

The Idea Factory Bell Labs And The Great Age Of American Innovation

A Wall Street Journal Business Bestseller “A deeply reported and business-savvy chronicle of Tesla's wild ride.” —Walter Isaacson, New York Times Book Review Power Play is the riveting inside story of Elon Musk and Tesla's bid to build the world's greatest car—from award-winning Wall Street Journal tech and auto reporter Tim Higgins Elon Musk is among the most controversial titans of Silicon Valley. To some he's a genius and a visionary; to others he's a mercurial huckster. Billions of dollars have been gained and lost on his tweets; his personal exploits are the stuff of tabloids. But for all his outrageous talk of mind-uploading and space travel, his most audacious vision is the one closest to the ground: the electric car. When Tesla was founded in the 2000s, electric cars were novelties, trotted out and thrown on the scrap heap by carmakers for more than a century. But where most onlookers saw only failure, a small band of Silicon Valley engineers and entrepreneurs saw opportunity. The gas-guzzling car was in need of disruption. They pitted themselves against the biggest, fiercest business rivals in the world, setting out to make a car that was quicker, sexier, smoother, cleaner than the competition. But as the saying goes, to make a small fortune in cars, start with a big fortune. Tesla would undergo a hellish fifteen years, beset by rivals, pressured by investors, hobbled by whistleblowers, buoyed by its loyal supporters. Musk himself would often prove Tesla's worst enemy—his antics more than once took the company he had initially funded largely with his own money to the brink of collapse. Was he an underdog, an antihero, a conman, or some combination of the three? Wall Street Journal tech and auto reporter Tim Higgins had a front-row seat for the drama: the pileups, wrestling for control, meltdowns, and the unlikeliest outcome of all, success. A story of power, recklessness, struggle, and triumph, Power Play is an exhilarating look at how a team of eccentrics and innovators beat the odds—and changed the future.

The history of the vocoder: how popular music hijacked the Pentagon's speech scrambling weapon The vocoder, invented by Bell Labs in 1928, once guarded phones from eavesdroppers during World War II; by the Vietnam War, it was repurposed as a voice-altering tool for musicians, and is now the ubiquitous voice of popular music. In How to Wreck a Nice Beach—from a mis-hearing of the vocoder-rendered phrase “how to recognize speech”—music journalist Dave Tompkins traces the history of electronic voices from Nazi research labs to Stalin's gulags, from the 1939 World's Fair to Hiroshima, from artificial larynges to Auto-Tune. We see the vocoder brush up against FDR, JFK, Stanley Kubrick, Stevie Wonder, Neil Young, Kraftwerk, the Cylons, Henry Kissinger, and Winston Churchill, who boomed, when vocoderized on V-E Day, “We must go off!” And now vocoder technology is a cell phone standard, allowing a digital replica of your voice to sound human. From T-Mobile to T-Pain, How to Wreck a Nice Beach is a riveting saga of technology and culture, illuminating the work of some of music's most provocative innovators.

Bell Laboratories is one of the world's leading research centres. Bell scientists have won seven Nobel prizes in, physics, more than any other single institution in the world. In this engrossing book - a blend of popular science, and history -Jeremy Bernstein guides us on a fascinating tour of the labs, introducing us to the men and women who have been responsible for some of the greatest scientific advances of this century, in computers and computation, solid state physics (including the invention and development of the transistor); communications, and in astrophysics.

Twenty five years ago, it didn't exist. Today, twenty million people worldwide are surfing the Net. Where Wizards Stay Up Late is the exciting story of the pioneers responsible for creating the most talked about, most influential, and most far-reaching communications breakthrough since the invention of the telephone. In the 1960's, when computers were regarded as mere giant calculators, J.C.R. Licklider at MIT saw them as the ultimate communications devices. With Defense Department funds, he and a band of visionary computer whizzes began work on a nationwide, interlocking network of computers. Taking readers behind the scenes, Where Wizards Stay Up Late captures the hard work, genius, and happy accidents of their daring, stunningly successful venture.

“It is possible to invent a single machine which can be used to compute any computable sequence,” twenty-four-year-old Alan Turing announced in 1936. In Turing's Cathedral, George Dyson focuses on a small group of men and women, led by John von Neumann at the Institute for Advanced Study in Princeton, New Jersey, who built one of the first computers to realize Alan Turing's vision of a Universal Machine. Their work would break the distinction between numbers that mean things and numbers that do things—and our universe would never be the same. Using five kilobytes of memory (the amount allocated to displaying the cursor on a computer desktop of today), they achieved unprecedented success in both weather prediction and nuclear weapons design, while tackling, in their spare time, problems ranging from the evolution of viruses to the evolution of stars. Dyson's account, both historic and prophetic, sheds important new light on how the digital universe exploded in the aftermath of World War II. The proliferation of both codes and machines was paralleled by two historic developments: the decoding of self-replicating sequences in biology and the invention of the hydrogen bomb. It's no coincidence that the most destructive and the most constructive of human inventions appeared at exactly the same time. How did code take over the world? In retracing how Alan Turing's one-dimensional model became John von Neumann's two-dimensional implementation, Turing's Cathedral offers a series of provocative suggestions as to where the digital universe, now fully three-dimensional, may be heading next.

* Our summary is short, simple and pragmatic. It allows you to have the essential ideas of a big book in less than 30 minutes. In this summary, you'll learn all about the origins of modern communications by delving into the history of Bell Laboratories. You'll understand how innovation comes about through the collaboration of ingenious and creative minds. You will also realize that : the success of a company depends above all on the vision of the people who make it up; intellectual curiosity and audacity are two virtues that bring creativity; technological innovations are based on collective and interdisciplinary work; bell laboratories have above all worked to reenchant science. Founded in 1925, Bell Laboratories was created to develop the R&D (research and development) of American Telephone & Telegraph (AT&T), which then held a monopoly in the telecommunications sector. The goal was to create a system capable of connecting two people wherever they were and whatever the time of day. Today, this is not only the case, but it is also possible to exchange images and different types of data. Tens of thousands of scientists have succeeded one another, over several decades, to bring this vision to life. The Idea Factory, traces the lives of some of them: Mervin Kelly, Jim Fisk, William Shockley, Claude Shannon, John R. Pierce. All are bound by the faith they put into the mission of Bell Laboratories. *Buy now the summary of this book for the modest price of a cup of coffee!

For those who could read between the lines, the censored news out of China was terrifying. But the president insisted there was nothing to worry about. Fortunately, we are still a nation of skeptics. Fortunately, there are those among us who study pandemics and are willing to look unflinchingly at worst-case scenarios. Michael Lewis's taut and brilliant nonfiction thriller pits a band of medical visionaries against the wall of ignorance that was the official response of the Trump administration to the outbreak of COVID-19. The characters you will meet in these pages are as fascinating as they are unexpected. A thirteen-year-old girl's science project on transmission of an airborne pathogen develops into a very grown-up model of disease control. A local public-health officer uses her worm's-eye view to see what the CDC misses, and reveals great truths about American society. A secret team of dissenting doctors, nicknamed the Wolverines, has everything necessary to fight the pandemic: brilliant backgrounds, world-class labs, prior experience with the pandemic scares of bird flu and swine flu...everything, that is, except official permission to implement their work. Michael Lewis is not shy about calling these people heroes for their refusal to follow directives that they know to be based on misinformation and bad science. Even the internet, as crucial as it is to their exchange of ideas, poses a risk to them. They never know for sure who else might be listening in.

A sweeping history of the electric light revolution and the birth of modern America The late nineteenth century was a period of explosive technological creativity, but more than any other invention, Thomas Edison's incandescent light bulb marked the arrival of modernity,

transforming its inventor into a mythic figure and avatar of an era. In *The Age of Edison*, award-winning author and historian Ernest Freeberg weaves a narrative that reaches from Coney Island and Broadway to the tiniest towns of rural America, tracing the progress of electric light through the reactions of everyone who saw it and capturing the wonder Edison's invention inspired. It is a quintessentially American story of ingenuity, ambition, and possibility in which the greater forces of progress and change are made by one of our most humble and ubiquitous objects.

A brilliant book by Nobel Prize winner Eric R. Kandel, *The Age of Insight* takes us to Vienna 1900, where leaders in science, medicine, and art began a revolution that changed forever how we think about the human mind—our conscious and unconscious thoughts and emotions—and how mind and brain relate to art. At the turn of the century, Vienna was the cultural capital of Europe. Artists and scientists met in glittering salons, where they freely exchanged ideas that led to revolutionary breakthroughs in psychology, brain science, literature, and art. Kandel takes us into the world of Vienna to trace, in rich and rewarding detail, the ideas and advances made then, and their enduring influence today. The Vienna School of Medicine led the way with its realization that truth lies hidden beneath the surface. That principle infused Viennese culture and strongly influenced the other pioneers of Vienna 1900. Sigmund Freud shocked the world with his insights into how our everyday unconscious aggressive and erotic desires are repressed and disguised in symbols, dreams, and behavior. Arthur Schnitzler revealed women's unconscious sexuality in his novels through his innovative use of the interior monologue. Gustav Klimt, Oscar Kokoschka, and Egon Schiele created startlingly evocative and honest portraits that expressed unconscious lust, desire, anxiety, and the fear of death. Kandel tells the story of how these pioneers—Freud, Schnitzler, Klimt, Kokoschka, and Schiele—inspired by the Vienna School of Medicine, in turn influenced the founders of the Vienna School of Art History to ask pivotal questions such as What does the viewer bring to a work of art? How does the beholder respond to it? These questions prompted new and ongoing discoveries in psychology and brain biology, leading to revelations about how we see and perceive, how we think and feel, and how we respond to and create works of art. Kandel, one of the leading scientific thinkers of our time, places these five innovators in the context of today's cutting-edge science and gives us a new understanding of the modernist art of Klimt, Kokoschka, and Schiele, as well as the school of thought of Freud and Schnitzler. Reinvigorating the intellectual enquiry that began in Vienna 1900, *The Age of Insight* is a wonderfully written, superbly researched, and beautifully illustrated book that also provides a foundation for future work in neuroscience and the humanities. It is an extraordinary book from an international leader in neuroscience and intellectual history.

The Idea Factory Bell Labs and the Great Age of American Innovation Penguin

Using Nobel Prize-winning examples like the transistor, laser, and magnetic resonance imaging, Venky Narayanamurti and Tolu Odumosu explore the daily micro-practices of research and show that distinctions between the search for knowledge and creative problem solving break down when one pays attention to how pathbreaking research actually happens.

Pulitzer Prize winner Tracy Kidder memorably records the drama, comedy, and excitement of one company's efforts to bring a new microcomputer to market. Computers have changed since 1981, when *The Soul of a New Machine* first examined the culture of the computer revolution. What has not changed is the feverish pace of the high-tech industry, the go-for-broke approach to business that has caused so many computer companies to win big (or go belly up), and the cult of pursuing mind-bending technological innovations. *The Soul of a New Machine* is an essential chapter in the history of the machine that revolutionized the world in the twentieth century.

An essential, eye-opening book about cyberterrorism, cyber war, and the next great threat to our national security. "Cyber War may be the most important book about national security policy in the last several years." —Slate Former presidential advisor and counter-terrorism expert Richard A. Clarke sounds a timely and chilling warning about America's vulnerability in a terrifying new international conflict. *Cyber War* is a powerful book about technology, government, and military strategy; about criminals, spies, soldiers, and hackers. It explains clearly and convincingly what cyber war is, and how vulnerable we are as a nation and as individuals to the vast and looming web of cyber criminals. Every concerned American should read this startling and explosive book that offers an insider's view of White House 'Situation Room' operations and carries the reader to the frontlines of our cyber defense. *Cyber War* exposes a virulent threat to our nation's security.

Even the smartest among us can feel inept as we fail to figure out which light switch or oven burner to turn on, or whether to push, pull, or slide a door. The fault, argues this ingenious—even liberating—book, lies not in ourselves, but in product design that ignores the needs of users and the principles of cognitive psychology. The problems range from ambiguous and hidden controls to arbitrary relationships between controls and functions, coupled with a lack of feedback or other assistance and unreasonable demands on memorization. *The Design of Everyday Things* shows that good, usable design is possible. The rules are simple: make things visible, exploit natural relationships that couple function and control, and make intelligent use of constraints. The goal: guide the user effortlessly to the right action on the right control at the right time. In this entertaining and insightful analysis, cognitive scientist Don Norman hails excellence of design as the most important key to regaining the competitive edge in influencing consumer behavior. Now fully expanded and updated, with a new introduction by the author, *The Design of Everyday Things* is a powerful primer on how—and why—some products satisfy customers while others only frustrate them.

The authors document how four forces—exponential technologies, the DIY innovator, the Technophilanthropist, and the Rising Billion—are conspiring to solve our biggest problems. "Abundance" establishes hard targets for change and lays out a strategic roadmap for governments, industry and entrepreneurs, giving us plenty of reason for optimism.

Throughout the ages, mankind has been fascinated by the ruins of previous societies. The desire to gain a greater understanding of our past has driven archaeologists, artists, and scholars from across the world to study the vestiges of lifestyles that have vanished in an attempt to capture their mystique and beauty. Originally intended as an examination of the rise and fall of the state hospital system, Matthew Christopher's *Abandoned America* rapidly grew to encompass derelict factories and industrial sites, schools, churches, power plants, hospitals, prisons, military installations, hotels, resorts, homes, and more. Through his collection of writing and photography, Christopher has spent the last decade documenting the ruins of one of the greatest civilizations the world has ever known: our own. Exploring sites like the charred remains of the Hotel Do De, the rusted cells of the Essex County Jail Annex, the sublime majesty of the Church of the Transfiguration, or the eerie and dilapidated remnants of the New Castle Elks Lodge, the work spans architectural treasures left to the elements and then all too often lost forever."

Winner of the Neumann Prize for the History of Mathematics **Named a best book of the year by Bloomberg and Nature** **'Best of 2017' by The Morning Sun** "We owe Claude Shannon a lot, and Soni & Goodman's book takes a big first step in paying that debt." —San Francisco Review of Books "Soni and Goodman are at their best when they invoke the wonder an idea can instill. They summon the right level of awe while stopping short of hyperbole." —Financial Times "Jimmy Soni and Rob Goodman make a convincing case for their subtitle while reminding us that Shannon never made this claim himself." —The Wall Street Journal "Soni and Goodman have done their research...A Mind at Play reveals the remarkable human behind some of the most important theoretical and practical contributions to the information age." —Nature "A Mind at Play shows us that you don't need to be a genius to learn from a genius. Claude Shannon's inventive, vibrant life demonstrates how vital the act of play can be to making the most of work." —Inc. "A charming account of one of the twentieth century's most distinguished scientists...Readers will enjoy this portrait of a modern-day Da Vinci."

—Fortune In their second collaboration, biographers Jimmy Soni and Rob Goodman present the story of Claude Shannon—one of the foremost intellects of the twentieth century and the architect of the Information Age, whose insights stand behind every computer built, email sent, video streamed, and webpage loaded. Claude Shannon was a groundbreaking polymath, a brilliant tinkerer, and a digital pioneer. He constructed the first wearable computer, outfoxed Vegas casinos, and built juggling robots. He also wrote the seminal text of the digital revolution, which has been called “the Magna Carta of the Information Age.” In this elegantly written, exhaustively researched biography, Soni and Goodman reveal Claude Shannon’s full story for the first time. With unique access to Shannon’s family and friends, *A Mind at Play* brings this singular innovator and always playful genius to life.

Highlights achievements of Bell Labs as a leading innovator, exploring the role of its highly educated employees in developing new technologies while considering the qualities of companies where innovation and development are most successful.

From the New York Times–bestselling author of *Where Good Ideas Come From* and *Extra Life*, a new look at the power and legacy of great ideas. In this illustrated history, Steven Johnson explores the history of innovation over centuries, tracing facets of modern life (refrigeration, clocks, and eyeglass lenses, to name a few) from their creation by hobbyists, amateurs, and entrepreneurs to their unintended historical consequences. Filled with surprising stories of accidental genius and brilliant mistakes—from the French publisher who invented the phonograph before Edison but forgot to include playback, to the Hollywood movie star who helped invent the technology behind Wi-Fi and Bluetooth—*How We Got to Now* investigates the secret history behind the everyday objects of contemporary life. In his trademark style, Johnson examines unexpected connections between seemingly unrelated fields: how the invention of air-conditioning enabled the largest migration of human beings in the history of the species—to cities such as Dubai or Phoenix, which would otherwise be virtually uninhabitable; how pendulum clocks helped trigger the industrial revolution; and how clean water made it possible to manufacture computer chips. Accompanied by a major six-part television series on PBS, *How We Got to Now* is the story of collaborative networks building the modern world, written in the provocative, informative, and engaging style that has earned Johnson fans around the globe.

Now in its 7th edition, *Communication in History* reveals how media has been influential in both maintaining social order and as powerful agents of change. Thirty-eight contributions from a wide range of voices offer instructors the opportunity to customize their courses while challenging students to build upon their own knowledge and skill sets. From stone-age symbols and early writing to the Internet and social media, readers are introduced to an expansive, intellectually enlivening study of the relationship between human history and communication media.

Software Engineering a Better Life tells the story of how a young man's struggle to find his place in the world led to the stuff that dreams are made of. Dan Hansen's winding path from Staten Island to Silicon Valley includes stops along the way at SUNY Plattsburgh, Wall Street, the U.S. Army Field Artillery, West Point, The College of Staten Island, AT&T Bell Labs, and his own software company, Legend Software. This improbable true story of an unfunded software startup's acquisition by Silicon Valley pioneer Network General is set against the backdrop of the 1980's, when MS-DOS was king and computer networking was still in its infancy. Aided by a treasure trove of records stored in an attic for thirty years, the book brings to life a bygone technology era before the existence of smartphones, tablets, laptops, and the World Wide Web. Hansen takes you inside AT&T's famed Bell Laboratories, as the future of local area networking was taking shape, and relates how his experiences there spurred him to found his own startup. This book relays events at a thirty year remove while capturing vivid details that make it seem as if it were recorded contemporaneously. *Software Engineering a Better Life* chronicles the triumphs and missteps of an unlikely entrepreneur as he struggles to keep moving forward.

From a co-founder of Pixar Animation Studios—the Academy Award–winning studio behind *Coco*, *Inside Out*, and *Toy Story*—comes an incisive book about creativity in business and leadership for readers of Daniel Pink, Tom Peters, and Chip and Dan Heath. **NEW YORK TIMES BESTSELLER | NAMED ONE OF THE BEST BOOKS OF THE YEAR BY The Huffington Post • Financial Times • Success • Inc. • Library Journal** Creativity, Inc. is a manual for anyone who strives for originality and the first-ever, all-access trip into the nerve center of Pixar Animation—into the meetings, postmortems, and “Braintrust” sessions where some of the most successful films in history are made. It is, at heart, a book about creativity—but it is also, as Pixar co-founder and president Ed Catmull writes, “an expression of the ideas that I believe make the best in us possible.” For nearly twenty years, Pixar has dominated the world of animation, producing such beloved films as the *Toy Story* trilogy, *Monsters, Inc.*, *Finding Nemo*, *The Incredibles*, *Up*, *WALL-E*, and *Inside Out*, which have gone on to set box-office records and garner thirty Academy Awards. The joyousness of the storytelling, the inventive plots, the emotional authenticity: In some ways, Pixar movies are an object lesson in what creativity really is. Here, in this book, Catmull reveals the ideals and techniques that have made Pixar so widely admired—and so profitable. As a young man, Ed Catmull had a dream: to make the first computer-animated movie. He nurtured that dream as a Ph.D. student at the University of Utah, where many computer science pioneers got their start, and then forged a partnership with George Lucas that led, indirectly, to his co-founding Pixar in 1986. Nine years later, *Toy Story* was released, changing animation forever. The essential ingredient in that movie’s success—and in the thirteen movies that followed—was the unique environment that Catmull and his colleagues built at Pixar, based on leadership and management philosophies that protect the creative process and defy convention, such as: • Give a good idea to a mediocre team, and they will screw it up. But give a mediocre idea to a great team, and they will either fix it or come up with something better. • If you don’t strive to uncover what is unseen and understand its nature, you will be ill prepared to lead. • It’s not the manager’s job to prevent risks. It’s the manager’s job to make it safe for others to take them. • The cost of preventing errors is often far greater than the cost of fixing them. • A company’s communication structure should not mirror its organizational structure. Everybody should be able to talk to anybody.

The third book to be released as part of the Writers in Residence series is written by Canadian cultural literary giant Douglas Coupland. Coupland takes readers on a web surfing-inspired ride through Alcatel-Lucent: one of the largest global telecommunications companies in the world. Coupland, with Magnum photographer Olivia Arthur, reports from inside Alcatel's faceless corporate offices and wire-laden science labs, writing in his inimitably playful and insightful way about the wider cultural implications of the Internet and the affect Alcatel's information technology has on each of our lives and the way we live. A non-fiction spin of *Microserfs* meets *J-Pod*, here comes Coupland's wildly funny meditation on the Internet, its future and our possible future within it, in ways we would only hope for and expect from Douglas Coupland.

A noted journalist chronicles three years in the lives of a team of maverick software developers, led by Lotus 1-2-3 creator Mitch Kapor, intent on creating a revolutionary personal information manager to challenge Microsoft Outlook. Reprint. 30,000 first printing.

A breezy, charming, and perfectly escapist mystery set in the heart of sun- and wine-soaked Aix-en-Provence--where murder investigations are always put on hold for lunch and the only thing more sweeping than the story is the Mediterranean coastline. Provençal Mystery Series #9 Something strange has happened at the unassuming Musée de Quentin-Savary in Aix-en-Provence. When the director, Monsieur Achille Formentin, walks in one beautiful April morning, he is shocked to find the whole museum emptied of its contents--only a bench, the reception desk, and a lowly fern remain. Distressed, he calls the local police, and Aix's examining magistrate Antoine Verlaque sets out to discover the thief's identity. But it's the most baffling case Verlaque has ever encountered. Why would someone want to steal porcelain dessert plates, some old documents, and a few small paintings? Could this have something to do with the mysterious robbery of Madame de Montbarbon's apartment a few weeks earlier? And how can Verlaque possibly concentrate on the theft when he and his wife, Marine Bonnet, are going to have a baby?

A marketing director's story of working at a startup called Google in the early days of the tech boom: "Vivid inside stories . . . Engrossing" (Ken Auletta). Douglas Edwards wasn't an engineer or a twentysomething fresh out of school when he received a job offer from a small but growing search engine company at the tail end of the 1990s. But founders Larry Page and Sergey Brin needed staff to develop the brand identity of their brainchild, and Edwards fit the bill with his journalistic background at the San Jose Mercury News, the newspaper of Silicon Valley. It was a change of pace for Edwards, to say the least, and put him in a unique position to interact with and observe the staff as Google began its rocket ride to the top. In entertaining, self-deprecating style, he tells his story of participating in this moment of business and technology history, giving readers a chance to fully experience the bizarre mix of camaraderie and competition at this phenomenal company. Edwards, Google's first director of marketing and brand management, describes the idiosyncratic Page and Brin, the evolution of the famously nonhierarchical structure in which every employee finds a problem to tackle and works independently, the races to develop and implement each new feature, and the many ideas that never came to pass. *I'm Feeling Lucky* reveals what it's like to be "indeed lucky, sort of an accidental millionaire, a reluctant bystander in a sea of computer geniuses who changed the world. This is a rare look at what happened inside the building of the most important company of our time" (Seth Godin, author of *Linchpin*). "An affectionate, compulsively readable recounting of the early years (1999–2005) of Google . . . This lively, thoughtful business memoir is more entertaining than it really has any right to be, and should be required reading for startup aficionados." —Publishers Weekly, starred review "Edwards recounts Google's stumbles and rise with verve and humor and a generosity of spirit. He kept me turning the pages of this engrossing tale." —Ken Auletta, author of *Greed and Glory on Wall Street* "Funny, revealing, and instructive, with an insider's perspective I hadn't seen anywhere before. I thought I had followed the Google story closely, but I realized how much I'd missed after reading—and enjoying—this book." —James Fallows, author of *China Airborne*

In the bestselling tradition of *The Soul of a New Machine*, *Dealers of Lightning* is a fascinating journey of intellectual creation. In the 1970s and '80s, Xerox Corporation brought together a brain-trust of engineering geniuses, a group of computer eccentrics dubbed PARC. This brilliant group created several monumental innovations that triggered a technological revolution, including the first personal computer, the laser printer, and the graphical interface (one of the main precursors of the Internet), only to see these breakthroughs rejected by the corporation. Yet, instead of giving up, these determined inventors turned their ideas into empires that radically altered contemporary life and changed the world. Based on extensive interviews with the scientists, engineers, administrators, and executives who lived the story, this riveting chronicle details PARC's humble beginnings through its triumph as a hothouse for ideas, and shows why Xerox was never able to grasp, and ultimately exploit, the cutting-edge innovations PARC delivered. *Dealers of Lightning* offers an unprecedented look at the ideas, the inventions, and the individuals that propelled Xerox PARC to the frontier of technohistory--and the corporate machinations that almost prevented it from achieving greatness.

"The fascinating story of how Unix began and how it took over the world. Brian Kernighan was a member of the original group of Unix developers, the creator of several fundamental Unix programs, and the co-author of classic books like "The C Programming Language" and "The Unix Programming Environment."--

"One man's quest to recover from great success"--Front cover.

Ask consumers and users what names they associate with the multibillion dollar personal computer market, and they will answer IBM, Apple, Tandy, or Lotus. The more knowledgeable of them will add the likes of Microsoft, Ashton-Tate, Compaq, and Borland. But no one will say Xerox. Fifteen years after it invented personal computing, Xerox still means "copy." *Fumbling the Future* tells how one of America's leading corporations invented the technology for one of the fastest-growing products of recent times, then miscalculated and mishandled the opportunity to fully exploit it. It is a classic story of how innovation can fare within large corporate structures, the real-life odyssey of what can happen to an

idea as it travels from inspiration to implementation. More than anything, *Fumbling the Future* is a tale of human beings whose talents, hopes, fears, habits, and prejudices determine the fate of our largest organizations and of our best ideas. In an era in which technological creativity and economic change are so critical to the competitiveness of the American economy, *Fumbling the Future* is a parable for our times.

Documents the race to seal the BP well in the Gulf of Mexico, describing how Deepwater Horizon challenged the world's leading scientists and engineers to stop the leak and discover why it exploded in the first place.

The definitive history of America's greatest incubator of innovation and the birthplace of some of the 20th century's most influential technologies "Filled with colorful characters and inspiring lessons . . . The Idea Factory explores one of the most critical issues of our time: What causes innovation?" —Walter Isaacson, *The New York Times Book Review*

"Compelling . . . Gertner's book offers fascinating evidence for those seeking to understand how a society should best invest its research resources." —*The Wall Street Journal* From its beginnings in the 1920s until its demise in the 1980s, Bell Labs—officially, the research and development wing of AT&T—was the biggest, and arguably the best, laboratory for new ideas in the world. From the transistor to the laser, from digital communications to cellular telephony, it's hard to find an aspect of modern life that hasn't been touched by Bell Labs. In *The Idea Factory*, Jon Gertner traces the origins of some of the twentieth century's most important inventions and delivers a riveting and heretofore untold chapter of American history. At its heart this is a story about the life and work of a small group of brilliant and eccentric men—Mervin Kelly, Bill Shockley, Claude Shannon, John Pierce, and Bill Baker—who spent their careers at Bell Labs. Today, when the drive to invent has become a mantra, Bell Labs offers us a way to enrich our understanding of the challenges and solutions to technological innovation. Here, after all, was where the foundational ideas on the management of innovation were born.

Focuses on the human factors behind the invention of the transistor, highlighting the pride and scientific ambitions of the team who spawned the epoch-making technology

"[Tracing] the intellectual history of computer science, [the author] puts the DNA of the very idea of 'tech' under the microscope. Google, Facebook, Apple, and Amazon, he argues, are breaking laws intended protect intellectual property and privacy. This is not the path towards freedom and prosperity, but the total automation and homogenization of our social, political, and intellectual lives. Today's corporate giants want access to every facet of our identities and influence over every corner of our lives. Foer both indicts these companies, and shapes a path towards reining them in."--

A riveting, urgent account of the explorers and scientists racing to understand the rapidly melting ice sheet in Greenland, a dramatic harbinger of climate change "Jon Gertner takes readers to spots few journalists or even explorers have visited. The result is a gripping and important book."—Elizabeth Kolbert, Pulitzer Prize–winning author of *The Sixth Extinction* **NAMED ONE OF THE BEST BOOKS OF THE YEAR BY** *The Washington Post* • *The Christian Science Monitor* • *Library Journal* Greenland: a remote, mysterious island five times the size of California but with a population of just 56,000. The ice sheet that covers it is 700 miles wide and 1,500 miles long, and is composed of nearly three quadrillion tons of ice. For the last 150 years, explorers and scientists have sought to understand Greenland—at first hoping that it would serve as a gateway to the North Pole, and later coming to realize that it contained essential information about our climate. Locked within this vast and frozen white desert are some of the most profound secrets about our planet and its future. Greenland's ice doesn't just tell us where we've been. More urgently, it tells us where we're headed. In *The Ice at the End of the World*, Jon Gertner explains how Greenland has evolved from one of earth's last frontiers to its largest scientific laboratory. The history of Greenland's ice begins with the explorers who arrived here at the turn of the twentieth century—first on foot, then on skis, then on crude, motorized sleds—and embarked on grueling expeditions that took as long as a year and often ended in frostbitten tragedy. Their original goal was simple: to conquer Greenland's seemingly infinite interior. Yet their efforts eventually gave way to scientists who built lonely encampments out on the ice and began drilling—one mile, two miles down. Their aim was to pull up ice cores that could reveal the deepest mysteries of earth's past, going back hundreds of thousands of years. Today, scientists from all over the world are deploying every technological tool available to uncover the secrets of this frozen island before it's too late. As Greenland's ice melts and runs off into the sea, it not only threatens to affect hundreds of millions of people who live in coastal areas. It will also have drastic effects on ocean currents, weather systems, economies, and migration patterns. Gertner chronicles the unfathomable hardships, amazing discoveries, and scientific achievements of the Arctic's explorers and researchers with a transporting, deeply intelligent style—and a keen sense of what this work means for the rest of us. The melting ice sheet in Greenland is, in a way, an analog for time. It contains the past. It reflects the present. It can also tell us how much time we might have left. The instant *New York Times* bestseller! A *Wall Street Journal* Best Science Book of the Year! A *Popular Science* Best Science Book of the Year! From a top scientist and the creator of the hugely popular web comic *Saturday Morning Breakfast Cereal*, a hilariously illustrated investigation into future technologies -- from how to fling a ship into deep space on the cheap to 3D organ printing What will the world of tomorrow be like? How does progress happen? And why do we not have a lunar colony already? What is the hold-up? In this smart and funny book, celebrated cartoonist Zach Weinersmith and noted researcher Dr. Kelly Weinersmith give us a snapshot of what's coming next -- from robot swarms to nuclear fusion powered-toasters. By weaving their own research, interviews with the scientists who are making these advances happen, and Zach's trademark comics, the Weinersmiths investigate why these technologies are needed, how they would work, and what is standing in their way. New technologies are almost never the work of isolated geniuses with a neat idea. A given future technology may need any number of intermediate technologies to develop first, and many of these critical advances may appear to be irrelevant when they are first discovered. The journey to progress is full of strange detours and blind alleys that tell us so much about the human mind and the march of civilization. To this end, *Soonish* investigates ten different emerging fields, from programmable matter to augmented reality, from space elevators to robotic construction, to show us the amazing world we will have, you know, *soonish*. *Soonish* is the perfect gift for science lovers for the holidays!

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