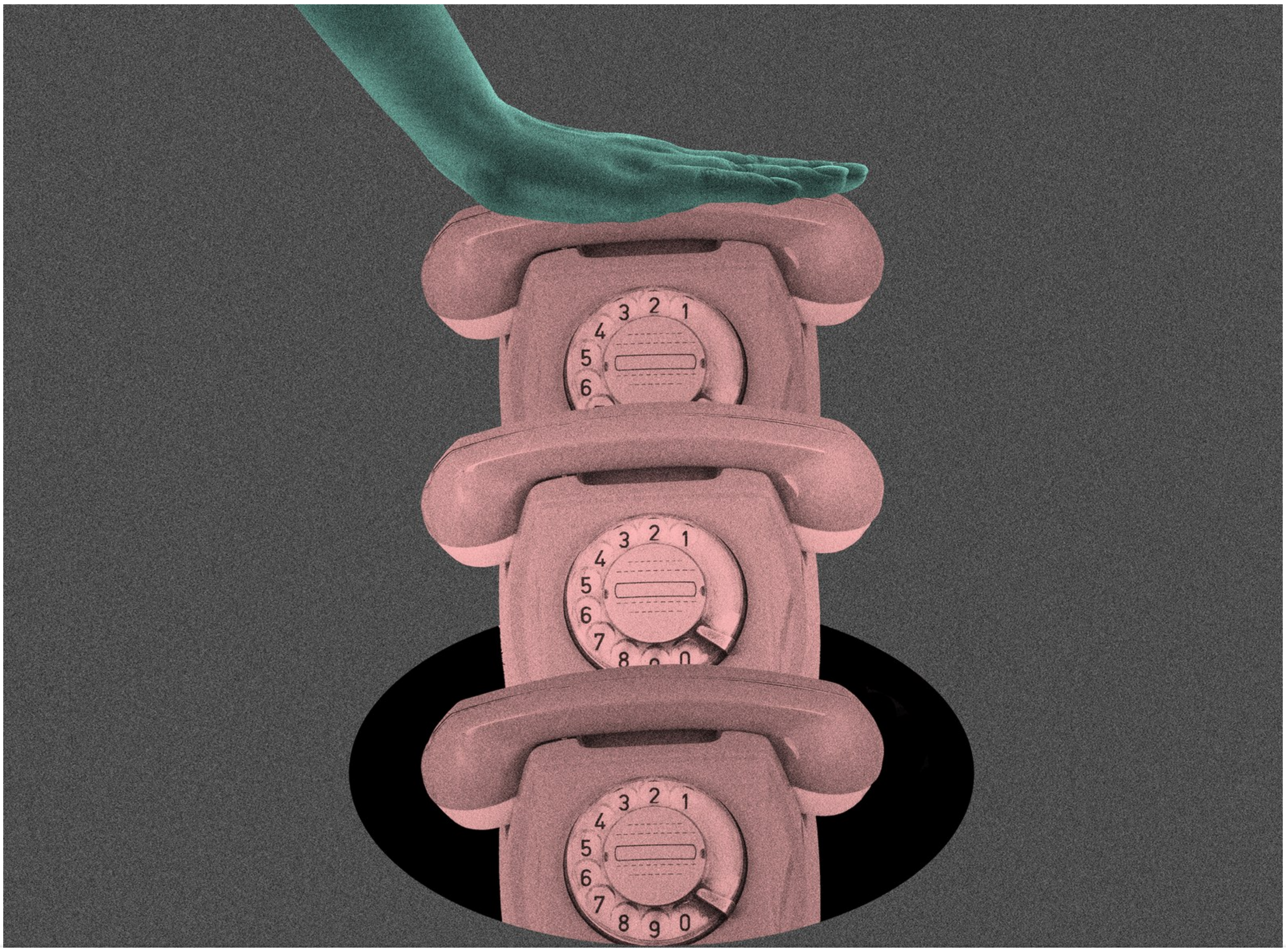
NITASHA TIKU BUSINESS 10.22.18 07:00 AM

AN ALTERNATIVE HISTORY OF SILICON VALLEY DISRUPTION



A FEW YEARS after the Great Recession, you couldn't scroll through Google Reader without seeing the word "disrupt." TechCrunch named a conference after it, the *New York Times* named a column after it, investor Marc Andreessen warned that "software disruption" would eat the world; not long after, Peter Thiel, his fellow Facebook board member, called "disrupt" one of his favorite words. (One of the future Trump adviser's *least* favorite words? "Politics.")

The term "disruptive innovation" was coined by Harvard Business School professor Clayton Christensen in the mid-90's to describe a particular business phenomenon, whereby established companies focus on high-priced products for their existing customers, while disruptors develop simpler, cheaper innovations, introduce the products to a new audience, and eventually displace incumbents. PCs disrupted mainframes, discount stores disrupted department stores, cellphones disrupted landlines, you get the idea.

In Silicon Valley's telling, however, "disruption" became shorthand for something closer to techno-darwinism. By imposing the rules of nature on man-made markets, the theory justified almost any act of upheaval. The companies still standing post-disruption must have survived *because* they were the fittest.

"Over the next 10 years, I expect many more industries to be disrupted by software, with new world-beating Silicon Valley companies doing the disruption in more cases than not," Andreessen wrote in his seminal 2011 essay on software in the *Wall Street Journal*. "This problem is even worse than it looks because many workers in existing industries will be stranded on the wrong side of software-based disruption and may never be able to work in their fields again."

Even after the word lost its meaning from overuse, it still suffused our understanding of why the ground beneath our feet felt so shaky. They tried to freak us out and we believed them.

Why wouldn't we? Their products were dazzling, sci-fi magic come to life. They transformed our days, our hours, our interior life. Fear of being stranded on "the wrong side," in turn, primed us to look to these world-beating companies to understand what comes next.

It is only now, a decade after the financial crisis, that the American public seems to appreciate that what we thought was disruption worked more like extraction—of our data, our attention, our time, our creativity, our content, our DNA, our homes, our cities, our relationships. The tech visionaries' predictions did not usher us into *the* future, but rather *a* future where they are kings.

They promised the open web, we got walled gardens. They promised individual liberty, then broke democracy—and now they've appointed themselves the right men to fix it.

But did the digital revolution have to end in an oligopoly? In our fog of resentment, three recent books argue that the current state of rising inequality was not a technological inevitability. Rather the narrative of disruption duped us into thinking this was a new kind of capitalism. The authors argue that tech companies conquered the world not with software, but via the usual route to power: ducking regulation, squeezing workers, strangling competitors, consolidating power, raising rents, and riding the wave of an economic shift already well underway.

Job Insecurity

Louis Hyman's new book, *Temp: How American Work, American Business, and the American Dream Became Temporary*, argues that many of the dystopian business practices we associate with fast-growing tech platforms—operating with a small group of well-paid engineers, surrounded by contractors—began in the 1970's when McKinsey consultants and business gurus pushed for flexible labor over job security as a way to maximize profits. But from its earliest days, Silicon Valley said automation was the reason high-tech companies were more profitable and productive.

For instance, in 1984, along with the Macintosh computer, Apple also introduced a $20 million "Robot Factory" in Fremont, California, that the company called "the most automated factory in the Western world," even though it was 140 human beings, "mostly women, mostly immigrants–who actually put the Macintosh together," Hyman says. In that, it was like the rest of the fast-growing electronics industry, which relied on undocumented workers and immigrants for its factories and temps for its offices to create a "buffer zone" to keep layoffs off the front page.

> **'While technical knowledge, and venture capital, was lauded for the valley's achievements, that success was made possible by a hidden underworld of flexible, poorly paid labor.'**
>
> —LOUIS HYMAN

Apple's use of the word "robot" turned out to be a "a very important cultural sleight of hand," Hyman says. "This rhetorical distinction helped Silicon Valley employ workers in ways that never would have happened in postwar Detroit," because unofficial and subcontracted workers were not protected by the same wage and safety rights.

To Hyman, an economic historian at Cornell, this explains the absence of labor unions in tech. "Managers wanted obedient employees—preferably immigrants. While technical knowledge, and venture capital, was lauded for the valley's achievements, that success was made possible by a hidden underworld of flexible, poorly paid labor," he writes.

Decades later, Uber could stay flexible because workers had few options. But observers often conflated cause and effect, blaming the gig economy, its use of non-employee contractors, and the unfeeling efficiency of smartphone apps. "Uber did not cause this precarious economy. It is the waste product of the service economy," Hyman counters. "Uber is possible because shift work, even with a W-2 is so bad."

The social disruption came first, and technology was built to exploit it. Nonetheless, Uber's association with our ruthless app-driven future served the company well. Regulators were reluctant to enforce the law not only because consumers loved the convenience, but also because we were told that technology made this business model—which shifted risk to cities, workers, and citizens—inevitable.

It may seem self-evident that Silicon Valley is not the alpha and omega of economic change. In fact, the critiques in these books resonate not because they expose the industry's villainous core or reveal some nefarious intent, but because the authors provide context missing from the tech industry's often ahistoric version of events. The ruminations on technology are tucked between chapters on Wall Street, big pharma, robber barons, the Sackler family, and McKinsey, gently eroding the idea that the tech industry operates (and should be treated) differently.

The Risk and Reward of Innovation

In *The Value of Everything: Making and Taking in the Global Economy*, economist Mariana Mazzucato chips away at another myth of Silicon Valley exceptionalism: the idea that big tech and its investors deserve massive profits because they are risk-taking innovators who create value, rather than extract it. "In the case of venture capitalists," Mazzucato writes, "their real genius appears to lie in their timing: their ability to enter a sector late, after the highest development risks had already been taken, but at an optimum moment to make a killing."

Much of the hard work of innovation, she argues, has been funded by the government, which sees little direct return. Contrary to tech industry sneering, public funds are responsible for a lot of the technology we attribute to Silicon Valley. Mazzucato points out that GPS was funded by the US Navy, touchscreen display was backed by the CIA, both the internet and SIRI were funded by the Pentagon's DARPA, and Google's search algorithm was funded by a National Science Foundation grant.

Yet the government reaps few of the rewards. For instance, the same year the government loaned $535 million to solar-power company Solyndra, it also loaned Tesla $465 million. "Taxpayers footed the bill for Solyndra's losses—yet got hardly any of Tesla's" gains, she says. Solyndra has become "a byword for the government's sorry track record when it came to picking winners," a story that has helped keep regulators at bay, she says.

In theory, Mazzucato says, the public sector gets paid back through indirect means, like higher tax receipts, or public good. Instead, the "persuasive narrative" that technological progress would not be possible without Silicon Valley has enabled it to privatize the profits from big data, while offloading all the risks.

Advocacy as Prophecy

In *Winners Take All: The Elite Charade of Changing the World*, journalist Anand Giridharadas unpacks the same penchant for prediction when it's applied to philanthropy instead of the free market.

Giridharadas takes readers aboard Summit at Sea, a startup conference on a cruise ship, where world-changers have gathered for a panel on storytelling from investor Shervin Pishevar, who urges the crowd to keep their bodies alive because genetic research that prolongs the human life span will soon arrive. "The idea of retiring at 70 is gonna seem like people telling you at 30 to retire," Pishevar said.

Giridharadas argues that this is a reflection not of where science is headed, but rather the type of causes favored by tech donors. "Longer lives for rich people were just something that happened to be coming down the pipe. Not so much better healthcare system for all," he writes.

> **'VCs and entrepreneurs are considered by many to be thinkers these days, their commercial utterances treated like ideas, and these ideas are often in the future tense.'**
>
> —ANAND GIRIDHARADAS

"Here Pishevar was engaging in advocacy that disguised itself as prophecy," Giridharadas writes. "VCs and entrepreneurs are considered by many to be thinkers these days, their commercial utterances treated like ideas, and these ideas are often in the future tense: claims about the next world, forged by adding up the theses of their portfolio companies to extrapolating rom their own startup mission statement"

The weather has turned on tech since Giridharadas stepped off that cruise. The arguments in these books would've been shrugged off a few years ago, now the authors are invited to give talks at tech events. On Capitol Hill, regulators have finally found their voice; in Silicon Valley, companies are acting contrite. But look a little closer and it's clear they are still pitching a future where disruptors know best. AI can fix hate speech and misinformation. China is better off with Google's censored search. Basic income will set us free.

In a winners-take-all economy, it's hard to prove the rulers wrong. But if the tech backlash wants to become more than just the next chapter in their myth, we have to question the fitness of the companies that survived.

More Great WIRED Stories

- Bionic limbs "learn" to open a beer
- The next great (digital) extinction

- Meet the YouTube King of useless machines
- Malware has a new way to hide on your Mac
- Crawling dead: how ants turn into zombies
- Looking for more? Sign up for our daily newsletter and never miss our latest and greatest stories

RELATED VIDEO

DESIGN

How Apple's iPhones Change the Smartphone Market Every Year

The launch of Apple's iPhone X brought face recognition, animoji, and the notch into the mainstream.

#SILICON VALLEY #TECHNOLOGY #ANDREESSEN HOROWITZ #DISRUPTION

VIEW COMMENTS

MORE BUSINESS

STARTUPS

Tech’s Ethical Crisis Over Venture Capital Goes Beyond Saudi Arabia

LOUISE MATSAKIS

ONLINE THREATS

Mail Bomb Suspect Threatened Some of His Targets on Twitter

PARIS MARTINEAU

OPEN INTERNET

California Will Pause Net Neutrality Law for Federal Suit

KLINT FINLEY

NAME PROTEST

AI Researchers Fight Over Four Letters: NIPS

TOM SIMONITE

ELECTIONS

Tech Workers Overwhelmingly Support Democrats in 2018

JOANNA PEARLSTEIN

STACKED DECK

Lawmakers Seek Review of Pentagon Cloud Contract

PARIS MARTINEAU

GET OUR NEWSLETTER

WIRED’s biggest stories delivered to your inbox.

Enter your email

SUBMIT

FOLLOW US ON YOUTUBE

Don’t miss out on WIRED’s latest videos.

FOLLOW