

Book Review

The Net Neutrality Guy

Tim Wu

The Master Switch: The Rise and Fall of Information Empires

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Reviewed by Abigail Slater

Antitrust practitioners may know Tim Wu best as the senior advisor to the Federal Trade Commission's Office of Policy Planning for consumer protection and competition issues that affect the Internet and mobile markets. But he is also the possessor of an impressive resume: Tim Wu is an author and professor of law at Columbia University and was recognized as one of fifty leaders in science and technology by *Scientific American* in 2006. His previous publications include a co-authored book, *Who Controls the Internet?* as well as various articles in *Slate*, the *New Yorker*, and other magazines and newspapers. Wu has indicated that his current research interests include the advertising industry and the role played by surplus in American society.

The Master Switch traces the history of five information industries: telephony, radio, film, television, and the Internet. The book is organized chronologically, and begins in the 1870s with the story of the early Bell system, the mother of all information industries, or as the author puts it: "the Ur-information network, the one whose working assumptions and ideology have influenced every information industry to follow." (p. 7) Wu follows the Bell story with an account of the early days of radio, and so on with film and television, to the present day and the Internet.

The future of the Internet is the target of *The Master Switch*. Wu argues that, as with information industries before it, the Internet may be shifting from an open to closed structure. With this in mind, he makes the case for net neutrality—indeed a complete ban on any significant degree of vertical integration between or among information industries—in the book's final chapter. Wu supports his argument with his historic research. According to the author: "Illuminating the past to anticipate the future is the *raison d'être* of this book." (p. 7)

While Wu clearly sides with those who would tackle net neutrality today through legislation prohibiting vertical integration leading to large monopolies in information industries, his book is fairly open-minded and even soft on benevolent monopolists. Take, for example, his treatment of Bell Labs. Founded in 1925 for the purpose of improving telephony, Bell labs gave birth to magnetic storage, from which technology grew audiocassettes, videotapes, and the computer hard drive. (p. 104) The innovation that flowed from Bell Labs in the post-war era may not have happened had the Bell system faced fiercer competition and thus not enjoyed the excess profits it used to invest in a fleet of research scientists. (p. 105)

At over 300 pages, the book is a big read. The story of each information industry is replete with interesting anecdotes, colorful personalities, and original research. What makes the book most relevant to antitrust practitioners are some of the concepts underpinning Wu's historical narratives—The Cycle, Creative Destruction, the Kronos Effect, and the roles played by the legal system and

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corporate DNA. The book's final chapter—The Separations Principle—ties together many of the concepts developed earlier in the book and establishes Wu's framework for net neutrality.

The Cycle. Wu's core thesis is that the history of each information industry shows a "typical progression . . . from somebody's hobby to somebody's industry; from jury-rigged contraption to slick production marvel; from a freely accessible channel to one strictly controlled by a single corporation or cartel—from open to closed system." (p. 6) Wu calls this progression "the Cycle." (p. 6) His book traces the history of the Cycle in each of the five information industries. The Cycle's progression has meant that "[c]ommunications by wire became the sole domain of the Bell system. The great networks, NBC and CBS, ruled radio broadcasting, as they prepared, with the help of the Federal Communications Commission, to launch in their own image a new medium called television. The Hollywood studios, meanwhile, closed a vise grip on every part of the film business, from talent to exhibition." (p. 11) And so it goes. That is, until the information industry becomes a target for assault and the Cycle is arrested.

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Creative Destruction. Assault of the kind that arrests the Cycle comes in one of two flavors: technological innovation or the legal system.

Antitrust practitioners will be familiar with Wu's innovation concept: It is Schumpeterian creative destruction with a few wrinkles. According to Schumpeter, as quoted by Wu, innovation in information industries as elsewhere is a "process of industrial mutation . . . that incessantly revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one." (p. 27) Creative destruction in information industries is not hard to find. Telephony was the original disruptive technology. In 1876 the Western Union telegraph service was one of the most powerful corporations in the world. No one saw the telephone coming. As Wu explains: "At the very beginning . . . the Bell Company probably seemed more a source of comic relief than a threat to Western Union." (p. 25) Western Union could have purchased all of Bell's patents for \$100,000, but it passed on them, and the rest is history. Bell subsequently acquired Western Union and, in 1913, agreed to sell the company—which "was fast becoming a dinosaur anyway"—in order to settle a DOJ antitrust suit. (p. 56)

The story of the early Bell system is Schumpeter's theory at its purest. What may be more challenging to antitrust practitioners is how often the Cycle in information industries has disproven Schumpeter's creative destruction theory—hence the wrinkles.

The Kronos Effect. Wu's research suggests that the demise of an information industry when faced with a disruptive technology is not a foregone conclusion. In the real world, Schumpeter does not always have his way. The Cycle can be arrested. In several instances, old technology has co-opted its usurper through a merger or other form of cooperation. In other instances, old technology killed its disruptive rival in its infancy, a phenomenon Wu dubs the Kronos Effect.¹ (p. 25) Once again, the Bell system story illustrates the point well. According to Wu's account, Bell Labs suppressed or failed to market several of its own technologies in their infancy for fear that they would disrupt its telephony franchise. These technologies included fiber optics, mobile phones, and DSL. (p. 107)

The visible hand of Government has also played a role in the Kronos Effect. Wu argues that FCC regulations have in several instances served to suppress innovation, often at the behest of an incumbent technology. The story of FM radio is illuminating here. According to Wu, from the 1920s

¹ Kronos was the Greek ruler of the Universe who was moved to eat his infants after having been told by the Oracle at Delphi that one of his children would dethrone him.

until the mid-1940s the AM radio industry, with the help of the FCC, managed to suppress the technologically superior FM radio. (p. 132) In fact, for six years after FM's invention, the FCC, without a coherent explanation, completely banned commercial FM broadcasting. (p. 130) Similarly, in the 1960s the FCC, deciding that cable television "posed a threat to the common good . . . issued an order barring it from America's hundred largest cities or towns by population." (p. 181) These operational constraints meant that funding for cable expansion dried up until a friendlier regulatory environment emerged during the Nixon administration, followed by the emergence of such cable mavericks as Ted Turner (who was by all accounts Schumpeter's poster child). (pp. 207–12)

The Law as Sword and Shield. Throughout the book Wu explores the role of the legal system, principally the FCC, antitrust, and patents, in the Cycle's progress. These forces have acted both as sword and shield.

According to Wu, the legal system has both prevented information industry Cycles from closing and re-opened those that would otherwise have remained closed. In this context, the bluntest instrument has been federal antitrust enforcement. The best known examples here are the breakups of the Bell system and the Hollywood film studios. The film breakup took ten years and a Supreme Court challenge, with the Court finally agreeing in 1948 with the DOJ that Hollywood was an illegal conspiracy in restraint of trade (p. 164) The Bell breakup was similarly protracted. It began with Nixon's communications advisor, Clay Whitehead, in 1974 and ended with the breakup of the Bell system into eight pieces in 1984. FCC regulation played a role here too. It is interesting to note that perhaps the most significant event in the Bell breakup was not the final breakup itself but rather an FCC rulemaking. In 1971, the Nixon FCC "issued a rule banning AT&T from directly entering the market for 'data processing' or 'online services.'" (p. 190) Absent this rulemaking, the infant industry created by America Online and CompuServe that came to be known as online services might never have emerged. (p. 191)

Antitrust enforcement in information industries has not always been as forceful as that deployed against the Bell system and the film studios. In fact, several investigations of information industries through the years petered out. Unsurprisingly, these investigations are less well reported than their more high profile counterparts. Even at the FTC it is not well known that from 1921 until 1927 the agency conducted an antitrust investigation into the film industry's block booking practices. The investigation ended when Chairman Myers, a Coolidge appointee, issued a weak reprimand to the industry. The consent was promptly and publicly ignored by the film industry. (p. 98)

The patent system has served both as a sword and a shield in information industry Cycles. Here again the Bell story is instructive. The early Bell system survived in part because of patents. According to Wu's account, the Bell patent was the original strong patent, and Bell survived competition from Western Union due to a patent lawsuit filed in 1878, despite being dwarfed by Western Union in all other respects. (p. 30)

Patents have also been used effectively to curb competition and to keep the Cycle closed. In Wu's telling, the Film Trust, the original patent pool, effectively kept the film industry closed to competition throughout the 1920s until the rise of the Hollywood studio system. The Film Trust, established in New York "pooled sixteen key film patents, blocked most film imports, and fixed prices at every step of filmmaking and exhibition" for the purpose of avoiding "ruinous" competition. (p. 64) As a consequence, "merely to operate a camera without a license was to violate patents owned by the Trust." (p. 68) The Film Trust enforced these patents vigilantly. Beginning in 1910, it commenced a scorched earth enforcement campaign. (p. 68) According to Wu, the Hollywood studios were born "not out of choice, let alone glamour, but of brutal necessity." (p. 67) This is because independent film producers who violated the east coast Film Trust became industrial out-

laws in Hollywood. (p. 68) The use of patents against competitors eventually drew the attention of the Taft administration, which began its own investigation into the Film Trust, resulting in a 1915 federal district court order dissolving it. (p. 72)

Non-Market Values. Wu's book is informative reading for antitrust practitioners not only because it challenges some antitrust assumptions with real world evidence, but also because it challenges the antitrust reader to think more broadly about industrial organization in information industries. In other words, Wu challenges the antitrust reader to think about issues outside the antitrust box. These issues can be loosely categorized as non-market values and include the importance of free speech and the role of "corporate DNA" or attitude in decision making, including decisions that might fall within the scope of Sherman Act Sections 1 or 2.

Wu's research shows that the attitude of information industry monopolists certainly has made a difference to the level of antitrust scrutiny they attract.

Corporate DNA. There is a long running debate in the field of antitrust theory as to what should matter when judging anticompetitive conduct. Robert Bork's *Antitrust Paradox* argues that a corporation's intent should be irrelevant. Yet as Bork knew, and Wu demonstrates in his book, for much of the history of antitrust in information industries, attitude mattered. (p. 57) Wu's research shows that the attitude of information industry monopolists certainly has made a difference to the level of antitrust scrutiny they attract. The Bell system survived antitrust attack for the best part of the 20th century because it was viewed as a benign monopolist. Bell's early mission statement "One System, One Policy, Universal Service" said it all. (p. 51) When Congress passed the Mann Elkins Act of 1910 designating Bell a common carrier, the company embraced this role. Common carriage "was a promise to serve any customer willing to pay, charge fixed rates, and carry his or her traffic without discrimination," (p. 57), in effect the early inspiration for net neutrality. (p. 311)

Moving forward to the Internet era, it would appear that attitude still matters. Although attitude may not be quite everything to today's antitrust practitioners, most would agree that it is at least relevant when weighing credibility, be that by a judge or an antitrust agency. Take, for example, the Microsoft monopolization case before the EC Commission. Having exhausted all appeals against the Commission's 2004 decision finding that Microsoft had abused its dominant position in operating systems, the company appeared to ignore the Commission altogether. That is until 2008 when then Commissioner Neelie Kroes imposed an unprecedented €899 million fine against Microsoft for its inaction. Commissioner Kroes's statement at the time illustrates Wu's point about antitrust and attitude nicely. As Commissioner Kroes said: "Talk is cheap; flouting the rules is expensive. We don't want talk and promises—we want compliance. If you flout the rules you will be caught, and it will cost you dear."²

The post-Microsoft era may mark an inflection point in corporate DNA in that industry. The social idealism of the World Wide Web founder Tim Berners-Lee, who believed that the Web should be open and would not patent it or enrich himself from his invention, inspired the Google "Don't be evil" mantra. In its 2004 IPO prospectus, Google's founders explained to future shareholders that the company's aim was "greater than simply growing itself as large as it can be" and that it had an obligation to apply its resources "ultimately to make the world a better place."³ Of course, Google's corporate DNA has yet to be seriously tested in an antitrust arena, although the ongoing book settlement saga may shed some light on the issue. According to filings in that case, the

² Press Conference, Neelie Kroes, European Commissioner for Competition Policy, Introductory Remarks, Decision to Impose €899 Million Penalty on Microsoft for Non-compliance (Feb. 27, 2008), <http://europa.eu/rapid/pressReleasesAction.do?reference=SPEECH/08/105&format=HTML&aged=1&language=EN&guiLanguage=en>.

³ KEN AULETTA, GOOGLED 289 (2010).

Google book settlement was either “a proposal to construct a repository of scholarly works that will be used to benefit the public” or “a sordid financial scheme to restructure the publishing industry and to control web commerce.”⁴ Judge Denny Chin in the Southern District of New York has rejected the current settlement and invited the parties to go back to the drawing board, where they will no doubt grapple with the dichotomy between Google’s “Don’t be evil” self image, and its opponents’ less flattering image of the company.

Free Speech and Market Structure. As with corporate DNA, the effect of consolidation in information industries on free speech and media plurality is not an issue given much thought in the antitrust world. Vertical mergers between content providers and information platforms, such as those between AOL/Time Warner and Comcast/NBC, did not raise significant eyebrows under traditional merger analysis. The chapter in Wu’s book devoted to the AOL/Time Warner merger—“A Surprising Wreck”—seems to suggest that this lack of concern was well placed. As explained by Wu, the merger was stillborn because the structure of the Internet was such that the merged company had no means of holding onto AOL’s already declining customer base. (p. 260) Yet vertical integration of the kind seen in AOL/Time Warner or Comcast/NBC is more worrisome to Wu than most horizontal consolidation. This is because protecting free speech and media plurality, and not antitrust, are his principal concerns. In fact, the book’s title is borrowed from a former CBS News President’s comment that issues of free speech necessarily follow the question of “who controls the master switch.” (p. 13)

Here as elsewhere Wu makes his point through example, in this case, the film industry. As Wu argues about the vertical integration of the film industry in the 1920s and 1930s:

[W]e must confront the reality that cultural and information industries pose special problems for standard industrial analysis, complicating the rules of supply and demand by virtue of the product’s less tangible forms of value. We might understand perfectly well how block booking and vertical integration reduced the costs of industrial production [in the film industry], while understanding nothing of what these innovations meant for film as a form of expression. (p. 97)

In fact, Wu argues that it was consolidation in the film industry that made early film censorship in the form of a voluntary “Production Code” possible. (p. 119) Had the film industry not been consolidated around the major Hollywood studios, the industry might not have been as able to acquiesce to the Catholic activists behind the Code, given the risk to profits. There simply would have been too many studios involved, leading Wu to conclude that: “in the United States, it is industrial structure that determines the limits of free speech.” (p. 121)

The Separations Principle. In the final chapter of his book Wu pulls together the lessons from previous information industries and applies them to the Internet. As explained in his introduction:

To understand the forces threatening the Internet as we know it, we must understand how information technologies give rise to industries, and industries to empires. In other words, we must understand the nature of the Cycle, its dynamics, what makes it go, and what can arrest it. As with any economic theory, there are no laboratories but past experience. (p. 7)

Wu’s Separations Principle is his suggested framework for Internet governance today that would allay the risk of Internet Cycle closure tomorrow. In a nutshell:

A Separations Principle would mean the creation of a salutary distance between each of the major

⁴ Supplemental Memorandum of Amicus Curiae Open Book Alliance in Opposition to the Proposed Settlement Between the Authors Guild, Inc., Association of American Publishers, Inc. et al., and Google Inc. at 1, Case No. 05 CV 8136-DC (S.D.N.Y. Jan. 28, 2010).

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. At the same time, the Separations Principle stipulates one other necessity: that the government also keep its distance and not intervene in the market to favor any technology, network monopoly, or integration of the major functions of an information industry. (p. 304)

Wu does not dismiss the role of antitrust and FCC regulation in this process, but neither does he see them as entirely up to the job. As he explains with respect to antitrust:

To leave the economy of information, and power over this commodity, subject solely to the traditional ad hoc ways of dealing with concentrations of industrial power—in other words, to antitrust law—is dangerous. Without venturing into the long, rancorous debate over what, if any, kind of antitrust policy is proper in our system, I would argue that by their nature, those particular laws alone are inadequate for the regulation of information industries . . . [A] framework that has worked well enough for oil and aluminum is ultimately unsuited to an industry whose substrate is speech. (p. 303–04)

He concludes his book with the suggestion that the most effective Internet governance may well be industry self-regulation. The concept of corporate DNA comes into play here. He encourages reliance on “corporate norms” which “have in many ways proved to be a far more powerful deterrent to misconduct than regulations, which in corporate psychology exists only to be circumvented, preferably though not necessarily by legal means.” (p. 314) This final point will no doubt resonate with the antitrust reader. ●