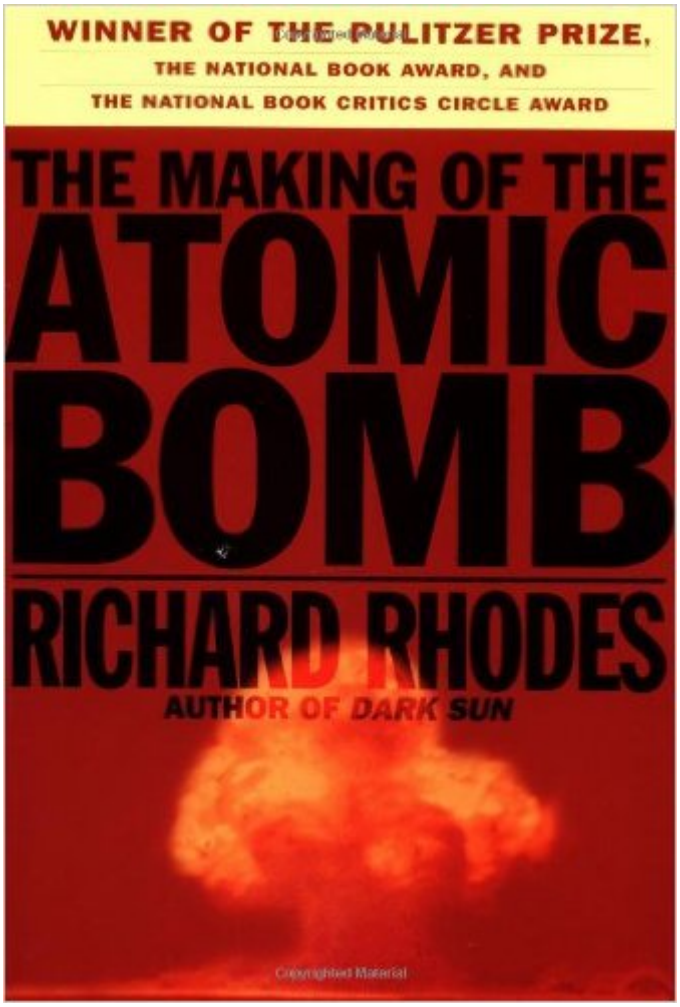
The Making Of The Atomic Bomb



Synopsis

The author recounts the story of how the atomic bomb was developed, from the discovery at the turn of century of the vast energy locked inside the atom, to the dropping of the first bombs on Japan during the Second World War.

Book Information

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Customer Reviews

I will echo the other reviewers: this is one of the best, if not the best book I have read.The book covers the subect on a number of levels. First is the factual story of the events leading up to the making of the bomb, which in themselves would be fascinating. For example, the fact that in two years the Manhattan Project built an industrial plant larger than the US automobile manufacturing base. That only in December of 1938 was the fission of Uranium first discovered, but the course of events were so rapid as to lead to the Trinity test in July of 1945. As a sometime program manager, but no General Groves, it was a fascinating account of the world’s most significant projecct.The second level is a very enjoyable history of nuclear physics as the reader is lead through the discovery process from the turn of the century to thermonuclear fusion. That discovery process is the vehicle for the third and fourth levels of the book. The stories and personalities of the scientists, around the world, who added to that knowledge, what shaped and motivated their lives and how they indiviually gained insight, brilliant insight, into the riddle that was physics. I felt I got to know people like Rutherford, Bohr, Oppenheimer, Fermi, Szilard, and Teller. The fourth level was that the insight was not really individual but collaborative. This book is one of the finest descriptions of the

scientific process and how this open, collaborative and communicative process works across boundaries.The last level, the biggest surprise and the most profoundly unsettling, was the realization of how this event, inevitable, has "changed everything" about human history - an appreciation, I believe 55 years later, we who did not participate in the Manhattan Project, have yet to fully realize.

This is one of those books that has it all: fascinating personalities, fundamental scientific discoveries explained with utter clarity, and the birth of political issues that are as relevant today as they were 60 years ago. That it is almost certainly the best book on the development of the atomic bomb is in itself remarkable, as the field is already crowded with mediocre efforts. Rhodes makes an entire era - the first half of the 20th Century - come alive in exacting detail.THe book starts with a ruminating Leo Szilard as he wanders the streets of London, with the concept of an atom bomb germinating in his mind. His pesonality is so quirky, his propensity to find just the right contact to advance his agenda, make him the ideal vehicle to follow the story of the harnessing of the atom for military purpose. But to offer a full view, Rhodes starts with the Curies and their milieu, when they discovered radiation - a fundamental new form of energy that could not be explained by chemistry - that was the start of the 20C revolution in physics. Not only does this story cover such luminaries as Einstein and Bohr, but it includes many others lesser known, who added their discoveries to the pieces of the puzzle that finally elucidated the structure of the atom. These developments are also brilliantly set in European and American history, where the rise of Nazism renders them frighteningly relevant. In addition, other issues are addressed, such as the reason for the sudden blossomng of several Hungarian geniuses, including Szilard and von Neumann, who left their homeland for the US.Then Rhodes moves to the practical question of the Bomb’s development, which was accomplished predominently by European scientists in exile and some remarkable Americans as well.

One of the most admirable qualities of this truly marvelous work is its ability to paint the story of the creation of the first atomic weapon on the broadest possible canvas, reaching back into the bowels of history to trace, with the fidelity of a seismographic needle, the rise of both the specific intellectuals as well as the critical scientific mass to make the work not only conceivable, but possible. This is indeed a work that one reads repeatedly, for there is so much to digest within the pages of this masterwork as to defy any easy such description. So both the cast of involved personalities is long and incredibly interesting to witness as the author develops it, but then again,

so is his description of the rise of theoretical physics through the work of Albert Einstein and his colleagues within the mostly European academic orbit in the first third of the twentieth century. In that sense, it is not strictly speaking, merely a detailed exposition dealing with what happened in New Mexico under incredibly secret circumstances during World War Two, as the Manhattan Project, even though it eventually gravitates toward being exactly that.Instead, the book opens as an exploration into the minds of some brilliantly eccentric professors and intellectuals struggling within theoretical physics on the very cutting edge of the unknown, and then stretching it in quite unsuspected and revolutionary ways. And as the critical mass of theoretical knowledge began to cluster within the fairly small community of like-minded souls, the scene changes based on world politics and the rise of fascism.