



Book Review

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A History of U.S. Nuclear Testing and Its Influence on Nuclear Thought, 1945–1963

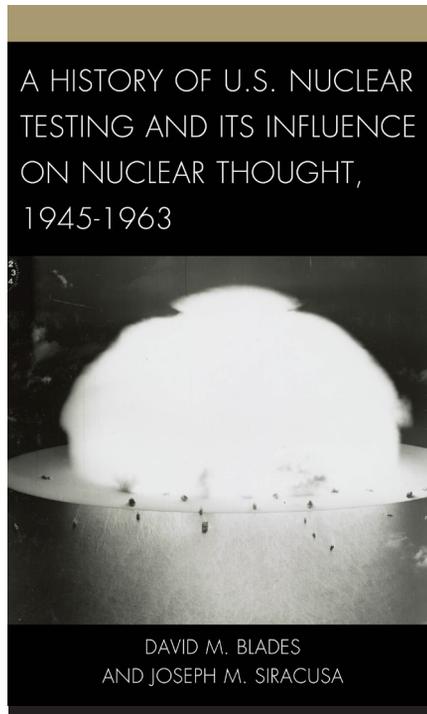
David M. Blades and
Joseph M. Siracusa

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It would seem obvious why the United States performed several decades of nuclear testing but until reading this book, how the testing itself changed American thinking on nuclear weapons may not have been as clear. The dynamic interplay of politics and science brought constant change that ultimately made nuclear testing, at first a normal choice for nuclear security, into an illegitimate option. How each nuclear test series influenced this transformation away from the “normalcy” of testing is the goal of the authors, both of whom are from Australian centers of learning.

Though the research is thorough and the story of the influence nuclear testing had on the political and societal dynamic of the U.S. is compelling, the conclusions presented here are not earth shattering. The value of the book lies partly with the story it tells but also with the perspective it brings from scholars outside the U.S. It is well written by its primary author with hints of influence from the more famous American ex-patriot co-author, Joseph Siracusa.

The story behind twenty test series and their respective families of 317 nuclear shots is clearly elucidated here.



The authors explain that for the most part, there were sound technical reasons for each of the shots that were carried forth in a natural progression motivated by science and influenced (not always) by the changing ideas concerning the legitimacy of these weapons. At the start, nuclear weapons held great legitimacy. Testing was politically acceptable and motivated by technical and defense concerns. Tests were categorized and ranged from those broadly defined as “radiation effects shots” such as those conducted at high altitude, to “human effects shots” involving military operations conducted post-explosion in or near the blast area. Nuclear tests were designed that ultimately determined the size of the U.S. arsenal and allowed the

military to miniaturize its atomic weapons for tactical battlefield use. Even the nascent space program benefited from nuclear testing. But, perhaps the best example of how nuclear testing changed the thinking behind the very idea of testing is that of radioactive fallout and its effects. Indeed, the Castle Bravo shot which resulted in the radiation exposure of the crew of the Japanese fishing vessel *Lucky Dragon*, revealed the inadequacy of meteorological prediction and that radiation’s deadly effects could be far flung. The authors peel away the onion of influences and changes to the U.S. test program in a paced, methodical approach. This is a revealing assessment if a bit anticlimactic. However, human history does not set out to entertain. It is not scripted for historians to turn into best sellers. It is what it is.

An excellent job is done organizing the narrative of nuclear test operations by presidential administration. Thus cataloged, the reader can clearly ascertain the influence of the personalities that headed the Atomic Energy Commission and the other interested governmental parties that sought the necessary presidential authorizations to conduct testing. The Truman era shots represent the development stage of nuclear weapons leading from uranium-based implosion devices to fusion mode thermonuclear weapons. Later, the Eisenhower administration saw miniaturization and varied deployment to multiple battlefield and submarine platforms. Finally, the Kennedy administration saw the perfection of



underground nuclear detonations, their detection and the somewhat haphazard response to Moscow's resumption of testing after the voluntary test moratorium of 1958. The result of the Kennedy era testing was the achievement of the Limited Test Ban Treaty (LTBT).

The U.S. response to the Soviet resumption of testing is perhaps, one of the more fascinating sections of the book. Here, unlike other sections where technical issues dominate the motivations for further nuclear testing, we find politics and national pride taking center stage with the result that testing was carried forth purely to sway world opinion. *Sputnik* had the world convinced of Soviet technical superiority. The U.S. thoroughly shaken by its own space program failures, compulsively launched into a poorly planned, politically motivated testing program largely conducted to regain its stature. If that thought puts fear into your heart, then the book serves yet another useful (and moral) purpose. Beyond its value as a chronicle of testing and the subsequent consequences, it announces—rather quietly as do most scholarly works—that political restraint can be easily subsumed by the fear of existential threat (or minimally, by damaged national pride). However, that would be a flawed, narrow view. As

the authors point out, the resumption of testing in 1961 to 1963 and its simultaneity with the Cuban Missile Crisis lead to a more durable agreement: the LTBT. And there, by providing such historical clarity, the book scores a high grade.

Is such an analysis worthy of a read? Clearly, those interested in the history of the nuclear testing era will find valuable information here. Well-constructed and well-written, the book will not bore. There is however a tinge of pedestrianism here. Some of the conclusions will seem obvious. The Truman era legitimacy of nuclear testing as the new technology was explored in the face of the perceived Soviet menace; the Eisenhower expansion as the technology matured and the arms race was on; and the pull back in the Kennedy era hastened by environmental concerns, the Cuban Missile Crisis, and ultimately by international treaty—all seem to be part of a logical progression obviating the need for an in-depth study. But, the authors contend that illumination was needed and a curious reader will not be disappointed.

The authors call upon the work of political scientists Scott D. Sagan (Stanford University) and Nina Tannenwald (Brown) who both have written on the manner in which states come to legitimize certain behaviors. The “domestic

politics model’ of Sagan is, thankfully for the casual reader, very briefly discussed in Chapter 4 and lightly applied in subsequent discussions to the behavior of nuclear testing. Thus, the story about the evolution in thinking regarding the defensive need and legitimacy of testing is in no way obscured by this political analysis. Instead, the story unfolds logically and sometimes dramatically as military men, politicians, scientists and anti-testing forces tried to sway the nation's nuclear testing future.

In 230 pages, the authors have scripted a concise, neatly written and well referenced story (the book is referenced by chapter and supplemented with a seven-page bibliography and ten-page index). Lest you think that road they traveled is too narrow or uninteresting consider that they skillfully and accurately framed their narrative with a reference to nuclear weapons development ascribed to Lewis Strauss, chair of the Atomic Energy Commission: He called it “this awesome field.” Indeed it is. Perhaps it is too big for most of us to fully grasp in a professional lifetime. This book is a very good starting point for those brave, scholarly, and ambitious enough to try.

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