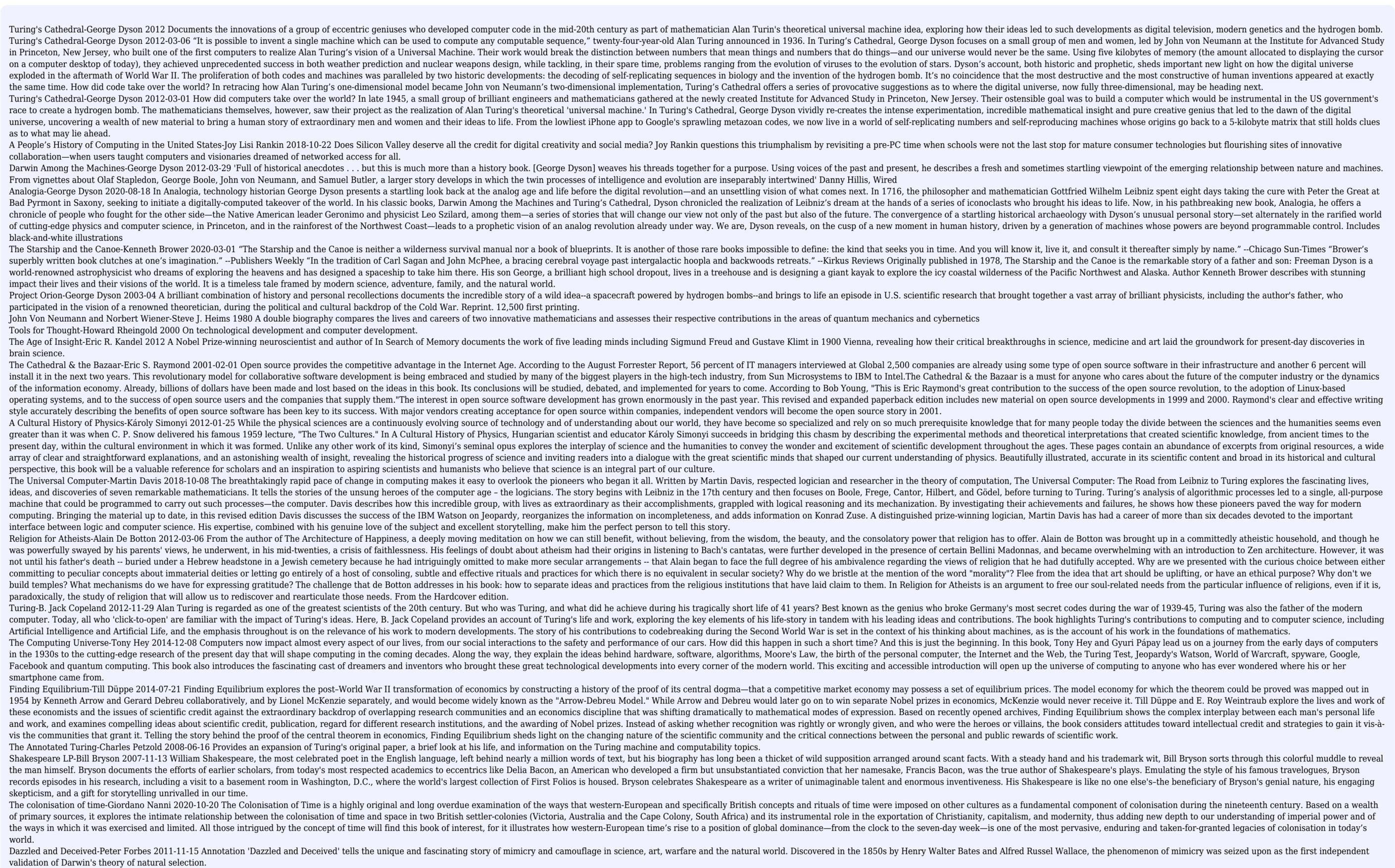


[Book] Turings Cathedral The Origins Of The Digital Universe

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Turing's Cathedral-George Dyson 2012 Documents the innovations of a group of eccentric geniuses who developed computer code in the mid-20th century as part of mathematician Alan Turin's theoretical universal machine idea, exploring how their ideas led to such developments as digital television, modern genetics and the hydrogen bomb. Turing's Cathedral-George Dyson 2012-03-06 "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.

Turing's Cathedral-George Dyson 2012-03-01 How did computers take over the world? In late 1945, a small group of brilliant engineers and mathematicians gathered at the newly created Institute for Advanced Study in Princeton, New Jersey. Their ostensible goal was to build a computer which would be instrumental in the US government's race to create a hydrogen bomb. The mathematicians themselves, however, saw their project as the realization of Alan Turing's theoretical 'universal machine.' In Turing's Cathedral, George Dyson vividly re-creates the intense experimentation, incredible mathematical insight and pure creative genius that led to the dawn of the digital universe, uncovering a wealth of new material to bring a human story of extraordinary men and women and their ideas to life. From the lowliest iPhone app to Google's sprawling metazoan codes, we now live in a world of self-replicating numbers and self-reproducing machines whose origins go back to a 5-kilobyte matrix that still holds clues as to what may lie ahead.

A People's History of Computing in the United States-Joy Lisi Rankin 2018-10-22 Does Silicon Valley deserve all the credit for digital creativity and social media? Joy Rankin questions this triumphalism by revisiting a pre-PC time when schools were not the last stop for mature consumer technologies but flourishing sites of innovative collaboration—when users taught computers and visionaries dreamed of networked access for all.

Darwin Among the Machines-George Dyson 2012-03-29 'Full of historical anecdotes . . . but this is much more than a history book. [George Dyson] weaves his threads together for a purpose. Using voices of the past and present, he describes a fresh and sometimes startling viewpoint of the emerging relationship between nature and machines. From vignettes about Olaf Stapledon, George Boole, John von Neumann, and Samuel Butler, a larger story develops in which the twin processes of intelligence and evolution are inseparably intertwined' Danny Hillis, Wired

Analogia-George Dyson 2020-08-18 In Analogia, technology historian George Dyson presents a startling look back at the analog age and life before the digital revolution—and an unsettling vision of what comes next. In 1716, the philosopher and mathematician Gottfried Wilhelm Leibniz spent eight days taking the cure with Peter the Great at Bad Pyrmont in Saxony, seeking to initiate a digitally-computed takeover of the world. In his classic books, Darwin Among the Machines and Turing's Cathedral, Dyson chronicled the realization of Leibniz's dream at the hands of a series of iconoclasts who brought his ideas to life. Now, in his pathbreaking new book, Analogia, he offers a chronicle of people who fought for the other side—the Native American leader Geronimo and physicist Leo Szilard, among them—a series of stories that will change our view not only of the past but also of the future. The convergence of a startling historical archaeology with Dyson's unusual personal story—set alternately in the rarified world of cutting-edge physics and computer science, in Princeton, and in the rainforest of the Northwest Coast—leads to a prophetic vision of an analog revolution already under way. We are, Dyson reveals, on the cusp of a new moment in human history, driven by a generation of machines whose powers are beyond programmable control. Includes black-and-white illustrations

The Starship and the Canoe-Kenneth Brower 2020-03-01 "The Starship and the Canoe is neither a wilderness survival manual nor a book of blueprints. It is another of those rare books impossible to define: the kind that seeks you in time. And you will know it, live it, and consult it thereafter simply by name." --Chicago Sun-Times "Brower's superbly written book clutches at one's imagination." --Publishers Weekly "In the tradition of Carl Sagan and John McPhee, a bracing cerebral voyage past intergalactic hoopla and backwoods retreats." --Kirkus Reviews Originally published in 1978, The Starship and the Canoe is the remarkable story of a father and son: Freeman Dyson is a world-renowned astrophysicist who dreams of exploring the heavens and has designed a spaceship to take him there. His son George, a brilliant high school dropout, lives in a treehouse and is designing a giant kayak to explore the icy coastal wilderness of the Pacific Northwest and Alaska. Author Kenneth Brower describes with stunning impact their lives and their visions of the world. It is a timeless tale framed by modern science, adventure, family, and the natural world.

Project Orion-George Dyson 2003-04 A brilliant combination of history and personal recollections documents the incredible story of a wild idea--a spacecraft powered by hydrogen bombs--and brings to life an episode in U.S. scientific research that brought together a vast array of brilliant physicists, including the author's father, who participated in the vision of a renowned theoretician, during the political and cultural backdrop of the Cold War. Reprint. 12,500 first printing.

John Von Neumann and Norbert Wiener-Steve J. Heims 1980 A double biography compares the lives and careers of two innovative mathematicians and assesses their respective contributions in the areas of quantum mechanics and cybernetics

Tools for Thought-Howard Rheingold 2000 On technological development and computer development.

The Age of Insight-Eric R. Kandel 2012 A Nobel Prize-winning neuroscientist and author of In Search of Memory documents the work of five leading minds including Sigmund Freud and Gustave Klimt in 1900 Vienna, revealing how their critical breakthroughs in science, medicine and art laid the groundwork for present-day discoveries in brain science.

The Cathedral & the Bazaar-Eric S. Raymond 2001-02-01 Open source provides the competitive advantage in the Internet Age. According to the August Forrester Report, 56 percent of IT managers interviewed at Global 2,500 companies are already using some type of open source software in their infrastructure and another 6 percent will install it in the next two years. This revolutionary model for collaborative software development is being embraced and studied by many of the biggest players in the high-tech industry, from Sun Microsystems to IBM to Intel.The Cathedral & the Bazaar is a must for anyone who cares about the future of the computer industry or the dynamics of the information economy. Already, billions of dollars have been made and lost based on the ideas in this book. Its conclusions will be studied, debated, and implemented for years to come. According to Bob Young, "This is Eric Raymond's great contribution to the success of the open source revolution, to the adoption of Linux-based operating systems, and to the success of open source users and the companies that supply them."The interest in open source software development has grown enormously in the past year. This revised and expanded paperback edition includes new material on open source developments in 1999 and 2000. Raymond's clear and effective writing style accurately describing the benefits of open source software has been key to its success. With major vendors creating acceptance for open source within companies, independent vendors will become the open source story in 2001.

A Cultural History of Physics-Károly Simonyi 2012-01-25 While the physical sciences are a continuously evolving source of technology and of understanding about our world, they have become so specialized and rely on so much prerequisite knowledge that for many people today the divide between the sciences and the humanities seems even greater than it was when C. P. Snow delivered his famous 1959 lecture, "The Two Cultures." In A Cultural History of Physics, Hungarian scientist and educator Károly Simonyi succeeds in bridging this chasm by describing the experimental methods and theoretical interpretations that created scientific knowledge, from ancient times to the present day, within the cultural environment in which it was formed. Unlike any other work of its kind, Simonyi's seminal opus explores the interplay of science and the humanities to convey the wonder and excitement of scientific development throughout the ages. These pages contain an abundance of excerpts from original resources, a wide array of clear and straightforward explanations, and an astonishing wealth of insight, revealing the historical progress of science and inviting readers into a dialogue with the great scientific minds that shaped our current understanding of physics. Beautifully illustrated, accurate in its scientific content and broad in its historical and cultural perspective, this book will be a valuable reference for scholars and an inspiration to aspiring scientists and humanists who believe that science is an integral part of our culture.

The Universal Computer-Martin Davis 2018-10-08 The breathtakingly rapid pace of change in computing makes it easy to overlook the pioneers who began it all. Written by Martin Davis, respected logician and researcher in the theory of computation, The Universal Computer: The Road from Leibniz to Turing explores the fascinating lives, ideas, and discoveries of seven remarkable mathematicians. It tells the stories of the unsung heroes of the computer age - the logicians. The story begins with Leibniz in the 17th century and then focuses on Boole, Frege, Cantor, Hilbert, and Gödel, before turning to Turing. Turing's analysis of algorithmic processes led to a single, all-purpose machine that could be programmed to carry out such processes—the computer. Davis describes how this incredible group, with lives as extraordinary as their accomplishments, grappled with logical reasoning and its mechanization. By investigating their achievements and failures, he shows how these pioneers paved the way for modern computing. Bringing the material up to date, in this revised edition Davis discusses the success of the IBM Watson on Jeopardy, reorganizes the information on incompleteness, and adds information on Konrad Zuse. A distinguished prize-winning logician, Martin Davis has had a career of more than six decades devoted to the important interface between logic and computer science. His expertise, combined with his genuine love of the subject and excellent storytelling, make him the perfect person to tell this story.

Religion for Atheists-Alain De Botton 2012-03-06 From the author of The Architecture of Happiness, a deeply moving meditation on how we can still benefit, without believing, from the wisdom, the beauty, and the consolatory power that religion has to offer. Alain de Botton was brought up in a committedly atheistic household, and though he was powerfully swayed by his parents' views, he underwent, in his mid-twenties, a crisis of faithlessness. His feelings of doubt about atheism had their origins in listening to Bach's cantatas, were further developed in the presence of certain Bellini Madonnas, and became overwhelming with an introduction to Zen architecture. However, it was not until his father's death -- buried under a Hebrew headstone in a Jewish cemetery because he had intriguingly omitted to make more secular arrangements -- that Alain began to face the full degree of his ambivalence regarding the views of religion that he had dutifully accepted. Why are we presented with the curious choice between either committing to peculiar concepts about immaterial deities or letting go entirely of a host of consoling, subtle and effective rituals and practices for which there is no equivalent in secular society? Why do we bristle at the mention of the word "morality"? Flee from the idea that art should be uplifting, or have an ethical purpose? Why don't we build temples? What mechanisms do we have for expressing gratitude? The challenge that de Botton addresses in his book: how to separate ideas and practices from the religious institutions that have laid claim to them. In Religion for Atheists is an argument to free our soul-related needs from the particular influence of religions, even if it is, paradoxically, the study of religion that will allow us to rediscover and rearticulate those needs. From the Hardcover edition.

Turing-B. Jack Copeland 2012-11-29 Alan Turing is regarded as one of the greatest scientists of the 20th century. But who was Turing, and what did he achieve during his tragically short life of 41 years? Best known as the genius who broke Germany's most secret codes during the war of 1939-45, Turing was also the father of the modern computer. Today, all who 'click-to-open' are familiar with the impact of Turing's ideas. Here, B. Jack Copeland provides an account of Turing's life and work, exploring the key elements of his life-story in tandem with his leading ideas and contributions. The book highlights Turing's contributions to computing and to computer science, including Artificial Intelligence and Artificial Life, and the emphasis throughout is on the relevance of his work to modern developments. The story of his contributions to codebreaking during the Second World War is set in the context of his thinking about machines, as is the account of his work in the foundations of mathematics.

The Computing Universe-Tony Hey 2014-12-08 Computers now impact almost every aspect of our lives, from our social interactions to the safety and performance of our cars. How did this happen in such a short time? And this is just the beginning. In this book, Tony Hey and Gyuri Pápay lead us on a journey from the early days of computers in the 1930s to the cutting-edge research of the present day that will shape computing in the coming decades. Along the way, they explain the ideas behind hardware, software, algorithms, Moore's Law, the birth of the personal computer, the Internet and the Web, the Turing Test, Jeopardy's Watson, World of Warcraft, spyware, Google, Facebook and quantum computing. This book also introduces the fascinating cast of dreamers and inventors who brought these great technological developments into every corner of the modern world. This exciting and accessible introduction will open up the universe of computing to anyone who has ever wondered where his or her smartphone came from.

Finding Equilibrium-Till Düppe 2014-07-21 Finding Equilibrium explores the post-World War II transformation of economics by constructing a history of the proof of its central dogma—that a competitive market economy may possess a set of equilibrium prices. The model economy for which the theorem could be proved was mapped out in 1954 by Kenneth Arrow and Gerard Debreu collaboratively, and by Lionel McKenzie separately, and would become widely known as the "Arrow-Debreu Model." While Arrow and Debreu would later go on to win separate Nobel prizes in economics, McKenzie would never receive it. Till Düppe and E. Roy Weintraub explore the lives and work of these economists and the issues of scientific credit against the extraordinary backdrop of overlapping research communities and an economics discipline that was shifting dramatically to mathematical modes of expression. Based on recently opened archives, Finding Equilibrium shows the complex interplay between each man's personal life and work, and examines compelling ideas about scientific credit, publication, regard for different research institutions, and the awarding of Nobel prizes. Instead of asking whether recognition was rightly or wrongly given, and who were the heroes or villains, the book considers attitudes toward intellectual credit and strategies to gain it vis-à-vis the communities that grant it. Telling the story behind the proof of the central theorem in economics, Finding Equilibrium sheds light on the changing nature of the scientific community and the critical connections between the personal and public rewards of scientific work.

The Annotated Turing-Charles Petzold 2008-06-16 Provides an expansion of Turing's original paper, a brief look at his life, and information on the Turing machine and computability topics.

Shakespeare LP-Bill Bryson 2007-11-13 William Shakespeare, the most celebrated poet in the English language, left behind nearly a million words of text, but his biography has long been a thicket of wild supposition arranged around scant facts. With a steady hand and his trademark wit, Bill Bryson sorts through this colorful muddle to reveal the man himself. Bryson documents the efforts of earlier scholars, from today's most respected academics to eccentrics like Delia Bacon, an American who developed a firm but unsubstantiated conviction that her namesake, Francis Bacon, was the true author of Shakespeare's plays. Emulating the style of his famous travelogues, Bryson records episodes in his research, including a visit to a basement room in Washington, D.C., where the world's largest collection of First Folios is housed. Bryson celebrates Shakespeare as a writer of unimaginable talent and enormous inventiveness. His Shakespeare is like no one else's—the beneficiary of Bryson's genial nature, his engaging skepticism, and a gift for storytelling unrivalled in our time.

The colonisation of time-Giordano Nanni 2020-10-20 The Colonisation of Time is a highly original and long overdue examination of the ways that western-European and specifically British concepts and rituals of time were imposed on other cultures as a fundamental component of colonisation during the nineteenth century. Based on a wealth of primary sources, it explores the intimate relationship between the colonisation of time and space in two British settler-colonies (Victoria, Australia and the Cape Colony, South Africa) and its instrumental role in the exportation of Christianity, capitalism, and modernity, thus adding new depth to our understanding of imperial power and of the ways in which it was exercised and limited. All those intrigued by the concept of time will find this book of interest, for it illustrates how western-European time's rise to a position of global dominance—from the clock to the seven-day week—is one of the most pervasive, enduring and taken-for-granted legacies of colonisation in today's world.

Dazzled and Deceived-Peter Forbes 2011-11-15 Annotation 'Dazzled and Deceived' tells the unique and fascinating story of mimicry and camouflage in science, art, warfare and the natural world. Discovered in the 1850s by Henry Walter Bates and Alfred Russel Wallace, the phenomenon of mimicry was seized upon as the first independent validation of Darwin's theory of natural selection.

The Idea Factory-Jon Gertner 2013 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.

Dreaming in Code-Scott Rosenberg 2008 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.

Alan Turing: The Enigma-Andrew Hodges 2014-11-10 A NEW YORK TIMES BESTSELLER The official book behind the Academy Award-winning film The Imitation Game, starring Benedict Cumberbatch and Keira Knightley It is only a slight exaggeration to say that the British mathematician Alan Turing (1912-1954) saved the Allies from the Nazis, invented the computer and artificial intelligence, and anticipated gay liberation by decades--all before his suicide at age forty-one. This New York Times--bestselling biography of the founder of computer science, with a new preface by the author that addresses Turing's royal pardon in 2013, is the definitive account of an extraordinary mind and life. Capturing both the inner and outer drama of Turing's life, Andrew Hodges tells how Turing's revolutionary idea of 1936--the concept of a universal machine--laid the foundation for the modern computer and how Turing brought the idea to practical realization in 1945 with his electronic design. The book also tells how this work was directly related to Turing's leading role in breaking the German Enigma ciphers during World War II, a scientific triumph that was critical to Allied victory in the Atlantic. At the same time, this is the tragic account of a man who, despite his wartime service, was eventually arrested, stripped of his security clearance, and forced to undergo a humiliating treatment program--all for trying to live honestly in a society that defined homosexuality as a crime. The inspiration for a major motion picture starring Benedict Cumberbatch and Keira Knightley, Alan Turing: The Enigma is a gripping story of mathematics, computers, cryptography, and homosexual persecution.

Bring Up the Bodies-Hilary Mantel 2012-05-08 Winner of the 2012 Man Booker Prize Winner of the 2012 Costa Book of the Year Award The sequel to Hilary Mantel's 2009 Man Booker Prize winner and New York Times bestseller, Wolf Hall delves into the heart of Tudor history with the downfall of Anne Boleyn Though he battled for seven years to marry her, Henry is disenchanted with Anne Boleyn. She has failed to give him a son and her sharp intelligence and audacious will alienate his old friends and the noble families of England. When the discarded Katherine dies in exile from the court, Anne stands starkly exposed, the focus of gossip and malice. At a word from Henry, Thomas Cromwell is ready to bring her down. Over three terrifying weeks, Anne is ensnared in a web of conspiracy, while the demure Jane Seymour stands waiting her turn for the poisoned wedding ring. But Anne and her powerful family will not yield without a ferocious struggle. Hilary Mantel's Bring Up the Bodies follows the dramatic trial of the queen and her suitors for adultery and treason. To defeat the Boleyns, Cromwell must ally with his natural enemies, the papist aristocracy. What price will he pay for Anne's head? Bring Up the Bodies is one of The New York Times' 10 Best Books of 2012, one of Publishers Weekly's Top 10 Best Books of 2012 and one of The Washington Post's 10 Best Books of 2012

The Weather of the Pacific Northwest-Clifford Mass 2015-09-01 The Pacific Northwest experiences the most varied and fascinating weather in the United States, including world-record winter snows, the strongest non-tropical storms in the nation, and shifts from desert to rain forest in a matter of miles. Local weather features dominate the meteorological landscape, from the Puget Sound convergence zone and wind surges along the Washington Coast, to gap winds through the Columbia Gorge and the ◆Banana Belt◆ of southern Oregon. This book is the first comprehensive and authoritative guide to Northwest weather that is directed to the general reader; helpful to boaters, hikers, and skiers; and valuable to expert meteorologists. In The Weather of the Pacific Northwest, University of Washington atmospheric scientist and popular radio commentator Cliff Mass unravels the intricacies of Northwest weather, from the mundane to the mystifying. By examining our legendary floods, snowstorms, and windstorms, and a wide variety of local weather features, Mass answers such interesting questions as: o Why does the Northwest have localized rain shadows? o What is the origin of the hurricane force winds that often buffet the region? o Why does the Northwest have so few thunderstorms? o What is the origin of the Pineapple Express? o Why do ferryboats sometimes seem to float above the water's surface? o Why is it so hard to predict Northwest weather? Mass brings together eyewitness accounts, historical records, and meteorological science to explain Pacific Northwest weather. He also considers possible local effects of global warming. The final chapters guide readers in interpreting the Northwest sky and in securing weather information on their own.

The Martian's Daughter-Marina Whitman 2012-08-31 Marina Whitman is the daughter and only child of John von Neumann, one of the five Hungarian scientific geniuses dubbed “the Martians” by their colleagues, a figure often hailed as the greatest mathematician of the 20th century and even as the greatest scientist after Einstein. He was a key figure in the Manhattan project; the inventor of game theory; the pioneer developer of the modern stored-program electronic computer; and, right up until his death, an adviser to the top echelons of the American military establishment. Whitman's memoir is the story of how the cosmopolitan environment in which she was immersed, the demanding expectations of her parents, and her own struggles to emerge from the shadow of a larger-than-life parent shaped her life and work. Starting as, in her words, “a trailing spouse,” she rose to become a noted academic during the 1960s and ’70s, casting her teaching and writing in the framework of globalization before the word had been invented. She was the first woman ever to serve on the President's Council of Economic Advisers and participated actively in U.S. efforts to reshape the international monetary and financial system during the early 1970s. She pioneered the role of women on the boards of leading multinational corporations, and became the highest-ranking female executive in the American auto industry in the 1980s, serving not only as GM's vice president and chief economist but also as its Cassandra while the firm persisted along a path that led eventually to its collapse into bankruptcy.

The Dawn of Software Engineering-Edgar G. Daylight 2012 Contrary to what many believe, Alan Turing is not the father of the all-purpose computer. Engineers were, independently of Turing, already building such machines during World War II. Turing's influence was felt more in programming after his death than in computer building during his lifetime. The first person to receive a Turing award was a programmer, not a computer builder. Logicians and programmers recast Turing's notions of machine and universality. Gradually, these recast notions helped programmers to see the bigger picture of what they were accomplishing. Later, problems unsolvable with a computer influenced experienced programmers, including Edsger W. Dijkstra. Dijkstra's pioneering work shows that both unsolvability and aesthetics have practical relevance in software engineering. But to what extent did Dijkstra and others depend on Turing's accomplishments? This book presents a revealing synthesis for the modern software engineer and, by doing so, deromanticizes Turing's role in the history of computing.

John von Neumann: The Scientific Genius Who Pioneered the Modern Computer, Game Theory, Nuclear Deterrence, and Much More-Norman Macrae 2019-07-31 John von Neumann was a Jewish refugee from Hungary — considered a “genius” like fellow Hungarians Leo Szilard, Eugene Wigner and Edward Teller — who played key roles developing the A-bomb at Los Alamos during World War II. As a mathematician at Princeton's Institute for Advanced Study (where Einstein was also a professor), von Neumann was a leader in the development of early computers. Later, he developed the new field of game theory in economics and became a top nuclear arms policy adviser to the Truman and Eisenhower administrations. “I always thought [von Neumann's] brain indicated that he belonged to a new species, an evolution beyond man. Macrae shows us in a lively way how this brain was nurtured and then left its great imprint on the world.” — Hans A. Bethe, Cornell University “The book makes for utterly captivating reading. Von Neumann was, of course, one of this century's geniuses, and it is surprising that we have had to wait so long... for a fully fleshed and sympathetic biography of the man. But now, happily, we have one. Macrae nicely delineates the cultural, familial, and educational environment from which von Neumann sprang and sketches the mathematical and scientific environment in which he flourished. It's no small task to render a genius like von Neumann in ordinary language, yet Macrae manages the trick, providing more than a glimpse of what von Neumann accomplished intellectually without expecting the reader to have a Ph.D. in mathematics. Beyond that, he captures von Neumann's qualities of temperament, mind, and personality, including his effortless wit and humor. And [Macrae] frames and accounts for von Neumann's politics in ways that even critics of them, among whom I include myself, will find provocative and illuminating.” — Daniel J. Kevles, California Institute of Technology “A lively portrait of the hugely consequential nonmathematician-physicist-et al., whose genius has left an enduring impress on our thought, technology, society, and culture. A double salute to Steve White, who started this grand book designed for us avid, nonmathematical readers, and to Norman Macrae, who brought it to a triumphant conclusion.” — Robert K. Merton, Columbia University “The first full-scale biography of this polymath, who was born Jewish in Hungary in 1903 and died Roman Catholic in the United States at the age of 53. And Mr. Macrae has some great stories to tell... Mr. Macrae's biography has rescued a lot of good science gossip from probable extinction, and has introduced many of us to the life story of a man we ought to know better.” — Ed Regis, The New York Times “A nice and fascinating picture of a genius who was active in so many domains.” —Zentralblatt MATH “Biographer Macrae takes a ‘viewspaperman’ approach which stresses the context and personalities associated with von Neumann's remarkable life, rather than attempting to give a detailed scholarly analysis of von Neumann's papers. The resulting book is a highly entertaining account that is difficult to put down.” — Journal of Mathematical Psychology “A full and intimate biography of ‘the man who consciously and deliberately set mankind moving along the road that led us into the Age of Computers.’” — Freeman Dyson, Princeton, NJ “It is good to have a biography of one of the most important mathematicians of the twentieth century, even if it is a biography that focuses much more on the man than on the mathematics.” — Fernando Q. Gouvêa, Mathematical Association of America “Based on much research, his own and that of others (especially of Stephen White), Macrae has written a valuable biography of this remarkable genius of our century, without the opacity of technical (mathematical) dimensions that are part of the hero's intellectual contributions to humanity. Interesting, informative, illuminating, and insightful.” — Choice Review “Macrae paints a highly readable, humanizing portrait of a man whose legacy still influences and shapes modern science and knowledge.” — Resonance, Journal of Science Education “In this affectionate, humanizing biography, former Economist editor Macrae limns a prescient pragmatist who actively fought against fascism and who advocated a policy of nuclear deterrence because he foresaw that Stalin's Soviet Union would rapidly acquire the bomb and develop rocketry... Macrae makes [von Neumann's] contributions accessible to the lay reader, and also discusses von Neumann's relationships with two long-suffering wives, his political differences with Einstein and the cancer that killed him.” — Publishers Weekly “Macrae's life of the great mathematician shows dramatically what proper care and feeding can do for an unusually capacious mind.” — John Wilkes, Los Angeles Times

Computing-Paul E. Ceruzzi 2012 A compact and accessible history, from punch cards and calculators to UNIVAC and ENIAC, the personal computer, Silicon Valley, and the Internet. The history of computing could be told as the story of hardware and software, or the story of the Internet, or the story of "smart" hand-held devices, with subplots involving IBM, Microsoft, Apple, Facebook, and Twitter. In this concise and accessible account of the invention and development of digital technology, computer historian Paul Ceruzzi offers a broader and more useful perspective. He identifies four major threads that run throughout all of computing's technological development: digitization--the coding of information, computation, and control in binary form, ones and zeros; the convergence of multiple streams of techniques, devices, and machines, yielding more than the sum of their parts; the steady advance of electronic technology, as characterized famously by "Moore's Law"; and the human-machine interface. Ceruzzi guides us through computing history, telling how a Bell Labs mathematician coined the word "digital" in 1942 (to describe a high-speed method of calculating used in anti-aircraft devices), and recounting the development of the punch card (for use in the 1890 U.S. Census). He describes the ENIAC, built for scientific and military applications; the UNIVAC, the first general purpose computer; and ARPANET, the Internet's precursor. Ceruzzi's account traces the world-changing evolution of the computer from a room-size ensemble of machinery to a "minicomputer" to a desktop computer to a pocket-sized smart phone. He describes the development of the silicon chip, which could store ever-increasing amounts of data and enabled ever-decreasing device size. He visits that hotbed of innovation, Silicon Valley, and brings the story up to the present with the Internet, the World Wide Web, and social networking.

Project Orion-George Dyson 2003-03-26 The race to the moon dominated space flight during the the 1960s yet, during the late 1950s and early 1960s, the US Government sponsored a project that could possibly have sent 150 people on expeditions to Mars or Saturn.The project was code-named Orion and centred upon the effort to develop a fast, manoeuvrable, nuclear-powered space vehicle for long-range voyages in space. The proposed 4000-ton spaceship would be propelled by nuclear bombs but, strictly classified, the project was never given a chance to succeed or fail - due partly to its apparent absurdity - but its mix of sublime physics, madcap engineering, and a cast of Cold War warriors and would-be inter-galactic engineers made the mission a tantalising what if story.In this book George Dyson, son of physicist Freeman Dyson, one of the original project team, pieces together the story his father could only tell him in fragments at the time.

The Man Who Knew Too Much: Alan Turing and the Invention of the Computer (Great Discoveries)-David Leavitt 2006-11-17 Outlines the Bletchley Park mathematician's efforts to launch artificial intelligence innovations, describing his thwarted attempts to gain support for a programmable calculating machine, his contributions to cracking the Nazi Enigma code during World War II, and how the revelation of his homosexuality led to his tragic imprisonment and suicide. Reprint.

Euclid's Window-Leonard Mlodinow 2010-09-28 Through Euclid's Window Leonard Mlodinow brilliantly and delightfully leads us on a journey through five revolutions in geometry, from the Greek concept of parallel lines to the latest notions of hyperspace. Here is an altogether new, refreshing, alternative history of math revealing how simple questions anyone might ask about space -- in the living room or in some other galaxy -- have been the hidden engine of the highest achievements in science and technology. Based on Mlodinow's extensive historical research; his studies alongside colleagues such as Richard Feynman and Kip Thorne; and interviews with leading physicists and mathematicians such as Murray Gell-Mann, Edward Witten, and Brian Greene, Euclid's Window is an extraordinary blend of rigorous, authoritative investigation and accessible, good-humored storytelling that makes a stunningly original argument asserting the primacy of geometry. For those who have looked through Euclid's Window, no space, no thing, and no time will ever be quite the same.

The Strangest Man-Graham Farmelo 2009-01-22 'A monumental achievement - one of the great scientific biographies.' Michael Frayn The Strangest Man is the Costa Biography Award-winning account of Paul Dirac, the famous physicist sometimes called the British Einstein. He was one of the leading pioneers of the greatest revolution in twentieth-century science: quantum mechanics. The youngest theoretician ever to win the Nobel Prize for Physics, he was also pathologically reticent, strangely literal-minded and legendarily unable to communicate or empathize. Through his greatest period of productivity, his postcards home contained only remarks about the weather. Based on a previously undiscovered archive of family papers, Graham Farmelo celebrates Dirac's massive scientific achievement while drawing a compassionate portrait of his life and work. Farmelo shows a man who, while hopelessly socially inept, could manage to love and sustain close friendship. The Strangest Man is an extraordinary and moving human story, as well as a study of one of the most exciting times in scientific history. 'A wonderful book . . . Moving, sometimes comic, sometimes infinitely sad, and goes to the roots of what we mean by truth in science.' Lord Waldegrave, Daily Telegraph

A Mind at Play-Jimmy Soni 2017-07-18 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.

The Sensorium of God-Stuart Clark 2012 It's the mid-17th century and the mystery behind the movement of the planets—elegantly described by Johannes Kepler almost a century earlier—remains unsolved. Edmond Halley, adventurer, astronomer, and ladies' man, and reclusive alchemist and fearsome mathematician Isaac Newton become collaborators in the attempt to decipher this puzzle. Due to this simple partnership, the lives of both men are plunged into crisis, Europe is pushed headlong towards the Age of the Enlightenment, and science is catapulted into its next decisive clash with religion. Inspired by the key events in man's quest to understand the universe, this brilliant and gripping fictionalization brings historical characters to life.

The Big Switch: Rewiring the World, from Edison to Google-Nicholas Carr 2009-01-19 Offers predictions about the shift from private computer systems to Internet-based networks for computer-based businesses, and how the change will impact economics, culture, and society.

When Computers Were Human-David Alan Grier 2013-11-01 Before Palm Pilots and iPods, PCs and laptops, the term "computer" referred to the people who did scientific calculations by hand. These workers were neither calculating geniuses nor idiot savants but knowledgeable people who, in other circumstances, might have become scientists in their own right. When Computers Were Human represents the first in-depth account of this little-known, 200-year epoch in the history of science and technology. Beginning with the story of his own grandmother, who was trained as a human computer, David Alan Grier provides a poignant introduction to the wider world of women and men who did the hard computational labor of science. His grandmother's casual remark, "I wish I'd used my calculus," hinted at a career deferred and an education forgotten, a secret life unappreciated; like many highly educated women of her generation, she studied to become a human computer because nothing else would offer her a place in the scientific world. The book begins with the return of Halley's comet in 1758 and the effort of three French astronomers to compute its orbit. It ends four cycles later, with a UNIVAC electronic computer projecting the 1986 orbit. In between, Grier tells us about the surveyors of the French Revolution, describes the calculating machines of Charles Babbage, and guides the reader through the Great Depression to marvel at the giant computing room of the Works Progress Administration. When Computers Were Human is the sad but lyrical story of workers who gladly did the hard labor of research calculation in the hope that they might be part of the scientific community. In the end, they were rewarded by a new electronic machine that took the place and the name of those who were, once, the computers.

Are You Smart Enough to Work at Google?-William Poundstone 2012-01-04 Are you Smart Enough to Work at Google? guides readers through the surprising solutions to dozens of the most challenging interview questions. Learn the importance of creative thinking, how to get a leg up on the competition, what your Facebook page says about you, and much more. You are shrunk to the height of a nickel and thrown in a blender. The blades start moving in 60 seconds. What do you do? If you want to work at Google, or any of America's best companies, you need to have an answer to this and other puzzling questions. Are you Smart Enough to Work at Google? is a must read for anyone who wants to succeed in today's job market.

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