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A lighthearted meditation on the philosophical quandaries of the hit television show *The Big Bang Theory*. Ever wonder what Aristotle might say about the life Sheldon Cooper leads? Why Thomas Hobbes would applaud the roommate agreement? Who Immanuel Kant would treat with "haughty derision" for weaving "un-unravelable webs?" And—most importantly—whether Wil Wheaton is truly evil? Of course you have. Bazinga! This book mines the deep thinking of some of history's most potent philosophical minds to explore your most pressing questions about *The Big Bang Theory* and its nerdy genius characters. You might find other philosophy books on science and cosmology, but only this one refers to Darth Vader Force-chokes, cloning Leonard Nimoy, and oompa-loompa-like engineers. Foshizzle. Gives you irresistibly geek-worthy insights on your favorite *Big Bang Theory* characters, story lines, and ideas. Examines important themes involving ethics and virtue, science, semiotics, religion, and the human condition. Brings the thinking of some of the world's greatest philosophers to bear on *The Big Bang Theory*, from Aristotle and Plato to Nietzsche, Wittgenstein, Simone de Beauvoir, and more. Essential reading for every *Big Bang Theory* fan, this book explores whether comic-book-wielding geeks can lead the good life, and whether they can know enough science to "tear the mask off nature and stare at the face of God." A ground-breaking book that takes on skeptics from both sides of the cosmological debate, arguing that science and the Bible are not at odds concerning the origin of the universe. The culmination of a physicist's thirty-five-year journey from MIT to Jerusalem, *Genesis and the Big Bang* presents a compelling argument that the events of the billions of years that cosmologists say followed the Big Bang and those of the first six days described in *Genesis* are, in fact, one and the same—identical realities described in vastly different terms. In engaging, accessible language, Dr. Schroeder reconciles the observable facts of science with the very essence of Western religion: the biblical account of Creation. Carefully reviewing and interpreting accepted scientific principles, analogous passages of Scripture, and biblical scholarship, Dr. Schroeder arrives at a conclusion so lucid that one wonders why it has taken this long in coming. The result for the reader—whether believer or skeptic, Jewish or Christian—is a totally fresh understanding of the key events in the life of the universe. Introduces the concept of the big bang and the immensity of the universe in picture book format. The theory that has come to be known as "The Big Bang" was originally proposed by a Catholic Priest, to make the Bible Scientific. Critics of the Big Bang theory have subsequently referred to this theory as "religion masquerading as science." Nevertheless, the Big Bang model is the generally accepted theory for the origin of universe. Nonetheless, findings in observational astronomy and revelations in the field of fundamental physics over the past two decades question the validity of the 'Big Bang' model as a viable theory for the origin of the universe. There are numerous factors which undermine the theory of the Big Bang, including the organization of galactic superstructures, the

Cosmic Microwave Background, distant galaxies, gravitational waves, red shifts, and the age of local galaxies. Admittedly, the Big Bang research program has been successful in generating fruitful scientific hypotheses and tests, and there has been some confirmation for many hypotheses. However, outstanding questions remain and substantial alternative cosmology models, which also have been fruitful, remain viable and continue to evolve. Unfortunately, there has been a concerted effort to prevent research into alternate cosmologies. The Big Bang has become a "sacred cow" which must not be questioned. One of the greatest challenges facing astrophysics is derivation of remoteness in cosmological objects. At large scales, it is almost entirely dependent upon the Hubble relationship between apparent brightness and spectral redshift for large luminous objects. However, this data has questionable validity. The assumption of scale invariance and universality of the Hubble law allowed the adoption of redshift as a standard calibration of cosmological distance. However, there have been several fields of study in observational astronomy that consistently give apparently anomalous results from ever-larger statistical samples, and would thus seem to require further careful investigation. A major problem is that the Big Bang model implies the existence of a creator. Why the Universe should have had a beginning, or why it would have been created, cannot be explained by classical or quantum physics. To support the Big Bang, estimates of the age and size of the cosmos, including claims of an accelerating universe, are based on an Earth-centered universe with the Earth as the measure of all things, exactly as dictated by religious theology. However, distance from Earth is not a measure of the age of far away galaxies. The Big Bang cannot explain why there are galaxies older than the Big Bang, why fully formed galaxies continue to be discovered at distances of over 13 billion light years from Earth, when according to Big Bang theory, no galaxies should exist at these distances. To support the Big Bang, red shifts are purposefully misinterpreted based on Pre-Copernican geocentrism with Earth serving as ground zero. However, red shifts are variable, effected by numerous factors, and do not provide measures of time, age or distance. Nor can Big Bang theory explain why galaxies collide, why rivers of galaxies flow in the "wrong" direction, why galaxies clump together creating great walls of galaxies which took from 80 billion to 150 billion years to form. Big Bang theory requires phantom forces, constantly adjusted parameters, and ad hoc theorizing to explain away and to cover up the numerous holes in this theory. Finally, if at first there was a "singularity" then the Big Bang was not a beginning, but a continuation. "A riveting tour of the cosmos from one of the brightest minds in astrophysics." —The Washington Post A revolutionary new account of our universe's creation—and breathtaking exploration of the landscape from which we sprang—from one of the world's most celebrated cosmologists What came before the Big Bang, and what exists outside of the universe it created? Until recently, scientists could only guess at what lay past the edge of space-time. However, as pioneering theoretical physicist Laura Mersini-Houghton explains, new scientific tools are now giving us the ability to peer beyond the limits of our universe and to test our theories about what is there. / what we are finding is upending everything we thought we knew about the cosmos and our place in it. Mersini-Houghton is no stranger to boundaries—or to pushing through them. As a child growing up in Communist Albania, she discovered a universe beyond her walled-off world through the study of math and science, and through music. As a female cosmologist in a male-dominated field, she transcended the limits that society and her profession tried to place on her. And as a trailblazing researcher, she helped to revolutionize the study of our universe by revealing that, far from living in a cosmic Albania, with a world that ends at its borders, we are part of a larger family of universes—a multiverse—that wonders we are only beginning to unlock. Mersini-Houghton's groundbreaking research suggests that we sit in a quantum landscape whose peaks and valleys hide a multitude of other universes, and even hold the secret to the origins of existence itself. Recent evidence has revealed the signatures of such sibling universes in our own night sky, confirming Mersini-Houghton's theoretical work and offering humbling evidence that our universe is just one member of an unending cosmic family. The incredible scientific saga of one woman's mind-expanding journey through the multiverse, Before the Big Bang will reshape our understanding of humanity's place in the unfathomable vastness of the cosmos. A mesmerizing challenge to orthodox cosmology with powerful implications not only for cosmology itself

but also for our notions of time, God, and human nature -- with a new Preface addressing the latest developments in the field. Far-ranging and provocative, *The Big Bang Never Happened* is more than a critique of one of the primary theories of astronomy -- that the universe appeared out of nothingness a single cataclysmic explosion ten to twenty billion years ago. Drawing on new discoveries in particle physics and thermodynamics as well as on readings in history and philosophy, Eric J. Lerner confronts the values behind the Big Bang theory: the belief that mathematical formulae are superior to empirical observation; that the universe is finite and decaying; and that it could only come into being through some outside force. With inspiring boldness and scientific rigor, he offers a brilliantly orchestrated argument that generates explosive intellectual debate. Reveals the hard facts behind the laughter on TV's most popular sitcom The highest-rated scripted show on TV, *The Big Bang Theory* often features Sheldon, Howard, Leonard, and Raj wisecracking about scientific principles as if Penny and the rest of us should know exactly what they're talking about. The Science of TV's *The Big Bang Theory* lets all of us in on the punchline by breaking down the show's scientific conversations. From an explanation of why Sheldon would think 73 is the best number, to an experiment involving the physical stature of Wolowitz women, to an argument refuting Sheldon's assertion that engineers are the Oompa-Loompas of science, author Dave Zobel maintains a humorous and informative approach and gives readers enough knowledge to make them welcome on Sheldon's couch. The author of "Fermat's Last Theorem" and "The Code Book" tells the story of the brilliant minds that deciphered the mysteries of the Big Bang. An exploration of the ultimate question: how was our universe created? In an astonishing unfurling of our universe, Newbery Honor winner Marion Dane Bauer and Caldecott Honor winner Ekua Holmes celebrate the birth of every child. Before the universe was formed, before time and space existed, there was . . . nothing. But then . . . BANG! Stars caught fire and burned so long that they exploded, flinging stardust everywhere. And the ash of those stars turned into planets. Into our Earth. And into us. In a poetic text, Marion Dane Bauer takes readers from the trillionth of a second when our universe was born to the singularities that became each one of us, while vivid illustrations by Ekua Holmes capture the void before the Big Bang and the ensuing life that burst across galaxies. A seamless blend of science and art, this picture book reveals the composition of our world and beyond — and how we are the stuff of stars. "Hogan compresses the fifteen-billion-year history of the Universe into a pleasurable evening. In a very direct way, he answers the questions everyone asks." -MARGARET GELLER, HARVARD-SMITHSONIAN CENTER FOR ASTROPHYSICS "This delightful little primer brings you right up to the cutting edge of modern cosmology." -GEORGE SMOOT, PRINCIPAL INVESTIGATOR, COBE AND AUTHOR OF WRINKLES IN TIME "An excellent bridge by which the layperson can enter the domain of the Cosmos with understanding." -ROBERT WILLIAMS, DIRECTOR, SPACE TELESCOPE SCIENCE INSTITUTE A celebration of fan-favorite moments and characters from *The Big Bang Theory*, featuring a gallery of forty removable posters. This deluxe poster collection features all of the most memorable, hilarious moments and characters from the hit television series *The Big Bang Theory*, including Leonard, Sheldon, Penny, and the rest of the gang. Each poster is easy-to-remove and perfect for displaying, making this collection of iconic series images the perfect way for devoted fans to show their love for the quirky comedy. This completely authorized *Big Bang Theory* trivia and quiz book is filled with questions from every season, photos, hilarious quotes, and more, including excerpts from the Roommate Agreement and your chance to play 'Emily or Cinnamon.' It's sure to provide hours of fun and test the knowledge of even the most dedicated fan. *The Big Bang Theory* is one of the most popular sitcoms in the world and the funniest show on TV. It is beloved by critics and audiences alike for its quick wit, incredibly geeky but relatable characters, and its science and science fiction storylines. But up until now, there has never been an official *Big Bang Theory* book. *The Big Bang Theory: The Official Trivia Guide* is the book fans have been waiting for. Featuring 1,600 questions, photos, and many of the best quotes from Sheldon, Raj, Penny, Howard, Leonard, Amy, and Bernadette, as well as a complete episode guide, this official book will entertain all *Big Bang* fans, old and new alike. Do you know what instrument Leonard plays in the Physics Department String Quartet? Or which award Sheldon is the youngest person to have ever received? Or how about the name of

Penny's avatar in the Age of Conan game? Or who Howard went to couples therapy with? Or the name of Raj's school? Or when Sheldon does his laundry? Or what Leonard brought Penny back from the North Pole? You don't need Sheldon's eidetic memory to enjoy this book, but it might help! Get ready to use your knowledge of The Big Bang Theory and challenge your friends and family with trivia and questions about your favorite scientists. Available again, with a new preface, a physicist's "exceptionally clear summary of 2,500 years of science and a fascinating account of the ways in which it often does intersect with spiritual beliefs" --Kirkus Reviews Describes the Big Bang scientific theory of creation of the universe. If you like science, Star Trek, comic books, and laughing, you'll love playing The Big Bang Theory Mad Libs! Featuring 21 stories based on the hit show, this collection of Mad Libs is sure to entertain the whole family. Provides a history of scientific discovery about the birth of the universe. The authors of this volume have been intimately connected with the conception of the Big Bang model since 1947. Following the late George Gamow's ideas in 1942 and more particularly in 1946 that the early universe was an appropriate site for the synthesis of the elements, they became deeply involved in the question of cosmic nucleosynthesis and particularly the synthesis of the light elements. In the course of this work they developed a general relativistic model of the expanding universe with physics folded in, which led in a progressive, logical sequence to our prediction of the existence of a present cosmic background radiation some seventeen years before the observation of such radiation was reported by Penzias and Wilson. In addition, they carried out with James W. Follin, Jr., a detailed study of the physics of what was then considered to be the very early universe, starting a few seconds after the Big Bang, which still provides a methodology for studies of light element nucleosynthesis. Because of their involvement, they bring a personal perspective to the subject. They present a picture of what is now believed to be the state of knowledge about the evolution of the expanding universe and delineate the story of the development of the Big Bang model as they have seen and lived it from their own unique vantage point. A lively, accessible look at the Big Bang theory This compelling book describes how the Big Bang theory arose, how it has evolved, and why it is the best theory so far to explain the current state of the universe. In addition to understanding the birth of the cosmos, readers will learn how the theory stands up to challenges and what it fails to explain. Karen Fox provides clear answers to some of the hardest questions including: Why was the Big Bang theory accepted to begin with? Will the Big Bang theory last into the next century or even the next decade? Is the theory at odds with new scientific findings? One of the most well-known theories in modern science, the Big Bang is the most accurate model yet devised in humanity's tireless search for the ultimate moment of creation. The Big Bang Theory is the first title in a planned series on the major theories of modern science. The three greatest scientific mysteries, which remain poorly understood, are the origin of the universe, the origin of life and the development of consciousness. This book describes the processes preceding the Big Bang, the creation of matter, the concentration of that matter into stars and planets, the development of simple forms and the theory of evolution that has given higher life forms, including mankind. There are many popular and excellent science books that present various aspects of science. However, this book follows a narrow scientific pathway from the Big Bang to mankind, and depicts the causal relationships between each step and the next. The science covered will be enough to satisfy most readers. Many important areas of science are dealt with, and these include cosmology, particle physics, atomic physics, galaxy and star formation, planet formation and aspects of evolution. The necessary science is described in a narrative form that general-interest readers should understand, without the use of equations or formulae. This 2nd edition includes several updates on the subjects that form the pillars of this book. They are: cosmology and astronomy, the features and formation of the solar system, the origin of life, and genetics and evolution. This book will appeal to readers with an interest in biology and those curious about the origins of the universe. The big bang theory of cosmology - the idea that the universe originated in a single cataclysmic explosion between ten and twenty billion years ago - has become the foundation stone not only of modern astronomy, but also of all current theories of matter and energy. Cosmology is the study of the origin, size, and evolution of the entire universe. Every culture has developed a cosmology, whether it be based on religious, philosophical, or scientific

principles. In this book, the evolution of the scientific understanding of the Universe in Western tradition is traced from the early Greek philosophers to the most modern 21st century view. After a brief introduction to the concept of the scientific method, the first part of the book describes the way in which detailed observations of the Universe, first with the naked eye and later with increasingly complex modern instruments, ultimately led to the development of the "Big Bang" theory. The second part of the book traces the evolution of the Big Bang including the very recent observation that the expansion of the Universe is itself accelerating with time. A respected physics professor and author breaks down the great debate over the Big Bang and the continuing quest to understand the fate of the universe. Today the Big Bang is so entrenched in our understanding of the cosmos that to doubt it would seem crazy. But as Paul Halpern shows in *Flashes of Creation*, just decades ago its mere mention caused sparks to fly. At the center of the debate were Russian American physicist George Gamow and British astrophysicist Fred Hoyle. Gamow insisted that a fiery explosion explained how the elements of the universe were created. Attacking the idea as half-baked, Hoyle countered that the universe was engaged in a never-ending process of creation. The battle was fierce. In the end, Gamow turned out to be right -- mostly -- and Hoyle, along with his many achievements, is remembered for giving the theory the silliest possible name: "The Big Bang." Halpern captures the brilliance of both thinkers and reminds us that even those proved wrong have much to teach us about boldness, imagination, and the universe itself. A half century ago, a shocking *Washington Post* headline claimed that the world began in five cataclysmic minutes rather than having existed for all time; a skeptical scientist dubbed the maverick theory the Big Bang. In this amazingly comprehensible history of the universe, Simon Singh decodes the mystery behind the Big Bang theory, leading us through the development of one of the most extraordinary, important, and awe-inspiring theories in science. An accessible and engaging primer on the history of the universe and life on Earth. In this delightful book, kids can follow the fascinating story of how we got from the beginning of the universe to life today on the "bright blue ball floating in space" called Earth. They'll learn about the big bang theory, how our solar system and planet were formed, how life on Earth began in the oceans and moved to land, what happened to the dinosaurs and how humans evolved from apes to build communities all over the planet ... and even travel to space! Kids will be enthralled by this out-of-this-world look at how the universe began! Two world-renowned scientists present an audacious new vision of the cosmos that "steals the thunder from the Big Bang theory." —*Wall Street Journal* The Big Bang theory—widely regarded as the leading explanation for the origin of the universe—posits that space and time sprang into being about 14 billion years ago in a hot, expanding fireball of nearly infinite density. Over the last three decades the theory has been repeatedly revised to address such issues as how galaxies and stars first formed and why the expansion of the universe is speeding up today. Furthermore, an explanation has yet to be found for what caused the Big Bang in the first place. In *Endless Universe*, Paul J. Steinhardt and Neil Turok, both distinguished theoretical physicists, present a bold new cosmology. Steinhardt and Turok "contend that what we think of as the moment of creation was simply part of an infinite cycle of titanic collisions between our universe and a parallel world" (*Discover*). They recount the remarkable developments in astronomy, particle physics, and superstring theory that form the basis for their groundbreaking "Cyclic Universe" theory. According to this theory, the Big Bang was not the beginning of time but the bridge to a past filled with endlessly repeating cycles of evolution, each accompanied by the creation of new matter and the formation of new galaxies, stars, and planets. *Endless Universe* provides answers to longstanding problems with the Big Bang model, while offering a provocative new view of both the past and the future of the cosmos. It is a "theory that could solve the cosmic mystery" (*USA Today*). The genesis of our universe has captured the imagination of astronomers throughout history. The development of the big bang theory is a story of heated debates, a race to discovery, and persistent scientists who refused to give up. This book includes biographies of Arno Penzias, Robert Wilson, Ralph Alpher, and more. The book presents proven scientific facts about our universe alongside questions that today's astrophysicists work tirelessly to answer. Why did Ptolemy's theory cause problems for the church? What is the big secret concerning the "Age" of the earth? Why do many scientists reject the use of

design in explaining origins? The seemingly absurd idea that all matter, energy, space, and time once exploded from a point of extreme density has captured the imagination of scientists and laypersons for decades. The big bang has provided a central teaching for the eons of time of "cosmic evolution", undermining the history and cosmology of the Bible. It is a theory that fails, even violating the very physical laws on which it is purportedly based. In this easy-to-read format, authors Alex Williams and John Hartnett explode this naturalistic explanation for the universe, and show that the biblical model provides a far better explanation of our origins. This fully indexed, illustrated analysis of the big bang theory is an invaluable help in understanding and countering a world view that is as chaotic and destructive as its name implies. Argues that the so-called Big Bang was part of an infinite cycle of colossal collisions between our known universe and a parallel world, drawing on developments in astronomy, particle physics, and superstring theory to illuminate the Cyclic Universe theory. According to a recent survey, the most popular question about science from the general public was: what came before the Big Bang? We all know on some level what the Big Bang is, but we don't know how it became the accepted theory, or how we might know what came before. In *Before the Big Bang*, Brian Clegg (the critically acclaimed author of *Upgrade Me* and *The God Effect*) explores the history of this remarkable concept. From the earliest creation myths, through Hershel's realization that the Milky Way was one of many galaxies, to on-going debates about Black Holes, this is an incredible look at the origins of the universe and the many theories that led to the acceptance of the Big Bang. But in classic scientist fashion Clegg challenges the notion of the "Big Bang" itself, and raises the deep philosophical question of why we might want to rethink the origin of the universe. This is popular science at its best: exploratory, controversial, and utterly engrossing. *A Quick History of the Universe* takes a whistlestop tour through – funnily enough – the history of the universe, from the Big Bang to right now. The narrative text and cartoons cover all you need to know about space, forces and physics. Presents the observations that helped establish our theories of the cosmos, from a unique and engaging perspective. "In a unique take on the cosmos, Gould makes the case that the emergence of a great many things are not only pre-ordained, but predictable." (Forbes) We know the universe has a history, but does it also have a story of self-creation to tell? Yes, in Roy R. Gould's account. He offers a compelling narrative of how the universe—with no instruction other than its own laws—evolved into billions of galaxies and gave rise to life. Far from being a random accident, the universe is hard at work, extracting order from chaos. Making use of the best current science, Gould turns what many assume to be true about the universe on its head. The cosmos expands inward, not outward. Gravity can drive things apart, not merely together. And the universe seems to defy entropy as it becomes more ordered, rather than the other way around. Strangest of all, the universe is exquisitely hospitable to life, despite its being constructed from undistinguished atoms and a few unexceptional rules of behavior. *Universe in Creation* explores whether the emergence of life, rather than being a mere cosmic afterthought, may be written into the most basic laws of nature. "A must-have for all avid popular science fans." —*Astronomy Now* "Gould . . . proposes a fascinating thesis about life's emergence in this eloquent debut" —*Publishers Weekly* "A joyous romp through a cosmos full of wonders." —Roald Hoffmann, Nobel Laureate and author of *Beyond the Finite* "Exciting, original, and extremely well written." —Avi Loeb, Harvard University, New York Times bestselling author of *Extraterrestrial* "Fascinating. . . . Gould artfully describes various . . . highlights in universal history, like the formation of stars and planets. Many of these moments are majestic." —*New Republic* Describes how the scientific discoveries of the Microwave Anisotropy Probe (MAP) satellite have transformed the modern science of cosmology, describing its revelations in terms of the origins and history of the universe, the nature of dark matter, the expansion of the universe, and other key topics. (Science & Mathematics) Explore how the universe began—and thwart evil along the way—in this cosmic adventure from Stephen and Lucy Hawking that includes a graphic novel. George has problems. He has twin baby sisters at home who demand his parents' attention. His beloved pig Freddy has been exiled to a farm, where he's miserable. And worst of all, his best friend, Annie, has made a new friend whom she seems to like more than George. So George jumps at the chance to help Eric with his plans to run a big experiment in Switzerland that seeks to explore the earliest moment of

the universe. But there is a conspiracy afoot, and a group of evildoers is planning to sabotage the experiment. Can George repair his friendship with Annie and piece together the clues before Eric's experiment is destroyed forever? This engaging adventure features essays by Professor Stephen Hawking and other eminent physicists about the origins of the universe and ends with a twenty-page graphic novel that explains how the Big Bang happened—in reverse! A collection of essays on research on CMBR in the 1960s by eminent cosmologists who pioneered the work. Tony Rothman offers a primer on the science of the big bang and the questions we still can't answer about the origins of the universe. Enlisting thoughtful analogies and a step-by-step approach, Rothman guides readers through dark matter, dark energy, quantum gravity, and other topics at—and beyond—the cutting edge of cosmology. Where did our universe come from? People have been trying to answer this question for thousands of years. The twentieth century brought new discoveries in physics and astronomy that led scientists to develop the Big Bang theory—a detailed idea that describes how our universe formed. According to this theory, the entire universe began in a single instant, in an unimaginably powerful explosion. That explosion created all time and space, all matter and energy—everything in the universe as we know it. This book tells the story of how scientists' observations of the stars led to the development of the Big Bang Theory. What exactly is the Big Bang theory? What came before it? What is a black hole? How do we know the universe is expanding? These are only five of 50 questions leading North American astronomer Terence Dickinson answers here from the many asked during his lectures and interviews. In his bestselling, down-to-earth style, Dickinson unravels the mysteries of the cosmos. Terms such as "expanding Universe", "big bang", and "initial singularity", are nowadays part of our common language. The idea that the Universe we observe today originated from an enormous explosion (big bang) is now well known and widely accepted, at all levels, in modern popular culture. But what happens to the Universe before the big bang? And would it make any sense at all to ask such a question? In fact, recent progress in theoretical physics, and in particular in String Theory, suggests answers to the above questions, providing us with mathematical tools able in principle to reconstruct the history of the Universe even for times before the big bang. In the emerging cosmological scenario the Universe, at the epoch of the big bang, instead of being a "new born baby" was actually a rather "aged" creature in the middle of its possibly infinitely enduring evolution. The aim of this book is to convey this picture in non-technical language accessible also to non-specialists. The author, himself a leading cosmologist, draws attention to ongoing and future observations that might reveal relics of an era before the big bang.