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UNCREATIVE DESTRUCTION: The Misguided War on Vertical Integration in the Information Economy

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INFORMATION ECONOMY**

By Brent Skorup and Adam Thierer*

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I. INTRODUCTION

Are information sectors sufficiently different from other sectors of the economy such that more stringent antitrust standards should be applied to them preemptively? Columbia Law School professor Tim Wu responds in the affirmative in his book *The Master Switch: The Rise and Fall of Information Empires*.¹ Having successfully pushed net-neutrality regulation into the policy spotlight,² Wu has turned his attention to what he regards as excessive market concentration and threats to free speech throughout the entire information economy.

To support his call for increased antitrust intervention, Wu explains his view of competition in the information economy—a view that deviates substantially from current mainstream antitrust theory. First, Wu contends that “information monopolies” are pervasive in the information economy. Wu’s “monopolists” include Facebook, Apple, Google, and even Twitter.³ In *The Master Switch* and essays like “In the Grip of the New Monopolists,” Wu argues that these so-called monopolies are increasing their market power and require more aggressive oversight and regulation.⁴

Second, Wu argues that traditional antitrust analysis is not sufficient for information systems because they carry speech. He claims, “Information industries . . . can never be properly understood as ‘normal’ industries,”⁵ and traditional forms of regulation, including antitrust enforcement, “are clearly inadequate for the regulation of information industries.”⁶ Wu believes that because information industries “traffic in forms of individual expression” and are “fundamental to democracy,” they should be subject to greater regulatory treatment.⁷

Third, in contrast to current competition law’s focus on horizontal relationships, Wu desires a reinvigorated regulatory enforcement that addresses “the corrupting effects of vertically

¹ Tim Wu, *The Master Switch: The Rise and Fall of Information Empires* (New York: Knopf, 2010).

² See Tim Wu, “Network Neutrality, Broadband Discrimination,” *Journal on Telecommunications and High Technology Law* 2, no. 1 (Fall 2003): 141–176.

³ Tim Wu, “In the Grip of the New Monopolists,” *Wall Street Journal*, November 13, 2010, <http://online.wsj.com/article/SB10001424052748704635704575604993311538482.html>.

⁴ *Ibid.* He also states, incorrectly, that cable operators have a monopoly over broadband Internet service. Wu, *The Master Switch*, 303.

⁵ Wu, *The Master Switch*, 302.

⁶ *Ibid.*, 303.

⁷ *Ibid.*, 301–2. This argument may be at odds with the First Amendment, since courts use a higher level of legal scrutiny on media-focused regulations.

integrated power” in the information sectors.⁸ He is particularly concerned about private threats to free speech arising from such vertical integration.

The solution, he says, is preventing vertical mergers in the information economy and the mandatory divestiture of vertically integrated companies.⁹ To implement this, Wu proposes a Separations Principle for the information economy, which would segregate information providers into three buckets, which we have labeled information creators, information distributors, and hardware makers.¹⁰

This article outlines Wu’s separations proposal, explains why his fears regarding vertical relationships should be rejected by regulatory and antitrust policymakers, and illustrates the legal and practical problems his Separations Principle poses. Wu justifies his Separations Principle by citing monopolies and market power in the information economy. He also advocates using U.S. antitrust authorities to enforce his Principle. We argue that the antitrust harms he fears are not present, and we highlight scholarship on the accepted benefits of vertically integrated firms. We show that Wu’s remedies are policy preferences wrapped in the language of competition law. In fact, the information economy is largely competitive and does not warrant interventionist regulatory enforcement. Since much of American economic vitality flows from the information economy and technology,¹¹ policymakers should reject a radical antitrust remedy like Wu’s preemptive Separations Principle.

II. THE SEPARATIONS PRINCIPLE

A. The Proposal

In the final chapter of *The Master Switch*, Wu outlines his Separations Principle for the

⁸ Ibid., 307, 311.

⁹ Ibid., 304.

¹⁰ Ibid.

¹¹ “Studies have linked technological innovation to three-quarters of the U.S. economy’s post–World War II growth.” See Arti Rai, Stuart Graham, and Mark Doms, “Patent Reform: Unleashing Innovation, Promoting Economic Growth and Producing High-Paying Jobs” (white paper, U.S. Department of Commerce, Washington, DC, April 13, 2010), <http://www.commerce.gov/news/fact-sheets/2010/04/20/white-paper-patent-reform-unleashing-innovation-promoting-economic-growt>. Berkeley economist Enrico Moretti estimates “innovation” firms like Apple create five other jobs for every Apple job. See Eduardo Porter, “The Promise of Today’s Factory Jobs,” *New York Times*, April 3, 2012, <http://www.nytimes.com/2012/04/04/business/economy/the-promise-of-todays-factory-jobs.html?ref=business&pagewanted=all>.

information economy,¹² a framework of industrial organization that, if adopted, would radically expand antitrust enforcement in information-technology markets and grant vast new powers to federal regulators.¹³ He writes,

A Separations Principle would mean the creation of a salutary distance between each of the major functions or layers in the information economy. It would mean that those who develop information, those who own the network infrastructure on which it travels, and those who control the tools or venues of access must be kept apart from one another.¹⁴

Wu concedes that it is radical to contemplate these “constitutional” safeguards on private actors, but says his idea is inspired by a long line of policy reformers, like Justice Brandeis and President Andrew Jackson, who had similar ideas regarding the dangers of concentration and power.¹⁵ Wu insists that this structural remedy “is not a *regulatory* approach but rather a *constitutional* approach to the information economy” because he models it on the separation of powers found in the U.S. Constitution.¹⁶ This is an especially inapt comparison, however, because the Constitution focused on constraining the powers of government, not businesses. As media historian Paul Starr noted in a review of *The Master Switch*, Wu “doesn’t really mean constitutional in a ‘formal’ sense. Actually, what he means is regulation—he just can’t bring himself to admit it.”¹⁷ It makes little difference how Wu describes his proposal. The practical result of his Separations Principle would be welfare-reducing regulation of the information

¹² Wu, *The Master Switch*, 299–319.

¹³ Other scholars have proposed similar structural remedies. Timothy Bresnahan writes, “The computer industry has changed to new modes of competition, which we do not yet fully understand. The determinants of computer industry structure offer . . . excellent opportunities for monopolization. . . . Modest interventions (banning certain clearly anticompetitive practices, for example) will have very small impacts. Only quite substantial interventions (structural ones) are likely to be efficacious.”

See Timothy Bresnahan, “New Modes of Competition: Implications for the Future Structure of the Computer Industry” (Stanford Institute for Economic Policy Research [SIEPR] Discussion Paper 500, Stanford University, Stanford, CA, 1998), 2–3, <http://siepr.stanford.edu/publicationsprofile/1885>. See also Mark A. Lemley and Lawrence Lessig, “The End of End-to-End: Preserving the Architecture of the Internet in the Broadband Era,” *UCLA Law Review* 48 (2001): 925, 942. They write, “Preserving competition is especially important given how little we know about how the broadband market will develop. The Internet market generally has been characterized by massive shifts in the competitive center.”

¹⁴ Wu, *The Master Switch*, 304.

¹⁵ *Ibid.*, 301.

¹⁶ *Ibid.* (emphasis in original).

¹⁷ Paul Starr, “The Manichean World of Tim Wu,” *The American Prospect*, June 9, 2011, <http://prospect.org/article/manichean-world-tim-wu>.

economy.

B. A New Spin on an Old Debate

Discussions about the wisdom and efficacy of vertical separations were largely resolved decades ago in the economics and antitrust literature, and some of those arguments will be presented here. Yet Wu is dissatisfied with the state of competition in the information economy and does not believe that the antitrust agencies—with their focus on social welfare calculations, efficiencies, and horizontal relationships—can prevent the sort of societal and competitive harms about which he is concerned.¹⁸

Wu resents the economic orthodoxy today that tolerates what he regards as “industrial dominations” and “imperial growth and overreach”¹⁹—no doubt referring to the general acceptance in antitrust of Chicago School economics,²⁰ the school of thought that displaced the interventionist Harvard School approach in the 1970s. He is troubled by Americans’ “relative indifference to the danger of private power,” the “sanctification of private property,”²¹ and the current interpretation and enforcement of antitrust statutes.²² In Wu’s estimation, Chicago School-style “economic vitality” depends “on the freedom of the economic system to rise and fall, crash and burn.”²³ The problem, Wu says, is that respected economic thought accepts the booms and busts as intrinsic to the free-market system.²⁴ In light of the current state of

¹⁸ Wu, *The Master Switch*, 307.

¹⁹ *Ibid.*, 301–303.

²⁰ See Christopher S. Yoo, “Vertical Integration and Media Regulation in the New Economy,” *Yale Journal on Regulation* 19 (2002): 171, 200–201. We use “Chicago School” liberally to include the derivative post-Chicago and neo-Chicago iterations, which employ somewhat different antitrust analyses but are all driven by economic analysis and not the structural concerns Wu and the Harvard School emphasized. “If reliance on economics is the sine qua non of the Chicago School, then there is certainly nothing new about either Post-Chicago or Neo-Chicago antitrust analyses. Both embrace economics as the mode of analysis.” Bruce H. Kobayashi and Timothy J. Muris, “Chicago, Post-Chicago, and Beyond: Time to Let Go of the 20th Century,” *Antitrust Law Journal* (2012): 147, 159. For more about the Chicago School and its later iterations, see Herbert Hovenkamp, “Post-Chicago Antitrust: A Review and Critique,” *Columbia Business Law Review* (2001): 257.

²¹ Wu, *The Master Switch*, 300–301.

²² See, for example, Elbert L. Robertson, “A Corrective Justice Theory of Antitrust Regulation,” *Catholic University Law Review* 49 (2000): 741; Barbara Ann White, “Black and White Thinking in the Gray Areas of Antitrust: The Dismantling of Vertical Restraints Regulation,” *George Washington Law Review* 60 (1991): 1; and Robert H. Lande, “Chicago’s False Foundation: Wealth Transfers (Not Just Efficiency) Should Guide Antitrust,” *Antitrust Law Journal* 58 (1989): 631.

²³ Wu, *The Master Switch*, 301.

²⁴ *Ibid.*

antitrust enforcement, he says, a radical overhaul of competition law is needed.

Whether intentional or not, Wu's call for renewed focus on vertical relationships resembles the so-called inhospitality tradition in antitrust, which was characterized by a deep suspicion of vertically integrated firms because integrated firms, allegedly, can foreclose entry of competitors and otherwise harm competition.²⁵ During that era, decades ago, antitrust policy was designed, in the words of a federal court of appeals, to "perpetuate and preserve, for its own sake and in spite of possible cost, an organization of industry in small units which can effectively compete with each other."²⁶ The Chicago School and the rise of transaction cost economics, however, "revolutionized economists' interpretation of non-standard contracts" and ultimately replaced the inhospitality tradition in the late 1970s.²⁷

Consequently, current economic thinking has a greater appreciation for the benefits of vertical integration in promoting interbrand competition and innovation in distribution, and courts applying the antitrust laws have generally been persuaded by that approach. With surprising frankness, Wu rejects that approach and argues that "what was understood in the 1970s, and what needs to be understood again, is the role of . . . restrictions in preserving both

²⁵ For a description of the inhospitality tradition, see Frank Easterbrook, "The Limits of Antitrust," *Texas Law Review* 63 (1984): 1, 4–9. See also Leonard W. Weiss, "The Structure-Conduct-Performance Paradigm and Antitrust," *University of Pennsylvania Law Review* 127 (1979): 1104–1123; Oliver Williamson, "Antitrust Enforcement: Where It's Been, Where It's Going," *St. Louis University Law Journal* 27 (1983): 289–292; and Christopher S. Yoo, "Vertical Integration and Media Regulation in the New Economy," *Yale Journal on Regulation* 19 (2002): 171, 186.

²⁶ *United States v. Aluminum Co. of America*, 148 F.2d 416, 429 (2d Cir. 1945). For an argument for the return to pre-Chicago School enforcement in light of 1990s media mergers, see Patrick Cox, "What Goes up Must Come Down: Grounding the Dizzying Height of Vertical Mergers in the Entertainment Industry," *Hofstra Law Review* 25 (1996): 261.

²⁷ Richard A. Posner notes that the predominant law and economics paradigm is the Chicago School analysis. See Richard A. Posner, "The Chicago School of Antitrust Analysis," *University of Pennsylvania Law Review* 127 (1979): 925. Edwin J. Hughes writes, "By . . . 1980, the Supreme Court's antitrust jurisprudence of the 1960s was widely considered to be intellectually bankrupt" (citation omitted). See Edwin J. Hughes, "The Left Side of Antitrust: What Fairness Means and Why It Matters," *Marquette Law Review* 77 (1994): 265, 271. Robert H. Bork writes, "The primary characteristics of the Chicago School of antitrust are two. The first is the insistence that the exclusive goal of antitrust adjudication, the sole consideration the judge must bear in mind, is the maximization of consumer welfare. The judge must not weight against consumer welfare any other goal, such as the supposed social benefits of preserving small businesses against superior efficiency. Second, the Chicagoans applied economic analysis more rigorously than was common at the time to test the propositions of the law and to understand the impact of business behavior on consumer welfare." See Robert H. Bork, *The Antitrust Paradox: A Policy at War with Itself* (New York: Basic Books, 1978), xi.

the free market of goods and services and the free market of ideas.”²⁸

Wu’s “central contention” in the book is that U.S. industrial structure determines the limits of free speech.²⁹ The information economy comprises the “speech industry,” he says, and he worries that private actors will limit free speech since speech is carried on privately owned platforms.³⁰ Like his mentor, Harvard University law professor Lawrence Lessig,³¹ Wu seems to accept that he cannot displace the Chicago School’s acceptance in the federal courts, so he desires to highlight a compelling reason for intervention into the information economy. That compelling reason is the unique role of speech to effective democracy.

Antitrust practice today, Wu says, is “unsuitable” for the information economy since speech is so intertwined.³² He says information industries, which carry speech, are just “different” from “normal” commodity industries.³³ These industries are fundamental to democracy and the efficiencies and utility antitrust concerns itself with miss the bigger picture.³⁴ Behind every political revolution or genocide is not “orange juice, heating oil, or running shoes,” but a partnership with mass media.³⁵ Wu suggests that without a Separations Principle, vertically integrated firms in the information economy will be tempted to engage in damaging private

²⁸ Wu, *The Master Switch*, 310.

²⁹ *Ibid.*, 121.

³⁰ *Ibid.*, 306.

³¹ See Lawrence Lessig, *Code and Other Laws of Cyberspace* (New York: Basic Books, 1999); Mark A. Lemley and Lawrence Lessig, “The End of End-to-End: Preserving the Architecture of the Internet in the Broadband Era,” *UCLA Law Review* 48 (2001): 925; and Lawrence Lessig, “The New Chicago School,” *Journal of Legal Studies* 27 (1998): 661 (proposing the “old” Chicago School regime use the law to achieve its regulatory aims).

³² Wu, *The Master Switch*, 303 (Antitrust “laws alone are inadequate for the regulation of information economies. . . . There is the problem of taking an after-the-fact approach to a commodity so vital to our basic liberties: a framework that has worked well enough for oil and aluminum is ultimately unsuited to an industry whose substrate is speech”).

³³ *Ibid.*, 301–302.

³⁴ *Ibid.*, 302.

³⁵ *Ibid.* Presumably to strengthen the moral urgency for his recommendations, Wu frequently compares dominant American firms to authoritarian regimes in *The Master Switch*. At 13, he draws a parallel between Ford’s mass production of the automobile and Joseph Goebbels’ desire to control radio. At 28, he writes, “Allying itself with the state, a dominant industrial force can turn a potentially destructive technology into a tool for perpetuating domination and delaying death.” At 79–80, he writes, AT&T’s “power . . . over American culture and communications [was] . . . comparable in structure only to what the fascist and Communist regimes in Europe were creating.” At 84–85, he compares the consolidation of the American broadcast radio industry in the 1930s to the concurrent efforts of the Nazis to centralize radio. At 89, he compares the Film Trust’s alliance to the alliance between Trotsky and Stalin. At 114, he compares Harry Tuttle’s fight against AT&T to a Robert De Niro character’s fight against a totalitarian state. At 116–19, he describes how Catholics and the film industry for decades “practice[d] . . . a censorship to rival that of any authoritarian regime.”

ensorship like the film industry did in earlier decades.³⁶ Immediate action is needed, he says, because “by the FCC’s own reckoning, the cable companies will soon enjoy an uncontested monopoly over broadband Internet in much of the United States.”³⁷

Adoption of the Separations Principle means both the dissolution of existing vertically integrated media entities and the prevention of future mergers that would result in vertical power.³⁸ To implement the Separations Principle, Wu proposes three complementary responses. First, the Federal Communications Commission (FCC) will be the primary enforcer of these vertical separations. The FCC, he says, currently has the authority to block mergers and compel divestitures in accordance with the Separations Principle and should act immediately to prevent further harms.³⁹ Wu is not convinced that the FCC could perpetually play neutral umpire in this role, however, and fears industry capture or influence, which leads to his second proposed response. Should the FCC fail at preventing a merger across categories or fail to enforce separations, the antitrust agencies—the Federal Trade Commission (FTC) and the Department of Justice (DOJ) Antitrust Division—will need to step in.⁴⁰ Even then, Wu says, it would be difficult to force this regime on an unwilling industry. He hopes industry players would adopt norms of openness and compliance; only then could the Separations Principle achieve its objectives.⁴¹ Wu’s justification for the Separations Principle is that eliminating vertical integration would prevent “one layer from smothering the others.”⁴² This is a more traditional competition rationale for antitrust and other forms of regulation. We address this concern in section III.

³⁶ *Ibid.*, 305–306.

³⁷ *Ibid.*, 302.

³⁸ *Ibid.*, 311.

³⁹ *Ibid.*, 311–12. The FCC has the authority to review license transfers but cannot block transactions because of antitrust concerns. See Geoffrey A. Manne and Berin Szoka, “Comments, In the Matter of Application of Cellco Partnership d/b/a Verizon Wireless and SpectrumCo LLC for Consent to Assign Licenses” (WT docket no. 12-4, TechFreedom and International Center for Law and Economics, Portland, OR, March 26, 2012), http://techfreedom.org/sites/default/files/VZ_SpectrumCo_filing_0.pdf.

⁴⁰ Wu, *The Master Switch*, 312.

⁴¹ *Ibid.*, 313.

⁴² *Ibid.*, 306.

III. COMPETITION AND VERTICAL INTEGRATION

Under current antitrust law, vertical restraints and integration are very rarely illegal per se.⁴³ Relative to the inhospitality era, vertical mergers are infrequently blocked and concerns with vertical merger consequences have been “essentially forgotten,” as two reviewers of the vertical integration literature put it.⁴⁴ Firms using vertical restraints and integration are constrained by competition from other producers, and vertical arrangements can increase interbrand competition. Further, because of the ambiguous welfare effects of integration and the costs of disintegration, structural separation of vertically integrated firms is a rarely used remedy in antitrust.⁴⁵ Wu accepts that his Separations Principle sacrifices some of the benefits of industry concentration and that this will reduce some social welfare.⁴⁶ He suggests these sacrifices are worth it to gain new forms of speech and the technical innovation that would be otherwise unrevealed.

Many readers may be puzzled that Wu recommends such a drastic shift in industrial organization policy in the information industries. By his account, we “live in what is in some ways an informational golden age. Television, the Internet, film, and mobile devices each force one another to become better.”⁴⁷ Why, then, break up some of the most innovative companies in the world after they have brought us this golden age? The reason, he says, lies in foreseeable and probable future risks. The convergence of all media channels into a single distribution

⁴³ See Frank H. Easterbrook, “Antitrust Law Enforcement in the Vertical Restraints Area: Vertical Arrangements and the Rule of Reason,” *Antitrust Law Journal* 53 (1984): 135, 143. Since 2007, all vertical restraints are analyzed under the rule of reason and are not per se antitrust violations. See *Leegin Creative Leather Prods. v. PSKS, Inc.*, 551 U.S. 877 (2007), which overturned a 96-year old precedent regarding retail price maintenance.

⁴⁴ Francine Lafontaine and Margaret Slade, “Vertical Integration and Firm Boundaries: The Evidence,” *Journal of Economic Literature* 45 (2007): 629, 662. Vertical integration is now lawful, for instance, even when a monopolist content producer (like a newspaper) integrates into distribution or refuses to deal with a distributor. See, for example, *Paschall v. Kansas City Star Co.*, 727 F.2d 692, 704 (8th Cir. 1984) (en banc), which finds, “[It is not] unlawful per se for a monopolist to unilaterally refuse to deal with a former distributor or to vertically integrate.” Most vertical arrangements are subject to rule of reason analysis by courts; that is, firms cannot have unreasonable vertical restraints that harm competition.

⁴⁵ See Robert W. Crandall, “The Failure of Structural Remedies in Sherman Act Monopolization Cases,” *Oregon Law Review* 80 (2001): 109.

⁴⁶ Wu, *The Master Switch*, 305.

⁴⁷ *Ibid.*, 317.

platform—the Internet—makes the entire system imminently at risk of “a new imperial age.”⁴⁸ He lists possible controllers of the master switch: NBCU-Comcast; AT&T; Apple; and maybe Google.⁴⁹ We cannot know and must compel separations before it is too late, he argues.

Aside from its speculative nature, the economics of industrial organization do not portend a likelihood of a single owner of the Internet. Underlying Wu’s concern is the concentration of private power and the ability of vertically integrated firms to exclude existing competitors, new rivals, and technological innovations that might displace incumbents. Antitrust is a form of common law and subject to change,⁵⁰ so it is worthwhile to examine this new challenge to the prevailing enforcement norms should Wu’s proposal gain traction. This section argues that these fears are not supported by economic evidence. The information economy is competitive and firms have incentives to open their platforms to horizontal and vertical complements, but there are also efficiency benefits available to vertically integrated firms. We make the case that it would be a mistake to sacrifice the substantial competitive and efficiency benefits present in vertical integration for the speculative future harms to competition and, by extension, free speech.

A. Benefits of Complements and Tying

Here we consider the vertical arrangements between information creators and information hardware makers (buckets one and three under Wu’s scheme). Wu’s fears stem from the ability of firms to exclude rivals or speech. Since the rise of the Chicago School in the 1970s, antitrust scholars generally have been skeptical of these sorts of claims of vertical leveraging because a firm should normally have incentives to deal reasonably with providers of complementary applications.⁵¹ Discriminating anticompetitively against complements often devalues the

⁴⁸ *Ibid.*, 318.

⁴⁹ *Ibid.*

⁵⁰ See Frank H. Easterbrook, “Antitrust Law Enforcement in the Vertical Restraints Area: Vertical Arrangements and the Rule of Reason,” *Antitrust Law Journal* 53 (1984): 135.

⁵¹ Joseph Farrell and Philip J. Weiser, “Modularity, Vertical Integration, and Open Access Policies: Towards a Convergence of Antitrust and Regulation in the Internet Age,” *Harvard Journal of Law and Technology* 17 (2003): 85, 104; and Jonathan E. Neuchterlein, “Antitrust Oversight of an Antitrust Dispute: An Institutional Perspective on the Net Neutrality Debate,” *Journal on Telecommunications and High Technology Law* 7 (2009): 19, 40.

platform,⁵² and this is true in the information economy. That firms internalize complementary externalities does not mean platform proprietors will never favor their own affiliates⁵³ (an issue to which Wu is sensitive, given his views on net neutrality). It does mean, however, that platform proprietors generally do not have an economic incentive to exclude competitors in ways that distort competition and harm consumers. Since firms can sometimes lower transaction costs by replacing a complement with their own product, lower costs can be passed on to consumers.⁵⁴ Favoring affiliates, then, can increase consumer welfare relative to bargaining with an independent firm or competitor.

Wu cites an example where Apple was forced to decide whether to permit a complementary service or exclude it, but Wu mischaracterizes why Apple permitted a competing service. Skype competes directly with Apple's FaceTime but Apple does not prohibit Skype for reasons consistent with profit-maximizing behavior. Since discriminating against complements often devalues the platform, it is at best incomplete for Wu to say that Apple allowed Skype on its iPhone because Apple was abiding by powerful tech norms that discourage blocking applications.⁵⁵ While norms might discourage firms from blocking applications from competitors, those norms are always present and do not explain why Apple allows Skype but prohibits other competing services on its phones. This selective discrimination is consistent with a profit-maximizing behavior because sometimes exclusion will devalue a platform (here, the iPhone) and sometimes it will make a platform more valuable to consumers. Skype is a popular voice-over IP (VoIP) application with over 600 million users.⁵⁶ Apple is infamous for its heavy-handed policies toward third-party apps⁵⁷ but blocking Skype would devalue the iPhone to users, millions of whom prefer Skype to other VoIP apps.⁵⁸ The decision to include or exclude

⁵² Neuchterlein, "Antitrust Oversight of an Antitrust Dispute," 40.

⁵³ *Ibid.*, 41.

⁵⁴ See R. H. Coase, "The Nature of the Firm," *Economica* 4 (1937): 386.

⁵⁵ Wu, *The Master Switch*, 313–14 .

⁵⁶ Tehseen Baweja, "With 663 Million Registered Users, Skype Earned \$860 Million Last Year," *Techie Buzz*, March 7, 2011, <http://techie-buzz.com/tech-news/with-663-million-registered-users-skype-earned-860-million-last-year.html>.

⁵⁷ Stuart Dredge, "Steve Jobs Resisted Third-Party Apps on iPhone, Biography Reveals," *The Guardian*, October 24, 2011, <http://www.guardian.co.uk/technology/appsblog/2011/oct/24/steve-jobs-apps-iphone>.

⁵⁸ For similar reasons, Apple makes Google Maps apps available in its online store, despite the fact that they compete with Apple's iOS 6 maps application.

competitors on a firm's platform is a complex business decision with many variables. Exclusionary incentives are often counterbalanced by a potential devaluation of the platform. Even where exclusion occurs, the resulting vertically integrated platform will approximate what competitors offer to attract consumers.

Wu also condemns what would be called *tying* or vertical foreclosure arrangements. In common tech parlance these are the so-called walled gardens, which refers to firms inhibiting interoperability with downstream products. Apple iPhones, for instance, are sold with free iCloud storage and Siri voice recognition features, to the exclusion of rivals' offerings. Likewise, Google Android smartphones use Google's search engine and other Google features by default. While section 3 of the Clayton Act could be interpreted to prohibit these sorts of tying arrangements,⁵⁹ Herbert Hovenkamp notes that "most economists and others interested in antitrust law believe [tying] is rarely competitively harmful."⁶⁰ For one, tying may reduce the costs of information and oversearching,⁶¹ and that seems to be the primary competitive advantage of walled gardens. Much of Apple devices' popularity seems to arise from these informational benefits.⁶² The Apple brand connotes a certain quality to consumers—the product will be sleek, intuitive to use, and relatively free of software vulnerabilities to viruses and trojans. Apple products have gained this beneficial reputation precisely because it has a closed system that ties apps to Apple devices.⁶³ Much of the iPhone's success is because it meshes so well with the downstream tied services. Competitors in the mobile operating system and handset markets are not as popular in part because they have not leveraged the competitive benefits of vertically closed systems.⁶⁴

⁵⁹ See 15 U.S.C. § 14.

⁶⁰ Herbert Hovenkamp, "Clayton Act (1914)," in *Major Acts of Congress*, ed. Brian K. Landsberg (New York: Macmillan Reference USA, 2003).

⁶¹ See Roy W. Kenney and Benjamin Klein, "The Economics of Block Booking," *Journal of Law and Economics* 26 (1983): 497.

⁶² These informational attributes parallel what Paul Joskow calls intangible assets. Paul L. Joskow, "Vertical Integration," in *Handbook of New Institutional Economics*, ed. Ménard Claude and Mary M. Shirley (Heidelberg, Germany: Springer, 2005), 328.

⁶³ Matt Burns, "The Decline of Android Foretells the Rise of a Total Apple Monopoly," *Tech Crunch*, April 26, 2012, <http://techcrunch.com/2012/04/26/apple-will-one-day-rule-the-world>. Burns writes, "Apple's success is made possible by keeping things simple. . . . Steve Jobs and Co. correctly identified that the average consumer doesn't care about specs but rather capabilities."

⁶⁴ *Ibid.* Burns writes, "The vast fragmentation in the hardware [handset market] causes apps to be very

Firms have incentives to allow competing services on their systems. Whether a firm will allow competing services requires a careful balancing. That consumers flock to closed devices like Apple iPhones and Amazon Kindles knowing full well the devices are tied to upstream apps and services is a powerful indictment of Wu's position that proprietary systems harm consumers. By all indications, consumer welfare is enhanced by these firms' reducing costly searches and other informational impediments through vertical arrangements. Dissolving a firm that possesses both information creation and hardware abilities—as the Separations Principle mandates—would eliminate these pro-consumer and pro-competitive tying arrangements.

B. Efficiency Benefits

Here we consider the vertical arrangements between information creators, who produce audio and visual content, and information distributors, like wireline and wireless networks (buckets one and two in Wu's scheme). These sorts of mergers are rarer relative to combinations involving information creators and hardware makers, but the efficiencies provided by these mergers are understood. Today it is accepted that vertical integrations involving networks and content are often motivated by firms seeking substantial efficiencies.⁶⁵ In contrast to the antitrust doctrines that prevailed in the middle of the 20th century—doctrines Herbert Hovenkamp characterized as “unreasonably hostile” to vertical mergers⁶⁶—antitrust officials today recognize that vertical integration of factors of production often results in pro-competitive efficiencies. In many instances, firms will acquire upstream or downstream complements because merging allows the firm to avoid costs associated with dealing with upstream and downstream firms

Firms achieve efficiencies by integrating vertically since nonintegrated firms are frequently

inconsistent in quality.” In explaining why programmers code more attractive apps in iOS, Christina Bonnington writes, “When coding for iOS, developers deal with a very limited number of screen resolutions and hardware profiles. But when coding for Android, developers have to resolve a virtually limitless set of device parameters.” See Christina Bonnington, “Why iOS Apps Look Better than Android Apps,” *Gizmodo*, April 30, 2012, <http://gizmodo.com/5906328/why-ios-apps-look-better-than-android-apps>. Competitors are catching on, however. Firms in the e-reader and tablet markets have taken notice, and we will likely see more of these vertical tying agreements in the future.

⁶⁵ Farrell and Weiser, “Modularity, Vertical Integration, and Open Access Policies,” 97.

⁶⁶ Herbert Hovenkamp, “The Law of Vertical Integration and the Business Firm: 1880–1960,” *Iowa Law Review* 95 (2010): 863, 876.

subject to upstream or downstream opportunism,⁶⁷ and this is particularly true in industries with rapid technology change.⁶⁸ Opportunism and hold-up occur because all bilateral contracts are incomplete and can result in ex post bargaining and contractual performance problems.⁶⁹ Coase notes this problem for manufacturers: If a car manufacturer makes large capital investments in a manufacturing plant, it may be subject to opportunism by a specialized distributor who knows the manufacturer risks having new but unused equipment if the distributor does not reach an agreement with the manufacturer.⁷⁰ Even the mere threat of hold-up by the supplier can coerce a manufacturing firm into lowering its price to average variable cost, and this risk often harms consumers since the firm “would have to cover this cost, by passing it on to its purchaser as part of the price of inputs.”⁷¹

These hold-up threats are common in the information economy because firms typically own specialized assets prone to hold-up—products like television programming, advertisement deals, and programming bundles.⁷² To avoid these contracting issues, firms explore alternative governance arrangements—like backwards merger—to prevent ex post rent extraction.⁷³ Hold-up problems have made the video-distribution industry particularly volatile and competitive in recent years. In addition to high-profile disputes like DirecTV-Viacom,⁷⁴ Netflix lost its Starz content after refusing to feature tiered pricing for Starz content.⁷⁵ Other studios and content

⁶⁷ Paul L. Joskow, “Vertical Integration,” 322; Oliver Williamson, “Transaction Costs Economics: The Governance of Contractual Relations,” *Journal of Law and Economics* 22 (1979): 233.

⁶⁸ Robert W. Crandall, “The Remedy for the ‘Bottleneck Monopoly’ in Telecom: Isolate It, Share It, or Ignore It?” *University of Chicago Law Review* 72 (2005): 3, 23.

⁶⁹ Joskow, “Vertical Integration,” 322; Benjamin Klein, Robert G. Crawford, and Armen A. Alchian, “Vertical Integration, Appropriable Rents, and the Competitive Contracting Process,” *Journal of Law and Economics* 21 (1978): 297.

⁷⁰ Alan J. Meese, “Reframing Antitrust In Light of Scientific Revolution: Accounting for Transaction Costs in Rule of Reason Analysis,” *Hastings Law Journal* 62 (2010): 457, 497.

⁷¹ *Ibid.*

⁷² Farrell and Weiser, “Modularity, Vertical Integration, and Open Access Policies,” 98; Klein, Crawford, and Alchian, “Vertical Integration, Appropriable Rents, and the Competitive Contracting Process,” 297.

⁷³ Joskow, “Vertical Integration.” Integration may also prevent problems with promotional incentives that contracting parties may remedy with resale price maintenance. See Benjamin Klein, “Competitive Resale Price Maintenance in the Absence of Free Riding,” *Antitrust Law Journal* 76 (2009): 431.

⁷⁴ Brian Stelter, “DirecTV-Viacom Dispute Turns into Blackout Reality,” *New York Times: Media Decoder*, July 11, 2012, <http://mediadecoder.blogs.nytimes.com/2012/07/11/viacom-directv-standoff-causes-channel-blackout-in-20-million-households/?pagewanted=print>.

⁷⁵ Tim Carmody, “How the Starz-Netflix Divorce Will Remake Video,” *Wired*, September 2, 2011, <http://www.wired.com/epicenter/2011/09/starz-netflix-divorce/all/1>.

sources have raised prices for Netflix in response to Netflix's success.⁷⁶ Price increases from its suppliers induced Netflix's recent entrance into content, and Netflix is now said to resemble a nascent version of premium-content provider HBO⁷⁷ (a development that would be, as one commentator said, "Hollywood's worst nightmare"⁷⁸). Hulu, which mostly features streaming network television shows, is also offering several original scripted series. Indicative of its growing competitive threat to the traditional video distributors upon which Hulu depends for content, Hulu recently sat down with advertisers to pitch programming—a ritual typically reserved only cable channels and network broadcasters.⁷⁹ Netflix's and Hulu's acquisitions of their own content means they can bargain harder with studios as studios seek to raise their prices to distributors.⁸⁰ Now, Amazon is creating original book (Amazon Publishing)⁸¹ and video content (Amazon Studios).⁸² By backwards integrating and creating their own content, these firms are preventing the studios from holding them hostage and can negotiate lower prices in licensing deals, which benefits consumers.

These sorts of business models are exactly what antitrust scholarship predicts when firms face hold-up problems from suppliers of an input:

To avoid this transaction cost, the [firm] might integrate backwards, taking on the manufacturing process itself, thereby avoiding a transaction, eliminating the prospect of opportunism, and minimizing the cost of obtaining the input.⁸³

Under a separations regime in which vertical integration across platforms is prohibited,

⁷⁶ See Brian Stelter, "Once Film-Focused, Netflix Transitions to TV Shows," *New York Times*, February 27, 2012, http://www.nytimes.com/2012/02/28/business/media/once-film-focused-netflix-shifts-to-tv-shows.html?_r=1&hp&gwh=031DD82832537FE05547A8316FE99BA3. Stelter writes, "The pivot to TV reruns was necessitated in part by the tightening of the movie spigot by major movie studios. Fearing that Netflix might grow too popular or powerful, the studios 'have decided to dramatically raise prices' for films and shows."

⁷⁷ Yinka Adegoke and Lisa Richwine, "Netflix in Talks for Cable Partnership," *Reuters*, March 6, 2012, <http://www.reuters.com/article/2012/03/06/us-netflix-cable-idUSTRE8251U520120306>; and Stelter, "Once Film-Focused, Netflix Transitions to TV Shows."

⁷⁸ Shira Ovide, "Netflix: Hollywood's Worst Nightmare," *Wall Street Journal: Deal Journal*, March 16, 2011, <http://blogs.wsj.com/deals/2011/03/16/netflix-hollywoods-worst-nightmare>.

⁷⁹ Amy Chozick and Brian Stelter, "An Online TV Site Grows Up," *New York Times*, April 16, 2012, http://www.nytimes.com/2012/04/17/business/media/hulu-the-online-tv-site-adds-original-programming.html?_r=1&pagewanted=all.

⁸⁰ See Ovide, "Netflix."

⁸¹ Amazon, "Amazon Publishing," <http://www.amazon.com/gp/feature.html?ie=UTF8&docId=1000664761>.

⁸² Amazon, "Amazon Studios," <http://studios.amazon.com>.

⁸³ Meese, "Reframing Antitrust In Light of Scientific Revolution," 457, 485.

however, distributors entering the content market would be prohibited. Vertical divestiture would prevent practices present in competitive markets like these and would prevent the subsequent price competition. Market developments like this are why current antitrust doctrine “still generally presumes that vertical agreements, vertical extension, and vertical mergers are unobjectionable unless a fact-intensive investigation shows otherwise.”⁸⁴ A per se Separations Principle would adversely affect these welfare-increasing transactions since, as Robert Bork has noted, “fragmentation for its own sake confers no clear gain, and it makes economic processes more costly.”⁸⁵

The overwhelming conclusion from economists and scholars who have looked at vertical relationships is that the vertical relationships Wu condemns tend to be benign or beneficial to consumers.⁸⁶ Bork notes, “Vertical mergers are means of creating efficiency, not of injuring competition.”⁸⁷ Francine Lafontaine and Margaret Slade’s 2007 survey of dozens of economics papers examining the welfare effects of vertical integration makes a compelling case for this proposition.⁸⁸ The authors conclude that vertical merger policy should be “de minim[is], if it exists at all. After all, both firms and consumers can benefit when firms realize efficiencies.”⁸⁹ They added that the empirical evidence shows that

under most circumstances, profit maximizing vertical-integration decisions are efficient, not just from the firms’ but also from the consumers’ points of view. Although there are isolated studies that contradict this claim, the vast majority support it. Moreover, even in industries that are highly concentrated so that horizontal considerations assume substantial importance, the net effect of vertical integration appears to be positive in

⁸⁴ Farrell and Weiser, “Modularity, Vertical Integration, and Open Access Policies,” 87.

⁸⁵ Bork, *The Antitrust Paradox*, 55.

⁸⁶ See Bruce M. Owen, “Antitrust and Vertical Integration in “New Economy” Industries,” (Washington, D.C.: Technology Policy Institute, November 2010), <http://www.techpolicyinstitute.org/files/owen%20antitrust%20and%20vertical%20integration.pdf>. (“Empirical evidence that vertical integration or vertical restraints are harmful is weak, compared to evidence that vertical integration is beneficial—again, even in cases where market power appears to be present. Thus, it is reasonable to conclude that prophylactic regulation is not necessary, and may well reduce welfare by deterring efficient investments. Sound policy is to wait for ex post evidence of harm to justify interventions in specific cases. The conditions that would trigger such intervention should be as concrete and specific as possible, in order to reduce perceived investment risk.” Bruce M. Owen, “Antitrust and Vertical Integration in ‘New Economy’ Industries” (Washington, DC: Technology Policy Institute, November 2010), <http://www.techpolicyinstitute.org/files/owen%20antitrust%20and%20vertical%20integration.pdf>.

⁸⁷ Bork, *The Antitrust Paradox*, 226.

⁸⁸ Lafontaine and Slade, “Vertical Integration and Firm Boundaries,” 629.

⁸⁹ *Ibid.*, 662.

many instances. We therefore conclude that, faced with a vertical arrangement, the burden of evidence should be placed on competition authorities to demonstrate that that arrangement is harmful before the practice is attacked. Furthermore, we have found clear evidence that restrictions on vertical integration that are imposed . . . are usually detrimental to consumers. Given the weight of the evidence, it behooves government agencies to reconsider the validity of such restrictions.⁹⁰

This literature survey is especially relevant here since it reviews several studies examining cable TV and film distribution integrations—the types of mergers Wu’s policy proposals would affect. In most studies of these integrations, the effects on consumers were positive or ambiguous.⁹¹ Further, the authors found that when authorities do force vertical separations, prices typically rise and consumers are harmed.⁹²

In every vertical merger or vertical contractual agreement there are two countervailing factors: an increase in foreclosure and an increase in efficiency or other cost reductions.⁹³ These two factors typically result in ambiguous or positive effects on consumers, which is why antitrust authorities are so hesitant to enforce vertical separations. Since there is substantial evidence of cost reductions in the information economy, a per se separations rule would be premature and probably welfare reducing without compelling evidence of pervasive vertical foreclosure and few benefits⁹⁴—evidence Wu never proffers.

C. Competition in the Information Economy: Case Studies

The case studies that follow show that markets tend to self-correct quickly when vertical integration or vertical mergers fail to produce the value to either the firm or consumers that was originally imagined.

1. AOL-Time Warner

⁹⁰ Ibid., 680.

⁹¹ Ibid.

⁹² Ibid., 663.

⁹³ Ibid., 673.

⁹⁴ One of the benefits of vertical integration in an industry with rapidly changing technology lies in the coordination of investment and production decisions. At the present time, when the technology for delivering telecom services is undergoing a sea change and the very nature of those services is changing dramatically, any decision to mandate a move away from vertical integration would be very risky. Crandall, “The Remedy for the ‘Bottleneck Monopoly’ in Telecom,” 3, 23. See also Owen, “Antitrust and Vertical Integration in ‘New Economy’ Industries.”

Just a decade ago, AOL was perceived as the primary threat to online openness and was thought to possess an unassailable position of digital dominance. For a time, it was easy to see why some were worried. Twenty-five million subscribers were willing to pay \$20 per month to get a guided tour of AOL's walled-garden version of the Internet. Then AOL and media titan Time Warner announced a historic megamerger that had some critics, such as Norman Soloman and Robert Scheer, predicting the rise of "new totalitarianisms" and a corporate "Big Brother."⁹⁵

Fearing the worst, the FTC and FCC placed several conditions on the merger. These included "open access" provisions that forced Time Warner to offer service from the second-largest competing Internet service provider (ISP) at the time (EarthLink) before it made AOL's service available across its largest cable divisions.⁹⁶ Another FCC-imposed provision mandated interoperability of instant messaging (IM) systems based on the fear that AOL was poised to monopolize that emerging technology.⁹⁷

Despite all the hand-wringing, the merger went off the rails and AOL's online dominance evaporated quickly.⁹⁸ The concern about AOL's threat to monopolize instant messaging proved particularly unfounded. Consumers today have access to multiple IM services that can be integrated into a single interface. By April 2002, just two years after the deal was struck, AOL-Time Warner had reported a staggering \$54 billion loss.⁹⁹ By January 2003, its losses had grown to \$99 billion,¹⁰⁰ and three years later Time Warner decided to drop AOL from its name

⁹⁵ Norman Soloman, "AOL Time Warner: Calling the Faithful to Their Knees," *Fair.org*, January 2000, <http://www.fair.org/media-beat/000113.html>; and Robert Scheer, "Confessions of an E-Columnist," *Online Journalism Review*, January 14, 2000, <http://www.ojr.org/ojr/workplace/1017966109.php>.

⁹⁶ Federal Trade Commission (FTC), "FTC Approves AOL/Time Warner Merger with Conditions," news release, December 14, 2000, <http://www.ftc.gov/opa/2000/12/aol.shtm>.

⁹⁷ Federal Communications Commission (FCC), *Memorandum Opinion and Order*, FCC 01-12, CS Docket No. 00-3, §128, January 11, 2001, <http://www.fcc.gov/Bureaus/Cable/Orders/2001/fcc01012.pdf>.

⁹⁸ Adam Thierer, "A Brief History of Media Merger Hysteria: From AOL-Time Warner to Comcast-NBC," *Progress and Freedom Foundation Progress on Point* 16, no. 25 (December 2009), <http://www.pff.org/issues-pubs/pops/2009/pop16.25-comcast-NBC-merger-madness.pdf>.

⁹⁹ Frank Pellegrini, "What AOL Time Warner's \$54 Billion Loss Means," *Time*, April 25, 2002, <http://www.time.com/time/business/article/0,8599,233436,00.html>.

¹⁰⁰ Jim Hu, "AOL Loses Ted Turner and \$99 billion," *CNetNews.com*, January 30, 2004, http://news.cnet.com/AOL-loses-Ted-Turner-and-99-billion/2100-1023_3-982648.html. In a 2006 interview with the *Wall Street Journal*, Time Warner president Jeffrey Bewkes famously declared the death of merger "synergy" and went so far as to tell shareholders the synergy message is "bull—." Matthew Karnitschnig, "After Years of Pushing Synergy, Time Warner Inc. Says Enough," *Wall Street Journal*, June 2, 2006,

altogether.¹⁰¹ In early 2008, Time Warner decided to shed AOL's dial-up service,¹⁰² and in 2009, it spun off AOL entirely.¹⁰³ Further deconsolidation followed for Time Warner, which spun off its cable TV unit and various other properties. Looking back at the deal in 2009, *Fortune* magazine senior editor Allan Sloan called it the "turkey of the decade."¹⁰⁴

2. News Corp-DirecTV

Similarly, News Corporation's 2003 acquisition of direct broadcast satellite provider DirecTV led to hyperbolic predictions of media monopoly.¹⁰⁵ Jeff Chester of Center for Digital Democracy predicted that Rupert Murdoch would use this "Digital Death Star" to "force his programming on cable companies" and a parade of other horrible things.¹⁰⁶ Despite the rhetoric, Murdoch's plans were abandoned three years after construction. In December 2006, News Corp. decided to divest the company to Liberty Media Corporation.¹⁰⁷ As with the unwinding of the AOL-Time Warner deal, little mention was made in the reporting of the divestiture of DirecTV of the previous round of pessimistic predictions or whether there had ever been any merit to the concerns about vertical integration raised by the critics.¹⁰⁸

<http://online.wsj.com/article/SB114921801650969574.html>.

¹⁰¹ Jim Hu, "AOL Loses Ted Turner and \$99 Billion."

¹⁰² Geraldine Fabrikant, "Time Warner Plans to Split off AOL's Dial-up Service," *New York Times*, February 7, 2008, http://www.nytimes.com/2008/02/07/business/07warner.html?_r=1&adxnnl=1&oref=slogin&adxnnlx=1209654030-ZpEGB/n3jS5TGHX63DONHg.

¹⁰³ "Time Warner, "Time Warner Inc. Completes Spin-off of AOL Inc.," news release, December 10, 2009, http://www.timewarner.com/newsroom/pressreleases/2009/12/Time_Warner_Inc_Completes_Spinoff_AOL_Inc_12-10-2009.php.

¹⁰⁴ Allan Sloan, "Deals: The Financial World's Turkeys of the Year," *Washington Post*, November 17, 2009, <http://www.washingtonpost.com/wp-dyn/content/article/2009/11/16/AR2009111603775.html>.

¹⁰⁵ Then-FCC commissioner Jonathan Adelstein worried that the deal would "result in unprecedented control over local and national media properties in one global media empire. Its shockwaves will undoubtedly recast our entire media landscape." He continued, "With this unprecedented combination, News Corp. could be in a position to raise programming prices for consumers, harm competition in video programming and distribution markets nationwide, and decrease the diversity of media voices." Dissenting Statement of Commissioner Jonathan S. Adelstein, *Re: General Motors Corporation and Hughes Electronics Corporation, Transferors, and The News Corporation Limited, Transferee*, MB Docket No. 03-124, January 14, 2004, http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-03-330A6.doc.

¹⁰⁶ Jeff Chester, "Rupert Murdoch's Digital Death Star," *AlterNet*, May 19, 2003, www.alternet.org/story/15949.

¹⁰⁷ News Corp, "News Corporation and Liberty Media Corporation Sign Share Exchange Agreement," news release, December 22, 2006, www.newscorp.com/news/news_322.html. A frustrated Murdoch referred to DirecTV as a "turd bird" just before he sold it off. See Jill Goldsmith, "Murdoch Looks to Release Bird," *Variety*, September 14, 2006, www.variety.com/article/VR1117950090.html?categoryid=1236&cs=1.

¹⁰⁸ Adam Thierer, "A Brief History of Media Merger Hysteria."

3. Smartphone Sector

A final case study involves the mobile phone handset and operating system (OS) marketplace, which has undergone continuous change over the past 15 years and is still evolving rapidly. When cellular telephone service first started taking off in the mid-1990s, handsets and mobile operating systems were essentially one in the same, and Nokia and Motorola dominated the sector with fairly rudimentary devices. The era of personal digital assistants (PDAs) dawned during this period, but mostly saw a series of overhyped devices, such as Apple's "Newton," that failed to catch on. In the early 2000s, however, a host of new players and devices entered the market, many of which are still major players today, including LG, Sony, Samsung, Siemens, and HTC. Importantly, the sector began dividing into handsets versus OS. Leading mobile OS makers have included Microsoft, Palm, Symbian, BlackBerry (RIM), Apple, and Android (Google).

The sector continues to undergo constant change. Palm smartphones were wildly popular for a brief time and brought many innovations to the marketplace.¹⁰⁹ Palm underwent many ownership and management changes, however, and rapidly faded from the scene.¹¹⁰ After buying Palm in 2010, HP announced it would use its WebOS platform in a variety of new products.¹¹¹ That effort failed, and HP instead announced it would transition WebOS to an open-source software product.¹¹²

Similarly, RIM's BlackBerry was the dominant smartphone device for a time, but it has

¹⁰⁹ Sam Grobart and Ian Austen, "The BlackBerry, Trying to Avoid the Hall of Fallen Giants," *New York Times*, January 28, 2012, <http://www.nytimes.com/2012/01/29/business/blackberry-aiming-to-avoid-the-hall-of-fallen-giants.html>. "Palm Pilots were dazzling when they first appeared: all of your contacts, calendars and notes in one slim, pocket-size device. A touch screen, which required a stylus, made navigation easy. And you could add software, bought through an online store. Want a Zagat guide to go along with your personal data? No problem. In later years, Palm even added telephone features, creating a compelling, all-in-one gadget. Despite boardroom dramas that affected the company's name and its ownership, Palm's reputation as a source of innovative hardware and software endured until Jan. 9, 2007. Why that date? That's when Apple introduced the iPhone."

¹¹⁰ Jason Perlow, "Love Stinks: The Worst Mergers in the History of the Technology Industry," *ZDNet*, February 11, 2012, <http://www.zdnet.com/photos/love-stinks-the-worst-mergers-in-the-history-of-the-technology-industry/6344256?seq=3&tag=photo-frame;get-photo-roto>.

¹¹¹ Jacqui Cheng, "HP Buys Palm for \$1.2 billion, Rescues WebOS," *Ars Technica*, April 28, 2010, <http://arstechnica.com/gadgets/news/2010/04/hp-to-buy-palm-rescue-webos-expand-its-own-mobile-efforts.ars>.

¹¹² Ryan Paul, "WebOS Governance Model Announced, More Open Than Android," *Ars Technica*, February 15, 2012, <http://arstechnica.com/business/news/2012/02/webos-governance-model-announced-more-open-than-android.ars>.

recently been decimated.¹¹³ BlackBerry's rollercoaster ride has left it "trying to avoid the hall of fallen giants," in the words of an early 2012 *New York Times* headline.¹¹⁴ Although the company once accounted for more than half of the American smartphone market, today its share has slipped into the single digits.¹¹⁵

Microsoft also had a huge lead in licensing its Windows Mobile OS to high-end smartphone handset makers until Apple and Android disrupted its business. It is hard to believe now, but just a few years ago the idea of Apple or Google being serious contenders in the smartphone business was greeted with derision, even scorn.

Famously, many commentators denigrated Apple's entry into the smartphone business since many industry analysts believed the market was mature.¹¹⁶ Just a few years later, Nokia's profits and market share have plummeted,¹¹⁷ and Google purchased the struggling Motorola. Meanwhile, Palm is dead and Microsoft is struggling to win back market share lost to Apple and Google.

"The violence with which new platforms have displaced incumbent mobile vendor fortunes

¹¹³ Holman W. Jenkins Jr., "Game Over for BlackBerry?" *Wall Street Journal*, January 6, 2012, http://online.wsj.com/article/SB10001424052970203513604577144614178603068.html?mod=WSJ_Opinion_LEFTTopOpinion.

¹¹⁴ Grobart and Austen, "The BlackBerry, Trying to Avoid the Hall of Fallen Giants."

¹¹⁵ Ibid.

¹¹⁶ In December 2006, Palm CEO Ed Colligan summarily dismissed the idea that a traditional personal computing company could compete in the smartphone business. "We've learned and struggled for a few years here figuring out how to make a decent phone," he said. "PC guys are not going to just figure this out. They're not going to just walk in." In January 2007, Microsoft CEO Steve Ballmer, laughed off the prospect of an expensive smartphone without a keyboard having a chance in the marketplace as follows: "Five hundred dollars? Fully subsidized? With a plan? I said that's the most expensive phone in the world and it doesn't appeal to business customers because it doesn't have a keyboard, which makes it not a very good e-mail machine." John Paczkowski, "Apple: How Do You Say 'Eat My Dust' in Finnish?" *All Things D*, November 11, 2009, <http://allthingsd.com/20091111/nokia-apple>. In March 2007, computing industry pundit John C. Dvorak argued that "Apple should pull the plug on the iPhone" since "there is no likelihood that Apple can be successful in a business this competitive." John C. Dvorak, "Apple Should Pull the Plug on the iPhone," *Wall Street Journal: Market Watch*, March 28, 2007, <http://www.marketwatch.com/story/apple-should-pull-the-plug-on-the-iphone>. Dvorak believed the mobile handset business was already locked up by the era's major players. "This is not an emerging business. In fact it's gone so far that it's in the process of consolidation with probably two players dominating everything, Nokia Corp. and Motorola Inc."

¹¹⁷ Stan Schroeder, "Nokia's Profits Fall, Its Smartphone Business Weakens," *Mashable*, January 27, 2011, <http://mashable.com/2011/01/27/nokias-profits-fall>; Anton Troianovski and Arild Moen, "Nokia Crisis Deepens, Shares Plunge," *Wall Street Journal*, April 11, 2012, <http://online.wsj.com/article/SB10001424052702304356604577337452563544904.html>.

continues to surprise,” says wireless industry analyst Horace Dediu.¹¹⁸ He notes that Nokia’s Symbian platform went from 47 percent share to 16 percent in three years, Microsoft’s phone platforms went from 12 percent to 1 percent, RIM’s went from 17 percent to 12 percent, and other platforms went from 21 percent to zero. Meanwhile, over a two-year period, Google’s Android OS went from zero to 48 percent and Apple’s iOS went from 2 percent to 19 percent.¹¹⁹ Of course, in a marketplace this dynamic, Apple and Google could wake up in a few years and find that they, too, have been displaced from their current perches atop the smartphone hill.¹²⁰ Given the importance of mobile broadband in consumer markets and the vicious competition in this sector and others, it strains credulity that breakup of tech companies via the Separations Principle is needed to ensure competition and free speech.

Interestingly, this dynamic change has not kept Wu from complaining about the nature of competition in the smartphone sector. He has bemoaned the state of competition in this sector and referred to the practices of carriers as “outrageous and perhaps illegal” even as market influence has rapidly shifted away from carriers and toward handset makers and OS developers.¹²¹

D. Dynamic, Schumpeterian Change vs. Static Equilibrium Analysis

Because of the efficiency justifications described above, and the changing nature of these markets, Wu’s proposed per se antitrust enforcement is unsupported. The preceding case studies prove that even the mightiest “information empires” can crumble and fall—and in very short order. We now turn to Wu’s underlying policy concerns that speech can be significantly stifled under traditional antitrust enforcement. Despite what Wu claims, there is no reason to believe “this time is different” and that the information economy is immune from dynamic,

¹¹⁸ Horace Dediu, “The Fate of Mobile Phone Brands,” *Asymco*, August 2, 2011, <http://www.asymco.com/2011/08/08/the-fate-of-mobile-phone-brands>.

¹¹⁹ *Ibid.*

¹²⁰ Adam Thierer, “Bye Bye BlackBerry: How Long Will Apple Last?” *Forbes*, April 1, 2012, <http://www.forbes.com/sites/adamthierer/2012/04/01/bye-bye-blackberry-how-long-will-apple-last>.

¹²¹ Tim Wu, “Wireless Net Neutrality: Cellular Carterfone and Consumer Choice in Mobile Broadband,” (working paper, New America Foundation, Washington, DC, February 15, 2007), http://www.newamerica.net/publications/policy/wireless_net_neutrality; and http://www.newamerica.net/publications/policy/wireless_net_neutrality. Adam Thierer, “CTIA’s Refutation of Tim Wu’s 2007 Wireless Net Neutrality Paper,” *Technology Liberation Front*, February 22, 2010, <http://techliberation.com/2010/02/22/ctias-refutation-of-tim-wus-2007-wireless-net-neutrality-paper>.

disruptive changes. Escape from any platform is reasonably easy. For the most part, barriers to entry by new firms are reasonably low. Innovation continues at a healthy clip.

The modern information economy is the living embodiment of what Austrian-born economist Joseph Schumpeter famously described as the “perennial gales of creative destruction.”¹²² Economist Jerry Ellig has explained that, in the Schumpeterian paradigm, “firms compete not on the margins of price and output, but by offering new products, new technologies, new sources of supply, and new forms of organization. Possession of market power is consistent with vigorous competition, and many seemingly anticompetitive practices actually facilitate innovation.”¹²³

The Schumpeterian paradigm and other dynamic competition models best capture the nature of competition and innovation in today’s digital marketplace. Innovative risk-takers are constantly shaking things up and displacing yesterday’s lumbering, lethargic giants.¹²⁴ In markets built largely upon binary code, the pace and nature of change has become hyper-Schumpeterian: unrelenting and unpredictable. New disruptions flow from many unexpected quarters as innovators launch groundbreaking products and services while devising new ways to construct cheaper and more efficient versions of existing technologies. Change has been constant, uneven, and highly disruptive, but it has also led to the progress and innovation seen flowing from the information sector over the past two decades.

There is no static end-state, “perfect competition,” or “market equilibrium” in today’s information-technology marketplace.¹²⁵ Change and innovation are chaotic, nonlinear, and paradigm-shattering.¹²⁶ Schumpeter notes how, “in capitalist reality as distinguished from its

¹²² Joseph Schumpeter, *Capitalism, Socialism and Democracy* (New York: Harper Perennial, 1942,), 84.

¹²³ Jerry Ellig, “Introduction,” in *Dynamic Competition and Public Policy: Technology, Innovation, and Antitrust Issues*, ed. Jerry Ellig (Cambridge, UK: Cambridge University Press, 2001), 6.

¹²⁴ Adam Thierer, “Of ‘Tech Titans’ and Schumpeter’s Vision,” *Forbes*, August 22, 2011, <http://www.forbes.com/sites/adamthierer/2011/08/22/of-tech-titans-and-schumpeters-vision>.

¹²⁵ “Evolutionary economics functions in ‘real time.’ There is no discernible end point.” Jerry Ellig and Daniel Lin, “A Taxonomy of Dynamic Competition Theories,” in *Dynamic Competition and Public Policy: Technology, Innovation, and Antitrust Issues*, ed. Jerry Ellig (Cambridge, UK: Cambridge University Press, 2001), 22. “Competition in fact is a continuous process and not a set of conditions. . . . Competition is a dynamic process, a process in time.” Gerald P. O’Driscoll Jr. and Mario J. Rizzo, “Competition and Discovery,” in *The Economics of Time and Ignorance* (London: Routledge, 1985, 1996), 97, 100.

¹²⁶ “Schumpeterian competition is primarily about active, risk-taking decision makers who seek to change their parameters,” note economists Jerry Ellig and Daniel Lin. “It is about continually destroying the old economic

textbook picture, it is not [perfect] competition which counts but the competition from the new commodity, the new technology, the new source of supply, the new type of organization . . . competition which commands a decisive cost or quality advantage and which strikes not at the margins of the profits and the outputs of the existing firms but at their foundations and their very lives. This kind of competition is as much more effective than the other” because the “ever-present threat” of dynamic, disruptive change “disciplines before it attacks.”¹²⁷

Antitrust scholars J. Gregory Sidak and David J. Teece explain why this dynamic model better explains real-world marketplace competition:

The adjective “dynamic” is a shorthand descriptor for a variety of rigorously competitive activities such as significant product differentiation and rapid response to change, whether from innovation or simply from new market opportunities ensuing from changes in taste or other forces of disequilibrium. Dynamic competition is, in fact, more intuitive and much closer to today’s everyday view of competition than is the stylized notion of static competition routinely depicted in textbooks.¹²⁸

While static or “perfect competition” models assume away innovation and are preoccupied with competitive equilibrium, dynamic models revolve around disequilibrium and assume the only constant is change.

What is most important to economic progress, therefore, is the ongoing process of constant experimentation and spontaneous discovery that allows new business models and organizational structures to emerge in response to market signals. Sidak and Teece note,

The basic framework employed in discussions about innovation, technology policy, and competition policy is often remarkably naïve, highly incomplete, and burdened by a myopic focus on market structure as the key determinant of innovation.¹²⁹

They continue:

Market share may be altogether irrelevant in some cases because markets may

structure *from within* and replacing it with a new one.” Jerry Ellig and Daniel Lin, “A Taxonomy of Dynamic Competition Theories,” 18–19.

¹²⁷ Schumpeter, *Capitalism, Socialism and Democracy*, 84–85.

¹²⁸ J. Gregory Sidak and David J. Teece, “Dynamic Competition in Antitrust Law,” *Journal of Competition Law and Economics* 5 (2009): 604.

¹²⁹ *Ibid.*, 589.

exist in which innovation is so characteristic and sustained that firms compete not merely for market share, but for markets as a whole. . . . A firm's monopoly today may say little about the firm's prospects one, two, or five years in the future.¹³⁰

The particular danger of the static equilibrium mindset is that the same new innovators and innovations that obtain success and scale rapidly as a result of this process are sometimes thought to possess problematic market power. Accusations of monopoly quickly follow, as they do in Wu's work. Ronald Coase notes that "if an economist finds something—a business practice of one sort or another—that he does not understand, he looks for a monopoly explanation. And as in this field we are very ignorant, the number of ununderstandable practices tends to be rather large, and the reliance on a monopoly explanation, frequent."¹³¹ This is why a short-term fixation on market share and market power is so problematic.

The static equilibrium model is myopically fixated on short-term market share and price competition while ignoring "competition for innovation," which is what matters most in the more dynamic Schumpeterian model. As Robert Kramer of the DOJ's Antitrust Division noted in a 1999 speech, "As important as price competition is to us, a second major and possibly even greater concern is maintaining competition for innovation."¹³² Schumpeter also explained that uneven entrepreneurial gains must be tolerated if innovation is to occur. Economies need innovators to take risks because progress is born from it. Penalizing the risk-takers by trying to level the playing field through rash regulation or antitrust interventions will often sap the entrepreneurial spirit from the marketplace, limit technological innovation, and diminish the possibility of progress and prosperity over the long-haul.¹³³ Wu's analysis gives little consideration to the possibility that obtaining market power will not adversely impact innovation within the tech sector. Geoffrey Manne and Joshua Wright explain that "this is a

¹³⁰ Ibid., 615.

¹³¹ Ronald Coase, "Industrial Organization: A Proposal for Research," in *Policy Issues and Research Opportunities in Industrial Organization* (ed. Victor R. Fuchs, National Bureau of Economics Research, Cambridge, MA, 1972), 67.

¹³² Robert Kramer, "Antitrust Considerations in International Defense Mergers" (speech to American institute of Aeronautics and Astronautics, Arlington, VA, May 4, 1999), 3, www.usdoj.gov/atr/public/speeches/2649.htm.

¹³³ Owen, "Antitrust and Vertical Integration in 'New Economy' Industries," 15. Owen writes, "Schumpeter and his followers had in mind an industry characterized by a continuing game in which process or product innovation is a key dimension of competition, requiring significant investment and risk."

problem if the innovators have forsaken monopoly profits in competition for the field in expectation of future reward, only to find that their reward is made unavailable at the moment they begin to enjoy it.”¹³⁴ They continue,

A purely static, forward-looking assessment will miss the consumer welfare benefits previously enjoyed by consumers of the innovative product and curtail the market because of a present or future expectation that consumers will be harmed. This has long-run dynamic efficiency effects, chilling the very innovation that might confer initial consumer surplus, but it also may simply miss the mark in a more static sense, punishing conduct that is already consumer-welfare enhancing.¹³⁵

Wu’s Separations Principle generally ignores these insights and instead proposes that policymakers engage in preemptive, prophylactic market-carving efforts to head-off unproven market-power problems. This discounts the potential for Schumpeterian change even though we have already witnessed repeated waves of such creative destruction reordering the information economy over the past two decades.

E. Openness Concerns

Throughout his work, Wu cites “openness” for networks, platforms, devices, and the like as a primary rationale for regulation, including his proposed Separations Principle. He speaks of “the perennial Manichean contest informing every episode in this book: the struggle between the partisans of the open and the closed, between the decentralized and the consolidated versions of a proper order.”¹³⁶ Such openness concerns are generally unwarranted or overblown, however.¹³⁷

¹³⁴ Geoffrey A. Manne and Joshua D. Wright, “Innovation and the Limits of Antitrust,” *Journal of Competition Law and Economics* 6, no. 1 (2010), 153, 171.

¹³⁵ *Ibid.* See also Eric Goldman, “Revisiting Search Engine Bias” (Santa Clara University Legal Studies Research Paper No. 12-11, Santa Clara, CA, June 2011), 5, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1860402: First, if we evaluate Internet competition only by taking a point-in-time snapshot of existing competitors, we will probably fail to anticipate the identity and business proposition of disruptive new entrants. Second, in a digital environment with low switching costs between vendors, consumers will flock to new entrants that solve their informational needs—even if the competitors offer a very different solution. As a result, a dominant information provider in one technological niche still faces significant cross-elasticities of demand from providers in other technological niches.

¹³⁶ Wu, *The Master Switch*, 273.

¹³⁷ See generally Adam Thierer, “The Case for Internet Optimism, Part 2: Saving the Net from Its Supporters,” in *The Next Digital Decade: Essays on the Future of the Internet*, ed. Berin Szoka and Adam Marcus (Washington,

First, “as an analytical tool the labels ‘open’ and ‘closed’ are of limited utility, because they cannot adequately capture the complexity of selective openness at various layers of a system within their single binary distinction,” observes Hanno F. Kaiser, a U.S. and EU antitrust lawyer.¹³⁸ Wu is often unclear about what constitutes “openness” or why some devices or platforms are supposedly more open than others. “A reader who pays close attention,” observes Paul Starr in his review of Wu’s book, “will notice a clever sleight of hand: The terms ‘open’ and ‘closed’ change in meaning from one chapter to another.”¹³⁹ That probably is not intentional but simply reflects the complexity of defining these subjective, evolving concepts.

Second, moving beyond definitional deficiencies, even if one grants that some information systems are more “closed” than others, it is evident that there must be a need for some closed devices and platforms or the market would not have supplied them. Building on concerns first articulated by Lessig and Jonathan Zittrain,¹⁴⁰ Wu fears closed systems will become mere “digital appliances” that are not sufficiently “generative.”¹⁴¹ He worries when he sees that devices like Apple’s iPad “are computers that have been reduced to a strictly limited set of functions that they are designed to perform extremely well.”¹⁴² Needless to say, most consumers will find it hard to sympathize with Wu’s complaint that Apple’s products work too well, even if the devices are not as open as Wu desires.

Third, it is unclear how an effort to mandate openness would improve consumer welfare. Would consumers be better served if they were offered only devices that arrived totally unconfigured? Should the iPhone or iPad, for example, be shipped to market with no applications loaded on the main screen, forcing everyone to go find them on their own? Few people want to program their mobile phones, hack their computers or gaming consoles, or write their own code. Markets serve these populations with specialized devices that offer a

DC: TechFreedom, 2011), 139–62.

¹³⁸ Hanno F. Kaiser, “Are Closed Systems an Antitrust Problem?” *Competition Policy International* 7, no. 1 (Spring 2011), 91, 94, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1844944.

¹³⁹ Starr, “The Manichean World of Tim Wu.”

¹⁴⁰ Jonathan Zittrain, *The Future of the Internet—And How to Stop It* (New Haven, CT: Yale University Press, 2008); and Jonathan Zittrain, “Lost in the Cloud,” *New York Times*, July 19, 2009, www.nytimes.com/2009/07/20/opinion/20zittrain.html.

¹⁴¹ Wu, *The Master Switch*, 291–93.

¹⁴² Wu, *The Master Switch*, 292.

diverse array of open and closed choices to fit their specific needs. Further, while opening closed systems (however defined) may produce some beneficial flexibility for consumers, it might also reduce the incentive to create new systems since firms cannot enjoy some of the competitive benefits of closed systems. Whether this would be a net benefit for consumers in the end cannot be determined here, but it is possible that closed systems—which give firms some control and perhaps some added profitability—incited the creation of the high-quality tech products on the market today.¹⁴³

What is important is the fact that innovation continues to unfold rapidly in both directions along the open vs. closed continuum, and the Separations Principle would stymie evolution.¹⁴⁴ There are more open and more closed devices and systems than ever. For example, each time Apple creates a new product category (iPod, iPhone, iPad), other companies are quick to follow with their own, usually more open systems, many of which run Google’s more open Android operating system. It is clear, therefore, “that elements of the system can be made open while others remain proprietary,” and that “these are not primarily ideological positions; they are commercial strategies.”¹⁴⁵ Many of the largest “information empires” do not create strict walled gardens; instead they create partially walled gardens and invite many others to enjoy them. One way they do so is by licensing upstream content to other downstream platform providers. For example, Microsoft Office runs on multiple operating systems; Amazon’s Kindle service is available via apps on the iPhone and iPad as well as Android devices; Google’s many services are available across browsers, phones, tablets, and so on. These trends and strategies remain in constant flux yielding varied forms of pro-consumer innovation.

Finally, most corporate attempts to bottle up information or close off their platforms end

¹⁴³ In some ways, permitting closed systems may be similar to granting intellectual property protections. For an explanation of how removing intellectual property protections would discourage the creation of new products while providing some short-term consumer benefits, see Harold Demsetz, “Barriers to Entry,” *American Economic Review* 72 (1982): 47, 51.

¹⁴⁴ Peter Decherney, Nathan Ensmenger, and Christopher S. Yoo, “Are Those Who Ignore History Doomed to Repeat It?” *University of Chicago Law Review* 78 (2011): 1627, 1665. The authors write, “It is true that in certain technologies, in specific historical periods, the balance between open and closed can become upset. It is not at all obvious, however, that the history of either the personal computer or the Internet illustrates a clear or inevitable trajectory from open to closed. The reality is much more complicated.” Long-lived closed systems might also be evidence of lower total cost or reputable history, which are valuable signals to consumers and not evidence of exploiting consumers. See Demsetz, “Barriers to Entry,” 47, 50–51.

¹⁴⁵ Decherney, Ensmenger, and Yoo, “Are Those Who Ignore History Doomed to Repeat It?” 1627, 1665.

badly. The walled gardens of the past—CompuServe and America Online, for example—failed in the end.¹⁴⁶ CompuServe no longer exists and AOL has been relegated to an also-ran in the Internet ecosystem. There are few reasons to believe that today’s efforts to build such walled gardens would end much differently in time.¹⁴⁷

These openness concerns arise from Wu’s fundamentally static model of competition and innovation. Properly defined, open systems are based on marketplace experimentation and consumer choices, even if some closed devices and platforms are popular and thrive naturally. A truly open system is one that allows for experimentation with varying models of production to determine what consumers prefer.

IV. REAL-WORLD APPLICATION OF THE SEPARATIONS PRINCIPLE

A. Self-Regulation Norms

Wu states that a necessary component of the Separations Principle is that firms voluntarily adopt self-governing norms that ensure the vertical separations.¹⁴⁸ This seems like an unlikely proposition. Firms can take advantage of efficiencies through vertical integration, as discussed previously, so self-regulation would mean voluntarily forfeiting those efficiencies. Because there are only a few dominant firms in each layer of the information economy, however, it is conceivable that firms could organize to mutually ensure each firm stayed in its respective “bucket.” The anticompetitive effects from this kind of self-regulation are readily apparent, however. With only a few dominant players at every level, firms may self-regulate to acquire

¹⁴⁶ In her critique of Zittrain’s book, Ann Bartow notes that “if Zittrain is correct that CompuServe and America Online (AOL) exemplify the evils of tethering, it’s pretty clear the market punished those entities pretty harshly without Internet governance-style interventions.” Ann Bartow, “A Portrait of the Internet as a Young Man,” *Michigan Law Review* 108 (April 2010): 1079, 1102–1103, www.michiganlawreview.org/assets/pdfs/108/6/bartow.pdf.

¹⁴⁷ Moreover, today’s “walled gardens”—Facebook and LinkedIn, for example—are less “walled” than they were in the past. Similarly, “closed” systems and devices are not really so closed. Increasingly, when companies or coders erect walls of any sort, holes form quickly. For example, it usually does not take long for a determined group of hackers to find ways around copy/security protections on various types of content or to “root” or “jailbreak” phones and other devices. Once hacked, users are usually able to configure their devices or applications however they wish, effectively thumbing their noses at developers. This process tends to unfold in a matter of days, even hours, after the release of a new device or operating system. On the other hand, some consumers may prefer the closed systems, but then there is not much consumer-welfare loss.

¹⁴⁸ Wu, *The Master Switch*, 313.

monopoly rents at the horizontal platform they occupy, no longer constrained by their large ex-competitors who have exited the market for their own bucket.

Would consumers really be better off if, say, Amazon agreed with Apple to not compete with each other in the information creator and information hardware maker markets? One can imagine Amazon willingly giving up its Kindle business in order to focus on distributing content to e-readers, knowing that Apple would no longer compete in the music and e-reader distribution business. Apple, of course, would probably be happy to no longer compete with Amazon in the e-reader device market if Amazon left the content space. These are the very self-regulating agreements we would expect if firms adopted Wu’s desired industry norms. It is apparent, however, that agreements like this resemble collusion and market division between competitors—acts currently prosecuted as per se violations by antitrust agencies because the anticonsumer effects are so obvious.¹⁴⁹ These anticonsumer dangers do not disappear if favored by the government through adoption of the Separations Principle.

B. Enforcement Challenges Associated with the Separations Principle

Regarding the “prevention and dissolution” of vertical mergers between the content production, telecom, and electronics sectors, Wu proposes the FCC impose the Separations Principle since it is currently within the FCC’s authority to do so,¹⁵⁰ presumably referring to the agency’s amorphous “public interest and convenience” standard.¹⁵¹ In addition to the FCC, Wu says the DOJ and FTC are needed as backup.¹⁵² Wu is aware of the public-choice problems involved: “Time and again [the government] has stood beside concentrated power against the underdog at the expense of economic dynamism.”¹⁵³ In the case of AT&T in the 1980s,

¹⁴⁹ See *Arizona v. Maricopa Co. Med. Soc.*, 457 U.S. 332, 344 n.15 (1982) (“division of markets” is a per se offense); *Palmer v. BRG of Ga., Inc.*, 498 U.S. 46, 49–50 (1990) (same).

¹⁵⁰ Wu, *The Master Switch*, 311.

¹⁵¹ See 47 U.S. § 303(r): “The Commission from time to time, as public convenience, interest, or necessity requires, shall . . . make such rules and regulations and prescribe such restrictions and conditions, not inconsistent with law, as may be necessary to carry out the provisions of this Act”; *WOKO, Inc. v. FCC*, 109 F.2d 665, 667 (DC Cir. 1939) (“Within the area bounded by the standard of public interest, convenience and necessity, the Commission has wide discretionary power. If it acts within this area of discretion prescribed by the Act, and its determination is supported by substantial evidence, there is no ground or reason for judicial interference”).

¹⁵² Tim Wu, *The Master Switch*, 312.

¹⁵³ *Ibid.*, 308.

particularly, the FCC was a large source of the problems the DOJ tried to remedy.¹⁵⁴ While Wu imagines that separations would be fairly nonintrusive—it is a “constitutional” solution, not a “regulatory” one, remember—his Principle would result in pervasive and costly regulatory processes.

In his extensive analysis of 20th-century Sherman Act structural remedies, Brookings Institution economist Robert Crandall concludes that structural remedies, particularly vertical divestitures, are often very costly and fail to improve the competitive landscape or consumer welfare.¹⁵⁵ Further, he points out that it can be very difficult to enforce structural remedies in rapidly changing industries.¹⁵⁶ Crandall’s conclusions cast doubt on the effectiveness and prudence of adopting a Separations Principle that would preemptively impose structural antitrust remedies. Structural remedies in the past, like the AT&T and Paramount breakups, required years or decades of careful watch by a regulatory body and the courts.¹⁵⁷ In the 1984 AT&T decree, for instance, there were over thirty separate waiver requests filed every year for the first eight years of the decree, each one pending for months or years.¹⁵⁸ The entire information economy is moving incredibly fast, and separated firms would likely be at unforeseen disadvantages as the market transformed, similar to what happened with AT&T. There is reason to believe the fast-moving nature of the information economy would pose more problems for regulators than traditional regulated industries. If the vertical separations imagined by Wu were to be anything like prior dissolutions, the regulatory fights would be constant and require constant vigilance by the FCC to prevent exclusionary conduct.

To give a taste of what regulation under the Separations Principle would look like, consider some of the high-profile dissolutions that would need to be implemented:

- **Apple:** Apple would have to be broken up into at least two companies: information creator and hardware maker. The Apple App Store, iTunes, iOS, and other programs would be separated from the iPad, iPod, iPhone, and other Apple devices. Those devices would need to be compatible with other content producers as well. These

¹⁵⁴ Crandall, “The Remedy for the ‘Bottleneck Monopoly’ in Telecom,” 3, 5.

¹⁵⁵ Crandall, “The Failure of Structural Remedies in Sherman Act Monopolization Cases,” 109, 114.

¹⁵⁶ *Ibid.*, 114.

¹⁵⁷ *Ibid.*, 115.

¹⁵⁸ *Ibid.*, 115.

device prices would all rise since they are subsidized by carriers today, often on the condition of exclusivity.

- **Microsoft:** Microsoft would also have to be broken up as an information creator and a hardware maker. Their software, video games, Internet Explorer, and Hotmail services would need to be separated from their Xbox game-console division, their recently acquired interest in Barnes & Noble's Nook e-reader, and, presumably, their Windows operating system. Microsoft's other hardware ventures—keyboards, mice, joysticks, peripherals, and so forth—would also have to be moved to the hardware division.
- **Amazon:** Amazon would probably have to be broken up into three companies since it occupies all three buckets. Amazon Web Services, its cloud-computing platform, would be an information distributor—its infrastructure in the information economy. Amazon's Kindle arm would become a separate company, in the hardware maker category. Amazon's presence in the information creator category, featuring books, publishing, CDs, DVDs, software, video, and other products would need to be kept separate.
- **Google:** Google also occupies all three categories. Google's substantial interest in the Current Communications Group—a smart-grid network—would be placed in the information distributor category, as would the Google Fiber broadband network.¹⁵⁹ Google, of course, is predominantly in the information creator business, including search, YouTube, Google Maps, Android software, and Gmail. Google's recent \$12.5 billion purchase of Motorola Mobility would need to be spun off in the hardware maker category, even though the partnership could help Google compete more squarely against Apple.¹⁶⁰
- **Comcast:** Comcast is a major cable operator and ISP, but it also owns cable

¹⁵⁹ See Nathan Olivarez-Giles, "Google Fiber in Kansas City, Kan., Free to Schools, Available to Public in 2012," *LA Times*, March 30, 2011, <http://latimesblogs.latimes.com/technology/2011/03/google-fiber-in-kansas-city-kan-free-to-schools-available-to-public-in-2012.html>.

¹⁶⁰ Tim Bjarin, "Why Google Will Use Motorola to Become Vertically Integrated," *Tech.pinions*, April 23, 2012, <http://techpinions.com/why-google-will-become-vertically-integrated/6575>.

networks like E!, The Golf Channel, and various sport properties. Comcast would be split as an information creator and information distributor.

- **Sony:** Sony produces movie and video-game content but also develops hardware, like video game consoles, televisions, music players, and phones, on which that content can be played. These units would need to be separated and some of them spun off.

These are some of the leading names of the information economy, but there are thousands of other information-sector companies operating across dozens of information sectors throughout our economy. TechAmerica, a technology industry trade association with diverse membership, uses over fifty North American Industry Classification System (NAICS) codes to define the U.S. high-technology industry.¹⁶¹ Although companies choose only one primary NAICS designation, in practice the diversity of goods and services they provide often cuts across multiple industrial classifications. For example, Google’s primary NAICS designation is NAICS #517919 (“All Other Telecommunications”) even though it would seem more logical for the firm to be housed under NAICS #519130 (“Internet Publishing and Broadcasting and Web Search Portals”). Of course, Google could just as easily be classified in NAICS #511210 (“Software Publishers”), where it competes against Microsoft among others, or in NAICS #334111 (“Electronic Computer Manufacturing”), where it competes against Apple. In other words, it is rare to find a major information economy operator that operates in just one NAICS field. The crucial point here is that creating firewalls between the buckets Wu proposes would be far more complicated than he admits and would entail incessant regulatory interventions to make sure the walls were not breached. More importantly, each new information-sector innovation would suddenly be subjected to a regulatory-classification proceeding. The costs for those to industries, consumers, and innovation would be significant.

Further, it is not clear that the Separations Principle—without more—would prevent the sort of exclusionary harms Wu fears since there is very little competitive difference between

¹⁶¹ TechAmerica, “TechAmerica’s NAICS-Based Definition of High Tech,” December 25, 2010, <http://www.techamerica.org/naics-definition>.

vertical integration through ownership or through contract.¹⁶² Would the Principle also require the FCC to examine and prohibit certain vertical contracts? For example, if Apple were separated into two companies—a device company and a content company—and they immediately contracted together for, say, a five-year exclusive deal, this looks much like the status quo (with some contracting costs). Would the FCC need the power to prevent these de facto vertical integrations, too?

Astonishingly, Wu suggests that “a Separations regime would take much of the guesswork and impressionism . . . out of the oversight of information industries.”¹⁶³ To the extent that his Separations Principle eliminates guesswork and creates more regulatory certainty, it would do so only by creating rigid artificial barriers to market entry across the information economy. That would seem to be the kind of “certainty” we can live without. It is doubtful that regulators will possess the requisite knowledge to define present markets in a static sense, or know which vertical contracts will be unduly exclusionary. As F. A. Hayek notes, “progress by its very nature cannot be planned.”¹⁶⁴ As Sidak and Teece argue:

If one is to adopt a forward-looking antitrust analysis, then neither the enforcement agencies nor the courts will likely know which products will be good substitutes in the future. Because innovation produces new products and lowers the cost of existing products, policymakers must include such future products when defining the market, but doing so is quite difficult in many instances.¹⁶⁵

Wu’s proposed solution, however, ignores these problems.

C. Other Considerations Regarding the Wisdom of the Separations Principle

This section briefly discusses a handful of other considerations that would complicate the creation and ongoing enforcement of Wu’s Separations Principle.

1. Regulatory Capture

Wu rightly points to the danger of regulatory capture in heavily regulated communications and media sectors:

¹⁶² Hovenkamp, “The Law of Vertical Integration and the Business Firm,” 863, 883.

¹⁶³ Wu, *The Master Switch*, 307.

¹⁶⁴ F. A. Hayek, *The Constitution of Liberty* (London: Routledge, 1960, 1990), 41.

¹⁶⁵ Sidak and Teece, “Dynamic Competition in Antitrust Law,” 614.

Again and again in the histories I have recounted, the state has shown itself an inferior arbiter of what is good for the information industries. The federal government's role in radio and television from the 1920s through the 1960s, for instance, was nothing short of a disgrace. . . . Government's tendency to protect large market players amounts to an illegitimate complicity . . . [particularly its] sense of obligation to protect big industries irrespective of their having become uncompetitive.¹⁶⁶

But as quickly as Wu raises this problem he seems to dismiss it. He seems to imagine that a new separations regime will be immune to such tendencies. That is unlikely to be the case. A long line of economists and political scientists have documented how affected parties often capture the regulatory process and use it for their own ends. Capture theory is closely related to the rent-seeking and political failure theories developed by the public choice school of economics.¹⁶⁷ While capture theory cannot explain all regulatory decisions or developments, it does explain with dismaying consistency how self-interested motives explain political actions.¹⁶⁸ The traditional normative theory of regulation, which viewed policymakers as enlightened, independent, and benevolent actors,¹⁶⁹ failed to address this problematic, recurring reality, as well as other deficiencies in the political decision-making process. Scholars developed a new, more robust economic theory of regulation to help explain why the traditional paradigm was incomplete in this and other ways.¹⁷⁰ These scholars argued it was inappropriate to assume regulatory intervention was always "in the public interest" or would always improve consumer welfare.¹⁷¹

In particular, University of Chicago economist George Stigler's pioneering work in

¹⁶⁶ Wu, *The Master Switch*, 308.

¹⁶⁷ Gordon Tullock, Arthur Seldon, and Gordon L. Brady, *Government Failure: A Primer in Public Choice* (Washington, DC: Cato Institute, 2002).

¹⁶⁸ Adam Thierer, "Regulatory Capture: What the Experts Have Found," *Technology Liberation Front*, December 19, 2010, <http://techliberation.com/2010/12/19/regulatory-capture-what-the-experts-have-found>.

¹⁶⁹ "For more than one hundred years the basic vision of bureaucracy has been that efficiency is promoted by professional, nonpartisan administration directed by a strong executive," notes economist Randy T. Simmons. "Scientific management of public agencies . . . is based on the belief that 'right-minded' managers, who are not motivated by profit or other selfish goals, will protect the public interest while managing government agencies, programs and properties." Randy T. Simmons, *Beyond Politics: The Roots of Government Failure* (Oakland, CA: The Independent Institute, 2011), 42.

¹⁷⁰ W. Kip Viscusi, John M. Vernon, and Joseph E. Harrington Jr., *Economics of Regulation and Antitrust*, 2nd ed. (Cambridge, MA: MIT Press, 1998), 328–46.

¹⁷¹ Sam Peltzman, "The Economic Theory of Regulation after a Decade of Deregulation," *Brookings Papers on Economic Activity* (1989), 1–59.

developing this more robust economic theory of regulation revealed how “as a rule, regulation is acquired by the industry and is designed and operated primarily for its benefits.”¹⁷² Alfred Kahn’s meticulous study of the regulatory process also identifies how capture was a particular problem for utility sectors:

When a commission is responsible for the performance of an industry, it is under never completely escapable pressure to protect the health of the companies it regulates, to assure a desirable performance by relying on those monopolistic chosen instruments and its own controls rather than on the unplanned and unplannable forces of competition. . . . Responsible for the continued provision and improvement of service, [the regulatory commission] comes increasingly and understandably to identify the interest of the public with that of the existing companies on whom it must rely to deliver goods.¹⁷³

Many other scholars have identified capture as a reoccurring problem in regulated industries.¹⁷⁴ They concur with UCLA emeritus professor of business economics Harold Demsetz’s conclusion that “in utility industries, regulation has often been sought because of the inconvenience of competition.”¹⁷⁵ The railroad industry provides a particularly egregious example of such capture,¹⁷⁶ as does the airline industry.¹⁷⁷ Both industries used their respective

¹⁷² George Stigler, “The Theory of Economic Regulation,” *Bell Journal of Economics and Management Science* 2, no. 1 (1971): 3. A broader discussion of capture theory can be found in Viscusi, Vernon, and Harrington, *Economics of Regulation and Antitrust*, 327–46.

¹⁷³ Alfred E. Kahn, *Economics of Regulation: Institutional Issues* (vol. 2) (Hoboken, NJ: John Wiley and Sons, 1971), 12, 46.

¹⁷⁴ Anthony Downs, “An Economic Theory of Political Action in a Democracy,” *Journal of Political Economy* 65, no. 2 (1957): 135–50; William A. Jordan, “Producer Protection, Prior Market Structure and the Effects of Government Regulation,” *Journal of Law and Economics* 15, no. 1 (April 1972): 151–76; Mark Green and Ralph Nader, “Economic Regulation vs. Competition: Uncle Sam the Monopoly Man,” *Yale Law Journal* 82, no. 5 (April 1973): 876; Barry Weingast, “Regulation, Reregulation and Deregulation: The Foundation of Agency-Clientele Relationships,” *Law and Contemporary Problems* 44 (1981): 147–77; Bruce Yandle, “Bootleggers and Baptists: The Education of a Regulatory Economist,” *Regulation* 3, no. 3 (May/June 1983): 12–6; William W. Bratton and Joseph A. McCahery, “Regulatory Capture, Public Interest, and the Public Agenda: Toward a Synthesis,” *North Carolina Law Review* 73 (1995): 1861; Fred S. McChesney, “Rent Extraction and Rent Creation in the Economic Theory of Regulation,” *Journal of Legal Studies* 16 (1987): 101–118; and J. J. Lafont and Jean Tirole, “The Politics of Government Decision-Making: A Theory of Regulatory Capture,” *Quarterly Journal of Economics* 106, no. 4 (November 1991): 1089–1127.

¹⁷⁵ Harold Demsetz, “Why Regulate Utilities?” *Journal of Law and Economics* 11, no. 1 (April 1968): 61.

¹⁷⁶ Thomas Frank, “Obama and ‘Regulatory Capture,’” *Wall Street Journal*, June 24, 2009, <http://online.wsj.com/article/SB124580461065744913.html>. “The first federal regulatory agency, the Interstate Commerce Commission, was set up to regulate railroad freight rates in the 1880s. Soon thereafter, Richard Olney, a prominent railroad lawyer, came to Washington to serve as Grover Cleveland’s attorney general. Olney’s former boss asked him if he would help kill off the hated ICC. Olney’s reply, handed down at the very dawn of Big Government, should be regarded as an urtext of the regulatory state: ‘The Commission . . . is, or can be made, of

regulators (the Interstate Commerce Commission and the Civil Aeronautics Board) to promote cartelization and market protectionism. When capture occurs, it lessens not only the innovation that would flow from other market entrants and entrepreneurs but also the innovation of the regulated entity itself, which shifts its focus to controlling the regulatory process and sheltering itself from disruptive change.

One can debate the chicken-and-egg question of which came first—the assignment of utility status or the capture of regulators by special interests—but the inquiry is largely irrelevant. Capture is a recurring problem within such sectors and undercuts traditional “public interest” rationales for intervention.¹⁷⁸ The FCC, by subjecting the telecommunications, electronics, and content-production industries to the Separations Principle, would be exposed to increased rent-seeking by some of the most powerful firms in the world.¹⁷⁹ Given the difficulty of what Wu proposes, the risk of capture should not be underestimated.

2. *Global Reach and International Competitiveness*

great use to the railroads. It satisfies the popular clamor for a government supervision of the railroads, at the same time that that supervision is almost entirely nominal. Further, the older such a commission gets to be, the more inclined it will be found to take the business and railroad view of things. . . . The part of wisdom is not to destroy the Commission, but to utilize it.”

¹⁷⁷ Thomas K. McCraw, *Prophets of Regulation* (Cambridge, MA: Harvard University Press, 1984), 263. “Clearly, in passing the Civil Aeronautics Act [of 1938], Congress intended to bring stability to airlines. What is not clear is whether the legislature intended to cartelize the industry. Yet this did happen. During the forty years between passage of the act of 1938 and the appointment of [Alfred] Kahn to the CAB chairmanship, the overall effect of board policies tended to freeze the industry more or less in its configuration of 1938. One policy, for example, forbade price competition. Instead the CAB ordinarily required that all carriers flying a certain route charge the same rates for the same class of customer. . . . A second policy had to do with the CAB’s stance toward the entry of new companies into the business. Charged by Congress with the duty of ascertaining whether or not ‘the public interest, convenience, and necessity’ mandated that new carriers should receive a certificate to operate, the board often ruled simply that no applicant met these tests. In fact, over the entire history of the CAB, no new trunkline carrier had been permitted to join the sixteen that existed in 1938. And those sixteen, later reduced to ten by a series of mergers, still dominated the industry in the 1970s. All these companies . . . developed into large companies under the protective wing of the CAB. None wanted deregulation.”

¹⁷⁸ David J. Farber and Gerald R. Faulhaber, “Net Neutrality: No One Will Be Satisfied, Everyone Will Complain,” *The Atlantic*, December 21, 2010, <http://www.theatlantic.com/technology/archive/2010/12/net-neutrality-no-one-will-be-satisfied-everyone-will-complain/68326>. “When the FCC asserts regulatory jurisdiction over an area of telecommunications, the dynamic of the industry changes. No longer are customer needs and desires at the forefront of firms’ competitive strategies; rather firms take their competitive battles to the FCC, hoping for a favorable ruling that will translate into a marketplace advantage. Customer needs take second place; regulatory “rent-seeking” becomes the rule of the day, and a previously innovative and vibrant industry becomes a creature of government rule-making.”

¹⁷⁹ Bruce Owen, “Communication Policy Reform, Interest Groups, and Legislative Capture” (SIEPR Discussion Paper No. 11-006, Stanford, CA, January 19, 2012), <http://publicpolicy.stanford.edu/publicationsprofile/2391>.

It is unclear how Wu’s regime would work for a sector with the global reach of information technology. Companies operating in these sectors often serve a global audience and possess many global affiliates. While these affiliates must conform their business practices to the host country’s laws and norms, the application of the Separations Principle in one country—especially the United States—would have a profound effect on how affected firms do business in many other markets. It would be difficult, for example, to operate a structurally separated enterprise in the United States but maintain a vertically integrated operation in other countries. It would be more likely for affected firms simply to relocate primary operations to countries where they enjoy a more hospitable regulatory environment and then determine how to deal with reimportation to markets governed by Wu’s Separations Principle.

This makes it clear that Wu’s proposed regime could also deleteriously affect the competitiveness of U.S.-based firms currently operating globally or exporting globally. Currently, the United States is a leader in many of the information sectors Wu’s Separations Principle would affect. It is unlikely that U.S.-based firms currently considered global leaders in their fields, including many of those identified above, would be able to maintain their global competitive advantage if stripped of the ability to capitalize on the benefits of vertical integration.

3. *Agency Conflicts and Administrative and Due Process Issues*

Wu envisions a regulatory framework where the FCC would be the primary enforcer of the Separations Principle and the antitrust agencies would supplement the FCC’s oversight.¹⁸⁰ There is reason to doubt, given recent Supreme Court cases, that the antitrust agencies could actually exercise this type of oversight. For decades, the court had wrestled with whether an extensive regulatory regime displaces concurrent antitrust lawsuits.¹⁸¹ Two Supreme Court cases decided in the past 10 years, *Trinko* and *Credit Suisse*, make it much more difficult for the

¹⁸⁰ Wu, *The Master Switch*, 312. “It is inevitable that the FCC will occasionally fail in its mission, and for this reason the government’s competition authorities, the Justice Department’s Antitrust Division and the Federal Trade Commission, are necessary as a backup.”

¹⁸¹ See, for example, *Silver v. New York Stock Exchange*, 373 U.S. 341 (1963) (permitting a private antitrust lawsuit in the securities industry despite the existence of the Securities Exchange Act of 1934); and *Otter Tail Power v. United States*, 410 U.S. 366 (1973) (permitting the government’s antitrust lawsuit against regulated electric utilities providers).

antitrust agencies to bring antitrust cases in regulated industries.¹⁸² Generally, based on these cases, if (1) a regulatory agency has authority to supervise the conduct in question; (2) the agency continuously exercises that authority; and (3) there is a conflict between the antitrust and regulatory regimes, the FTC and DOJ cannot bring an antitrust suit regarding that conduct.¹⁸³ In both cases the court is concerned about nonexpert judges and juries erring in competition issues and harming consumer welfare.¹⁸⁴ This is a significant problem since Wu obviously doubts that the FCC, with its checkered past, can objectively exercise its responsibility to keep the buckets separate and not to favor any industry, technology, or firm. If Wu's Principle depends on antitrust oversight from the FTC and DOJ but they are prohibited from acting under these court decisions, this represents an obstacle to implementing the Separations Principle.

Wu's proposed regulatory paradigm raises other administrative law considerations. As noted, given the power of special interests in gaining regulatory and congressional favors and the conflicting incentives of some regulators, it is unlikely that an agency like the FCC could restrain itself from putting its thumb on the scales for what it deemed the public interest. One need look no further than Wu's book and his other writings to see that regulators are often encouraged to be interventionist. Notably, Wu has advocated informal "agency threats" and the use of "threat regimes" to accomplish policy goals that prove difficult to steer through the formal rulemaking process.¹⁸⁵ His "defense of regulatory threats in particular contexts" is justified as follows:

The use of threats instead of law can be a useful choice—not simply a procedural end run. My argument is that the merits of any regulative modality cannot be determined without reference to the state of the industry being regulated. Threat regimes, I suggest, are important and are best justified when the industry is undergoing rapid change—under conditions of "high uncertainty." Highly informal regimes are most useful, that is, when the agency faces a problem in an

¹⁸² See *Verizon Communications v. Law Offices of Curtis V. Trinko*, 540 U.S. 398 (2004); and *Credit Suisse Securities v. Billing*, 551 U.S. 264 (2007).

¹⁸³ *Credit Suisse Securities v. Billing*, 551 U.S. 264, 276-79 (2007).

¹⁸⁴ *Verizon Communications v. Law Offices of Curtis V. Trinko*, 540 U.S. 398, 414-16 (2004); and *Credit Suisse Securities v. Billing*, 551 U.S. 264, 281-82 (2007).

¹⁸⁵ Tim Wu, "Agency Threats," *Duke Law Journal* 60 (2011): 1841, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1829005.

environment in which facts are highly unclear and evolving. Examples include periods surrounding a newly invented technology or business model, or a practice about which little is known.¹⁸⁶

These threat regimes represent a significant departure from traditional democratic norms of accountable governance and limits on the delegation of legislative and regulatory authority.¹⁸⁷ They would also likely constitute a violation of the Administrative Procedures Act. Wu's assumption that threats make even *more* sense in fast-moving high-tech industries also seems counterintuitive and unwise.¹⁸⁸ "Anyone who predicts the technological future is sure soon to seem foolish," notes George Gilder. "It springs from human creativity and thus inevitably consists of surprise."¹⁸⁹ If a given sector finds itself in such a state of high uncertainty, it seems safe to assume that the state of competition and innovation would be dynamic enough that intervention would not be necessary or wise. Those would be the last sectors regulators should be preemptively micromanaging since they lack the requisite knowledge of whether a market development will harm or benefit consumers in the long-term. This is especially true as it pertains to technological change and change in information markets.

Wu explicitly rejects the present antitrust model, which generally allows firms and innovators to respond to marketplace demands and developments in an evolutionary way, in favor of government intervention and intimidation:

The [wait-and-see] option . . . may sound attractive because it allows the industry to develop in what might be called a natural way. This approach, however, makes a great sacrifice: the public's interest may be entirely unrepresented during the industry's formative period. The risk is that the industry's norms and business models will, effectively, be set without any public input. Waiting for the industry to settle down may result in undesirable practices that prove extremely hard to reverse or influence with rules issued later. To state the matter more colloquially, the industry may be "baked" by the time

¹⁸⁶ Ibid., 1842.

¹⁸⁷ Lars Noah, "Administrative Arm-Twisting in the Shadow of Congressional Delegations of Authority," *Wisconsin Law Review* 5 (1997): 873.

¹⁸⁸ Wu seems to be guilty of what economist Israel Kirzner referred to as "the shortsightedness of those who, not recognizing the open-ended character of entrepreneurial discovery, repeatedly fall into the trap of forecasting the future against the background of today's expectations rather than against the unknowable background of tomorrow's discoveries." Israel Kirzner, *Discovery and the Capitalist Process* (Chicago: University of Chicago Press, 1985), xi.

¹⁸⁹ George Gilder, *Wealth and Poverty* (New York: Bantam Books, 1981), 101.

there is any real oversight or public input.¹⁹⁰

Wu does not bother offering any sort of robust cost-benefit analysis of the probability of such preemptive regulation benefiting consumers versus the probability of some short term harm developing absent such threats.

Regardless, when we marry this vision of regulation-via-intimidation to Wu's Separations Principle, the scope of Wu's ambitions becomes obvious. After implementation, the high-tech sectors begin to resemble a mixed-economy model in which decisions are guided by the supposed wisdom of technocratic regulators. We are asked to believe that such a heavy-handed regime will guide America's high-technology economy down a more innovative path, even if some threats may be necessary to get the job done and entire segments of the economy must be destroyed and reordered to achieve this vision. It is a breathtaking and radical vision for the future of information-technology markets.

4. *Fifth Amendment Takings Issues*

Wu's Separations Principle would undermine companies' rights to some of their most valuable assets. His plan would likely require the forcible disintegration of information platforms and providers that operate in the three layers of the information economy that Wu wants to keep strictly quarantined. For vertically integrated companies such as Apple or Microsoft, this requirement would have devastating ramifications. Indeed, for any media operator or information platform, being forced to divest assets or being structurally separated could mean the loss of integrative efficiencies, core competencies, and important product lines. Such breakups might also require companies to sacrifice crucial intellectual-property rights.¹⁹¹ Finally, forcible disintegration could mean the loss of a valued part of the firm's labor force, as well as a significant loss of shareholder value. These losses constitute legal grounds for a takings challenge under the Fifth Amendment.¹⁹²

¹⁹⁰ Wu, "Agency Threats," xx.

¹⁹¹ Thomas F. Cotter, "The Essential Facilities Doctrine" (research paper No. 08-18, Minnesota Legal Studies Research Paper Series, Minneapolis, MN, 2008), 12, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1125368. "To the extent governments confer intellectual property rights (IPRs) precisely for the purpose of encouraging such investments, the application of the essential facilities doctrine to IPRs therefore may seem particularly dubious."

¹⁹² Richard Epstein, *Takings: Private Property and the Power of Eminent Domain* (Cambridge, MA: Harvard

At a minimum, regulatory proponents should not be surprised when these matters are litigated by affected companies and lengthy legal wrangling ensues. Litigation would further limit innovation by the regulated entities and others in the field, and would likely chill broader industry investment by both the incumbent social media provider and its potential competitors.¹⁹³

5. *First Amendment Considerations*

Wu believes that because information industries “traffic in forms of individual expression” and are so “fundamental to democracy,” they should be subject to differential regulatory treatment.¹⁹⁴ He is troubled that the Constitution prohibits the government from limiting free speech but says nothing to prevent private institutions from doing so.

That the information economy comprises the “speech industry” and that private actors operate in many speech-facilitating platforms cannot—at least under a proper understanding of the First Amendment—serve as an excuse for the sort of sweeping regulation Wu desires. Wu’s argument contradicts the thrust of the First Amendment, which has traditionally imposed a higher level of legal scrutiny on media-focused regulatory efforts. Wu is essentially trying to marry media-access theory to pre-Chicago School antitrust thinking. Media-access theorists believe the rights of listeners—not speakers—are paramount under the First Amendment.¹⁹⁵ They rest their case primarily on some of the ambiguous language from the Supreme Court’s controversial 1945 decision in *Associated Press v. U.S.*, in which the court fashioned a new theory of the First Amendment as the guarantor of a certain amount or type of speech.¹⁹⁶ Many policymakers and media critics have subsequently interpreted this case—as well as the court’s

University Press, 1985); and David L. Kaserman and John Mayo, *Government and Business* (Fort Worth, TX: Harcourt Brace College Publishers, 1994), 435.

¹⁹³ Cotter, “The Essential Facilities Doctrine,” 12. “The prospect of obtaining access to the monopolist’s facility reduces the plaintiff’s incentive to invest in developing its own competing facility, thus perpetuating the monopolist’s control over the facility and reducing the prospect of future competition.”

¹⁹⁴ *Ibid.*, 301–302.

¹⁹⁵ Jerome A. Barron, “Access to the Press—a New First Amendment Right,” *Harvard Law Review* 80 (1967): 1641; and Owen M. Fiss, “Free Speech and Social Structures,” *Iowa Law Review* 71 (1986): 1416. Fiss argues that a proper reading of the First Amendment requires “a change in our attitude about the state” such that we learn “to recognize the state not only as an enemy, but also as a friend of speech . . . [that should act] to enhance the quality of public debate.”

¹⁹⁶ *Associated Press v. U.S.* 326 U.S. 1 (1945). The court concluded that the First Amendment “rests on the assumption that the widest possible dissemination of information from diverse and antagonistic sources is essential to the welfare of the public, that a free press is a condition of a free society.”

decisions in *NBC v. United States*¹⁹⁷ and *Red Lion Broadcasting Co. v. FCC*¹⁹⁸—as proof that media-ownership regulations and other press controls were demanded by the First Amendment to guarantee a certain level of diversity.¹⁹⁹

In essence, media-access advocates say that once a given media provider becomes popular enough, everyone has a right to use it and the First Amendment allows the government to mold media in whatever form it wishes. Of course the First Amendment says nothing of the sort. Importantly, Wu makes the bar to government action even lower with his separations regime. Under Wu’s paradigm, the fact that information industries “traffic in forms of individual expression” and are so “fundamental to democracy” would open them to almost unlimited structural regulation.

Structural regulations are not purely content-neutral methods of media regulation, however. Christopher S. Yoo has coined the term “architectural censorship” to describe “the tangential, but important adverse impact on speech” that structural media regulations can have.²⁰⁰ By artificially limiting market structures or outputs, structural controls can limit the quantity and quality of media created.²⁰¹

The danger with media-access mandates—even when they take the form of structural controls—is that they ultimately transform the First Amendment into an affirmative tool of the state that legislators and regulators can wield to control content and influence the editorial judgments of the press. As Justice Owen Roberts presciently warned 50 years ago in his dissenting opinion in *Associated Press v. U.S.*, the case that helped spawn the media-access movement,

¹⁹⁷ *NBC v. United States*, 319 U.S. 190 (1943).

¹⁹⁸ *Red Lion Broadcasting Co. v. FCC*, 395 U.S. 367 (1969).

¹⁹⁹ John Nichols and Robert W. McChesney, *Our Media, Not Theirs: The Democratic Struggle against Corporate Media* (New York: Seven Stories Press, 2002), 49. “The highly concentrated market makes a mockery of the freedom of press clause in the First Amendment, which was predicated on the ability of citizens to create their own media if they so desire.”

²⁰⁰ Christopher S. Yoo, “Architectural Censorship and the FCC,” *Southern California Law Review* 78 (March 2005): 669.

²⁰¹ Clyde Wayne Crews of the Competitive Enterprise Institute has argued that “Government restrictions on ownership are themselves censorship, and a coercive impediment to speech and a threat to democracy and wide scale expression.” Clyde Wayne Crews Jr., “A Defense of Media Monopoly,” *Communications Lawyer* 23, no. 1 (Fall 2003), 14, <http://www.cato.org/research/articles/crews-fall2003.pdf>.

The decree here approved may well be, and I think threatens to be, but a first step in the shackling of the press, which will subvert the constitutional freedom to print or to withhold, to print as and how one's reason or one's interest dictates. When that time comes, the state will be supreme and freedom of the state will have superseded freedom of the individual to print, being responsible before the law for abuse of the high privilege. It is not protecting a freedom but confining it to prescribe where and how and under what conditions one must impart the literary product of his thought and research. This is fettering the press, not striking off its chains.²⁰²

Wu's separations regime would "fetter the press" along similar lines and significantly expand the horizons of government power over speech-producing and speech-disseminating industries. As a result, First Amendment values are implicated and litigation becomes more likely.

V. CONCLUSION

Wu's regulatory aims ultimately resemble those from 1950s and 1960s industrial organization theory, which suffered from "casual observations of business behavior, colorful characterizations, eclectic forays into sociology and psychology, descriptive statistics, and verification by plausibility."²⁰³ Like the industrial organization theories in vogue during that period, Wu's Separations Principle is a proposition "that contradict[s] economic theory"²⁰⁴ and should be avoided as preemptive remedy to speculative societal harms. The information economy today is dynamic and competitive. A Separations Principle that prevents and dissolves vertical acquisitions would be to consumers' substantial detriment. Instead we should embrace a different "separations principle" to guide policy: the preservation of a salutary distance between the state and all layers of the information economy.

²⁰² Dissenting opinion of Justice Owen J. Roberts, *Associated Press v. U.S.*, 326 U.S. 1, 48 (1945).

²⁰³ Posner, "The Chicago School of Antitrust Analysis," 925, 928–29.

²⁰⁴ *Ibid.*