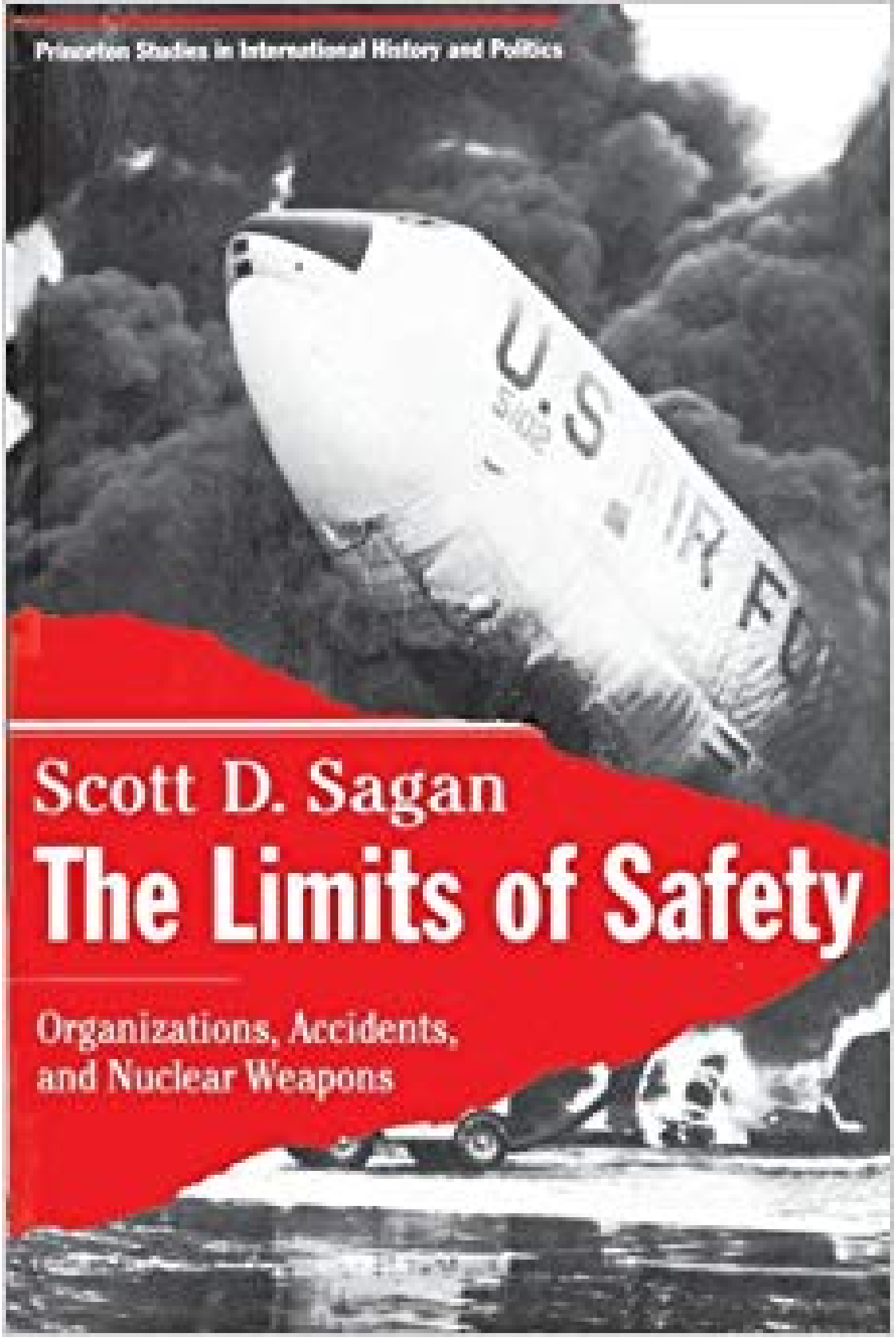
Princeton Studies in International History and Politics



Scott D. Sagan

The Limits of Safety

Organizations, Accidents, and Nuclear Weapons

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Environmental tragedies such as for example Chernobyl and the Exxon Valdez remind all of us that catastrophic accidents are always possible in a world full of hazardous technologies. Sagan's study into formerly classified archives penetrates the veil of safety that has surrounded U.S. Yet, the apparently excellent security record with nuclear weapons has led scholars, policy-makers, and the public alike to believe that nuclear arsenals can serve as a protected deterrent for the near future. In this provocative publication, Scott Sagan problems such optimism. nuclear weapons and reveals a concealed history of frightening "close phone calls" to disaster.

Excellent organizational behavior case study Regular accident theory versus high reliability theory for nuclear weapons.We're just lucky there's not been a major disaster. EceeeInt discussion in controlling nuclear weapons This important and informative book by Dr. An important book This book is well researched and well crafted. The contrasting perspective can be that of regular accident theory where the author combines Charles Perrow's system accident theory with theories of bounded rationality, particularly the garbage can theory of organisational behaviour by Cohen, March and Olsen.High reliability theory holds that accidents could be prevented through great organisational design, that safety is the priority organisational objective, that redundancy enhances safety, and that trial-and-error learning from near-misses could be effective. He gives a good summary of each theory and what each theory would expect to predict relating to nuclear weapons systems. Sagan undergoes a great deal of effort obtaining information through independence of information work requests, interviews with important participants, and review of congressional testimony. (It's amazing we survived the Cool War.) Thought-provoking. The reserve is important because its findings talk with the reliability of various other highly complex systems such as off shore oil rigs, nuclear reactors, chemical substance plants, etc.The implications of the issues raised in this book go far beyond nuclear weapons safety. This collection of case research is a hardcore test for normal accident theory. Scott Sagan examines the basic safety of the US nuclear weapons command organisations employing two opposing theoretical lines of thought: the so-called high reliability school and the standard accident school. He goes into depth reviewing organizational behavior through the Cuban missle crisis and the 1968 Thule bomber accident. Sagan uses the experiences of the nuclear weapons plan to compare high reliability and regular accidents theory.S. The more optimistic theory is called the High Reliability theory: it retains that organizations can desire to prevent all accidents through a solid organizational emphasis on safety; Highly recommendable book on systems safety. One would expect that the all-pervasive and dreadful effects of an accidental nuclear battle would make nuclear weapons basic safety a first priority at all levels of all involved organisations. The reader is left un-reassured of this. Scott Sagan provides many examples of political infighting, of organised cover-up, of normalisation of mistakes, of reinterpretation of failing as success, and of conflicts over parochial passions which are serious barriers to organisation learning. This is unpleasant reading, not minimal because Sagan's accounts is limited to US experience just. I recommend it. Arguments are cautiously reasoned, conclusions well balanced, the style of writing clear, however all details appear meticulously researched. 5 stars. The armed service nottelling their civilian masters what they are doing short circuits any hopeof them being an HRO. The apparent message of the book is that we must move even more forcefully in reducing the nuclear threat in all its diemsnions. This watch holds that incidents are inevitable in complicated and tightly coupled systems, that protection is one of a number of competing goals, that redundancy escalates the complexity and opaqueness of the system and thus may compromise safety (indeed the provocative view that redundancy may even cause incidents) and that political infighting is a serious barrier to organisational learning. policymakers, the leadership of other nuclear nations and the ones aspiring to be so.This ia a must go through for all Christians concerned peacemaking that goes beyond mere sentiment. New nuclear countries lack the technical infrastructure enjoyed by the West and Russia. This increases the risk of the unintended use of nuclear weapons. Sagan should be must reading for all U. His arugments about the hazards involved in trying to avoid mishaps with nuclear weapons is certainly eye-opening and gives one reason for concern. Two interesting topics Sagan examines the safety record of the Strategic Surroundings Command, the organization responsible for US property- and air-based nuclear weapons, in an effort to comparison two different theories about how exactly organizations that cope with high-risk technologies avoid

accidents.After having organized the propositions and assumptions of these competing theories, the books addresses the basic question of which of the two theories is even more accurate drawing from analysis of the Cuban missile crisis, the B52 Thule bomber crash, the performance of US missile warning systems, and others. redundancy (in both the technological and individual senses); and a commitment to organizational learning. The pessimistic theory is called the Normal Accidents theory: it keeps that organizations are driven by inner politics, that greater degrees of redundancy can actually cause incidents, and that what Sagan telephone calls "limited coupling" between processes can cause little mishaps to rapidly escalate into main disasters. Sagan favors the latter interpretation. Reading the title of the publication - "The Limits of Basic safety: Organizations, Incidents, and Nuclear Weapons" - would suggest that this book is about organizational issues of protection and accidents of our nuclear weapons system rather than technical tour de drive of nuclear weapons.) Sagan is considerably hampered in his choice of topic - you need to assume that more skeletons are hiding in the military's top-key closet - and as Sagan admits, it is difficult to draw any conclusions regarding safety from near-accidents. (Is a near accident proof that redundancy in the system functions as designed, or could it be evidence that, under slightly different circumstances, a significant disaster could have happened? The book is well-created and about as riveting as a publication on this topic can be, and I learned a whole lot about US nuclear weapons history. If the title isn't enough, the desk of contents is certainly a dead hand out of the book's articles.