.internetworldstats.com/emarketing.htm> (last visited August 18, 2018).

¹⁵¹The issue with the unlimited growth model for the Internet is that for the model to be correct, there must be an unlimited growth of the world's population, or there must be unlimited avenues for the Internet to enter or unlimited application to employ the Internet.

¹⁵²S Curve, *Business Dictionary*, n.d., <http://www.businessdictionary.com/definition/S-curve.html> (last visited August 18, 2018).

¹⁵³Andrew Latham, What Is the S Curve in Business?, *Chron*, n.d., <https://smallbusiness.chron.com/s-curve-business-23032.html> (last visited August 18, 2018).

¹⁵⁴Leif Wenar, John Rawls, *Stanford Encyclopedia of Philosophy*, First published March 25, 2008; substantive revision January 9, 2017, <https://plato.stanford.edu/entries/rawls/> (last visited July 17, 2018).

¹⁵⁵Id.
¹⁵⁶Id.

¹⁵⁷Gustavo Hessmann Dalaqua, John Stuart Mill vs. John Rawls: A comparison, *Seara Filosófica*, 2014, https://www.academia.edu/13676289/John_Stuart_Mill_vs_John_Rawls_A_Comparison (last visited July 17, 2018).

theory of justice and liberty is a logical edifice where propositions are proven using deductive logic. The key to applying Rawls' theory to specific instances is to ensure that the premises are true, and if so, the conclusion is necessarily true.¹⁵⁸ If there is any weakness in Rawls' theories, it is that reality is always in the process of becoming. It is not static, as espoused in Aristotle's *Posterior Analytics*.¹⁵⁹ Rather, our reality is constantly changing. "A" may no longer be "A" in the future, but maybe something else.¹⁶⁰

RAWLS' OPINIONS ON THE NET NEUTRALITY ARGUMENTS

Because of the number of pro and con arguments that have been discussed in this paper, it is only appropriate to discuss what may have been Rawls' opinions on the arguments in favor of net neutrality as well as his views of the arguments opposed to net neutrality. In this way, a certain amount of balance can be achieved.

OPINIONS REGARDING ARGUMENTS IN FAVOR OF NET NEUTRALITY

COMPETITION AND INNOVATION

Cable companies are in some sense gatekeepers because the Internet runs on their networks.¹⁶¹ The cable companies have actual control over the packets that are transmitted and received on their cables and telephone lines.¹⁶² Rawls believed that the economic conditions regarding the Internet must maximize the benefit to the least advantaged people in society.¹⁶³ Based on the ever-increasing transmission speeds available to customers, it seems that competition and innovation are benefiting individuals.¹⁶⁴ Thus, this argument appears to be valid.

DATA CONTROL

By rescinding the common carrier designation by the FCC, the Trump administration has removed the FCC from regulating the Internet, turning over regulatory powers to the Federal

Trade Commission ("FTC").¹⁶⁵ From an economic perspective, it appears to be only a matter of time, probably several years, until cable companies engage in monopolistic behavior against consumers and Internet companies such as Google take actions to extract additional profit. From Rawls' point of view, such behavior would be in the interest of the cable companies, and not be in the best interest of the poor.¹⁶⁶ By law, a company's primary interest is to maximize shareholder value, or economically, maximize profits, not necessarily helping the least advantaged.¹⁶⁷ Thus, Rawls would argue that data control via one or more of the discrimination types discussed above is entirely possible without net neutrality.

END-TO-END PRINCIPLE

If data is not treated equally by the Internet, then some data are better than other data. The argument is akin to the arguments proposed by many Protestant Christian ministers these days that God wants us to prosper, and those that are more favored by God are richer than the rest of humanity.¹⁶⁸ Rawls would contend that even if some data are better than other data, it is the "least data" that should benefit the most and not the other way around.¹⁶⁹ With information, if one person has information and sells that information to another person, then both people have the information.¹⁷⁰ Because scarcity does not exist with information,¹⁷¹ Rawls would propose that the only way to maximize the benefit for the "least data" is to ensure that all data is treated equally.¹⁷² Thus, this argument also appears to have merit.

PREVENTING PSEUDO SERVICES

The *Comcast v. Microsoft* and the *Comcast v. Netflix* battles of 2012 and 2014 respectively demonstrate that cable companies are more than willing to employ their gatekeeper status to further their economic interests.¹⁷³ If Comcast and other cable companies can injure software and Internet companies and then force the consumer to use their products, there is only the law

¹⁵⁸Validity and Soundness, *Internet Encyclopedia of Philosophy*, n.d., <https://www.iep.utm.edu/val-snd/> (last visited July 17, 2018).

¹⁵⁹JONATHAN BARNES, (ARISTOTLE) POSTERIOR ANALYTICS (Oxford: Clarendon Press, 1994).

¹⁶⁰David Duquette, Hegel: Social and Political Thought, *Internet Encyclopedia of Philosophy*, n.d., <https://www.iep.utm.edu/hegelsoc/> (last visited July 17, 2018).

¹⁶¹Allie Shaw, How Does Cable Internet Work?, *Reviews.org*, August 16, 2018, <https://www.reviews.org/internet-service/cable-internet-work/> (last visited August 18, 2018).

¹⁶²Id.
¹⁶³Leif Wenar, *supra*.

¹⁶⁴Chris Mills, Comcast is only increasing internet speeds for customers who also pay for cable, *BGR Media*, May 1, 2018, <https://bgr.com/2018/05/01/comcast-internet-speeds-cable/> (last visited August 18, 2018) and Monica Chin, *If you have Comcast Xfinity, your internet may soon get a lot faster*, Mashable, March 6, 2018, <https://mashable.com/2018/03/06/comcast-increases-xfinity-speeds/#Ou9DBUZN.Oqw> (last visited August 18, 2018).

¹⁶⁵David Shepardson, U.S. agency prepares to hand over internet oversight to FTC, *Reuters*, December 11, 2017, <https://www.reuters.com/article/us-usa-internet/u-s-agency-prepares-to-hand-over-internet-oversight-to-ftc-idUSKBN1E52N9> (last visited August 18, 2018).

¹⁶⁶Leif Wenar, *supra*.
¹⁶⁷See *Dodge v. Ford*, 204 Mich. 459 (Mich. 1919) and PAUL KRUGMAN & ROBIN WELLS, *ECONOMICS*, (New York: Worth Publishers 5th ed. 2017).

¹⁶⁸Tara Isabella Burton, The prosperity gospel, explained: Why Joel Osteen believes that prayer can make you rich, *VOX*, September 1, 2007, <https://www.vox.com/identities/2017/9/1/15951874/prosperity-gospel-explained-why-joel-osteen-believes-prayer-can-make-you-rich-trump> (last visited August 18, 2018).

¹⁶⁹Leif Wenar, *supra*.
¹⁷⁰Paul Krugman & Robin Wells, *supra*.

¹⁷¹Information Scarcity, *WordPress: Thoughts about Higher Education*, February 9, 2012, <https://hethoughts.wordpress.com/2012/02/09/information-scarcity/> (last visited August 18, 2018).

¹⁷²Leif Wenar, *supra*.
¹⁷³Dan Mitchell, *supra* and Brian Nadel, *supra*.

and a sense of fair play to prevent them. Rawls would contend that Comcast attempted to maximize its benefit without considering the benefit of the least advantaged. Thus, Rawls would condemn Comcast's behavior of trying to maximize shareholder value and profits.¹⁷⁴ In other words, Rawls would probably support the prevention of pseudo services.

PRESERVING THE STANDARDS OF THE INTERNET

One of the technological methods available to technically speed up packets from individuals and companies paying a premium to cable companies for faster transmission speeds is to change the content of TCP/IP packets.¹⁷⁵ If the content of a TCP/IP packet is altered, it is straightforward to determine which packets are to be given transmission priority.¹⁷⁶ It should be understood that there are currently reserved bytes within a packet that could be used by cable companies to designate high-speed packets.¹⁷⁷ The advantage of using these reserved bytes is that length in bytes of the TCP/IP packets would change only slightly.¹⁷⁸ The disadvantage is that some browsers may not be able to recognize these modified packets.¹⁷⁹ However, this situation could probably be quickly rectified.

Rawls would question who benefited from the change in the packet structure. If the only people that were helped by altering the packet structure were the cable companies, Rawls would be against it.¹⁸⁰ On the other hand, if everyone benefitted, Rawls would endorse the change.¹⁸¹

RIGHTS AND FREEDOMS IN A DIGITAL WORLD

The problem with the First Amendment and free speech are that the government cannot violate this fundamental right.¹⁸² The First Amendment is silent about private organizations quelling speech.¹⁸³ Under statutory law, the only time that a private organization must honor this fundamental right is when it is equivalent to a public square.¹⁸⁴ Rawls would probably believe that the Internet is a modern-day public square. The reason is that the Internet benefits everyone which is one of his

fundamental principles.¹⁸⁵ Even so, the freedom of speech issue has all of the makings of a future Supreme Court decision. Given the conservative makeup of the Court, it seems likely that the Court would hold against Rawls and net neutrality.¹⁸⁶

USER PREJUDICE AGAINST WEBSITES THAT LOAD SLOWLY

The issue in this argument is what happens when the transmission speeds change. Will the transmission speeds for some people increase while the transmission speeds for other people decrease? Or, will the transmission speeds increase for some people, but remain the same for other people? If it is the former, then the fear of the net neutrality proponents is justified.¹⁸⁷ Rawls would be against the change because the different transmission speeds would not benefit everyone.¹⁸⁸ If the latter occurs, Rawls would have no qualms about the decision because the least advantaged were not harmed.¹⁸⁹

OPINIONS REGARDING ARGUMENTS AGAINST NET NEUTRALITY

COUNTERWEIGHT TO THE NON-NEUTRALITY OF SERVERS

This argument indicates that the Internet is currently not neutral, and so it seems to be saying that net neutrality is a non-issue.¹⁹⁰ It is correct that large companies already have a performance advantage when compared to small competitors.¹⁹¹ The question is whether the performance advantage becomes the norm rather than the exception. It does not make sense to make non-neutrality the standard because then only the big companies can afford high-speed transmissions. There is the distinct possibility that in rescinding net neutrality, cable companies will focus their resources on their high-paying customers, providing only marginal transmission speed increases to the rest of its customers.¹⁹²

From Rawls' perspective, the critical issue regarding this argument is whether by focusing on its high-paying customers, cable companies are restricting liberty for the sake of liberty.¹⁹³ Rawls would suggest that the restriction is due to cable companies attempting to maximize shareholder value or

¹⁷⁴See *Dodge v. Ford*, *supra* and Krugman & Wells, *supra*.

¹⁷⁵Sebastian Anthony, Increasing wireless network speed by 1000%, by replacing packets with algebra, *ExtremeTech*, October 23, 2013, <https://www.extremetech.com/computing/138424-increasing-wireless-network-speed-by-1000-by-replacing-packets-with-algebra> (last visited August 18, 2018).

¹⁷⁶*Id.*

¹⁷⁷Charles M. Kozierok, *supra*.

¹⁷⁸*Id.*

¹⁷⁹*Id.*

¹⁸⁰Leif Wenar, *supra*.

¹⁸¹*Id.*

¹⁸²U.S. Const., amend. IV.

¹⁸³Peter van Buren, 4 Ways the Fourth Amendment Won't Protect You Anymore, *Mother Jones*, June 26, 2014, <https://www.motherjones.com/politics/2014/06/how-fourth-amendment-not-protect/> (last visited August 18, 2018).

¹⁸⁴RUSSELL L. WEAVER, STEVEN I. FRIEDLAND, CATHERINE HANCOCK, BRYAN FAIR, JOHN KNECHTLE, & RICHARD D. ROSEN, *CONSTITUTIONAL LAW: CASES, MATERIALS, AND PROBLEMS* (Wolters Kluwer 2nd ed. 2011).

¹⁸⁵Leif Wenar, *supra*.

¹⁸⁶The last time the Supreme Court was a liberal court was when Earl Warren was Chief Justice. The Court has been a conservative for the past 50 years (since 1969 when Justice Warren retired), while Warren Burger, William Rehnquist, and John Roberts were Chief Justices.

¹⁸⁷Tali Arbel, After net neutrality, brace for Internet 'fast lanes', *USA Today*, December 20, 2017, <https://www.usatoday.com/story/tech/news/2017/12/20/after-net-neutrality-brace-internet-fast-lanes/970712001/> (last visited August 18, 2018).

¹⁸⁸Leif Wenar, *supra*.

¹⁸⁹*Id.*

¹⁹⁰Richard Patterson, *supra*.

¹⁹¹*Id.*

¹⁹²Chris Mills, *supra*.

¹⁹³Leif Wenar, *supra*.

maximizing profits.¹⁹⁴ The least advantaged do not seem to be taken into consideration by this argument.

DISCOURAGES COMPETITION

Rawls would opine that the argument that net neutrality discourages competition is unconvincing. The purpose of net neutrality is to promote the equal treatment of data by the Internet from anyone.¹⁹⁵ Many years ago, John D. Rockefeller Sr, the founder of Standard Oil, stated that competition is a sin.¹⁹⁶ Rockefeller spent a good portion of his business life in buying up and sometimes ruining his competition.¹⁹⁷ In other words, according to Rockefeller, companies should work to eliminate competition. Rockefeller benefitted himself and Standard Old, and not the poor.¹⁹⁸ There is no reason to believe that cable companies in the 21st Century have abandoned the pursuit of monopoly power. Thus, Rawls would almost certainly conclude that this argument has little or no value.

INTERNET TRAFFIC NOT ALLOCATED EFFICIENTLY

Here, Rawls would notice that this argument can be confusing because the word “efficient” can be misinterpreted. What the argument is referring to is financial efficiency, which is code for minimizing costs, and not technological efficiency.¹⁹⁹ In economics, minimizing costs is logically equivalent to maximizing profits.²⁰⁰ Thus, Rawls would observe that the argument seems to be implying that net neutrality does not allow a cable company to maximize shareholder value or maximize profits.²⁰¹

Rawls would also point out that cable companies are currently natural monopolies or at least a member of a natural oligopoly in local communities.²⁰² By being granted a license to operate in a community, cable companies are assured reasonable profits, but not optimal profits.²⁰³ With this argument, the cable companies appear to be suggesting that they want to maximize their profits, while at the same time, the firms seem to desire that federal, state, and local governments protect them in providing cable television services to their customers.²⁰⁴ Rawls

would argue that the cable companies cannot have it both ways. They can either be treated as a common carrier and be assured of a reasonable profit and help everyone, or disavow government protection, run the risk of failure, and only help themselves.

INTERNET ACCESS NOT AVAILABLE TO THE POOR

Rawls would boldly state that cable companies are not charities even though they may attempt to improve their image among low-income customers.²⁰⁵ Companies do not give away their products for free or under cost unless there are genuine profit-making reasons for doing so.²⁰⁶ Corporations are legal fictions that have neither morals nor ethics, but they do have interests.²⁰⁷ Rawls would suggest that a firm’s primary legitimate interest is to maximize shareholder value, or economically, maximize profits, not help the poor.²⁰⁸

INVESTMENT REDUCTIONS

According to this argument, net neutrality makes it more difficult for ISPs to recoup their investment in broadband networks.²⁰⁹ Rawls would ask whether recouping investment is in the best interest of the least advantaged.²¹⁰ However, in spite of this so-called difficulty, individual cable companies invested about \$20 billion per year in improving their network investment.²¹¹ Now, \$20 billion annually is a sizeable sum of money.²¹² Rawls could find it hard to believe that if net neutrality did not exist, companies would invest some of the additional revenue in improving their fiber optic networks. Rawls would suggest that their far more likely behavior would be to take the extrain come, and invest it in the financial markets because their return on investment would be more than any investment in fiber optics.²¹³ This is what financial institutions did when the Federal Reserve engaged in quantitative easement

15, 2011, <https://gizmodo.com/5830956/why-the-government-wont-protect-you-from-getting-screwed-by-your-cable-company> (last visited August 18, 2018).

²⁰⁵ Cecilia Kang, Comcast is trying to improve its image with a program for low-income consumers, *The Washington Post*, May 9, 2014,

https://www.washingtonpost.com/business/technology/comcast-is-trying-to-improve-its-image-with-a-program-for-low-income-consumers/2014/05/09/cab489cc-d231-11e3-937f-d3026234b51c_story.html?utm_term=.06a23591b24e (last visited August 18, 2018).

²⁰⁶ Id.

²⁰⁷ John D. Whitney, Corporate Idolatry? Legal Fictions Don't Have Human Rights, *America: The Jesuit Review*, July 7, 2014, <https://www.americamagazine.org/content/all-things/corporate-idolatry-legal-fictions-dont-have-human-rights> (last visited August 18, 2018).

²⁰⁸ See *Dodge v. Ford*, *supra* and Krugman & Wells, *supra*.

²⁰⁹ Arshad Mohammed, *supra*.

²¹⁰ Leif Wenar, *supra*.

²¹¹ Tyler Cowen, *supra*.

²¹² Id.

²¹³ Miles Johnson, Stock market winners of 2008’s crash had one thing in common, *Financial Times*, October 2, 2017, <https://www.ft.com/content/1d6ec1a2-a77f-11e7-93c5-648314d2c72c> (last visited August 18, 2018).

¹⁹⁴ See *Dodge v. Ford*, *supra* and Krugman & Wells, *supra*.

¹⁹⁵ Lawrence Lessig & Robert W. McChesney, *supra*.

¹⁹⁶ Christopher T. S. Harvey, Competition Is A Sin, *UK Huffington Post*, October 7, 2017, https://www.huffingtonpost.co.uk/christopher-ts-harvey/competition-is-a-sin_b_17444620.html?guccounter=1&guce_referrer_us=aHR0cHM6Ly93d3cuZ29vZ2xlLmNvbS8&guce_referrer_cs=OoXuXYJ1fIdobOowlIz6fA (last visited August 18, 2018).

¹⁹⁷ Emil Duhnea, The Rise and Fall of Rockefeller, *Foundation of Economic Education*, December 3, 2016, <https://fee.org/articles/the-rise-and-fall-of-rockefeller/> (last visited August 18, 2018).

¹⁹⁸ Id.

¹⁹⁹ Paul Krugman and Robin Wells, *supra*.

²⁰⁰ Id.

²⁰¹ See *Dodge v. Ford*, *supra* and Krugman & Wells, *supra*.

²⁰² Paul Krugman and Robin Wells, *supra*.

²⁰³ Id.

²⁰⁴ Mat Honan, Why the Government Won't Protect You from Getting Screwed by Your Cable Company, *Gizmodo*, August

during the Great Recession of 2008 (i.e., flooding the financial markets with more money).²¹⁴ The banks took the money that the Fed and Congress gave them and made more money in the financial markets.²¹⁵ Rawls would probably conclude that there is no reason to believe that cable companies would behave any differently.

POSSIBLE INCREASE IN TAXES

As previously stated, according to the *Free Press*, the additional taxes for the average American citizen is \$4 billion a year, \$12.23 per year per person.²¹⁶ However, the *Progressive Policy Institute* estimated that the additional taxes attributed to net neutrality is \$11 billion per year or \$33.64 per year per person.²¹⁷ Now, Rawls would agree that the \$7 billion difference is a substantial amount of money.²¹⁸ However, if these figures are divided by the population of the United States or 327 million people, and the results subtracted from each other, Rawls would opine that the difference is \$21.41 per year per person.²¹⁹ This is the amount of money needed to purchase dinner at a moderately upscale restaurant, hardly an amount that justifies the abolishment of net neutrality. Rawls would probably suggest that for the least advantaged the cost differential is not substantial.

SIGNIFICANT GROWTH IN INVESTMENT COMPETITION

It is true that access to high-speed Internet has grown dramatically since 2002, and that Internet traffic has expanded seemingly without measure.²²⁰ Rawls would argue that an increase in transmission speeds benefit the poor.²²¹ The fact that cable companies do not make nearly as much money as Internet companies would not lend Rawls to concede that net neutrality is inappropriate because profit increases are seemingly irrelevant to Rawls' philosophy.²²² On the contrary, Rawls could argue that the cable companies are experiencing a wave of creative destruction.²²³ It should be remembered that cable companies either are natural monopolies or members of a natural oligopoly with reasonable profits assured by the

government.²²⁴ Rawls would observe that the argument seems to imply that it is morally and ethically wrong to restrain companies from maximizing profits.²²⁵ The proponents of this argument conveniently fail to mention that the gains made by Google and other Internet companies are the reward for taking on risk in a fickle and speculative market, and by doing so helped everyone.²²⁶ Rawls would affirm that the tradeoff is between low risk and reasonable gain and high risk and speculative gain.²²⁷

UNNECESSARY REGULATIONS

For the reasons previously mentioned, Rawls would be assert that this argument is unconvincing. In the heyday of the Internet, this market was in its infancy.²²⁸ Economic theory as expressed by the S-curve market growth curve demonstrates that in periods of high growth, regulation is counterproductive.²²⁹ Rawls would probably argue that the lack of regulation in the Internet's infancy benefitted everyone because the Internet was permitted to mature rapidly.²³⁰ However, as a market grows into adulthood, and the S-curve flattens out, Rawls would opine that regulation may be appropriate to prevent corporate abuse, thereby enhancing everyone's liberty.²³¹ The antagonists of net neutrality merely ignore this crucial feature of economic growth. Rawls would doubtless observe that the argument appears to presume that the Internet market will stay young forever. Rawls would probably think that this argument is delusional at best, and downright wrong at worst.

CONCLUSION

In this paper, it was argued that Rawls would believe that net neutrality is a fair and reasonable policy. In all probability, Rawls would likely change his opinions if the reasons presented by the net neutrality opponents were logical and convincing, and maximized the benefits to the least advantaged.²³² The result of this analysis indicates that Rawls would agree that the antagonists of net neutrality have failed to tip the scales in their favor. Their arguments are mostly economic, and their allusions to altruism seem to be feeble and insincere. Therefore, it is concluded that for Rawls net neutrality is both a fair and reasonable mechanism to ensure that justice is served, and the many are not sacrificed to benefit of the few.

²¹⁴Trefis Team, Quantitative Easing In Focus: The U.S. Experience, *Forbes*, November 16, 2015, <https://www.forbes.com/sites/greatspeculations/2015/11/16/quantitative-easing-in-focus-the-u-s-experience/#2340eec6528d> (last visited August 18, 2018).

²¹⁵Neal Irwin, Quantitative Easing Is Ending. Here's What It Did, in Charts, *The New York Times*, October 29, 2014), <https://www.nytimes.com/2014/10/30/upshot/quantitative-easing-is-about-to-end-heres-what-it-did-in-seven-charts.html> (last visited August 18, 2018).

²¹⁶See footnote 139.

²¹⁷See footnote 140.

²¹⁸\$7 billion = \$11 billion - \$4 billion.

²¹⁹\$21.41 = \$33.64 - \$12.23.

²²⁰Gary S. Becker, Dennis W. Carlton & Hal S. Sider, *supra*.

²²¹Leif Wenar, *supra*.

²²²Id.

²²³THOMAS K. MCGRAW, PROPHET OF INNOVATION: JOSEPH SCHUMPETER AND CREATIVE DESTRUCTION (Belknap Press 2010).

²²⁴Paul Krugman and Robin Wells, *supra*.

²²⁵Lynn Stout, Corporations Don't Have to Maximize Profits, *The New York Times*, April 16, 2015, <https://www.nytimes.com/roomfordebate/2015/04/16/what-are-corporations-obligations-to-shareholders/corporations-dont-have-to-maximize-profits> (last visited August 18, 2018).

²²⁶ASWATH DAMODARAN, CORPORATE FINANCE: THEORY AND PRACTICE (John Wiley & Sons 1997).

²²⁷Id. and Paul Krugman and Robin Wells, *supra*.

²²⁸Barry M. Leiner et al., *supra*.

²²⁹Andrew Latham, *supra*.

²³⁰Leif Wenar, *supra*.

²³¹Andrew Latham, *supra* and Leif Wenar, *supra*.

²³²Leif Wenar, *supra*.