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# THE PUBLIC NETWORK

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## I. INTRODUCTION

Never has the regulation of the telecommunications industry been more widely and hotly contested than it is today. Communications markets have historically been subject to government regulation, but there has been substantial movement over the last decade toward deregulation.<sup>1</sup> Over that time, communications markets have steadily become both more competitive and more valuable.<sup>2</sup> On one hand, the ability of network operators to exercise complete control over modern communications networks has been challenged by increasing competition;<sup>3</sup> on the other, network operators have particularly strong incentives to exercise maximum control, both to capture the wealth their networks generate and to take advantage of technological improvements.<sup>4</sup> Control of networks can garner more than profits—it can potentially translate into control over technological innovation itself.

The amenability of modern communications markets to such capture represents a challenge to traditional models of regulation. Within pre-classical mercantilist systems, government regulation of commercial activity was the norm; even purely “private” businesses faced price and output controls.<sup>5</sup> The rise of

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<sup>1</sup> See Kevin Werbach, *Only Connect*, 22 BERKELEY TECH. L.J. 1233, 1237, 1255 (2007).

<sup>2</sup> See *id.* at 1237 (explaining the qualitative value of communications networks to commerce).

<sup>3</sup> *Id.* at 1235 (discussing that with increased competitiveness in communications markets, comes an increasing need for fixed interconnection rules).

<sup>4</sup> *Id.* at 1238 (explaining that the potential that “network operators will deny necessary connections to their competitors” is a recurring concern).

<sup>5</sup> See Thomas B. Nachbar, *Monopoly, Mercantilism, and the Politics of Regulation*, 91 VA. L. REV. 1313, 1319 (2005).

the free market approach to commercial activity led Anglo-American society to question the role of government in the regulation of economic activity, which resulted in a system of largely unfettered discretion by firms to use (and sell) their property as they wished.<sup>6</sup> But there are some industries in which property owners are compensated for use of their property but nevertheless are denied discretion over how their property is to be used.<sup>7</sup> In these industries, access is granted to customers on a nondiscriminatory, but paid basis. Nondiscrimination rules have not only formed the basis of traditional telecommunications regulation, but have been applied to a number of other industries, many of which pre-date telecommunications.<sup>8</sup>

A particular type of nondiscrimination rule recently received much attention for its potential to ameliorate the risks to the information economy posed by private control over telecommunications networks.<sup>9</sup> Network neutrality (or “open access”<sup>10</sup>) rules have at their core some form of nondiscrimination mandate.<sup>11</sup> Network neutrality has been advanced, attacked, and defended as a matter of economics.<sup>12</sup> Critics of neutrality argue that network neutrality rules will reduce the incentives to build communications networks.<sup>13</sup> Neutrality propo-

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<sup>6</sup> See *id.* at 1376–79 (tracing the development of free-market ideology in the English guild system); see also Thomas B. Nachbar, *Intellectual Property and Constitutional Norms*, 104 COLUM. L. REV. 272, 339–47 (2004) (describing the role of free trade as a constitutional norm).

<sup>7</sup> See, e.g., Werbach, *supra* note 1, at 1239 (explaining that the concept of nondiscrimination mandates similar treatment for similarly situated customers).

<sup>8</sup> See generally James Speta, *Resale Requirements and the Intersection of Antitrust and Regulated Industries*, 31 J. CORP. L. 307, 307–12 (2006) (discussing the regulation of the transportation and utility industries using non-discrimination rules).

<sup>9</sup> See generally Brett M. Frischmann & Mark A. Lemley, *Spillovers*, 107 COLUM. L. REV. 257, 295–99 (2007) (discussing the economic effect of discrimination of applications by broadband network operators).

<sup>10</sup> “Open access” is a confusing term because it is also used in property law to describe a regime of unfettered and free access to property and has been adopted by a movement of academics seeking to have scholarship made freely available over the Internet. See generally Michael Carroll, *Open Access Publishing and the Future of Legal Scholarship*, 10 LEWIS & CLARK L. REV. 741 (2006). My analysis pertains to neither alternative uses of the term.

<sup>11</sup> See Barbara van Schewick, *Towards an Economic Framework for Network Neutrality Regulation*, 5 J. ON TELECOMM. & HIGH TECH. L. 329, 331–33 (2007) (“Repeatedly, proponents of network neutrality regulation have asked the Federal Communications commission to impose rules on the operators of broadband access networks that forbid network operators to discriminate against third-party applications, content or portals . . . and to exclude them from their network.”).

<sup>12</sup> See, e.g., *id.* at 332 (applying insights “from game theory, industrial organization, antitrust, evolutionary economics and management strategy to analyze network operators’ incentives to discriminate, the impact of potential discriminatory behavior on innovation and social welfare, and the costs of regulation.”).

<sup>13</sup> See generally Christopher S. Yoo, *Beyond Network Neutrality*, 19 HARV. J.L. & TECH. 1, 54–55 (2005) [hereinafter Yoo, *Beyond Network Neutrality*] (explaining that at some point, the marginal cost of “protecting another small voice” is outweighed by protect-

nents argue that network neutrality is necessary in order for networks to realize their full social value.<sup>14</sup> Although the two sides of the network neutrality debate come to opposite conclusions, they agree that the terms are set by the economics of nondiscrimination.<sup>15</sup>

This article seeks to step back from the modern debate about network neutrality, derive from established law the accepted bases for imposing nondiscrimination rules, and then work forward to ask whether those concepts have any traction in the current network neutrality debates. Most nondiscriminatory access regulation has been surprisingly consistent over time and the proffered justifications even more so, suggesting some rational basis for the distinctions drawn by the law.<sup>16</sup> The nondiscrimination tradition in Anglo-American law suggests that much of the modern network neutrality debate has been taking place in exceedingly narrow terms and is consequently preoccupied with solving the wrong problem.

This article proceeds in four parts. Part I defines the problem, describing exactly what is—and is not—a nondiscriminatory access regime. In search of the underlying justifications for nondiscrimination rules, Part II examines the case law and history of nondiscriminatory access in the many contexts in which it has traditionally been imposed. Although modern arguments over nondiscrimination rules are made almost exclusively in economic terms, nondiscrimination rules have generally been imposed on industries based on whether they could be considered public<sup>17</sup>—or as the Supreme Court termed it, are affected with the public interest<sup>18</sup>—a condition not necessarily related to the economic characteristics of the industry in question. Part III considers what implications the history of nondiscriminatory access has for the current debates over access to modern communications networks. Excessive attention to economic theory has biased modern network neutrality debates in several ways, both as to the merits and the nature of network neutrality. A robust understanding of the history of nondiscriminatory access substantially enriches modern economic arguments, providing insight into differing forms of modern network neutrality and suggesting how policymakers can best implement nondiscrimination rules in modern communications network markets. Part IV considers issues of implementation and evaluates a recent major policy initiative on the part of the Federal

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ing the economies of scale available to telecommunications network owners).

<sup>14</sup> See van Schewick, *supra* note 11, at 332.

<sup>15</sup> Compare *id.*, with Yoo, *Beyond Network Neutrality*, *supra* note 13, at 8.

<sup>16</sup> See *infra* Parts II.B, III.

<sup>17</sup> *Charles Wolff Packing Co. v. Court of Indus. Relations of Kan.*, 262 U.S. 522, 535 (1923) (discussing three classes of businesses “clothed with a public interest” including business which are not public at their inception, but that rise to a public level by having a “peculiar relation to the public that this is superimposed upon them.”).

<sup>18</sup> *Id.*; see *infra* Part III.A (discussing the “public interest” line of cases).

Communications Commission (“FCC” or “Commission”) to bring nondiscriminatory access to wireless telecommunications: a multi-billion dollar auction of spectrum licenses that includes “open access” restrictions.<sup>19</sup>

## II. NONDISCRIMINATORY ACCESS

In general terms, “nondiscriminatory access” describes various regimes in which property owners are denied the ability to prohibit certain uses of their property but are nevertheless compensated for the use.<sup>20</sup> There is a long history of such restrictions. The most common subjects of nondiscriminatory access are common carriers, who must grant access to their property on equal terms without discriminating among applicants.<sup>21</sup> But nondiscrimination obligations also apply to regulated industries such as water, electric, and natural gas utilities, whose rates are commonly regulated.<sup>22</sup> Nondiscriminatory access regimes frequently include a component of rate regulation.<sup>23</sup> In this article, “nondiscriminatory access” and “nondiscrimination” are used without regard to whether a nondiscrimination rule is accompanied by rate regulation (although simple nondiscrimination and that which is accompanied by rate regulation are distinguished when necessary). The obligations imposed by nondiscrimination rules have varied, but they all divest the property owner of the discretion to determine who may and may not use his property without divesting him of most of the economic advantages of ownership.<sup>24</sup>

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<sup>19</sup> *In re Service Rules for the 698-746, 747-762 and 777-792 MHz Bands; Revision of the Commission’s Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems; Section 68.4(a) of the Commission’s Rules Governing Hearing Aid-Compatible Telephones; Biennial Regulatory Review – Amendment of Parts 1, 22, 24, 27, and 90 to Streamline and Harmonize Various Rules Affecting Wireless Radio Services; Former Nextel Communications, Inc. Upper 700 MHz Guard Band Licenses and Revisions to Part 27 of the Commission’s Rules; Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band; Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Requirements Through the year 2010; Declaratory Ruling on Reporting Requirement under Commission’s Part 1 Anti-Collusion Rule, Second Report and Order, 22 F.C.C.R. 15,289, at 15,557–58 (July 31, 2007) (Statement of Chairman Kevin J. Martin) (adopting limited neutrality rules that would allow consumers to use their own devices and applications).*

<sup>20</sup> See Werbach, *supra* note 1, at 1239.

<sup>21</sup> See *Interstate Commerce Comm’n v. Balt. & O.R. Co.*, 145 U.S. 263, 275 (1892) (“[T]he principles of the common law applicable to common carriers . . . demanded little more than that they should carry for all persons who applied, in the order in which the goods were delivered at the particular station, and that their charges for transportation should be reasonable.”).

<sup>22</sup> Jim Rossi, *The Common Law “Duty to Serve” and Protection of Consumers in an Age of Competitive Retail Public Utility Restructuring*, 51 VAND. L. REV. 1233, 1236 (1998).

<sup>23</sup> See, e.g., Daniel F. Spulber & Christopher S. Yoo, *On the Regulation of Network as Complex Systems: A Graph Theory Approach*, 99 NW. U. L. REV. 1687, 1688 (2005).

<sup>24</sup> See Rossi, *supra* note 22, at 1252–53. Some nondiscriminatory access regimes, par-

### A. The Limits of Nondiscriminatory Access

Nondiscriminatory access is an abstract concept, one better defined by excluding certain concepts that are similar, but not identical. First, discrimination on the basis of personal characteristics (such as race, color, religion, national origin, or sex) is distinct from the economic discrimination that is the subject of this article. Personal-status anti-discrimination laws are much narrower than economic nondiscrimination rules and only prevent property owners from discriminating based on a few specific attributes of the customer.<sup>25</sup> Nondiscriminatory access regimes essentially remove all arbitrary discretion from property owners.<sup>26</sup>

Second, nondiscriminatory access should not be conflated with subsidy programs. Nondiscriminatory access regimes frequently subsidize particular users at the cost of others (cross-subsidization), especially in the case of public utilities for which service is frequently required to be provided at identical prices regardless of the cost of serving a particular user.<sup>27</sup> Telephone service was extended in this manner to dispersed, high-cost rural customers at the same price that it was offered to concentrated low-cost urban ones.<sup>28</sup> Similarly, the postal service has traditionally charged the same postage regardless of origin and destination within the United States, even though the same cost differential between urban and rural customers exists for the delivery of mail as for phone service.<sup>29</sup> But there is no necessary relationship between cross-subsidization and nondiscrimination. Since deregulation of the telephone industry, subsidization of particular high-cost users has been provided through the Universal Service Fund, which is essentially a tax on users.<sup>30</sup> Such a tax can be imposed on

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ticularly those imposed on regulated utilities, include a duty to expand service in response to increasing demand, while others (such as in the case of most common carriers) do not include such a duty. *Id.*

<sup>25</sup> 42 U.S.C. § 2000(a) (2000) (prohibiting discrimination or segregation in places of public accommodation). See Lois Shepherd, *HIV, the ADA, and the Duty to Treat*, 37 HOUS. L. REV. 1055, 1090–91 (2000) (explaining statutory non-discrimination in the context of a doctor's duty to serve).

<sup>26</sup> See Eli M. Noam, *Beyond Liberalization II: The Impending Doom of Common Carriage*, 18 TELECOMM. POL'Y 435, 436 (1994).

<sup>27</sup> Joseph D. Kearney & Thomas W. Merrill, *The Great Transformation of Regulated Industries Law*, 98 COLUM. L. REV. 1323, 1346 (1998).

<sup>28</sup> *Id.* It was further cross-subsidized through price discrimination by charging business users more for telephone service than residential users (regardless of the relative cost of providing service) and by charging long distance customers at above-cost rates in order to subsidize local calling. *Id.*

<sup>29</sup> See Peter Hettich, *Governance by Mutual Benchmarking in Postal Markets: How State-Owned Enterprises May Induce Private Competitors to Observe Policy Goals*, 32 U. DAYTON L. REV. 199, 220 (2007) (“[The U.S. Postal Service] shall provide prompt, reliable, and efficient services to patrons in all areas and shall render postal services to all communities, even where post offices are not self-sustaining.”).

<sup>30</sup> See Kearney & Merrill, *supra* note 27, at 1347–48.

some users to cross-subsidize others regardless of whether nondiscrimination requirements are imposed on the industry in question.<sup>31</sup> Of course, the relationship between nondiscriminatory access and even broader subsidization (by users and non-users alike) is even more tenuous. Public education, for instance, is the object of substantial subsidization by non-users, but many public educational institutions (such as elite public universities) discriminate considerably among whom they chose to admit.<sup>32</sup>

Finally, it is important to distinguish public goods from goods subject to nondiscriminatory access. True public goods, such as national defense, are non-excludable and therefore are provided non-discriminatorily.<sup>33</sup> The nature of true public goods *prevents* the choice of any access regime, discriminatory or otherwise. Purely public goods provide interesting examples to consider in the debate over nondiscriminatory access, but free provision of goods to which access cannot be limited does not represent a social choice of nondiscriminatory over privately controlled access.

## B. The Means of Nondiscriminatory Access

With a working definition of nondiscriminatory access, the next question becomes how to achieve it. The form and source of a nondiscrimination requirement have important consequences for the effect of the chosen regime on a particular industry. Generally, nondiscriminatory access has been accomplished in one of three (or depending how you count, four) ways.

The first—and perhaps most direct—method of providing nondiscriminatory access is for the government to enter the industry in question and market the particular good or service in a nondiscriminatory manner.<sup>34</sup> While the United States has applied this method to the U.S. Postal Service, government intervention has been a common method of regulating the telecommunication industry in other countries.<sup>35</sup> Similarly, the federal government is involved in the recrea-

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<sup>31</sup> *See id.*, at 1346–47.

<sup>32</sup> *See generally* Barbara A. Cherry, *Misusing Network Neutrality to Eliminate Common Carriage Threatens Free Speech and the Postal System*, 33 N. KY. L. REV. 483, 491 tbl.1 (2006) (describing the variety of legal means by which government can provide access to particular services).

<sup>33</sup> ROBERT S. PINDYCK & DANIEL L. RUBINFELD, *MICROECONOMICS* 666 (6th ed. 2005). On public goods generally, *see* Paul A. Samuelson, *The Pure Theory of Public Expenditure*, 36 REV. ECON. & STAT. 386 (1954) (defining a “collective consumption good”).

<sup>34</sup> *See* Spencer Weber Waller, *Areeda, Epithets, and Essential Facilities*, 2 WIS. L. REV. 359, 372 (2008).

<sup>35</sup> 39 U.S.C. § 101(b), (d) (2000); Taunya L. McLarty, *Liberalized Telecommunications Trade in the WTO: Implications for Universal Service Policy*, 51 FED. COMM. L.J. 1, 10 (1998) (explaining that “the central governments of most countries regulate, own, and operate, either directly or indirectly, the telecommunications infrastructure.”).

tion business, providing millions of Americans with recreational opportunities every year,<sup>36</sup> and many states also have their own recreational systems.<sup>37</sup> In the modern era, government intervention also has been applied to roads and highways, usually with access granted for free but occasionally by toll.<sup>38</sup> The degree to which governments actively participate in markets for private goods—goods that could just as easily be supplied by markets—varies widely by form of government and national and cultural predilection. Governments are generally perceived to provide goods or services in the absence of competition in cases in which competitors are either outlawed or effectively driven from the market through heavy subsidization of the government industry. But governments frequently provide goods and services in competition with private industry.<sup>39</sup> The U.S. Postal Service is an example of both models, with a monopoly in letter carriage,<sup>40</sup> but competition in certain high-value services such as overnight mail and parcel post.<sup>41</sup>

The second method of implementing nondiscriminatory access is closely related to the first. Instead of providing the services itself, the government can contract with private entities to do so.<sup>42</sup> Government provision of roads, ferries, bridges, ports (and customs houses), electricity, natural gas, and water has frequently been accomplished through private entities.<sup>43</sup> Such “franchises” typi-

<sup>36</sup> For instance, in 2002 the National Park System had a total of 277,299,880 recreational visits, approximately one visit for every citizen in the United States. Although access to some national parks is free, many charge entrance fees. Press Release, Nat'l Park Serv., National Park Attendance Rises in 2007 (Feb. 26, 2008), available at <http://home.nps.gov/applications/release/Detail.cfm?ID=785>.

<sup>37</sup> See, e.g., Welcome to North Carolina State Parks, <http://www.ncparks.gov/Visit/main.php> (last visited Sept. 20, 2008); California State Parks, <http://www.parks.ca.gov/> (last visited Sept. 20, 2008); Kentucky State Parks, <http://parks.ky.gov/> (last visited Sept. 20, 2008).

<sup>38</sup> See Casey T. Wallace & Sandy D. Hellums, *A Long and Winding Road: Federal Funding for Interstate Toll Roads*, 40 URB. LAW. 495, 497 (2008); Stephen McDonald, *Why VEETC Is Not Enough: Protecting the National Highway Transportation Infrastructure*, 30 WM. & MARY L. REV. 731, 731 (2006).

<sup>39</sup> *Oversight Hearings on the U.S. Postal Service – 1994: Hearing Before the H. Comm. on Post Office and Civil Serv.*, 103rd Cong. 103-40 (1994) (statement of Michael E. Motley, Associate Director, U.S. Gen. Acct. Office).

<sup>40</sup> 18 U.S.C. §§ 1694–1697 (2006).

<sup>41</sup> See, e.g., DHL History, <http://www.dhl-usa.com/Company/History.asp> (last visited Aug. 26, 2008); FedEx Global Supply Chain Services, [http://about.fedex.designcdt.com/our\\_company](http://about.fedex.designcdt.com/our_company) (last visited Aug. 26, 2008); UPS 2000-2007 Global Commerce and Transformation, <http://www.ups.com/content/corp/about/history/2002.html> (last visited Aug. 26, 2008).

<sup>42</sup> See U.S. GEN. ACCOUNTABILITY OFFICE, FEDERAL-AID HIGHWAYS: INCREASED RELIANCE ON CONTRACTORS CAN POSE OVERSIGHT CHALLENGES FOR FEDERAL AND STATE OFFICIALS 1 (2008) (considering the privatization of transportation projects in order to keep pace with existing demand).

<sup>43</sup> See generally *id.* (“Consistent with longer-term trends in privatization of public services, states and localities have looked to increased private sector participation in delivering

cally include a duty to serve all who apply—almost invariably with either explicit or implicit price controls—and a monopoly over the particular function for which the franchise is granted.<sup>44</sup> Occasionally, the nondiscrimination requirement imposed on franchisees will include not only the duty to serve, but also the duty to *expand* service to new customers.<sup>45</sup> In the modern era, this type of nondiscriminatory access has been imposed on regulated industries, with not only rates, but also the profitability of the provider set by government actors.<sup>46</sup>

A third method to bring about nondiscriminatory access is simply to mandate it without designating the entity or industry as a monopoly or providing a detailed regulatory regime to govern the industry. Modern examples include industries that experience periods of deregulation with the degree of government control varying widely based on the stage of (de)regulation.<sup>47</sup> Legislatures have occasionally mandated “pure” nondiscriminatory access without specifying in detail how the industry would operate, often in combination with a provision setting the price of the good or service, but without the intense supervisory structure of a regulated industry.<sup>48</sup> This is the model of compulsory licenses—including those in American copyright law—that dictate the price at which transactions take place, but leave market participants to manage their own profitability at the mandated price. But broad nondiscrimination obligations imposed without supporting regulatory structures have more traditionally been the province of courts. Courts have sometimes implied nondiscrimination obligations on government franchises, but the need to do so has been rare as legislatures have become better at drafting franchises to explicitly impose nondiscrimination obligations.<sup>49</sup> Absent legislative nondiscrimination mandates, courts tend not to impose a common-law duty to serve<sup>50</sup>—but courts have found a common law duty to provide nondiscriminatory access for certain industries.<sup>51</sup>

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highway infrastructure and services.”).

<sup>44</sup> Rossi, *supra* note 22, at 1236.

<sup>45</sup> *Id.* at 1252–53.

<sup>46</sup> *Id.* at 1243 (discussing the applicability of rate regulation).

<sup>47</sup> *See, e.g., id.* at 1277–78 (discussing the path and ultimate result of deregulating the electric utility industry).

<sup>48</sup> *Id.* at 1236.

<sup>49</sup> *Lane v. Cotton*, (1701) 88 Eng. Rep. 1458, 1468–69 (K.B.). Similarly, English courts typically implied in royal grants of franchises for bridges and ferries a concomitant duty to serve all at a reasonable price.

<sup>50</sup> *See, e.g., Time Warner Entm’t Advance/Newhouse P’ship v. Carteret-Craven Elec. Corp.*, 506 F.3d 304, 314–15 (4th Cr. 2007) (refusing to interpret “North Carolina law so as to extend the common law prohibition against unreasonable and discriminatory rates” absent legislative action).

<sup>51</sup> *See, e.g., Jim Rossi, The Common Law “Duty to Serve” and Protection of Consumers in an Age of Competitive Retail Public Utility Restructuring*, 51 VAND. L. REV. 1233, 1260–61 (1998) (discussing the judiciary’s imposition of the common law “duty to serve” on pub-



The fourth method of instituting nondiscriminatory access is the judicially created “essential facilities” doctrine in antitrust law. This is a type of modern federal analog to the more traditional common-law nondiscrimination rules. On its face, the essential facilities doctrine applies to a monopolist who denies its *competitors* access to an input to production that is vital to their ability to compete.<sup>52</sup> Thus, the doctrine excludes consumers entirely from its reach, nor does it apply to most monopolists, since most monopolists do not control inputs essential to any particular industry and only a subset of those are vertically integrated to the point of having downstream competitors.<sup>53</sup> The Supreme Court has not applied the doctrine in decades<sup>54</sup> and recently disclaimed that it ever had.<sup>55</sup>

### C. The Objects of Nondiscriminatory Access

A critical element of the “why” of nondiscriminatory access is the “what” of nondiscriminatory access: to what industries have nondiscrimination obligations traditionally been applied?

There is no particularly good rule for distinguishing industries subjected to nondiscrimination obligations from those with complete discretion in their dealings. Rather, regulation is a continuum, with some businesses subject to increasing government interference until they are stripped of any meaningful ability to discriminate among their customers.<sup>56</sup> For instance, under the Robinson-Patman Act, all businesses are ostensibly prohibited from charging two similarly situated customers different prices.<sup>57</sup> There are also businesses whose ability to choose their customers has been subject to limitations different not only in degree but in kind from the limitations placed on most businesses, and

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lic utilities).

<sup>52</sup> See *MCI Commc'ns Corp. v. Am. Tel. & Tel. Co.*, 708 F.2d 1081, 1132 (7th Cir. 1983) (“[A]ntitrust laws have imposed on firms controlling an essential facility the obligation to make the facility available on non-discriminatory terms.”).

<sup>53</sup> See Oliver E. Williamson, *The Vertical Integration of Production: Market Failure Considerations*, 61 AMER. ECON. REV. 112, 112 (1971).

<sup>54</sup> *United States v. Terminal R.R. Ass'n of St. Louis*, 224 U.S. 383 (1912). Because the order in *Terminal Railroad* required that the ownership of the defendant be shared among potential competitors, the remedy in that case was not so much the imposition nondiscriminatory access as it was divestiture. *Id.*

<sup>55</sup> See *Verizon Commc'ns, Inc. v. Law Offices of Curtis V. Trinko*, 540 U.S. 398, 408–11 (2004) (explaining the Court’s refusal to apply the doctrine by stating that it “[has] never recognized such a doctrine.”). Exactly what *Trinko* means has been the subject of considerable debate, but if nothing else, *Trinko* establishes that modern antitrust law is an unlikely source of network neutrality regulation.

<sup>56</sup> 15 U.S.C. § 13 (2006).

<sup>57</sup> *Id.* § 13(b).

they appear consistently over time in cases and statutes.<sup>58</sup>

At common law, and as a matter of custom pre-dating legal recognition, certain industries have been regulated under nondiscrimination regimes. The most familiar form of nondiscrimination rules are those imposed on so-called "common carriers," businesses carrying persons or goods from place to place.<sup>59</sup> Nondiscrimination rules have been imposed on package carriers, taxis (or hacks), and, most famously, railroads.<sup>60</sup> Of course, nondiscriminatory access can be imposed by other methods as well. In England, nondiscriminatory access to the post was guaranteed at common law;<sup>61</sup> in the United States, common access to the post is assured by government ownership of the postal service. Many nondiscrimination obligations traditionally imposed by common law now are today controlled by statute.<sup>62</sup>

Roads have always been subject to special access rules, regardless of whether they are operated by government or private actors.<sup>63</sup> Many of the businesses to which nondiscrimination rules have been applied relate to the use of roads.<sup>64</sup> In addition to nondiscriminatory access for common carriers, the Anglo-American legal tradition has also provided for nondiscriminatory access to inns and blacksmiths,<sup>65</sup> ports,<sup>66</sup> stockyards,<sup>67</sup> grain elevators,<sup>68</sup> slaughter-

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<sup>58</sup> Nondiscrimination rules have been imposed fairly frequently in response to particular exigencies. I will not include uses of nondiscrimination in times of extreme, temporary necessity in my analysis since they are by definition exceptional. *See* Charles Wolff Packing Co. v. Court of Indus. Relations., 262 U.S. 522, 542–44 (1923) (distinguishing the exigencies of war and nationwide railroad strikes from legislation regulating the food producers in Kansas).

<sup>59</sup> *See In re Policy and Rules Concerning Rates for Competitive Common Carrier Services and Facilities Authorizations Therefor, Further Notice of Proposed Rulemaking*, 84 F.C.C. 2d 445 ¶¶ 7–8 (Dec. 16, 1980) [hereinafter FCC Common Carrier NPRM] ("[T]he basic approach of the common law was to impose the duty to serve indiscriminately upon certain occupations particularly likely to abuse the public if no legal protection were extended.").

<sup>60</sup> *See, e.g., Interstate Commerce Comm'n v. Del., Lackawanna & W. R.R. Co.*, 220 U.S. 235, 252 (1911) (applying non-discrimination rules in finding that the contents of a cargo shipment were irrelevant to the cost of shipment).

<sup>61</sup> *Lane v. Cotton*, (1701) 88 Eng. Rep. 1458 (K.B.) ("And why should not an action lie against a postmaster here if, he should refuse to take in a letter or any other thing proper to be sent by post?").

<sup>62</sup> *See* 39 U.S.C. § 101 (2000).

<sup>63</sup> *See Covington & Lexington Tpk. Rd. Co. v. Sandford*, 164 U.S. 578, 596–97 (1896) (explaining that regardless of ownership, roads are operated for the public benefit, which supersedes any desire by a private company to make a profit at the expense of the public).

<sup>64</sup> *See id.*

<sup>65</sup> *Lane*, 88 Eng. Rep. at 1464–65; *See* Bruce Wyman, *The Law of Public Callings as a Solution of the Trust Problem*, 17 HARV. L. REV. 156, 159 (1903).

<sup>66</sup> Sir Matthew Hale, *De Portibus Maris*, in A COLLECTION OF TRACTS RELATIVE TO THE LAW OF ENGLAND 79 (Francis Hargrave ed., 1787) [hereinafter Hale, *De Portibus Maris*].

<sup>67</sup> Gustavus H. Robinson, *The Public Utility Concept in American Law*, 41 HARV. L. REV. 277, 281 (1928) (collecting cases establishing the justification for nondiscriminatory

houses,<sup>69</sup> and even cold storage.<sup>70</sup> It is remarkable that, after the industrial and regulatory revolution that accompanied the nineteenth and twentieth centuries, common carriers and innkeepers are still subject to common law nondiscrimination obligations in jurisdictions lacking statutory equivalents.<sup>71</sup>

Nondiscriminatory access is also frequently the order of the day for certain commodities and services that the public has come to think of as utilities such as natural gas,<sup>72</sup> water,<sup>73</sup> electricity, telecommunications, and even cable television. Even for these products the dominant characteristic that subjects them to nondiscrimination rules appears not to be the commodity itself, but its transportation.<sup>74</sup> There is no duty for merchants to sell bottled water to all comers, but there is a duty for water companies and other utilities to not only serve existing customers, but also to extend service to new ones.<sup>75</sup>

For communications, the whole product is transport. But the duty has limits. For cable television, the most common element—the provision of service itself—is subject to nondiscrimination rules, but cable companies are not generally required to surrender discretion as to what content they will carry.<sup>76</sup> In-

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access).

<sup>68</sup> See *Munn v. Illinois*, 94 U.S. 113, 126 (1876) (allowing the state of Illinois to regulate grain elevators when necessary for the public good).

<sup>69</sup> See Herbert Hovenkamp, *Technology, Politics, and Regulated Monopoly: An American Historical Perspective*, 62 TEX. L. REV. 1263, 1271 (1984) (“[M]any cities in both the United States and Europe created price-regulated monopoly slaughterhouses, effectively turning the industry into a regulated utility.”).

<sup>70</sup> Robinson, *supra* note 67, at 281 (“A cold storage business is ‘public’ because it is a part of the distribution system linked with transportation.” (internal citation omitted)).

<sup>71</sup> See Joseph William Singer, *No Right to Exclude: Public Accommodations and Private Property*, 90 NW. U. L. REV. 1283, 1439 (1996) (collecting cases finding common law nondiscrimination obligations for “innkeepers and common carriers”).

<sup>72</sup> See Rossi, *supra* note 22, at 1249.

<sup>73</sup> See *id.*

<sup>74</sup> In the late twentieth century, there was some regulation of wellhead pricing for oil and gas, but it was short-lived and largely ineffective. Moreover, it was focused not on providing nondiscriminatory access but rather on controlling prices. STEPHEN G. BREYER & PAUL W. MACAVOY, *ENERGY REGULATION BY THE FEDERAL POWER COMMISSION* 56, 60, 122 (1974).

<sup>75</sup> See Rossi, *supra* note 22, at 1236, 1239. This applies in sparsely-populated locales, usually by statutory mandate. In the cases of water, gas and other similar companies, this is a common law principle as well. *Id.* at 1249. While an “isolated individual cannot compel an uneconomical addition to an area with a very low demand for service,” in the case of a growing area:

The proper discharge of this public duty required not only the company should provide a supply of water and establish a system for its distribution to meet the reasonable needs of the municipal community as it then existed, but it was under the obligation to keep in view the prospective and probable increase in population of the municipality. *Id.* at 1254–55 (quoting *Lukrawka v. Spring Valley Water Co.*, 146 P. 640, 643 (Cal. 1915)).

<sup>76</sup> What limits there are on cable companies’ choice of content run not to customers but to program suppliers through must-carry, leased-access, and public and educational access

deed, the focus on the transport element of these goods and services offers some explanation for why rural customers are frequently unable to obtain natural gas or water service even when they are able to obtain electrical service.<sup>77</sup> While it is expensive to extend all three services to rural customers, it is comparatively less expensive for them to rely on alternatives to a centralized distribution network for gas (which can be delivered in bulk and stored in tanks) and water (which can be produced by individual households from wells) than for electricity (which can be neither easily transported in bulk and stored nor economically produced on a household basis). Nondiscriminatory access for *transportation* of these commodities transcends the consumer market; it is the rule for wholesale transportation of not only electricity<sup>78</sup> and natural gas,<sup>79</sup> but also for pipeline transportation of oil,<sup>80</sup> a commodity that is not itself subject to nondiscrimination obligations.

There have been a few other industries traditionally subject to nondiscriminatory access, but they are exceptional. Grain mills were traditionally required to take all comers, and there is conflicting precedent on the similarly antiquated case of cotton gins.<sup>81</sup> Additionally, some forms of insurance have been subject to nondiscrimination requirements, but the need for insurers to have discretion in distinguishing among risks requires that the form of nondiscrimination applied to insurance be quite narrow.<sup>82</sup>

More remarkable than the list of industries that have traditionally been subject to nondiscriminatory access is the list of industries that have not. For instance, the production and distribution of food has not been subjected to nondiscriminatory access for hundreds of years. Neither have other vital services like shelter and medical care, for which we have gone to substantial pains to provide *full* access, but for which America does not provide *nondiscriminatory*

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regulations. See Brief for Center for Media Education et al. as Amici Curiae Supporting Respondents at 10 n.13, *Time Warner Entm't Co., L.P., v. FCC*, 240 F.3d 1126, 1137 (D.C. Cir. 2001) (No. 94-1035).

<sup>77</sup> See Rossi, *supra* note 22, at 1237–38 n.12.

<sup>78</sup> *Id.* at 1279–82 (discussing the Federal Energy Regulatory Commission orders that subject wholesale electricity distribution (or “wheeling”) to nondiscriminatory access); Kearney & Merrill, *supra* note 27, at 1354–55; see *Otter Tail Power Co. v. United States*, 410 U.S. 366 (1973) (deciding arguably the only true antitrust essential facilities case decided by the Supreme Court, which dealt with transport of wholesale electricity).

<sup>79</sup> Kearney & Merrill, *supra* note 27, at 1344 (discussing the National Gas Policy Act of 1978 and the series of orders by the FERC that eventually imposed common carrier obligations on gas pipelines by 1992).

<sup>80</sup> See *United States v. Ohio Oil Co. (The Pipeline Cases)*, 234 U.S. 548, 559 (1914); Edward A. Adler, *Business Jurisprudence*, 28 HARV. L. REV. 135, 143 (1914).

<sup>81</sup> See Rossi, *supra* note 22, at 1244–45 (discussing the nondiscriminatory access restrictions on mills); Robinson, *supra* note 67, at 282 (citing cases finding both that cotton gins were and were not public utilities).

<sup>82</sup> See Rossi, *supra* note 22, at 1292.

access. We have an enormous regulatory infrastructure to fund access to medical treatment, but doctors are still perfectly free (as a legal matter) to pick and choose their patients. Education also is subject to an extensive regulatory infrastructure, but institutions of higher learning are not treated like common carriers.<sup>83</sup> Employment, while subject to limits on personal status discrimination, is otherwise given, withheld, and withdrawn at the whim of the employer.<sup>84</sup>

Unfortunately, simply identifying which industries have and have not subject to nondiscriminatory access tells us little about the principles of trade regulation embodied in decisions about whether to apply nondiscrimination norms to particular industries. The harder question, and the question that must be answered before we have any hope of testing modern network neutrality proposals for consistency with established uses of nondiscriminatory access, is: why? What are the accepted justifications for imposing nondiscriminatory access on a particular industry? The next section explores this question.

### III. POTENTIAL JUSTIFICATIONS FOR IMPOSING NONDISCRIMINATORY ACCESS

In order to identify a common justification for imposing nondiscriminatory access, this section evaluates all of the most frequently offered justifications for imposing nondiscrimination rules—necessity, holding out, and market power. After discounting these broad justifications, I consider a number of component standards, none of which alone explain nondiscrimination rules but, when combined, offer the best explanation for when and why the Anglo-American legal tradition has chosen to impose nondiscriminatory access. Before that, though, I seek insight into the nondiscrimination problem through a series of cases that address the question of the “public interest,” which closely parallels that of nondiscrimination.

#### A. The Regulatory Paradigm: “Businesses Affected with the Public Interest”

In the late-nineteenth and early-twentieth centuries, the Supreme Court struggled with a series of cases that considered under what conditions businesses could be regulated at all, including through the imposition of nondiscrimination rules and rate regulation.<sup>85</sup> The cases were rendered moot with the

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<sup>83</sup> See *Grutter v. Bollinger*, 539 U.S. 306 (2003) (upholding the University of Michigan Law School’s use of affirmative action in its admission policy).

<sup>84</sup> See Paul M. Secunda, *Reflections on the Technicolor Right to Association in American Labor and Employment Law*, 96 KY. L.J. 343, 345 n.10 (2008) (discussing the doctrine of employment-at-will).

<sup>85</sup> See Rossi, *supra* note 22, at 1247–49.

death of economic substantive due process in *Nebbia v. New York*,<sup>86</sup> but the restrictive nature of the pre-*Nebbia* doctrine required the Court to regularly confront whether a particular industry was subject to state interference with business discretion.<sup>87</sup>

It is hard to argue that the Court made much progress in separating the businesses that could be regulated from those that could not. Toward the end of this era, and with the benefit of the many cases already addressing the issue, Chief Justice Taft made a valiant attempt to describe the types of businesses for which the state could regulate the terms of exchange—businesses that were public:

(1) Those [businesses] which are carried on under the authority of a public grant of privileges which either expressly or impliedly imposes the affirmative duty of rendering a public service demanded by any member of the public. . . .

(2) Certain occupations, regarded as exceptional, the public interest attaching to which, recognized from earliest times, has survived the period of arbitrary laws by Parliament or Colonial legislatures for regulating all trades and callings. . . .

(3) Businesses which though not public at their inception may be fairly said to have risen to be such and have become subject in consequence to some government regulation. They have come to hold such a peculiar relation to the public that this is superimposed upon them. In the language of the cases, the owner by devoting his business to the public use, in effect grants the public an interest in that use and subjects himself to public regulation to the extent of that interest although the property continues to belong to its private owner and to be entitled to protection accordingly.<sup>88</sup>

Taft's list is subject to criticism not for its over- or under-inclusiveness, but for the minor sin of misidentifying the categories into which certain businesses fall and for the major sin of providing absolutely no guidance as to why or how businesses in the third category "come to hold such a peculiar relation to the public. . . ."<sup>89</sup> The owners of such businesses would generally deny that they

<sup>86</sup> *Nebbia v. New York*, 291 U.S. 502, 537 (1934).

<sup>87</sup> The precise basis for the limits actually is a bit murky. Some of the cases rest on the Takings Clause, some on the Equal Protection Clause, and others directly on the due process clauses of the Fifth and Fourteenth Amendments. See *Smyth v. Ames*, 169 U.S. 466, 524–26 (1898) (distinguishing among the takings, equal protection, and due process rationales). The substantive criteria, however, do not seem to have depended on the part of the Constitution applied. I have found no cases holding a particular regulation to be valid under one of the provisions while a violation of another. On the mixed takings/due process/equal protection basis for these restrictions, see Michael J. Phillips, *The Progressiveness of the Lochner Court*, 75 DENV. U. L. REV. 453, 465–66 (1998). I have largely omitted consideration of federal regulation of businesses, as the limits on federal power were specific to positive constraints present in the Constitution. See *infra* note 216.

<sup>88</sup> *Charles Wolff Packing Co. v. Court of Indus. Relations of Kan.*, 262 U.S. 522, 535 (1923).

<sup>89</sup> *Id.* Gustavus Robinson explains that the examples Taft used for the first category, like common carriers—frequently did not have their nondiscrimination obligations imposed by franchise and that Taft's list of historical examples (inns, cabs, and mills) was overly restrictive, since common carriers historically had been so regulated from time immemorial. Thus, while Taft seems to have incorrectly categorized some businesses, particularly between the

had “devot[ed]” them “to the public use.”<sup>90</sup> The Supreme Court struggled with the question during the American industrial revolution, and frequently knew a business “affected with the public interest” when it saw it. But providing a sensible list of *criteria* for imposing nondiscriminatory access proved to be a fifty-year exercise in circular logic.<sup>91</sup> Businesses that fell within the first two categories could be regulated out of tradition.<sup>92</sup> The third category posited that if the public has an interest in a business’ operation, the business may be regulated in the public interest.<sup>93</sup>

It is easy to dismiss these cases for their failure to define how or why a business becomes “affected with a public interest,” but even if the Court failed in defining “public,” its singular pursuit of that goal is itself important. Publicness was itself a justification for imposing restrictions on certain businesses.<sup>94</sup> The cases are clear on that even if they are not clear on exactly how to identify which businesses were public and which were private.<sup>95</sup> Insistence on the distinction was, to some degree, a product of the Court’s formalist approach toward questions of governmental power,<sup>96</sup> but if it was a formalism, it was hardly an empty one. The same distinction formed the analytical framework for hundreds of years of English and American cases that addressed the imposition of special duties on particular industries. The Court’s search to identify public businesses subject to enhanced regulation was a continuation of previous practice. Although the Court was never able to provide a satisfactory definition of publicness, there is good reason why it was the criterion for which the Court sought definition. Publicness was not a random distinction chosen merely to prevent governments from regulating *all* businesses, nor was it a label without intrinsic meaning.

The 1701 case *Lane v. Cotton*<sup>97</sup> provides an excellent summary of the

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first and second categories, the list as a whole does include most businesses for which non-discrimination rules applied. Robinson saves his strongest criticism for the third category, which he argues was no more than a naked attempt to make sense of the recent cases on public regulation of businesses. Robinson, *supra* note 67, at 286–87.

<sup>90</sup> Robinson, *supra* note 67, at 286–87.

<sup>91</sup> *Id.*

<sup>92</sup> *See id.* at 286.

<sup>93</sup> As Edward Adler put it, the Court’s logic in *Charles Wolff Packing Co.* suggests the rule that “[y]ou may regulate a business if it is public, and it is public if it may be regulated.” Adler, *supra* note 80, at 146.

<sup>94</sup> *See* Barry Cushman, *Formalism and Realism in Commerce Clause Jurisprudence*, 67 U. CHI. L. REV. 1089, 1128–29 (2000).

<sup>95</sup> *See id.* at 1127 (“A . . . division of the world into public and private spheres supplied the organizing principle for the Court’s substantive due process jurisprudence. . .”).

<sup>96</sup> *Id.* at 1128 (“[T]he ‘formalist’ division of the world into public and private realms created a restraint parallel to that imposed on the federal and state governments by the local/national dichotomy of Commerce Clause jurisprudence.”).

<sup>97</sup> *Lane v. Cotton*, (1701) 88 Eng. Rep. 1458 (K.B.).

somewhat confused, but ever-consistent devotion of the law to the concept of publicness. The case arose out of the loss by the post office of a letter sent by Lane containing eight English bearer bonds.<sup>98</sup> Lane sued Cotton, the postmaster, for compensation.<sup>99</sup> Chief Justice Holt concluded that liability fell properly on Cotton as holder of a “public office.”<sup>100</sup> The law, Holt explained, had always imposed particularly stringent duties on “one that has made profession of a public employment.”<sup>101</sup>

It may seem obvious to modern Americans that the postmaster holds a public office, but the term had a quite different meaning at the time. Public did not equal government. Cotton’s office was created by statute and he held it by means of a royal letter patent,<sup>102</sup> but, as was the case with much of the pre-industrial English administrative state, it would be misleading to consider the post office of Cotton’s era an equivalent of the modern government-operated version. Cotton was not a salaried employee; he took his payment (and those of the clerks he hired) from the proceeds of the post office.<sup>103</sup> As were many of the services we now think of as government ones, the English post office was, in modern terms, outsourced.

The converse was also true. Many functions performed entirely by non-governmental actors were considered public. Innkeepers and common carriers assumed public offices, a term used throughout early English case law to describe the duties of nondiscriminatory access.<sup>104</sup> As Holt explained in *Lane*: “If the inn be full, or the carrier’s horses laden, the action would not lie for . . . refusal, but one that has made profession of a public employment, is bound to the utmost extent of that employment to serve the public.”<sup>105</sup> Innkeepers were considered “sort of public servants”<sup>106</sup> for their role in providing shelter for travelers. A common carrier too was “in the nature of a public officer, bound to

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<sup>98</sup> *Id.* at 1458.

<sup>99</sup> *Id.*

<sup>100</sup> *Id.* at 1469 (“I hold the action lies: First, because it is a public office, [e]ntrusted to them by Parliament, for the profit and benefit of the subject, which in its nature requires care and diligence.”).

<sup>101</sup> *Id.* at 1465.

<sup>102</sup> *Id.* at 1458.

<sup>103</sup> *See id.* (“[F]or the executing of this office an annuity of fifteen hundred pounds a-year is granted him out of the profits of the office.”).

<sup>104</sup> *See, e.g.,* *Rex v. Ivens*, (1835) 173 Eng. Rep. 94, 96 (N.P.) (“[I]nnkeepers are a sort of public servants.”); *Munn v. Illinois*, 94 U.S. 113, 130 (1876) (“Common Carriers exercise a sort of public office . . .”).

<sup>105</sup> *Lane v. Cotton*, (1701) 88 Eng. Rep. 1458, 1465 (K.B.).

<sup>106</sup> *Ivens*, 173 Eng. Rep. at 96; *see De Wolf v. Ford*, 86 N.E. 527, 529 (N.Y. 1908) (“For centuries it has been settled in all jurisdictions where the common law prevails that the business of an innkeeper is of a *quasi public character*, invested with many privileges, and burdened with correspondingly great responsibilities.”) (emphasis added).



the discharge of a general duty.”<sup>107</sup> Sir Matthew Hale’s treatise on the duties of privately owned warehouses, which became an intellectual foundation for the American law of nondiscriminatory access and common carrier regulation, also likened the duties of regulated businesses to public officers.<sup>108</sup>

Holt was surely correct that the office of postmaster was, like that of a common carrier, a public one, although he seems to have missed some of the complexity inherent in the claim. First, the office Cotton possessed was created by statute, but many of the cases Holt cited were for duties imposed on certain professions by the common law.<sup>109</sup> Thus, while Holt cited cases for the duties imposed on smiths,<sup>110</sup> innkeepers,<sup>111</sup> and common carriers,<sup>112</sup> it was entirely plausible for the statute explicitly creating the duties imposed on Cotton to enhance or reduce the duties that the common law imposed on Cotton as a common carrier. There are numerous other cases in which duties are imposed by virtue of statute or patent as a quid pro quo for a particular franchise with no further justification required.<sup>113</sup> Holt concluded that the statute did not alter the common law duties,<sup>114</sup> but it need not have been so.

Second, Holt failed to distinguish between the two different duties the law imposed on those engaged in public employment: the duty to serve all who applied<sup>115</sup> (the traditional analog of modern nondiscriminatory access) and strict liability for losses suffered by customers.<sup>116</sup> It does not necessarily follow that because the postmaster accepted the duty to carry every Englishman’s letters he also took on strict liability for losing them. But, in Cotton’s case, the analogy of the postmaster to—and its direct descent from—the trade of common carriage proved too strong to allow suggestion that the duties were bifurcated.<sup>117</sup>

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<sup>107</sup> *Ansel v. Waterhouse*, (1817) 105 Eng. Rep. 1286, 1289 (N.P.); see *Munn*, 94 U.S. at 130 (“Common carriers exercise a sort of public office, and have duties to perform in which the public is interested. Their business is, therefore, ‘affected with a public interest,’ within the meaning of the doctrine . . .”).

<sup>108</sup> See Hale, *De Portibus Maris*, *supra* note 66, at 77–78.

<sup>109</sup> See *Lane*, 88 Eng. Rep. at 1458, 1464.

<sup>110</sup> *Id.* at 1464.

<sup>111</sup> *Id.* at 1464–65.

<sup>112</sup> *Id.* at 1465.

<sup>113</sup> See, e.g., *Allnut v. Inglis*, (1810) 104 Eng. Rep. 206, 208 (K.B.) (noting that the statutory exclusive right to receive imported goods includes a duty to receive and handle all goods at reasonable rates).

<sup>114</sup> *Lane*, 88 Eng. Rep. at 1466 (“And the post-master was, as I said, chargeable at common law before, and the employment is now the same that it was then . . .”).

<sup>115</sup> The duty is the traditional analog of modern nondiscriminatory access. *Lane*, 88 Eng. Rep. at 1464–65 (citing the duties of a smith to shoe a horse, an innkeeper to lodge a traveler, and a common carrier to accept a parcel for delivery).

<sup>116</sup> *Id.* at 1462.

<sup>117</sup> *Id.* at 1468 (“And it seems plain to me that the Act intended he should be answerable for all the letters and packets they should receive, and for the default of their servants.”).

Thus, it should come as little surprise that, when the U.S. Supreme Court had to debate the limits of regulation, it did so through the rubric of publicness.<sup>118</sup> The leading case of the era, *Munn v. Illinois*, largely consists of a dispute between the majority and dissent over whether Chicago grain elevators could legitimately be declared public as the constitution of Illinois declared, and both sides appealed to the English common law and commentary on public occupations as authority.<sup>119</sup> While there was considerable dispute throughout the era over the criteria for determining whether a particular business was public, it was common ground that publicness provided its own justification for imposing special duties on businesses deemed to be public.<sup>120</sup> The various lines of reasoning the Court used to determine publicness are addressed in detail below. But if the Court's reasoning was somewhat vague, as suggested by Chief Justice Taft's definition in *Charles Wolff Packing Co. v. Court of Indus. Relations*,<sup>121</sup> it seemed to have largely gotten the "what" of nondiscriminatory access right. Very few of the cases imposed nondiscrimination duties on industries that would shock either ancient or modern lawyers.<sup>122</sup>

Even if the Court's reasoning was somewhat lacking, no one seeking to identify when to apply nondiscrimination obligations can ignore the work of the Court during the public interest era. The Court was correct in its pursuit of publicness as the criterion by which the Anglo-American legal tradition has imposed special obligations on businesses. The impetus for separating public businesses from private was largely obviated by the end of the *Lochner* era, but some distinctions persist. Even though constitutional limits on the abilities of legislatures to impose nondiscrimination requirements on businesses disappeared almost sixty years ago, the classes of businesses that legislatures and courts have subjected to extensive nondiscrimination and rate regulation have not been expanded substantially since that time. The concept of publicness has retained its meaning among lawyers and laypeople alike, along with its normative—if not constitutional—implications. If "public" were self-defining, that would be the end of the matter, but it's not self-defining. The heart of the inquiry, then, is to identify exactly what it is that makes a business "public."

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<sup>118</sup> *Munn v. Illinois*, 94 U.S. 113, 126 (1876).

<sup>119</sup> Compare *id.* at 126–30 (arguing that a business becomes "public" when it is devoted to a use in which the public has an interest and for which there is a near-universal need, based to some degree based in the presence of monopoly). with *id.* at 139–41 (Field, J., dissenting) (arguing that a business becomes "public" only as a condition to the granting of special privileges by the government essentially a franchise theory). See *infra* Part III.D.2.

<sup>120</sup> *Munn*, 94 U.S. at 126 ("[W]hen, therefore, one devotes his property to a use in which the public has an interest, he, in effect, grants to the public an interest in that use . . .").

<sup>121</sup> *Charles Wolff Packing Co. v. Court of Indus. Relations*, 262 U.S. 522, 536 (1923) (discussing how a business becomes "affected with a public interest").

<sup>122</sup> *Id.* (restating the circumstances, as established by *Munn* that clothe a business with a public interest).

## B. Necessity

Society's willingness to engineer markets in order to provide access to certain articles of commerce depends in some measure on the necessity of those items. Separating articles of commerce that are necessary from those that are not is an exercise likely to reveal more about the author's preferences than anything else, but profitable comparisons are not beyond reach. Among the extremes the differences are obvious. Clean water is more of a necessity than cotton candy, and shelter<sup>123</sup> is more a necessity than opera tickets.<sup>124</sup> Because subjecting an article of commerce to nondiscriminatory access will (on the margin) decrease the incentive to produce it, it might seem even more foolhardy to subject the most necessary items to nondiscriminatory access. The reduced incentive resulting from nondiscrimination rules may be why necessity has never been a particularly important criterion for applying nondiscrimination obligations.

Most items necessary to life are not subject to nondiscriminatory access, and many of those that are (such as common carriage and lodging while traveling) would rank fairly low on any list of necessary goods and services. Indeed, necessity seems to be a strong factor supporting nondiscriminatory access only in times of emergency. The short-term nature of all emergencies provides some insulation between reduced returns and the effects on long-term investment decisions. Though housing has never been subject to broad nondiscrimination controls,<sup>125</sup> the Court was willing to approve a nondiscriminatory access regime to provide housing in Washington, D.C. for the increased number of federal workers needed to organize the United States' participation in World War I.<sup>126</sup> Even in the exigency of World War I, the Court later explained the statute "went to the verge of the law."<sup>127</sup> Societies usually respond to necessity by subsidizing access to necessary items, as frequently is the case with the many social programs intended to provide basic housing, food, education, and medical care. There is no common law (or statutory) tradition of justifying the imposi-

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<sup>123</sup> See *Block v. Hirsch*, 256 U.S. 135, 153–54 (1921) (upholding nondiscrimination rules applied to the Washington D.C. apartment market during World War I).

<sup>124</sup> See *Tyson v. Banton*, 273 U.S. 418, 444–45 (1927) (striking a statute regulating the price of theater tickets); *Ribnik v. McBride*, 277 U.S. 350, 373 (1928) (Stone, J., dissenting) ("Ticket brokers and employment brokers are similar in name; in no other respect do they seem alike to me. To overcharge a man for the privilege of hearing the opera is one thing; to control the possibility of his earning a livelihood would appear to be quite another.").

<sup>125</sup> *Robinson*, *supra* note 67, at 287–88 (discussing Supreme Court decisions finding that housing is a necessity without necessarily extending or approving nondiscrimination controls).

<sup>126</sup> See *Block*, 256 U.S. at 153–56; see also *Tyson*, 273 U.S. at 440 ("As we have shown, there is no legislative power to fix the prices of provisions or clothing or the rental charges for houses or apartments, in the absence of some controlling emergency. . . .").

<sup>127</sup> *Tyson*, 273 U.S. at 438 (quoting *Pa. Coal Co. v. Mahon*, 260 U.S. 393, 416 (1922)).

tion of nondiscriminatory access on necessity, at least in the absence of emergency.

### C. “Holding Out”

Another possible justification for imposing nondiscriminatory access on businesses is the quasi-contractual, “holding out” theory—all businesses that hold themselves out as open to the public must provide nondiscriminatory service. The theory’s origin stems from the duties of businesses under pre-industrial English (and to a lesser extent American) law.<sup>128</sup> The holding out theory held considerable sway around the turn of the twentieth century and was resurrected recently by Professor Joseph Singer as an argument for prohibiting racial or ethnic discrimination by a much broader range of businesses than those currently subject to Title II of the Civil Rights Act.<sup>129</sup> Further support for a holding out approach is arguably provided in the public interest cases, most directly in Chief Justice Taft’s third category of businesses: those in which “the owner by devoting his business to the public use, in effect grants the public an interest in that use and subjects himself to public regulation.”<sup>130</sup> The theory, if valid, would justify imposing nondiscrimination obligations on virtually any business that serves the general public, and certainly would justify imposing network neutrality or other forms of nondiscriminatory access on any firm in the telecommunications industry.

The holding out theory of nondiscriminatory access is largely a product of procedural rather than substantive law. Many of the earliest cases addressing the liability of businesses turn on what form of action was plead, not the scope of the liability.<sup>131</sup> During the early development of contract law, before the requirement of consideration separated breach of contract into its own form of action and before negligent professional conduct became its own basis for an action in tort, breach of promise was pursued as its own tort.<sup>132</sup> It was necessary, however, to plead the breach of a specific promise.<sup>133</sup> Therefore, in a case against a service provider for harm caused by the provider’s careless (or negligent) conduct, plaintiffs had to allege that the service provider made a specific

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<sup>128</sup> Charles K. Burdick, *The Origin of the Peculiar Duties of Public Service Companies*, 11 COLUM. L. REV. 514, 515 (1911) (describing “the peculiar general duties laid upon persons engaged in common callings” to provide non-discriminatory service); see Adler, *supra* note 80, at 143.

<sup>129</sup> See Singer, *supra* note 71, at 1439.

<sup>130</sup> Charles Wolff Packing Co. v. Court of Indus. Relations, 262 U.S. 522, 533–35 (1923); see *supra* text accompanying note 88.

<sup>131</sup> See Burdick, *supra* note 128, at 515–16; Singer, *supra* note 71, at 1358.

<sup>132</sup> Burdick, *supra* note 128, at 516 (describing the common law action of assumpsit).

<sup>133</sup> *Id.*

promise against committing the harm caused by the provider's conduct.<sup>134</sup> This was an onerous pleading standard, but it was ameliorated significantly by the ability to plead that the service provider made providing this service its business.<sup>135</sup> As Blackstone explained, someone who made it their business to provide a particular service was considered to have made a *general* or *universal* promise that they would perform the service with requisite care.<sup>136</sup> Failure to do so was a breach of that general promise and created liability without the need to plead a specific promise to exercise due care.<sup>137</sup> The claim that a defendant was a professional, and therefore made a general assumpsit, took the form of an allegation that the defendant was *common*—as in a “common surgeon,” “common cook,” or “common carrier.”<sup>138</sup>

The contract basis of liability and the concomitant allegation that a service provider is *common* led to two related arguments for broad nondiscrimination obligations on all businesses. Those two arguments were originally made in the early twentieth century as part of the debates surrounding the public interest cases in the Supreme Court. First, as Edward Adler pointed out, the appellation “common” was not limited to a few professions.<sup>139</sup> *Common* was a description affixed in the case law to virtually all professions, which suggests that the duties we recognize in modern times as imposed upon common carriers applied not to a limited class of professionals, but to all professionals.<sup>140</sup> Second, as

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<sup>134</sup> *Id.*

<sup>135</sup> *Id.* (“In actions against those engaged in common callings the allegation of an express special *assumpsit* is not found, and it was not necessary to a recovery that there should have been such *assumpsit*.”).

<sup>136</sup> WILLIAM BLACKSTONE, 3 COMMENTARIES \*164.

<sup>137</sup> *Id.*; see Burdick, *supra* note 128, at 516 (discussing the difference between “special” and “general” assumpsit by service providers).

<sup>138</sup> BLACKSTONE, *supra* note 136, at 164; OLIVER WENDELL HOLMES, JR., THE COMMON LAW 184 (1909); Adler, *supra* note 80, at 150–51; see Norman F. Arterburn, *The Origin and First Test of Public Callings*, 75 U. PA. L. REV. 411, 413–14 (1927); Burdick, *supra* note 128, at 516; Singer, *supra* note 71, at 1310; Breck P. McAllister, *Lord Hale and Businesses Affected with a Public Interest*, 43 HARV. L. REV. 759, 761–62 (1930) (citing a similar obligation imposed by the allegation that the defendant is engaged in service in “common trust”). Even my lengthy treatment is something of an oversimplification of the controversy. For instance, Holmes believed that the liability of businesses developed out of the strict liability that bailees had previously been subject to, but that strict liability had been limited (in consideration-demanding actions for assumpsit) in *Lane v. Cotton* to the common occupations or to those making an express promise. HOLMES, *supra*, at 196–98. A leading holding out proponent, Norman Arterburn, saw exactly the reverse development: the implied promise of professionals that made an assumpsit action possible was based on a pre-existing duty (enforceable, apparently, in an action on the case) of professionals to exercise care in the performance of their duties. Arterburn, *supra*, at 413–14. As I note below, the tort and contract distinction is relevant to my project only for its eventual influence on the meaning of alleging that the defendant was a *common* service provider.

<sup>139</sup> Adler, *supra* note 80, at 149–52.

<sup>140</sup> *Id.* at 152 (“What, then, did ‘common’ mean? Simply ‘business,’ – business carrier,

championed by Professor Charles K. Burdick, the use of *assumpsit* as the basis of liability for those engaged in common callings suggests that operators of businesses make certain implied promises, and among them is the promise to provide nondiscriminatory service.<sup>141</sup> Eighty years later, Singer enlisted both of these arguments—as well as similar arguments made by others<sup>142</sup>—in his proposal for a broadly conceived anti-discrimination rule. From these two arguments—Adler’s ubiquity of common callings and Burdick’s theory of the origins of implied contractual liability for businesses—Singer traces throughout the pre-industrial era a duty for all businesses to provide service on a nondiscriminatory basis.<sup>143</sup>

Two facts, one historical and one contemporary, cast some initial doubt on the holding out theory as a basis for nondiscriminatory access. First, during the historical period that Singer and his predecessors examine, the business discretion of *all* businesses was severely limited, frequently in ways that modern free markets would now consciously reject.<sup>144</sup> Examining the trade policy of medieval and mercantilist England for guidance on optimal nondiscrimination policy presents a serious risk of importing elements of that policy into a world in which the underlying economic, social, and moral justifications no longer apply.<sup>145</sup> Second, while it is at least debatable that nondiscriminatory access was imposed on all businesses in pre-industrial England, there is no doubt that nondiscriminatory access duties are more limited today.<sup>146</sup> None of the proponents of the holding out theory provide a particularly good explanation for how the duty came to be so limited.

Adler, for instance, explained the change for most businesses as a consequence of the rise of classical, free market economics, and explained the retention of special liability for common carriers as a matter of habit flowing from

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business tailor, business barber. A common surgeon was one who made a business of surgery, who practiced it commonly; a common tailor was one who was in the business of tailoring.”).

<sup>141</sup> Burdick, *supra* note 128, at 518.

<sup>142</sup> Singer, *supra* note 71, at 1329 (citing Joseph H. Beale, Jr., *The Carrier’s Liability: Its History*, 11 HARV. L. REV. 158, 163 (1897) (standing for the proposition that there was no real distinction between the treatment of common carriers and innkeepers on one hand and many other professions on the other).

<sup>143</sup> Singer, *supra* note 71, at 1310. See Nat’l Ass’n of Regulatory. Util. Comm’rs v. FCC, 525 F.2d 630, 641–42 (D.C. Cir. 1976) (applying a historically-based holding out test for imposing nondiscrimination obligations on communications providers).

<sup>144</sup> Nachbar, *supra* note 5, at 1358–63. See *Charles Wolff Packing Co. v. Court of Indus. Relations*, 262 U.S. 522, 537–38 (1923) (stating that at early common law all trades were subject to state wage and price controls); Adler, *supra* note 80, at 146–47 (arguing that all trades had a duty to serve); Arterburn, *supra* note 138, at 421–22 (citing the lack of freedom, even for laborers, to make business choices during the period between the Fourteenth Century and the rise of *assumpsit*).

<sup>145</sup> Cf. Nachbar, *supra* note 5, at 1371–72.

<sup>146</sup> See SANDRA FREDMAN, *DISCRIMINATION LAW* 82–83 (2002).

their status as both bailees and, frequently, franchisees.<sup>147</sup> Burdick similarly argued that the duty to serve continued for common carriers and innkeepers largely as a matter of habit, combined with the importance of the carriage and innkeeping trades and the increasing size and political power of their clientele.<sup>148</sup> But if the duty was as broad as suggested, the habit of imposing liability should have developed equally developed for all the common trades. Many other trades (such as the marketing of food for an increasingly urban population) also increased in importance and client base over the period, but were nevertheless freed from a continuing nondiscrimination obligation, if they ever had one.<sup>149</sup>

Singer's theory is that nondiscriminatory access remained the rule until the second-half of the nineteenth century, when Americans rejected it in order to permit racial discrimination by business owners against the new class of free blacks.<sup>150</sup> But, like the other theories, Singer's theory of racial motivation does little to explain the mix of industries for which nondiscriminatory access has remained the rule.

The inability of holding out theorists to adequately explain the change from historical to present circumstances presents the possibility that the change never took place—that their historical description is simply mistaken. Indeed, each of the two bases of the holding out theory—the abundance of common callings and the imposition on businesses of implied contractual liability—suffers from a single fatal flaw: each fails to account for the varying duties applied to different businesses.

Adler and Burdick's theories rest on cases where courts found two different forms of liability: liability for refusal to serve an applicant and liability for misfeasance in performance of a contracted task.<sup>151</sup> But there is no reason to think that the two duties have the same basis—different duties applied to different common callings. While all of the callings may have had a duty to exercise reasonable care in the performance of their trade, perhaps only a few had a duty to serve. Conflating the two sets of duties has led proponents of the holding out theory to mistakenly take evidence about the origins of the duty to exercise due care as similarly indicative of the origins of the very different duty

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<sup>147</sup> Adler, *supra* note 80, at 156–58. Adler did not explain—other than as a matter of habit—why non-franchised common carriers retained special duties to serve. *See id.*

<sup>148</sup> Burdick, *supra* note 128, at 523–24.

<sup>149</sup> Writing in the early twentieth century, Burdick did not attempt to reconcile the increased importance of the carriage and innkeeping trades with a (relative) decrease in the political power of their proprietors. *See id.* at 523.

<sup>150</sup> Singer, *supra* note 71, at 1390–95.

<sup>151</sup> *Id.*; *see* Adler, *supra* note 80, at 149–62; Burdick, *supra* note 128, at 523–24 (describing “the liability for perjury resulting from failure to properly perform the service after it was entered upon. . .”).

to serve.<sup>152</sup>

Adler, in his theory of common trades, likely was correct that “common” implied “business”<sup>153</sup> (or more likely something closer to “habitual”).<sup>154</sup> Adler’s supposition that all “common” trades were subject to nondiscriminatory access requires the additional inference that “common” implied not only business but a *public* business.<sup>155</sup> “Public,” not “common,” was the term used throughout the period to describe businesses with a duty to serve all.<sup>156</sup> Adler’s theory depends on there being no distinction between common and public, but he provided no case law suggesting that the two were the same, and as an assumption, it does not hold.

Sir Matthew Hale understood a distinction between common businesses and those with a public-service obligation,<sup>157</sup> a point not lost on the Supreme Court two hundred years later, when the Court distinguished between ordinary producers engaged in common callings and those quasi-public businesses and businesses “clothed with a public interest” for which price and output regulation were permissible.<sup>158</sup> Merely referring to someone as a common practitioner of a trade suggests little about the legal obligations imposed as a consequence of the label.<sup>159</sup>

Burdick’s implied contract basis for the holding out theory of nondiscriminatory access similarly conflates the two duties, a defect best exemplified by its collapse when confronted by the requirement of consideration.<sup>160</sup> It is easy to find a contract that is breached when a service provider causes harm in the performance of a service.<sup>161</sup> In cases of malfeasance, consideration is a given

<sup>152</sup> See Arterburn, *supra* note 138, at 415, 418; see also FCC Common Carrier NPRM, *supra* note 59, at ¶ 9.

<sup>153</sup> Adler, *supra* note 80, at 152.

<sup>154</sup> See FCC Common Carrier NPRM, *supra* note 59, ¶ 7 (“The word ‘common’ was used in many different senses, and often meant ‘ordinary’ as for a common soldier, or ‘habitual’ as for a common scold.”).

<sup>155</sup> See Adler, *supra* note 80, at 158–59.

<sup>156</sup> See *supra* Part II.C.

<sup>157</sup> McAllister, *supra* note 138, at 761–62.

<sup>158</sup> See *Charles Wolff Packing Co. v. Court of Indus. Relations*, 262 U.S. 522, 537–39 (1923).

<sup>159</sup> See Arterburn, *supra* note 138, at 418 (explaining that unlike the duty to serve, the duty to use care “applied to all businesses alike, and still does today; no distinction being made between ‘public’ and ‘private’ callings.”); see also FCC Common Carrier NPRM, *supra* note 59, at Appendix B ¶ 7 (“There is little reason to believe that the various references to common cooks, builders, or bakers implied that those professions bore a legal duty to serve, and surely no cases hold to that effect. Rather, these references seem only to have been to ordinary members of those trades.”).

<sup>160</sup> See *supra* note 132–35 and accompanying text (explaining Burdick’s assumptit theory).

<sup>161</sup> Good examples of this kind of breach include losing a parcel entrusted for delivery and killing a horse entrusted to a veterinarian’s care.



since there will be some evidence that the parties previously agreed to an underlying transaction: the existence of (failed) performance. But there is no way to find consideration for an implied promise to serve whoever enters a particular business. By definition, that person is someone who is not *yet* a customer; the only potential consideration would be the act of walking into a business, which is an unlikely source of consideration.<sup>162</sup> Rather than solve the consideration problem, Burdick pointed to Blackstone as an authority for his conclusion, quoting in bulk from Blackstone's *Commentaries*:

There is also in law always an implied contract with a common inn-keeper, to secure his guest's goods in his inn; with a common carrier, or bargemaster, to be answerable for the goods he carries; with a common farrier, that he shoes a horse well, without laming him; with a common taylor, or other workman, that he performs his business in a workmanlike manner: in which if they fail, an action on the case lies to recover damages for such breach of their general undertaking. But if I employ a person to transact any of these concerns, whose common profession and business it is not, the law implies no such *general* undertaking; but in order to charge him with damages, a *special* agreement is required. Also, if an inn-keeper, or other victualler, hangs out a sign and opens his house for travelers, it is an implied engagement to entertain all persons who travel that way; and upon this universal *assumpsit* an action on the case will lie against him for damages, if he without good reason refuses to admit a traveler.<sup>163</sup>

Burdick concludes: "From this we see that a person, by holding himself out to serve the public generally, assumed two obligations—to serve all who applied; and, if he entered upon the performance of his service, to do it in a 'workmanlike manner.'"<sup>164</sup> Eighty years later, Joseph Singer offered a similar analysis, quoting exactly the same passage for exactly the same proposition—that the observed (modern) duties of innkeepers and common carriers are based in contract: "In effect, Blackstone treated the act of hanging out a sign as an invitation to come on the premises to do business of a certain kind, the act of stepping inside and offering money as an acceptance, and the refusal to do business as a breach of contract."<sup>165</sup>

Within the passage from Blackstone, though, the mistake in Burdick's and Singer's reasoning is apparent. Burdick took the class Blackstone described in

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<sup>162</sup> Singer's explication of a similar theory runs into similar problems with consideration. Singer's response, though, was to assume away the normative basis for contract law. As he explains:

[S]ince no agreement between the parties exists [at the time a prospective guest enters an inn], no consideration has been provided by the traveler for the promise to serve, and it is not clear that the traveler relied specifically on a promise of the inn to serve him, one might better argue that the duty to serve the public *is simply an incident of operating a particular form of property*.

Singer, *supra* note 71, at 1310 (citation omitted) (emphasis added). A duty one takes on through no more than "operating a particular form of property" can only be described as a duty imposed by positive law.

<sup>163</sup> BLACKSTONE, *supra* note 136, at 164 (quoted in Burdick, *supra* note 128, at 518).

<sup>164</sup> Burdick, *supra* note 128, at 518.

<sup>165</sup> Singer, *supra* note 71, at 1309–10.

the first part of the passage as subject to liability for misfeasance (a class that includes not only innkeepers, various common carriers, and smiths but also tailors “or other workm[e]n”)<sup>166</sup> and applied to it the duty to serve described in the second part of the passage.<sup>167</sup> But Blackstone did not do so; Blackstone only ascribed duties to serve to innkeepers and victuallers, which suggests that Blackstone himself found cases applying the duty to serve on only those trades.<sup>168</sup> Blackstone’s failure to explain why the promise to serve all was made solely by innkeepers and victuallers opens the passage to the previous criticism of the holding out theory: it fails to explain why some common callings have higher duties than others. The more important point, though, is that Blackstone made the distinction; he did not suggest that the duty to serve applied equally to all common callings, as Burdick and Singer later suggested.<sup>169</sup> Not that Burdick and Singer were alone; the conflation of the two duties escaped notice in *Lane* as well.<sup>170</sup>

Based on a misunderstanding of both the duties historically imposed on common callings and the requirements of contractual liability itself, the holding out theory perpetuates the circular reasoning suggested by Chief Justice Taft’s third category of public businesses (those “devoted” by their owners to a public purpose).<sup>171</sup> While the holding out theory appeals to contract law as a justification for nondiscriminatory access, it simultaneously seeks to deny business owners the assent so critical to justify contractual liability, as the Court recognized at the end of the public-interest era.<sup>172</sup> In *Nebbia v. New York*, the Court dropped all pretense of assent, explaining that

[O]bviously Munn and Scott had not voluntarily dedicated their business to a public use. They intended only to conduct it as private citizens, and they insisted that they had done nothing which gave the public an interest in their transactions or conferred

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<sup>166</sup> See Burdick, *supra* note 128, at 517–18 (quoting BLACKSTONE, *supra* note 136, at 164).

<sup>167</sup> See Burdick, *supra* note 128, at 518 (ascribing the obligation to serve all in a workman like manner to any person holding “himself out to serve the public”).

<sup>168</sup> See BLACKSTONE, *supra* note 136, at 164.

<sup>169</sup> Singer also conflates the duties to exercise due care and to serve all in his treatment of other sources. Although Singer relies heavily on Joseph Beale for support, Beale was writing exclusively about liability for misfeasance, not failure to serve. Beale, *supra* note 142, at 163; Singer, *supra* note 71, at 1329. Beale’s point was that the heightened duty of care attributed to common carriers was a form of implied contract and not (in response to Holmes) a consequence of the status of common carriers’ as bailees. See Beale, *supra* note 142, at 165–66.

<sup>170</sup> See *Lane v. Cotton*, (1701) 88 Eng. Rep. 1458, 1458–1459 (K.B.).

<sup>171</sup> *Charles Wolff Packing Co. v. Court of Indus. Relations*, 262 U.S. 522, 535 (1923) (explaining that the third category of public business includes those “devoted” by their owners to a public purpose).

<sup>172</sup> See generally *Nebbia v. New York*, 291 U.S. 502, 532–34 (1934) (reasoning that when one engages in business “in which the public has an interest,” he is subject to public regulation).

any right of regulation. The statement that one has dedicated his property to a public use is, therefore, merely another way of saying that if one embarks in a business which public interest demands shall be regulated, he must know regulation will ensue.<sup>173</sup>

The same, of course, is true of all duties imposed by positive law. Notice supplies a justification for imposing liability on the party who acts with notice of a duty, but it is not a justification for the underlying duty itself. As a justification for imposing nondiscriminatory access, holding out oneself as open to the public is a conspicuously empty one.

#### D. Market Power

The most durable theory for the imposition of nondiscriminatory access has been to compensate for the existence of a “monopoly.” The term is imprecise; it has meant many things over time, and different meanings suggest different justifications for imposing nondiscriminatory access. One meaning is political monopoly, or franchise. A more recent usage is economic monopoly: the accumulation of market power by a market participant.<sup>174</sup> The justification for imposing nondiscriminatory access on monopolists is simply to prevent them from using their market power to control markets, frequently by extracting supra-competitive rents through high prices and reduced output.<sup>175</sup> Monopoly is currently the dominant rationale offered to justify government rate-setting and restrictions on discrimination. Indeed, the centrality of market power to justifying nondiscriminatory access seems to be the one point on which both sides of the network neutrality and open access debates agree.<sup>176</sup> Market power-based theories of nondiscriminatory access rely on a different set of justifications than franchise (or regulatory compact) theories, so franchise justifications are treated separately before moving on to several market power theories of nondiscriminatory access.

##### 1. Franchise and Regulatory Compact

Grant of a franchise has often been deemed sufficient to demand the owner of the franchise operate their business under a nondiscrimination obligation. But, as a normative theory of nondiscriminatory access, franchise has more in common with contract law than with the market-power theories that have occasionally been applied to holders of economic monopolies. A franchise is a right exclusive to the grantee, and as such it is a proper subject of bargaining be-

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<sup>173</sup> *Id.* at 533–34.

<sup>174</sup> See discussion *infra* Parts III.D.2.

<sup>175</sup> See Wyman, *supra* note 65, at 164–66.

<sup>176</sup> See *infra* text accompanying notes 185–200.

tween grantor and grantee. Franchises can be granted for anything, and they have frequently been used not only to regulate natural economic monopolies, but also as a means for governments to contract with private entities to provide public works.<sup>177</sup> In the case of public works, nondiscriminatory access is simply a quid pro quo demanded as part of the transaction to construct the project, essentially making the franchisee the government's construction and management contractor.<sup>178</sup>

Franchise justifications are not limited to literal franchises. As Dean Jim Chen points out, although such contracts were at one time legally enforceable, the ability of municipalities to enter into such binding contracts has been limited, and has given way to regulatory compact, an arrangement in which regulation, rather than a contract, is used to manage the private production of public services.<sup>179</sup> The difference between literal franchise and regulatory compact is largely irrelevant; both are justified on the quid pro quo between government and industry.

That is not to say that franchise and market power are completely unrelated justifications; it is no coincidence that these exchanges take place in industries considered to be natural economic monopolies. Even absent a payment rationale, though, franchise justifications differ from market power justifications in that the justification for nondiscriminatory access is not the economic status of the resulting entity but the legal nature of the monopoly. Thus, during the public-interest era, even conservatives who would have resisted virtually any market regulation—including that of economic monopolies—thought that it was legitimate to impose nondiscriminatory access on de jure monopolies, largely because the de jure monopolies legal status made them much more durable than inherently unstable economic monopolies.<sup>180</sup>

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<sup>177</sup> See George L. Priest, *The Origins of Utility Regulation and the "Theories of Regulation" Debate*, 36 J.L. & ECON. 289, 302 (1993). Franchises are not necessarily so limited. During their early uses, American municipalities granted franchises for many items, such as pneumatic tubes, refrigeration, and central heating. However, such uses of franchises discontinued and municipal franchises settled on those we commonly think of today as public utilities. See *id.*

<sup>178</sup> See FCC Common Carrier NPRM, *supra* note 59, at ¶¶ 23–24; Jim Chen, *The Death of the Regulatory Compact: Adjusting Prices and Expectations in the Law of Regulated Industries*, 67 OHIO ST. L.J. 1265, 1316 (2006) [hereinafter Chen, *The Death of the Regulatory Compact*]; Rossi, *supra* note 22, at 1244–47; see, e.g., *Norwich Gas Light Co. v. Norwich City Gas Co.*, 25 Conn. 19 (1856) (presenting several cases where the franchisee must provide nondiscriminatory access as part of a construction franchise).

<sup>179</sup> See Chen, *The Death of the Regulatory Compact*, *supra* note 178, at 1316. Instead of a contract, the (unenforceable) regulation is the result of a "repeated dynamic game" between municipality and private provider. *Id.* at 1329–30; see also Rossi, *supra* note 22, at 1248–52.

<sup>180</sup> Stephen A. Siegel, *Understanding the Lochner Era: Lessons from the Controversy Over Railroad and Utility Rate Regulation*, 70 VA. L. REV. 187, 202–03 (1984).

The *quid pro quo* theory of nondiscriminatory access is limited as an explanation of nondiscrimination duties in several ways. While the franchise theory explains the nondiscrimination duties imposed on regulated public utilities, it fails to explain the imposition of similar requirements on many who did not have franchises, including most common carriers and innkeepers, as well as a host of others.<sup>181</sup> Not only is the franchise theory under-inclusive, it is equally over-inclusive. “Franchise” does not mean only the exclusive right to carry out a particular trade; franchises have been granted not only to limit an open trade, they have also been granted regularly to carry out trades otherwise prohibited by law, such as operation of a tavern or alehouse.<sup>182</sup> Most trades required licenses in antebellum America, but few of them were subject to nondiscriminatory access.<sup>183</sup> Moreover, if the *quid pro quo* of franchise were itself enough to justify imposing nondiscrimination rules, we could quickly find ourselves in a world in which the state prohibited many activities we now take for granted and participation in markets—or use of the roads<sup>184</sup>—would be conditioned on acceptance of nondiscrimination obligations, making assent to the franchise as empty as that envisioned by the holding out theorists.

Free exchange is rarely a sufficient basis for justifying restrictions on individual or economic freedom when that exchange takes place with the state. Such restrictions, even as part of a *quid pro quo* with the state, cannot be justified without reference to the activity to which the restrictions pertain. Even if franchise could serve as a normative justification for imposing nondiscriminatory access, it would fail as a descriptive matter to explain why particular industries have traditionally been subjected to nondiscrimination regulation. As such, while many of the cases point to the presence of a franchise as part justification for imposing nondiscriminatory access or other regulation, it is important to place that reliance in perspective.

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<sup>181</sup> See FCC Common Carrier NPRM, *supra* note 59, ¶ 38 (discussing public service obligations imposed on telegraph companies); McAllister, *supra* note 138, at 762 (discussing public interest obligations imposed on ferries).

<sup>182</sup> Franchises also were granted the power of eminent domain, which was frequently granted to private entities undertaking public works projects, at least partially in exchange for a duty to serve the public at nondiscriminatory rates. Charles W. McCurdy, *Justice Field and the Jurisprudence of Government-Business Relations: Some Parameters of Laissez-Faire Constitutionalism, 1863–97*, 61 J. AM. HIST. 970, 974 (1975); see Wyman, *supra* note 65, at 168.

<sup>183</sup> See Singer, *supra* note 71, at 1328–29.

<sup>184</sup> See *Frost v. R.R. Comm’n of State of Cal.*, 271 U.S. 583, 592–93, 99 (1926) (holding, over the dissenting Justices Holmes, Brandeis, and McReynolds, that the state cannot condition the use of its roads on a carrier’s willingness to assume common carrier obligations).

## 2. Simple Market Power

Around the turn of the twentieth century, as the nation struggled to define the limits on government regulation of business, monopoly appeared frequently as a justification for nondiscriminatory access in cases and commentary. For instance, the landmark case of the era, *Munn v. Illinois*, in several references explains that the defendants had a “virtual monopoly” over grain elevators in the city of Chicago, a theme that found a recurrent voice in the cases to follow.<sup>185</sup> Indeed, monopoly, and more generally market power, became the leading theory justifying nondiscriminatory access and rate regulation in the twentieth century, a set of economic arguments that followed the historical ones made by Bruce Wyman.<sup>186</sup> When Singer re-advanced the holding out theory of nondiscriminatory access, he did so primarily to refute Wyman’s still-dominant market power theory advanced eighty years earlier.<sup>187</sup>

Like the proponents of the holding out theory, Wyman also accepted that all the common callings took on similar duties to serve, but he offered a more facially plausible explanation for the change from early English practice than those offered by his holding out counterparts: the expansion of the economy reduced the market power of individual professionals.<sup>188</sup> Thus, Wyman’s theory was adaptable; the common law established the criteria for defining a public business, but changing economic circumstance could alter the set of businesses to which the obligations would attach.<sup>189</sup> Wyman applied his doctrine to contemporary circumstances, arguing that businesses became public when they held either legal or economic monopolies, making the theory capable of accommodating not only market power as a justification in its own right, but also the quid pro quo of franchises.<sup>190</sup> More impressively, he was able to tie the quid

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<sup>185</sup> *Munn v. Illinois*, 94 U.S. 113, 131 (1876). The Court was suggesting, actually, a cartel among multiple elevator owners, not a single monopoly. *Id.*

<sup>186</sup> See generally Wyman, *supra* note 65 (summarizing early English cases that explore the law of public callings, and applying those cases to trust issues in American law at the turn of the twentieth century).

<sup>187</sup> See Singer, *supra* note 71, at 1408. See generally Jim Chen, *The Nature of the Public Utility: Infrastructure, the Market, and the Law*, 98 NW. U. L. REV. 1617 (2004) (reviewing JOSÉ A. GÓMEZ-IBÁÑEZ, *REGULATING INFRASTRUCTURE: MONOPOLY, CONTRACTS, AND DISCRETION* (2003)).

<sup>188</sup> See Wyman, *supra* note 65, at 160 (“Barber, surgeon, smith, and tailor are no longer in common calling because the situation in the modern market does not call for it; but inn-keeper, victualler, carrier, and ferryman are still in that classification, since even in modern trade the conditions require it.”); see also Arterburn, *supra* note 138, at 420–25 (commenting on the economically contingent, and therefore changing, market power basis for imposing duties to serve).

<sup>189</sup> See Wyman, *supra* note 65, at 172–73.

<sup>190</sup> *Id.* at 166 (“Actual monopoly should be dealt with upon the same basis as legal monopoly; and indeed is so treated by the inclusion of both within the law of public employments.”).

pro quo theory of franchises to his own market power justification through language in the case law suggesting that franchises could be granted only for public benefit and therefore they must provide the nondiscriminatory access that all public businesses do.<sup>191</sup> In this way, the nondiscrimination requirements found either explicitly or implicitly in most franchise grants were themselves required *because* of the market power conferred by the franchise.

Wyman's theory, and the market power justification itself, are subject to criticism for a number of reasons. Though holding out theorists have problems with the history, they are not nearly so profound as those facing the market power theory. As Singer aptly points out, Wyman made his historical claims without any support; he simply cited a few cases in which duties were applied and imagined the economic landscape.<sup>192</sup> As Adler put it, there truly is no reason to think "carriers were less numerous than butchers, or that innkeepers were fewer than carpenters, or barbers. . . ."<sup>193</sup> Moreover, the market power theory relies on a counterfactual assertion about the development of markets after the period on which Wyman based his theory. Even if it were true that innkeepers and common carriers did not face competition in pre-industrial England, they certainly did by the early-twentieth century when Wyman wrote.

In America, nondiscrimination restrictions have routinely been placed on service providers without market power, such as taxis, trucking,<sup>194</sup> and even railroads, which have been regulated in both the presence and absence of competing routes.<sup>195</sup> When not otherwise subject to administrative regulation, the common law duties of innkeepers and common carriers remain today, even though hoteliers, bus line operators, and cab drivers face significant competition.<sup>196</sup>

Not only does the market power theory face historical problems, but it also faces jurisprudential ones. The early history of common carrier regulation is devoid of any mention of monopoly,<sup>197</sup> nor is market power an element of modern common carrier regulation of many industries. For instance, inns have traditionally been subject to the same liability in the presence or absence of competition.<sup>198</sup> The duty of common carriers for packages appears to have been

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<sup>191</sup> *Id.* at 162–66.

<sup>192</sup> See Singer, *supra* note 71, at 1408.

<sup>193</sup> Adler, *supra* note 80, at 149.

<sup>194</sup> See Kearney & Merrill, *supra* note 27, at 1388–89.

<sup>195</sup> See *id.* at 1332–33; James B. Speta, *A Common Carrier Approach to Internet Interconnection*, 54 FED. COMM. L.J. 225, 259 (2002) [hereinafter Speta, *A Common Carrier Approach*].

<sup>196</sup> See Singer, *supra* note 71, at 1445–46.

<sup>197</sup> Adler, *supra* note 80, at 148.

<sup>198</sup> Lane v. Cotton, (1701) 88 Eng. Rep. 1458, 1468 (K.B.). See generally Singer, *supra* note 71, at 1408 (“[Wyman does not] explain why innkeepers and common carriers retain duties to serve the public even when competition exists.”).

broader than that for passengers, although it is hard to imagine how a common carrier could have more bargaining power against a shipper than a passenger.<sup>199</sup> Wyman completely ignores many trades that were subject to nondiscriminatory access, such as taxi cabs. The duties imposed on both innkeepers and common carriers have traditionally had little direct relation to the amount of market power they happen to possess.<sup>200</sup>

Even during the tumultuous public interest debates, market power does not appear to have been a driving justification for imposing nondiscriminatory access.<sup>201</sup> The role of market power in *Munn v. Illinois* itself is a matter of some question.<sup>202</sup> Chief Justice Waite called the structure of the Chicago grain elevator market a “virtual monopoly,” but he also provided many examples of industries that could be regulated—such as common carriers, taverns, inns, bakers, hacks, and (depending on the circumstance) bridges, ferries, and mills—that are not natural monopolies.<sup>203</sup> The majority opinion in *Munn* rested largely on Lord Matthew Hale’s seventeenth-century exposition of the duties of public companies, which suggests that Hale is the intellectual grandfather of public interest cases.<sup>204</sup> Waite’s invocation of Hale in *Munn*, though, could just as easily be advanced in support of a franchise theory as it could in support of market power. Waite quoted Hale:

If the king or subject have a public wharf, unto which all persons that come to that port must come and unlade or lade their goods as for the purpose, because they are the wharfs only licensed by the queen . . . or because there is no other wharf in that port, as it may fall out where a port is newly erected; in that case there cannot be taken arbitrary and excessive duties. . . .<sup>205</sup>

It is not clear from the quote whether Hale was addressing legal or economic monopolies—or both. In his dissent in *Munn*, Justice Field attacked Waite’s reliance on Hale for exactly that reason, a point on which Waite provided no reply.<sup>206</sup>

Rather, the market power justification for *Munn* appears to have come after

<sup>199</sup> See Dodd, *On the Contract of Coach Proprietors*, 11 LEGAL OBSERVER 233, 233–34 (Jan. 1836). The same was true for innkeepers. *Calye’s Case*, (1584) 77 Eng. Rep. 520, 523 (K.B.).

<sup>200</sup> See Singer, *supra* note 71 at 1305–06 (quoting Lord Holt).

<sup>201</sup> See Speta, *A Common Carrier Approach*, *supra* note 195, at 252.

<sup>202</sup> See *Munn v. Illinois*, 94 U.S. 113 (1876).

<sup>203</sup> *Id.* at 125, 131–32; see McAllister, *supra* note 138, at 769 (noting that Chief Justice Wait determined that if all of the “enumerated businesses” were subject to regulation, “surely the business of the warehousemen could be”).

<sup>204</sup> See *Munn v. Illinois*, 94 U.S. at 126–29; Speta, *A Common Carrier Approach*, *supra* note 195, at 256–57 (“The opinion has two strands: that of common carrier duties regulating monopoly, and that of public interest more generally.”).

<sup>205</sup> Hale, *De Portibus Maris*, *supra* note 66, at 77; see *Munn*, 94 U.S. at 127.

<sup>206</sup> See *Munn*, 94 U.S. at 150–51 (Field, J., dissenting).



the case itself.<sup>207</sup> After *Munn*, both conservatives and liberals desperately sought a limitation on the Waite's suggestion of the long reach of regulatory authority.<sup>208</sup> The lack of a clear limit on authority in *Munn* meant that the case could be precedent for regulating any business on which the public was dependent.<sup>209</sup> Conservatives naturally wanted strict limits on state regulation, but they agreed that political monopolies could be subject to rate regulation—arguing, along with Field, that Waite's reliance on Hale was misplaced for that reason.<sup>210</sup> Liberals, too, desired a limited interpretation of *Munn*—else it could be taken as asserting that the state could set prices for *all* businesses, a position politically unpopular and so easily attacked that maintaining it could undermine *Munn* entirely.<sup>211</sup> After *Munn*, Chief Justice Waite himself argued that there must be some limit to the kinds of businesses that states could regulate but was unsure of what that limit might be<sup>212</sup>—a clear sign that not even the case's author thought that monopoly (or anything else) provided the primary justification for the state's regulatory authority.<sup>213</sup>

Monopoly did not serve as the foundation for *Munn*. Rather, monopoly served as a compromise justification read into *Munn* by the later public interest cases, a compromise to which the Court could not keep.<sup>214</sup> By 1914, in *German Alliance Insurance Co. v. Lewis*, the Court had repudiated any interpretation of *Munn* that rested on monopoly (political or economic) as the justification and consequent limitation on the state's ability to fully regulate an industry.<sup>215</sup> With the waning of constitutional restrictions on the regulation of business, it became unnecessary for the court to find any extraordinary justification for regulation, and the Court eventually read the monopoly distinction out of *Munn*

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<sup>207</sup> McAllister, *supra* note 138, at 770–72 (citing to cases citing *Munn* as holding “that the state might regulate the prices of businesses which enjoyed a practical monopoly . . .”).

<sup>208</sup> See Siegel, *supra* note 180, at 201–03.

<sup>209</sup> See Edmund W. Kitch & Clara Ann Bowler, *The Facts of Munn v. Illinois*, 1978 SUP. CT. REV. 313, 341 (1979).

<sup>210</sup> See Siegel, *supra* note 180, at 202–04; see also *supra* note 205 and accompanying text.

<sup>211</sup> See *id.* at 201–03.

<sup>212</sup> See, e.g., McCurdy, *supra* note 182, at 997 (noting a statement Waite made following *Munn* that indicated there were limits to the extent of which businesses were private and which were public, thus limiting which businesses the state could regulate).

<sup>213</sup> See *id.* at 997.

<sup>214</sup> McAllister, *supra* note 138, at 770.

<sup>215</sup> See *German Alliance Ins. Co. v. Lewis*, 233 U.S. 389, 410 (1914) (“[*Brass v. N.D.*, in 1894] extended the principle of [*Munn* and *Budd v. New York*, a case on the regulation of both the storage and carriage of grain] and denuded it of the limiting element which was supposed to beset it—that to justify regulation of a business the business must have a monopolistic character.”). See generally McAllister, *supra* note 138, at 771–72 (“[Justice McKenna] found that the earlier cases disposed of the contention that the power of regulation rested upon the grant of a public franchise or privilege.” (citation omitted)).

much as it had previously read in.<sup>216</sup>

The persistence of monopoly in the public interest era case law is more likely a sign of the political unpopularity of monopolists (and other large businesses) than it is of any particular theory of special regulatory power over monopolists.<sup>217</sup> When monopoly was present, the Court did not hesitate to point it out.<sup>218</sup> Identifying monopoly was most likely a rhetorical device to garner support for the Court's decision to permit a particular regulation. In *Budd v. New York*, one of the cases *German Alliance* cited as removing the monopoly limitation on *Munn*, the Court pointed out the monopolistic nature of the business of elevating grain as a justification for its regulation under the separate police power.<sup>219</sup> In *German Alliance*, four pages after the Court held that monopoly was not necessary to justify rate regulation, it hinted at the possibility that the insurance industry might display some characteristics of monopoly.<sup>220</sup> The Court indulged this habit whenever a monopoly was present.<sup>221</sup> Natural monopoly remains the dominant *economic* justification for imposing nondiscriminatory access and rate regulation on industries, but while market power remains important to nondiscriminatory access debates, it does not adequately explain the scope of pre-twentieth-century limits on discrimination.

### 3. Network Concentration

A modern variant of the market power argument for limiting the discretion of property owners over their property (often in the form of nondiscrimination) is network concentration. Networks typically display network effects—the increased utility that each user of a network experiences from use of the network by others.<sup>222</sup> Economically, networks can be distinguished from typical goods

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<sup>216</sup> See *Nebbia v. New York*, 291 U.S. 502, 532 (1934) (“[The] virtual monopoly [in *Munn*] meant only that their elevator was strategically situated and that a large portion of the public found it highly inconvenient to deal with others. This court concluded the circumstances justified the legislation as an exercise of the governmental right to control the business in the public interest; that is, as an exercise of the police power.” (emphasis added)).

<sup>217</sup> See *McAllister*, *supra* note 138, at 769 (“Chief Justice Waite’s references [in *Munn*] to monopoly seem to be for the purpose of emphasizing the size and importance of the business and not of delimiting a necessary condition to regulation.”).

<sup>218</sup> See *United States v. E.I. du Pont de Nemours & Co.*, 351 U.S. 377, 425 (1956).

<sup>219</sup> *Budd v. New York*, 143 U.S. 517, 544–45 (1892).

<sup>220</sup> See *German Alliance*, 233 U.S. at 416–17 (suggesting that the use of rating agencies to set rates “has led to the assertion that the business of insurance is of monopolistic character.”).

<sup>221</sup> See *McAllister*, *supra* note 138, at 772–78, 787 (discussing several cases where the Court uses monopoly as a rhetorical device).

<sup>222</sup> See HARRY NEWTON, *NEWTON’S TELECOM DICTIONARY* 641 (23rd ed., 2007) (explaining that “network effects” exist when the value of a product “to the user is a function of the number of users of that product. A telephone or cellular phone becomes more valuable as the number of people who have one increases.”); Mark A. Lemley, *Antitrust and the In-*

by reference to their *increasing* returns to scale, which makes network markets resistant to discipline of competition.<sup>223</sup> Moreover, the standardization that networks require raises particularly high barriers to entry and therefore can result in unusually durable monopolies.<sup>224</sup> The tendency of network control to concentrate on a single provider has led many scholars to suggest that they are particularly good targets for regulation, including nondiscriminatory access.<sup>225</sup>

Whether or not a strong argument for regulating networks exists, the concentration that typifies networks does not appear to have frequently driven society to regulate them. Telephone service, which displays strong network effects, is largely subject to nondiscriminatory access.<sup>226</sup> However, so are water, natural gas, and electricity—services that exhibit economies of scale similar to phone service, but not network concentration. Network concentration is a problem best solved by imposing a duty to interconnect on network providers.<sup>227</sup> But interconnection obligations were not generally imposed on networks either in common law or much of the early common carrier regulation of networks in the United States.<sup>228</sup>

It would be more accurate to say that nondiscriminatory access has been imposed on networks than to say that it has been imposed in the presence of network concentration.<sup>229</sup> Bridges and ferries may or may not have ready competitors, but they have historically been subject to nondiscriminatory access even though their market positions are (like most public utilities) the result of economies of scale, not network concentration<sup>230</sup>—so too with Hale’s prototypical example of ports.<sup>231</sup> Common carriers are essential components of networks and historically have been subject to nondiscriminatory access, even though common carriage is not readily subject to market concentration at all, much less the powerful effects of network concentration. While there no doubt

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*ternet Standardization Problem*, 28 CONN. L. REV. 1041, 1045 (1996) [hereinafter Lemley, *Antitrust and the Internet Standardization Problem*] (“The more people that are connected to the Internet, the more valuable the connection is to each of the members . . . . [T]he Internet [is] a rare example of the ‘strong’ form of network . . . .”).

<sup>223</sup> See Lemley, *Antitrust and the Internet Standardization Problem*, *supra* note 222, at 1052–53.

<sup>224</sup> See *id.* at 1045–52.

<sup>225</sup> See Mark A. Lemley & Lawrence Lessig, *The End of End-to-End: Preserving the Architecture of the Internet in the Broadband Era*, 48 UCLA L. REV. 925, 933–36 (2001).

<sup>226</sup> 47 U.S.C. §§ 201(a), 202(a) (2000).

<sup>227</sup> See Speta, *A Common Carrier Approach*, *supra* note 195, at 252.

<sup>228</sup> *Id.* at 258–59, 262.

<sup>229</sup> Indeed, many students of regulation define the scope of their study as the regulation of networks. See, e.g., JOSÉ A. GÓMEZ-IBÁÑEZ, *REGULATING INFRASTRUCTURE: MONOPOLY, CONTRACTS, AND DISCRETION* 4 (2003) (defining “infrastructure” as “networks that distribute products or services over geographic space”).

<sup>230</sup> See *id.*

<sup>231</sup> See McAllister, *supra* note 138, at 763–66.

is some unique feature of networks that has led society to mandate nondiscriminatory access to so many of their elements, it is not the proclivity of networks to drive toward monopoly.

Monopolies will always make popular political targets—as they did during the public interest era—but the correlation between market power and the traditional imposition of nondiscriminatory access is tenuous at best. Nondiscriminatory access has been the norm in many industries that do not exhibit strong market power, and many monopolies have escaped any real limits on discrimination.<sup>232</sup> As a matter of twentieth-century law, any regulation that seeks to control monopolies because of their monopoly power is at least facially inconsistent with the American policy of allowing monopolists to reap the rewards of their market position so long as they obtain their monopolies through merit and do not attempt to use their monopolies to interfere with other markets.<sup>233</sup>

#### E. Network

As the preceding section on network concentration suggests, it is impossible to ignore the relationship between industries traditionally subjected to nondiscriminatory access and the operation of physical networks. Discussion of this relationship is not to suggest that the economic incidents of networks led to nondiscriminatory access regulation. Nondiscriminatory access appears to be the rule for physical networks even in the absence of economic forces that typically characterize networks. In addition to network concentration, the principle economic incidents of networks—network effects and network externalities—are similarly limited in their explanatory power.<sup>234</sup> Common carriers, for instance, are inherently tied to networks but do not display network effects.<sup>235</sup> There is no way that one consumer's use of a common carrier increases the benefits other consumers receive from using the same common carrier. Additionally, there is no reason to think that common carriers create important externalities, since the benefits and costs of using a common carrier can be readily realized by its customers. The same is true of not only inns and grain elevators but also of most public utilities: gas, electric, and water service pose no important network effects or externalities.<sup>236</sup>

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<sup>232</sup> See Lemley & Lessig, *supra* note 225, at 927.

<sup>233</sup> Cf. *United States v. Aluminum Co. of Am.*, 148 F.2d 416, 430 (2d Cir. 1945) (explaining “mere size . . . is not an offense against the Sherman Act.”).

<sup>234</sup> See, e.g., Tim Wu, *Why Have a Telecommunications Law? Anti-Discrimination Norms in Communications*, 5 J. ON TELECOMM. & HIGH TECH. L. 15, 25 (2006) [hereinafter Wu, *Why Have a Telecommunications Law?*].

<sup>235</sup> See *id.* at 30–31.

<sup>236</sup> *Id.*

Some industries that share economic characteristics with networks—telephone and telegraph, and arguably bridges, ferries, canals, and railroads—have traditionally been subjected to nondiscriminatory access obligations.<sup>237</sup> Only some of these industries display economic incidents of networks, but virtually all of them have a direct, physical connection to the means of transportation and communication.<sup>238</sup> The connection between transportation and regulation is so strong that it shaped the duties of mixed-use providers. For instance, the duty of nondiscriminatory access applied to inns is limited to travelers; innkeepers have traditionally had the discretion to turn away neighbors or diners at will.<sup>239</sup> The connection between nondiscriminatory access and physical networks is more elemental than the abstractions of economic analysis.

Direct government interest in the operation of transportation and communication networks has a long and robust history.<sup>240</sup> States have operated highways for as long as there have been states.<sup>241</sup> The place of highways at the core of government functions has always been recognized in American law, too, from the constitutional power of the federal government to build post roads—a power distinct from the power to regulate the commerce traveling over them—to the breadth of the powers to tax and spend in their construction.<sup>242</sup> As the Court pointed out, “[i]f there be any purpose for which taxation would seem to be legitimate it is the making and maintenance of highways. They have always been governmental affairs, and it has ever been recognized as one of the most important duties of the State to provide and care for them.”<sup>243</sup> The connection is almost too intuitive to require further explanation. For instance, when Justice Harlan dissented in the *Civil Rights Cases*, his argument for federal anti-discrimination regulation of public conveyances had a self-evident ring<sup>244</sup>—a much more convincing argument than his licensing-based explanation for why the power should also extend to regulation of discrimination in places of public amusement, for which the intuitive connection is not as strong.<sup>245</sup>

It is difficult to identify a consistent justification underlying this public involvement in roads. In his eighteenth-century work, *De Jure Maris*, Sir Mat-

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<sup>237</sup> *Id.*

<sup>238</sup> See Wu, *Why Have a Telecommunications Law?*, *supra* note 234, at 30–31.

<sup>239</sup> See *Calve's Case*, (1584) 77 Eng. Rep. 520, 521 (K.B.); see also *Alpaugh v. Wolverton*, 36 S.E.2d 906 (Va. 1946).

<sup>240</sup> See Noam, *supra* note 26, at 436–37; Carol M. Rose, *Romans, Roads, and Romantic Creators: Traditions of Public Property in the Information Age*, 66 L. & CONTEMP. PROBS. 89, 96–97 (2003) (citing Roman regulation of roads as an example of an industry subject to nondiscriminatory access restrictions).

<sup>241</sup> See *Olcott v. Supervisors*, 83 U.S. (16 Wall.) 678, 696 (1872).

<sup>242</sup> See *United States v. E.C. Knight Co.*, 156 U.S. 1, 16–17 (1895).

<sup>243</sup> *Olcott*, 83 U.S. at 696.

<sup>244</sup> See *Civil Rights Cases*, 109 U.S. 3, 37–42 (1883) (Harlan, J., dissenting).

<sup>245</sup> See *id.* at 41–42.

thew Hale described the public control over ferries in general terms but struggled to provide an abstract foundation for the object of public control:

[A person] may make a ferry for his own use or the use of his family, but not for the common use of all the king's subjects passing that way; because it doth in consequence tend to a common charge, and is become a thing of public interest and use, and every man for his passage pays a toll, which is a common charge, and every ferry ought to be under a public regulation, viz., that it give attendance at due times, keep a boat in due order, and take but reasonable toll; for if he fail in these he is finable.<sup>246</sup>

Hale's attempt at justification points toward the ubiquity of the need to use ferries—a “common charge,” but he does not seem to point to the avoidance of exorbitant rates (a market power explanation) as the primary evil. To take a “reasonable toll” is only one of two justifications; operation “at due times” and maintenance of the boat “in due order” are equally emphasized, points both going to the reliability, not the cost, of the service. Similarly, the analogy Hale drew to ports was not monopoly, but roads: “as if a man set out a street in new building on his own land, it is now no longer bare private interest, but is affected by a public interest.”<sup>247</sup> He offered no underlying justification for the public's right to access a privately constructed road, but his example continues to be cited.<sup>248</sup>

Even franchise justifications, and their suggestion of exclusivity, are closely tied to the inherent public control over roads. Many of the early American franchises did not provide exclusivity; the consideration given in exchange for the promise of nondiscriminatory access and reasonable rates was not a monopoly, but the right of the franchisee to use public thoroughfares.<sup>249</sup> Even Justice Field, one of the most conservative members of the public-interest court, allowed regulation of a franchise if the consideration for the regulation was access to a public street or river.<sup>250</sup>

Although *Munn v. Illinois* came to stand for the proposition that market power could serve as a justification for regulation, the Court explicitly pointed out that the affected market was one for transportation and that the “virtual monopoly” allegedly held by the grain elevators stood in the “gateway of commerce.”<sup>251</sup> In fact, the regulation under consideration in *Munn* had little to do

<sup>246</sup> Hale, *De Portibus Maris*, *supra* note 66, at 78.

<sup>247</sup> *Id.*

<sup>248</sup> See, e.g., *A & M Prop., Inc. v. Norfolk S. Corp.*, 506 S.E.2d 632, 635 (W. Va. 1998) (citing Hale to support the proposition that “[t]his ancient doctrine regarding construction of private thoroughfares for public use, no less relevant now than when it was first enunciated, is the hinge upon which the issue presented by this case turns.”).

<sup>249</sup> See Priest, *supra* note 177, at 305.

<sup>250</sup> See McCurdy, *supra* note 182, at 996–97. Field thought that granting monopolies abrogated the common right, so he would not have thought it to be appropriate consideration for the state's regulation of prices or access. *Id.* at 997.

<sup>251</sup> *Munn v. Illinois*, 94 U.S. 113, 132 (1876). The Court was actually quoting Munn's brief, which argued that because the elevators were instruments of interstate commerce, they

with market power. The operators of grain elevators did not, in fact, have anything resembling a virtual monopoly. Each one was tied to a specific railroad, and operated essentially as independently operated service providers to the railroads themselves.<sup>252</sup> Nor did the Illinois statute prevent monopoly pricing; rather, it authorized collusive pricing and was enacted to control other aspects of the grain-elevator business.<sup>253</sup> Similarly, in *Budd v. New York*, the Court's primary justification for allowing state regulation of grain elevators was that they were "a link in the chain of transportation,"<sup>254</sup> although the Court also defended its decision on market power grounds when faced with the argument that grain elevator owners did not have franchises.<sup>255</sup>

The connection between roads and regulation was not absolute during the public-interest era. The Court permitted regulation of some industries like insurance<sup>256</sup> that had no specific tie to roads or transportation, and states could not condition the use of public highways on willingness to submit to nondiscriminatory access and rate regulation.<sup>257</sup> Even when the Court imposed extensive regulation on the insurance industry, it invoked not the market power of the insurance carriers but the similarity of their function to government, relying on the potential for collusive pricing only for rhetorical effect.<sup>258</sup>

Inherent public control over roads as the justification for nondiscriminatory access also better explains the frequent reference of both English and American courts to the publicness of regulated businesses.<sup>259</sup> In *Smyth v. Ames*,<sup>260</sup> the

could not be regulated by the states. *Id.*; see Kitch & Bowler, *supra* note 209, at 313.

<sup>252</sup> Kitch & Bowler, *supra* note 209, at 315–16.

<sup>253</sup> See *id.* The Illinois statute in question sought to provide speculators with the right to inspect the contents of each elevator in order to better estimate the supply of grain in the Chicago spot markets. The price cap in the statute had no meaningful impact. It merely altered the duration of some of the contracts, which applied to only 12% of the grain. *Id.* at 328, 336–38.

<sup>254</sup> *Budd v. New York*, 143 U.S. 517, 544–45 (1892).

<sup>255</sup> See *id.*

<sup>256</sup> *German Alliance Ins. Co. v. Lewis*, 233 U.S. 389, 405–8 (1914).

<sup>257</sup> *Frost & Frost Trucking Co. v. R.R. Comm'n of Cal.*, 271 U.S. 583, 592–93 (1926).

<sup>258</sup> See *German Alliance*, 233 U.S. at 412–13 (likening the risk-pooling aspects of insurance to a "tax" on all property owners).

<sup>259</sup> See, e.g., *Munn v. Illinois*, 94 U.S. 113, 131–32 (1876) (noting that grain elevators occupy a "sort of public office."); *N.J. Steam Nav. Co. v. Merchs. Bank of Boston*, 47 U.S. 344, 382 (1848) (stating a ferry company carrying passengers and goods was "in the exercise of a sort of public office, and has public duties to perform."); *Cherokee Nation v. S. Kan. Ry. Co.* 135 U.S. 641, 657 (1890) ("The question is no longer an open one as to whether a railroad is a public highway, established primarily for the convenience of the people, and to subserve public ends, and therefore subject to governmental control and regulation."); *United States v. Trans-Mo. Freight Ass'n*, 166 U.S. 290, 321–22 (1897) ("The points of difference between the railroad and other corporations are many and great. It cannot be disputed that a railroad is a public corporation, and its business pertains to and greatly affects the public, and that it is of a public nature."). For discussion about the early common law cases, see *supra* text accompanying notes 59–71.

Court justified rate regulation by reference to the status of railroads as “public highway[s],” and went so far as to suggest that they performed a “state function,” without reference to the status of many railroads as monopolies.<sup>261</sup> Calling upon the publicness of one’s business was a claim about the relationship between the business’s function and the *responsibilities of the state*, not about the degree of market concentration in that business. The object of the business, not the number of competitors in the market, renders one’s work public.<sup>262</sup> That maintenance of roads and communication networks are functions of the state has always been a given. The question was not whether the state could regulate private roads as public; it was whether the analogy between roads and the business in question would hold.

Even if the public’s interest in transportation and communication infrastructure is universally accepted, there remains the question of the justification underlying that interest. After all, it is hard to claim “roads” as a first principle. The early English cases offer no justification. Crown control of roads was accepted as axiomatic.<sup>263</sup> Some theories suggest themselves, but none convincingly. Roads are not particularly strong public goods. Although roads benefit many, there is no reason why the benefits accruing to their users can not be isolated and captured through tolls. It is possible that the nature of roads as touching on the land of many owners made it necessary for landowners to agree on a single authority for their control in order to avoid collective action problems,<sup>264</sup> much as the king had dominion over rivers because they run across and through many different properties. That theory does not explain, however, how a road laid on private land can become public or, perhaps more realistically, how a port or ferry necessarily becomes public, since there is no particular need for a single agency to coordinate the activities of multiple land-

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<sup>260</sup> *Smyth v. Ames*, 169 U.S. 466 (1898).

<sup>261</sup> *Id.* at 544; *see Olcott v. Supervisors*, 83 U.S. (16 Wall.) 678, 695 (1872) (“It has never been considered a matter of any importance that the road was built by . . . a private corporation . . . . [T]he function performed is that of the State.”); *Twp. of Pine Grove v. Talcott*, 86 U.S. (19 Wall.) 666, 676 (1873) (“Though the corporation was private, its work [in building a railroad] was public, as much so as if it were to be constructed by the state.”); *Madden v. Queens County Jockey Club, Inc.*, 72 N.E.2d 697, 699 (N.Y. 1947) (stating the test for whether to impose nondiscriminatory access is whether it is “inherent in the nature” of the business “which makes [its] operation . . . the performance of a public function.”).

<sup>262</sup> *See Wu, Why Have a Telecommunications Law?*, *supra* note 234, at 31 (“[I]t is the role the carrier plays in the economy that necessitates duties of common carriage, not necessarily the potential for abuse of market power.”).

<sup>263</sup> *See P.H. SAWYER, FROM ROMAN BRITAIN TO NORMAN ENGLAND* 182 (2d ed. 1998) (stating that Crown control of roads may have been derived from the Roman Empire).

<sup>264</sup> *Rose*, *supra* note 240, at 97 (“[R]oads and waterways are typically long and thin, and hence they are vulnerable to many possibilities for obstruction and bottlenecks, where any one of multiple miscreants or opportunistic adjacent owners can effectively take control of the whole length of the road.”).



owners with regard to isolated (in place) uses.<sup>265</sup> Most likely, the Crown developed a habit of controlling roads because of the collective action problem they present, and that habit—along with strategic considerations—led by analogy to other Crown-controlled elements of the kingdom's communications infrastructure.<sup>266</sup> Identifying exactly what about transportation and communications that led to such broadly applied nondiscriminatory access rights would be helpful to the analysis, but government control appears to be incompletely theorized. Analogy may be the best we can hope for.

Nondiscriminatory access is not the rule for all aspects of transportation and communication networks, but its application has hardly been random. Nondiscrimination has been implemented almost exclusively with regard to delivery of undifferentiated services, such as carriage, or commodities, like water or electricity. Unlike the inquiry into the root basis for government regulation of roads there is no mystery why nondiscrimination was imposed on these services. For a common carrier, the carrier's cost of providing transport varies only with regard to a few specific characteristics of the shipment, mostly its size and weight.<sup>267</sup> A common carrier is, within limits, indifferent to whether it is transporting 100 tons of televisions or 100 tons of wheelbarrows.<sup>268</sup> Consequently, developing a tariff that accounts for the characteristics relevant to a shipper—size, weight of goods, speed of delivery, and perhaps commonly requested environmental characteristics such as refrigeration—is a straightforward enterprise. The identity of the transported good is largely irrelevant.

The same is not true for other services, such as retail sales, which involve substantial discretion as to the type and quality of goods to be offered, or lending, which frequently involves individualized risk assessment.<sup>269</sup> Public utilities

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<sup>265</sup> Hale, *De Portibus Maris*, *supra* note 66, at 78.

<sup>266</sup> See SAWYER, *supra* note 263, at 256.

<sup>267</sup> See, e.g., UPS Express Freight: 2008 Rates 5 (2008), available at [http://www.ups.com/media/en/AF\\_Zones\\_Rates\\_Exp\\_US.pdf](http://www.ups.com/media/en/AF_Zones_Rates_Exp_US.pdf).

<sup>268</sup> This assumes that the carrier's liability for loss is fixed by tariff, which has not always been the case. Particularly dangerous cargo, too, would require individualized consideration. Brett Frischmann advances a definition of "infrastructure" (and attendant regulatory interests) based in part on the number and variety of goods and services for which the service in question is an input. Brett M. Frischmann, *An Economic Theory of Infrastructure and Commons Management*, 89 MINN. L. REV. 917, 956–59 (2005). But it is not the number or heterogeneity of downstream uses that separates industries subject to nondiscriminatory access from those traditionally not subject to them; it is the cost indifference of the service's provider. Frischmann addresses cost indifference in part by restricting his definition to goods and services that are non-rivalrous. *Id.* at 956–57. Doing so, however, severely limits the descriptive power of his definition, since most industries traditionally subject to nondiscriminatory access are also subject to rivalrous consumption.

<sup>269</sup> See Joanna M. Shepherd, Frederick Tung & Albert H Yoon, *What Else Matters for Corporate Governance?: The Case of Bank Monitoring*, 88 B.U. L. REV. 991, 1007–08 (2008).

also provide commodity goods.<sup>270</sup> At base, though, public utilities essentially are integrated firms that provide both a commodity and the network over which it is carried, a point that has become much clearer in the wake of telecommunications and electricity deregulation.<sup>271</sup>

The benefits of term and rate standardization in network markets, combined with the relatively low risk of adopting standardized pricing for homogenous goods and services, may justify the risk of government intervention in such markets. If true, nondiscrimination (and rate regulation) serves not to control market power so much as it does to reduce transaction costs in markets for undifferentiated goods in the quest for standardization, not optimal pricing.

It is not a coincidence that standardization largely exists in markets for network elements. Both network effects and network economics play a role. In order for networks to remain viable, access to them must remain stable—network transactions are complicated by the need to allow both transacting parties to rely on the stability and reliability of a third party, the network, in order to carry out their transaction. Thus, efficiency of operation for a particular transaction has never dominated network markets the way it does most commodity markets. Until 1996, “destructive competition” was eschewed in favor of monopoly and “universal service” as the cornerstones of telecommunications policy in the United States.<sup>272</sup>

The need for stability and reliability over a series of transactions tends to weigh heavily in forming network policy, and standardization of terms (and reliability of their acceptance by the carrier in question) serves stability and reliability of the network.<sup>273</sup> So too for public utilities, for which regularity and reliability of transport is as important as the commodities themselves. Even if the network is hierarchical and one-way—like a public utility’s—society has a strong interest in the stability of both the network and its pricing. Networks are also typically characterized by substantial fixed costs, and stable pricing that does not include random variations for individual customers.<sup>274</sup> These can provide the assurances that both the builders of networks and their customers require in order to commit such large investments up front—the classic regulatory compact.<sup>275</sup>

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<sup>270</sup> See Rossi, *supra* note 22, at 1237, 1285–86 (describing the electricity industry as an example of a commoditized public utility).

<sup>271</sup> See *id.* at 1237, 1265–1268 (discussing public utilities as integrated firms).

<sup>272</sup> See GLEN O. ROBINSON & THOMAS B. NACHBAR, COMMUNICATIONS REGULATION 440–42 (2008).

<sup>273</sup> Kearney & Merrill, *supra* note 27, at 1333–34.

<sup>274</sup> See Rossi, *supra* note 22, at 1296.

<sup>275</sup> See generally Rossi, *supra* note 22, at 1296 (discussing electric utility’s duty to serve). However, stability requires that customers’ needs be relatively homogeneous. See Oliver E. Williamson, *Transaction-Cost Economics: The Governance of Contractual Relations*, 22 J.L. & ECON. 233, 257 (1979).

Price and term standardization in the provision of undifferentiated goods and services over networks does not perfectly describe the industries subject to nondiscrimination regimes. Many industries distribute largely undifferentiated goods and services over networks without being subject to nondiscriminatory access. Rather, when combined with the inherent public interest in transportation and communications infrastructure, homogeneity serves as a necessary rather than a sufficient condition for justifying deviation from the baseline of free-market provision. As Professor Christopher Yoo points out, as networks serve increasingly heterogeneous uses—which might be achieved more efficiently by splitting a network into several specialized networks—the benefits of regulated stability decrease.<sup>276</sup>

It is hard to find a specific characteristic that leads to nondiscriminatory access and rate regulation.<sup>277</sup> Depending on the context, different economic and social facts seem to carry different weight. Nonetheless, all of the regulated industries relate in some way to transportation and communication networks, and society has demonstrated a singularly strong interest in their regulation.

#### IV. READING THE HISTORY OF NONDISCRIMINATORY ACCESS ONTO MODERN ACCESS DEBATES

Today's most vigorous nondiscriminatory access debates concern modern communications networks, including wired and wireless telephone networks and especially the Internet.<sup>278</sup> The debate has taken place at different levels with regard to different technologies and generally falls under the rubric of "network neutrality," or to a lesser degree "open access." In the late 1990s and early 2000s, debate raged over whether cable companies that entered the telecommunications business by selling Internet access should be required to allow other Internet service providers ("ISPs") to sell Internet access over the cable companies' lines.<sup>279</sup> Although the problem largely solved itself in the marketplace—as consumers have demanded, and local service providers have largely

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<sup>276</sup> Yoo, *Beyond Network Neutrality*, *supra* note 13, at 9 ("Allowing network owners to differentiate their networks can better satisfy the increasing heterogeneity of end user demand.").

<sup>277</sup> See Speta, *A Common Carrier Approach*, *supra* note 195, at 252 ("Common carrier duties have been imposed based variously upon theories of de facto and de jure monopoly, on the theory that the enterprise had become 'essential,' and upon theories that the enterprise was publicly concerned in a particular manner.").

<sup>278</sup> See *infra* text accompanying notes 288–90.

<sup>279</sup> See Speta, *A Common Carrier Approach*, *supra* note 195, at 234; see also Tim Wu, *The Broadband Debate: A User's Guide*, 3 J. ON TELECOMM. & HIGH TECH. L. 69, 78 (2004) (noting the asymmetric regulation of wireless Internet service, Internet service provided by telephone companies, and Internet service provided by cable companies in 2004).

agreed to provide nondiscriminatory access to all Internet content<sup>280</sup>—the FCC refused to require cable companies to give nondiscriminatory access to unaffiliated ISPs, an exercise of discretion ratified by the Supreme Court in 2005.<sup>281</sup> The following year, the FCC decided to free local telephone companies of similar nondiscrimination obligations to competing ISPs,<sup>282</sup> giving local telephone companies the same near-absolute discretion to discriminate enjoyed by their only real competitors for residential broadband service: cable companies.<sup>283</sup>

But there has been a growing movement among activists, academics, many elements of the high technology industry—and perhaps most importantly FCC commissioners—for the application of some form of “neutrality” to modern communications networks.<sup>284</sup> On the academic side, numerous articles have been written about the merits of mandatory access to communications net-

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<sup>280</sup> See Christopher S. Yoo, *Network Neutrality and the Economics of Congestion*, 94 GEO. L.J. 1847, 1851 (2006) [hereinafter Yoo, *Network Neutrality and the Economics of Congestion*]. See generally James B. Speta, *Handicapping the Race for the Last Mile?: A Critique of Open Access Rules for Broadband Platforms*, 17 YALE J. ON REG. 39 (2000) [hereinafter Speta, *Handicapping the Race for the Last Mile?*] (discussing different modes of delivery for broadband service and open access rules governing each).

<sup>281</sup> See *Nat'l Cable & Telecomm. Ass'n v. Brand X Internet Serv., Inc.*, 545 U.S. 967 (2005).

<sup>282</sup> *In re* Appropriate Framework for Broadband Access To The Internet Over Wireline Facilities; Universal Service Obligations of Broadband Providers; Review of Regulatory Requirements for Incumbent LEC Broadband Telecommunications Services; Computer III Further Remand Proceedings: Bell Operating Company Provision of Enhanced Services; 1998 Biennial Regulatory Review—Review of Computer III and ONA Safeguards and Requirements; Conditional Petition of the Verizon Telephone Companies for Forbearance Under 47 U.S.C. § 160(c) with Regard to Broadband Services Provided Via Fiber to the Premises; Petition of the Verizon Telephone Companies for Declaratory Ruling or, Alternatively, for Interim Waiver with Regard to Broadband Services Provided Via Fiber to the Premises; Consumer Protection in the Broadband Era, *Report and Order and Notice of Proposed Rulemaking*, 20 F.C.C.R. 14,853, ¶¶ 1–4 (Aug. 5, 2005) [hereinafter *Wireline Broadband Order*].

<sup>283</sup> *Id.*

<sup>284</sup> See Frischmann, *supra* note 268; Lemley & Lessig, *supra* note 225; van Schewick, *supra* note 11; Wu, *Why Have a Telecommunications Law?*, *supra* note 234; Yoo, *Network Neutrality and the Economics of Congestion*, *supra* note 280; Joseph Farrell & Philip J. Weiser, *Modularity, Vertical Integration, and Open Access Policies: Towards a Convergence of Antitrust and Regulation in the Internet Age*, 17 HARV. J.L. & TECH. 85 (2003); *In re* Appropriate Framework for Broadband Access To The Internet Over Wireline Facilities; Review of Regulatory Requirements for Incumbent LEC Broadband Telecommunications Services; Computer III Further Remand Proceedings: Bell Operating Company Provision of Enhanced Services; 1998 Biennial Regulatory Review—Review of Computer III and ONA Safeguards and Requirements; Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities; Internet Over Cable Declaratory Ruling; Appropriate Regulatory Treatment of Broadband Access to the Internet Over Cable Facilities, *Policy Statement*, 20 F.C.C.R. 14,986, ¶ 4 (Aug. 5, 2005) [hereinafter *Wireline Broadband Policy Statement*].

works,<sup>285</sup> and academics have testified before Congress in favor of network neutrality obligations.<sup>286</sup> Simultaneously, the FCC promulgated its own set of neutrality “principles” for Internet services, which it imposed as a condition for approval of the 2006 merger between American Telephone and Telegraph Co. (“AT&T”) and BellSouth Co. (“BellSouth”).<sup>287</sup> Also, a series of communications bills have been introduced in Congress addressing the neutrality question on the Internet, several of which would severely limit the application of non-discrimination principles to Internet carriage.<sup>288</sup> In February 2004, FCC Chairman Michael Powell advanced his four “Internet Freedoms,” all stated in the form of consumer rights: 1) the freedom to access content of consumers’ choice; 2) the freedom to access applications of consumers’ choice; 3) the freedom for consumers to attach any device to their Internet connection; and 4) the freedom to obtain clear information regarding their Internet service plans.<sup>289</sup> In August 2005, the FCC followed Powell’s lead and issued a policy statement that reflected “guidance and insight into its approach to the Internet and broadband” consistent with Congressional mandates to promote and preserve a competitive Internet.<sup>290</sup> Specifically the Commission adopted the following “principles” regarding regulation of telecommunications carriers who participate in providing broadband access to the Internet:

*To encourage broadband deployment and preserve and promote the open and interconnected nature of the public Internet, consumers are entitled to access the lawful Internet content of their choice.*

*To encourage broadband deployment and preserve and promote the open and interconnected nature of the public Internet, consumers are entitled to run applications and use services of their choice, subject to the needs of law enforcement.*

*To encourage broadband deployment and preserve and promote the open and inter-*

<sup>285</sup> See, e.g., Frischmann, *supra* note 268; Lemley & Lessig, *supra* note 225; van Schewick, *supra* note 11; Wu, *Why Have a Telecommunications Law?*, *supra* note 234.

<sup>286</sup> See *Network Neutrality: Competition, Innovation, and Nondiscriminatory Access: Hearing Before the Task Force on Telecom and Antitrust of the H. Comm. on the Judiciary*, 109th Cong. 53 (2006) (statement of Tim Wu, Professor of Law, Columbia University) [hereinafter Wu Testimony]; *Network Neutrality: Hearing Before the S. Comm. on Commerce, Science, and Transportation*, 109th Cong. 52 (2006) (statement of Lawrence Lessig, C. Wendell and Edith M. Carlsmith Professor of Law, Stanford Law School) [hereinafter Lessig Testimony]; *id.* at 59 (statement of J. Gregory Sidak, Visiting Professor of Law, Georgetown University Law Center).

<sup>287</sup> *Wireline Broadband Policy Statement*, *supra* note 284, ¶ 4.

<sup>288</sup> See Communications, Consumer’s Choice, and Broadband Deployment Act of 2006, S. 2686, 109th Cong. (2006); Communications Opportunity, Promotion, and Enhancement Act of 2006, H.R. 5252, 109th Cong. (2006) (as passed by House, June 8, 2006). During the 110th Congress, one proposed net neutrality bill, the Internet Freedom Preservation Act, S. 215, 110th Cong. (2007), would prevent discrimination by Internet service providers against devices, applications, or sources of content. *Id.* § 2.

<sup>289</sup> Michael K. Powell, *Preserving Internet Freedom: Guiding Principles For The Industry*, 3 J. ON TELECOMM. & HIGH TECH. L. 5, 11–12 (2004).

<sup>290</sup> *Wireline Broadband Policy Statement*, *supra* note 284, ¶¶ 2–3.

*connected nature of the public Internet*, consumers are entitled to connect their choice of legal devices that do not harm the network.

*To encourage broadband deployment and preserve and promote the open and interconnected nature of the public Internet*, consumers are entitled to competition among network providers, application and service providers, and content providers.<sup>291</sup>

Recently, the FCC subjected over \$4.6 billion in spectrum licenses in the 700 MHz band to a form of nondiscriminatory access it calls “open access.”<sup>292</sup>

But neither “neutrality” nor “open access” are self-defining concepts, and different proponents of network neutrality offer differing visions of what neutrality requires. Professor Lawrence Lessig promoted Powell’s four Internet freedoms and added another, which changes the focus from consumers to Internet content providers—a prohibition against giving preferential treatment to some information providers over others, or “access tiering.”<sup>293</sup> Others, like Professor Tim Wu, focus on the third FCC principle, the freedom for consumers to connect devices of their choice to the Internet so that network operators are not able to capture (and suffocate) the market for Internet-related devices and the content that they access,<sup>294</sup> a concern with some resonance given the history of telephone regulation.<sup>295</sup> The FCC’s 1968 *Carterfone* decision allowing consumers to connect “foreign attachments” to their telephone was one of the first steps toward opening up AT&T’s complete control of the telephone network to allow competition from other firms in telephone-related businesses, a proposal the FCC picked up on in shaping the open access requirements for its 700 MHz auction.<sup>296</sup> The question is whether the history of access regulation

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<sup>291</sup> *Id.* ¶ 4. The Commission changed only the last freedom put forth by Powell to reflect a focus on actual competition.

<sup>292</sup> *In re* Service Rules for the 698-746, 747-762 and 777-792 MHz Bands; Revision of the Commission’s Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems; Section 68.4(a) of the Commission’s Rules Governing Hearing Aid-Compatible Telephones; Biennial Regulatory Review—Amendment of Parts 1, 22, 24, 27, and 90 to Streamline and Harmonize Various Rules Affecting Wireless Radio Services; Former Nextel communications, Inc. Upper 700 MHz Guard Band Licenses and Revisions to Part 27 of the Commission’s Rules; Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band; Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Requirements Through the Year 2010; Declaratory Ruling on Reporting Requirement under Commission’s Part 1 Anti-Collusion Rule, *Second Report and Order*, 22 F.C.C.R. 15,289, ¶ 195 (July 31, 2007) [hereinafter *700 MHz Report and Order*].

<sup>293</sup> Lessig Testimony, *supra* note 286, at 2–3.

<sup>294</sup> Tim Wu, *Wireless Carterfone*, 1 INT’L J. COMM. 389, 391 (2007) [hereinafter Wu, *Wireless Carterfone*]; Wu Testimony, *supra* note 286, at 55–56. Wu also argues for full net neutrality principles to be applied to wireless networks. Wu, *Wireless Carterfone*, *supra*.

<sup>295</sup> See Wu, *Wireless Carterfone*, *supra* note 294, at 396–98.

<sup>296</sup> *In re* Use of the Carterfone Device in Message Toll Telephone Service; Thomas F. Carter and Carter Electronics Corp., Dallas, Tex., (Complainants), v. American Telephone and Telegraph Co., Associated Bell System Companies, Southwestern Bell Telephone Co., and General Telephone Co. of the Southwest (Defendants), *Decision*, 13 F.C.C.2d 420, 423

has anything to offer to modern network neutrality debates as they apply to modern communications networks generally, and the Internet specifically.

#### A. What the History of Nondiscriminatory Access Adds to Contemporary, Economic Arguments Over Network Neutrality

It should be self-evident by now that modern communications networks like the Internet are prototypical candidates for the imposition of traditional nondiscriminatory access obligations. Communications networks present the coordination, high fixed-cost, and network economics exemplified by many regulated industries, and their function of providing undifferentiated communications services calls directly on the long-standing practice of public regulation of transportation and communications networks without reference to any particular justification.<sup>297</sup> Unlike the nondiscriminatory access regimes of the past, today's network neutrality debates coalesce around a set of very specific economic justifications—but that does not mean that resort to precedent has nothing to offer the network neutrality debate.

Although presented in many different ways, the debate over network neutrality is dominated by concerns about market power,<sup>298</sup> and economic analysis occupies a primary position on both sides of the network neutrality question.<sup>299</sup>

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(June 26, 1968) [hereinafter *Carterfone Decision*] (citing *Hush-A-Phone Corp. v. United States*, 238 F.2d 266, 269 (D.C. Cir. 1956)).

<sup>297</sup> See *supra* Part III.C.

<sup>298</sup> Compare neutrality proponents Lemley & Lessig, *supra* note 225, at 936–38; van Schewick, *supra* note 11, at 332, 349–50; Wu Testimony, *supra* note 286, at 53–54; Speta, *Handicapping the Race for the Last Mile?*, *supra* note 280, at 78, with neutrality opponent Yoo, *Network Neutrality and the Economics of Congestion*, *supra* note 280, 1892–93. For a comprehensive discussion of the role of raw market power in network regulation debates, see Farrell & Weiser, *Modularity, Vertical Integration, and Open Access Policies*, *supra* note 284.

<sup>299</sup> Not all of the economic theories advanced in the literature are necessarily tied to market power. For instance, concerns over externalities do not necessarily depend on market power. See, e.g., Wu, *Why Have a Telecommunications Law?*, *supra* note 234, at 25 (“The focus on market power may neglect some of the societal benefits of general purpose networks, independent of market power concerns.”). Even those theories rely on a more robust economic description of network markets than could possibly fit all markets, and each still has a strong relationship to market power arguments. Cf. Frischmann & Lemley, *supra* note 9, at 298 (discussing the relative harm to innovation resulting from transferring some of the value of the innovation to owners of the network, which can only occur in an environment of limited competition); van Schewick, *supra* note 11, at 353–56 (discussing network externalities as an ingredient in monopolists’ incentives to leverage their monopolies into complementary markets). Professor Barbara Cherry, too, argues against market power as the sole determinant for imposing neutrality rules, but even she relies on problems of “evolving concepts of economic coercion.” Cherry, *supra* note 32, at 492. Cherry discusses economic coercion even as she explains that those economic concepts are not identical with the focus of antitrust law on specific forms of overreaching. *Id.* at 501. Similarly, Professor Susan Crawford argues for an approach “focusing on the complexity of human communications

Proponents of broad nondiscrimination rules argue that network operators will either vertically integrate into content markets or provide preferential treatment to particular content providers.<sup>300</sup> They fear that network operators will leverage their near- (and occasional absolute) monopoly in the market for local access or backbone<sup>301</sup> carriage into control over the content available on the Internet, thereby asserting their market power vertically from the market for carriage to the market for content and applications.<sup>302</sup> Opponents of imposing nondiscrimination on network operators question whether such market power actually exists or, if it does, whether it can be successfully leveraged into control over either the Internet or its content.<sup>303</sup> Some straddle the debate and provide an exposition of the theoretical possibilities for injurious discrimination, the theoretical incentives that would prevent a monopolist from wanting to engage in discrimination, and the theoretical cases in which the theoretical in-

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online,” but ultimately justifies her policy recommendations on the economic value to the U.S. economy of increased access to the Internet and the danger to access posed by monopolists. See Susan P. Crawford, *The Internet and the Project of Communications Law*, 55 U.C.L.A. L. REV. 359, 365, 403–407 (2007). In a seminal article on public access written in 1986, Professor Carol M. Rose suggested the of increased “sociability” that results from commerce as one reason for mandating public access to certain facilities of trade or communication, but, again, her argument was predicated on the need to prevent infrastructure owners from capturing the “rents” generated by increased commerce. See Carol M. Rose, *The Comedy of the Commons: Custom, Commerce, and Inherently Public Property*, 53 U. CHI. L. REV. 711, 771, 775–77 (1986).

<sup>300</sup> See, e.g., Lemley & Lessig, *supra* note 225, at 940–43; Lessig Testimony, *supra* note 286, at 8; van Schewick, *supra* note 11, at 331–32.

<sup>301</sup> Jacques Crémer, Patrick Rey, and Jean Tirole, *Connectivity in the Commercial Internet*, 48 J. OF INDUS. ECON. 433, 434–36 (2000).

<sup>302</sup> Of course, it is irrelevant whether carriers actually vertically integrate or merely engage in exclusive contracts with some content providers. See Lessig Testimony, *supra* note 286, at 57–58 (on “access tiering”). The displacement of other content providers is identical (if perhaps not as durable).

<sup>303</sup> See Daniel L. Rubinfeld & Hal J. Singer, *Vertical Foreclosure in Broadband Access?*, 49 J. INDUS. ECON. 299, 304–05 (2001); Speta, *Handicapping the Race for the Last Mile?* *supra* note 280; Christopher Yoo, *What Can Antitrust Contribute to the Network Neutrality Debate?*, 1 INT’L J. OF COMM. 493, 504–11, 515–25 (2007) [hereinafter Yoo, *What Can Antitrust Contribute to the Network Neutrality Debate?*], available at <http://lsr.nellco.org/cgi/viewcontent.cgi?article=1167&context=upenn/wps> (stating that vertical integration by network providers is arguably pro-competitive); Douglas A. Hass, *First, Assume a Monopoly: The Failure of Vertical Foreclosure Theory on the Never-Was-Neutral Internet*, 6 J. SYSTEMICS, CYBERNETICS & INFORMATICS 300 (2004), available at [http://www.iiisci.org/Journal/CV\\$/sci/pdfs/W138DH.pdf](http://www.iiisci.org/Journal/CV$/sci/pdfs/W138DH.pdf) (pointing out that the search engine market—a prime content market—is extremely concentrated and difficult to enter, suggesting that search engine providers have more than ample bargaining power to offset that held by broadband providers); see also Yoo, *Beyond Network Neutrality*, *supra* note 13, at 8 (suggesting that network neutrality advocates have misdirected their concerns away from local access, which is subject to limited competition, and toward content and applications, which are subject to wide competition); J. Gregory Sidak, *A Consumer-Welfare Approach to Network Neutrality Regulation of the Internet*, 2 J. COMP. L. & ECON. 349, 386, 398, 429–30, 442–43 (2006).



centives can be overwhelmed by other benefits.<sup>304</sup> At a recent conference on telecommunications policy, one keynote panelist pointed out that the importance of market power to the net neutrality debate was the one thing on which both sides of the debate could agree.<sup>305</sup>

Perhaps most importantly, the FCC focused on the availability of competition as a critical “principle” in its broadband access *Policy Statement*.<sup>306</sup> In the FCC’s most recent major reallocation of spectrum—the auction of licenses in the 700 MHz band for wireless communication services—the FCC calibrated the breadth of the neutrality rules it imposed on one subset of licensees to the degree of market power it perceives in the market for wireless services.<sup>307</sup> The rhetoric of market power has a hold on the network neutrality debate; there is little left to add to the well-traveled economic theories advanced by both sides.

Consideration of traditional nondiscrimination regulation, though, suggests that the current debate’s nearly exclusive focus on economic theory is necessarily incomplete. Economic theory certainly has an important, if not predominant role to play in the formation of access policy. But there has been little if any attempt in the literature on network neutrality to test that theory, either through empirical analysis or by demonstrating that the economic theory explains past regulation. Instead, the economic theory underlying both sides of the network neutrality debate has developed with very little demonstration of its connection to regulatory reality, and both its prescriptive and explanatory value are necessarily reduced as a result.

Although the failure to account for the history of nondiscrimination weakens both sides, it particularly disadvantages advocates of network neutrality regulation, in two very distinct ways.

First, the history provides an additional point of argument for network neutrality advocates: that the inherently public nature of privately owned transportation and communication networks has generally justified their regulation without the need to demonstrate market failure or some other economic justification for regulation. Arguing exclusively on economic terms presents an additional challenge for neutrality proponents. The fundamental axiom of law and

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<sup>304</sup> See Farrell & Weiser, *supra* note 284, at 89–90, 96–97, 105 (discussing both the force that should lead to wealth-enhancing vertical integration by network operators, “internalizing complementary efficiencies,” or “ICES” and the eight ways in which optimal vertical integration can be thwarted).

<sup>305</sup> Dale Hatfield, Remarks at TPRC: Are Telecom Policymakers Getting Good Information on Technology? 2006.

<sup>306</sup> See *supra* text accompanying note 291.

<sup>307</sup> 700 MHz *Report and Order*, *supra* note 292, ¶¶ 199–202 (adopting limited neutrality rules for a portion of the spectrum that will allow consumers to use their own devices and applications because, while the Commission has previously found the wireless communications market to be “effectively competitive,” market forces have been unsuccessful in driving wireless providers to allow for device and application interchangeability).

economics is that markets generally provide socially optimal outcomes and that deviations from market allocation have to be justified.<sup>308</sup> Showing that a market is imperfect is not enough; in order to justify regulation, neutrality advocates have the burden of showing that regulation is *superior* to market allocation.<sup>309</sup> But the economic realities of network markets are highly contested. The lack of solid empirical work in the area requires both sides to rely on theory and unverified (and largely unfalsifiable) claims about the shape of modern communications and content markets.<sup>310</sup>

Even worse for neutrality advocates, their most forceful arguments pertain to *vertical* integration by network operators,<sup>311</sup> a form of discrimination that has been the subject of regulatory *retrenchment* over the past four decades.<sup>312</sup> Every claim by a neutrality advocate for why the economics of network markets require regulation can easily be met by an equally speculative claim about why they do not. Furthermore, among equally plausible theories, a tie is likely to go to those disfavoring regulation,<sup>313</sup> as demonstrated by the FCC's general path of refusing to regulate broadband Internet access or to deregulate services previously subject to nondiscriminatory access.<sup>314</sup> Shifting the debate to more traditional justifications limits the scope of the debate tremendously and more clearly grounds it in value-laden justifications. Although the specific values are

<sup>308</sup> See ROBERT COOTER & THOMAS ULEN, *LAW AND ECONOMICS* 7–12, 44–45 (1988).

<sup>309</sup> See ADAM SMITH, *AN INQUIRY INTO THE NATURE AND CAUSES OF THE WEALTH OF NATIONS* 453 (R.H. Campbell et al., eds., 1976); COOTER & ULEN, *supra* note 308, at 44–45.

<sup>310</sup> See Christopher S. Yoo, *Vertical Integration and Media Regulation in the New Economy*, 19 *YALE J. ON REG.* 171, 176–77 (2002).

<sup>311</sup> A vertical theory of harm in network markets is that network operators may try to leverage their market power vertically into content or application markets. See *id.* at 290–92.

<sup>312</sup> See Farrell & Weiser, *supra* note 284, at 87; Yoo, *What Can Antitrust Contribute to Network Neutrality?*, *supra* note 303, at 522. For example, in 2007, the Supreme Court removed the last of the “per se” rules related to vertical conduct (the long-standing prohibition against minimum resale price maintenance) because it was no longer convinced that the conduct was necessarily harmful. See *Leegin Creative Leather Prod., Inc. v. PSKS, Inc.*, 127 S.Ct. 2705, 2725 (2007) (“Vertical Price restraints are to be judged according to the rule of reason.”).

<sup>313</sup> See Dennis W. Carlton, *A General Analysis of Exclusionary Conduct and Refusal to Deal — Why Aspen and Kodak Are Misguided*, 68 *ANTITRUST L.J.* 659, 672 (2001) (“[A]ny antitrust attack on an explicit or implicit refusal to deal must recognize this difficulty of identifying by theory alone a competitive harm, and instead must turn to a quantitative analysis, which may be difficult to perform . . .”); see also *Cal. Dental Ass’n v. FTC*, 526 U.S. 756, 778–79 (1999) (requiring, in the face of competing theories about the competitive impact of a practice, a full inquiry into the actual effects of the practice).

<sup>314</sup> *In re Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities; Internet Over Cable Declaratory Ruling; Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities, Declaratory Ruling and Notice of Proposed Rulemaking*, 17 F.C.C.R. 4798, ¶¶ 7, 60 (2002) (establishing that cable modem service is outside the Communications Act’s common carrier provisions), *aff’d* *Nat’l Cable and Telecomm. Ass’n v. Brand X Internet Serv., Inc.*, 545 U.S. 967 (2005); *Wireline Broadband Order*, *supra* note 282, ¶¶ 1, 3, 18–19.

subject to debate, they are likely to be consistent with values that neutrality advocates already hold, and engaging those values would at least require those who disfavor neutrality to provide alternative arguments outside the largely amoral realm of economics.

Second, a failure to adequately address the history of nondiscrimination has pushed network neutrality advocates to emphasize a particularly invasive form of neutrality that is not as easily defended—even on economic terms—as other forms might be. Discrimination can take many forms, and consequently so can neutrality rules. The current debate conflates various forms of discrimination and focuses (without recognition of the distinctions) largely on a particular form of neutrality. Even if the debate is argued on strictly economic terms, history provides a way to distinguish between competing economic theories of nondiscrimination. Acknowledgement of the distinction suggests the existence of a form of nondiscriminatory access not susceptible to many of the criticisms that opponents have raised to current proposals. In order to understand this claim, though, it is necessary to disaggregate the forms and means of discrimination, and to separate discrimination itself from its potential remedies.

## B. Disaggregating Discrimination

While there is substantial temptation to liken the network neutrality debates of today to the nondiscriminatory access regimes of the past, the flexibility of modern communications networks substantially complicates the discrimination question. Even if the basic shape of discrimination has not changed over time, consideration of the ways that modern communications networks lend themselves to discrimination—and the concomitant breadth of the proposals for combating that discrimination—changes the implications of nondiscriminatory access entirely.

In order to understand fully discrimination on modern communications networks and the proposed remedy of network neutrality, it is necessary to consider two related characteristics of discrimination: the various forms of discrimination and the various means by which it is carried out.

### *1. User-Based Discrimination v. Use-Based Discrimination*

Modern communications networks are distinguishable from most previous objects of nondiscriminatory access by the variety of ways in which they can be used to discriminate. The traditional view of discrimination is that it would take place on the basis of the proposed *user* of the resource in question. The

prototypical nondiscrimination obligation is to serve all who seek service.<sup>315</sup> For instance, Western Union is famous for discriminating in favor of one news provider by refusing to carry messages for others.<sup>316</sup> Another form of user-based discrimination might not be outright refusal to carry some users' traffic, but instead to engage in exclusive arrangements that simply favor, or prioritize, carriage on basis of customer—providing faster service, for instance, for one customer over another. Preference rather than flat refusals to deal is the form of discrimination that is the focus in today's debates over modern communications networks. One set of proposals for nondiscriminatory access to the Internet is intended to prevent the possibility that Internet service providers could carry affiliated content faster than content from their competitors (imagine, for example, Comcast Co. ("Comcast") promising Google that they will provide faster connections to Google's home page than they provide to Yahoo!'s).<sup>317</sup>

Given the two-sided nature of network markets, though, it is important to recognize that user-based discrimination itself breaks down to two distinct kinds of discrimination. Modern communications networks provide communication between two parties—both of them are "users" of the network regardless of who is paying for the connection. Discrimination can occur on either end (or in the middle) of the connection between those two users, against one or both of the parties to the communication.<sup>318</sup> Although the peer-to-peer nature of most modern communications networks results in little differentiation between senders and recipients of data, for practical purposes those engaged in the network neutrality debate focus on different categories of network users: consumers and application or content providers.<sup>319</sup> Consumers are unlikely to experience invidious discrimination in most communications markets (although many network operators engage in forms of price discrimination), but many network operators also are vertically integrated information and service providers, which creates an incentive to discriminate against rivals.<sup>320</sup> For ex-

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<sup>315</sup> 47 U.S.C. §201(a) (2000) ("It shall be the duty of every common carrier engaged in interstate or foreign communication by wire or radio to furnish such communication service upon reasonable request therefor . . .").

<sup>316</sup> See Wu, *Why Have a Telecommunications Law?*, *supra* note 234, at 29 (describing an exclusive deal between the Associated Press and Western Union in the late nineteenth century).

<sup>317</sup> See Benjamin Rupert, *The 110th Congress and Network Neutrality: S. 215—The Internet Freedom Preservation Act*, 18 DEPAUL J. ART, TECH. & INTELL. PROP. L. 325, 343, 350 (2008) (discussing legislative action that would forbid broadband providers from providing superior service to those customers willing to pay for it).

<sup>318</sup> ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT, *MOBILE PHONES: PRICING STRUCTURES & TRENDS* 33 (2000).

<sup>319</sup> See Douglas A. Hass, *The Never-Was-Neutral Net and Why Informed End Users Can End The Net Neutrality Debates*, 22 BERKELEY TECH. L.J. 1565, 1567 (2007).

<sup>320</sup> See Damien Geradin & Robert O'Donoghue, *The Concurrent Application of Competition Law and Regulation: The Case of Margin Squeeze Abuses in the Telecommunications*

ample, Verizon Wireless provides wireless Internet access to its customers, but it also has its own fee-based ringtones, weather, and navigation services.<sup>321</sup> It is conceivable, then, that Verizon will want to discriminate against Internet-based ringtone, weather, and navigation providers in the hope of steering their customers to their own fee-based services. Although provider-based, the harm in this case falls on both consumers and providers.

Identifying discrimination as consumer- or provider-based is the first step to understanding discrimination, its likelihood of success, the harm potentially flowing from it, and the steps necessary to prevent it.

In addition to discrimination by user, though, modern communications networks also lend themselves to discrimination by *use*. The first two principles of the FCC Policy Statement are that consumers should be able to access whatever (1) content and (2) applications and services they choose.<sup>322</sup> Discrimination against either particular content or particular applications is a form of use-based discrimination.<sup>323</sup> Such discrimination can be as equally self-serving (and destructive to competition) as direct discrimination against specific users. Two examples, one hypothetical, one real, describe the concern: In addition to being a broadband provider, Comcast also offers cable television service. As such, Comcast may have a particular interest in preventing its users from using the Internet to download movies (a form of content) or it may want to prevent the ability to stream video content (an application) in order to avoid competition with the company's cable entertainment subscriptions. Similarly, a local telephone company that provides DSL service may wish to prevent use of the DSL modems to carry Voice over Internet Protocol ("VoIP") telephony, an application that is a direct competitor to their own publicly-switched voice service.<sup>324</sup>

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*Sector*, 1 J. COMPETITION L. & ECON. 355, 413 (2005).

<sup>321</sup> Compare Verizon Wireless VZ Access, <http://b2b.v2w.com/govt/vzaccess.html> (last visited Sept. 15, 2008), with Verizon Wireless, Cell Phone Plans, <http://www.verizonwireless.com/b2c/index.html> (last visited Sept. 15, 2008).

<sup>322</sup> Wireline Broadband Policy Statement, *supra* note 284, ¶ 4.

<sup>323</sup> Any application or service is self-evidently a "use," but accessing a particular form of content itself is a specific use of the network, and so the distinction between accessing content or applications is not particularly important for the purposes of either engaging in or fighting discrimination by network operators. It is easy to overemphasize the difference between the two, and many network neutrality proposals treat them as separate requirements. See Brett M. Frischman & Barbara van Schewick, *Network Neutrality and the Economics of an Information Superhighway: A Reply to Professor Yoo*, 47 JURIMETRICS J. 383, 406-407 (2007).

<sup>324</sup> See *In re Madison River Communications, LLC and affiliated companies, Consent Decree*, 20 F.C.C.R. 4296, ¶ 3 (Mar. 3, 2005). Madison River is a local telephone company that was accused of "blocking ports used for VoIP applications, thereby affecting customers' ability to use VoIP through one or more VoIP providers." *Id.* (citation omitted). The company entered into a consent decree with the FCC agreeing to voluntarily pay the United States Treasury \$15,000 and to stop blocking VoIP applications. *Id.* ¶¶ 4-5.

User-based and use-based discrimination are two related concepts.<sup>325</sup> Use-based discrimination in modern communications networks is frequently a proxy for user-based discrimination; the real objection that network operators have to specific content or applications is frequently that they are being offered by competitors. But the two forms are not identical, and the distinction represents a key tenet of the network neutrality movement. Leaving access points for new innovations to connect to the network (ensuring modularity of the network's components) increases the number of ways that innovation can be introduced into the combined product.<sup>326</sup> But new uses come from new users. As argued by Lawrence Lessig and Tim Wu, market entry by new application and content providers creates the most significant development of new applications and content.<sup>327</sup> This means that the network must be open for access by new innovators. User-based discrimination, which specifically provides priority for certain providers, or "access-tiering," will discourage entry by new providers and retard the development of new applications and content:

In a world with access-tiering, companies like Google in this context would have an incentive to secure sufficient bandwidth to enable its services while leaving competitors without enough bandwidth for their own. Access-tiering would thus become another barrier to entry for competitors, reducing application or content competition on the Internet.<sup>328</sup>

In this way, user- and use-based discrimination are recursive; discrimination of one form actually leads to the other, and the process feeds on itself. As related to innovation, the problem of discrimination is not simple rent extraction, but rather distortion of the market for application and content innovation.<sup>329</sup> Use-based discrimination in particular is troubling for net neutrality advocates, because the ultimate concern is over the market for innovative uses of modern communications networks.<sup>330</sup> The concern over innovative uses has prompted

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<sup>325</sup> They can be combined, for instance, to slow down certain uses only if made by certain users.

<sup>326</sup> Farrell & Weiser, *supra* note 284, at 95 ("Modular industry structures enable independent firms to introduce innovations into an established environment."). See Jonathan Zittrain, *The Generative Internet*, 119 HARV. L. REV. 1974, 1978 (2006).

<sup>327</sup> See Lessig Testimony, *supra* note 286, at 139–41; Wu Testimony, *supra* note 286, at 56 (discussing "'Schumpeterian' innovation" where "new technologies supplant the old, in a constant process of industrial rebirth.").

<sup>328</sup> Lessig Testimony, *supra* note 286, at 58; see Carlton, *supra* note 313, at 668–71 (discussing dynamic leveraging, in which a firm has an incentive to use market power in a current product to displace demand for a future, complementary product).

<sup>329</sup> See Frischmann & Lemley, *supra* note 9, at 295–98; Lemley & Lessig, *supra* note 225, at 945–46; Wu, *Why Have a Telecommunications Law?*, *supra* note 234, at 16 (arguing that the goal is "not the maximization of the value of infrastructure for its own sake, but maximization of its value as a catalyst for other activities.").

<sup>330</sup> Wu Testimony, *supra* note 286, at 53 ("The problem with network discrimination is it is inherently a tax and a distortion on competition in the network."); Lessig Testimony, *supra* note 286, at 54–58. Professor Lessig does suggest in his testimony that he would allow

net neutrality advocates to oppose *both* user- or use-based discrimination, a position adopted by former FCC Chairman Michael Powell and the FCC itself.<sup>331</sup> Nevertheless, the two forms remain conceptually distinct.

## 2. Contractual vs. Physical Means of Discrimination

Another important difference between most historical examples of discrimination and discrimination in modern communications networks is the availability of additional means to discriminate. Traditionally, discrimination has taken place through contract, or more likely, by the refusal to contract.<sup>332</sup> But communications networks are increasingly reliant on virtual elements that can be changed simply and quickly by the owner of the resource.<sup>333</sup> The relative ease that modern communications networks can be altered or reconfigured means that discrimination can be carried out through design of the resource itself. In addition to refusing to sell broadband access, it is conceivable that a consumer's local ISP will turn off the services necessary for him to access particular providers or applications.

Again, the distinction between consumer- and provider-based discrimination is important. The same two-sided nature of network markets that may create an incentive for vertically integrated network operators to discriminate against competing content and application providers also limits the ability of network operators to use contract to effect that discrimination. It may be in a cable provider's best interest to injure YouTube by prohibiting streaming video to its broadband customers, but the local cable company's contract is with the consumer, not YouTube. An Internet access customer is unlikely to agree to such a term, and even if he does, he is less likely to abide by it. Rather, a more successful strategy for discriminating against YouTube is to deliver YouTube's content very slowly, thereby discouraging consumers from accessing the application and its content.

On the Internet, this "physical" discrimination can happen in the form of turning off certain "ports" on communications servers that are accessed by par-

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carriers to engage in use-based, consumer-based, tiering of service (e.g. it would be permissible to guarantee "fast 'video service' without specifying a particular provider"). *Id.* at 58. But his citation of Madison River's blocking of the VoIP application as the worst example of phone company discrimination to date suggests that he would find aggressive use-based consumer tiering troublesome. *See id.* at 54, 57.

<sup>331</sup> *See supra* text accompanying notes 322–25.

<sup>332</sup> *See, e.g.,* Wu, *Why Have a Telecommunications Law?*, *supra* note 234, at 29–30 (discussing Western Union's exclusive contract with the Associated Press).

<sup>333</sup> *See, e.g.,* Douglas C. Sicker, *The End of Federalism in Telecommunications Regulations?*, 3 *NW. J. TECH. & INTELL. PROP.* 130, 155 (2005) (discussing the evolving nature of the telecommunications infrastructure and the increased reliance on packet switched technologies).

ticular applications.<sup>334</sup> Port blocking occurs by examining the contents of packets transmitted over a carrier's lines, and either failing to deliver or slowing the delivery of packets on the basis of either their source, destination (both forms of user-based discrimination), or the application for which they are being transmitted (a form of use-based discrimination);<sup>335</sup> or simply by reducing the speed of the entire network to make particular applications practically unusable. An even more effective, if more difficult method, is to promulgate a set of standards for the Internet—an alteration of the Internet protocol itself—that allows discrimination or that simply prevents particular uses. Of course, the converse also is true—it is possible to design the network in such a way as to make physical discrimination impossible.

Just as user- and use-based discrimination are related, so are contractual and physical discrimination. Frequently, contractual discrimination on modern communications networks is implemented through physical means.<sup>336</sup> In addition to a contract term that prevents a customer from using his home Internet connection to host Web pages or offer Web services, his ISP may also turn off the services necessary for him to host Web pages or reduce his upload speeds enough so that doing so is impractical.<sup>337</sup> If an ISP enters into a contract with Internet application provider Google to provide its content faster than its competitor Yahoo!, the ISP will configure its lines to automatically prioritize data traveling from or to Google.

The point is that the two means of discrimination—physical and contractual—are not the same. On one hand, the physical nature of modern communications networks is an opportunity for extra-contractual discrimination; unless network operators somehow are prohibited from doing so, they can discriminate without resorting to discriminatory contracts. On the other hand, the close relationship between the contractual and the physical means of discrimination means that there are many contractual forms of discrimination that are practically impossible to carry out without altering the network itself.<sup>338</sup> Network operators not only can use technological means to implement their discrimina-

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<sup>334</sup> On the details of port blocking, see Rob Frieden, *Network Neutrality or Bias?—Handicapping the Odds for a Tiered and Branded Internet*, 29 HASTINGS COMM. & ENT. L.J. 171, 209–10 (2007) [hereinafter Frieden, *Network Neutrality or Bias?*]; Lawrence B. Solum & Minn Chung, *The Layers Principle: Internet Architectures and the Law*, 79 NOTRE DAME L. REV. 815, 929–31 (2004).

<sup>335</sup> See Rob Frieden, *Internet Packet Sniffing and Its Impact on the Network Neutrality Debate and the Balance of Power Between Intellectual Property Creators and Consumers*, 18 FORDHAM INTELL. PROP. MEDIA & ENT L.J. 633, 652–53 (2008) [hereinafter Frieden, *Internet Packet Sniffing*].

<sup>336</sup> See Adam D. Thierer, “Net Neutrality”: *Digital Discrimination or Regulatory Gamesmanship in Cyberspace*, 507 POL’Y ANALYSIS 1, 2 (2004)

<sup>337</sup> Cf. Frieden, *Network Neutrality or Bias?*, *supra* note 334, at 209.

<sup>338</sup> *Id.* at 204–08.



tion, they *require* technological means to implement discrimination.<sup>339</sup> Therefore, regulation preventing network operators from discriminating can take two forms: regulation of business arrangements, or regulation of network technology.<sup>340</sup>

### C. Nondiscriminatory Access vs. Mandatory Design

Because discrimination in modern communications networks can take place along so many lines, “network neutrality” is a necessarily vague concept, potentially signifying any number of limits on discrimination, whether user- or use-based, and applied either to business arrangements or technologies. Any network will discriminate against some uses as compared to others—the Internet’s failure to accommodate service level guarantees discriminates against streaming video in favor of e-mail<sup>341</sup>—and what is “neutral” to one party may not seem so to another. Not only is neutrality technically contingent, it’s socially contingent. Professor Lessig, for example, objects to access-tiering because of the unfair advantage that selling priority carriage gives to large firms (with deep pockets) over small firms—a stance more closely reflecting a Brandeisian understanding of trade regulation than any particular theory about telecommunications.<sup>342</sup>

But if competitively offered priority carriage is objectionable, then network neutrality proponents have a larger problem than they understand. Firms like Akamai are already providing services to speed the carriage of their customers’ data; already giving larger firms an advantage over smaller ones.<sup>343</sup> If network neutrality actually means economic parity between large and small firms, it is

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<sup>339</sup> See *id.* at 204–205 (discussing different means of network operators achieving “network bias.”).

<sup>340</sup> One implication of the network neutrality argument is that discrimination may be effected on modern communications networks by private actors who are able to implement the discrimination—and as a result their economic agenda—through force of will on a network that they physically control. However, an equally troubling implication, at least for those dedicated to the rule of law, is that the policy goals of network neutrality could be implemented not through law but rather by the non-governmental standard-setting bodies that currently control the technical definition of modern communications networks, especially the Internet. See Thomas B. Nachbar, *Speech and Institutional Choice*, 21 WASH. U. J.L. & POL’Y 67, 77 (2006).

<sup>341</sup> Yoo, *Beyond Network Neutrality*, *supra* note 13, at 20–26.

<sup>342</sup> *Lessig Testimony*, *supra* note 286, at 2–4.

<sup>343</sup> Akamai first launched its commercial service in April 1997 and now handles tens of billions of Web interactions daily for companies like NASDAQ, NBC and Audi. It aims to help enterprises worldwide efficiently conduct their businesses online. With a “global platform of thousands of specially-equipped servers,” Akamai serves as a medium in delivering online content between providers and consumers. See Akamai.com, About Akamai, <http://www.akamai.com/html/about/index.html> (last visited Nov. 13, 2008). On the relationship between Akamai and neutrality, see ROBINSON & NACHBAR, *supra* note 272, at 706.

an agenda with a remedy that reaches far beyond the Internet and communications markets. Neutrality is not a self-explanatory condition, which means that someone must set specific neutrality mandates and provide strict oversight.

If neutrality mandates are adopted, measuring compliance is dependent upon the form of neutrality adopted. If regulators adopt a form of technological neutrality, imposing neutrality may require regulators to review network design and operations for compliance with set technological mandates. Such heavy interference in the design and operation of communications networks would represent a substantial departure from the Anglo-American nondiscrimination tradition.<sup>344</sup> America has considerable regulatory experience providing nondiscriminatory access through rules that prevent discrimination against particular *users*, but we have hesitated to provide nondiscriminatory access through rules that prevent discrimination against a particular use. Railroads could be required to provide carriage at a set rate, but they were not required to alter the size of their cars (or their track) in order to enable particular uses.<sup>345</sup>

While nondiscrimination regulation frequently includes rate regulation and defines some of the ancillary terms of service, it usually only imposes the mildest rules governing the nature of the product or service offered.<sup>346</sup> In most cases, defining the service has not been an issue; the product provided by a water utility is not subject to much alteration through the nondiscrimination regime.<sup>347</sup> But even in cases where the service is not self-defining, nondiscrimination regimes touch upon the question of service definition in only the slightest and most general terms.<sup>348</sup>

Ferryman might have been required to maintain their boats “in due order” and to operate “at due times,”<sup>349</sup> but that was the extent of ferry service definition under the common law. While railroads were required to charge nondiscriminatory rates, they were free to charge different rates based on different

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<sup>344</sup> See, e.g., *Interstate Commerce Comm’n v. Balt. & Ohio R.R.*, 145 U.S. 263, 282 (1892) (discussing a clause in the 1854 English Traffic Act similar to the 1887 Interstate Commerce Act which ensured non-discriminatory access on a user, rather than use, basis).

<sup>345</sup> Adelbert Hamilton, *Discrimination in Railway Facilities*, 32 AM. L. REG. 417, 418–27 (1884).

<sup>346</sup> Examples of such mild regulation include the degree of liability for loss assumed by common carriers or the quality-of-service obligations of public utilities and spectrum licensees. See, e.g., 47 U.S.C. § 254(b) (2000) (setting out universal service principles for telecommunications carriers, including rates, non-discrimination, and quality-of-service).

<sup>347</sup> The most frequent way in which nondiscriminatory access has been coupled with providing a particular level of service has been in common carriage, in which nondiscriminatory access is accompanied by strict liability, although the reasons for each are not necessarily related. See *supra* notes 289–91 and accompanying text.

<sup>348</sup> See Hale, *De Portibus Maris*, *supra* note 66, at 78; *Balt. & Ohio R.R.*, 145 U.S. at 278.

<sup>349</sup> Hale, *De Portibus Maris*, *supra* note 66, at 78.

levels of service.<sup>350</sup> In a sense, the interconnection obligations imposed on telegraph and telephone companies altered the nature of those services by requiring interconnection itself, but there was no substantial regulatory movement to, for instance, require Western Union to carry voice calls over its lines or even to require it to carry a particular kind of telegraph message (such as, in furtherance of its current business of allowing individuals to “wire” money). Questions of service definition have traditionally been left to proprietors, even in otherwise heavily regulated industries.<sup>351</sup>

The best example of both the reach and the limit of use-based nondiscriminatory access is the national telephone system itself. Public regulation of the Bell System included rate setting and interconnection, but the design of the telephone network was largely not a matter of regulatory concern.<sup>352</sup> Even when regulation became use-specific, regulators did little to interfere with AT&T’s discretion over network design.

For example, in 1968 the FCC ruled in *Carterfone* that consumers could connect devices manufactured by firms not authorized by AT&T (so-called “foreign attachments”) to their telephone lines.<sup>353</sup> The decision was a break from the total design control that AT&T exercised, and recognized the value of allowing consumers (and producers of related products) freedom to make alternative uses of the telephone network, but the limits of that break are itself telling. In order to avail oneself of *Carterfone*’s foreign attachment rule, one had to demonstrate that the attachment in question would have no adverse effect on the network.<sup>354</sup> In other words, the attachment could not in any way degrade AT&T’s chosen use for the network: voice telephony.<sup>355</sup> *Carterfone* did not divest AT&T of any discretion over the design of the network itself.<sup>356</sup> *Carterfone* may have created a right for others to introduce additional uses to the network, but it did not grant anyone an affirmative right have the network

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<sup>350</sup> In addition to the ability to charge based on class, railroads were also able to engage in volume discounts and even preferences for certain customers, such as for property shipped by government agencies, indigents transported by charities, and ministers. See *Interstate Commerce Comm’n v. Balt. & Ohio R.R.*, 145 U.S. at 278–82.

<sup>351</sup> See, e.g., 47 U.S.C. § 153(46) (2000) (establishing a broad definition of telecommunications service).

<sup>352</sup> See Communications Act of 1934, Pub. L. No. 73-416, §§ 201–02, 48 Stat. 1064, 1070.

<sup>353</sup> *Carterfone Decision*, *supra* note 296, at 423; see *Hush-A-Phone Corp. v. United States*, 238 F.2d 266, 269 (D.C. Cir. 1956) (finding, prior to *Carterfone*, that AT&T’s rules preventing a subscriber from attaching a device to their telephone were “unwarranted interference with the telephone subscriber’s right reasonably to use his telephone in ways . . . privately beneficial without being publicly detrimental.”).

<sup>354</sup> *Carterfone Decision*, *supra* note 296, at 424 (“We are not holding that the telephone companies may not prevent the use of devices which actually cause harm . . .”).

<sup>355</sup> See *id.*

<sup>356</sup> See *id.*

operate in a different way to allow their chosen use.<sup>357</sup> To the contrary, *Carterfone* explicitly acknowledged that control over the design and future direction of the network was up to AT&T. The FCC went so far to explain that makers of foreign attachments would be expected to change their existing products in order to conform to AT&T's future revisions to the telephone network.<sup>358</sup> Similarly, while another FCC action regarding the evolution of the telephone network defined carriage, it did not mandate forms of carriage, it just mandated equal dealing in the provision of carriage.<sup>359</sup>

If *Carterfone* was an introduction to opening up the network to nondiscriminatory access by competitors, the true revolution came in the wake of the Telecommunications Act of 1996 ("1996 Act").<sup>360</sup> The 1996 Act required incumbent local exchange carriers ("ILECs") to re-package the services they provided to consumers for resale, or integrate with budding competitive local exchange carriers ("CLECs").<sup>361</sup> Even then, though, ILECs were not required to alter the services they were actually providing; they were only required to provide access to the same services they were already providing on a different basis.<sup>362</sup> Technical decisions about the design and functionality of the local telephone network were left to the ILECs themselves.<sup>363</sup> Thus, even if there is a strong historical precedent for nondiscriminatory access to communications services, history does suggest some limits on the nature of the access to be mandated.

Nondiscrimination regimes have traditionally imposed nondiscriminatory

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<sup>357</sup> *Id.* at 423–424 (citing *Hush-A-Phone Corp.*, 238 F. 2d at 269).

<sup>358</sup> As the Commission explained, the duty to comply (and the risk of network change) was entirely on the foreign attachment user or provider:

The telephone companies would remain free to make improvements to the telephone system and could reflect any such improvements in reasonable revised standards for nontelephone company provided devices used in connection with the system. Manufacturers and sellers of such devices would then have the responsibility of offering for sale or use only such equipment as would be in compliance with such revised standards. An owner or user of a device which failed to meet reasonable revised standards for such devices, would either have to have the device rebuilt to comply with the revised standards or discontinue its use. Such is the risk inherent in the private ownership of any equipment to be used in connection with the telephone system.

*Carterfone Decision*, *supra* note 296, at 424.

<sup>359</sup> *In re* Amendment of Section 64.702 of the Commission's Rules and Regulations (Second Computer Inquiry), *Final Decision*, 77 F.C.C. 2d 450, ¶ 170 (Apr. 7, 1980) [hereinafter *Computer II*].

<sup>360</sup> See Telecommunications Act of 1996, Pub. L. No. 104–104, 110 Stat. 56 (1996) (codified in scattered sections of 47 U.S.C.).

<sup>361</sup> See 47 U.S.C. § 251.

<sup>362</sup> See *AT&T Corp. v. Iowa Utils. Bd.*, 525 U.S. 366, 387–88 (1999) (discussing the FCC's "necessary and impair" standard in 47 C.F.R. § 51.319 (2007)).

<sup>363</sup> See 47 U.S.C. § 251 (specifying various required interconnections to be facilitated by ILECs, but not specifying the technical details by which interconnection should be effected).

access along the lines of *users* rather than *uses*, but most network neutrality proposals seek a comprehensive solution to both forms of discrimination.<sup>364</sup> Consequently, net neutrality proposals call for a degree of regulatory involvement in the definition of network and technology markets that is unprecedented in the post-mercantilist history of nondiscriminatory access. The question is whether history has anything to offer to modern neutrality debates.

## V. APPLYING NONDISCRIMINATORY ACCESS TO MODERN COMMUNICATIONS NETWORKS

Nondiscriminatory access regulation can take many forms, and deciding to apply nondiscriminatory access to modern communications networks does not necessarily suggest what the regulation should look like. The amenability of modern communications networks to innovation requires policymakers to be forward-looking. Policymakers must not only decide the nondiscrimination rules they want for today, but also a mechanism for nondiscriminatory access to accommodate future developments in technology, forms of discrimination, and access principles themselves. Despite the fact that this article highlights the inapplicability of economic theory to optimizing net neutrality regulation for today's networks, basic lessons of economics (and its cognate in political markets, public choice theory) provide a guide to what types of regimes are likely to be the most effective. The history, in this case, informs economics; it does not replace it.<sup>365</sup>

If we take seriously not only the benefits but also the risks of imposing nondiscriminatory access on modern communications networks, it becomes clear that neutrality rules should not target user discrimination, but that network operators should have discretion to discriminate on the basis of use. Such "user neutrality" requirements should be stated in the form of standards, since standards are more readily adaptable to new technologies, to forms of discrimination, and to development of the access principles underlying the legal standard.

### A. A User Neutrality Standard

Although user- and use-based discrimination have similar effects on markets and result in closely related harms, they do not have identical solutions. Put another way, imposing user neutrality does not carry the same regulatory implications as imposing use neutrality. User neutrality can be imposed simply

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<sup>364</sup> See *supra* Part IV.B.1.

<sup>365</sup> Thus, it should come as little surprise that I will deploy a number of well-worn concepts of law and economics in arguing for a form of neutrality regulation that will better stand the test of time than the proposals that dominate today's debate.

without affecting the network operator's design decisions, either by mandating that a network operator provide any service to others that it provides to itself or its affiliates on the same terms (often through unregulated tariffs) or by mandating actual terms of sale for different users (through regulated tariffs).<sup>366</sup> When the FCC removed deregulated "enhanced services" from regulated carriage in *Computer II*, for instance, it did not define what types of enhanced services the carriers must provide or how they should be provided.<sup>367</sup> Instead, the FCC put in place limitations on carriers that forced every transaction with affiliated enhanced service providers to be disclosed and on equal terms with non-affiliated enhanced service providers.<sup>368</sup> Phone companies could develop whatever new forms of carriage they wanted, but they had to provide equal carriage to any other firm wishing to use their facilities in the same way.<sup>369</sup> In order for use neutrality to be viable, on the other hand, regulators must specify not only the terms of sale but also the product itself in order to assure that it serves the designated, protected uses.<sup>370</sup>

It is easy to understand why regulators have traditionally been more comfortable regulating public businesses by regulating the terms of exchange rather than regulating product design. Although regulators are likely to err in setting prices, the kind of pricing errors they are likely to make are not nearly as dangerous to markets as the design errors likely to be introduced through a regulatory design process. There are only so many factors that affect price, and they are all roughly commensurable (in dollars). Even when nondiscrimination regulation largely avoids questions of design or technology, disputes over pricing and the delineation of already-existing products consumes millions of dollars and countless man-hours. A vivid example is the battles in the wake of the 1996 Act's mandate that ILECs sell and combine "unbundled network elements" of local telephone service so that CLECs could enter local telephone markets, a fight that continues to this day.<sup>371</sup> The product design process, on the other hand, has innumerable inputs, many of which have no logical connection to each other, opening the possibility of debate along many more avenues.

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<sup>366</sup> See 47 U.S.C. § 202.

<sup>367</sup> *Computer II*, *supra* note 359, ¶ 6.

<sup>368</sup> *Id.* ¶ 7. On the series of decreasingly onerous separation requirements in the various *Computer Inquiries*, see Farrell & Weiser, *supra* note 284, at 129–133.

<sup>369</sup> See Harvey Reiter, *The Contrasting Policies of the FCC and FERC Regarding the Importance of Open Transmission Networks in Downstream Competitive Markets*, 57 *Fed. Comm. L.J.* 243, 265 (2005); *Computer II*, *supra* note 359, ¶ 96.

<sup>370</sup> If applying use neutrality, regulators can impose use-based non-discrimination obligations on a product either by specifying the various uses that the supplier must support (to which the supplier can design the product) or the characteristics of the product (to which others can design their uses or complementary products without fear of discrimination by the constrained supplier).

<sup>371</sup> See Robinson & Nachbar, *supra* note 272 (on the 96-Act battles).

Given how costly and destructive the debate over unbundled network elements and total element long run incremental cost (“TELRIC”) pricing was, bad, the prospect of debates over not only product segmentation, pricing, but also product design should give anyone proposing such a scheme considerable pause.

For those concerned not only with the cost and delay of regulation but also with the potential for error, price-setting has the additional advantage of being a scalar that allows for only one of two possible errors: setting it too low or setting it too high. The number and types of potential errors that government regulation could introduce into the design process are as limitless as the number of possible designs. Of course, the more involved government is in defining products and the markets in which they are sold, the higher the stakes for those whose interests are affected by the government’s design mandates and the greater the incentive to corrupt the design process.<sup>372</sup> If regulatory capture is a problem for today’s telecommunications regulation, one can only imagine what will happen if government controls not only the markets for communications technology but the development of the technology itself. Conflicting lobbying by billionaires seeking to increase their own net worth has already begun; Google successfully went to war with the established telecommunications industry over new use limitations the FCC imposed on the 700 MHz spectrum auction.<sup>373</sup>

Even for the design-by-government-committee optimists, the network neutrality movement teaches why we should be concerned about moves to regulate the communications industry through design mandates. The very same pre-emption of innovation that network neutrality proponents fear may result from private control of modern communications networks is possible through either error or capture of the regulatory process. Regulatory involvement systematically biases innovation toward incumbent technologies; it is easier for both network operators and users to argue about the terms of access to *existing* networks, content, and applications than it is for them to argue over the merits of a *non-existent* technology. If one network operator engages in use-based discrimination to the detriment of a developing technology, the proponents of the technology at least have a chance of finding another form of carriage. But if a new technology requires a form of carriage that has been regulatorily excluded from the design of modern communications networks—such as the level-of-service guarantees that some potential Internet applications require—it will

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<sup>372</sup> This incentive is accentuated by the fact that the government’s design will not be the suggested or default design—as in the case of a standards-setting body—it will be the only design. See Lemley, *Antitrust and the Internet Standardization Problem*, *supra* note 222, at 1062 (discussing the standardization process for high-definition television).

<sup>373</sup> See *Bidding for Bandwidth: The 700 MHz Spectrum Auction*, 23 BERKELEY TECH. L.J. 651 (2008) [hereinafter *Bidding for Bandwidth*].

have zero chance of ever developing.<sup>374</sup>

Controlling market outcomes by mandating the terms of access is one thing; controlling technological development by mandating particular technological features is quite another.<sup>375</sup> There is little convincing evidence that government regulation would provide a more socially beneficial mix of network uses than unregulated markets would, which suggests that regulation ought to be directed toward limiting the discretion of network operators with regard to users, not uses.

Even if we chose to address economic discrimination through the regulation of network design, use neutrality is not a good basis for doing so. While “neutrality” is appealing as part of a bulleted list of principles or as shorthand in policy statements or congressional testimony, neutrality contains about as much regulatory specificity as “fairness”—as a technical imperative it has even less specificity. For example, many argue that the Internet should continue to follow the “end-to-end” principle currently embedded in Internet Protocol, in which the network does not differentiate at all (by user or use) among packets of data transmitted across it.<sup>376</sup> Others point out that the insensitivity of the end-to-end design to the type of data transmitted prevents ISPs from tailoring carriage to the needs of different applications, such as providing streaming video or voice conversations with a higher level of service than asynchronous content like e-mail.<sup>377</sup> Providing a higher level of service to particular data packets is a form of discrimination; the question is whether the discrimination is invidious or salubrious.

The answer to that question depends on the economic realities of the discrimination, basic understandings of fairness and, possibly, the intent behind the discriminatory practice—matters not amenable to specification in a design document. The answer does not depend on the use of any particular technology, and use neutrality rules highlight the failure of tying nondiscrimination rules to particular technologies of both access and discrimination.<sup>378</sup> The lim-

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<sup>374</sup> See Nachbar, *supra* note 5, at 1375.

<sup>375</sup> Given that economic and physical discrimination in this environment are inseparable, regulators cannot help but be interested in design, if only as a matter of assuring that carriers actually are providing the same access to outside users as they are to their own affiliates. However, that oversight can occur through a strict disclosure rule without interfering in the design process itself. See Phillip Weiser, *Goldwasser, The Telecom Act, and Reflections on Antitrust Remedies*, 55 ADMIN. L. REV. 1, 19 (2003).

<sup>376</sup> See, e.g., Lemley & Lessig, *supra* note 225, at 943 (arguing that the power to discriminate by ISPs could be a “first step in a return to the failed architecture of the old AT&T monopoly.”).

<sup>377</sup> Marjory S. Blumenthal & David D. Clark, *Rethinking the Design of the Internet: The End-to-End Arguments vs. the Brave New World*, 1 ACM TRANSACTIONS ON INTERNET TECH. 70, 72 (2001); Yoo, *Beyond Network Neutrality*, *supra* note 13, at 21–22.

<sup>378</sup> See Wu, *Why Have a Telecommunications Law?*, *supra* note 234, at 17.



ited and highly specified neutrality requirements of the FCC's 2008 auction of the 700 MHz spectrum are a perfect example.

#### B. A Case Study in Regulatory Use Neutrality: The 700 MHz Spectrum Auction

Although the FCC previously endorsed neutrality as a policy matter, it has not mandated it through regulation.<sup>379</sup> That changed, however, in early 2008, when the FCC auctioned off to commercial wireless communications carriers licenses covering a large swath of spectrum.<sup>380</sup> The spectrum auctioned will be freed up in 2009 by the transition from analog to digital television and is particularly valuable because of its propagation characteristics.<sup>381</sup> The FCC adopted a version of "open access" (a version referred to be proponents as "Wireless *Carterfone*") for a portion of the spectrum to be auctioned.<sup>382</sup> Open access provides neutrality in two specific ways. Under the rules, consumers will have the freedom to use their choice of "device" and "application" for a limited portion of the 700 MHz band known as the C Block.<sup>383</sup> But by defining neutrality in a specific, technologically dependent formula, Wireless *Carterfone* likely will have a very short-lived regulatory impact on wireless markets.

The poor economic fit between the AT&T telephone monopoly, to which *Carterfone* itself applied, and today's wireless markets requires only perfunctory treatment here.<sup>384</sup> AT&T, as a regulated monopoly, had the market power

<sup>379</sup> See Wireline Broadband Policy Statement, *supra* note 284, ¶¶ 4, 5 n. 15 (explicitly stating that the Commission did not adopt rules in the Wireline Broadband Policy Statement).

<sup>380</sup> See 700 MHz Report and Order, *supra* note 292, ¶ 12.

<sup>381</sup> *Id.* ¶ 15; see Philip J. Weiser and Dale Hatfield, *Spectrum Policy Reform and the Next Frontier of Property Rights*, 15 GEO. MASON L. REV. 549, 577-78 (2007) (discussing the propagation characteristics of the 700 MHz spectrum).

<sup>382</sup> See 700 MHz Report and Order, *supra* note 292, at 15,561 (Copps, Comm'r approving); see generally Wu, *Wireless Carterfone*, *supra* note 294 (discussing the applicability of the *Carterfone* rules to the current wireless industry).

<sup>383</sup> The spectrum licenses will be auctioned with the conditions that:

consistent with the broadband principles . . . will require only C Block licensees to allow customers, device manufacturers, third-party application developers, and others to use or develop the devices and applications of their choosing in C Block networks, so long as they meet all applicable regulatory requirements and comply with reasonable conditions related to management of the wireless network (*i.e.*, do not cause harm to the network). Specifically, a C Block licensee may not block, degrade, or interfere with the ability of end users to download and utilize applications of their choosing on the licensee's C Block network, subject to reasonable network management.

700 MHz Report and Order, *supra* note 292, ¶ 206.

<sup>384</sup> See *id.* at 15,574 (McDowell, Comm'r dissenting).

First, the AT&T of the 1960's was a nearly 100-year-old government protected and subsidized monopoly. By any measure, today's U.S. wireless service providers lack market or monopoly power, as this Commission concluded just 10 months ago. Sec-

necessary to seek monopoly rents, but faced price limits that prevented it from doing so.<sup>385</sup> In such cases, it may make economic sense to try to capture monopoly rents they are being denied by regulators in their primary market by extending market power into a complementary, unregulated market.<sup>386</sup> The wireless market today is not like the wireline market in which AT&T operated years ago. Today's wireless carriers face two or three competitors in over 90% of their markets and therefore have less market power than AT&T once possessed.<sup>387</sup> More importantly though, the lack of serious price regulation of wireless service means that wireless carriers have no incentive to extend whatever market power they do have into complementary markets.

The converse is also true; if wireless carriers actually do have market power, opening device and application markets to competition will have no effect on their ability to charge monopoly rents. Carriage is no good without a device, and a device is useless without carriage, so from a consumer standpoint, the product is the *combination* of device (or application) and carriage. If device markets are competitive, device manufacturers cannot charge for the extra value they add to networks—their price is constrained by competition from other device makers—but monopolistic carriers can still extract the full monopoly rents that accrue from provision of the combined product.<sup>388</sup> Freeing only one-half of the combined device/network product does not reduce the ability of carriers to charge monopoly rents for carriage. If anything, a variety of devices makes the combined product, and consequently carriage itself, *more* valuable providing an incentive for monopolistic carriers to eliminate restrictions on third-party devices.<sup>389</sup>

*Carterfone* also fails to account for the differing relationship between carriers and device and application providers. As the recent excitement over the

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ond, unlike wireline voice services offered in the 1960's, today's U.S. wireless service providers have never integrated into the applications or equipment markets. Third, under common antitrust analysis, today's wireless providers lack the ability to exercise buying power over upstream handset suppliers, of which there are many competitors, which wield significant countervailing selling power. Fourth, wireless service providers are not subject to price regulation in the market in which they are alleged to have market power, which otherwise might encourage them to seek profits in complementary markets.

*Id.* See Robert W. Hahn et al., *The Economics of Wireless Net Neutrality* 29–34 (AEI-Brookings Joint Ctr. for Reg. Studies, Working Paper No. 07-10, 2007).

<sup>385</sup> See Howard A. Shelanski, *Adjusting Regulation to Competition: Toward a New Model for U.S. Telecommunications Policy*, 24 *YALE J. ON REG.* 55, 59 (2007).

<sup>386</sup> Ward S. Bowman, Jr., *Tying Arrangements and the Leverage Problem*, 67 *YALE L.J.* 19, 22 (1957); Hahn et al., *supra* note 384, at 33–34.

<sup>387</sup> *In re* Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services, *Twelfth Report*, 23 *F.C.C.R.* 2245 (Jan. 28, 2008).

<sup>388</sup> See Bowman, *supra* note 386, at 22; Carlton, *supra* note 320, at 666.

<sup>389</sup> Farrell & Weiser, *supra* note 284, at 98–99, 102.

iPhone shows, many consumers are not driven to a particular handset by their carrier but instead are driven to a particular carrier by the available handsets (and applications).<sup>390</sup> Especially because carriers are selling a commodified, undifferentiated service (carriage), there is every reason to believe that whatever market power is exercised in cellular communications markets is exercised not by the carriers but rather by handset makers and application providers. Not only is *Carterfone* a bad way to control carriers, it does not adequately address the possibility that other suppliers (such as the device manufacturers themselves) will actually be the ones who engage in exclusionary conduct. The FCC may require AT&T Wireless to allow third-party applications on their network, but no one is suggesting that the FCC can require Apple to allow third-party applications on the iPhone.<sup>391</sup>

Not only does *Carterfone* provide a poor economic analogy, it provides a poor technological one as well. A circuit-switched network—the AT&T phone network of the 1970s and 1980s—was completely insensitive to how a circuit was used once the circuit was established.<sup>392</sup> Today's packet-switched communications networks are entirely different. The medium (wires or spectrum) is shared among various users, with protocols to manage that sharing and prevent interference of the shared uses. Modern packet-switched communications networks are actually more sensitive to different uses than the old circuit-switched telephone network, because the medium is shared.<sup>393</sup> Securing the network from harmful uses is actually harder now than it was for networks of dedicated circuits. If a consumer has dial-up Internet service, a rogue application that causes their computer to transmit endless data ties up their phone line no more than if their computer transmits nothing. The same is not true of a shared net-

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<sup>390</sup> See *In re Rural Cellular Association Petition for Rulemaking Regarding Excusatory Arrangements Between Commercial Wireless Carriers and Handset Manufacturers*, at 4–5 (May 20, 2008), [http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native\\_or\\_pdf=pdf&id\\_document=6520010759](http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520010759). In the third quarter of 2007 AT&T activated 2.4 million iPhones, 40 percent of which were owned by new subscribers. Strong Wireless Gains, Sound Operational Execution Highlight AT&T's Third Quarter; Results Led by 2.4 Million iPhone 3G Activations, Rapid Wireless Data Growth, <http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=26227> (last visited Oct. 28, 2008).

<sup>391</sup> Apple has chosen to allow third-party applications, but only those it both approves and actually sells through its own software outlet—hardly a recipe for widespread, spontaneous innovation in application markets. Press Release, Apple Inc., Apple Announces iPhone 2.0 Software Beta: Includes SDK & Built-in Microsoft Exchange ActiveSync (Mar. 6, 2008), <http://www.apple.com/pr/library/2008/03/06iphone.html>.

<sup>392</sup> See Christopher Libertelli, *Internet Telephony Architecture and Federal Access Charge Reform*, 2 B.U. J. SCI. & TECH. L. 224, 225–27 (1996) (explaining how the dedicated circuit utilized in a circuit-switched network avoids the mixing of informational traffic seen in packet-switched networks).

<sup>393</sup> See Spencer Kass, *Regulation and the Internet*, 26 S.U. L. REV. 93, 93–96 (1998) (explaining how increased usage on a packet-switched network can have displacement effect on information packets in transit).

work; if a consumer's computer spits endless data onto a packet-switched network, it displaces other users' traffic.

At the same time, the variability in uses on the 700 MHz spectrum likely is higher than those allowed under *Carterfone*. The "foreign attachments" permitted by *Carterfone* used the network in exactly the same way as voice service—many of them were simply competitively made telephones.<sup>394</sup> That is not true of applications running on smart cell phones, some of which send e-mail, some download or upload music or video, and most of which do things unimaginable a decade ago and will likely do things in a decade that we can't imagine now.<sup>395</sup> Like the *Carterfone* rules, the rules imposed on the C Block in the 700 MHz auction permit carriers to impose "reasonable conditions related to management of the wireless network."<sup>396</sup> But unlike AT&T under *Carterfone*, wireless carriers actually will be able to distinguish between the loads on their networks imposed by different applications, giving wireless carriers justification for limiting high- or unpredictable-demand applications. The increased sensitivity of modern networks to high data loads—combined with increased heterogeneity among uses—will make it much easier for carriers to object to open, untested applications on wireless phone networks than it was for AT&T to object to fax machines.<sup>397</sup>

The FCC's ex ante announcement of a technology-specific rule is also an invitation to circumvention through the adoption of alternative technologies. The 700 MHz C Block rules put in place a regime that can easily be circumvented, because they require nondiscrimination for only two components of the network; devices and user applications. There is no requirement that carriers

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<sup>394</sup> Even then, AT&T was largely successful in resisting any real openness flowing from the decision. See Farrell & Weiser, *supra* note 284, at 94. The failure of the *Carterfone* framework to bring about any real neutrality in part led to the *Computer Inquiries* that resulted in a nondiscrimination regime. *Id.* at 130 (explaining the *Computer Inquiry* rules).

<sup>395</sup> The increased complexity of both today's networks and devices also suggests that mandating support for a particular interface will be a much more difficult process than developing a simple interface to allow wired foreign attachments. Cf. Wu, *Wireless Carterfone*, *supra* note 294, at 415–16 (expressing the view that the "impossibility" of developing a standard interface may be an overstatement).

<sup>396</sup> 700 MHz *Report and Order*, *supra* note 292, ¶ 206 ("Specifically, a C Block licensee may not block, degrade, or interfere with the ability of end users to download and utilize applications of their choosing on the licensee's C Block network, *subject to reasonable network management.*") (emphasis added).

<sup>397</sup> Cf. 700 MHz *Report and Order*, *supra* note 292, at 15,569 (Tate, Comm'r approving).

We should not underestimate the value of reasonable requirements established by a network operator to protect its network and allow for compliance with its regulatory obligations, such as an obligation to provide e911 service. None of us would want an e911 call to go unanswered because it could not find its way through a maze of movie and music downloads, or malicious software.

*Id.*

make their networks technologically amenable to particular devices. For all the hype over the iPhone, for instance, there is no way to make an iPhone purchased for AT&T's network function on Verizon's network regardless of the carriers' willingness to "unlock" their devices. The 700 MHz C Block rules do nothing to solve such problems.<sup>398</sup> Even as the 700 MHz C Block rules do nothing to solve greater incompatibility issues, they provide countless opportunities for discrimination that would avoid the FCC's device- and application-centric nondiscrimination rules. For instance, carriers can develop services that rely on forms of carriage that they do not make available to the public, and there is no limitation on providing priority carriage to proprietary applications.<sup>399</sup>

Even more likely is that technological changes will render device- and application-centric nondiscrimination rules moot. It is unforeseeable how wireless network markets will develop in the coming years. If "devices" and "applications" are not the currency of network productivity and freedom, carriers will be poised to impose near-complete control over whatever those non-device, non-application innovations will be.

Although much of the value of modern communications networks may reside at the ends of the network, superficial changes like those brought about by *Carterfone* had little responsibility for that added value.<sup>400</sup> Wireline phones look different now than they used to, but they basically do the same thing; data transmission over old voice lines is still incredibly slow regardless of advances in modem technology. The ability to attach foreign devices has little impact if the network itself does not evolve to provide more than plain-old telephone service.

In 1981, the FCC undertook a much more important change than in the *Carterfone* decision when, in the *Computer II* inquiry, it separated voice telephone service from "enhanced services" and largely deregulated the latter, save for a

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<sup>398</sup> AT&T operates on a Global System for Mobile communications ("GSM") standard and Verizon operates on the incompatible code division multiple access ("CDMA") standard. AT&T Wireless, GSM, <http://www.wireless.att.com/learn/why/technology/gsm-gprs.jsp> (last visited Sept. 4, 2008); Verizon Wireless, About Us, <http://aboutus.vzw.com/atag glance.html> (last visited Sept. 4, 2008).

<sup>399</sup> At this time, there does not appear to be a requirement that carriers provide the same priority to information required for third-party applications. See generally *700 MHz Report and Order*, *supra* note 292, at 15,570 (Tate, Comm'r approving) ("Carriers will still be free to establish business plans of their choice, including, for instance, pricing models based on the amount of bandwidth used, tiered pricing, or other innovations we have not yet seen."). As announced, the FCC order does not address Professor Lessig's concerns over "access tiering." See text accompanying note 293.

<sup>400</sup> See Lemley & Lessig, *supra* note 225 (discussing the overriding importance of maintaining the Internet's underlying architecture in order to ensure future utility). Cf. Wu, *Wireless Carterfone*, *supra* note 294, at 17–20 (discussing the dangers of allowing wireless carriers to aggressively restrict connectivity).

strong user neutrality requirement.<sup>401</sup> The term “enhanced services” was defined broadly and without regard to specific technologies, which allowed the term to adapt to unforeseeable changes in communications markets.<sup>402</sup> In the *Computer II* and *Computer III* inquiries, the FCC addressed the business, not the technology, of discrimination, and created a far more enduring approach.<sup>403</sup> Today, anyone who subscribes to broadband access through their local phone company (or a competitive reseller) is the beneficiary of the *Computer Inquiries*. Even though digital subscriber line (“DSL”) technology did not exist in 1981, it nevertheless fit the broad definition of an “enhanced service” under *Computer II*, and was regulated as such until the FCC deregulated the provision of DSL in 2005.<sup>404</sup>

In order to be workable, any modern neutrality mandate must accommodate innovation, in both technology and forms of discrimination.<sup>405</sup> Although imperfect, user neutrality can provide most of the benefits of use neutrality while avoiding the very worst pitfalls of regulatory involvement in technology markets. Imposing use neutrality requires addressing questions of design, which opens the door to tremendous interference by regulators and rent-seeking policy advocates and lobbyists. Effective use neutrality also requires neutrality to be implemented with rules that specify either the design of the network, or particular uses the network must support to satisfy the neutrality imperative. Ex ante regulatory specification can only work in static, predictable environments, and modern communications technologies and markets are anything but static and predictable. The genius of modern communications networks, though, is their ready adaptation to new, unpredicted uses.

Avoiding interference with developing technology is not the only reason to favor user neutrality over use neutrality. Part of the problem with codifying

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<sup>401</sup> See *supra* text accompanying notes 367–69.

<sup>402</sup> [T]he term *enhanced service* shall refer to services, offered over common carrier transmission facilities used in interstate communications, which employ computer processing applications that act on the format, content, code, protocol or similar aspects of the subscriber’s transmitted information; provide the subscriber additional, different, or restructured information; or involve subscriber interaction with stored information.

47 C.F.R. § 64.702(a) (2007).

<sup>403</sup> *Computer II*, *supra* note 359, ¶¶ 100–1; *In re* Amendment of Sections 64.702 of the Commission’s Rules and Regulations (Third Computer Inquiry); and Policy and Rules Concerning Rates for Competitive Common Carrier Service and Facilities Authorizations Thereof; Communications Protocols under Section 64.702 of the Communication’s Rules and Regulations, *Report and Order*, 104 F.C.C. 2d 958, ¶¶ 351–52 (May 15, 1986).

<sup>404</sup> See *Wireline Broadband Order*, *supra* note 282, ¶¶ 4–5. Subscribers to cable modem service also get a benefit, since *Computer II* is responsible for creating the only competitor—DSL—capable of policing largely unregulated but otherwise monopolistic cable modem providers. See *Computer II*, *supra* note 359, ¶¶ 2–12.

<sup>405</sup> See Yoo, *What Can Antitrust Contribute to Network Neutrality?*, *supra* note 303, at 500 (“[T]he central policy goal [of neutrality rules] should be to encourage . . . network owners to experiment with architectures that deviate from the status quo.”).

neutrality is the necessary vagueness of the neutrality mandate. Neutrality is an unlikely candidate for implementation by rule, but defining discrimination in terms of uses means that it must be implemented by specific rules. Rules do not allow technology, markets, or the neutrality principle itself enough room to grow. Standards, rather than rules, are better suited to legal regimes predicated on expected but unpredictable change.<sup>406</sup>

A neutrality standard, rather than mandated design requirements, is the best way to allow room for new uses and networks to develop while preserving open communications networks. Moreover, the vagueness inherent in standards allows standards to be applied to specific circumstances through ex post adjudication rather than ex ante specification. Just as standards leave room for innovation, ex post adjudication provides decision makers the benefit of experience with a particular form of discrimination prior to having to rule on its merits.

The question is not whether to allow discrimination. Discrimination of some kind is unavoidable. There may be some troublesome forms of discrimination that could potentially be subject to per se prohibitions, but, in most cases, whether technical innovation fostered through economic discrimination is good or bad depends on the nature of the discrimination and the way it is practiced, neither of which readily can be determined before the discrimination occurs.<sup>407</sup>

## VI. CONCLUSION

Consideration of the traditional justifications for nondiscriminatory access demonstrates how truly exceptional the imposition of nondiscrimination regulation is. Although it has always been tempting to focus exclusively on market power when imposing nondiscrimination rules, history demonstrates that market power actually plays a fairly small role in determining whether or not to subject a particular industry to nondiscriminatory access. Rather than relying on utilitarian efficiency grounds, traditional justifications for nondiscriminatory access have emphasized the inherent role of government in the regulation of roads and, by extension, communications.

Current arguments over modern communications networks, however, are

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<sup>406</sup> See generally Isaac Ehrlich & Richard A. Posner, *An Economic Analysis of Legal Rulemaking*, 3 J. LEGAL STUD. 257 (1974) (discussing the benefits of rules and standards).

<sup>407</sup> See, e.g., *United States v. Microsoft Corp.*, 147 F.3d 935, 949–50 (D.C. Cir. 1998) (allowing a particularly forgiving tying analysis in cases involving tying for ostensibly technical reasons); *Berkey Photo, Inc. v. Eastman Kodak Co.*, 603 F.2d 263, 281–83 (2d Cir. 1979) (rejecting a pre-disclosure because it would stifle firm innovation); see also Yoo, *What Can Antitrust Contribute to Network Neutrality?*, *supra* note 303, at 516–17 (describing a similar advantage in using ex post standards to evaluate business innovations in dynamic high technology industries).

waged almost entirely along the lines of market power.<sup>408</sup> Limiting nondiscriminatory access obligations to firms with market power fails to adequately account for the reach of—and consequently the values—that traditionally underlie nondiscriminatory access. We may choose to reject those values as outdated (or even naïve in a world in which we better understand the economics of regulation), but that rejection at least should be a conscious one rather than a consequence of unquestioning acceptance of market power as the *sine qua non* of nondiscrimination regulation. This is especially true in light of the dearth of empirical work demonstrating how well the theory fits the reality of modern communications markets.

Widespread disagreement about the economics of neutrality, and the varied network markets potentially subject to neutrality, renders the economic argument for a blanket neutrality rule a weak one. A focus on economic theory drives network neutrality advocates to emphasize a form of nondiscriminatory access that protects not only the terms of access but also particular uses of the network and could potentially drive network design, which is a radical departure from the history of nondiscriminatory access. History, as well as economic and public choice theory, teaches that government involvement in network design is unlikely to produce happy outcomes. Though network neutrality is properly subject to a number of economic objections, history provides an object lesson in how to avoid many of the hazards of regulation while maximizing the substantive benefits of nondiscrimination. Regulating against user-based discrimination is both less intrusive on admittedly imperfect network markets and more consistent with the history of nondiscriminatory access.

In addition to being easier to apply than use neutrality, user neutrality's basis in non-economic values provides a much more robust justification for government interference with markets. Markets, after all, are excellent devices for maximizing social wealth—an economic objective. If providing access is not the solution to an *economic* problem, markets lose their presumptive superiority over government regulation as a method for allocating access to networks.

Although it undoubtedly is tempting for regulators, commentators, and engineers alike to try to design neutrality into networks, doing so will stilt the development of both network technology and business models premised on particular network architectures. Imposing neutrality through design will lead to a particularly dangerous combination: low level meddling by regulators in the technology of modern communications networks mixed with highly disputed concepts of neutrality. The result is a process ripe for both error and corruption. Instead, regulators will preserve more room for change and adaptation by allowing courts to apply a user neutrality standard to allegedly discrimina-

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<sup>408</sup> See *supra* text accompanying notes 298–305.



tory practices. The FCC's latest foray into nondiscriminatory access appears to miss the mark through its focus on particular forms of discrimination. The 700 MHz C Block rules have the potential to stifle true innovation in wireless markets by locking in a particularly narrow understanding of neutrality for the affected 700 MHz bands, while simultaneously failing to protect against the most invidious forms of discrimination.

Even in times when suspicion of government regulation of businesses has been at its height, some businesses have been subject to greater government control than others. Every network that is offered for use to the public is a *public* network, whether offered in a competitive or monopolistic market, and it is impossible to view government regulation of such businesses as driven by the economics of welfare maximization—legislatures are not populated by economists. Relying on efficiency justifications for network regulation has led to a false sense that questions of access have ready, mathematical answers. Overconfidence in our understanding of how innovation and network markets function and in systematic, engineered solutions to access discrimination has led to overly narrow and technically driven proposals to prevent discrimination in modern communications network markets. Instead, discrimination by network providers should be met by application of the kind of broad, general nondiscrimination standards that make up our society's long tradition of nondiscriminatory access to businesses "affected with the public interest."

