They’ve Got You, Wherever You Are

Jacob Weisberg

OCTOBER 27, 2016 ISSUE

The Attention Merchants: The Epic Scramble to Get Inside Our Heads
by Tim Wu
Knopf, 403 pp., $28.95

Chaos Monkeys: Obscene Fortune and Random Failure in Silicon Valley
by Antonio García Martínez
Harper, 515 pp., $29.99

1.

Beck Diefenbach/Reuters

Facebook founder Mark Zuckerberg at the announcement of the Chan Zuckerberg Initiative to ‘cure, prevent, or manage all disease’ by the end of the century, San Francisco, September 2016

Earlier this year, Facebook announced a major new initiative called Facebook Live, which was intended to encourage the consumption of minimally produced, real-time video on its site. The videos would come from news organizations such as *The New York Times*, as well as from celebrities and Facebook users. Interpreted by some as an effort to challenge Snapchat, the app popular with teenagers in which content quickly vanishes, Live reflects the trend toward video’s becoming the dominant consumer and commercial activity on the Web. Following the announcement, one executive at the company predicted that in five years the Facebook News Feed wouldn’t include any written articles at all, because video “helps us to digest more of the information” and is “the best way to tell stories.”

Facebook’s News Feed is the largest source of traffic for news and media sites, representing 43 percent of their referrals, according to the web analytics firm Parse.ly. So when Facebook indicates that it favors a new form of content, publishers start making a lot of it. In this case, news organizations including the *Times*, *BuzzFeed*, NPR, and Al Jazeera began streaming live videos, which were funded in part by $50 million in payments from Facebook itself. These subsidies were thought necessary because live video carries no advertising, and thus produces no revenue for Facebook or its partners.

Why, if it generates no revenue, is Facebook pushing video streaming so insistently? For the same reason that it does almost everything: in hopes of capturing more user attention. According to the company’s research, live videos—which feel more spontaneous and authentic—are viewed an average of three times longer than prerecorded videos.

Facebook is currently the fourth most valuable American company. Its stock price is based less upon its current revenues, which are much lower than those of other companies with similar valuations, than upon expectations about revenues it will one day be able to earn. That future revenue depends on reselling to advertisers the attention of 1.7 billion global users, who currently spend an average of fifty minutes a day on Facebook’s sites and apps.

Facebook promotes video, plays publisher-generated content up or down in relation to user-generated content, and tinkers continually with the algorithm that determines what appears on its News Feed; it does this not out of any inherent high- or low-mindedness, but in an effort to harvest an ever greater quantity of our time. If the written word happens to fall out of favor, or if journalism becomes economically unworkable as a consequence, these results, so far as Facebook is concerned, are unintentional. They're merely collateral damage from the relentless expansion of the most powerful attention-capture machine ever built.

The economist Herbert A. Simon first developed the concept of an attention economy in a 1971 essay.[1] Taking note of the new phenomenon of "information overload," Simon pointed out something that now seems obvious—that "a wealth of information creates a poverty of attention." In recent years, thinking about attention as a scarce resource has come into vogue as a way to appraise the human and psychological impact of digital and social media.[2]

The animating insight of Tim Wu's illuminating new book, *The Attention Merchants*, is to apply this concept as a backward-facing lens as well as a contemporary one. Modern media, he argues, have always been based on the reselling of human attention to advertisers. Wu, who teaches at Columbia Law School, is a broad thinker about law, technology, and media who has had a varied career as an academic, a journalist, and a 2014 candidate for lieutenant governor of New York. He is best known for developing "net neutrality"—the principle that access providers (such as Comcast or Time Warner) should treat all Internet traffic equally—which formed the basis of a federal regulation that went into effect last year.

Wu's earlier book, *The Master Switch* (2010), interpreted the history of mass communications as the ongoing pursuit of media monopoly. In *The Attention Merchants*, he narrates a history of media built around a model of "free stuff"—for example, radio and TV programs—in exchange for the ingestion of advertising. Wu relates the sequential conquest, by marketing, of formerly exempt spheres: public spaces through posters and billboards, the family home by radio and TV, person-to-person communication by online portals and social media, and physical movement through smartphones.

His story begins with the New York newspaper wars of the Jacksonian Era. Wu names as the first merchant of attention Benjamin Day, who in 1833 disrupted the placid market for printed dailies costing six cents. Day's larger-circulation *New York Sun* cost only a penny thanks to revenue from advertising. The battle between the *Sun* and its competitors established what Wu calls the basic dynamic of such industries: a race to the bottom, since "attention will almost invariably gravitate to the more garish, lurid, outrageous alternative." In the case of the *New York Sun* that meant, among other salacious inventions, a five-part series on the astronomical discovery that the moon was covered with trees and populated by unicorns and four-foot-tall winged man-bats. Within two years of its founding, the *Sun* was the most widely read newspaper in the world.

At the dawn of the twentieth century, advertising remained largely a medium to sell products like "Clark Stanley's Snake Oil Linament" and "the Elixir of Life," whose manufacturer promised a cure for "any and every disease that is known to the human body." Such claims and the occasionally poisonous products they promoted were a favorite target of Progressive Era journalists. Lest we congratulate ourselves on having outgrown such flimflam, Wu reminds us that the "secret ingredient" pitch used to sell patent medicine is still routine in our ostensibly less credulous era. He writes:

> As devotees of technology we are, if anything, more susceptible to the supposed degree of difference afforded by some ingenious proprietary innovation, like the "air" in Nike's sports shoes, triple reverse osmosis in some brands of water, or the gold-plating of audio component cables.

During the 1920s, ad spending in the United States and Europe rose tenfold. The development of mass communications gave rise to an advertising industry with pretensions to be "scientific." Three techniques, developed then for magazines and radio, are still with us today: (1) "demand engineering," which is a fancy term for creating desire for new products like orange juice and mouthwash; (2) "branding," which means building loyalty to names like Buick and Coca-Cola; and (3) "targeted advertising," which originally meant focusing on the female consumer, who did most household purchasing.

In the radio era the great breakthrough was the minstrel comedy *Amos 'n' Andy*, which first aired on a Chicago station in 1928. At its peak, the show drew 40 to 50 million nightly listeners, out of a national population of only 122 million. For David Sarnoff's National Broadcasting Company, this was "the equivalent of having today's Super Bowl audiences each and every evening—and with just one advertiser"—Pepsodent toothpaste. (The TV version of the show was canceled in 1953 following protests from the NAACP.) After World War II, NBC began establishing similar dominance over "prime time" television with programs like *Texaco Star Theater* and *Your Show of Shows*. Wu calls the 1950s through the 1970s the period of "'peak attention'…the moment when more regular attention was paid to the same set of messages at the same time than ever before or since."

What was actually happening so far as economics was concerned? In the conventional analysis, advertising is part of the "discovery" process whereby consumers find out what products, from sliced bread to political candidates, are available in the marketplace. To critics, however, mass marketers were not providing useful information, but misleading the public and exploiting emotion to build monopolies. Dishonest claims, like Lucky Strike's contention that its cigarettes "soothed the throat," led to efforts to ban deceptive advertising practices. But in 1931, the Supreme Court ruled that the Federal Trade Commission lacked authority to prohibit or change an ad. The decision prompted the New Dealer Rexford Tugwell, an economist at the Department of Agriculture, to propose more stringent regulation. The advertising industry and its allies in ad-supported media helped scuttle Tugwell's bill. In 1938 far weaker legislation passed, giving the FTC the power to ban factually untrue statements, but not much more.

Another rebellion came in the 1950s, with the exposure of the rigged outcome of television quiz shows and Vance Packard's best seller *The Hidden Persuaders*, which depicted an ad industry engaged in psychological manipulation. A still-bigger wave hit with criticism of consumer society from such commentators as Timothy Leary and Marshall McLuhan. But advertising has a marvelous ability to absorb antagonism and retune its messages to it. This is an ongoing theme in the later seasons of *Mad Men*, in which the soul-damaged Don Draper applies his talent to making a commodity out of dissent.

2.

Justina Mintz/AMC

John Hamm as Don Draper in the final episode of Mad Men*, 2015*

The research scientists who designed the World Wide Web intended it to be free from commercial exploitation. The company that decisively fastened it to an advertising model was America Online (AOL), which by the mid-1990s had emerged as victorious over its competitors, its success driven less by its reputation as a family-friendly space than by the use of chat rooms, which enabled people to participate in graphic descriptions of sex—"cybersex." Though AOL was originally ad-free, earning its money from hourly access charges, the canny executive Bob Pittman, the co-founder of MTV, saw greater potential in subsidizing access—by lowering subscription fees and selling advertising. AOL did this in notoriously unscrupulous fashion, booking phony revenue, exploiting its users, and engaging in other dishonest practices that caused it to implode after swallowing Time Warner in a $164 billion merger that took place in January 2001.

Google originally rejected the attention model too, only to succumb to it in turn. Wu writes that Larry Page and Sergey Brin, the company's cofounders, were concerned about the corrupting potential of advertising, believing that it would bias their search engine in favor of sellers and against consumers. But because search is so closely allied with consumption, selling paid advertising became irresistible to them. With its Ad Words product—the text ads that appear above and alongside search results—Google became "the most profitable attention merchant in the history of the world." When Google sells ads accompanying the results of searches people make, it uses a real-time bidding exchange. This electronic auction process remains its central cash machine, generating most of the company's $75 billion a year in revenue.

Mark Zuckerberg began with the same aversion to advertising, famously rejecting a million dollars from Sprite to turn Facebook green for a day in 2006. He thought obtrusive advertising would disrupt the user experience he needed to perfect in order to undermine his main competitor, Myspace, which had become infested by mischief-making trolls. By requiring the use of real names, Zuckerberg kept the trolls at bay. But he was ultimately no better able to resist the sale of advertising than his predecessors. Facebook's vast trove of voluntarily surrendered personal information would allow it to resell segmented attention with unparalleled specificity, enabling marketers to target not just the location and demographic characteristics of its users, but practically any conceivable taste, interest, or affinity. And with ad products displayed on smartphones, Facebook has ensured that targeted advertising travels with its users everywhere.

Today Google and Facebook are, as Wu writes, the "de facto diarchs of the online attention merchants." Their deferred-gratification model, by which the company only starts selling advertisers the audience that it assembles after operating free of ads for a certain period, is now the standard for aspiring tech companies. You begin with idealistic hauteur and visions of engineering purity, proceed to exponential growth, and belatedly open the spigot to fill buckets with revenue. This sequence describes the growth of tech-media companies including YouTube, Twitter, Pinterest, Instagram, and Snapchat, their success underpinned by kinds of user data that television and radio have never had. Many younger start-ups pursuing this trajectory are focused on the next attention-mining frontier: wearable technology, including virtual reality headsets, that will send marketing messages even more directly to the human body.

This is not, however, the only possible business model to support content and services. In the 1990s, HBO developed the alternative of paid programming offered through cable providers such as Time Warner. Netflix has pursued a freestanding subscription model that, in the words of its founder Reed Hastings, doesn't "cram advertisements down people's throats." Under its CEO Tim Cook, Apple has rejected the prevailing model of gathering private information and selling it to marketers to subsidize free services. From Cook's perspective, advertising doesn't merely harm privacy. It depletes battery life, eats up mobile data plans, and creates a less pleasing experience on Apple's beautiful devices. To the chagrin of publishers, the company now offers ad-blocking apps on the iPhone that allow users to gain access to the Internet without any ads at all.

3.

Antonio García Martínez, author of the autobiographical book *Chaos Monkeys*, is a member of the new class of attention merchants constructing the marketplace for "programmatic" advertising, which is advertising sold on electronic exchanges without the traditional lubricated palaver between buyers and sellers. He is, by his own account, a dissolute character: bad boyfriend, absent father, and often drunk. A tech wise guy working the start-up racket, he was quick to deceive and betray the two less worldly foreign-born engineers who left one advertising technology company with him to start another. He is nonetheless, by the end of his account, a winning antihero, a rebel against Silicon Valley's culture of nonconformist conformity.

Part of Martínez's seditiousness is his refusal to accept that the work he does serves some higher social purpose. He writes:

> Every time you go to Facebook or ESPN.com or wherever, you're unleashing a mad scramble of money, data, and pixels that involves undersea fiber-optic cables, the world's best database technologies, and everything that is known about you by greedy strangers.

To be fair, there's no reason to think that people in ad tech are greedier than anyone else. Their work is simply more obscure. Some 2,500 companies are part of the technical supply chain for digital advertising. What many of them do to create and transmit ads is largely incomprehensible and uninteresting to outsiders. The simplest explanation is that they interpose themselves between buyers and sellers in an attempt to capture a cut of the revenue.

As a former doctoral student in physics at Berkeley and quantitative analyst on Goldman Sachs's corporate credit desk, Martínez was well suited to develop this type of intermediation. The advertising technology he works on somewhat resembles the secretive world of high-frequency financial trading depicted by Michael Lewis in *Flash Boys* (2014). It works to extract value from millions of small daily transactions around captured attention. Adchemy, the company where Martínez first worked, was an intermediary between users of Google's search engine and companies seeking access to them. It created an information arbitrage by finding potential customers interested in mortgages and online education degrees, and then selling those leads to buyers like Quicken Loans and the University of Phoenix. ("I want to take a shower just reading those names," he writes.) Martínez worked on building a real-time bidding engine allowing buyers to communicate with Google's ad exchange—new software that would use Google's code more efficiently.

The concept behind AdGrok, the company he started after leaving Adchemy with two colleagues, was to break into Google's search ad business in a different way by allowing store owners to buy location-based ads for products using a barcode scan. By his own admission, this was a half-baked idea. As Martínez writes, a good start-up plan should require no more than one miracle to succeed. AdGrok needed at least five. His stroke of luck was being accepted into Y Combinator, a tech incubator that helps start-ups get going in exchange for a stake in their business. With a Y Combinator pedigree and connections, he was able to sell AdGrok to Twitter after nine months in business. The deal was what's called an "acqui-hire." Twitter wanted the company's engineers, not its software. Facebook was interested as well, but didn't want the other two engineers or the software, just Martínez. With a sleight-of-hand, he managed to separate himself from the transaction, infuriating Twitter, his two cofounders, and his investors, while landing himself at Facebook, the more promising company.

Martínez arrived at Facebook in 2011 and immediately recognized that he'd never fit in with the hoodie people. He's an up-from-nowhere cynic; Facebook is an ingenuous company populated by privileged true believers who are cultishly devoted to their boy leader. He was genuinely surprised to discover that the company significantly lagged in its advertising efforts. Facebook's digital display units were nearly invisible, its tools for use by ad buyers limited, and its general attitude toward advertising one of lordly disdain. Despite its wealth of user data, its ads were—and remain—vastly less effective than Google's.

Martínez also noticed that status and resources didn't accrue to advertising product managers at Facebook. He received minimal support for his project of creating a real-time bidding platform called Facebook Exchange, modeled on Google's Ad Words. Thanks in part to his impatience with lesser minds, his project lost out to an internal competitor, making him superfluous at the company. By the end of the book the reader can't help rooting for him to get hold of more of his 70,000 pre-IPO stock options before getting fired in 2014, even though he deserves to go.

Martínez takes personally the seeming irrationality of Facebook's throwing away half a billion dollars a year in Facebook Exchange revenue. What he may not fully appreciate is the extent to which a dismissive attitude toward advertising was a feature of Facebook's business strategy, not a bug in it. Facebook has succeeded because of its relentless focus on increasing its user base and the addictiveness of its product, which constantly promotes more and better connections with other people. The company introduced ads into the News Feed, its core revenue producer, only in 2012, as it approached a billion users and was preparing to become a public company. Zuckerberg spent his first decade focused on harvesting attention—while postponing the feast. Had Martínez arrived at Facebook five years later, he would have found a company much more like Google was in 2011: still focused on growth but bent on improving its advertising products to drive earnings.

As with Google, Facebook's passage to maturity has required compromise with the purity of the product and the founder's original vision. But as Wu makes clear, this kind of transformation is almost irresistible. Whatever high-minded things attention merchants say about their mission of connecting the entire world or putting information at its fingertips, they're in the same business as Benjamin Day, David Sarnoff, and Bob Pittman. The business is advertising.

Ad exchanges, in which advertising units are bought and sold automatically using software designed to target specific audiences, have made digital advertising more efficient without necessarily making it more effective in increasing sales. Facebook holds out the promise of mass personalization; advertisers can pinpoint users with extraordinary precision. That doesn't mean, however, that ads on Facebook have any special impact. Unlike on Google, where people go to search for goods and services, Facebook ads are still, in the industry's jargon, "upper funnel," a better way for marketers to breed awareness than to make a sale. This has made it a high priority for Facebook to establish "attribution," to demonstrate that it plays an important part in purchase decisions taking place elsewhere, e.g., through search engines and on other websites.

"Adtech" has also done much to make the Web a squalid, chaotic place. On news sites, video ads begin playing automatically and without permission, sometimes with the sound blaring. Pop-up windows ask you to participate in brief surveys before continuing. "Retargeting" ads for whatever product you last browsed follow you around like lost puppies. Pages load in balky fashion because of the click-bait monetization links, real-time bidding for available ad units, and also because of data-collecting cookies and other tracking technologies. Add to that the misery of trolling on social media and on sites that can't manage to police user comments effectively.[3] This is what the value exchange around free content has become.

The old cliché about advertising was, “Half the money I spend on advertising is wasted; the trouble is I don’t know which half.” The new cliché is, “If you’re not paying for it, you’re the product.” In an attention economy, you pay for free content and services with your time. The compensation isn’t very good. Consider the pre-roll commercials you are forced to watch to gain access to most video clips, increasingly the dominant type of content on the Web. At an above-average $10 CPM, the cost per thousand views, an advertiser is paying one cent per thirty-second increment of distraction. For the user, that works out to a rate of sixty cents an hour for watching ads. The problem isn’t simply that attention has been made into a commodity, it’s that it’s so undervalued. Marketers buy our time for far less than its worth.

Wu suggests that we may be in the middle of another periodic revolt against advertising, based on “a growing sense that media had overtaxed our attentions to the point of crisis.” Though he points to trends like ad-blocking and to higher-quality paid television programming on Netflix and HBO, he doesn’t offer much in the way of a broader prescription. His book is about how we got here, not what to do about it. Based on his reading of media history, Wu doesn’t see much likelihood of replacing the basic model of obtaining apparently “free stuff” in exchange for absorbing commercial messages. Rather, he proposes that we try harder to conserve our mental space through a kind of zoning that declares certain times and spaces off-limits to commercial messages. That might mean a digital sabbath every weekend, or technology to keep advertising out of classrooms. We should appreciate that attention is precious, he writes, and not “part with it as cheaply or unthinkingly as we so often have.”

---

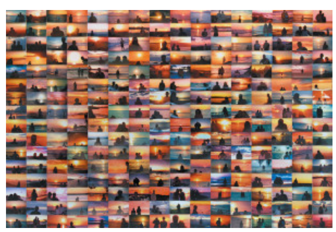
1 “Designing Organizations for an Information-Rich World,” in *Computers, Communications and the Public Interest*, edited by Martin Greenberger (Johns Hopkins University Press, 1971). ↩

2 See my “We Are Hopelessly Hooked,” *The New York Review*, February 25, 2016. ↩

3 See Joel Stein, “How Trolls Are Ruining the Internet,” *Time*, August 29, 2016. ↩

RELATED

Generation Why?
Zadie Smith



The Creepy New Wave of the Internet
Sue Halpern

We Are Hopelessly Hooked
Jacob Weisberg