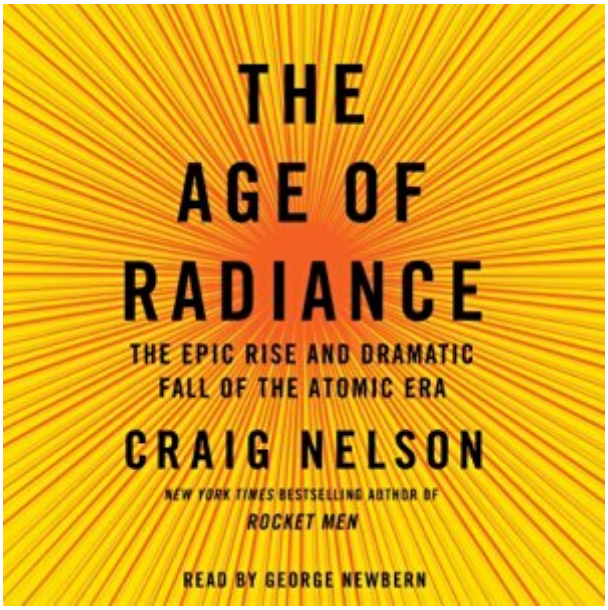
The Age Of Radiance: The Epic Rise And Dramatic Fall Of The Atomic Era



Synopsis

From the New York Times best-selling author of Rocket Men and the award-winning biographer of Thomas Paine comes the first complete history of the Atomic Age, a brilliant, magisterial account of the men and women who uncovered the secrets of the nucleus, brought its power to America, and ignited the 20th century. When Marie Curie, Enrico Fermi, and Edward Teller forged the science of radioactivity, they created a revolution that arced from the end of the 19th century, through the course of World War II and the Cold War of superpower brinksmanship, to our own 21st-century confrontation with the dangers of nuclear power and proliferation - a history of paradox, miracle, and nightmare. While nuclear science improves our everyday lives - from medicine to microwave technology - radiation's invisible powers can trigger cancer and cellular mayhem. Writing with a biographer's passion, Craig Nelson unlocks one of the great mysteries of the universe in a work that is tragic, triumphant, and above all, fascinating. From the discovery of X-rays in the 1890s, through the birth of nuclear power in an abandoned Chicago football stadium, to the bomb builders of Los Alamos and the apocalyptic Dr. Strangelove era, Nelson illuminates a pageant of fascinating historical figures: Marie and Pierre Curie, Albert Einstein, Niels Bohr, Franklin Roosevelt, J. Robert Oppenheimer, Harry Truman, Curtis LeMay, John F. Kennedy, Robert McNamara, Ronald Reagan, and Mikhail Gorbachev, among others. He reveals how brilliant Jewish scientists fleeing Hitler transformed America from a nation that created lightbulbs and telephones into one that split atoms; how the most grotesque weapon ever invented could realize Alfred Nobel's lifelong dream of global peace; and how, in our time, emergency workers and low-level utility employees fought to contain run-amok nuclear reactors while wondering if they would live or die. Radiance defies our common-sense views of nature, with its staggering amounts of energy flowing from seemingly inert rock and matter pulsing in half-lives that transforms into other states over the course of decades or in the blink of an eye. Radiation is as scary a word as cancer, but it's the power that keeps our planet warm, as well as the force behind earthquakes, tsunamis, and volcanic eruptions, and so organic to all life that even our own human bodies are radioactive. By tracing mankind's complicated relationship with the dangerous energy it discovered and unleashed, Nelson reveals how atomic power and radiation are indivisible from our everyday lives. Brilliantly told and masterfully crafted, The Age of Radiance provides a new understanding of a misunderstood epoch in history and restores to prominence the forgotten heroes and heroines who have changed all of our lives for better and for worse. It confirms Craig Nelson's position as one of the most lively and skillful popular historians writing today.

Book Information

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Customer Reviews

Craig NelsonÃ¢Â Â™s Ã¢Â ÂœThe Age of RadianceÃ¢Â Â• offers a survey of nuclear energy from Henri Becquerel through the recent accident at Fukushima, and, overall, does a respectable job. As a physicist, I am familiar with the science involved with this material. I found its coverage of the personalities involved to be engaging, and intended to go through the entire volume. However, I soon noticed that it contains numerous small errors, especially in the sections that dealt with my own area of expertise, the Manhattan Project; I finally gave up about half-way through, and this is why I give this book a two-star rating.Here is a partial list of corrections: In a discussion of a memo from Vannevar Bush to President Roosevelt (p. 146), FDR is quoted as writing Ã¢Â ÂœTime is very much of the essence,Ã¢Â Â• whereas the actual wording is Ã¢Â Âœl think the whole thing should be pushed not only in regard to development, but also with due regard to time. This is very much of the essence.Ã¢Â Â• Page 147 implies that a group of scientists chose General Groves to lead the Project, an assertion I have never come across in my own research. Los Alamos had 6000 residents, but only about 2500 employees (150). No credible source ever refers to Einstein having consulted at Los Alamos (153); his forte was not nuclear physics and Groves would have considered him too great a security risk. Construction on the K-25 diffusion plant did not begun until 1943, and was not finished until well into 1945 (161). A discussion at the bottom of p. 161 confusingly mixes the discovery of plutonium and uranium separation techniques in the same paragraph. A description of the S-50 liquid-diffusion plant reverses the order of heated and cooled pipes (163). On page 166, the assertion that the Hiroshima bomb Ã¢Â Âœwent supercritical for less

than a secondÃ¢Â Â• is strictly true, but the actual order of magnitude is only about a microsecond. Otto Hahn does not have an element named after him (190), and David Hawkins was a philosopher, not a physicist (192). A paragraph on p. 197 confusingly garbles the roles of the Jumbo containment vessel and sealing the windows of the McDonald ranch house to reduce dust during bomb assembly(!); Ã¢Â Âœsearching lightÃ¢Â Â• on p. 202 is probably supposed to be Ã¢Â Âœsearing lightÃ¢Â Â•; William Parsons is misidentified as the bombardier of the Enola Gay (212); Mitsubishi Heavy Industries was in Nagasaki, not Hiroshima (212); and the name of Enola GayÃ¢Â Â™s bombardier, Tom Ferebee, is mis-spelt as Farraby (212). Also, are descriptions such Wilhelm Roentgen having Ã¢Â Âœunruly beard and hair, wild and untamedÃ¢Â Â• (13), or the Fat Man bomb as Ã¢Â Âœgrungy and cobbled togetherÃ¢Â Â• (197), or Edward Teller Ã¢Â ÂœWith a face like an abdominal muscle foreshadowed by a prow of beetle brows ...Ã¢Â Â• (157) really necessary? Mr. Nelson is an experienced writer who should be above such characterizations. Individually, the above points are each minor, but they make me wonder how carefully this book was researched. These are not arcane points, but rather relate to material that has been reviewed many times by scientists and historians and which can now be researched with a few minutes of online effort. Readers who seek surveys of the history of nuclear physics, radioactivity, and the development of nuclear weapons have many other more carefully-prepared volumes from which to choose.

Author Craig Nelson does a credible job of explaining the history and science of the atomic bomb, also covering a lot of politics. On the other hand, Nelson makes extensive use of quotes, particularly pertaining to Marie Curie and Paul Langevin that quickly become tiresome. Nelson does an excellent job of covering post-war nuclear issues such as the Cuban missile crisis and atomic power generation. On the latter, however, he did not cover enough science. From a science point of view, Making of the Atomic Bomb by Richard Rhodes is a better book but NelsonÃ¢Â Â™s book brings us up to the present day. Even though there is a lot of overlap between Age of Radiance and Making of the Atomic Bomb, I recommend both books for those more interested in the science of the atomic bomb and The Age of Radiance alone for those who want a little less science but more information about the situation today.

Okay, I admit it. I made a big mistake when I checked "The Age of Radiance" out of the public library. I didn’t even look at the author’s name on the cover when I spotted the volume on the New Books shelf. I just grabbed it and headed for the self-checkout scanner. In my defense, I was in a bit

of a hurry.Had I noticed the author was the same one who gave us the memorably atrocious "Rocket Men," I would never have checked it out. But I didn't realize that until I started to read it. Since I had the book in hand then, so to speak, I figured I'd start into it anyway. I thought that perhaps Mr. Nelson did a better job explaining nuclear technology than he did Project Apollo.Unfortunately, he didn't. By the time I read Chapter 1--FIVE pages--my mind was reeling from his bizarre phraseology, botched descriptions of technical concepts and absurd uses of terminology that, to me, indicate he is as ignorant about nuclear matters as he is about spaceflight. I skimmed ahead and read a few sections about topics with which I am reasonably familiar, such as the implosion technique. He gets those wrong, too--not totally, perhaps, but enough to reveal that he does not really know much about the subject he's trying to write about."The Age of Radiance" is similar to "Rocket Men" in that Mr. Nelson relies VERY heavily on extensive quotes from other published sources. That's not necessarily bad in itself. But he clearly lacks the relevant knowledge to tie such quotes together or to place the events they describe in the proper historical context. At best, "The Age of Radiance" is a disconnected series of oral history interviews without a technically and historically accurate unifying narrative. I continue to wonder why authors such as Mr. Nelson don't write books on subjects they know about rather than on subjects that just reveal their ignorance.Some reviewers have said that Mr. Nelson writes very well. I agree--his style is lucid, fast paced and easy to read. But when an author gets so many of the basic facts of the story wrong, it's not worth reading, regardless of how well it's written. "Rocket Men" wasn't, and, based on my quick scan of it, neither is "The Age of Radiance."

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