

BOOK NOTE
INFORMATION ANXIETIES

*Reviewed by G.S. Hans**

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THE MASTER SWITCH—THE RISE AND FALL OF INFORMATION EMPIRES.
By Tim Wu. New York: Alfred A. Knopf. 2010. Pp. 366. Cloth, \$27.95

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INTRODUCTION

The Internet has created an industry of aphorisms, clichés, and predictions, from “information wants to be free” to the viability of Twitter revolutions. The constant access and instant publication that the Internet allows have given every pundit an online soapbox.

This content explosion has created two related problems for consumers and industry: how to find valuable content online (whatever “valuable” means) and how to moderate the flow of the content itself. Tim Wu¹ argues in *The Master Switch* that the second issue of content control and mediation has been fiercely debated in the United States as far back as the invention of the telephone in the late nineteenth century. Consumers, creators, companies, and government officials have disputed the appropriate regulations for the devices and networks that deliver information to consumers.

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In *The Master Switch*, Wu’s “ultimate concern is the future of information.”² He proceeds through the history of several information technologies—telephone, film, FM radio, television, and the Internet—in order to examine what the future of information might be. Wu analyzes each industry from a historical and economic perspective, focusing particularly on the relationships between private firms, the government, and individual inventors. He also focuses on “those particular, decisive moments when a medium opens or closes.”³ Such moments reveal the “flaws, kinks, and limitations”⁴ of each new technology and form part of “the Cycle.”⁵

Wu’s theory of the Cycle serves as the book’s main thesis.⁶ His “Separations Principle”⁷ also forms part of the thesis, but as Wu does not discuss the Separations Principle until the final chapter of *The Master Switch*, the Cycle serves as the book’s central theme. Wu defines the Cycle as an oft-repeated progression from novel invention to pervasive industry, from open access to a highly-controlled closed system, and from innovation friendly to near dominance by a single firm. Wu argues that these tightly girded systems eventually open up again, beginning the Cycle anew.⁸ These feedback loops of competition and monopoly may seem typical for most industries in a capitalist economy. According to Wu, the special aspects of the information sector—especially its susceptibility to government-sponsored monopolies—make the Cycle much more damaging than in other sectors of the economy.⁹

Wu sets up his arguments historically, proceeding from the origins of the telephone to the era of Google and Apple. *The Master Switch* is most convincing as a work of popular history but slightly disappoints in its arguments for a new national telecommunications policy.

I. AS THE CYCLE TURNS

Within 320 pages, Wu takes the reader from the origins of the telephone in Alexander Bell’s labs in 1877 to the advent of Apple’s iPhone and Google’s Android mobile telephone operating system. In between, he touches upon a wide variety of industries, from early American cin-

2. TIM WU, *THE MASTER SWITCH: THE RISE AND FALL OF INFORMATION EMPIRES* 5 (2010).

3. *Id.* at 9–10.

4. *Id.* at 10.

5. *Id.*

6. *Id.* at 6.

7. *See infra* Part II.

8. WU, *supra* note 2, at 6.

9. *Id.* at 6–7.

ema to FM radio to the rise of cable television. Wu also recounts the rise, fall, and rebirth of American Telephone and Telegraph (“AT&T”), which was broken up in the 1980s and largely reconstituted in the mid-2000s. Wu tells each story in an easy, highly readable style, relying heavily on dialogue and anecdotes. This makes the minutiae of antitrust law and telecommunications policy engaging. Each historical episode often flies by in a few pages, referring to other, more expansive accounts by earlier writers. Wu marshals each story to drive home his points about the Cycle.

Much—although not all—of what Wu describes in the book has been written before. For example, Wu’s recounting of the rise of American independent cinema and the economics of Hollywood entertainment relies upon sources like Chris Anderson’s *The Long Tail*¹⁰ and Steven Bach’s *Final Cut*.¹¹ Most obviously, Wu’s history of the AT&T antitrust proceedings in the 1970s and early 1980s owes a large debt to Steve Coll’s *The Deal of the Century*.¹² Wu fully cites these sources in his endnotes. Wu’s arguments, compared to the earlier books, may be more current and compelling to today’s readers. For example, by analyzing recent developments up to 2010, he can delve into the politics surrounding the AT&T reconstitution and the skirmishes between Apple and Google. But much of the book may not be new to readers or may be discussed more fully elsewhere.

In describing the breakup of AT&T, Wu admits that “[t]he full legal story of the breakup is complex, a major historical event to which no chronicler could do justice in brief.”¹³ By focusing more on telephony and the Internet and less on other methods of content delivery, including radio, cinema, and cable television, Wu could have expanded upon his four-page summary of the AT&T divestiture, a crucial moment in communications history. Wu’s analysis of the divestiture in the larger context of the Cycle deserves more than this gloss. Indeed, other central moments of American telecommunications history, such as the Communications Act of 1996 or the reconstitution of AT&T, deserved more attention. That would have made *The Master Switch* a far different book. But as it stands, the book sometimes seems to occupy an uncomfortable hybrid space: more assertive than mere history but not as focused or persuasive as the best argumentative work. As a result, *The*

10. CHRIS ANDERSON, *THE LONG TAIL: WHY THE FUTURE OF BUSINESS IS SELLING LESS OF MORE* (2006).

11. STEVEN BACH, *FINAL CUT: ART, MONEY, AND EGO IN THE MAKING OF HEAVEN’S GATE, THE FILM THAT SANK UNITED ARTISTS* (1999).

12. STEVE COLL, *THE DEAL OF THE CENTURY: THE BREAKUP OF AT&T* (1986).

13. WU, *supra* note 2, at 192.

Master Switch sometimes creates the odd impression of simultaneously being minutely detailed and somewhat cursory.

Structurally, Wu arranges *The Master Switch* as a sandwich, beginning and ending the book with two pieces of strong argumentation, and filling the middle with the history of American telecommunications. He begins the book by focusing on the Cycle of telecommunications media and ends with a provocative description of his Separations Principle. Wu hopes that the Separations Principle will obviate some of the problems arising from highly regulated monopolies, which have long plagued the information industries. In between these two comes an extended history lesson, sprinkled with references to the Cycle that remind the reader of the book's organizing thesis. Wu's allusions to the Cycle are sometimes helpful, but more often than not they take the form of koans, like "[i]t is always to be preferred that the Cycle proceed of its own accord."¹⁴ While this assertion may seem obvious to Wu, it is not clear to a reader.

Wu's descriptions of the Cycle can also be inconsistent. He concisely defines the Cycle in his introduction,¹⁵ but allusions to the Cycle throughout the book make it more amorphous.¹⁶ When Wu drops in a comment analogizing an episode to the Cycle, it often lacks specificity. At one point Wu states that the Cycle is not inevitable and that "the combined forces of a dominant industry and the federal government can arrest the Cycle's otherwise inexorable progress."¹⁷ Later, however, he describes the Cycle as inevitable in the context of AT&T's rebirth; the resurrection of AT&T "prove[s] the irrevocability of the Cycle of information empires."¹⁸ It is not clear how to reconcile these two statements. At the beginning of *The Master Switch*, the Cycle seems easy to understand, but after reading Wu's qualifications and descriptions, it becomes fuzzier.

II. SEPARATIONS AND POWER

A. Defining the Separations Principle

Wu concludes *The Master Switch* with a return to full-throated argumentation, calling for implementation of the Separations Principle.

14. *Id.* at 195.

15. *Id.* at 6–7.

16. At times the Cycle seems "tumultuous." *Id.* at 160. At other times it is "inexorable." *Id.* at 156. Wu at one point claims that "[e]very consolidated entity may well have only until the next turn of the Cycle before being scattered, and everything scattered may await only its eventual imperial visionary." *Id.* at 253. Consequently, the Cycle starts to resemble a kitchen sink of metaphors.

17. *Id.* at 156.

18. *Id.* at 252.

The Separations Principle, along with the Cycle, forms the central thesis of *The Master Switch*. Wu envisions it as a cure for the problems surrounding the information industries he describes throughout the book. The Separations Principle “would mean the creation of a salutary distance between each of the major functions or layers in the information economy.”¹⁹ Wu describes it both as separating different sectors of the information economy and as preventing the government from intervening in a way that favors any one technology. In his eyes, it “preempts politics” and favors no one group.²⁰ At first glance, this seems to recall both separation of powers and a limit on vertical integration under anti-trust law.

Wu describes this approach as “constitutional” in the sense of being generally accepted by all relevant parties rather than as a direct reference to the U.S. Constitution.²¹ Wu takes a constitutional rather than regulatory approach in order to strengthen the Separations Principle’s argument. He reasons that because the information industries have often flaunted regulations, a stronger form of governmental control, akin to Constitutional control, would have more success.²² He also assumes that a constitutional approach would force all actors to understand the necessity of the Separations Principle.²³

Wu identifies strong justifications for the Separations Principle: those who create information are often at odds with those who disseminate it, and the Separations Principle would forestall the effects of this conflict to some extent.²⁴ Indeed, given the history that he describes in the book, the Separations Principle seems necessary. It would prevent another AT&T story, according to Wu, by prohibiting excessive government intervention or other repressions of innovation and encouraging entrepreneurial freedom.²⁵

Wu proposes a multilateral system to solve this problem, recognizing that implementation of the Separations Principle will require more than just the participation of the Federal Communications Commission (“FCC”).²⁶ In Wu’s ideal world, the FCC would take the

19. *Id.* at 304.

20. *Id.* at 304–05.

21. *Id.* at 308. This is an atypical use of the term “constitutional,” but Wu seems to employ it here to stress the foundational nature of the Separations Principle for the central actors in telecommunications policy. Those actors will need to accept the Separations Principle to the same degree as political actors in the United States accept the supremacy of the U.S. Constitution. The Separations Principle will thus be more forceful than traditional regulation.

22. *Id.* at 308–09.

23. *Id.*

24. *Id.* at 305.

25. *Id.* at 306–08.

26. *Id.* at 312.

lead in implementing a working Separations Policy by promulgating anti-discriminatory common carriage rules and by preventing large-scale vertical mergers within the communications industry.²⁷ This latter duty would also require the assistance of the Department of Justice's ("DOJ") Antitrust Division and the Federal Trade Commission ("FTC"), according to Wu.²⁸ Wu also hopes that the leaders of the information industries will acknowledge the need for the Separations Principle, noting that they have been more forthcoming in the media regarding their practices, as public shaming has forced them to be more open and responsive than in years past.²⁹ Finally, he hopes that, because cultural norms will shape the policies of the Separations Principle, ordinary citizens will participate in some capacity in its development.³⁰

For Wu, the Separations Principle is sorely needed to protect the flow of information for all individuals, but individuals must also play a role in implementing it.³¹ He argues that the Internet is a special case: its resounding success as an open medium means that no one can seriously argue it would work better as a closed, highly regulated system.³² However, it is still fragile and therefore susceptible to the Cycle. The Cycle could destroy the openness and innovation-friendly environment of the Internet, just as it did for earlier media, such as FM radio. Because many different modes of communication are dependent upon the Internet, crippling its current, open structure would be catastrophic.³³ Equally catastrophic would be an Internet controlled by a few powerful firms, supported by the government.

Public awareness—a crucial step in implementing the Separations Principle—is central in preventing these particular dangers of the Cycle. Awareness remains the duty of consumers, requiring us to be mindful.³⁴ In the past, consumers have been largely absent or apathetic to the turns of the Cycle; correcting that absence through increased consumer awareness will be vital to preserving an open Internet.

B. *Implementing the Separations Principle*

Wu's Separations Principle makes a great deal of sense in the larger context of *The Master Switch*, though Wu does not forecast it explicitly in the book's earlier sections. One of Wu's main points concerns the

27. *Id.* at 310–312.

28. *Id.* at 312.

29. *Id.* at 313–14.

30. *Id.* at 315–16.

31. *Id.* at 311.

32. *Id.* at 317.

33. *Id.* at 318.

34. *Id.* at 318–19.

dangers of regulation. Traditionally, regulation has been thought to promote the public interest and prevent industries from operating with impunity. However, as Wu demonstrates through the AT&T saga, the heavy hand that the government took in *preserving* AT&T's dominance by creating a government-sanctioned monopoly demonstrates how intense regulation can perpetuate one firm's control of an entire industry. As a result, his framing of the Separations Principle as a constitutional, rather than a regulatory, theory attempts to respond effectively to the history of American telecommunications policy by avoiding a regulation-based monopoly.

The Separations Principle also avoids some of the connotations that accompany a call for "increased regulation," which some critics feel stifles innovation. Wu recognizes the need for innovation and uses the Separations Principle as a way of promoting it in the information industries.³⁵ By describing it as constitutional, something that all actors should sign onto because it would be in their best interest, he avoids labeling any one party a "loser" in the struggle amongst government, industry, and the public. For Wu, each actor can benefit under the Separations Principle.³⁶

Wu's abstract goals are laudable but impractical for today's political climate. Wu envisions a central role for the FCC, which would share responsibilities for implementing the United States' information policy with the FTC and the DOJ.³⁷ It remains uncertain whether the FCC will be able to assert substantial force in telecommunications debates in the near future. The FCC has faced major difficulties in attempting to promulgate one Internet cause célèbre, network neutrality.³⁸ Indeed, in April 2010, the FCC received a sharp slap on the wrist from the District of Columbia Court of Appeals in *Comcast Corp. v. FCC*.³⁹ The court prevented the FCC from regulating an Internet service provider's network management practices under an ancillary jurisdiction theory stemming from the language of the Communications Act of 1934.⁴⁰ This invalidated the FCC's preferred method of mandating network neutrality, a major policy goal. If the FCC cannot manage to enact network neutrality—which had been a priority for a few years—it seems unlikely that it could lead the government vanguard in upholding Wu's new Separations Principle.

35. *Id.* at 306.

36. *Id.* at 308.

37. *Id.* at 312.

38. Wu coined "net neutrality" in a 2003 article. Tim Wu, *Network Neutrality, Broadband Discrimination*, 2 J. TELECOMM. & HIGH TECH. L. 141, 145 (2003).

39. *Comcast Corp. v. FCC*, 600 F.3d 642 (D.C. Cir. 2010).

40. *Id.* at 644.

Wu's predictions regarding the willingness of industry to adopt the Separations Principle are similarly rosy. He admits that it may sound improbable to assume that industry members will adopt the Principle but points out that few alternative options exist.⁴¹ Wu relies upon the new norms of openness and transparency within the telecommunications industry—norms he asserts did not exist in the past⁴²—and a “strain of idealism”⁴³ in telecommunications executives that might push them towards the Separations Principle. This assumes a high-mindedness on the part of telecommunications corporations that may not exist.

Wu uses shaming examples, like Apple's admission of Skype into its App Store,⁴⁴ as reasons that we might assume that norms are changing, forcing telecommunications companies to adopt a less self-serving model. However, such instances of backtracking and industry responsiveness are relatively minor compared to the scope of the information industries. In the last ten years, no firm has suffered an ignominy on the order of AT&T's divestiture. No major telecommunications or Internet firm has faced large fines, restrictive injunctions, or court-mandated divestitures in recent memory. Indeed, they have done quite well. Comcast won the last round of the battle with the FCC over network neutrality⁴⁵ and the Justice Department approved its merger with NBC. The FTC has dropped its investigations into Google's consumer protection violations in its Street View program.⁴⁶ AT&T reconstituted many of its old subsidiaries only a few years ago.⁴⁷ On a macro level, the telecommunications firms are winning major policy battles. They may become embroiled in low-level disputes that require small course corrections or be shamed into minor concessions, but it does not seem obvious that they would feel pressured to adopt some version of the Separations Principle.

As for consumers-at-large—the final piece that Wu sees as helping establish norms that would force industry to adopt the Separations Principle⁴⁸—it is possible that they may play an important role in pushing towards the communications policies Wu envisions. If history is any guide, however, consumers do not find the intricacies of telecommunications policy relevant or interesting. For example, the United States

41. Wu, *supra* note 2, at 313.

42. *Id.*

43. *Id.* at 315.

44. *Id.* at 314.

45. *See Comcast*, 600 F.3d at 642.

46. *See Claire Cain Miller, A Reassured F.T.C. Ends Google Street View Inquiry*, N.Y. TIMES, Oct. 28, 2010, at B9.

47. Wu, *supra* note 2, at 248–49.

48. *Id.* at 315.

continues to lag behind nations like South Korea in broadband speeds,⁴⁹ but there is little consumer agitation for adoption of the National Broadband Plan. In the mid-1980s, the immediate aftermath of the AT&T divestiture confused and frustrated consumers, even though it was designed to serve the public interest and promote innovation.⁵⁰ We can hope that, in the years following AT&T's breakup, consumers have developed a better awareness of why the Separations Principle may be beneficial for them in the short- *and* long-term, but it is not obvious that they have done so.

III. BREAKING THE CYCLE

Some critics have lambasted Wu for his "innovation-killing regulatory regime"⁵¹ and for penning the textual version of an eighteen-minute TED talk⁵²: short on substance but long on style. This seems to me an uncharitable view of *The Master Switch* and of Wu's project. Even if its structure and style remain frustrating to a reader who knows the intricacies of American telecommunications law and policy, the book's reception from the general public has been much more glowing. Critics from the *New York Times*, the *Atlantic*, the *Boston Globe* and *Salon* praised the book for its insights into the convoluted information industries.⁵³ For a general audience, *The Master Switch* provides a helpful primer on the major historical events in American telecommunications during the last century.

Wu does not provide a consistently detailed, nuanced analysis. At times, especially at its conclusion, the book makes gestures towards a more argumentative rather than historical tone. However, such moments are rare, promising sophisticated readers a forceful, visionary argument that never fully materializes.

49. See Mark McDonald, *Home Internet May Get Even Faster in South Korea*, N.Y. TIMES, Feb. 21, 2011, at B3.

50. WU, *supra* note 2, at 195.

51. Adam Thierer, *Thoughts on Wu's Master Switch, Part 6 (His Audacious Information Industrial Policy)*, TECH. LIBERATION FRONT (Nov. 2, 2010), <http://techliberation.com/2010/11/02/thoughts-on-wu-s-master-switch-part-6-his-audacious-information-industrial-policy/>.

52. Evgeny Morozov, *Passing Through: Why the Open Internet Is Worth Saving*, BOS. REV., Mar./Apr. 2011, at 50, 54, available at http://www.bostonreview.net/BR36.2/evgeny_morozov_net_neutrality.php.

53. Hiawatha Bray, *Building Media Empires*, BOS. GLOBE, Nov. 7, 2010, at BR7; David Leonhardt, *From Hobby to Industry*, N.Y. TIMES, Dec. 12, 2010, at BR12; Bruce Gottlieb, *Net Neutrality and the Academics Who Love It*, ATLANTIC (Dec. 9, 2010), <http://www.theatlantic.com/technology/archive/2010/12/net-neutrality-and-the-academics-who-love-it/67764/>; Laura Miller, *The Master Switch: Is the Internet Due for a Takeover?*, SALON (Dec. 12, 2010), http://www.salon.com/books/laura_miller/2010/12/12/master_switch.

If one considers Wu's goals for *The Master Switch*—to educate the public on the importance of sound telecommunications policy and to thus help implement part of the Separations Principle through increased awareness—his focus on a novice reader makes sense. The apathy that most Americans have towards technology policy provides a major obstacle to implementation of the Separations Principle. Books like *The Master Switch*, much more than whitepapers or obscure academic articles, provide the best hope of dispelling that apathy. Time will tell if consumer interest can help break the Cycle, but Wu's book, while a rousing *cri de coeur*, does not give much hope.