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The Master Switch (Timothy Wu)

- Highlight Loc. 165-68 | Added on Sunday, August 28, 2011, 01:56 PM

a strong belief in both human perfectibility and the unique optimal design of any system. It was the last decades of Utopia Victoriana, an era of faith in technological planning, applied science, and social conditioning that had seen the rise of eugenics, Frederick Taylor's "scientific management," socialism, and Darwinism, to name but a few disparate systematizing strains of thought.

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The Master Switch (Timothy Wu)

- Highlight Loc. 338-40 | Added on Sunday, August 28, 2011, 02:19 PM

Those closer to—often at the trough of—existing industries face a remarkably constant pressure not to invent things that will ruin their employer. The outsider has nothing to lose.

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The Master Switch (Timothy Wu)

- Highlight Loc. 479-81 | Added on Tuesday, August 30, 2011, 04:29 PM

Countries that innovated would grow wealthier; those that did not would stagnate. And in Schumpeter's vision innovation was no benignly gradual process, but a merciless cycle of industrial destruction and birth, as implacable as the way of all flesh.

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The Master Switch (Timothy Wu)

- Highlight Loc. 489-91 | Added on Tuesday, August 30, 2011, 04:29 PM

It is a vision to out-Darwin Darwin: "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."

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The Master Switch (Timothy Wu)

- Highlight Loc. 496-97 | Added on Tuesday, August 30, 2011, 04:31 PM

In particular Schumpeter's theory did not account for the power of law or the government to stave off industrial death, and (for our particular purposes) arrest the Cycle.

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The Master Switch (Timothy Wu)

- Highlight Loc. 525-26 | Added on Tuesday, August 30, 2011, 04:34 PM

The importance of Bell's lawsuit shows the central role that patent plays in the Cycle, and it is a role somewhat different than is usually understood by legal scholars.

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The Master Switch (Timothy Wu)

- Highlight Loc. 528-29 | Added on Tuesday, August 30, 2011, 04:34 PM

But in the hands of an outside inventor, a patent serves a different function: as sort of corporate shield that can prevent a large industrial power from killing you off or seizing control of your company and the industry.

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The Master Switch (Timothy Wu)

- Highlight Loc. 530-32 | Added on Tuesday, August 30, 2011, 04:34 PM

The Bell patent is an example, perhaps the definitive example, of such a seeding patent. Had it not existed, there would never have been a telephone industry independent of the telegraph.

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The Master Switch (Timothy Wu)

- Highlight Loc. 558-59 | Added on Tuesday, August 30, 2011, 04:37 PM

Both the telephone and the telegraph monopolies offered magnificent opportunities, [but] were not worth very much unless they were opportunities to be monopolies.” 21

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The Master Switch (Timothy Wu)

- Highlight Loc. 626-28 | Added on Tuesday, August 30, 2011, 04:43 PM

Having begun among some oddballs as a novelty aimed at bringing one’s voice and other sounds to strangers via the air-waves, broadcasting was suddenly in the reach of just about anyone, and very soon all sorts of ideas as to what shape it should take,

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The Master Switch (Timothy Wu)

- Bookmark Loc. 649 | Added on Tuesday, August 30, 2011, 05:52 PM

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The Master Switch (Timothy Wu)

- Highlight Loc. 649-50 | Added on Tuesday, August 30, 2011, 05:52 PM

In the magazines of the 1910s you can feel the excitement of reaching strangers by radio, the connection with thousands and the sheer wonder at the technology. What you don’t hear is any expectation of cashing in.

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The Master Switch (Timothy Wu)

- Highlight Loc. 661-64 | Added on Tuesday, August 30, 2011, 05:54 PM

All these disconnected communities and houses will be united through radio as they were never united by the telegraph and the telephone. The President of the United States delivers important messages in every home, not in cold, impersonal type, but in living speech; he is transformed from what is almost a political abstraction, a personification of the republic’s dignity and power, into a kindly father, talking to his children.

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The Master Switch (Timothy Wu)

- Highlight Loc. 690-94 | Added on Tuesday, August 30, 2011, 06:10 PM

One must stress that it was not merely technological wizardry that set people dreaming: it was also the openness of the industry then rising up. The barriers to entry were low. Radio in the 1920s was a two-way medium accessible to most any hobbyist, and for a larger sum any club or other institution could launch a small broadcast station. Compare the present moment: radio is hardly our most vital medium, yet it is hard if not impossible to get a radio license, and to broadcast without one is a federal felony.

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The Master Switch (Timothy Wu)

- Highlight Loc. 728 | Added on Tuesday, August 30, 2011, 06:31 PM

In tune with Victorian convictions about human perfectibility,

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The Master Switch (Timothy Wu)

- Highlight Loc. 740-41 | Added on Tuesday, August 30, 2011, 06:32 PM

He believed that anything one might take for popular demand was but the contrivance of the broadcasters themselves.

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The Master Switch (Timothy Wu)

- Highlight Loc. 742-43 | Added on Tuesday, August 30, 2011, 06:32 PM

Reith would later put it, “He who prides himself on giving what he thinks the public wants is often creating a fictitious demand for lower standards which he will then satisfy.”

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The Master Switch (Timothy Wu)

- Highlight Loc. 797-98 | Added on Wednesday, August 31, 2011, 09:00 PM

So Burch urged his fellow mesa farmers to forget waiting for Bell and “do it ourselves.”

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The Master Switch (Timothy Wu)

- Highlight Loc. 831-32 | Added on Wednesday, August 31, 2011, 09:03 PM

Again and again in the development of technology, full appreciation of an invention’s potential importance falls to others—not necessarily technical geniuses themselves—who develop it in ways that the inventor never dreamed of.

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The Master Switch (Timothy Wu)

- Highlight Loc. 843-44 | Added on Wednesday, August 31, 2011, 09:03 PM

If we want to define how “open” any industry is, we should start with a number: the cost of entry. By this we simply mean the monetary cost of

getting into the business with a reasonable shot at reaching customers.

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The Master Switch (Timothy Wu)

- Highlight Loc. 858-59 | Added on Wednesday, August 31, 2011, 09:05 PM

These simple logistics, taken together with the absence of licensing costs, made things easy for motivated self-starters. The

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The Master Switch (Timothy Wu)

- Highlight Loc. 858-62 | Added on Wednesday, August 31, 2011, 09:05 PM

These simple logistics, taken together with the absence of licensing costs, made things easy for motivated self-starters. The economics of switching also made it possible for independent phone systems to compete with Bell. In today's automated world, the larger the network, the better it is, because you can reach more people in more places. But when human operators ("What number, please?"—the "telephone girls" to whom we shall return in another chapter) were needed to physically connect one phone line to another, a larger network meant a slower switching system, prone to bottlenecks and breakdowns.

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The Master Switch (Timothy Wu)

- Highlight Loc. 870-71 | Added on Wednesday, August 31, 2011, 09:06 PM

Relying on its profits in stronger markets, Bell would dramatically undercut the rates of local independent telephone companies in any contested area, a tactic known as predatory pricing.

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The Master Switch (Timothy Wu)

- Highlight Loc. 897-98 | Added on Wednesday, August 31, 2011, 09:09 PM

Rather like Steve Jobs's storied coming back to Apple, Vail's return to Bell, at age sixty-two, would change everything.

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The Master Switch (Timothy Wu)

- Highlight Loc. 911-12 | Added on Wednesday, August 31, 2011, 09:11 PM

he undercut the price cutters.

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The Master Switch (Timothy Wu)

- Highlight Loc. 922-23 | Added on Wednesday, August 31, 2011, 09:12 PM

Indeed, as we shall see over and over again, the shift from an open industrial phase to a closed market usually begins when capital interests spy the potential for vastly increased profit through monopoly, or when they demand greater security for their investments.

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The Master Switch (Timothy Wu)

- Highlight Loc. 935-36 | Added on Wednesday, August 31, 2011, 09:13 PM

Vail's approach was now more subtle and complex: he used connectivity as a carrot rather than a stick; and it proved, together with merger and acquisition, an irresistible way to dominate the market.

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The Master Switch (Timothy Wu)

- Highlight Loc. 964-65 | Added on Wednesday, August 31, 2011, 09:16 PM

Like AT&T, Microsoft invited its enemies to connect, to take advantage of an open platform, hoping they wouldn't notice or worry that the platform came with a spring trap.

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The Master Switch (Timothy Wu)

- Highlight Loc. 976-78 | Added on Wednesday, August 31, 2011, 09:17 PM

But from AT&T's first meeting with Justice, we see for the first time something that will occur again and again in the history of communications, the state's calculated exercise of discretion over whether to bless or destroy the monopoly power, deciding in effect what industry it will allow to be dominated.

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The Master Switch (Timothy Wu)

- Note Loc. 978 | Added on Wednesday, August 31, 2011, 09:19 PM

what a great reading. thanks mr wu for "the master switch", the marc bloch of technology

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The Master Switch (Timothy Wu)

- Highlight Loc. 986 | Added on Wednesday, August 31, 2011, 09:20 PM

Having spun much rhetoric about Bell as a public trust, Vail now seemed to be putting his money where his mouth was.

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The Master Switch (Timothy Wu)

- Highlight Loc. 1012-13 | Added on Monday, September 05, 2011, 12:41 PM

He promised to do no evil. And the government bought it.

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The Master Switch (Timothy Wu)

- Highlight Loc. 1022-24 | Added on Monday, September 05, 2011, 12:42 PM

Despite being a monopoly, Bell was committing itself to noninterference and making itself equally open to all users of its service—that is, universal in the sense its initial claim of being universal had belied.

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The Master Switch (Timothy Wu)

- Highlight Loc. 1039-40 | Added on Monday, September 05, 2011, 12:43 PM

the Anglo-American common law tradition, one asks how essential or necessary the service is—how much other industries depend on it.

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The Master Switch (Timothy Wu)

- Highlight Loc. 1041-42 | Added on Monday, September 05, 2011, 12:44 PM

four basic industries being identified as “public callings”:
telecommunications, banking, energy, and transportation.

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The Master Switch (Timothy Wu)

- Highlight Loc. 1286-87 | Added on Monday, September 05, 2011, 01:34 PM

The Trust overrelied on its prices, the patent law, and lawyers, whereas AT&T relied on its financial power, a much more dependable asset.

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The Master Switch (Timothy Wu)

- Highlight Loc. 1365-66 | Added on Monday, September 05, 2011, 01:40 PM

Advertising, in time, proved almost a license to print money,

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The Master Switch (Timothy Wu)

- Highlight Loc. 1367-71 | Added on Monday, September 05, 2011, 01:40 PM

When revenues came from the sale of radio sets, it was desirable to have as many people broadcasting as possible—nonprofits, churches, and other noncommercial entities. The more broadcasters, the more inducement for the consumer to buy a radio, and the more income for the industry. But once advertisements were introduced, radio became a zero-sum game for the attention of listeners. Each station wanted the largest possible audience listening to its programming and its advertisements. In this way advertising made rivals of onetime friends, commercial and nonprofit radio.

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The Master Switch (Timothy Wu)

- Highlight Loc. 1379-80 | Added on Monday, September 05, 2011, 01:41 PM

many of the first advertisements took a form more educational than commercial.

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The Master Switch (Timothy Wu)

- Highlight Loc. 1402-3 | Added on Monday, September 05, 2011, 01:43 PM

a final stroke, such as to this day inspires heated debate over network neutrality, AT&T’s new radios were engineered to receive only AT&T broadcast frequencies—and, not surprisingly, only AT&T programming.

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Instapaper (Instapaper)

- Highlight Loc. 665-67 | Added on Monday, September 05, 2011, 01:51 PM

Market fragmentation, along with perhaps the majority of other concerns, could be solved by working at a pan-European level. But to do that, we’d need a pan-European legislative network and a pan-European tech community.

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Instapaper (Instapaper)

- Highlight Loc. 667-68 | Added on Monday, September 05, 2011, 01:51 PM

“A Cry For Europe”, Fred Destin from Atlas Venture laid much of the blame at the feet of “our political class”.

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Instapaper (Instapaper)

- Highlight Loc. 670-73 | Added on Monday, September 05, 2011, 01:51 PM

What would be needed to make it straightforward for European startups to offer their services in all – or at least in most – European countries from day one? What can the high tech community do to enable that? Push the entertainment industry to simplify rights and licensing? Encourage startups to come up with innovative payment systems that will work throughout Europe and perhaps globally? Fund smart kids that can help break down the language

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Instapaper (Instapaper)

- Highlight Loc. 857 | Added on Monday, September 05, 2011, 01:58 PM

We will showcase the impact of public comment on regulatory outcomes. Already, we are finding interesting examples.

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Instapaper (Instapaper)

- Highlight Loc. 866-68 | Added on Monday, September 05, 2011, 01:59 PM

Because of the many alternatives suggested by the public, and because of the degree of public opposition, we have decided to gather additional information and conduct further analysis and public outreach on the concept of a no-go zone. Therefore, the final rule does not adopt a no-go zone”

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Instapaper (Instapaper)

- Highlight Loc. 1356-60 | Added on Monday, September 05, 2011, 02:49 PM

The Quarterly: What should be on a checklist when an executive is making an important strategic decision? Daniel Kahneman: I would ask about the quality and independence of information. Is it coming from multiple sources or just one source that’s being regurgitated in different ways? Is there a possibility of group-think? Does the leader have an opinion that seems to be influencing others? I would ask where every number comes from and would try to postpone the achievement of group consensus. Fragmenting problems and keeping judgments independent helps

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Instapaper (Instapaper)

- Highlight Loc. 1364-66 | Added on Monday, September 05, 2011, 02:50 PM

Frankly, I’m surprised that when you have a reasonably well-informed group—say, they have read all the background materials—that it isn’t more common to begin by having everyone write their conclusions on a slip of paper. If you don’t do that, the discussion will create an enormous amount of conformity that reduces the quality of the

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The Master Switch (Timothy Wu)

- Highlight Loc. 1873-74 | Added on Sunday, September 11, 2011, 03:07 PM

It was a scientific Valhalla, hiring the best men (and later women) they could find and leaving them more or less free to pursue what interested them.

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The Master Switch (Timothy Wu)

- Highlight Loc. 1880-83 | Added on Sunday, September 11, 2011, 03:08 PM

In short, Bell Labs has been a great force for good. It is, frankly, just the kind of phenomenon that makes one side with Theodore Vail about the blessings of a monopoly. For while AT&T was never formally required to run Bell Labs as a research laboratory, it did so out of exactly the sort of noblesse oblige that Vail espoused. AT&T ran Bell Labs not just for its corporate good but for the greater good as well.

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The Master Switch (Timothy Wu)

- Highlight Loc. 1885-86 | Added on Sunday, September 11, 2011, 03:08 PM

More to the point, it is hard to imagine a phone company today hiring someone to be their quantum physicist, with no rules and no boss.

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The Master Switch (Timothy Wu)

- Highlight Loc. 1888-89 | Added on Sunday, September 11, 2011, 03:09 PM

Put another way, in the United States, the higher consumer prices resulting from monopoly amounted, in effect, to a tax on Americans used to fund basic research.

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The Master Switch (Timothy Wu)

- Highlight Loc. 1903-6 | Added on Sunday, September 11, 2011, 03:10 PM

But why would company management bury such an important and commercially valuable discovery? What were they afraid of? The answer, rather surreal, is evident in the corporate memoranda, also unearthed by Clark, imposing the research ban. AT&T firmly believed that the answering machine, and its magnetic tapes, would lead the public to abandon the telephone.

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The Master Switch (Timothy Wu)

- Highlight Loc. 1918-22 | Added on Sunday, September 11, 2011, 03:11 PM

Yes, Bell Labs was great. But AT&T, as an innovator, bore a serious genetic flaw: it could not originate technologies that might, by the remotest possibility, threaten the Bell system. In the language of innovation theory, the output of the Bell Labs was practically restricted to sustaining inventions; disruptive technologies, those that might even cast a shadow of uncertainty over the business model, were simply out of the question.

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The Master Switch (Timothy Wu)

- Highlight Loc. 1922-24 | Added on Sunday, September 11, 2011, 03:11 PM

technology that AT&T, out of such fears, would for years suppress or fail to market: fiber optics, mobile telephones, digital subscriber lines (DSL), facsimile machines, speakerphones—the

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The Master Switch (Timothy Wu)

- Highlight Loc. 1976-78 | Added on Sunday, September 11, 2011, 03:16 PM

the world was witnessing, unbeknownst to anyone, even the combatants, the first of many engagements between AT&T and the Internet's founders—in effect, the Fort Sumter, so to speak, in the epic fight between those later to be called the “Net-heads” (backers of the Internet) and the “Bellheads.”

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The Master Switch (Timothy Wu)

- Highlight Loc. 1986-87 | Added on Sunday, September 11, 2011, 03:16 PM

The device itself did not so much effect as foreshadow an intolerable loss of control.

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The Master Switch (Timothy Wu)

- Highlight Loc. 1996 | Added on Sunday, September 11, 2011, 03:17 PM

And that's the problem: monopoly presumes a prescience that humans are seldom capable of.

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The Master Switch (Timothy Wu)

- Highlight Loc. 2000-2003 | Added on Sunday, September 11, 2011, 03:17 PM

It would be extremely difficult to furnish “good” telephone service if telephone users were free to attach to the equipment, or use with it, all of the numerous kinds of foreign attachments that are marketed by persons who have no responsibility for the quality of telephone service but are primarily interested in exploiting their products.⁹

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The Master Switch (Timothy Wu)

- Highlight Loc. 2148-49 | Added on Sunday, September 18, 2011, 07:06 PM

it demonstrates a substantial vulnerability of highly centralized systems: while designed for stability's sake, they are in fact susceptible to extremely drastic disruption.

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The Master Switch (Timothy Wu)

- Highlight Loc. 2192-93 | Added on Sunday, September 18, 2011, 07:09 PM

There is nothing in the Constitution that stops Church A from compelling Mr. B to pipe down.

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Instapaper (Instapaper)

- Highlight Loc. 848 | Added on Monday, September 19, 2011, 05:01 PM

identifying case studies and data surrounding this impact-a

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The Master Switch (Timothy Wu)

- Highlight Loc. 2209-10 | Added on Saturday, September 24, 2011, 10:15 AM

It was the combination of the Church and the Hollywood studio system that produced one of the most dramatic regimes of censorship in American history.

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The Master Switch (Timothy Wu)

- Highlight Loc. 2205-7 | Added on Saturday, September 24, 2011, 10:16 AM

The problem is that a “speech industry”—as we might term any information industry—once centralized, becomes an easy target for external independent actors with strong reasons of their own for limiting speech.

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The Master Switch (Timothy Wu)

- Highlight Loc. 2288-89 | Added on Saturday, September 24, 2011, 10:22 AM

the early FCC was among the most useful tools of domination that industry has ever invented.

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The Master Switch (Timothy Wu)

- Highlight Loc. 2316-17 | Added on Saturday, September 24, 2011, 10:25 AM

vertical integration of an industry creates a vested interest in limiting free expression.

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The Master Switch (Timothy Wu)

- Highlight Loc. 2324-25 | Added on Saturday, September 24, 2011, 10:26 AM

The government can act only on the basis of what it understands to be established fact.

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The Master Switch (Timothy Wu)

- Highlight Loc. 2327-28 | Added on Saturday, September 24, 2011, 10:26 AM

Much of the work of Washington lobbyists is simply an effort to control the conversation surrounding an issue, and new technologies are no exception.

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The Master Switch (Timothy Wu)

- Highlight Loc. 2325-27 | Added on Saturday, September 24, 2011, 10:26 AM

Much of what is called lobbying must actually be recognized as a campaign to establish, as conventional wisdom, the “right” facts, whether pertaining to climate change, the advantages of charter schools, or the ideal technology for broadcasting.

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The Master Switch (Timothy Wu)

- Highlight Loc. 2334-36 | Added on Saturday, September 24, 2011, 10:27 AM

the very first FM radio stations were nonprofit ventures, financed by Columbia University at Armstrong's urging, a precursor of Stanford's funding of the Google search engine in the 1990s.

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The Master Switch (Timothy Wu)

- Highlight Loc. 2336-37 | Added on Saturday, September 24, 2011, 10:28 AM

thanks to Armstrong's tireless advocacy did the technology not die,

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The Master Switch (Timothy Wu)

- Highlight Loc. 2337-38 | Added on Saturday, September 24, 2011, 10:29 AM

He had a flair for the dramatic, and his demonstrations of FM's wonders made headlines, undermining the efforts of the industry to suggest there wasn't much to it.

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The Master Switch (Timothy Wu)

- Highlight Loc. 2345-47 | Added on Saturday, September 24, 2011, 10:30 AM

There was no reason for the federal government not to allow the development of both a new FM industry and a television industry. Except in the industry's tale spinning, it never was a matter of one or the other.

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The Master Switch (Timothy Wu)

- Highlight Loc. 2360-63 | Added on Saturday, September 24, 2011, 10:31 AM

The FCC nevertheless defended them in terms reasonable on their face, but specious under their technical particulars. The band relocation and the wattage limits, for instance, apart from clearing bandwidth for television, were officially justified as protecting FM broadcasts from interference, particularly something called "skywave interference" that critics believed to be a bogeyman, but whose existence could never conclusively be disproved.

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The Master Switch (Timothy Wu)

- Highlight Loc. 2365-66 | Added on Saturday, September 24, 2011, 10:32 AM

But even if one assumes benign intentions, federal planning is never a good midwife for a new industry.

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The Master Switch (Timothy Wu)

- Highlight Loc. 2391-92 | Added on Saturday, September 24, 2011, 10:34 AM

It was a fight of man against corporation, with discovery and pretrial motions artfully employed to delay justice until the size of Armstrong's legal bills alone threatened to determine the contest. The inventor's deposition alone lasted over a year.

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The Master Switch (Timothy Wu)

- Highlight Loc. 2447-48 | Added on Saturday, September 24, 2011, 10:38 AM

Enter the force that perennially has bedeviled the smooth operation of Schumpeter's basic theory: the reluctance of the obsolete to go gently.

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The Master Switch (Timothy Wu)

- Highlight Loc. 2510-11 | Added on Saturday, September 24, 2011, 10:44 AM

their value is in exposing a working model to more minds that might muse upon it and imagine a more evolved version.

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The Master Switch (Timothy Wu)

- Highlight Loc. 2556-57 | Added on Monday, September 26, 2011, 02:40 AM

But the FCC, at the time, was obsessed with the perceived benefits of "planning"—of setting out America's technological future in an orderly manner.

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The Master Switch (Timothy Wu)

- Highlight Loc. 2568-69 | Added on Monday, September 26, 2011, 02:41 AM

As Friedrich Hayek would later argue, how can the government possibly have enough information to know when something as unpredictable as technology is "ready"?

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The Master Switch (Timothy Wu)

- Highlight Loc. 2570 | Added on Monday, September 26, 2011, 02:41 AM

permission?

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The Master Switch (Timothy Wu)

- Highlight Loc. 2579 | Added on Monday, September 26, 2011, 02:42 AM

"permissionless innovation."

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The Master Switch (Timothy Wu)

- Highlight Loc. 2592 | Added on Monday, September 26, 2011, 02:43 AM

what we call genius might better be described as smarts coupled with capital.

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The Master Switch (Timothy Wu)

- Highlight Loc. 2625-26 | Added on Monday, September 26, 2011, 02:47 AM

We fancy having in the United States the most open of markets for innovation, in contrast to the more controlled economies of other nations. In truth, however, the record is decidedly uneven,

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Instapaper (Instapaper)

- Highlight Loc. 134-35 | Added on Tuesday, September 27, 2011, 04:57 PM

accept your CAD design files and convert them into real parts and products via CAM (computer-aided manufacture). Different companies specialize in different computerized production technologies, ranging from laser cutting to 3-D printing.

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Instapaper (Instapaper)

- Highlight Loc. 1546-47 | Added on Tuesday, September 27, 2011, 08:46 PM

we have decided to gather additional information and conduct further analysis and public outreach on the concept of a no-go zone.

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The Master Switch (Timothy Wu)

- Highlight Loc. 2807-8 | Added on Wednesday, October 05, 2011, 07:33 PM

the blessing of the state, implicit or explicit, has been crucial to every twentieth-century information empire.

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The Master Switch (Timothy Wu)

- Highlight Loc. 2842-43 | Added on Wednesday, October 05, 2011, 07:36 PM

the breakup of Bell laid the foundation for every important communications revolution since the 1980s onward.

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The Master Switch (Timothy Wu)

- Highlight Loc. 2910-11 | Added on Wednesday, October 05, 2011, 08:00 PM

But the most profound effects of the decree would not emerge for decades. The industry would remain in an odd stasis through the 1950s and into the early 1960s.

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The Master Switch (Timothy Wu)

- Highlight Loc. 2944 | Added on Wednesday, October 05, 2011, 08:03 PM

the merits of a breakup cannot be reduced to its effect on consumer prices,

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The Master Switch (Timothy Wu)

- Highlight Loc. 2979-80 | Added on Wednesday, October 05, 2011, 11:24 PM

These were systems whose priority was human augmentation rather than the system itself.

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The Master Switch (Timothy Wu)

- Highlight Loc. 3061-64 | Added on Wednesday, October 05, 2011, 11:30 PM

“We believe that we are entering a technological age in which we will be able to interact with the richness of living information—not merely in the passive way that we have become accustomed to using books and libraries,

but as active participants in an ongoing process, bringing something to it through our interaction with it, and not simply receiving something from it by our connection to it.”

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Instapaper (Instapaper)

- Highlight Loc. 59-62 | Added on Sunday, October 09, 2011, 09:37 AM

But often knowledge created in a forum or discussion network is hard to find and doesn't show up well in search engines. In some forums, this has evolved into a 'forum and wiki' model where knowledge generated in the forum is copied out into a wiki where it is much easier to find and consume. This

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Instapaper (Instapaper)

- Highlight Loc. 63-64 | Added on Sunday, October 09, 2011, 09:37 AM

Moneysavingexpert and Mumsnet for instance both lead these days with specially created or curated content for their audience, with the forums in the background

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Instapaper (Instapaper)

- Highlight Loc. 66 | Added on Sunday, October 09, 2011, 09:37 AM

Forums are not flat in structure even though anyone can pitch in.

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Instapaper (Instapaper)

- Highlight Loc. 67-68 | Added on Sunday, October 09, 2011, 09:38 AM

Moderators and other active contributors need to be nurtured in some form, often with peer-status rewards.

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Instapaper (Instapaper)

- Highlight Loc. 69-70 | Added on Sunday, October 09, 2011, 09:38 AM

I spoke with a former Citizen's Advice Bureau staffer: 'we had our own carefully drafted internal knowledge base, but it was much easier to ask a question in Rightsnet'

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Instapaper (Instapaper)

- Highlight Loc. 75-77 | Added on Sunday, October 09, 2011, 09:38 AM

the work on forums went almost nowhere until resurfacing in the coalition government's 2011 consumer empowerment strategy.

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Instapaper (Instapaper)

- Highlight Loc. 124-25 | Added on Sunday, October 09, 2011, 09:43 AM

More than 100 years ago first aid was first taught to volunteers in Woolwich, generating widespread concern about the risks of amateurs causing more harm than good.

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Instapaper (Instapaper)

- Highlight Loc. 135-36 | Added on Sunday, October 09, 2011, 09:44 AM

you could reasonably expect to see your GP for an hour or two to help you manage your long-term conditions

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Instapaper (Instapaper)

- Highlight Loc. 137 | Added on Sunday, October 09, 2011, 10:07 AM

expert patient programme,

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Instapaper (Instapaper)

- Highlight Loc. 138-39 | Added on Sunday, October 09, 2011, 10:08 AM

to teach people how to manage their own conditions, with real results in quality of life and reduced demand on health services.

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Instapaper (Instapaper)

- Highlight Loc. 145-47 | Added on Sunday, October 09, 2011, 10:08 AM

Equipping citizens with the skills and knowledge to help themselves and each other is clearly a good investment. But running through many of these innovations is a more radical idea that challenges the nature of professionalism and expertise.

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Instapaper (Instapaper)

- Highlight Loc. 148-49 | Added on Sunday, October 09, 2011, 10:09 AM

huge potential for professionals and citizens to join forces in new ways that enable them to create much more value by working together.

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Technology Review (Technology Review)

- Highlight Loc. 1066-67 | Added on Monday, October 10, 2011, 11:37 PM

although photovoltaic technology was invented in the United States, many key innovations in solar power are happening in Asia now, largely because the necessary manufacturing prowess is there.

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The Master Switch (Timothy Wu)

- Highlight Loc. 3207-8 | Added on Saturday, October 29, 2011, 08:38 PM

the shortage of TV stations had given exclusive custody of a "master switch" over speech, creating "an autocracy where a very few citizens are more equal than all the others."

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The Master Switch (Timothy Wu)

- Highlight Loc. 3234-39 | Added on Sunday, October 30, 2011, 03:29 PM

The cable operator was to be granted discretion over the content of only

one or two channels; the rest would be reserved for public interest programming, or freely available for lease by anyone. This arrangement the Nixon administration called its "separations policy."¹³ One cannot fail to be impressed by the radicalism of the Nixon policy. Both in freeing the cable industry from geographical restrictions on its business and in denying both the federal government and the operators themselves any power over programming, the administration was evincing a hard-core libertarian streak not always associated with a White House that also spied on its enemies.

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The Master Switch (Timothy Wu)

- Highlight Loc. 3241-42 | Added on Sunday, October 30, 2011, 03:29 PM

This wariness of corporate power was also at the heart of his most famous initiative, the so-called Open Skies policy, which permitted any qualified company to launch a satellite,

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The Master Switch (Timothy Wu)

- Highlight Loc. 3401-7 | Added on Tuesday, November 01, 2011, 10:56 AM

DeButts and the old Bellheads were right about the immediate effects of the breakup. An American public wearied and bewildered by the years its government had spent hounding the nation's most reliable corporation* would very shortly face a rude awakening to inflated and complicated phone bills, including all sorts of mystifying connection fees and surcharges. (The degree to which the long lines had been subsidizing loss-leading markets throughout the country was greater than even Bell itself knew!) It would be some years before these inconveniences were offset by the fruits of innovation. On the other hand, when the innovation pent up by the Bell system came out, it was not a trickle but a tidal wave, in computing, telephony, networking, and everything else that has defined the information economy of the last thirty years.

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The Master Switch (Timothy Wu)

- Highlight Loc. 3464-69 | Added on Tuesday, November 01, 2011, 11:00 AM

To ponder the design of the Internet is to be struck by its resemblance to other decentralized systems, such as the federal system of the United States. The Founding Fathers had no choice but to deal with the fact of individual states already too powerful and mature to give up most of their authority to a central government. The designs of the first two constitutions were therefore constrained—indeed, overwhelmingly informed—by the imperative of preserving states' rights, in order to have any hope of ratification. Similarly, the Internet's founders were forced, however fortunate the effect may now seem, to invent a protocol that took account of the existence of many networks, over which they had limited power.

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The Master Switch (Timothy Wu)

- Highlight Loc. 3478-79 | Added on Tuesday, November 01, 2011, 11:01 AM

The same ideas that had inspired Henry Ford and Theodore Vail had, in the realm of politics, led to Hitler and Stalin.

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The Master Switch (Timothy Wu)

- Highlight Loc. 3487-90 | Added on Tuesday, November 01, 2011, 11:02 AM

But what prevented monopoly and all centralized systems from realizing these efficiencies, in Hayek's view, was a fundamental failure to appreciate human limitations. With perfect information, a central planner could effect the best of all possible arrangements, but no such planner could ever hope to have all the relevant facts

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The Master Switch (Timothy Wu)

- Highlight Loc. 3512-13 | Added on Tuesday, November 01, 2011, 11:24 AM

like markets, had an inscrutable, idiosyncratic logic not easily grasped by the human mind but deserving of respect.

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The Master Switch (Timothy Wu)

- Highlight Loc. 3522-25 | Added on Tuesday, November 01, 2011, 11:26 AM

In a seminal paper of 1984, "End-to-End Arguments in System Design," they argued for the enormous potential inherent in decentralizing decisional authority—giving it to the network users (the "ends").¹⁵ The network itself (the "middle") should, they insisted, be as nonspecialized as possible, so as to serve the "ends" in any ways they could imagine.*

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The Master Switch (Timothy Wu)

- Highlight Loc. 3527-28 | Added on Tuesday, November 01, 2011, 11:27 AM

While we cannot say exactly that the network pioneers of the 1970s were disciples of these or any particular thinker, there is no denying the general climate of thought in which computer scientists were living, along with everybody else.

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The Master Switch (Timothy Wu)

- Highlight Loc. 3552-53 | Added on Tuesday, November 01, 2011, 11:29 AM

Yet in the rebuilt industries something is missing, like a part overlooked, and this is the sense of civic responsibility.

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The Master Switch (Timothy Wu)

- Highlight Loc. 3550-52 | Added on Tuesday, November 01, 2011, 11:29 AM

For the entertainment industries, size is a means of trying to flatten out the huge risk inherent in creating big, expensive products. In communications, the temptations of size and monopoly arise from an interest in running a fully integrated system and controlling every possible source of revenue.

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The Master Switch (Timothy Wu)

- Highlight Loc. 3557-59 | Added on Tuesday, November 01, 2011, 11:33 AM

The new giants had much of the power of the old, without the noblesse oblige. And by the late 1990s it began to seem inevitable that just two industries, the Bell companies and the media conglomerates, would soon control everything in the world of

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The Master Switch (Timothy Wu)

- Highlight Loc. 3556 | Added on Tuesday, November 01, 2011, 11:33 AM

What reemerged was similar in body but different in its soul.

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The Master Switch (Timothy Wu)

- Highlight Loc. 3789-91 | Added on Wednesday, November 02, 2011, 07:45 PM

The fundamental fact in the business is a high level of uncertainty as to the success of any given product, and a giant disparity between the rewards that come to those that succeed modestly, as against the real hits.

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The Master Switch (Timothy Wu)

- Highlight Loc. 3810-12 | Added on Wednesday, November 02, 2011, 07:50 PM

With any given entertainment product—as compared with, say, socks or beer—one is faced with selling something people don't ultimately need; they have to want it.

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The Master Switch (Timothy Wu)

- Highlight Loc. 4479-80 | Added on Wednesday, November 02, 2011, 08:56 PM

the very structure of the Internet in destroying whatever advantages the merger was meant to deliver.

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The Master Switch (Timothy Wu)

- Highlight Loc. 4480 | Added on Wednesday, November 02, 2011, 08:56 PM

The principle of net neutrality, instilled by the Internet's founders, is ultimately what wrecked AOL Time Warner.

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The Master Switch (Timothy Wu)

- Highlight Loc. 4682-84 | Added on Wednesday, November 02, 2011, 09:11 PM

Unnoticed by most, here was enunciated a crucial idea, a philosophy of business organization radical in its implications. Schmidt was suggesting that, on a layered network, in an age of open protocols, all the advantages of integration—the “synergies” and efficiencies of joint operation—could be realized without actual corporate mergers.

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The Master Switch (Timothy Wu)

- Highlight Loc. 4689-90 | Added on Wednesday, November 02, 2011, 09:12 PM

The iPhone would work exclusively on the network of one company: AT&T.*

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The Master Switch (Timothy Wu)

- Highlight Loc. 4718 | Added on Wednesday, November 02, 2011, 09:14 PM

the future of Apple and Google will form the future of America and the world.

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The Master Switch (Timothy Wu)

- Highlight Loc. 4758 | Added on Saturday, November 12, 2011, 09:36 AM

the power of computing, formerly the instrument of large companies with mainframe resources, and put it in the hands of individuals.

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The Master Switch (Timothy Wu)

- Highlight Loc. 4768-69 | Added on Saturday, November 12, 2011, 09:37 AM

Put another way, Wozniak welcomed the amateur enthusiast, bringing the cult of the inspired tinkerer to the mass-produced computer.

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The Master Switch (Timothy Wu)

- Highlight Loc. 4771-72 | Added on Sunday, November 13, 2011, 05:44 PM

As Wozniak described the club, "Everyone in the Homebrew Computer Club envisioned computers as a benefit to humanity—a tool that would lead to social justice."

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The Master Switch (Timothy Wu)

- Highlight Loc. 4880-81 | Added on Sunday, November 13, 2011, 07:01 PM

The firm, while having as many ventures as it has engineers, eschews vertical integration of these efforts to a degree virtually unprecedented for a communications giant.

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The Master Switch (Timothy Wu)

- Highlight Loc. 4889-91 | Added on Sunday, November 13, 2011, 07:05 PM

Compared with other giants, like Time Warner circa 2000, or Paramount Pictures circa 1927, or AT&T's original and resurrected incarnations, Google is underintegrated and undefended.

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The Master Switch (Timothy Wu)

- Highlight Loc. 4904-5 | Added on Sunday, November 13, 2011, 07:06 PM

Google's chief advantage, as we have suggested, can be summarized in a single word: specialization.

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The Master Switch (Timothy Wu)

- Highlight Loc. 4972-73 | Added on Sunday, November 13, 2011, 07:10 PM

if a copyright lawyer had been among Google's founders, it's doubtful the thing would have gotten off the ground.

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The Master Switch (Timothy Wu)

- Highlight Loc. 5119-20 | Added on Sunday, November 13, 2011, 07:21 PM

basic conception of the Internet and Wozniak's idea of the computer as worlds that minimize the need for permission.

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The Master Switch (Timothy Wu)

- Highlight Loc. 5253-55 | Added on Sunday, November 13, 2011, 07:49 PM

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.

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The Master Switch (Timothy Wu)

- Highlight Loc. 5268-69 | Added on Sunday, November 13, 2011, 07:50 PM

What I propose is not a regulatory approach but rather a constitutional approach to the information economy.

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 106-7 | Added on Thursday, December 08, 2011, 12:38 PM

Faced with a networked future that seems to favor the distracted over the focused, the automatic over the considered, and the contrary over the compassionate, it's time to press the pause button and ask what all this means

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 111-13 | Added on Thursday, December 08, 2011, 02:56 PM

It is that thinking itself is no longer—at least no longer exclusively—a personal activity. It's something happening in a new, networked fashion. But the cybernetic organism, so far, is more like a cybernetic mob than new collective human brain.

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 156-60 | Added on Thursday, December 08, 2011, 03:07 PM

Meanwhile, we tend to think less about how to integrate new tools into our lives than about how simply to keep up. Businesses throw money at social networks because they think that's the way to market in a digital age. Newspapers go online less because they want to than because they think they have to—and with largely disastrous results. Likewise, elementary school boards adopt "laptop" curriculums less because they believe that they'll

teach better than because they fear their students will miss out on something if they don't.

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 203-4 | Added on Thursday, December 08, 2011, 03:12 PM

Freedom—even in a digital age—means freedom to choose how and with whom you do your reflection, and not everything needs to be posted for the entire world with “comments on” and “copyright off.”

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 497-503 | Added on Saturday, December 10, 2011, 11:22 AM

Similarly, I very often find the hosts of my talks flabbergasted when they learn I will be presenting without the aid of a computer slide show. Some have even been brought to the brink of canceling an event for fear of how their audiences might react to a speaker who presents without computer-generated visuals. What they can't seem to grasp is that I could just as easily deliver a digital slide show live from the comfort of my home via broadband Internet. There's no need to fly a human body two thousand miles for that. No, the reason to spend the jet fuel to bring a human body across a country or an ocean is for the full-spectrum communication that occurs between human beings in real spaces with one another. The digital slideshow, in most cases, is a distraction—distancing people from one another by mediating their interaction with electronic data.

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 540-43 | Added on Saturday, December 10, 2011, 11:26 AM

In the digital recording, however, only the dimensions of the sound that can be measured and represented in numbers are taken into account. Any dimensions that the recording engineers haven't taken into consideration are lost. They are simply not measured, written down, stored, and reproduced. It's not as if they can be rediscovered later on some upgraded playback device. They are gone.

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 545-47 | Added on Saturday, December 10, 2011, 11:27 AM

But early tests of analog recordings compared to digital ones revealed that music played back on a CD format had much less of a positive impact on depressed patients than the same recording played back on a record.

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 552-54 | Added on Saturday, December 10, 2011, 11:29 AM

The analog really just happens—the same way the hands of a clock move slowly around the dial, passing over the digits in one smooth motion. The digital recording is more like a digital clock, making absolute and discrete choices about when those seconds are changing from one to the

next.

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 557-58 | Added on Saturday, December 10, 2011, 11:29 AM

Every translation of a real thing to the symbolic realm of the digital requires that such decisions be made.

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 559-61 | Added on Saturday, December 10, 2011, 11:29 AM

The digital realm is biased toward choice, because everything must be expressed in the terms of a discrete, yes-or-no, symbolic language. This, in turn, often forces choices on humans operating within the digital sphere.

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 580-82 | Added on Saturday, December 10, 2011, 11:31 AM

And while our computers are busy making discrete choices about the rather indiscrete and subtle world in which we live, many of us are busy, too—accommodating our computers by living and defining ourselves in their terms. We are making choices not because we want to, but because our programs demand them.

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 617-23 | Added on Saturday, December 10, 2011, 11:35 AM

One emerging alternative to forced, top-down choice in the digital realm is “tagging.” Instead of a picture, blog entry, or anything being entirely defined by its predetermined category, users who come upon it are free (but not obligated) to label it themselves with a tag. The more people who tag it a certain way, the more easily others looking for something with that tag will find it. While traditional databases are not biased toward categorizing things in an open-ended, bottom-up fashion, they are capable of operating this way. They needn’t be limited by the original choices programmed into them but can be programmed instead to expand their dimensions and categories based on the tags and preferences of the people using them. They can be made to conform to the way people think, instead of demanding we think like they do. It’s all in the programming, and in our awareness of how these technologies will be biased if we do not intervene consciously in their implementation.

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 641-43 | Added on Saturday, December 10, 2011, 11:37 AM

This makes digital technology—and those of us using it—biased toward a reduction of complexity.

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 663-64 | Added on Saturday, December 10, 2011, 11:41 AM

Actually reading the scenes in a Shakespeare play, or following the process through which Mendel inferred genetics from the variations in his garden pea plants, promotes experiential learning.

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 669-70 | Added on Saturday, December 10, 2011, 11:42 AM

we can retrieve any piece of data on our own terms, but we do so at the risk of losing its context.

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 681-82 | Added on Saturday, December 10, 2011, 11:44 AM

In a digital culture that values data points over context, everyone comes to believe they have the real answer and that the other side is crazy or evil.

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 685-88 | Added on Saturday, December 10, 2011, 11:45 AM

As a result, we tend to retreat into tribes, guided primarily by our uninformed rage. And we naturally hunger for reinforcement. Television news shows rise to the occasion, offering shouting matches between caricatured opposites competing for ratings. Elected officials are ridiculed as “wonks” for sharing or even understanding multiple viewpoints, the history of an issue, or its greater context.

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 710-12 | Added on Saturday, December 10, 2011, 11:47 AM

Reading becomes a process of elimination rather than deep engagement. Life becomes about knowing how not to know what one doesn't have to know.

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 721-22 | Added on Saturday, December 10, 2011, 11:48 AM

Instead of learning about our technology, we opt for a world in which our technology learns about us.

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 737-38 | Added on Saturday, December 10, 2011, 11:49 AM

As we know even personally, our time spent looking into screens harms our eyesight, wearing earbuds harms our hearing, and crouching over a keyboard harms our ability to move.

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 750-52 | Added on Saturday, December 10, 2011, 11:50 AM

Because digital simulations are numerical models, many choices about them must be made in advance. Models are necessarily reductive. They are limited by design. This does not negate their usefulness; it merely qualifies it. Digital reduction yields maps.

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 808-15 | Added on Saturday, December 10, 2011, 11:56 AM

Of course, this logic dovetails perfectly with a financial industry in which derivatives on transactions matter more than the transactions themselves. Once the financial world came to understand that its own medium—central currency—was biased in the interests of the lender and not the producer, every business attempted to get out of the business it was actually in, and scale up to become a holding company. Thus, great industrial companies like General Electric shed their factories and got involved in capital leasing, banking, and commercial credit. Meanwhile, those who were already in banking and credit moved up one level of abstraction as well, opening hedge funds and creating derivatives instruments that won or lost money based on the movements of economic activity occurring one level below. Even craftier speculators began writing derivatives of derivatives, and so on, and so on.

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 834 | Added on Saturday, December 10, 2011, 11:58 AM

Activism means finding a website, joining a movement, or “liking” a cause—all of which exist on a plane above and beyond their human members.

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 880-81 | Added on Saturday, December 10, 2011, 12:01 PM

In the march toward increasing abstraction, whatever we had previously will seem like the real

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 904-9 | Added on Saturday, December 10, 2011, 12:03 PM

As the postmodernists would remind us, we have stuff, we have signs for stuff, and we have symbols of signs. What these philosophers feared was that as we came to live in a world defined more by symbols, we would lose touch altogether with the real stuff; we would become entranced by our simulated reality, and disconnect from the people and places we should care about. As we watch people wearing headphones and staring into smart phones, ensconced in their private digital bubbles as they walk down what were once public streets, it is hard not to agree with those pessimistic assessments of our procession into simulation.

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 912-13 | Added on Saturday, December 10, 2011, 12:04 PM

Just as the framers of the Constitution and the Talmudic scribes before them understood, abstract codes of laws are fine—so long as we're the ones writing them.

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 957-58 | Added on Saturday, December 10, 2011, 02:06 PM

But more than simply protecting them from retribution, the anonymous status of people in an online group engenders crowd behavior.

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 966 | Added on Saturday, December 10, 2011, 02:07 PM

digital technology is biased toward depersonalization,

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 980-81 | Added on Saturday, December 10, 2011, 02:08 PM

Requiring that people register to make comments invariably raises the level of conversation as well as the level of civility.

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 998-99 | Added on Saturday, December 10, 2011, 02:09 PM

our digital behaviors closely mirror those of Asperger's sufferers: a dependence on the verbal over the visual, low pickup on social cues and facial expressions, apparent lack of empathy, and the inability to make eye contact.

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 1001-5 | Added on Saturday, December 10, 2011, 02:10 PM

According to best estimates,[4] only 7 percent of human communication occurs on the verbal level. Pitch, volume, and other vocal tone account for 38 percent, and body movements such as gestures and facial expression account for a whopping 55 percent. As we have all experienced, the way a person makes eye contact can mean a whole lot more to us than whatever he is saying.

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 1064-65 | Added on Saturday, December 10, 2011, 02:14 PM

My own first Internet book was actually canceled by the publisher in 1992 because they thought the net would be "over" by 1993, when the book would finally hit the shelves.

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 1182-85 | Added on Saturday, December 10, 2011, 02:23 PM

Memes passed from person to person, and replicated if they were useful and powerful or died out if they were not. Just as a species can get stronger through natural selection of genes, a society gets stronger through the natural selection of memes. Memes are just ideas that spread. The meme for exchanging grain receipts works better than the one for depending entirely on one-to-one bartering, and so the meme spreads and many towns develop coinage.

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 1187 | Added on Saturday, December 10, 2011, 02:23 PM

We spread the ideas that we think are true, because this will increase our value to others.

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 1274-75 | Added on Saturday, December 10, 2011, 02:29 PM

marketers need to learn that the easiest way to sell stuff in the digital age is to make good stuff.

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 1283-85 | Added on Saturday, December 10, 2011, 02:30 PM

or a threatening virus that will eat your data if you don't shut down your computer immediately. It's sweet that they want to share with us; it's just a shame they don't have anything real to share. Viral media fills this need for them, giving them fake facts with which to feed digital media's bias for nonfiction content.

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 1285-87 | Added on Saturday, December 10, 2011, 02:30 PM

Those who succeed as communicators in the new bazaar will be the ones who can quickly evaluate what they're hearing, and learn to pass on only the stuff that matters.

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 1321-22 | Added on Saturday, December 10, 2011, 02:33 PM

The boost to one's reputation could still bring financial reward in the form of job advancement or speaking fees, but the real motivator was fun and pride.

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 1331-32 | Added on Saturday, December 10, 2011, 02:34 PM

Now that students can find out almost anything they need to online, the role of the teacher must change to that of a guide or coach—more of a partner in learning who helps the students evaluate and synthesize the data they find.

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 1341-46 | Added on Saturday, December 10, 2011, 02:35 PM

As early as the 1920s, artists called the Dadaists began cutting up text and putting it together in new ways. In the 1960s, writers and artists such as William Burroughs and Brion Gysin were experimenting with the technique, physically cutting up a newspaper or other text object into many pieces and then recombining them into new forms. They saw it as a way to break through the hypnosis of traditional media and see beyond its false imagery to the real messages and commands its controllers were trying to transmit to us without our knowledge. Digital technology has turned this technique from a fringe art form to a dominant aesthetic.

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Bookmark Loc. 1506 | Added on Saturday, December 10, 2011, 02:43 PM

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Program or Be Programmed (Douglas Rushkoff and Leland Purvis)

- Highlight Loc. 1506-8 | Added on Saturday, December 10, 2011, 02:43 PM

Instead of teaching programming, most schools with computer literacy curriculums teach programs. Kids learn how to use popular spreadsheet, word processing, and browsing software so that they can operate effectively in the high-tech workplace.

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Honeybee Democracy (Thomas D. Seeley)

- Highlight Loc. 971-72 | Added on Saturday, December 10, 2011, 03:11 PM

Consider, for example, the first stage of every decision-making process, where the critical challenge is to identify the available options.

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Honeybee Democracy (Thomas D. Seeley)

- Highlight Loc. 986-88 | Added on Saturday, December 10, 2011, 03:13 PM

One valuable lesson that we can learn from the bees is that holding an open and fair competition of ideas is a smart solution to the problem of making a decision based on a pool of information dispersed across a group of individuals.

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Honeybee Democracy (Thomas D. Seeley)

- Highlight Loc. 996-98 | Added on Saturday, December 10, 2011, 03:13 PM

Knowing the value of starting an investigation of animal behavior with a “watching and wondering” phase, during which one patiently makes broad observations that can yield unexpected discoveries,

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Free Ride (Robert Levine)

- Highlight Loc. 125-26 | Added on Saturday, December 10, 2011, 05:45 PM

But like most ideological arguments about the Internet, the idea that consumers want free media has an economic agenda behind it.

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Free Ride (Robert Levine)

- Highlight Loc. 220-22 | Added on Saturday, December 10, 2011, 05:52 PM

Google has as much interest in free online media as General Motors does in cheap gasoline. That's why the company spends millions of dollars lobbying to weaken copyright.²⁶

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Free Ride (Robert Levine)

- Highlight Loc. 225-26 | Added on Saturday, December 10, 2011, 05:52 PM

While it's silly to argue that lending a DVD to a friend is some kind of a moral failing, it's even more ridiculous to suggest there's an inalienable right to see Iron Man 2.

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Free Ride (Robert Levine)

- Highlight Loc. 229-31 | Added on Saturday, December 10, 2011, 05:53 PM

The core copyright businesses—music, film, television, and computer software—account for about 6.5 percent of U.S. GDP, according to a report by the economist Stephen E. Siwek.²⁷ More important, given the current economic climate, they generate jobs and a trade surplus.

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Free Ride (Robert Levine)

- Bookmark Loc. 403 | Added on Sunday, December 11, 2011, 01:14 PM

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Free Ride (Robert Levine)

- Highlight Loc. 403-4 | Added on Sunday, December 11, 2011, 01:14 PM

On one side were the major labels and studios, at the height of their power and with good connections in the White House. On the other were electronics manufacturers, telecom companies, and Internet idealists—groups

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Free Ride (Robert Levine)

- Highlight Loc. 412-14 | Added on Sunday, December 11, 2011, 01:17 PM

Lehman and the administration assumed that many of those jobs would come from the rapidly expanding global market for American-made entertainment. Other countries would manufacture machines; the United States could make the music, movies, and video games they played.

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Free Ride (Robert Levine)

- Highlight Loc. 416-17 | Added on Sunday, December 11, 2011, 01:17 PM

have an economy that wasn't just based on backbreaking physical labor but

on the fruits of the mind.”

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Free Ride (Robert Levine)

- Highlight Loc. 420-21 | Added on Sunday, December 11, 2011, 01:17 PM

a 1998 law prohibited federal, state, and local governments from taxing it.
13

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Free Ride (Robert Levine)

- Highlight Loc. 470-73 | Added on Sunday, December 11, 2011, 01:21 PM

THE ONGOING LEGAL struggle between technology companies and media conglomerates has always been characterized as one of small start-ups challenging established giants. “If you look at copyright as a whole, you had a phenomenal lobby without pushback from anybody, except a little bit from us and a handful of law professors,” says the CEA’s chief executive, Gary Shapiro. “We’re David

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Free Ride (Robert Levine)

- Highlight Loc. 483-84 | Added on Sunday, December 11, 2011, 01:22 PM

the bill’s opponents also wanted to make the Internet safe for businesses—they just happened to be different businesses.

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Free Ride (Robert Levine)

- Highlight Loc. 523-24 | Added on Sunday, December 11, 2011, 01:25 PM

It framed an industry dispute in terms of public interest, and this tactic has been remarkably effective ever since.

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Free Ride (Robert Levine)

- Highlight Loc. 529-30 | Added on Sunday, December 11, 2011, 01:25 PM

Later, technology companies would return the favor with significant funding for organizations that work to loosen copyright laws.

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Free Ride (Robert Levine)

- Highlight Loc. 547-48 | Added on Sunday, December 11, 2011, 01:28 PM

As anti-copyright activists point out, this is a common way of extending intellectual property protections, and they now have their own lobbyists at international bodies like WIPO.

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Free Ride (Robert Levine)

- Highlight Loc. 581 | Added on Sunday, December 11, 2011, 01:30 PM

competition between the Commerce and Judiciary committees,”

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Free Ride (Robert Levine)

- Highlight Loc. 586 | Added on Sunday, December 11, 2011, 01:31 PM

the truth—perhaps just as disturbing—is that it was a backroom deal between two powerful interest groups.

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Free Ride (Robert Levine)

- Highlight Loc. 664-66 | Added on Sunday, December 11, 2011, 01:42 PM

In the 1990s, investors funded companies like CNET and Slate, which produced original journalism. But it's hard for them to compete with sites like the Huffington Post, which pay to create only some of the content they sell ads against.

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Free Ride (Robert Levine)

- Highlight Loc. 671-73 | Added on Sunday, December 11, 2011, 01:43 PM

music was entering a “post-copyright era” in which labels would be unable to invest in career development and artists would be left to compete for the patronage of wealthy supporters the way Mozart and Salieri vied for the favor of the Viennese court.

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Free Ride (Robert Levine)

- Highlight Loc. 780-83 | Added on Sunday, December 11, 2011, 01:52 PM

the one hand, RIAA creates all this flap about Napster and copyright infringement,” Eagles frontman Don Henley said at the time, “while with the other hand, they’ve taken away artists’ copyrights.”¹⁴ This didn’t exactly inspire artists to speak out on behalf of labels. At

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Free Ride (Robert Levine)

- Highlight Loc. 1256-57 | Added on Monday, December 12, 2011, 12:27 PM

And much of the increase over the past decade seems to have come from hobbyists: the number of U.S. residents employed as musicians has declined 19 percent since 2001.

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Free Ride (Robert Levine)

- Highlight Loc. 1362-63 | Added on Monday, December 12, 2011, 12:35 PM

A 2007 study by the consulting company Capgemini funded by the U.K. music industry found that 18 percent of the labels’ 2004–2007 revenue loss stemmed from piracy, while the rest was the result of selling music by the track.

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Free Ride (Robert Levine)

- Highlight Loc. 1461-63 | Added on Monday, December 12, 2011, 01:26 PM

The idea that artists will give away their music assumes they’ll create it cheaply—at home, on a computer, by themselves. But making an album can take time and outside expertise, neither of which has fallen in cost the way the price of equipment has.

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Free Ride (Robert Levine)

- Highlight Loc. 1549-50 | Added on Monday, December 12, 2011, 01:35 PM

Ever since the late-1990s debate over the Digital Millennium Copyright Act, technology companies have funded anti-copyright activists in ways that are rarely reported.

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Free Ride (Robert Levine)

- Highlight Loc. 1565-68 | Added on Monday, December 12, 2011, 01:36 PM

Most observers see technology companies as the underdogs in their disputes with major labels and movie studios, since the RIAA and the MPAA have so much power in Washington. In reality, the big money comes from telecom companies: Disney spent about \$3.8 million on lobbying in 2010, while Verizon spent \$16.8 million, according to the Center for Responsive Politics.

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Free Ride (Robert Levine)

- Highlight Loc. 1652-53 | Added on Monday, December 12, 2011, 01:45 PM

But most professors there express hostility toward enforcement of copyright law, and few do any work on privacy, a hot-button issue for Google.

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Free Ride (Robert Levine)

- Highlight Loc. 1713-20 | Added on Monday, December 12, 2011, 01:50 PM

Steeped in the technology world, Lessig and other copyright reformers were inspired by the marvels of online mass collaboration, from Wikipedia to the Linux operating system. Such projects represent a new style of creativity, which technology makes possible and the Internet can turn into a business. In these open-source projects, today's finished work becomes tomorrow's raw material. Everyone works for the benefit of all, and individual rights mostly just get in the way. This fits with the trend toward deconstruction, which has made academics ever more skeptical of the Romantic ideal of individual genius. All artists build on the work of others, just as programmers combine existing bits of code. By locking up today's art, the argument goes, copyright interferes with tomorrow's.

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Free Ride (Robert Levine)

- Highlight Loc. 1851-52 | Added on Monday, December 12, 2011, 01:59 PM

And while YouTube has implied that it's impossible to run a user-generated content site that screens out copyrighted material, it now does exactly that.

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Free Ride (Robert Levine)

- Highlight Loc. 2190 | Added on Monday, December 12, 2011, 05:09 PM

a print reader is worth an average of about \$539 in advertising alone,

while an average online reader is worth \$26.

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Free Ride (Robert Levine)

- Highlight Loc. 2408-9 | Added on Monday, December 12, 2011, 05:31 PM

What he should be worried about are the sites that aggregate his journalism and sell ads against it themselves.

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Free Ride (Robert Levine)

- Highlight Loc. 2446 | Added on Monday, December 12, 2011, 05:36 PM

And the site's wellness editor, Patricia Fitzgerald, is a medical doctor, but she has a doctorate in homeopathy.

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Free Ride (Robert Levine)

- Highlight Loc. 2560-61 | Added on Monday, December 12, 2011, 05:52 PM

Newspapers need to find a better way to compete online—ideally one that involves bundling content from different publications under one fee and sharing data to get more money for ads.

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Free Ride (Robert Levine)

- Highlight Loc. 2942-43 | Added on Tuesday, December 13, 2011, 09:51 PM

It's amazing how easy the Internet makes it to destroy a business without creating another one in its place.

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Free Ride (Robert Levine)

- Highlight Loc. 3030 | Added on Tuesday, December 13, 2011, 09:57 PM

That would make it much easier to download video illegally.

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Free Ride (Robert Levine)

- Highlight Loc. 3265-66 | Added on Tuesday, December 13, 2011, 10:22 PM

Publishers spread out their risk among scores of books in a way that writers can't.

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Free Ride (Robert Levine)

- Highlight Loc. 3297-99 | Added on Tuesday, December 13, 2011, 10:25 PM

we had the infrastructure to get a book printed, ship it to a warehouse, ship it to a bookstore, and take returns," Napack says. "In the digital world, that becomes less important. We have to rely again on what we did well—what should have been a core advantage all along—which is editing and marketing books."

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Free Ride (Robert Levine)

- Highlight Loc. 3479-80 | Added on Tuesday, December 13, 2011, 10:37 PM

A detailed 2010 study by the Organization for Economic Cooperation and Development found that improved protection of intellectual property rights generally helps developing economies.²⁶

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Free Ride (Robert Levine)

- Highlight Loc. 4038-39 | Added on Wednesday, December 14, 2011, 01:10 AM

Copyright-based businesses generate a significant number of jobs in Europe, just as they do in the United States.

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Instapaper (Instapaper)

- Highlight Loc. 57-58 | Added on Wednesday, December 14, 2011, 10:20 AM

The computer was built to aid in the development of the hydrogen bomb. Why was it needed for that? There's no way to partially test a hydrogen bomb. A computing machine was needed to model the explosion before the actual test was done.

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Instapaper (Instapaper)

- Highlight Loc. 81-82 | Added on Wednesday, December 14, 2011, 10:28 AM

History is one of the only fields where contributions by amateurs are taken seriously,

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Instapaper (Instapaper)

- Highlight Loc. 107-9 | Added on Wednesday, December 14, 2011, 10:30 AM

Synthesys®, the company's flagship product that identifies, summarizes and reveals hidden relationships between people, places and events in big data. Currently, Synthesys is being used in government agencies to uncover security threats and enable intelligence analysts to find and act on critical relationships in big data while containing the costs of and dependence on human reading.

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Instapaper (Instapaper)

- Highlight Loc. 115-16 | Added on Wednesday, December 14, 2011, 10:30 AM

"Until now, the tools available on Big Data have been focused on mostly structured data that is well formed and easily countable. Now, we can bring rich understanding of human communication- unstructured data-

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Instapaper (Instapaper)

- Highlight Loc. 117 | Added on Wednesday, December 14, 2011, 10:30 AM

Hadoop."

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Instapaper (Instapaper)

- Highlight Loc. 120-21 | Added on Wednesday, December 14, 2011, 10:31 AM

With success on a number of large systems in the Government market, Digital

Reasoning will be expanding Synthesys into enterprise commercial markets.

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Instapaper (Instapaper)

- Highlight Loc. 454-58 | Added on Wednesday, December 14, 2011, 11:25 AM

Beppe Pisanu che, forte dell'esperienza accumulata al Viminale, spiegò in un'intervista al Corriere che no, la situazione non era per niente paragonabile a quella precedente allo scossone di Mani Pulite: «Per certi versi siamo oltre. Allora crollò il sistema del finanziamento dei partiti. Oggi è la coesione sociale, è la stessa unità nazionale a essere in discussione, al punto da venire apertamente negata anche da forze di governo. Si chiude l'orizzonte dell'interesse generale e si aprono le cateratte dell'interesse privato, dell'arricchimento personale, della corruzione dilagante

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Instapaper (Instapaper)

- Highlight Loc. 835-38 | Added on Wednesday, December 14, 2011, 11:27 AM

Beyer suggested three big opportunities that can come from extreme information management: the addition of sentiment and network analysis from social software to existing marketing processes; the combination of operational technology monitoring and metrics with logistics and supply planning; and adherence to a high-fidelity data strategy that builds datasets, creating competitive advantages in operations.

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Instapaper (Instapaper)

- Highlight Loc. 838-40 | Added on Wednesday, December 14, 2011, 11:28 AM

It costs three times more to store data than to get it, and although 70 to 85 percent is unstructured, most companies spend the majority of their analytics only on structured data. Basically, they are ignoring most of the information while spending a lot to save it.

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Instapaper (Instapaper)

- Highlight Loc. 850-53 | Added on Wednesday, December 14, 2011, 11:28 AM

Overall, extreme information will be used in the public sector (in applications such as disaster and emergency response), in the private sector (to remove management bias), in health care (though electronic medical records and breakthroughs in understanding disease through statistical analysis), in utilities (though things such as smart meters), and many other places.

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Instapaper (Instapaper)

- Highlight Loc. 958-60 | Added on Wednesday, December 14, 2011, 11:29 AM

Through a pilot website called BetterBuy launched a few months ago, the GSA is providing a wiki for vendors to provide feedback on acquisitions and suggest ways to improve the process.

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Free Ride (Robert Levine)

- Highlight Loc. 4532 | Added on Friday, December 16, 2011, 09:06 PM

And fully closed or fully open networks would be the worst two choices we could make.

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Free Ride (Robert Levine)

- Highlight Loc. 4540-41 | Added on Friday, December 16, 2011, 09:06 PM

For all their talk of innovation, Google and other technology giants have the same agenda as the media companies and Internet service providers they lobby against: regulation for thee but not for me.

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Free Ride (Robert Levine)

- Highlight Loc. 4542-43 | Added on Friday, December 16, 2011, 09:07 PM

Online activists present the choice about our online future as one between control and creativity, but it's really about commerce or chaos.

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Free Ride (Robert Levine)

- Highlight Loc. 4555-57 | Added on Friday, December 16, 2011, 09:08 PM

That means revisiting or interpreting the Digital Millennium Copyright Act to give Internet service providers, online locker services, and ad networks at least some responsibility for how their products are used.

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Free Ride (Robert Levine)

- Highlight Loc. 4559-60 | Added on Friday, December 16, 2011, 09:08 PM

Giving safe harbor if they use a basic level of filtering, as YouTube does now, would be a reasonable compromise.

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Free Ride (Robert Levine)

- Highlight Loc. 4560-61 | Added on Friday, December 16, 2011, 09:08 PM

This wouldn't slow innovation; it would encourage it. As pirate sites lost their unfair advantage, legitimate services would attract more investment and prosper.

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Free Ride (Robert Levine)

- Highlight Loc. 4573-74 | Added on Friday, December 16, 2011, 09:09 PM

Do we really want to risk destroying a centuries-old market for cultural products to ensure that the Internet can continue to work the way it did in 1995?

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Free Ride (Robert Levine)

- Highlight Loc. 4598-99 | Added on Friday, December 16, 2011, 09:24 PM

But if media gets more expensive, much of the resulting revenue will be

invested in making better products.

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Free Ride (Robert Levine)

- Highlight Loc. 4620-22 | Added on Friday, December 16, 2011, 09:27 PM

Although Google “may represent open systems,” as Michael Wolff wrote in an article that ran with Anderson’s in Wired, “it came to almost completely control that openness. It’s difficult to imagine another industry so thoroughly subservient to one player. In the Google model, there is one distributor of movies, which also owns all the theaters.”

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Free Ride (Robert Levine)

- Highlight Loc. 4655-57 | Added on Friday, December 16, 2011, 09:37 PM

Forcing smartphones and Internet TV devices to access the open Internet without preferring certain apps, as Google would like to see them do, wouldn’t just hurt the entertainment business; it would undermine technology companies like Netflix and Spotify.

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Free Ride (Robert Levine)

- Highlight Loc. 4672-77 | Added on Friday, December 16, 2011, 09:39 PM

Copyright laws do need to be revised to bring some order to the Internet; we need shorter terms of protection, a way to take quicker action against commercial-scale pirates, and less draconian damages for individual infringers. Specifically, a small-claims court for copyright infringement would allow independent artists to assert their rights without burdening the court system and distinguish casual downloaders from moneymaking operations. To deal with the former, it’s much fairer to sue 100,000 illegal downloaders for \$50 each than it is to sue 50 users for \$100,000 each, and the law should make that possible. Making such suits an unpleasant but routine event—like getting a speeding ticket—would cut down on infringement as well.

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Free Ride (Robert Levine)

- Highlight Loc. 4760-65 | Added on Friday, December 16, 2011, 10:01 PM

As of early 2011, no agreement had been announced. Even if the deal never happens, however, the relationship between media companies and Internet service providers has fundamentally changed. For a decade and a half, they had found themselves on opposite sides of an issue: the same piracy that hurt labels and studios made broadband Internet access more valuable to consumers. But now that most consumers already have broadband, Internet service providers want to control costs by limiting the activities of the small number of downloaders who account for a disproportionate share of data traffic.³⁴ And the service providers and media companies have common foes in Google and other technology companies that champion net neutrality.

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Free Ride (Robert Levine)

- Highlight Loc. 4784-85 | Added on Friday, December 16, 2011, 10:02 PM

It's never been easier to distribute creative work. At the same time, it's never been harder to get paid for it.

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Reinventing Discovery: The New Era of Networked Science (Michael Nielsen)
- Highlight Loc. 3231-32 | Added on Friday, December 16, 2011, 11:14 PM

Before we give up on open science, we should draw on these ideas.

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Reinventing Discovery: The New Era of Networked Science (Michael Nielsen)
- Highlight Loc. 3266-68 | Added on Friday, December 16, 2011, 11:17 PM

Imagine, for example, that one of the big grant agencies began asking applicants to submit evidence of public outreach using blogging and online videos. Or suppose they started asking applicants to describe their contributions to science wikis, as evidence of research activity. Such policies would do much to legitimize new tools.

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