At the Frontiers of Surveillance Capitalism

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Illustration by Tim Robinson.

Before they started their successful wildcat strike last year, West Virginia teachers railed against the introduction of a workplace wellness program called Go365. The program coerced employees into downloading an app that would monitor their health, rewarding points for exercise and good behavior. Employees who failed to accrue 3,000 points by the end of the year would be penalized with a \$25 monthly fee and increased deductibles. Although the program was made voluntary before the strike began (and has since been eliminated), the outrage over Go365 helped ignite the strike. As one teacher told *The New York Times*, "People felt that was very invasive, to have to download that app and to be forced into turning over sensitive information."

BOOKS IN REVIEW

The Age of Surveillance Capitalism, The Fight for a Human Future at the New Frontier of Power By Shoshana Zuboff

By resisting Go365, the West Virginia teachers waged two battles at once: They fought in the trenches of state austerity and on the front lines of private digital surveillance. The app presaged many of the worrying trends that Shoshana Zuboff describes in her new book, *The Age of Surveillance Capitalism*. She explains that Silicon Valley firms are looking to wearable technologies and other smart devices to gain an increasingly detailed view of our physical and emotional health. Go365 measured teachers' daily steps with the help of a Fitbit; Sleep Number beds measure the hours we keep and the quality of our rest; a new company called Realeyes plans to surveil our facial expressions as we watch advertisements, interpreting our emotions in real time.

Silicon Valley firms don't want to simply monitor our behavior, however; they plan to shape it, too. Their influence over our actions might be indirect for now, effected through the prizes and penalties that Go365 weaponized against teachers. But by integrating these devices into our daily lives, these companies also set the stage for a future of more direct intervention. Zuboff quotes one software developer fantasizing aloud about the tech industry's ability to push and prod us remotely: "We can know if you shouldn't be driving, and we can just shut your car down...we tell the TV to shut off and make you get some sleep, or the chair to start shaking because you shouldn't be sitting so long."

Drawing on thorough research as well as alarming interviews like that one, *The Age of Surveillance Capitalism* offers an urgent warning about our possible future. Zuboff discusses the technological innovations and market mechanisms that make ubiquitous surveillance increasingly likely. Although her diagnosis is chilling, her solutions are few. Throughout the book, she decries the abuses perpetrated by Silicon Valley companies and argues that they represent a radical break from an earlier, kinder form of capitalism. But by refusing to acknowledge the continuities between past modes of exploitation and the latest horrors of surveillance capitalism, she ultimately leads readers away from the most promising paths of resistance.

Zuboff has been hailed as a "maverick management guru" and a "prophet of the information age." A former columnist at Fast Company and Businessweek and one of the first women tenured at Harvard Business School, she has been a leading voice on information technology, business, and the workplace for over 30 years. She first gained wide attention for her 1988 book, In the Age of the Smart Machine, an early and influential study of how computer technology would affect the American workforce. This project was notable in its ambition, and Zuboff set an even larger goal for herself in a 2015 article that sketched the fundamentals of surveillance capitalism: "Just a moment ago," she writes, "it still seemed reasonable to focus our concerns on the challenges of an information workplace or an information society. Now, the enduring questions of authority and power must be addressed to the widest possible frame...information civilization." In The Age of Surveillance Capitalism, which runs over 700 pages, she sets out to describe the dawn of a civilization—one that she argues will be dominated by Silicon Valley and its surveillance apparatus.

In the first section of her sprawling book, Zuboff traces the birth of surveillance capitalism to the moment in 2003 when Google filed a patent titled "Generating User Information for Use in Targeted Advertising." In Google's early days, she explains, the company linked advertising only to search queries. Meanwhile, the vast quantities of data that it gathered about particular users (including "the number and pattern of search terms...dwell times, click patterns, and location") were used only to improve users' experience. The 2003 patent, however, promised to convert that "data exhaust" into "behavioral surplus" that could be used to increase the precision of targeted advertising, a much more lucrative venture. This approach to data collection became so successful, she argues, that it led to a new logic of accumulation: From 2003 on, Google was on a quest to gather and monetize as much user data as possible.

The "extraction imperative," as Zuboff calls it, eventually migrated beyond Google. In 2008, Google executive Sheryl Sandberg (whom Zuboff dubs the "Typhoid Mary" of surveillance capitalism) left the search giant for a position at Facebook. Her aim was to monetize the intimate information that Mark Zuckerberg's company has gathered from users, transforming Facebook from "a social networking site to an advertising behemoth." From there, word spread fast, with giants like Microsoft, AT&T, Verizon, and Comcast joining the behavioral-surplus extraction business.

Today, companies of all kinds are trying to get into the game. Samsung's smart TV records private conversations in living rooms across the country; the latest Roomba vacuum maps its users' floor plans; the CEO of Allstate Insurance hopes, in his own words, to "sell this information we get from people driving around to various people and capture some additional profit source." These companies belong to industries outside Silicon Valley's traditional purview of high-tech devices and Internet platforms, but what they share with Google and Facebook is a desire to generate profit from their intimate knowledge of our behavior and experience.

Zuboff shows that these increasingly frequent invasions of our privacy are neither accidental nor optional; instead, they're a key source of profit for many of the 21st century's most successful companies. Thus, these companies have a direct financial stake in the broadening, deepening, and perfecting of the surveillance they already profit from—and in making sure that it remains legal.

As a result of this boom in data extraction, new technologies are emerging as well: Engineers are intent on developing tools that will mine all sorts of dark data—the Silicon Valley term for those dimensions of human experience currently inaccessible to algorithmic analysis. To mine dark data, Google, Facebook, and others are developing smart homes and wearable devices, self-driving cars, drones, and augmented reality. They're even striving to monitor the body's inner workings through digestible sensors and to map a person's inner life through so-called emotion analytics.

The primary purpose of these disturbing new technologies is not to influence consumer behavior but to generate accurate predictions about it. Yet that "prediction imperative," as Zuboff calls it, naturally leads back to a desire for influence. For example, Facebook boasts a "loyalty prediction" service that identifies "individuals who are 'at risk' of shifting their brand allegiance" and prompts advertisers to intervene swiftly. The goal, Zuboff explains, is not just to get to know us better but also to find ways to manipulate and control our actions in the service of advertisers. As one chief data scientist told her, "Conditioning at scale is essential to the new science of massively engineered human behavior." The most persuasive (and terrifying) sections of her book chart this rapid growth of Silicon Valley's ambitions, from mass data extraction to ubiquitous monitoring to widespread behavior modification.

The third section of Zuboff's book is dedicated to describing a new ideology—instrumentarianism—that she says will dominate the 21st century. To explain this new species of power, she returns first to the midcentury work of the psychologist B.F. Skinner, who argued that free will was an illusion and that any action that seemed freely chosen or spontaneous was just a behavior that had yet to be predicted, explained, and conditioned by behavioral psychology. Eventually, Skinner posited, such analysis could be used to replace the chaos of individual "freedom" with large-scale social engineering. This idea, Zuboff argues, has now been taken up by leading researchers like MIT's Alex "Sandy" Pentland, whose 2014 article "The Death of Individuality" suggests that we ought to do away with the individual as the governing unit of rationality and focus on how our society is governed by a "collective intelligence." Although most Silicon Valley developers seem to lack Skinner's and Pentland's utopian (or, rather, dystopian) ambitions, Zuboff warns that their quest to profit from behavior modification will eventually merge with instrumentarianism's project of social control.

The book presents instrumentarianism as a "decisive break" from an earlier, apparently more beneficent form of capitalism. Zuboff praises market capitalism at length near the end of the book, arguing that it "awakened the unstoppable march toward liberty" in the United States and the United Kingdom and helped "lift much of humankind from millennia of ignorance, poverty, and pain." But she worries that today's surveillance capitalism violates some of the core tenets of this earlier model, including liberal individualism, the bourgeois home, the invisible hand, and what she terms the "organic reciprocities" between capital and labor. Drawing on Adam Smith and Friedrich Hayek, she complains that the vast amounts of data available to technology companies will make once-unknowable markets predictable, thus granting those companies an unprecedented power over our economic lives. She notes that Silicon Valley has relatively few employees and an unusual relationship to its customer base (depending on users whose data is extracted, as opposed to traditional consumers). For this reason, she argues, Mark Zuckerberg does not exist in the same mutually beneficial relationship to the public that Henry Ford once did.

It is in her discussion of market democracy that the limitations of Zuboff's analysis come to the fore. For her, the market —before the rise of platform monopolies (and, to a lesser degree, neoliberalism)—was characterized by individual liberty and free choice. Accordingly, she is uninterested in how surveillance might deepen the forms of exploitation and coercion that always structured market capitalism, particularly for marginalized and racialized communities. Her commitment to the free market also explains why she spends very little time considering the role that the state might play in countering Silicon Valley's power. In the recent essay collection *Economics for the Many*, Nick Srnicek advocates for the socialization of platform monopolies like Facebook. Though his proposal is flawed (Srnicek concedes that the state could put our private data to different dystopian ends), it rises to the scale of ambition necessary to address this threat. Zuboff, by contrast, spends a lot of time encouraging us to act but gives us very little sense of how.

The Age of Surveillance Capitalism succeeds in painting a dark portrait of Silicon Valley's growing power, but it ultimately fails in its political analysis. In whose service and at whose expense is the control of surveillance capitalism effected? Zuboff reaches for the grandest possible explanation: She argues that Silicon Valley is in the thrall of a radical instrumentarian ideology that aims to supplant liberal individualism with large-scale social engineering. But we don't need a spooky new political theory to explain what's going on; it's already perfectly legible in the context of liberal capitalism. Companies do not pursue control in a quest for Skinner's or Pentland's engineered utopias. Their goals are much simpler: first, to accrue profits through targeted advertising and, second, to promote their direct economic and political interests. The problem with surveillance capitalism is as much the capitalism as it is the surveillance.

At the close of her book, Zuboff seeks to stir her readers to collective action against the behemoths of Silicon Valley. She argues that we cannot treat the invasion of our privacy as a personal problem to be managed with new forms of encryption or evasion. Instead, we must treat it as a social problem to be tackled through widespread democratic contestation. "The individual alone cannot shoulder the burden of justice," she writes, "any more than an individual worker in the first years of the twentieth century could bear the burden of fighting for fair wages and working conditions.... A century ago, workers organized for collective action and ultimately tipped the scales of power...today's 'users' will have to mobilize in new ways." For an example of such inspiring collective action, she looks to an activist group called None of Your Business, which aims to impose significant fines on companies that fail to uphold existing privacy regulations.

While her desire to fight back is, of course, noble, Zuboff's subtle rhetorical slide from "workers" to "users" is troubling. For her, the battle for "fair wages and working conditions" is apparently a thing of the past, resolved a century ago when workers finally "tipped the scales of power." Of course, we know that these fights are far from over—and surveillance capitalism is poised to make them much more difficult. Silicon Valley doesn't just harm workers in Amazon fulfillment centers or Chinese iPhone factories, although these violations are horrific enough. It also makes all workers more vulnerable to the spying and prying of their bosses. Zuboff describes a new service for employers (and landlords) that scrapes and analyzes applicants' social-media activity, including private messages, to assess their character. Meanwhile, Pentland proposes the use of "unobtrusive wearable sensors" called sociometers that would help managers "infer the relationships between colleagues."

Although Zuboff notes these examples, she spends very little time discussing them, instead focusing on how surveillance capitalism can affect us during our leisure hours, when we approach technology primarily as users. She emphasizes surveillance in the home over surveillance in the office; she is more worried about how we're manipulated while shopping than working. Once again, her nostalgia for an earlier form of market capitalism limits the power of her critique: Zuboff is so intent on protecting an idealized image of the liberal individual (someone who exchanges freely on the market and then returns to the privacy of home) that she gives little attention to the corners of our society that capitalism has always subjected to surveillance: prisons, hospitals, borders, workplaces.

The good news, though: While Zuboff may ignore it, labor also offers a site of resistance that is much more promising than the regulations and fines advocated by None of Your Business. If those at the margins of our society are the most likely to be directly affected by surveillance, then building power at those margins—among tenants, debtors, immigrants, prisoners, and, of course, workers—will allow us to resist the worst abuses of surveillance capitalism at the point of their application. The teachers in West Virginia knew that Go365 threatened their dignity and their livelihood. They used the power of their union to fight back and win. In resisting the rise of surveillance capitalism, we should look to examples like theirs.