

tion with the MIT Museum. However, the book's acknowledgments reveal no connections to anyone in the institute's Science, Technology, and Society Program. And worse yet, the book betrays no knowledge of the kind of work done in that department. The material cries out for some analysis (historical, political, anthropological, or sociological), but none is given. Such analysis could have been provided without turning the volume into a dry academic tome. Hacks at MIT are the stuff of myth and legend—but instead of trying to examine and understand the myths and legends, this book accepts them at face value. While *Nightwork* may please MIT alumni, students of science and technology studies can only hope that someone will use it as a starting point to produce a more analytical work.

ROSS BASSETT

Richard Polenberg (Editor). *In the Matter of J. Robert Oppenheimer: The Security Clearance Hearing*. xxxii + 409 pp., illus., index. Ithaca, N.Y.: Cornell University Press, 2002. \$19.95 (paper).

For historians of American science, there is no document quite like the so-called Oppenheimer hearing, the transcript of the proceedings before the Atomic Energy Commission's Personnel Security Board, in 1954, to decide whether to reinstate the security clearance of the physicist J. Robert Oppenheimer. For nearly four weeks, from 12 April to 6 May, witnesses, in addition to Oppenheimer himself and his wife Kitty, appeared before the board to argue for or against the scientist who spearheaded the making of the atomic bomb during World War II but advised against the making of the H-bomb in 1949. Among the leading scientists testifying for Oppenheimer were James Conant, Vannevar Bush, I. I. Rabi, and Hans Bethe, while Edward Teller and several others spoke against him. They not only expressed their opinions as to Oppenheimer's fitness to continue to serve the government but also recounted their experiences of working with him from pre-World War II days to the Cold War, covering, along the way, many of the most crucial events of the nuclear age. The hearing itself became a major milestone in Cold War history, with a profound impact on the relationship between American scientists and the national security state.

Even though the witnesses were originally told that the hearing would be confidential, the AEC decided to publish the transcript quickly as a move in its battle with Oppenheimer's defense team for favorable publicity. Thus, on 16 June

1945 the Government Printing Office rolled out the 992 pages of the transcript, just as the AEC commissioners prepared their four-to-one decision against Oppenheimer. Titled simply and starkly *In the Matter of J. Robert Oppenheimer*, the massive volume has served as a treasure trove for historians and other scholars—including even dramatists—interested in science, politics, security policy, morality, and McCarthyism in Cold War America. The venerable GPO version was usefully updated in 1970 when the MIT Press, under the same title, reprinted the transcript, added a separate section of the subsequent reports by the board and commission and related correspondence, and furnished an indispensable index.

Now Richard Polenberg, a distinguished American historian at Cornell, has rendered a valuable service to the scholarly community and the public at large by mining and distilling the transcript into a form that should fulfill a number of previously unmet needs. He has judiciously selected about one quarter of the original transcript and most of the reports, written a lucid introduction to give the background to and an overview of the case based on up-to-date scholarship by himself and others, and inserted short, unobtrusive commentaries throughout the text to connect the selections into an unfolding drama. The book boasts a new, pleasing typeface and contains photographs of the main characters to enliven the narrative. In short, Polenberg has made the Oppenheimer hearing accessible for everyone. His volume will serve, for example, as an excellent supplemental text in a variety of undergraduate courses in the history of science and American history.

Of course, scholars who turn to the Oppenheimer hearing as a primary source for research should use this book in conjunction with the 1970 MIT Press version. To reduce the book's length and maintain cohesion, Polenberg has quite properly selected mainly those portions of the testimony dealing with two key issues: the so-called Chevalier incident—Oppenheimer's failure to report truthfully his friend Haakon Chevalier's approach to him about passing nuclear information to the Soviet Union during World War II—and his opposition to a crash H-bomb project. In doing so, Polenberg had to omit the testimony of some witnesses entirely (e.g., Karl Compton and Walt Whitman of MIT), instead providing one-sentence summaries of their attitudes toward Oppenheimer. He also had to leave out large parts of the testimony of those he does include. Thus scholars who want to get more detail on the case or learn about general

nuclear and defense policy-making in this period should consult the full version.

When he returned home at the end of the hearing, Oppenheimer said—according to an FBI agent's report—that he did not expect the case to end quietly, “as all the evil of the times is wrapped in this situation” (p. xv). Polenberg construes the phrase “all the evil of the times” to refer to the undermining of the ideals of decency, justice, and fair play by McCarthyism. To that one might add nuclear destruction and the Cold War conflict itself. Half a century later, the world has changed in many ways. Yet, as we live in the post–September 11 era and debate over the proper balance between homeland security and civil liberties, over a new and more aggressive nuclear posture, and over renewed American interventions abroad, it pays to revisit one of the most famous cases in the history of American nuclear politics. And there is no better way to do so than by reading this admirably edited volume.

ZUOYUE WANG

Jeffrey T. Richelson. *The Wizards of Langley: Inside the CIA's Directorate of Science and Technology*. 386 pp., apps., bibl., index. Boulder, Colo.: Westview Press, 2001. \$26 (cloth).

In August 2001, just before terrorist attacks leveled the World Trade Center towers and damaged the Pentagon, John Kerr became head of the Directorate of Science and Technology at the Central Intelligence Agency. A plasma physicist with a 1966 Ph.D. from Cornell who had directed the Los Alamos National Laboratory and later served as an assistant director of the FBI, Kerr quickly faced fundamental questions that had vexed his predecessors for more than half a century. Should the CIA concentrate on covert technologies, including remote sensors, or on interpreting human intelligence? Should its scientists and technological experts focus broadly on basic science through the development of weapons systems or instead respond to narrower requests for information from other intelligence agencies and the Pentagon?

In *The Wizards of Langley* Jeffrey Richelson, a political scientist now at the National Security Archives in Washington, D.C., analyzes the place of science and technology within the CIA from the time of its founding in 1947 through early 2001. Richelson rightly notes that scholars have paid far more attention to the CIA's clandestine operations, political espionage, and traditional analysis than to how the agency exploited science and technology to benefit U.S. intelligence. Richelson focuses on two closely

related themes: the CIA's use of science and technology as tools to improve intelligence generally and agency efforts to comprehend advances and weaknesses in the natural sciences and related technologies in foreign nations.

Richelson offers a fast-paced overview of the challenges that scientists faced in defining a clear role for science and technology within a bureaucracy slow to comprehend the particular requirements of scientific intelligence and frequently inclined to subordinate the Directorate of Science and Technology (formally established in 1962–1963) to more powerful agency branches. He recounts familiar developments, including the CIA's successful highly secret Corona satellite photography missions beginning in 1960, the salvaging of wreckage from a sunken Soviet submarine by the *Glomar Explorer* in 1972, and the disastrous LSD-induced death of an agency scientist in 1953 (part of an experiment motivated by anxieties over perceived Soviet advances in controlling human behavior). A nimble sleuth, Richelson reveals other less well known science and technology initiatives, among them covert listening devices mounted in the Indian high Himalayas in 1965 to monitor Chinese nuclear tests, long-running studies of psychic phenomena in the 1970s in response to reported Soviet work on psychokinesis, and the creation of a bugged fiberglass “twig” that was tossed into the Chinese embassy compound in Washington, D.C., in the 1980s to eavesdrop on conversations. Richelson focuses primarily on the physical sciences (and their applications) rather than biological studies—perhaps reflecting the division's own emphasis before bioterrorism emerged as a critical threat after September 2001.

Nevertheless, *The Wizards of Langley* is at heart a bureaucratic history. Richelson pays special attention to turf battles over science and technology within the CIA, the history of particular projects and technological systems, and the triumphs and failures of science advocates within the agency (especially illuminating is his discussion of Ruth David, the first woman to serve as Deputy Director of Science and Technology, in the late 1990s). In part this reflects limited source materials, especially for recent decades. But it also seems a deliberate decision by Richelson: his book does not address such issues as how scientists outside the agency provided information to CIA analysts, despite the significance of this topic for assessing how the practice of secrecy affected the production of knowledge. Nor does Richelson explore whether agency scientists felt that their efforts violated