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### New Models of Regulation and Interagency Governance

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# NEW MODELS OF REGULATION AND INTERAGENCY GOVERNANCE

*Christopher S. Yoo\**

2003 MICH. ST. DCL L. REV. 701

## TABLE OF CONTENTS

I.	AN UNPRECEDENTED WILLINGNESS TO CONSIDER ALTERNATIVE GOVERNANCE STRUCTURES . . . . .	702
II.	ACCESS REGULATION, CONVERGENCE, AND DYNAMIC EFFICIENCY . . . . .	708
III.	CONVERGENCE AND REGULATORY PRICING . . . . .	711
IV.	BEYOND CONVERGENCE: FROM SUBSTITUTION TO COMPLEMENTARITY . . . . .	714

Those of us who study telecommunications are fortunate to live in very interesting times. The emergence of new network technologies and advances in our understanding of the economics and politics of regulation have opened up the policy space in ways never before imagined. As a result, policymakers have begun to exhibit an unprecedented willingness to experiment with alternative institutional arrangements, governance structures, and regulatory paradigms.

I would like to explore the dimensions of the new policy alternatives being considered, paying particular attention to what the recent debates over new approaches to regulation and interagency governance have overlooked. A close examination reveals that, although these debates have reflected a number of interesting insights, they have yet to incorporate the full implications of the forces that are transforming the policy environment.

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My remarks will proceed as follows: Part I reviews the wealth of possible governance structures currently under discussion.

Part II will identify the two forces that I believe are primarily responsible for much of the new thinking about telecommunications regulation—specifically the advent of access regulation and the convergence of communications technologies—and explore how they have placed a newfound importance on considerations related to dynamic efficiency. This analysis sheds new light on the dangers associated with the continued application of old regulatory tools that are designed primarily to promote static efficiency and fail to pay sufficient attention to dynamic efficiency.

Part III examines how those same forces are revolutionizing the way telecommunications policy is being implemented. In particular, it explores how technological convergence and the shift towards access regulation is undercutting the traditional approach to setting regulatory rates. My analysis suggests that the same forces that are transforming the *ends* of telecommunications policy are exerting a fundamental transformation on the *means* employed as well.

Part IV looks beyond the current discussions to a future in which competing network platforms serve as complements rather than substitutes for one another and offers some initial thoughts about the regulatory changes that might be required.

#### I. AN UNPRECEDENTED WILLINGNESS TO CONSIDER ALTERNATIVE GOVERNANCE STRUCTURES

In recent years, policymakers have evinced a greater willingness to experiment with alternative governance structures than has ever been seen before. One can easily identify at least six areas in which policymakers are actively reconsidering their basic substantive and institutional approach to regulation. A brief review of these proposals reveals just how much more wide open the policy space has become.

*First*, the Federal Trade Commission (FTC) and the Antitrust Division of the Department of Justice (DOJ) recently attempted to offer a clearer delineation of the types of merger each agency would be responsible for reviewing for compliance with the antitrust laws. These two agencies have historically divided merger clearance responsibility on a case-by-case basis. This process has at times embroiled the two agencies in protracted turf battles, which in turn has created delays that increased the pressure placed on both the regulators and the merging parties. As a result, the American Bar Association and other professional organizations have long called upon the agencies to simplify the manner in which responsibility for merger clearances was assigned.

The DOJ and the FTC jointly offered just such a proposal last year. The plan advanced by both agencies would circumvent bureaucratic infighting over particular mergers by dividing regulatory oversight responsibility on an industry-by-industry basis.<sup>1</sup> The effort collapsed in the face of the opposition of Senate Commerce Committee Chairman Ernest Hollings, who objected to the decision to allocate responsibility to review media-related mergers to the DOJ.<sup>2</sup> Now that control of the Senate has changed hands, it remains to be seen whether a similar proposal will resurface.

*Second*, policymakers have begun to debate whether to impose greater restrictions on the Federal Communication Commission's (FCC's) role in scrutinizing mergers in the communications industry. Unlike mergers in other industries, which are generally reviewed only by either the DOJ or the FTC, communications-related mergers must also go through an additional level of review by the FCC.<sup>3</sup> The dual nature of the review increases the costs of such mergers and extends the time needed to clear these mergers, which can be catastrophic in technologically dynamic industries.

In addition, the substantive principles applied by the FCC differ widely from those applied under conventional antitrust review. Under the approach taken by the DOJ and the FTC, the burden rests on the government to prove that the merger would harm competition. In addition, those agencies have jointly issued Merger Guidelines that offer a relatively clear description of how the competitive effects of mergers will be assessed.<sup>4</sup> FCC review, in contrast, is governed by the more amorphous "public interest" standard.<sup>5</sup> The FCC has offered relatively little advance guidance about what it believes the public interest standard requires. Over time, some details have become apparent. It is clear, for example, that the FCC places the burden of proof on the merging parties to show that the merger would affirmatively enhance competition. The effect is to raise a presumption against mergers, which in turn forecloses mergers whose competitive effects are either neutral or

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1. See Caroline E. Mayer, *Justice, FTC Split Duties on Antitrust*, WASH. POST, Mar. 6, 2002, at E1.

2. See Yochi J. Dreazen & John R. Wilke, *Justice Department, FTC Deal Dividing Merger Reviews Collapses*, WALL ST. J., May 21, 2002, at B6.

3. See generally Rachel E. Barkow & Peter W. Huber, *A Tale of Two Agencies: A Comparative Analysis of FCC and DOJ Review of Telecommunications Mergers*, 2000 U. CHI. LEGAL F. 29 (offering a comprehensive review and critique of the differences between FCC and Justice Department merger review).

4. See U.S. Dep't of Justice & Fed. Trade Comm'n, *Horizontal Merger Guidelines* (rev. Apr. 8, 1997), available at <http://www.usdoj.gov/atr/public/guidelines/hmg.htm>; U.S. Dep't of Justice, *Non-Horizontal Merger Guidelines* (issued June 14, 1984), available at <http://www.usdoj.gov/atr/public/guidelines/2614.htm>.

5. See 47 U.S.C. §§ 214(a), 310(d) (2000).

ambiguous. In addition, the FCC has made clear that it will block mergers based on far more speculative harms to potential competition than would be allowed under current antitrust law.

The FCC's merger clearance process has also raised substantial procedural and process-oriented concerns. Specifically, the FCC has been able to use its role in clearing mergers to impose conditions on the merging parties. This has had the effect of turning merger review into a form of back-door regulation that does not have to go through the regular process of notice and comment and may well be immune from judicial review.

Controversy over the manner in which the FCC was exercising its merger review authority has led Congress periodically to consider legislation that would either eliminate or severely restrict the FCC's authority to review mergers.<sup>6</sup> This, in turn, prompted the FCC to publish internal guidelines cabinining its own discretion in an attempt to head off such criticism.<sup>7</sup> While apparently sufficient to quiet congressional concerns, the FCC's action has been less than completely effective in speeding up and rationalizing the FCC's merger review process.<sup>8</sup>

Third, the Seventh Circuit's decision in *Goldwasser v. Ameritech Corp.*<sup>9</sup> has opened up a fascinating debate over whether anticompetitive conduct allegedly undertaken by local telephone companies and other regulated entities should be policed by courts applying antitrust laws or by regulatory

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6. See, e.g., *FCC Task Force Aims to Speed Telecom Merger Review*, NAT'L POST, Nov. 4, 1999, at C2; Lisa I. Fried, *Congressional Critics Blast FCC Role in Mergers*, RECORDER, June 23, 1999, at 3; Doug Halonen, *Seven Month Pitch: Bill Would Force FCC to Expedite Merger Rulings*, ELEC. MEDIA, Apr. 19, 1999, at 4; Kalpana Srinivasan, *Lawmakers Seek to Curtail FCC's Authority in Mergers*, AUSTIN AM.-STATSMAN, Mar. 15, 2000, at D2.

7. See FCC Transaction Team, Proposed Timeline for Consideration of Applications for Transfers or Assignments of Licenses or Requests for Authorizations Relating to Complex Mergers (Mar. 1, 2000), at <http://www.fcc.gov/transaction/timeline.html>; FCC Transaction Team, Issues Memorandum for March 1, 2000; *Transaction Team Public Forum on Streamlining FCC Review of Applications Relating to Mergers* (Mar. 1, 2000), available at <http://www.fcc.gov/transaction/issuesmemo.doc>; Paige Albinak & Bill McConnell, *FCC Spells Out Merger Deadlines*, BROADCASTING & CABLE, Mar. 6, 2000, at 20.

8. To cite one example, although the FCC is nominally supposed to complete its merger review process within six months, it stops the clock while awaiting information from the parties or for other agencies to act. See, e.g., Letter from Christopher J. Wright to AOL-Time Warner Merger Applicants Stopping the Clock Pending FTC Action (Oct. 11, 2000), available at <http://www.fcc.gov/transaction/aol-tw101100letter.html>. As a result, clearance of the first major merger reviewed under these new procedures still took eleven months. See Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations by Time Warner, Inc. & America Online, Inc., 16 F.C.C.R. 6547, 6548 n.1 (2001).

9. 222 F.3d 390 (7th Cir. 2000).

agencies applying their statutory mandates.<sup>10</sup> The courts of appeals have split over the issue, with some favoring the former<sup>11</sup> and others favoring the latter.<sup>12</sup> Implicit in this debate are difficult questions about institutional capability and the procedural differences associated with each approach. It is an issue that will soon be addressed by the Supreme Court.<sup>13</sup>

*Fourth*, even when an issue clearly falls within the jurisdiction of the agencies rather than courts, it still must be determined whether that jurisdiction should be exercised by federal or state authorities. The original division of responsibility established by the Communications Act of 1934<sup>14</sup> gave the FCC authority over all *interstate* communications, while according to the states exclusive jurisdiction over purely *intrastate* matters.<sup>15</sup> Enactment of the Telecommunications Act of 1996<sup>16</sup> prompted an extended dispute between federal and state regulators that was ultimately resolved by the Supreme Court's recognition that the Act effected a fundamental shift of power towards the federal government and away from the states.<sup>17</sup>

A parallel debate arose with respect to cable modem service, prompted by the attempt by municipal regulatory authorities to impose open access requirements either as a matter of direct regulation<sup>18</sup> or as a condition upon the transfer of licenses needed to consummate a merger.<sup>19</sup> Two courts of appeals have rejected the cities' authority to impose such requirements, holding that

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10. See, e.g., Philip J. Weiser, Goldwasser, *The Telecom Act, and Reflections on Antitrust Remedies*, 55 ADMIN. L. REV. 1 (2003).

11. See *Law Offices of Curtis V. Trinko, L.L.P. v. Bell Atl. Corp.*, 305 F.3d 89 (2d Cir. 2002), *cert. granted sub nom. Verizon Communications, Inc. v. Law Offices of Curtis V. Trinko, L.L.P.*, \_\_\_ U.S. \_\_\_, 123 S. Ct. 1480 (2003); *Covad Communications Co. v. BellSouth Corp.*, 299 F.3d 1272 (11th Cir. 2002).

12. See *Cavalier Tel., L.L.C. v. Verizon Va., Inc.*, No. 02-1337, 2003 WL 21153305 (4th Cir. May 20, 2003); *Goldwasser v. Ameritech Corp.*, 222 F.3d 390, 399-401 (7th Cir. 2000); *Covad Communications Co. v. Bell Atl. Corp.*, 201 F. Supp. 2d 123, 134 (D.D.C. 2002), *motion granted*, 2003 U.S. App. LEXIS 6456 (D.C. Cir. Apr. 2, 2003).

13. See *Trinko*, \_\_\_ U.S. \_\_\_, 123 S. Ct. at 1480 (granting *certiorari* on this issue).

14. Ch. 652, 48 Stat. 1064 (codified as amended at 47 U.S.C. § 151 *et seq.* (2000)).

15. See 47 U.S.C. § 152 (2000); *La. Pub. Serv. Comm'n v. FCC*, 476 U.S. 355 (1986).

16. Pub. L. No. 104-104, 110 Stat. 56 (codified as amended in scattered sections of 15, 18, and 47 U.S.C.).

17. See *AT&T Co. v. Iowa Utils. Bd.*, 525 U.S. 366, 378 n.6 (1999).

18. See *Comcast Cablevision of Broward County, Inc. v. Broward County*, 124 F. Supp. 2d 685, 686-87 (S.D. Fla. 2000).

19. See *MediaOne Group, Inc. v. County of Henrico*, 257 F.3d 356, 360 (4th Cir. 2001); *AT&T Co. v. City of Portland*, 216 F.3d 871, 875 (9th Cir. 2000).

the regulation of cable modem service fell within the exclusive jurisdiction of the FCC.<sup>20</sup>

More recently, the FCC has wavered in its certainty that such matters are best governed by federal regulators. For example, in clarifying the basis for its jurisdiction to regulate cable modem services, the FCC sought comment on whether it should forbear from displacing all state and municipal regulation.<sup>21</sup> The consensus in favor of federal regulatory jurisdiction received another jolt in the FCC's Triennial Review proceedings when the FCC decided to give the states a greater role in determining the scope of the unbundled access requirements of the 1996 Act.<sup>22</sup> The order in this proceeding was finally released as this symposium contribution was going to press.<sup>23</sup> Final resolution of this issue will have to wait until the courts finish with the judicial challenges to the FCC's actions.<sup>24</sup>

*Fifth*, policymakers appear to be actively reconsidering the utility of many of the basic regulatory tools upon which they have relied for more than a century. The classic approach taken by regulatory authorities with respect to telecommunications networks has been to impose cost-of-service rate-

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20. The courts differed slightly as to the proper rationale for this holding. Compare *City of Portland*, 216 F.3d at 877-80 (holding that cable modem service constitutes a "telecommunications service" that falls within the exclusive jurisdiction of the FCC), with *MediaOne Group*, 257 F.3d at 363-64 (holding that open access would require cable modem providers to provide "telecommunications facility" in violation of 47 U.S.C. § 541(b)(3)(D)). Both agreed that regulation of cable modem services fall within the exclusive jurisdiction of the FCC.

21. *Inquiry Concerning High-Speed Access to the Internet over Cable & Other Facilities*, 17 F.C.C.R. 4798, 4848-52, ¶¶ 96-108 (2002). Interestingly, the FCC contradicted the conclusions of the two Courts of Appeals that had addressed the issue and based its jurisdiction on the conclusion that cable modems represented an "information service" regulable by the FCC under its ancillary jurisdiction provided by Title II of the Communications Act. See *id.* at 4832, ¶ 59.

22. Most notably, the FCC left it for state Public Utility Commissioners to decide whether failure to provide unbundled access to local switching would impair the ability of competing telecommunications carriers to provide the services that they seek to offer as required by 47 U.S.C. § 251(d)(2)(B). With respect to high-capacity lines used by businesses, the FCC entered a presumptive finding of no impairment and gave the PUCs ninety days to rebut that national finding. With respect to mass market (i.e., small business and residential) lines, the FCC entered no presumption and gave the PUCs nine months to determine whether economic and operational impairment exists in any particular market. Attachment to Triennial Review Press Release (FCC Feb. 20, 2003), available at [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-231344A2.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-231344A2.pdf).

23. *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, 18 F.C.C.R. 16978 (Aug. 21, 2003).

24. See Jeremy Pelofsky, *Phone Carriers Petition Appeals Court to Drop Network-Sharing Rules*, SEATTLE TIMES, Aug. 29, 2003, at D3.

making. This approach requires carriers to file tariffs with regulatory agencies. Once the authorities approve the tariff, the carriers must make their services available according to the terms of the tariff to all comers on a nondiscriminatory basis.

Over time, the administrative process for submitting and approving tariffs has proven far too cumbersome to accommodate the more competitive environments that characterize modern telecommunications. In addition, carriers have proven quite adept at manipulating the tariff process for strategic purposes.<sup>25</sup> Tariffing also contradicts certain basic principles of consumer protection by sanctioning the displacement of any terms inconsistent with the tariff to which the parties may have agreed, even when the carrier intentionally misrepresents its rate and the customer relies upon the misrepresentation.<sup>26</sup>

As a result, policymakers have increasingly moved away from tariffs towards more flexible agreements negotiated on a customer-by-customer basis.<sup>27</sup> Even more fundamentally, regulators have increasingly begun to abandon classic rate regulation in favor of new approach known as “access regulation.”<sup>28</sup> Rather than focusing on the rates that carriers charge *end users* for *outputs*, access regulation focuses on the terms and conditions under which *competitors* can purchase the right to use *inputs*.

*Sixth*, the growing convergence of telecommunications technologies has strengthened the arguments in favor of relying on markets as a governance

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25. See Roger G. Noll & Bruce M. Owen, *The Anticompetitive Uses of Regulation: United States v. AT&T*, in *THE ANTITRUST REVOLUTION* 328, 344-47 (John E. Kwoka, Jr. & Lawrence J. White eds., 2d ed. 1994).

26. See *AT&T Co. v. Cent. Office Tel., Inc.*, 524 U.S. 214, 222-23 (1998). For insightful discussions of the so-called “filed rate doctrine,” see Jim Rossi, *Lowering the Filed Tariff Shield: Judicial Enforcement in the Deregulatory Era*, 56 *VAND. L. REV.* (forthcoming 2003), at [http://papers.ssrn.com/abstract\\_id=326701](http://papers.ssrn.com/abstract_id=326701), as well as the contributions of Professors Rossi and Weiser to this Symposium.

27. See 47 U.S.C. § 252 (2000); Policy and Rules Concerning the Interstate, Interexchange Marketplace, 11 F.C.C.R. 20730 (1996), *clarified*, 12 F.C.C.R. 20787 (1997), *aff’d sub nom.* *MCI WorldCom, Inc. v. FCC*, 209 F.3d 760 (D.C. Cir. 2000). Prior to the enactment of the Telecommunications Act of 1996, the FCC’s attempts to detariff long distance rates were repeatedly rejected by the courts. See, e.g., *MCI Telecomms. Corp. v. AT&T Co.*, 512 U.S. 218 (1994); *AT&T Co. v. FCC*, 978 F.2d 727 (D.C. Cir. 1992); *MCI Telecomms. Corp. v. FCC*, 765 F.2d 1186 (D.C. Cir. 1985).

28. See Daniel F. Spulber & Christopher S. Yoo, *Access to Networks: Economic and Constitutional Connections*, 88 *CORNELL L. REV.* 885, 889-90, 960-70, 980-87, 1002-18 (2003) (tracing the emergence of access regulation in local telephony, pole attachments, and broadband networks). Indeed, the shift towards access regulation appears to span all regulated industries. See Joseph D. Kearney & Thomas W. Merrill, *The Great Transformation of Regulated Industries Law*, 98 *COLUM. L. REV.* 1323, 1340-57, 1364-83 (1998).



mechanism. It is towards the confluence of and interaction between these last two developments that I would like to address the balance of my remarks.

## II. ACCESS REGULATION, CONVERGENCE, AND DYNAMIC EFFICIENCY

It seems to me that the last two transformations that I have identified—the shift towards access regulation and the emergence of technological convergence—together have far greater implications for telecommunications policy than is generally appreciated. In particular, too little attention has been paid to the new emphasis that these two transformations have placed on considerations of dynamic efficiency.<sup>29</sup>

Before convergence, each mode of communication was available through only one means of transmission, and each means of transmission was considered a natural monopoly. The impossibility of sustainable competition from alternative facilities understandably led policymakers to direct their efforts towards allocating the existing facilities in the most efficient manner possible and to pay little attention to the impact that their regulatory decisions had on the incentives to invest in alternative network capacity. In other words, they focused on static efficiency, which adopts an *ex post* perspective that takes the existing distribution of goods as given, and ignores dynamic efficiency, which evaluates optimality on an *ex ante* basis and asks the logically prior question of which goods should be produced in the first place. Ignoring dynamic efficiency was reasonable when the underlying technologies remained natural monopolies and any attempt to foster competition would inevitably prove futile. It is less defensible in an era of technological convergence, in which the deployment of alternative network facilities represents a critical policy objective.

The tension between static and dynamic efficiency is well illustrated by the conundrum posed by access requirements. Under the conventional approach to competition policy, access requirements represent something of an anomaly. The fundamental problem posed in most access-related situations is monopoly control of a bottleneck facility. Under such circumstances, the most appropriate long-term solution is to break up control of the bottleneck either by forcing the existing player to divest part of its holdings or by cultivating the emergence of new entrants who will compete directly with the

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29. The discussion that follows draws on the more extensive discussion of these issues presented in Christopher S. Yoo, *Vertical Integration and Media Regulation in the New Economy*, 19 *YALE J. ON REG.* 171, 243-47, 268-69 (2002). *See also* Spulber & Yoo, *supra* note 28, at 897-98, 931-32 & n.160, 975-76, 992, 996, 1020 (applying this analysis to compelled access to local telephone, utility pole, and broadband networks).

bottleneck facility. Access remedies, in contrast, simply force bottleneck owners to share their monopolies without breaking them up.

Such a result might be justified when an industry is truly a natural monopoly and there is no viable prospect that any degree of competition would be sustainable. The propriety of access remedies changes radically after the emergence of alternative network facilities becomes technologically and economically feasible. When sustainable competition is possible, access regimes harm dynamic efficiency in two distinct ways. First, it is now well recognized that resources are most likely to receive the appropriate level of conservation and investment if they are protected by well-defined property rights.<sup>30</sup> Since any benefits gained from investments in capital or research must be shared with competitors, forcing a monopolist to share its resources reduces incentives to improve their facilities and pursue technological innovation.

Second, compelling access to an input also discourages investment by competitors by rescuing firms that need the input from having to invest in alternative sources of supply. In other words, forcing carriers to share their networks cuts off those who would like to construct alternative network facilities from their natural strategic partners. Access can thus preempt the emergence of a viable alternative to the bottleneck facility that represents the best long-run solution to the bottleneck problem. Quite the contrary, access remedies can have the perverse effect of cementing the existing monopoly into place.

This is particularly true in technologically dynamic industries, in which the prospects of developing new ways either to circumvent or to compete directly with the bottleneck are the highest. The inevitable lag in adjusting regulation also raises the risk that regulations, such as access, that protect incumbents from new entry will continue to exist long after the justifications for enacting the regulation have long disappeared.<sup>31</sup>

A growing body of empirical work suggests that the provisions of the Telecommunications Act of 1996 compelling incumbent local exchange carriers (ILECs) to provide competitors with access to elements of their networks on an unbundled basis<sup>32</sup> have stifled investment in local telephone networks in precisely this manner. Not only has it deterred incumbents from

30. See Harold Demsetz, *Toward a Theory of Property Rights*, 57 AM. ECON. REV. 347, 354-59 (1967); Garret Hardin, *The Tragedy of the Commons*, 162 SCIENCE 1243 (1968).

31. See, e.g., STEPHEN BREYER, REGULATION AND ITS REFORM, 286-87 (1982); 2 ALFRED E. KAHN, THE ECONOMICS OF REGULATION 127 (1971); Richard A. Posner, *Natural Monopoly and Its Regulation*, 21 STAN. L. REV. 548, 611-15 (1969).

32. 47 U.S.C. § 251(c)(3).

investing in their networks, it has also rescued new entrants from having to invest in their own facilities.<sup>33</sup>

Put in terms of the ongoing debate about open access that is taking place in the cable broadband proceedings, the real problem is not that consumers lack sufficient choice in terms of internet service providers (ISPs). Indeed, most can reach their desired web portal simply by clicking through to another address or by resetting their default home page to another website. The real problem is the lack of choice in last-mile broadband providers. Most households can only choose between their local cable operator and local telephone company. This underlying problem will remain regardless of whether consumers can choose among multiple ISPs or not. Mandating open access would thus amount to little more than simply rearranging the deck chairs on the Titanic.

The best long-run solution would be to stimulate the build-out of alternative broadband platforms. Indeed, satellite broadband, fixed wireless technologies, and third-generation mobile wireless devices (3G) each hold considerable promise to diversify our broadband choices. The problem is that deployment of each these technologies will require significant capital investments. The logical strategic partners to help finance such investments are those ISPs and other content providers who are unable to obtain the access to existing broadband networks. Mandating such access would obviate their need to undertake such risks. While the elimination of the need to make such investments would doubtlessly be beneficial to those ISPs, it is far from clear how consumers would benefit from such an outcome. It may seem counterintuitive, but the best way to maximize choice in the long run may well be to limit the number of choices in the short run. Such is the nature of the interrelationship between dynamic and static efficiency.

The implications of this line of reasoning are clear. Technological convergence appears to have eviscerated the factual preconditions needed to justify imposing access requirements. Although compelling access may make sense when an input is not available from any other source, it makes no sense in a convergent world in which alternative sources of supply are feasible. The fact that generating alternative sources of supply may be costly and may take a long time does not change the analysis. If the choice is between “some time in the far future” and “never,” the former is still the better alternative.

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33. See Augustin J. Ros & Karl McDermott, *Are Residential Local Exchange Prices Too Low?*, in EXPANDING COMPETITION IN REGULATED INDUSTRIES 149 (Michael A. Crew ed., 2000); James Zolnierok et al., *An Empirical Examination of Entry Patterns in Local Telephone Markets*, 19 J. REG. ECON. 143 (2001); Robert W. Crandall et al., *Do Unbundling Policies Discourage CLEC Facilities-Based Investment?* (unpublished manuscript), available at [http://papers.ssrn.com/abstract\\_id=387421](http://papers.ssrn.com/abstract_id=387421).

The inherent tension between access requirements and dynamic efficiency represents one of the central weaknesses of any access-oriented regulatory regime. If access prices are set too low, the imposition of an access regime will forestall the emergence of platform competition, as every potential entrant will find it more profitable to borrow parts of the incumbent's network rather than to build its own. It will also discourage the incumbent from making any investments in its network. The net result is an inevitable degradation of our communications infrastructure. Setting access prices too high, on the other hand, will render access remedies completely useless. Regulators implementing access regimes find themselves caught in a somewhat intractable position.<sup>34</sup>

Perhaps the greatest irony is that practical considerations may render the debates about the relative policy or impolicy of access regimes largely moot. Because the owner of the input has no real motivation to provide access to its competitors, it is common for interconnection agreements to become bogged down in incessant arguments about the reasonableness of the terms and conditions of access. It is thus arguable that access is destined to prove ineffectual as a remedy regardless of whether access is compelled or not.<sup>35</sup> The FCC's history with policing access regimes provides ample reason to suspect that the debates about access may ultimately prove to be much ado about nothing.<sup>36</sup>

### III. CONVERGENCE AND REGULATORY PRICING

In addition to effect that the emergence of access regulation and technological convergence has had on the *goals* of telecommunications policy, federal and state regulators have failed to appreciate the full implications that

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34. Indeed, the Supreme Court recognized this inherent tension in *Verizon Communications, Inc. v. FCC*, 535 U.S. 467, 511-13 (2002). The Court nonetheless attempted to avoid its strictures by suggesting that the lag inherent in any regulatory system would provide sufficient incentive to foster investment. The existence of supposedly countervailing distortions will of course give rise to additional efficiency losses.

35. See Paul L. Joskow & Roger G. Noll, *The Bell Doctrine: Applications in Telecommunications, Electricity, and Other Network Industries*, 51 STAN. L. REV. 1249, 1252-53, 1256-58, 1260-61, 1263, 1267, 1283-84 (1999).

36. See *Time Warner Entm't Co. v. FCC*, 93 F.3d 957, 970 (D.C. Cir. 1996); Competition, Rate Deregulation, and the Commission's Policies Relating to the Provision of Cable Television Service, 5 F.C.C.R. 4962, 5048, ¶ 177 (1990); Donna N. Lampert, *Cable Television: Does Leased Access Mean Least Access?*, 44 FED. COMM. L.J. 245 (1992); Glen O. Robinson, *On Refusing to Deal with Rivals*, 87 CORNELL L. REV. 1177, 1222-23 (2002).

these two developments have for the *means* employed to achieve those goals.<sup>37</sup> For more than a century, the traditional approach has been to base rates on some measure of cost. The reasons for adopting this approach are perhaps best stated by Justice Brandeis's classic concurrence in *Missouri ex rel. Southwestern Bell Telephone Co. v. Public Service Commission*<sup>38</sup> from which the Court has drawn guidance in later years.<sup>39</sup>

Justice Brandeis implicitly recognized that the most accurate methodology for setting rates would be the prices charged for comparable goods when sold in competitive markets. Understanding that value is best determined by the market reflects the insights of what has become known as the "marginalist revolution" that undergirded the rise of neoclassical economics in the latter part of the Nineteenth Century.<sup>40</sup> Prior to that time, value was regarded as an intrinsic concept established by the cost of the inputs required to produce the good. The marginalist revolution recast value as a relativistic concept determined by the interaction between supply and demand.

The advent of neoclassical economics underscored the importance of using market-based rather than cost-based indicia when assessing the value of any good. Justice Brandeis recognized that determining market value is a relatively simple matter when the good in question (or some good comparable to it) is sold into an unregulated market. In such a case, the market value is simply the market price. If market prices are unavailable, a market-based assessment can also be derived through the capitalization of earnings.

The problem was that neither approach was practicable in the case of natural monopolies. External, unregulated markets did not exist for utilities or the goods that they produce, "since utilities, unlike merchandise or land, are not commonly bought and sold in the market."<sup>41</sup> Justice Brandeis further noted that calculating value by capitalizing the utility's earnings necessarily embroiled regulatory authorities in a "vicious circle."<sup>42</sup> As the Court later

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37. The discussion that follows extends the discussion advanced in Spulber & Yoo, *supra* note 28, at 907-12.

38. 262 U.S. 276, 289-312 (1923) (Brandeis, J., joined by Holmes, J., concurring in the judgment).

39. See *Verizon Communications, Inc. v. FCC*, 535 U.S. 467, 482-85 (2002); *Duquesne Light Co. v. Barasch*, 488 U.S. 299, 309 & n.5 (1989); *Fed. Power Comm'n v. Natural Gas Pipeline Co.*, 315 U.S. 575, 603-07 (1942) (Black, J., concurring).

40. See Herbert Hovenkamp, *The Marginalist Revolution in Legal Thought*, 46 VAND. L. REV. 305, 308-15 (1993); Stephen A. Siegel, *Understanding the Lochner Era: Lessons from the Controversy over Railroad and Utility Rate Regulation*, 70 VA. L. REV. 187, 243-46 (1984).

41. *Missouri ex rel. Southwestern Bell Tel. Co. v. Pub. Serv. Comm'n*, 262 U.S. 276, 292 (1923) (Brandeis, J., concurring in the judgment).

42. *Southwestern Bell*, 262 U.S. at 292; *accord St. Louis & O'Fallon Ry. Co. v. United States*, 279 U.S. 461, 505 n.23 (1929) (Brandeis, J., dissenting).

noted, “[t]he heart of the matter is that rates cannot be made to depend upon ‘fair value’ when the value of the going enterprise depends on earnings under whatever rates may be anticipated”; the result is that fair value becomes “the end product of the process of rate-making not the starting point.”<sup>43</sup>

In the absence of some market-determined basis for setting rates, Justice Brandeis concluded that the only available alternative was to base rates on some measure of cost.<sup>44</sup> Justice Brandeis recognized that replacement cost would likely represent the best evidence of present value, since it would provide a better reflection of technological improvements and obsolescence.<sup>45</sup> In the end, however, pragmatic considerations led Justice Brandeis to advocate relying on historical cost. Determining replacement cost was an inherently speculative endeavor fraught with unnecessary uncertainty.<sup>46</sup> In comparison, relying on historic cost allowed for less variable and subjective determinations of value.<sup>47</sup>

What has largely gone unnoticed is how technological convergence and the emergence of access regulation have undercut the traditional justifications for basing regulated rates on cost-based measures. The emergence of alternative network platforms (such as wireless telephone networks; wireline broadband networks, such as digital subscriber line (DSL) and cable modem systems; and satellite distribution of television, telephony, and broadband) now provides a wealth of unregulated markets in which comparable goods are bought and sold in arms-length transactions. As a result, the emergence of platform competition has now made external benchmarks widely available and ready to serve as market-based determinants for regulatory prices.

The shift towards access regulation facilitates basing rates on market prices even more. The shift from regulating outputs to regulating inputs mitigates the inherent circularity of basing access rates on market prices. Instead, the cost of an input becomes only one of many determinants of the final good’s total value. For example, if an input represents only five percent of the overall cost, the price charged for that input will exert only a relatively small influence on the value of the final good. In addition, inputs may have other uses in unregulated markets that do not exhibit natural monopoly characteristics. If that is the case, it should be possible to establish the value of an input through an external, market benchmark that does not depend upon the particular rate being set.

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43. Fed. Power Comm’n v. Hope Natural Gas Co., 320 U.S. 591, 601 (1944).

44. See *Southwestern Bell*, 262 U.S. at 292 (Brandeis, J., concurring in the judgment).

45. See *id.* at 300.

46. See *id.* at 293-302.

47. See *id.* at 308-10.

To cite one example, consider how the advent of wireless telephony makes it possible to base the rates for terminating calls by incumbent wireline carriers upon market prices. Unlike interconnection agreements involving wireline carriers, interconnection between wireless carriers is currently unregulated.<sup>48</sup> As a result, the terms of wireless-to-wireless interconnection are determined through arms-length negotiations that can provide precisely the type of external benchmark needed to determine the market value of termination of calls by wireline carriers.

Indeed, basing access rates on market prices may represent more than good economic policy. The fact that access to wireline networks almost invariably requires the network owner to permit competitors to place equipment on its property indicates that access regimes constitute *per se* physical takings for which market-based compensation must be paid.<sup>49</sup>

#### IV. BEYOND CONVERGENCE: FROM SUBSTITUTION TO COMPLEMENTARITY

It is thus becoming increasingly clear that technological convergence and the shift towards access regulation is undermining the primary justifications for much of existing telecommunications policy. Gone are the days in which each communications technology could be regarded as occupying a separate regulatory silo. The impending shift of all networks to packet-switched technologies promises to complete the collapse of any remaining attempt to base regulation on differences in the means of transmission.<sup>50</sup> Once all communications are reduced to bits and bytes, all media will constitute substitutes for one another, and attempts to segment markets based on the means of conveyance will become increasingly problematic.

Unfortunately, the underlying regulatory regime has not yet fully accommodated these changes. Instead, the basic regulatory structure continues to treat each transmission medium as if it were a universe unto itself. Although the Telecommunications Act of 1996 was trumpeted as a way to end this regulatory balkanization, it left the basic technology-specific regime erected by the Communications Act of 1934 intact.

Most interestingly of all, regarding various network technologies as substitutes for one another may represent nothing more than a transitional step in the logic of convergence. Although each technology now serves as a substitute for one another, they each possess different technological characteristics that affect the purposes for which each is best suited. One can

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48. See Interconnection and Resale Obligations Pertaining to Commercial Mobile Radio Servs., 15 F.C.C.R. 13523, 13534 ¶ 28 (2000).

49. See Spulber & Yoo, *supra* note 28, at 933-59, 976-80, 998-1001, 1021-23.

50. See Yoo, *supra* note 29, at 285-90.

envision a day in which every communication will not necessarily take place over more than one medium. The various packets comprising a single piece of communication might travel through both wireline and wireless media simultaneously and be reassembled only after arriving at its destination.

Even more radically, communications systems could be designed so as to take advantage of the different technological characteristics of the various media. Consider, for example, the usage patterns of the typical person browsing the World Wide Web. Such a person would need a fairly large amount of bandwidth to download the requested webpages. The amount of information needed to be transmitted along the return path would be relatively small, consisting of nothing more than a URL. Currently, most broadband technologies use the same transmission technology for downloading and uploading, but there is nothing inevitable about such an arrangement. One can easily imagine a system that combines high-bandwidth technologies for downloading with low-bandwidth technologies for uploading. In addition, it is conceivable that different types of content might be segregated to different media, based on overall demand. One can thus also envision a day in which certain general-interest websites are broadcast via wireless technologies, while content that commands only small audiences is narrowcast through wireline technologies.

This suggests that the ultimate destiny is that the various communications platforms will serve as *complements*, rather than *substitutes*. Acknowledging this possibility poses regulatory problems that are radically different from those posed previously. It counsels in favor of moving past the conventional line of business restrictions which limit any entity from owning more than one network technology. It also raises the possibility that new types of regulation that would allow sharing of each network might have to be created.

I find the prospect of such new regulatory challenges to be quite exciting. Whichever direction the debate ultimately turns, I have little doubt that the Quello Center and this Symposium will be at its forefront.