

A More Perfect Heaven How Copernicus Revolutionized The Cosmos

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Nicolaus Copernicus Barbara A. Somervill 2008-02 Discusses the life and career of the sixteenth-century Polish astronomer who was the first man to assert, in print, the theory that the Earth moves around the sun.

Letters of Credit Walter Tracy 2003 The revolution in typesetting - a revolution that over the past two decades has eliminated a five-hundred-year-old system of hot metal production and replaced it with one of photo-generated and computer-driven composition - shows no sign of winding down. This book, more than any other we know, traces the steps that went into that revolution and simultaneously makes the argument that the letter forms themselves are in process of evolution. Tracy argues that, whether they are of the sixteenth or the twentieth century, the forms that comprise our alphabet are subject to the same rules of good taste, proportion, and clarity that have always obtained. But what we face today is vastly different from fifty years ago. For the first time, new technology has made the proliferation (and, as some would maintain, debasement) of letter forms fast and easy (or quick and dirty.) With fifty years of professional experience on both sides of the Atlantic (including thirty years as head of type design for the British Linotype Company), Tracy is in a unique position to make this argument and arrive at his sad conclusion: the design of distinguished, contemporary typefaces is far outnumbered by the mediocre and downright bad. Part of the reason for this deplorable deterioration is a lack of critical analysis of the particular esthetics involved. This step-by-step examination of type-design esthetics is precisely what Tracy provides here, while avoiding both the promoter's hype and the manufacturer's claims. Here are the gut issues of what makes type good or bad, legible or unreadable. Extensively illustrated with both typefaces and line drawings, this book belongs on the shelf of anyone interested in the history of letters or in the artistry and peculiar problems that lie behind their production.

Astronomy Vs. History Anatoly Fomenko 2016-11-05 NASA research of Earth-Moon mechanics by astrophysicist Robert Newton leads mathematicians of MSU to a breakthrough in the chronology of civilization. Astronomy Vs. History dissects every historical age and analyses the data from every source imaginable ??" Greek and Egyptian chronology take a good beating, and it goes rapidly downhill from there. Almagest that is supposed to have been written in the 2nd century A.D. by Ptolemy dates to 16th century; Tycho Brahe, Ptolemy and Copernicus take the blame for taking part in creation of the legend of a mythical Classical Age that never was and misdating medieval events as very ancient ones. In Astronomy Vs. History we are reminded of the crucial role of eclipses in verifying the dating of major historical events, of stone Zodiacs containing the true dates of such events. Our perception of history begins to change dramatically even before we're through with Astronomy Vs. History.

The Best American Science Writing 2004 Dava Sobel 2004-09-14 Jennifer Kahn's "Stripped for Parts" was selected as the lead story of this year's Best American Science Writing because, as Dava Sobel, best-selling author of *Longitude* and *Galileo's Daughter*, reveals, "it begins with one of the most arresting openings I have ever read." In "Columbia's Last Flight," William Langewiesche recounts the February 1, 2003, space shuttle tragedy, along with the investigation into the nationwide complacency that brought the ship down. K. C. Cole's "Fun with Physics" is a profile of astrophysicist Janet Conrad that blends her personal life with professional activity. In "Desperate Measures," the doctor and writer Atul Gawande profiles the surgeon Francis Daniels Moore, whose experiments in the 1940s and '50s pushed medicine harder and farther than almost anyone had contemplated. Also included is a poem by the legendary John Updike, "Mars as Bright as Venus." The collection ends with Diane Ackerman's "ebullient" essay "We Are All a Part of Nature." Together these twenty-three articles on a wide range of today's most current topics in science -- from biology, physics, biotechnology, and astronomy, to anthropology, genetics, evolutionary theory, and cognition, represent the full spectrum of scientific writing from America's most prominent science authors, proving once again that "good science writing is evidently plentiful" (Scientific American).

The Planets Dava Sobel 2006-10-31 Dava Sobel's *The Glass Universe* will be available from Viking in December 2016 With her bestsellers *Longitude* and *Galileo's Daughter*, Dava Sobel introduced readers to her rare gift for weaving complex scientific concepts into a compelling narrative. Now Sobel brings her full talents to bear on what is perhaps her most ambitious topic to date-the planets of our solar system. Sobel explores the origins and oddities of the planets through the lens of popular culture, from astrology, mythology, and science fiction to art, music, poetry, biography, and history. Written in her characteristically graceful prose, *The Planets* is a stunningly original celebration of our solar system and offers a distinctive view of our place in the universe. * A New York Times extended bestseller * A Featured Alternate of the Book-of-the-Month Club, History Book Club, Scientific American Book Club, and Natural Science Book Club * Includes 11 full-color illustrations by artist Lynette R. Cook "[The Planets] lets us fall in love with the heavens all over again." -The New York Times Book Review "Playful . . . lyrical . . . a guided tour so imaginative that we forget we're being educated as we're being entertained." -Newsweek " [Sobel] has outdone her extraordinary talent for keeping readers enthralled. . . . *Longitude* and *Galileo's Daughter* were exciting enough, but *The Planets* has a charm of its own A splendid and enticing book." -San Francisco Chronicle "A sublime journey. [Sobel's] writing . . . is as bright as the sun and its thinking as star-studded as the cosmos." -The Atlanta Journal-Constitution "An incantatory serenade to the Solar System. Grade A" -Entertainment Weekly "Like Sobel's [*Longitude* and *Galileo's Daughter*] . . . [The Planets] combines masterful storytelling with clear, engaging explanations of the essential scientific facts." -Physics World

The Science of Liberty Timothy Ferris 2011-02-08 In his most powerful book to date, award-winning author Timothy Ferris makes a passionate case for science as the inspiration behind the rise of liberalism and democracy. Ferris shows how science was integral to the American Revolution but misinterpreted in the French Revolution; reflects on the history of liberalism, stressing its widely underestimated and mutually beneficial relationship with science; and surveys the forces that have opposed science and liberalism—from communism and fascism to postmodernism and Islamic fundamentalism. A sweeping intellectual history, *The Science of Liberty* is a stunningly original work that transcends the antiquated concepts of left and right.

The Copernican Revolution Thomas Kuhn 1992-01-01 For scientist and layman alike this book provides vivid evidence that the Copernican Revolution has by no means lost its significance today. Few episodes in the development of scientific theory show so clearly how the solution to a highly technical problem can alter our basic thought processes and attitudes.

Galileo in Rome William R. Shea 2004-10-21 Galileo's trial by the Inquisition is one of the most dramatic incidents in the history of science and religion. Today, we tend to see this event in black and white--Galileo all white, the Church all black. *Galileo in Rome* presents a much more nuanced account of Galileo's relationship with Rome. The book offers a fascinating account of the six trips Galileo made to Rome, from his first visit at age 23, as an unemployed mathematician, to his final fateful journey to face the Inquisition. The authors reveal why the theory that the Earth revolves around the Sun, set forth in Galileo's *Dialogue*, stirred a hornet's nest of theological issues, and they argue that, despite these issues, the Church might have accepted Copernicus if there had been solid proof. More interesting, they show how Galileo dug his own grave. To get the imprimatur, he brought political pressure to bear on the Roman Censor. He disobeyed a Church order not to teach the heliocentric theory. And he had a character named Simplicio (which in Italian sounds like simpleton) raise the same objections to heliocentrism that the Pope had raised with Galileo. The authors show that throughout the trial, until the final sentence and abjuration, the Church treated Galileo with great deference, and once he was declared guilty commuted his sentence to house arrest. Here then is a unique look at the life of Galileo as well as a strikingly different view of an event that has come to epitomize the Church's supposed antagonism toward science.

Heaven on Earth J. S. Fauber 2019-12-26 'What Fauber does well is humanize these four residents of the pantheon of science... The story is seldom less

than fascinating. A readable, enjoyable contribution to the history of science.' - Kirkus An intimate examination of a scientific family - that of Nicolaus Copernicus, Tycho Brahe, Johannes Kepler and Galileo Galilei. Fauber juxtaposes their scientific work with insight into their personal lives and political considerations, which shaped their pursuit of knowledge. Uniquely, he shows how their intergenerational collaboration made the scientific revolution possible. These brave scientists called each other 'brothers', 'fathers' and 'sons', and laid the foundations of modern science through familial co-work. And though the sixteenth century was far from an open society for women, there were female pioneers in this 'family' as well, including Brahe's sister Sophie, Kepler's mother, and Galileo's daughter. Filled with rich characters and sweeping historical scope, this book reveals how the strong connections between these pillars of intellectual history moved science forward.

Is Anyone Out There? Frank D. Drake 1994 The leader of NASA's controversial multimillion-dollar transglobal search for signs of extraterrestrial life pulls fact from fiction in this accessible and entertaining book. Essential reading for anyone concerned with the stirring prospect that We are not alone'.--Carl Sagan. Illustrations. 16-page photo insert.

Understanding the Heavens Jean-Claude Pecker 2001-04-24 From its beginnings, astronomy has attempted to explain not only what the universe is and how it works, but also its origins, evolution, and future. Richly illustrated, this book traces astronomical thought from Egypt, Mesopotamia and Greece, through the European golden age of Copernicus, Galileo, Kepler and Newton, and up to the latest modern theories of cosmology.

A More Perfect Heaven Dava Sobel 2011-09-05 The bestselling author of *Longitude* and *Galileo's Daughter* tells the story of Nicolaus Copernicus and the revolution in astronomy that changed the world.

The Glass Universe Dava Sobel 2017-10-23 The Economist #1 New York Times bestselling author Dava Sobel returns with a captivating, little-known true story of women in science.

And the Sun Stood Still Dava Sobel 2016-03-01 Using her deep knowledge, her skills as a storyteller, and her imagination, Dava Sobel illuminates one of history's most significant and far-reaching meetings. In the spring of 1539, a young German mathematician--Georg Joachim Rheticus--journeyed hundreds of miles to northern Poland to meet the legendary, elderly cleric and reluctant astronomer Nicolaus Copernicus. Some two decades earlier, Copernicus had floated the mind-boggling theory that the Sun, not the Earth, was stationary at the center of the universe, and he was rumored to have crafted a book that could prove it. Though exactly what happened between them can never be known, Rheticus shepherded Copernicus's great work into production and *De revolutionibus orbium coelestium* ultimately changed the course of human understanding. Dava Sobel imagines their dramatic encounter, and with wit and erudition gives them personality. Through clever and dramatic dialogue, she brings alive the months Rheticus and Copernicus spent together--the one a heretical Lutheran, the other a free-thinking Catholic--and in the process illuminates the historic tension between science and religion. An introduction by Dava Sobel will set the stage, putting the scenes in historical context, and an afterword will describe what happened after Copernicus's book was published detailing the impact it had on science and on civilization.

The Dialogue of Civilizations in the Birth of Modern Science A. Bala 2006-11-13 Arun Bala challenges Eurocentric conceptions of history by showing how Chinese, Indian, Arabic, and ancient Egyptian ideas in philosophy, mathematics, cosmology and physics played an indispensable role in making possible the birth of modern science.

The Book Nobody Read Owen Gingerich 2009-05-26 After three decades of investigation, and after traveling hundreds of thousands of miles across the globe-from Melbourne to Moscow, Boston to Beijing-Gingerich has written an utterly original book built on his experience and the remarkable insights gleaned from examining some 600 copies of *De revolutionibus*. He found the books owned and annotated by Galileo, Kepler and many other lesser-known astronomers whom he brings back to life, which illuminate the long, reluctant process of accepting the Sun-centered cosmos and highlight the historic tensions between science and the Catholic Church. He traced the ownership of individual copies through the hands of saints, heretics, scalawags, and bibliomaniacs. He was called as the expert witness in the theft of one copy, witnessed the dramatic auction of another, and proves conclusively that *De revolutionibus* was as inspirational as it was revolutionary. Part biography of a book, part scientific exploration, part bibliographic detective story, *The Book Nobody Read* recolors the history of cosmology and offers new appreciation of the enduring power of an extraordinary book and its ideas.

Galileo's Daughter Dava Sobel 2000 This is an account of the relationship between Italian scientist Galileo and his daughter, Marie Celeste. It contains letters sent from Marie Celeste to her father from a Florence convent.

The Scientific Revolution Steven Shapin 2018-11-05 "There was no such thing as the Scientific Revolution, and this is a book about it." With this provocative and apparently paradoxical claim, Steven Shapin begins his bold, vibrant exploration of the origins of the modern scientific worldview, now updated with a new bibliographic essay featuring the latest scholarship. "An excellent book."—Anthony Gottlieb, *New York Times* Book Review "Timely and highly readable. . . . A book which every scientist curious about our predecessors should read."—Trevor Pinch, *New Scientist* "Shapin's account is informed, nuanced, and articulated with clarity. . . . This is not to attack or devalue science but to reveal its richness as the human endeavor that it most surely is. . . . Shapin's book is an impressive achievement."—David C. Lindberg, *Science* "It's hard to believe that there could be a more accessible, informed or concise account. . . . The Scientific Revolution should be a set text in all the disciplines. And in all the indisciplines, too."—Adam Phillips, *London Review of Books*

Squashed Philosophers Glyn Hughes

Galileo's Daughter Dava Sobel 2009-05-26 Inspired by a long fascination with Galileo, and by the remarkable surviving letters of Galileo's daughter, a cloistered nun, Dava Sobel has written a biography unlike any other of the man Albert Einstein called "the father of modern physics- indeed of modern science altogether." Galileo's Daughter also presents a stunning portrait of a person hitherto lost to history, described by her father as "a woman of exquisite mind, singular goodness, and most tenderly attached to me." Galileo's Daughter dramatically recolors the personality and accomplishment of a mythic figure whose seventeenth-century clash with Catholic doctrine continues to define the schism between science and religion. Moving between Galileo's grand public life and Maria Celeste's sequestered world, Sobel illuminates the Florence of the Medicis and the papal court in Rome during the pivotal era when humanity's perception of its place in the cosmos was about to be overturned. In that same time, while the bubonic plague wreaked its terrible devastation and the Thirty Years' War tipped fortunes across Europe, one man sought to reconcile the Heaven he revered as a good Catholic with the heavens he revealed through his telescope. With all the human drama and scientific adventure that distinguished Dava Sobel's previous book *Longitude*, Galileo's Daughter is an unforgettable story

The Cambridge History of Philosophy of the Scientific Revolution David Marshall Miller 2021-12-31 The early modern era produced the Scientific Revolution, which originated our present understanding of the natural world. Concurrently, philosophers established the conceptual foundations of modernity. This rich and comprehensive volume surveys and illuminates the numerous and complicated interconnections between philosophical and scientific thought as both were radically transformed from the late sixteenth to the mid-eighteenth century. The chapters explore reciprocal influences between philosophy and physics, astronomy, mathematics, medicine, and other disciplines, and show how thinkers responded to an immense range of intellectual, material, and institutional influences. The volume offers a unique perspicuity, viewing the entire landscape of early modern philosophy and science, and also marks an epoch in contemporary scholarship, surveying recent contributions and suggesting future investigations for the next generation

of scholars and students.

Starlight Detectives Alan Hirshfeld 2014-06-16 Julia Ward Howe Award Finalist NBC News “Top Science and Tech Books of the Year” selection Scientific American/FSG “Favorite Science Books of the Year” selection Nature.com “Top Reads of the Year” selection Kirkus Reviews “Best Books of the Year” selection Discover magazine “Top 5 Summer Read” “A masterful balance of science, history and rich narrative.” —Discover magazine “Hirshfeld tells this climactic discovery of the expanding universe with great verve and sweep, as befits a story whose scope, characters and import leave most fiction far behind.” —Wall Street Journal “Starlight Detectives is just the sort of richly veined book I love to read—full of scientific history and discoveries, peopled by real heroes and rogues, and told with absolute authority. Alan Hirshfeld’s wide, deep knowledge of astronomy arises not only from the most careful scholarship, but also from the years he’s spent at the telescope, posing his own questions to the stars.” —DAVA SOBEL, author of *A More Perfect Heaven: How Copernicus Revolutionized the Cosmos* and *Longitude* In 1929, Edwin Hubble announced the greatest discovery in the history of astronomy since Galileo first turned a telescope to the heavens. The galaxies, previously believed to float serenely in the void, are in fact hurtling apart at an incredible speed: the universe is expanding. This stunning discovery was the culmination of a decades-long arc of scientific and technical advancement. In its shadow lies an untold, yet equally fascinating, backstory whose cast of characters illuminates the gritty, hard-won nature of scientific progress. The path to a broader mode of cosmic observation was blazed by a cadre of nineteenth-century amateur astronomers and inventors, galvanized by the advent of photography, spectral analysis, and innovative technology to create the entirely new field of astrophysics. From William Bond, who turned his home into a functional observatory, to John and Henry Draper, a father and son team who were trailblazers of astrophotography and spectroscopy, to geniuses of invention such as Léon Foucault, and George Hale, who founded the Mount Wilson Observatory, Hirshfeld reveals the incredible stories—and the ambitious dreamers—behind the birth of modern astronomy. Alan Hirshfeld, Professor of Physics at the University of Massachusetts Dartmouth and an Associate of the Harvard College Observatory, is the author of *Parallax: The Race to Measure the Cosmos*, *The Electric Life of Michael Faraday*, and *Eureka Man: The Life and Legacy of Archimedes*.

Letters to Father Maria Galilei 2009-05-26 When she was 13, Virginia Galilei, eldest daughter of the great scientist Galileo, was placed by her father in a convent near him in Florence and took the name Suor Maria Celeste. Unable to see him except on his occasional visits, she wrote him continually, as her 124 surviving letters (which Galileo kept) attest. Now, for the first time, all of these letters are reproduced in English, translated by Dava Sobel, and in their original Italian, and Ms. Sobel has also written an introduction and annotations placing the letters in historical context. The 124 letters span only a decade of Maria Celeste's 33 years. In that dramatic period, a pope came to power who battled the Protestant Reformation; the Thirty Years' War embroiled all of Europe; the bubonic plague erupted across Italy; and a new philosophy of science, promulgated most forcefully by Galileo himself, threatened to overturn the order of the universe. Maria Celeste's evocative, beautifully written letters touch on all of these situations, but they dwell in the small details of everyday life; and though Galileo's letters to her have not survived, it is clear from hers that he answered every one. Especially for those who have read Ms. Sobel's *Galileo's Daughter*, but even for those who haven't, Maria Celeste's letters provide an indelible chronicle of convent life in the early 17th century, a memorable portrait of deep affection between a famous father and his daughter, and fascinating insight into Galileo himself.

The Illustrated Longitude Dava Sobel 2008-10-08 Describes the forty-year effort of John Harrison to invent the chronometer, the first instrument able to keep accurate time for navigational purposes.

Nicolaus Copernicus Owen Gingerich 2005-06-16 Presents the life and accomplishments of the man considered the "father of the Scientific Revolution" due to his theory that the sun is the center of the solar system and the planets revolve around it.

Backache Dava Sobel 1996-06-15 Argues that exercise is the best therapy for backache, discusses motivation, recommends specific exercises, and covers yoga, meditation, and life-style changes

A More Perfect Heaven Dava Sobel 2012-10-01 The bestselling author of *Longitude* and *Galileo's Daughter* tells the story of Nicolaus Copernicus and the revolution in astronomy that changed the world.

How It Began: A Time-Traveler's Guide to the Universe Chris Impey 2012-03-26 “Impey combines the vision of a practicing scientist with the voice of a gifted storyteller.”—Dava Sobel In this vibrant, eye-opening tour of milestones in the history of our universe, Chris Impey guides us through space and time, leading us from the familiar sights of the night sky to the dazzlingly strange aftermath of the Big Bang. What if we could look into space and see not only our place in the universe but also how we came to be here? As it happens, we can. Because it takes time for light to travel, we see more and more distant regions of the universe as they were in the successively greater past. Impey uses this concept—“look-back time”—to take us on an intergalactic tour that is simultaneously out in space and back in time. Performing a type of cosmic archaeology, Impey brilliantly describes the astronomical clues that scientists have used to solve fascinating mysteries about the origins and development of our universe. The milestones on this journey range from the nearby to the remote: we travel from the Moon, Jupiter, and the black hole at the heart of our galaxy all the way to the first star, the first ray of light, and even the strange, roiling conditions of the infant universe, an intense and volatile environment in which matter was created from pure energy. Impey gives us breathtaking visual descriptions and also explains what each landmark can reveal about the universe and its history. His lucid, wonderfully engaging scientific discussions bring us to the brink of modern cosmology and physics, illuminating such mind-bending concepts as invisible dimensions, timelessness, and multiple universes. A dynamic and unforgettable portrait of the cosmos, *How It Began* will reward its readers with a deeper understanding of the universe we inhabit as well as a renewed sense of wonder at its beauty and mystery.

Longitude Dava Sobel 2010-07-05 The dramatic human story of an epic scientific quest and of one man's forty-year obsession to find a solution to the thorniest scientific dilemma of the day--“the longitude problem.” Anyone alive in the eighteenth century would have known that “the longitude problem” was the thorniest scientific dilemma of the day-and had been for centuries. Lacking the ability to measure their longitude, sailors throughout the great ages of exploration had been literally lost at sea as soon as they lost sight of land. Thousands of lives and the increasing fortunes of nations hung on a resolution. One man, John Harrison, in complete opposition to the scientific community, dared to imagine a mechanical solution-a clock that would keep precise time at sea, something no clock had ever been able to do on land. *Longitude* is the dramatic human story of an epic scientific quest and of Harrison's forty-year obsession with building his perfect timekeeper, known today as the chronometer. Full of heroism and chicanery, it is also a fascinating brief history of astronomy, navigation, and clockmaking, and opens a new window on our world.

The Industrial Revolutionaries Gavin Weightman 2010-05-18 “Anyone with a passing interest in economic history will thoroughly enjoy” this account of how industry transformed the world (The Seattle Times). In less than one hundred and fifty years, an unlikely band of scientists, spies, entrepreneurs, and political refugees took a world made of wood and powered by animals, wind, and water, and made it into something entirely new, forged of steel and iron, and powered by steam and fossil fuels. This “entertaining and informative” account weaves together the dramatic stories of giants such as Edison, Watt, Wedgwood, and Daimler with lesser-known or entirely forgotten characters, including a group of Japanese samurai who risked their lives to learn the secrets of the West, and John “Iron Mad” Wilkinson, who didn’t let war between England and France stop him from plumbing Paris (The Wall Street Journal). “Integrating lively biography with technological clarity, Weightman converts the Industrial Revolution into an enjoyably readable period of history.” —Booklist “Skillfully stitching together thumbnail sketches of a large number of inventors, architects, engineers, and visionaries. . . . Weightman expertly marshals his cast of characters across continents and centuries, forging a genuinely global history that brings the collaborative, if competitive, business of industrial innovation to life.” —The New York Times Book Review

A More Perfect Heaven Dava Sobel 2011-09-27 Traces the story of the reclusive sixteenth-century cleric who introduced the revolutionary idea that the Earth orbits the sun, describing the dangerous forces and complicated personalities that marked the publication of Copernicus's findings.

Teaching About Evolution and the Nature of Science National Academy of Sciences 1998-05-06 Today many school students are shielded from one of the most important concepts in modern science: evolution. In engaging and conversational style, *Teaching About Evolution and the Nature of Science* provides a well-structured framework for understanding and teaching evolution. Written for teachers, parents, and community officials as well as scientists and educators, this book describes how evolution reveals both the great diversity and similarity among the Earth's organisms; it explores how scientists approach the question of evolution; and it illustrates the nature of science as a way of knowing about the natural world. In addition, the book provides

answers to frequently asked questions to help readers understand many of the issues and misconceptions about evolution. The book includes sample activities for teaching about evolution and the nature of science. For example, the book includes activities that investigate fossil footprints and population growth that teachers of science can use to introduce principles of evolution. Background information, materials, and step-by-step presentations are provided for each activity. In addition, this volume: Presents the evidence for evolution, including how evolution can be observed today. Explains the nature of science through a variety of examples. Describes how science differs from other human endeavors and why evolution is one of the best avenues for helping students understand this distinction. Answers frequently asked questions about evolution. Teaching About Evolution and the Nature of Science builds on the 1996 National Science Education Standards released by the National Research Council--and offers detailed guidance on how to evaluate and choose instructional materials that support the standards. Comprehensive and practical, this book brings one of today's educational challenges into focus in a balanced and reasoned discussion. It will be of special interest to teachers of science, school administrators, and interested members of the community.

To Explain the World Steven Weinberg 2015-02-17 A masterful commentary on the history of science from the Greeks to modern times, by Nobel Prize-winning physicist Steven Weinberg—a thought-provoking and important book by one of the most distinguished scientists and intellectuals of our time. In this rich, irreverent, and compelling history, Nobel Prize-winning physicist Steven Weinberg takes us across centuries from ancient Miletus to medieval Baghdad and Oxford, from Plato’s Academy and the Museum of Alexandria to the cathedral school of Chartres and the Royal Society of London. He shows that the scientists of ancient and medieval times not only did not understand what we understand about the world—they did not understand what there is to understand, or how to understand it. Yet over the centuries, through the struggle to solve such mysteries as the curious backward movement of the planets and the rise and fall of the tides, the modern discipline of science eventually emerged. Along the way, Weinberg examines historic clashes and collaborations between science and the competing spheres of religion, technology, poetry, mathematics, and philosophy. An illuminating exploration of the way we consider and analyze the world around us, *To Explain the World* is a sweeping, ambitious account of how difficult it was to discover the goals and methods of modern science, and the impact of this discovery on human knowledge and development.

Copernicus' Secret Jack Repcheck 2007-12-04 Traces the story of the enigmatic scientist while revealing how he was able to make his pivotal discovery about how the earth revolves around the sun in spite of limited technology and the obscure belief systems of his contemporaries, in an account that traces the crucial role played by Copernicus's associate, Georg Joachim Rheticus. 35,000 first printing.

Coming of Age in the Milky Way Timothy Ferris 2010-07-06 From the second-century celestial models of Ptolemy to modern-day research institutes and quantum theory, this classic book offers a breathtaking tour of astronomy and the brilliant, eccentric personalities who have shaped it. From the first time mankind had an inkling of the vast space that surrounds us, those who study the universe have had to struggle against political and religious preconceptions. They have included some of the most charismatic, courageous, and idiosyncratic thinkers of all time. In *Coming of Age in the Milky Way*, Timothy Ferris uses his unique blend of rigorous research and captivating narrative skill to draw us into the lives and minds of these extraordinary figures, creating a landmark work of scientific history.

The Glass Universe Dava Sobel 2017-10-31 From #1 New York Times bestselling author Dava Sobel, the "inspiring" (People), little-known true story of women's landmark contributions to astronomy A New York Times Book Review Notable Book Named one of the best books of the year by NPR, The Economist, Smithsonian, Nature, and NPR's Science Friday Nominated for the PEN/E.O. Wilson Literary Science Writing Award "A joy to read." —The Wall Street Journal In the mid-nineteenth century, the Harvard College Observatory began employing women as calculators, or “human computers,” to interpret the observations their male counterparts made via telescope each night. At the outset this group included the wives, sisters, and daughters of the resident astronomers, but soon the female corps included graduates of the new women's colleges—Vassar, Wellesley, and Smith. As photography transformed the practice of astronomy, the ladies turned from computation to studying the stars captured nightly on glass photographic plates. The “glass universe” of half a million plates that Harvard amassed over the ensuing decades—through the generous support of Mrs. Anna Palmer Draper, the widow of a pioneer in stellar photography—enabled the women to make extraordinary discoveries that attracted worldwide acclaim. They helped discern what stars were made of, divided the stars into meaningful categories for further research, and found a way to measure distances across space by starlight. Their ranks included Williamina Fleming, a Scottish woman originally hired as a maid who went on to identify ten novae and more than three hundred variable stars; Annie Jump Cannon, who designed a stellar classification system that was adopted by astronomers the world over and is still in use; and Dr. Cecilia Helena Payne, who in 1956 became the first ever woman professor of astronomy at Harvard—and Harvard’s first female department chair. Elegantly written and enriched by excerpts from letters, diaries, and memoirs, *The Glass Universe* is the hidden history of the women whose contributions to the burgeoning field of astronomy forever changed our understanding of the stars and our place in the universe.

Unlimited Wealth Paul Zane Pilzer 1990 In a refutation of conventional economic theories, the author outlines the new economic order, where corporations profit by providing products and services that did not exist before

The Age of Wonder Richard Holmes 2009-07-14 The Age of Wonder is a colorful and utterly absorbing history of the men and women whose discoveries and inventions at the end of the eighteenth century gave birth to the Romantic Age of Science. When young Joseph Banks stepped onto a Tahitian beach in 1769, he hoped to discover Paradise. Inspired by the scientific ferment sweeping through Britain, the botanist had sailed with Captain Cook in search of new worlds. Other voyages of discovery—astronomical, chemical, poetical, philosophical—swiftly follow in Richard Holmes's thrilling evocation of the second scientific revolution. Through the lives of William Herschel and his sister Caroline, who forever changed the public conception of the solar system; of Humphry Davy, whose near-suicidal gas experiments revolutionized chemistry; and of the great Romantic writers, from Mary Shelley to Coleridge and Keats, who were inspired by the scientific breakthroughs of their day, Holmes brings to life the era in which we first realized both the awe-inspiring and the frightening possibilities of science—an era whose consequences are with us still. BONUS MATERIAL: This ebook edition includes an excerpt from Richard Holmes's *Falling Upwards*.

What Galileo Saw Lawrence Lipking 2014-12-18 The Scientific Revolution of the seventeenth century has often been called a decisive turning point in human history. It represents, for good or ill, the birth of modern science and modern ways of viewing the world. In *What Galileo Saw*, Lawrence Lipking offers a new perspective on how to understand what happened then, arguing that artistic imagination and creativity as much as rational thought played a critical role in creating new visions of science and in shaping stories about eye-opening discoveries in cosmology, natural history, engineering, and the life sciences. When Galileo saw the face of the Moon and the moons of Jupiter, Lipking writes, he had to picture a cosmos that could account for them. Kepler thought his geometry could open a window into the mind of God. Francis Bacon's natural history envisioned an order of things that would replace the illusions of language with solid evidence and transform notions of life and death. Descartes designed a hypothetical "Book of Nature" to explain how everything in the universe was constructed. Thomas Browne reconceived the boundaries of truth and error. Robert Hooke, like Leonardo, was both researcher and artist; his schemes illuminate the microscopic and the macrocosmic. And when Isaac Newton imagined nature as a coherent and comprehensive mathematical system, he redefined the goals of science and the meaning of genius. What Galileo Saw bridges the divide between science and art; it brings together Galileo and Milton, Bacon and Shakespeare. Lipking enters the minds and the workshops where the Scientific Revolution was fashioned, drawing on art, literature, and the history of science to reimagine how perceptions about the world and human life could change so drastically, and change forever.

The Copernican Question Robert Westman 2020-04-21 In 1543, Nicolaus Copernicus publicly defended his hypothesis that the earth is a planet and the sun a body resting near the center of a finite universe. But why did Copernicus make this bold proposal? And why did it matter? The Copernican Question reframes this pivotal moment in the history of science, centering the story on a conflict over the credibility of astrology that erupted in Italy just as Copernicus arrived in 1496. Copernicus engendered enormous resistance when he sought to protect astrology by reconstituting its astronomical foundations. Robert S. Westman shows that efforts to answer the astrological skeptics became a crucial unifying theme of the early modern scientific movement. His interpretation of this long sixteenth century, from the 1490s to the 1610s, offers a new framework for understanding the great transformations in natural philosophy in the century that followed.

