

Amazon Unbound

JEFF BEZOS *and*
the INVENTION *of a*
GLOBAL EMPIRE

Brad Stone

Author of The Everything Store

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Amazon Unbound

JEFF BEZOS *and the* INVENTION
of a GLOBAL EMPIRE

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To my father, Robert Stone

“His genius was not in inventing; rather, it was in inventing a system of invention. Dozens of researchers and engineers and developmental tinkerers labored beneath Edison in a carefully constructed hierarchical organization that he founded and oversaw.”

—Graham Moore, *The Last Days of Night: A Novel*

“It has always seemed strange to me.... The things we admire in men—kindness and generosity, openness, honesty, understanding, and feeling—are the concomitants of failure in our system. And those traits we detest—sharpness, greed, acquisitiveness, meanness, egotism, and self-interest—are the traits of success. And while men admire the quality of the first, they love the produce of the second.”

—John Steinbeck, *Cannery Row*

Introduction

It was the kind of large indoor gathering that would soon feel anachronistic, like an ancient custom from a lost civilization. On a Sunday night in November 2019, one month before Covid-19 first appeared in Wuhan, China, kicking off the worst pandemic in modern history, luminaries from the worlds of politics, media, business, and the arts gathered at the Smithsonian's National Portrait Gallery in Washington, D.C. Michelle Obama, Hillary Clinton, Nancy Pelosi, and hundreds of other guests packed the museum courtyard for an invitation-only, black-tie affair. They were there to celebrate the addition of six new portraits to the gallery's permanent collection, honoring iconic Americans such as *Hamilton* creator Lin-Manuel Miranda, and *Vogue* editor Anna Wintour, as well as the richest person in the world: Amazon founder and CEO, Jeff Bezos.

Bezos's lifelike portrait by the photorealistic painter Robert McCurdy depicted him against a stark white background, wearing a crisp white shirt, silver tie, and the severe gaze that had flustered Amazon employees over the last twenty-five years. In his speech that night, accepting the Portrait of a Nation Prize for commitment to "service, creativity, individuality, insight, and ingenuity," Bezos thanked his large coterie of family and colleagues in the audience and struck a characteristic note of public humility.

"My life is based on a large series of mistakes," he said, after an eloquent introduction from his oldest son, nineteen-year-old Preston. "I'm kind of famous for it in the business realm. How many people here have a Fire Phone?" The crowd guffawed and was silent—Amazon's 2014 smartphone had infamously bombed. "Yeah, no, none of you do. Thanks," he said to laughs.

“Every interesting thing I’ve ever done, every important thing I’ve ever done, every beneficial thing I’ve ever done, has been through a cascade of experiments and mistakes and failures,” Bezos continued. “I’m covered in scar tissues as a result of this.” He recalled selecting McCurdy from binders of artists provided by the museum, and said he was looking for “someone who would paint me hyper-realistically, with every flaw, every imperfection, every piece of scar tissue that I have.”

The audience responded to Bezos’s speech with a rapturous standing ovation. It was that kind of evening. The band Earth, Wind & Fire played, guests drank and danced, and the comedian James Corden presented an award to Wintour while impersonating her in a blond wig, black sunglasses, and fur-lined coat. “Ask Jeff Bezos to get me a coffee!” he vamped. The well-heeled crowd roared in delight.

Outside that prosperous gathering though, the feelings toward Amazon and its CEO in the midst of the company’s twenty-sixth year were far more complicated. Amazon was booming, but its name was stained. Wherever there was applause, there was also discordant criticism. Amazon was admired and even beloved by customers while its secretive intentions were often mistrusted, and the towering net worth of its founder, set against the plight of its blue-collar workforce in company warehouses, provoked unsettling questions about the asymmetric distribution of money and power. Amazon was no longer just an inspiring business story but a referendum on society, and on the responsibilities that large companies have toward their employees, their communities, and the sanctity of our fragile planet.

Bezos had attempted to address that latter concern by conceiving the Climate Pledge, a promise that Amazon would be carbon neutral by 2040, ten years before the most ambitious goals set by the Paris climate accords. Critics were hammering Amazon to follow other companies and reveal its carbon footprint—its contribution to the harmful gasses that were rapidly warming the globe. Its sustainability division had labored for years to create more efficient standards for its buildings and to cut down on wasteful packaging materials. But it wasn’t enough to simply publicize their work and follow other companies by releasing a carbon impact report. Bezos insisted that Amazon approach the issue creatively,

so that it might be viewed as a leader and its millions of customers around the world could still feel good about visiting the site and clicking the buttons labeled “Buy Now.”

No concrete way existed to achieve this goal, particularly in the face of Amazon’s growing armada of pollution-spewing airplanes, trucks, and delivery vans. Nevertheless, Bezos wanted to unveil the pledge and invite other companies to sign it with a grand gesture. One idea actively discussed inside the company was for him to announce the initiative with a video that he would personally record from one of the polar ice caps. Employees in Amazon’s sustainability and public relations departments actually spent a few days contemplating how to pull off that nightmarishly complex and carbon-intensive feat, until they mercifully gave up the notion. Bezos would do it in the far more accessible and warmer confines of the National Press Club in Washington, D.C.

On the morning of September 19, 2019, two months before the gala at the Smithsonian, a few dozen members of the press gathered for a rare audience with Amazon’s CEO. Bezos sat on a small stage with Christiana Figueres, former executive secretary of the United Nations Framework Convention on Climate Change. “Predictions made by climate scientists just five years ago are turning out to be wrong,” he began. “The Antarctic ice sheets are melting 70 percent faster than predicted five years ago. Oceans are warming 40 percent faster.” To help meet its new goals, he continued, Amazon would move to power its operations with 100 percent renewable energy. It would start by placing an order for one hundred thousand electric vans from the Plymouth, Michigan–based startup that Amazon had helped fund, Rivian Automotive.

In the Q&A session that followed, a reporter asked Bezos about a group of workers who had banded together under the mantle “Amazon Employees for Climate Justice.” They were demanding, among other things, that the company withdraw financial support for climate-denying politicians and break its cloud computing contracts with fossil fuel companies. “I think it’s totally understandable,” said Bezos of the group’s concerns, while noting that he didn’t agree with all of their demands. “We don’t want this to be the tragedy of the commons. We all have to work together on this.” A few months later, in the

midst of the Covid-19 pandemic, Amazon would fire two of the group's organizers.

I was in the audience that day as well, and raised my hand to ask Bezos the last question of the morning: Was he confident that humanity could move quickly enough to escape the direst scenarios for a warming planet? "I'm congenitally optimistic," he replied, fixing me with the laser-eyed stare that the artist Robert McCurdy so faithfully captured. "I really do believe when ingenuity gets involved, when invention gets involved, when people get determined, when passion comes out, when they make strong goals—you can invent your way out of any box. That's what we humans need to do right now. I believe we're going to do it. I'm sure we're going to do it."

His answer suggested total faith in the underlying virtues of technology, and in the ability of the cleverest, most determined innovators to navigate out of any jam. At least in that moment, he seemed like the *same old Jeff*, and not at all the billionaire who founded and operated a business that, depending on your perspective, was either propelling the world into an exciting future or helping to blot out the nurturing sun of fair competition and free enterprise itself.

Today, Amazon sells nearly everything and delivers its packages promptly, powers much of the internet in its data centers, streams television shows and movies to our homes, and sells a popular line of voice-activated speakers. But nearly three decades ago, it was just an idea, circulating on the fortieth floor of a midtown Manhattan skyscraper. In case you're not familiar with that foundational piece of internet lore, the story went like this:

Vowing upon the age of thirty to risk the entrepreneurial path, Jeffrey Preston Bezos quit his high-paying job at the esteemed Wall Street hedge fund D. E. Shaw to start a seemingly modest business: an online bookstore. With his twenty-four-year-old wife, MacKenzie, he flew from New York City to Fort Worth, took his family's '88 Chevy Blazer out of storage, and asked her to drive northwest while he sat in the passenger's seat, tapping financial projections into a spreadsheet on his laptop. It was 1994, the paleolithic year of the internet.

He set up his startup in the enclosed garage of a three-bedroom ranch house in an eastern Seattle suburb, with an old iron potbellied stove at its center, and fashioned the first two desks himself out of sixty-dollar wooden doors from Home Depot. He called the company Cadabra Inc., then wavered and considered the names Bookmall.com, Aard.com, and Relentless.com, before finally deducing that the Earth's largest river could represent its biggest selection of books—Amazon.com.

He financed the startup himself at first, along with a \$245,000 investment from his devoted parents, Jackie and Mike. When the website went live in '95, Amazon immediately got caught up in a dawning mania for a novel technology called the World Wide Web. There was 30, 40, 50 percent growth in orders each week, undermining any attempts at careful planning and pushing that earliest batch of eclectic recruits into such a frenetic pace that they would later share a palpable sense of amnesia about those early times. The first potential investors mostly balked, distrustful of the internet and this geeky, self-assured young man from the East Coast with a crazy, barking laugh. But in 1996, Silicon Valley venture capitalists got ahold of the startup, and the abundance of money flipped a switch in the brain of the budding CEO, sparking a bullish fervor of wild ambitions and fever dreams of domination.

The first company-wide motto was "Get Big Fast." Amazon's rapid expansion, during what became known as the dot-com boom in the late 1990s, was epic. Bezos hired new executives, opened new warehouses, staged a well-publicized IPO in 1997, and fought off a desperate lawsuit from his first rival, the bookseller Barnes & Noble. He thought the Amazon brand could be malleable, like Richard Branson's Virgin, so he dove headlong into new product categories and started selling CDs, DVDs, toys, and electronics. "We are going to take this thing to the moon," he told then fellow Seattle CEO Howard Schultz of Starbucks.

Bezos wanted to set his own metrics for success, without interference from impatient outsiders, so he encoded his operating philosophy in his first letter to shareholders, vowing a focus not on immediate financial returns or on satisfying the myopic demands of Wall Street, but on increasing cash flow and growing market share to generate value over the long term for loyal shareholders. "This is

Day 1 for the Internet and, if we execute well, for Amazon.com,” he wrote, coining the sacred phrase “Day 1” that inside Amazon would come to represent the need for constant invention, fast decision-making, and the eager embrace of broader technology trends. Investors signed on for the ride, bidding the stock price to unimaginable heights. The CEO became a millionaire and a celebrity, landing on the cover of *Time* magazine as “Person of the Year” in 1999, at the twilight of the century, his balding head peeking goofily out of a cardboard box filled with colored Styrofoam peanuts.

But behind the scenes, things were a mess. Amazon’s profligate investments in other dot-com startups were souring, a host of acquisitions hadn’t worked, and many of the early hires, from traditional retailers like Walmart, looked askance at the sprawling chaos and fled. The first warehouses were so overwhelmed by orders over the Christmas holidays that employees from Seattle had to leave their desks every December, roll up their sleeves, and work on the front lines, packing and wrapping gifts while doubling up in economy hotel rooms.

Over the next two years, the company bled money and almost died during the period known as the dot-com bust. A financial paper dubbed the company “Amazon.bomb”—declaring that “Investors Are Beginning to Realize This Storybook Stock Has Problems”—and it stuck. Bezos was widely ridiculed and in 2001 was even frivolously investigated by the SEC for insider trading. One analyst generated frequent headlines by repeatedly predicting that the company was about to run out of money. By then, Amazon had moved into a 1930s-era art deco VA hospital that sat on a hill facing downtown Seattle. When the Nisqually earthquake struck the Pacific Northwest in February 2001, bricks and mortar rained down in what seemed like an ominous prophecy. Bezos and his employees survived by diving under their thick door desks.

Amazon’s stock sank into the single digits, ruining dreams of quick fortune. The thirty-seven-year-old Bezos scrawled “I am not my stock price!” on a whiteboard in his office and doubled down on giveaways to customers, like rapid delivery of the latest Harry Potter novel on the day of publication.

Employees were scared, but Bezos seemed to have ice in his veins. Through some well-timed debt offerings and a last-minute \$100 million infusion from the

online service AOL in the summer of 2001, the company raised enough money to cover its obligations and evade the fate that befell most other dot-coms. When Amazon finally cut enough costs to notch a quarter of profitability in the spring of 2003, the grudge-holding CEO hid an acronym, *milliravi*, in an earnings press release, an inside joke ridiculing the analyst who had predicted Amazon's demise.

The company had survived, but there was little about it that seemed special. The rival online store eBay had a far larger selection of products for sale. The discount physical retailer Walmart had lower prices. The growing search engine Google was attracting the world's best engineers and siphoning away online shoppers to its eponymous website, then charging Amazon to place advertisements within search results to lure them back.

What followed was one of the most remarkable turnarounds in business history. After failing to match eBay's success with online auctions, Bezos opened the site to third-party sellers and allowed them to list their wares alongside Amazon's own products and let customers decide who to buy from. Then he had an epiphany, recognizing the flywheel, or virtuous cycle, that was powering his business. By adding outside vendors and additional selection to Amazon.com, the company drew in new shoppers and earned commissions on those sales, which it could use to lower prices or subsidize faster delivery. That in turn drew in more shoppers and attracted more sellers—and the process repeated itself. Invest in any part of the loop, Bezos reasoned, and this cycle would accelerate.

Bezos also hired an executive named Jeff Wilke from the aerospace and automotive giant AlliedSignal. Wilke was a lot like Bezos: precocious, ambitious, and focused on satisfying customers over just about everything else, including the feelings of his employees. Together they redesigned the warehouses, christening them “fulfillment centers” or FCs, and rewrote their logistics software from scratch. The ability to efficiently and predictably fulfill customer orders allowed Amazon to resume expansion into new product categories, like jewelry and apparel—and eventually, to introduce the enticing \$79-a-year two-day shipping guarantee, Amazon Prime.

With another like-minded deputy, Andy Jassy, Bezos also expanded in an even more surprising direction. Contemplating the way his own engineers worked, and the expertise the company had developed in building a stable computing infrastructure that could withstand enormous seasonal spikes in traffic, he conceived of a new business called Amazon Web Services. The idea was that Amazon would sell raw computing power to other organizations, who could access it online and use it to economically run their own operations.

The business plan was barely understandable to many of Amazon's own employees and board members. But the forty-year-old Bezos believed in it, micromanaging the project and sending extraordinarily detailed recommendations and goals to AWS team leaders, often late at night. "This has to scale to infinity with no planned downtime," he told the beleaguered engineers working on the project. "Infinity!"

At the same time, Bezos was shocked by Apple's rapid ascendance in music sales with its iPod music player and iTunes store. Concerned about a similar incursion into books, he initiated a secret project to create Amazon's own digital book reader, the Kindle. Colleagues thought it was crazy for the perennially money-losing Amazon to make gadgets. "I absolutely know it's hard, but we'll learn how to do it," Bezos told them.

He put another deputy, Steve Kessel, in charge and asked him to drop his responsibilities running Amazon's original bookselling business and to "proceed as if your goal is to put everyone selling physical books out of a job." The resulting skirmishes with traditional publishers over the terms for the new e-book market spanned years and generated charges that Amazon was engaging in predatory conduct. Paradoxically, it also resulted in an antitrust case against five large book publishers and Apple, alleging they had illegally conspired to fix digital prices for e-books above the Kindle's \$9.99 standard.

The confluence of those three initiatives—in the fulfillment centers, and with AWS and the Kindle—vaulted Amazon back into the graces of Wall Street. In 2008, Amazon surpassed eBay in market capitalization and was beginning to be mentioned in the same breath as Google, Apple, and a new Silicon Valley upstart, Facebook. Bezos then used every bit of leverage at his disposal to outduel Walmart and acquire two emerging online rivals: the shoe-retailer

Zappos and a seller of consumable goods called Quidsi, which owned the popular website Diapers.com. Antitrust authorities approved those deals quickly—decisions that would later be regarded skeptically in light of Amazon’s growing dominance.

It turned out that there was more depth than anyone had suspected to the increasingly fit CEO with the now clean-shaven head. He was a ravenous reader, leading senior executives in discussion of books like Clayton Christensen’s *The Innovator’s Dilemma*, and he had an utter aversion to doing anything conventionally. Employees were instructed to model his fourteen leadership principles, such as customer obsession, high bar for talent, and frugality, and they were trained to consider them daily when making decisions about things like new hires, promotions, and even trivial changes to products.

PowerPoint presentations, with their litany of bullet points and incomplete thoughts, were banned inside the company despite being popular in the rest of corporate America. Instead, all meetings started with almost meditative readings of data-rich, six-page documents, called “narratives.” The act of business building at Amazon was an editorial process, with papers subject to numerous revisions, debate over the meaning of individual words, and meticulous consideration by company leaders, most of all from Bezos himself. Meanwhile, working groups inside Amazon were broken into small versatile units, called two-pizza teams (because they were small enough to be fed with two pizzas), and were ordered to move quickly, often in competition with one another.

This unusual and decentralized corporate culture hammered into employees that there was no trade-off between speed and accuracy. They were supposed to move fast and *never* break things. Goals, accountability, and deadlines were pushed down into the organization, while metrics were fed upward, via weekly and quarterly business reports and biannual companywide reviews, called OP1 (for operating plan, in the late summer) and OP2 (after the holidays). The performance of each team was evaluated by Bezos’s hallowed leadership council of like-minded math whizzes: the S-team (for senior team). Sitting atop it all was Bezos himself, who would home in on promising new projects, or on fixing teams whose results were disappointing, with the same focus and exacting

standards that he had brought to Amazon's earliest days. He took nothing for granted, including Amazon's increasing success.

His blasts of annoyance, directed at employees who failed to meet those standards, were legendary inside the company. "Why are you wasting my life?" he'd ask, scoffing at disappointing underlings. Or he leveled them with "I'm sorry, did I take my stupid pills today?" While the brutal leadership style and distinct culture was enervating to many employees, it was also proving unmistakably effective. In the spring of 2011, Amazon was valued at \$80 billion. Buoyed by the rise of his stock holdings, the forty-seven-year-old Bezos was the thirtieth richest person in the world, with an \$18.1 billion net worth.

That outsized success started to draw attention. State legislatures recognized that the growing flood of tax-free sales over the internet was depleting their coffers, and they passed legislation requiring online retailers to pay sales taxes, closing a loophole that had been created before the internet age for mail-order companies. Bezos was prepared to fight to protect a significant price advantage over offline rivals, and even backed a California ballot initiative to undo a new state law that would force online retailers to collect sales tax. But in the middle of the fight, he changed course; sales tax avoidance had tied the company in knots, requiring it to limit where it opened facilities and even where employees could travel. By agreeing to collect sales tax, Bezos surrendered his prized advantage. Instead, he took the longer view, making it possible for Amazon to open up offices and fulfillment centers in more populous states, much closer to its customers, laying the groundwork for one of the largest expansions in business history.

Amazon was sprawling out in every direction, both online and back home. It moved from a scattered collection of offices around Seattle to nearly a dozen buildings in a developing office district by the freshwater Lake Union, north of downtown. In early 2012, anonymous fliers taped around South Lake Union found a derogatory name for the growing cadre of employees spreading out over the area with their identifiable badges: "Am-holes." It presaged a growing unease between the company and its left-leaning, blue-collar hometown.

While he had triumphed against enormous odds, Jeff Bezos preferred those negative articles, like the old "Amazon.bomb" cover story in *Barron's*, to be

posted on his office walls, so that he and his colleagues would remain frightened and motivated. “It’s still Day 1!” he dutifully reminded his employees and investors in the shareholder letter published that spring. After all, there was so much more to do to augment the nearly endless selection of physical and digital goods on the virtual shelves of the everything store.

I published a book by that title in October 2013, right into the grip of the world’s growing fascination with Amazon. It was an attempt to explain a classic modern business story—how the impresario of online books had fought off near ruin and upended not only retail but digital media and enterprise computing.

There were generally positive reviews and a few infamous negative ones. “I wanted to like this book,” wrote MacKenzie Bezos in a one-star brickbat posted to Amazon.com. She alleged factual inaccuracies, a “lopsided and misleading portrait of the people and culture at Amazon,” and criticized my characterization of Bezos’s disciples, who channeled his maxims and leadership style, as “Jeff Bots.” Later, I also learned that Bezos was upset with how I had handled tracking down his biological father, the now-deceased Ted Jorgensen, a man who had left his family when Bezos was a toddler and did not know what had become of his son until I visited him forty-five years later.

At the time I thought I had written the comprehensive book on Amazon’s rise. But then a strange thing happened. In 2014, Amazon released the first Echo, a voice-activated speaker running the virtual assistant Alexa. The product was a hit, and over the next five years the company sold more than a hundred million devices, initiating a new wave of voice-connected computing and eliminating the odor of Amazon’s previous failure in consumer gadgets, the Fire Phone. Amazon was moving from its customers’ doorsteps to their living rooms, with access to their broad range of requests and questions, and potentially their most intimate conversations.

At around the same time, Amazon’s AWS division expanded its line of database services to lure large enterprises and government agencies into that ethereal future of enterprise computing known as “the cloud.” Amazon reported AWS’s financial results for the first time in the spring of 2015, shocking

investors with its profitability and growth, only to generate another round of feverish enthusiasm for Amazon's stock.

A few years later, Amazon opened its first prototype Amazon Go physical retail store in Seattle, using artificial intelligence and computer vision so customers could walk out of the store and be automatically charged rather than checking out with a human cashier. The company also expanded geographically, pushing into India, Mexico, and other countries, at massive expense and in direct competition with the largest company in the world by sales: Walmart. Meanwhile, its investments in Hollywood, via Amazon Studios, yielded critical hits like *Transparent*, *The Marvelous Mrs. Maisel*, and *Jack Ryan*, along with a few notorious bombs, like Woody Allen's *Crisis in Six Scenes*. It put Amazon right behind Netflix in the race to redefine home entertainment for a new age.

While all this was unfolding, Amazon was also reinvigorating its older businesses. Amazon Marketplace, where independent sellers hawked their wares on Amazon.com, exploded with a surge of low-priced products (including counterfeits and knockoffs) manufactured in China. In 2015, the total value of the products sold on the marketplace surpassed the value of the units that Amazon sold itself on its own site. Amazon acquired the organic supermarket chain Whole Foods Market in 2017, saving the iconic American grocer from an unwelcome incursion by activist investors, and boosting its own ineffectual efforts to crack the food business.

Amazon also remade its delivery operations, lessening its reliance on partners like UPS with its own network of sortation centers, drivers, and cargo aircraft branded with the Amazon Prime logo. And it revived its advertising business, embedding ads in its search results just as Google had pioneered a decade before to Amazon's annoyance, generating a profitable new revenue line for the company.

The Amazon that I had written about was worth nearly \$120 billion at the end of 2012. The company's market capitalization touched a trillion dollars for the first time in the fall of 2018—eight times more valuable in less than six years—and returned to surpass that threshold, apparently for good, in early 2020. My Amazon had under 150,000 employees. By the end of 2020, it had an astounding 1.3 million employees. I was writing about the Kindle company, but

this was now the Alexa company. Also, the cloud company. And a Hollywood studio. And a video game maker, robotics manufacturer, grocery store owner—and on and on.

While Amazon seduced investors and customers, it also moved to the center of an acrimonious political struggle that had the potential to redefine free market capitalism. Its vocal critics believed that such brazen accumulation of wealth and power had a significant cost, exacerbating income inequality and stacking the odds against workers and locally owned businesses.

“Today’s big tech companies have too much power—too much power over our economy, our society, and our democracy,” wrote Senator Elizabeth Warren at the debut of her unsuccessful bid for the White House in 2019. “Amazon crushes small companies by copying the goods they sell on the Amazon Marketplace and then selling its own branded version.” She urged that Jeff Bezos’s meticulous creation be forced to spin off Zappos and Whole Foods Market and be stamped into smaller parts.

As Amazon changed, so too did Bezos undergo his own startling transformation.

In the company’s early years, he usually sported pleated khakis and navy-blue button-down shirts and rode his two-wheel Segway scooter around the office, his laugh ricocheting off the walls. He lived with his wife and four children in the opulent waterfront suburb of Medina, Washington, outside Seattle, and fiercely guarded their privacy. Despite his budding wealth, he appeared to have little interest in collecting assets like vintage sports cars or expensive paintings won at exclusive auctions. He was not, by any means, an aficionado of luxury yachts. Only his private jet seemed to kindle his overt enthusiasm, because avoiding public air travel saved him a resource that money couldn’t buy: time.

But by the late 2010s, Bezos as the unfashionable, single-minded geek was largely obsolete. Even the half-reformed nerd from the Fire Phone launch in 2014, who delighted in reciting the technical specifications of the fated smartphone, had bowed from the stage.

Shedding this image as an awkward though self-assured geek, Bezos emerged as a business kingpin who, at first, seemed to have an almost mystical aura of invincibility. Over the summer of 2017, Bezos became the wealthiest person in the world, a mathematical eventuality produced by Amazon's rising stock price and the relatively slower growing fortune of Microsoft cofounder Bill Gates, who was giving his money away in philanthropy, a process Bezos had yet to start in any meaningful way. As Bezos rose to the top of the world's wealthiest chart, a widely circulated photo from the prestigious Allen & Company's conference in Sun Valley showed him wearing a pair of stylish Garrett Leight folding sunglasses and a short-sleeved polo shirt and down vest that exposed enormous biceps. The photo went viral. Jeff Bezos was the action hero of the business world.

At first it was difficult for insiders to discern how much Bezos had truly changed. Colleagues said he remained absorbed in the mechanics of new businesses at Amazon, like Alexa. But other demands required his time, including his fledgling philanthropic efforts, his newly ambitious space company, Blue Origin, and the *Washington Post*, the prestigious newspaper he bought in 2013 that was a frequent target of the impetuous U.S. president, Donald J. Trump.

JPMorgan CEO Jamie Dimon, a longtime friend, said that the "Jeff I know is the same old Jeff." But as Dimon worked with Bezos in forums like the Business Council, a D.C. organization that meets several times a year to discuss policy, and Haven Healthcare, the failed joint initiative between Amazon, JPMorgan, and Berkshire Hathaway to lower employee healthcare costs, he observed his friend's eyes gradually opening. "Jeff was like a kid in a candy store. It was all new to him. He was so focused on Amazon for a long time. Then he gradually became a citizen of the world."

To others, Bezos's metamorphosis indicated the presence of something else: the hubris that comes with unimaginable success. In the fall of 2017, he directed Amazon to stage a contest called HQ2, a bakeoff among cities in North America to land a new Amazon headquarters outside of Seattle. The unprecedented public competition created a seventeen-month frenzy, with 238 regions contorting themselves to attract the tech giant. New York City and Northern Virginia were dubbed the winners, but by then political sentiment had turned

sharply against Amazon for (among other things) seeking out rich local tax incentives. Progressive legislators in Queens, like popular congresswoman Alexandria Ocasio-Cortez, and their allies in organized labor were able to make enough noise that Amazon ignominiously rescinded its offer to open the office in Long Island City, New York.

From there things took an even stranger turn. In January 2019, Bezos tweeted the surprising news of his divorce from MacKenzie, his wife of twenty-five years, stunning even those who believed they knew the couple well. The next day, the *National Enquirer*, the infamous supermarket tabloid, published a eleven-page spread divulging Bezos's extramarital relationship with TV personality Lauren Sanchez that included salacious private text messages between the pair. Bezos ordered an investigation into how the paper obtained his texts and intimate photographs; over the next year, that tawdry drama grew to involve charges of global espionage and hints of a conspiracy that involved Mohammed bin Salman, the crown prince of Saudi Arabia. *How does one of the most disciplined men in the world get himself into a situation like that?* more than one Amazon executive wondered privately at the time.

Amazon's founder was now so many things in the public eye, all at once: an inventor, arguably the most accomplished CEO in the world, a space entrepreneur, a newspaper savior and swashbuckling proponent for a free press—as well as a menacing monopolist, the foe of small business, an exploiter of warehouse workers, and the subject of prurient tabloid fascination. Such a disparate range of responses was also on display in the varied reaction to his February 2021 announcement that he would devote himself more fully to new products and projects at Amazon, as well as to his other interests, by giving the CEO job to longtime deputy Andy Jassy and becoming executive chairman.

Despite his optimism about solutions to global warming at the Climate Pledge press conference, this was clearly *not* the same old Jeff. So I resolved to write this sequel, and to investigate how Amazon had grown to such tremendous size in such a little amount of time. I would once again pose the critical question of whether Amazon and Jeff Bezos were good for business competition, for modern society, and even for our planet.

The task was completed with help from Amazon, the *Washington Post*, and Blue Origin, which facilitated interviews with many senior executives. Amazon did not, in the end, make Bezos himself available, despite repeated requests and personal entreaties. I also interviewed several hundred current and former employees, partners, competitors, and many others caught up in the whirling cyclone of Bezos and his multiple enterprises and personal dramas.

The result is this book. It's the story of a hard-driving CEO who created such a fertile corporate culture that even at massive size it repeatedly shucked its own bureaucracy to invent exhilarating new products. It's also the story of how a leading technology company became so omnipotent over the course of a single decade that many started to worry that it might definitively tilt the proverbial playing field against smaller companies. And it shows how one of the world's most famous businesspeople appeared to lose his way, and then tried to find it again—right in the midst of a terrifying global pandemic that further augmented his power and profit.

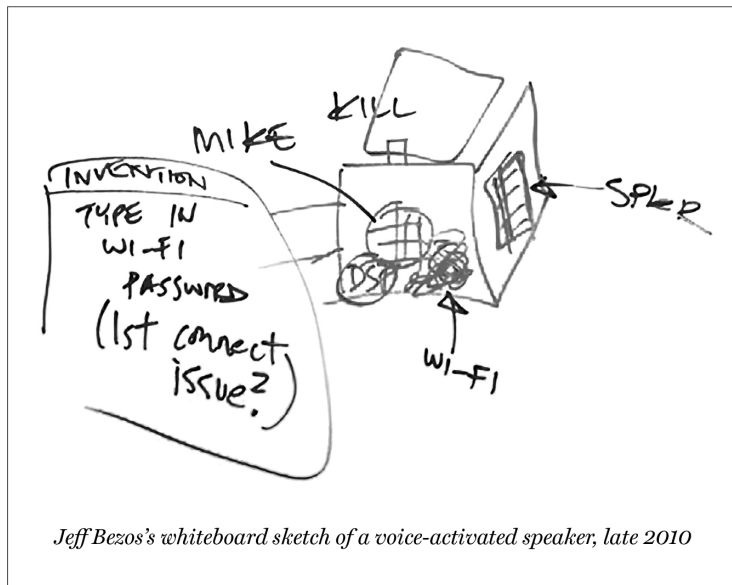
It's a tale that describes a period in business history when the old laws no longer seemed to apply to the world's most dominant companies. And it explores what happened when one man and his vast empire were about to become totally unbound.

PART I

INVENTION

Amazon, December 31, 2010

Annual net sales:	\$34.20 billion
Full- and part-time employees:	33,700
End-of-year market capitalization:	\$80.46 billion
<hr/>	
Jeff Bezos end-of-year net worth:	\$15.86 billion



Jeff Bezos's whiteboard sketch of a voice-activated speaker, late 2010

The Über Product Manager

There was nothing particularly distinctive about the dozen or so low-rise buildings in Seattle's burgeoning South Lake Union district that Amazon moved into over the course of 2010. They were architecturally ordinary and, on the insistence of its CEO, bore no obvious signage indicating the presence of an iconic internet company with almost \$35 billion in annual sales. Jeff Bezos had instructed colleagues that nothing good could come from that kind of obvious self-aggrandizement, noting that people who had business with the company would already know where it was located.

While the offices clustered around the intersection of Terry Avenue North and Harrison Street were largely anonymous, inside they bore all the distinguishing marks of a unique and idiosyncratic corporate culture. Employees wore color-coded badges around their necks signifying their seniority at the company (blue for those with up to five years of tenure, yellow for up to ten, red for up to fifteen), and the offices and elevators were decorated with posters delineating Bezos's fourteen sacrosanct leadership principles.

Within these walls ranged Bezos himself, forty-six years old at the time, carrying himself in such a way as to always exemplify Amazon's unique operating ideology. The CEO, for example, went to great lengths to illustrate Amazon's principal #10, "frugality": *Accomplish more with less. Constraints breed resourcefulness, self-sufficiency, and invention. There are no extra points for growing headcount, budget size, or fixed expense.* His wife, MacKenzie, drove him to work most days in their Honda minivan, and when he flew with colleagues on his private Dassault Falcon 900EX jet, he often mentioned that he personally, not Amazon, had paid for the flight.

If Bezos took one leadership principle most to heart—which would also come to define the next half decade at Amazon—it was principal #8, “think big”: *Thinking small is a self-fulfilling prophecy. Leaders create and communicate a bold direction that inspires results. They think differently and look around corners for ways to serve customers.* In 2010, Amazon was a successful online retailer, a nascent cloud provider, and a pioneer in digital reading. But Bezos envisioned it as much more. His shareholder letter that year was a paean to the esoteric computer science disciplines of artificial intelligence and machine learning that Amazon was just beginning to explore. It opened by citing a list of impossibly obscure terms such as “naïve Bayesian estimators,” “gossip protocols,” and “data sharding.” Bezos wrote: “Invention is in our DNA and technology is the fundamental tool we wield to evolve and improve every aspect of the experience we provide our customers.”

Bezos wasn’t only imagining these technological possibilities. He was also attempting to position Amazon’s next generation of products directly on its farthest frontier. Around this time, he started working intensively with the engineers at Lab126, Amazon’s Silicon Valley R&D subsidiary, which had developed the company’s first gadget, the Kindle. In a flurry of brainstorming sessions, he initiated several projects to complement the Kindle and the coming Kindle Fire tablets, which were known internally at the time as Project A.

Project B, which became Amazon’s ill-fated Fire Phone, would use an assembly of front-facing cameras and infrared lights to conjure a seemingly three-dimensional smartphone display. Project C, or “Shimmer,” was a desk lamp-shaped device designed to project hologram-like displays onto a table or ceiling. It proved unfeasibly expensive and was never launched.

Bezos had peculiar ideas about how customers might interact with these devices. The engineers working on the third version of the Kindle discovered this when they tried to kill a microphone that was planned for the device, since no features were slated to actually use it. But the CEO insisted that the microphone remain. “The answer I got is that Jeff thinks in the future we’ll talk to our devices,” said Sam Bowen, then a Kindle hardware director. “It felt a bit more like *Star Trek* than reality.”

Designers convinced Bezos to lose the microphone in subsequent versions of the Kindle, but he clung to his belief in the inevitability of conversational computing and the potential of artificial intelligence to make it practical. It was a trope in all his favorite science fiction, from TV's *Star Trek* ("computer, open a channel") to authors like Arthur C. Clarke, Isaac Asimov, and Robert A. Heinlein whose books lined the library of hundreds of volumes in his lakefront Seattle-area home. While others read these classics and only dreamed of alternate realities, Bezos seemed to consider the books blueprints for an exciting future. It was a practice that would culminate in Amazon's defining product for a new decade: a cylindrical speaker that sparked a wave of imitators, challenged norms around privacy, and changed the way people thought about Amazon—not only as an e-commerce giant, but as an inventive technology company that was pushing the very boundaries of computer science.

The initiative was originally designated inside Lab126 as Project D. It would come to be known as the Amazon Echo, and by the name of its virtual assistant, Alexa.

As with several other projects at Amazon, the origins of Project D can be traced back to discussions between Bezos and his "technical advisor" or TA, the promising executive handpicked to shadow the CEO. Among the TA's duties were to take notes in meetings, write the first draft of the annual shareholder letter, and learn by interacting with the master closely for more than a year. In the role from 2009 to 2011 was Amazon executive Greg Hart, a veteran of the company's earliest retail categories, like books, music, DVDs, and video games. Originally from Seattle, Hart had attended Williams College in Western Massachusetts and, after a stint in the ad world, returned home at the twilight of the city's grunge era, sporting a goatee and a penchant for flannel shirts. By the time he was following Bezos around, the facial hair was gone and Hart was a rising corporate star. "You sort of feel like you're an assistant coach watching John Wooden, you know, perhaps the greatest basketball coach ever," Hart said of his time as the TA.

Hart remembered talking to Bezos about speech recognition one day in late 2010 at Seattle's Blue Moon Burgers. Over lunch, Hart demonstrated his enthusiasm for Google's voice search on his Android phone by saying, "pizza near me," and then showing Bezos the list of links to nearby pizza joints that popped up on-screen. "Jeff was a little skeptical about the use of it on phones, because he thought it might be socially awkward," Hart remembered. But they discussed how the technology was finally getting good at dictation and search.

At the time, Bezos was also excited about Amazon's growing cloud business, asking all of his executives, "What are you doing to help AWS?" Inspired by the conversations with Hart and others about voice computing, he emailed Hart, device vice president Ian Freed, and senior vice president Steve Kessel on January 4, 2011, linking the two topics: "We should build a \$20 device with its brains in the cloud that's completely controlled by your voice." It was another idea from the boss who seemed to have a limitless wellspring of them.

Bezos and his employees riffed on the idea over email for a few days, but no further action was taken, and it could have ended there. Then a few weeks later, Hart met with Bezos in a sixth-floor conference room in Amazon's headquarters, Day 1 North, to discuss his career options. His tenure as TA was wrapping up, so they discussed several possible opportunities to lead new initiatives at the company, including positions in Amazon's video streaming and advertising groups. Bezos jotted their ideas down on a whiteboard, adding a few of his own, and then started to apply his usual criteria to assess their merit: If they work, will they grow to become big businesses? If the company didn't pursue them aggressively now, would it miss an opportunity? Eventually Bezos and Hart crossed off all the items on the list except one—pursuing Bezos's idea for a voice-activated cloud computer.

"Jeff, I don't have any experience in hardware, and the largest software team I've led is only about forty people," Hart recalled saying.

"You'll do fine," Bezos replied.

Hart thanked him for the vote of confidence and said, "Okay, well, remember that when we screw up along the way."

Before they parted, Bezos illustrated his idea for the screenless voice computer on the whiteboard. The first-ever depiction of an Alexa device showed the

speaker, microphone, and a mute button. And it identified the act of configuring the device to a wireless network, since it wouldn't be able to listen to commands right out of the box, as a challenge requiring further thought. Hart snapped a photo of the drawing with his phone.

Bezos would remain intimately involved in the project, meeting with the team as frequently as every other day, making detailed product decisions, and authorizing the investment of hundreds of millions of dollars in the project before the first Echo was ever released. Using the German superlative, employees referred to him as the *über* product manager.

But it was Greg Hart who ran the team, just across the street from Bezos's office, in Fiona, the Kindle building. Over the next few months, Hart hired a small group from in and outside the company, sending out emails to prospective hires with the subject line "Join my mission" and asking interview questions like "How would you design a Kindle for the blind?" Then, just as obsessed with secrecy as his boss, he declined to specify what product candidates would be working on. One interviewee recalled guessing that it was Amazon's widely rumored smartphone and said that Hart replied, "There's another team building a phone. But this is way more interesting."

One early recruit was Amazon engineer Al Lindsay, who in a previous job had written some of the original code for telco US West's voice-activated directory assistance. Lindsay spent his first three weeks on the project on vacation at his cottage in Canada, writing a six-page narrative that envisioned how outside developers might program their own voice-enabled apps that could run on the device. Another internal recruit, Amazon manager John Thimsen, signed on as director of engineering and coined a formal code name for the initiative, Doppler, after the Project D designation. "At the start, I don't think anybody really expected it to succeed, to be honest with you," Thimsen told me. "But to Greg's credit, halfway through, we were all believers."

The initial Alexa crew worked with a feverish sense of urgency due to their impatient boss. Unrealistically, Bezos wanted to release the device in six to twelve months. He would have a good reason to hurry. On October 4, 2011, just as the Doppler team was coming together, Apple introduced the Siri virtual assistant in the iPhone 4S, the last passion project of cofounder Steve Jobs, who died of

cancer the next day. That the resurgent Apple had the same idea of a voice-activated personal assistant was both validating for Hart and his employees and discouraging, since Siri was first to market and with initial mixed reviews. The Amazon team tried to reassure themselves that their product was unique, since it would be independent from smartphones. Perhaps a more significant differentiator though was that Siri unfortunately could no longer have Jobs's active support, while Alexa would have Bezos's sponsorship and almost maniacal attention inside Amazon.

To speed up development and meet Bezos's goals, Hart and his crew started looking for startups to acquire. It was a nontrivial challenge, since Nuance, the Boston-based speech giant whose technology Apple had licensed for Siri, had grown over the years by gobbling up the top American speech companies. Doppler execs tried to learn which of the remaining startups were promising by asking prospective targets to voice-enable the Kindle digital book catalog, then studying their methods and results. The search led to several rapid-fire acquisitions over the next two years, which would end up shaping Alexa's brain and even the timbre of its voice.

The first company Amazon bought, Yap, a twenty-person startup based in Charlotte, North Carolina, automatically translated human speech such as voicemails into text, without relying on a secret workforce of human transcribers in low-wage countries. Though much of Yap's technology would be discarded, its engineers would help develop the technology to convert what customers said to Doppler into a computer-readable format. During the prolonged courtship, Amazon execs tormented Yap execs by refusing to disclose what they'd be working on. Even a week after the deal closed, Al Lindsay was with Yap's engineers at an industry conference in Florence, Italy, where he insisted that they pretend they didn't know him, so that no one could catch on to Amazon's newfound interest in speech technology.

After the purchase was finalized for around \$25 million, Amazon dismissed the company's founders but kept its speech science group in Cambridge, Massachusetts, making it the seed of a new R&D office in Kendall Square, near MIT. Yap engineers flew to Seattle, walking into a conference room on the first floor of Fiona with locked doors and closed window blinds. There Greg Hart

finally described “this little device, about the size of a Coke can, that would sit on your table and you could ask it natural language questions and it would be a smart assistant,” recalled Yap’s VP of research, Jeff Adams, a two-decade veteran of the speech industry. “Half of my team were rolling their eyes, saying ‘oh my word, what have we gotten ourselves into.’”

After the meeting, Adams delicately told Hart and Lindsay that their goals were unrealistic. Most experts believed that true “far-field speech recognition”—comprehending speech from up to thirty-two feet away, often amid crosstalk and background noise—was beyond the realm of established computer science, since sound bounces off surfaces like walls and ceilings, producing echoes that confuse computers. The Amazon executives responded by channeling Bezos’s resolve. “They basically told me, ‘We don’t care. Hire more people. Take as long as it takes. Solve the problem,’” recalled Adams. “They were unflappable.”

A few months after the Yap purchase, Greg Hart and his colleagues acquired another piece of the Doppler puzzle. It was the technological antonym of Yap, which converted speech into text. Instead, the Polish startup Ivona generated computer-synthesized speech that resembled a human voice.

Ivona was founded in 2001 by Lukasz Osowski, a computer science student at the Gdan’sk University of Technology. Osowski had the notion that so-called “text to speech,” or TTS, could read digital texts aloud in a natural voice and help the visually impaired in Poland appreciate the written word. With a younger classmate, Michal Kaszczuk, he took recordings of an actor’s voice and selected fragments of words, called diphones, and then blended or “concatenated” them together in different combinations to approximate natural-sounding words and sentences that the actor might never have uttered.

The Ivona founders got an early glimpse of how powerful their technology could be. While students, they paid a popular Polish actor named Jacek Labijak to record hours of speech to create a database of sounds. The result was their first product, Spiker, which quickly became the top-selling computer voice in Poland. Over the next few years, it was used widely in subways, elevators, and for robocall campaigns. Labijak subsequently began to hear himself everywhere and