



Book Review

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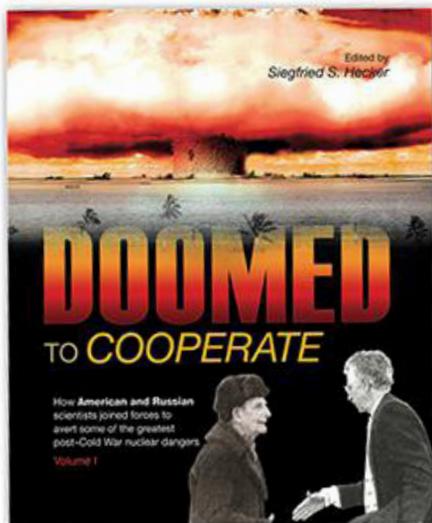
Doomed to Cooperate

Edited by Siegfried S. Hecker

Volume 1: Hardcover, 540 pages, ISBN 978-0-9411232-44-9

Volume 2: Hardcover, 436 pages, ISBN 978-0-9411232-44-9

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This massive undertaking focuses its effort on an important and little-told story that those studying the immediate post-Soviet era of nuclear angst in the United States will no doubt find interesting. Weapons scientists of both nations—one concerned that abandoned Soviet nuclear weapons would fall prey to proliferators and terrorists, the other sanguine about its change of nation-status but still confident in its scientists' ability to protect the nuclear arsenal despite the evolving political climate—came together with a shared sense of accountability to manage the situation. This is how, at least in part, the

story arc reads in *Doomed to Cooperate*, a publication of the Los Alamos Historical Society.

The editor and contributors do a very credible job of painting the bleak landscape of the Russian nuclear complex in decline (especially from the U.S. perspective). With thousands of weapons of various designs, the international community felt justified in its fear and concern that the Soviet political upheaval would leave components of the arsenal exposed to terrorism. By 1985, Mikhail Gorbachev had been elected and initiated detente with the United States. Two years later, the first scientific cooperation between the two nations occurred under the Joint Verification Experiment (JVE), a U.S.–Soviet collaboration to measure the explosive yields of both nation's nuclear tests. It resulted in a verification mechanism for the Threshold Test Ban Treaty (1974) to limit testing yields. This initial bridge-building effort was later supplemented by the 1989 Megagauss-V Conference that built a path toward joint scientific research. The very first collaboration was held in Moscow between a delegation from Los Alamos National Lab and the Russian Research Institute for Experimental Physics (VNIIEF) in May 1992. The last such conference was held in

2013. The editor focuses on the personal narratives originating from employees of three U.S. nuclear weapons laboratories—Los Alamos, Lawrence Livermore, and Sandia—and their Russian Federation counterparts—VNIIEF, VNIITF (Russian Federal Nuclear Center All-Russian Research Institute for Technical Physics), and VNIIA (All-Russian Research Institute of Automatics), respectively. These weapons facilities faced the most dramatic changes as the Cold War ended.

Here are the “diaries” of the people living this historical moment of peaceful cooperation. The two volumes record the efforts and impressions of American and former Soviet nuclear weapons scientists collaborating to establish a camaraderie that would serve both nations well during and after the Soviet Union breakup. With at least 120 contributors (mostly men; this reviewer counted eight women contributing to volume 1), the reader will find first-person accounts mixed with interview-style recollections. For reasons mentioned later, such variety of presentation is welcome.

The books are well designed. Volume 1 covers the efforts to safeguard weapons and nuclear materials. Volume 2 focuses on converting a part of the Russian



weapons complex into a civilian effort, thereby giving Russian scientists future employment options. The “brain drain” to terrorist organizations so feared in the West was largely averted. There is also a section devoted to joint science projects between both nations—another welcome addition to the read.

The table of contents in both volumes clearly shows the thought that went into the construction of this history. Each major section is a broad technical area. Examples include “warhead safety,” “nuclear materials,” and “Russian military cooperation.” Under each, one encounters chapter headings focusing the reader on one aspect of the section topic. That is followed by a multitude of relevant personal narratives. One complaint: there is no glossary, which I imagine will be regretted by historians wading through the two-volume, 976-page effort in their hunt for ever-elusive facts.

There is an extensive biographical section lauding the accomplishments of the contributors. Two-page maps indicating locations for the USSR/Russia and U.S. nuclear weapons facilities and supporting sites are located on the inside front and back covers. Black-and-white photos, mainly of the scientists involved in the many scientific exchanges, accompany the chapters with some “ancient” laboratory equipment also well represented. A very useful 1953 to 2015 U.S./Russian lab-to-lab nuclear cooperation timeline accompanies volume 1. Printed on a glossy heavyweight paper with minimal but handsome page decorations, these books will be formidable occupants of any bookshelf.

There is much to praise here. The effort alone to solicit, collect, translate, edit, and arrange the recollections is enough to make me catch my breath. As mentioned,

the entries are first-person accounts and include not only descriptions of the lab-to-lab collaborations but also lighthearted accounts of cross-cultural confusion that inevitably accompanies first-time visits to a foreign land. I imagine the translation and editing effort is responsible for the clarity of these narratives. The reader won't find clunky writing or poor syntax that could distract and take them out of the narrative. That success alone deserves congratulations.

With all that going for it, do not expect a scintillating cover-to-cover read. This is a workmanlike and very competent account of a particular slice of history made interesting by the overall story arc of superpower collaboration. Inevitably, the narrative becomes a bit pedestrian. These are scientists and engineers writing about impressions, their projects, political hurdles, administrative miscues, and other aspects of first-time cooperation in the secret world of nuclear weapons. Writing is not their first calling. How many times can one claim victory for science over politics and make it sound fresh?

One must also remember that the history it spans is a very short period of time: roughly 1988 to 2013. A non-weapons-lab reader such as a historian of science or perhaps a graduate student of nonproliferation studies looking for context, with an interest in this short span of Soviet decline and American concern, will have an easier time making a purchase than a casual reader trying to determine if the book will generate curiosity. In other words, this is first a book for a special audience—and secondly for anyone who seriously wants to join that special group.

Accessing the book's webpages might help potential readers make a purchase decision. Articles that could not be

included in the book, plus supplementary material such as photos, videos, and other material, can be found in an electronic archive at <https://lab2lab.stanford.edu/electronic-archive-us-russian-nuclear-and-scientific-cooperation>. It is a rich trove of information for historians of nuclear science. One hopes that the Los Alamos Historical Society will maintain and add to it.

The “Outreach” link under “The Book” drop-down menu will be of special interest to those considering a purchase. Here, one will find a BBC interview of the editor and articles he wrote about visits to Soviet labs and U.S.–Russian teamwork, along with a presentation of the book at the Center for Strategic and International Studies in Washington, D.C. Under the “About” drop-down, look for “Book origin.” Here, you will learn that a Russian version of the book—and not one merely translated from the current two volumes—is expected. Again, before deciding to purchase, check out the table of contents of both volumes under “The Book” to view the nuclear weapons and nonproliferation areas covered.

There is no doubt that constructing *Doomed to Cooperate* was and remains a successful ongoing collaborative effort made possible by the very cooperation it documents. It is a memorial to the heroic efforts of former enemies (who sadly have become more adversarial again), the integrity of the scientists who initiated those efforts and carried them as far as they could, and all the other people who had the foresight to realize that partnership was (and is) a better way for nuclear armed countries to proceed into the murky future of the 21st century.