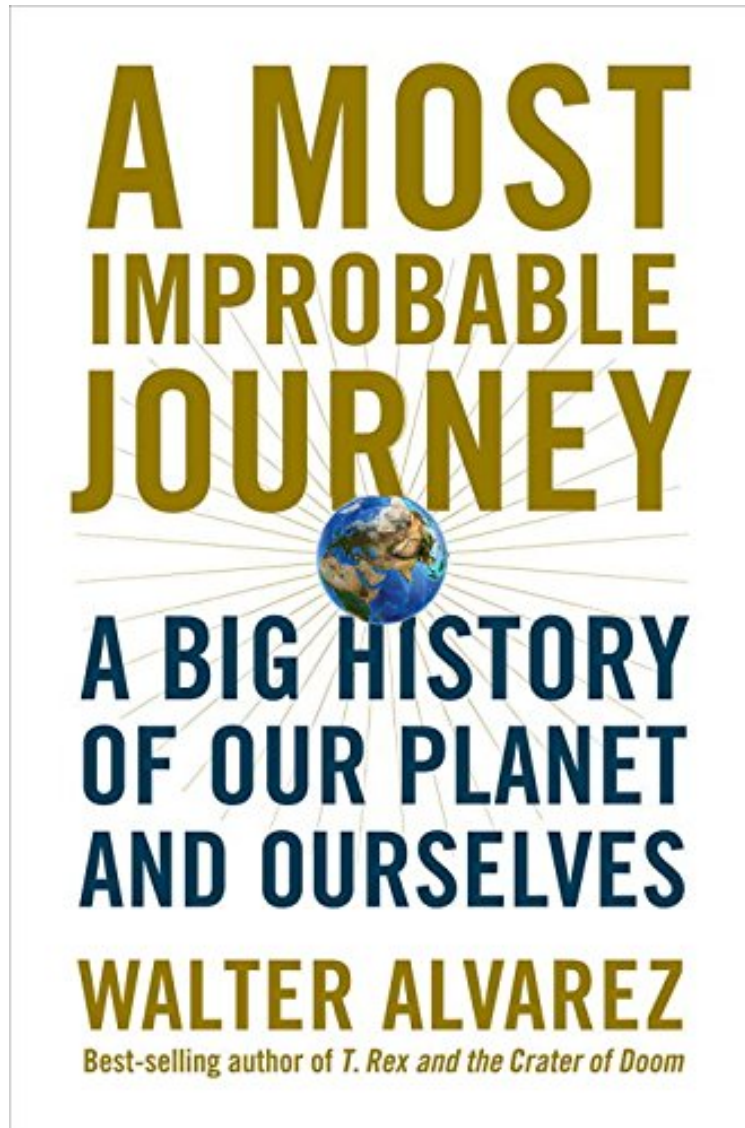


A Most Improbable Journey: A Big History of Our Planet and Ourselves

Walter Alvarez

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Walter Alvarez : A Most Improbable Journey: A Big History of Our Planet and Ourselves before purchasing it in order to gauge whether or not it would be worth my time, and all praised A Most Improbable Journey: A Big History of Our Planet and Ourselves:

20 of 21 people found the following review helpful. Excellent Popular Science WritingBy Book SharkA Most

Improbable Journey: A Big History of Our Planet and Ourselves by Walter Alvarez

A Most Improbable Journey is an awe-inspiring and accessible history of our planet and ourselves that combines the cosmos, earth, life and humanity. Famed geologist and professor at the University of California, Berkely, Walter Alvarez takes the reader on a stimulating ride through our planets history and the incredible occurrences that have led us to where we are today. This inspiring 256-page book includes the following ten chapters: 1. Big History, the Earth, and the Human Situation, 2. From the Big Bang to Planet Earth, 3. Gifts from the Earth, 4. A Planet with Continents and Oceans, 5. A Tale of Two Mountain Ranges, 6. Remembering Ancient Rivers, 7. Your Personal Record of Life History, 8. The Great Journey, 9. Being Human, and 10. What Was the Chance of All This Happening?

Positives:

1. Great science writing. Informative, interesting, accessible and fun to read.
2. A fascinating topic, the panoramic viewpoint of history, Big History that combines history and science about our universe.
3. A very good format and overall good flow. Each chapter covers an interesting aspect of Big History. Professor Alvarez has a great command of the topics and the innate ability to convey concepts clearly and with a sense of awe.
4. Good use of photos, maps and illustrations that complement the accessible narrative.
5. Provides a quick account of how cosmic history produced the planet and our solar system. In an expanding universe, if you were to go backward in time, the galaxies would get closer and closer together, until all the galaxies and all the space between them would be confined to a tiny ball, and this was the Big Bang, almost 14 billion years ago. The Big Bang is usually described as an explosion, although not like ones familiar to us. It was not an explosion within space, like a firecracker or a quarry blast, but an explosion of space and of matter and even of time itself, none of which existed until the explosion took place.
6. Find out the three wonderful tricks that Nature used to make our world possible.
7. Explains how Earth makes resources useful. Of those four dominant elements, lets focus on silicon because it is the basis of most of the minerals and rocks that make up our planet.
8. Defines key terms and concepts throughout the book. Tectonics is the study of the large-scale geological features of Earth continents, ocean basins, and mountain ranges and the word comes from the same root as architecture in this case, the architecture of our planet.
9. The revolutionary discovery that continents move. In 1912 the German meteorologist Alfred Wegener presented a detailed theory of continental drift, starting from the coastline fit.
10. Instead of going into deep depth on each topic and thus dissuading the layperson, Alvarez provides key examples that succeeds in enlightening the reader. In keeping with the Big History approach, let us look at our two mountain ranges first from the viewpoint of historians, then of travelers and artists and, finally, of geologists.
11. Mountain history. The fundamental discovery of the eighteenth- and nineteenth-century geologists was that Earth history has not been brief not just a few thousand years, but enormously long, going back to an origin that has now been dated as about 4,500 million years ago.
12. Describes how external processes like rivers, glaciers and the wind create the geological changes the produce the landscapes that we live in. Getting the agreement to build the Erie Canal was difficult, and digging the ditch and building the locks in an age of hand labor was herculean, but once the canal was finished in 1825, it changed everything. The agricultural products of the west and the manufactures of the east floated easily along the placid waters of the canal, linking the coastal states and the new interior lands into a dynamic, growing nation.
13. The keys to life history. Fossils and DNA give complementary records of life history, each supplying information the other cannot. Fossils tell us what an organism looked like, while DNA tells how two organisms are related.
14. Interesting tidbits throughout. Eating with your jaw is a much more ancient activity than using it to tell stories!
15. Explores how humans tie into the deeper history of our planet. The grand theory of evolution and the human journey. Finally, about 200,000 years ago, came Homo sapiens, who developed sophisticated culture and a wide range of advanced tools made from stone and other materials.
16. Describes how human ancestry is revealed. So we have two tracers of our human ancestry mitochondrial DNA for the female side and Y-chromosome DNA for the male line.
17. Describes how the achievements that make us human and how the Earth history has set the stage for these achievements. The use of fire is not often on the list of critical human attributes, but when we look at what makes us human, controlled fire use might even be the most defining characteristic of our species.
18. Describes history through the key concepts of continuity and contingency. On the one hand, I see continuities, made up of trends and cycles, combined in various ways at various time scales. On the other hand, there are contingencies rare events that make significant changes in history that could not have been predicted very far in advance.
19. Find out the satisfying conclusion of this book.
20. Notes and further sources provided.

Negatives:

1. It was so much fun to read, I was sad when it was over.
2. Not so much a negative but a disclaimer to readers looking for depth, this book is intended for laypersons.
3. Good use of photos and illustrations but I would have added more timelines. In summary, this is what good popular science writing is all about; a fascinating story grounded in good science and fun to read. Professor Alvarez succeeds in providing the public with an awe-inspiring book on the history of the universe through the four regimes of cosmos, earth, life and humanity. A great gift for the Holidays. A highly recommended read, get this!

Further recommendations: The Big Picture by Sean Carroll, Improbable Planet by Hugh Ross, Big History by Cynthia Stokes Brown, The Serengeti Rules by Sean B. Carroll, Welcome to the Universe by Neil deGrasse Tyson, How it Began by Chris Impey, Extinction: How Life on Earth Nearly Ended 250 Million Years Ago by Douglas Erwin, Wonders of the Universe and Wonders of Life by Brian Cox, The Great Extinctions by Norman MacLeod, Written in Stone by Brian Switek, Sapiens: A Brief History of Humankind by Yuval Noah Harari.

3 of 4 people found the following review helpful. Continental drift, the death of the

dinosaurs, and the accidental history of human life on Earth. By Mal Warwick, UC Berkeley professor Walter Alvarez tackles the emerging field of Big History from his perspective as a geologist, viewing himself as a historian of the Earth. In *A Most Improbable Journey*, he writes about the universal context in which human life has emerged. A planet in a constant state of flux. Beginning with the Big Bang and rushing through the intervening 13.8 billion years at top speed, he focuses on the geological processes through which the Earth was formed and progressively re-formed in ways that have determined the course of human events to this day. The topography and climate of continents, he writes, have controlled the pattern of settlement and the lines of communication throughout history; resources are distributed in an irregular way across the continents; and land warfare is carried out on a geographical chessboard. The geography of the oceans has determined routes of exploration, trade, and migration and has set the stage for naval warfare. And all this, he emphasizes, is the result of the particular configuration of the continents at this moment in geological history. Because of continental drift, the shape and distribution of both land and sea have radically changed numerous times since the Earth was created 4.5 billion years ago. For example, to cite just two minor examples of the Earth's changeability, he notes that California is further away from Utah than it used to be. And the coast of Northern California once extended to what we know today as the Farallones Islands. If your taste runs to nonfiction, you may well find this book as enjoyable as the best thriller. An unusual contribution to Big History. The discipline of Big History is less than three decades old. Founded by David Christian, an American historian then teaching in Australia, its mission is to transcend the boundaries of written history and help us see ourselves in the context of an inconceivably vast and complex universe. Instead of focusing on the mere 5,000 years of recorded history, Big Historians typically direct our attention far backwards to the beginning of time itself. However, in most treatments, Big History explores the astronomical, physical, chemical, and geological realities of our past only as prologue to an abbreviated world history. Walter Alvarez takes a different approach in *A Most Improbable Journey*. Though he frequently dips into other scientific disciplines, his focus throughout is on the ways in which geological science can help us understand the shape our lives and the character of the planet we share. Human life is an accident. In his short and highly readable book, Alvarez frames the story of the ascension of the human species as an accident. At innumerable moments . . . , he writes, history could have taken different paths than the one our world actually did take, resulting in a human situation different from the one we have today or possibly no human situation at all! He emphasizes that the human situation is balanced on a knife edge of improbability. This is the principal theme of his book. Again and again, Alvarez returns to this point. Writing about the improbable evolution of our bodies, he asks, What if bilateral symmetry had never appeared? What if the movable jaw had not evolved? What if the dinosaurs had not been killed off? What if other biological inventions we can barely imagine had shaped the path of evolution? As with so much else in Big History, it was a very particular and unlikely sequence of events that gave us the characteristics of our human bodies. A very personal perspective. Alvarez bookends his account with references to the theory that has put him on the map, so to speak: the hypothesis that the crash-landing of a meteor or comet in the Yucatan Peninsula caused the extinction of the dinosaurs and the rise of mammals to supremacy on the Earth. The improbability of this event—unlike anything in the previous half-billion years—reinforces his thesis that the emergence of our species is due to a long sequence of highly unlikely occurrences. Although Alvarez dips into geological jargon from time to time and offers more about the history of geological science than any lay reader might wish to know, *A Most Improbable Journey* is nonetheless entertaining. No doubt the book closely parallels the popular course in Big History he teaches at UC Berkeley. My only complaint is Alvarez's unaccountable love for unnecessary emphasis. Surely, it's not necessary to punctuate nearly every interesting observation with an exclamation mark! The frequency of this aberrant punctuation is annoying. About the author: Walter Alvarez is a professor in the Earth and Planetary Sciences Department at the University of California, Berkeley. A geologist, he is best known for the hypothesis that a meteor impact on the coast of Yucatan 66 million years ago led to the extinction of the dinosaurs, which he developed with his father. The father, Luis Walter Alvarez, was an experimental physicist who paved the way for the discovery of whole new families of subatomic particles, work for which he won the Nobel Prize in Physics. 0 of 0 people found the following review helpful. A very modern, thought-provoking exploration of the truly BIG picture. By Kindle Customer. Excellent, as expected from Walter. Challenging and vision-expanding.

Famed geologist Walter Alvarez expands our view of human history by revealing the cosmic, geologic, and evolutionary forces that have shaped us. One in a million doesn't even come close. Not when we're talking about the odds that you would happen to be alive today, on this particular planet, hurtling through space. Almost fourteen billion years of cosmic history, over four billion years of Earth history, a couple million years of human history, the rise and fall of nations, the unbroken string of generations necessary to lead to you—it's staggering to consider. Yet behind everything in our world, from the phone in your pocket to even the force of gravity itself, lies a similarly grand procession of highly improbable events. This panoramic viewpoint has captured the imagination of historians and scientists alike, and together they've created a new field: Big History—that integrates traditional historical scholarship with scientific insights to study the full sweep of our universe and its past. Famed geologist Walter Alvarez—best known for the impact theory explaining dinosaur extinction—has championed a science-first approach to Big History, and *A Most*

Improbable Journey is one of the first Big History books to be written by a scientist rather than a historian. Alvarez brings his unique expertise and infectious curiosity to give us a new appreciation for the incredible occurrences from the Big Bang to the formation of supercontinents, the dawn of the Bronze Age, and beyond that have led to our improbable place in the universe. 35 illustrations

Evocative Alvarez [enables] readers to experience the power of Big History. - Science Fans of Bill Bryson's A Short History of Nearly Everything will appreciate Alvarez's enthusiastic, clearly written tour of contingencies that have shaped our world. A compelling case for Big History as a fun, perspective-stretching exercise: a way to dust off familiar topics and make them sparkle. - Science News Imagine a campfire chat with your favorite teacher sharing the biggest story you ever heard. A Most Improbable Journey is a thrilling synthesis from a brilliant scientist who discovered one of the most important chapters in our history. An instant classic. - Sean B. Carroll, author of Endless Forms Most Beautiful A wonderful account of Big History by a geologist. And not just any geologist, but the geologist who showed that the dinosaurs were done in by an unlucky asteroid strike! Alvarez writes with precision and great charm. And he reminds us how absurdly improbable is the role we play in this colossal story, and how many things had to go right for you and me to exist. - David Christian, founder of the field of Big History and author of Maps of Time For the past three decades, Walter Alvarez has been at the center of a revolution in how scientists think about the history of life and the Earth. In A Most Improbable Journey he gives us the biggest history of all, going from the Big Bang to our own place on the planet. Lively and profound and flavored with his infectious enthusiasm, Alvarez shows how each of us has won a truly massive lottery just to be a sentient being on this planet. - Neil Shubin, best-selling author of Your Inner Fish About the Author Walter Alvarez, professor of geology at the University of California, Berkeley, received the Penrose Medal, the top honor in geology, and is the best-selling author of T. Rex and the Crater of Doom. He lives in Berkeley, California.