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Audra J. Wolfe. *Competing with the Soviets: Science, Technology, and the State in Cold War America*.
Competing with the Soviets: Science, Technology, and the State in Cold War America by
Audra J. Wolfe

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tions to deal with the big three included in the “Weapons of Mass Destruction” moniker, this is two books under a single cover—one dealing with chemical and biological weapons, the other with nuclear weapons, although there is much overlap. John Walker’s sources are almost exclusively drawn from British government archives, and, while there are secondary sources listed in the bibliography, there are no notable attempts to incorporate the exhaustive literature on arms control and disarmament into the narrative.

With chemical and biological weapons, Walker draws attention to some interesting points, the most intriguing being the notion that the two, which were classified together by the 1925 Geneva Protocol, had to be decoupled. Their joint classification became problematic during the Cold War, since most considered that the United States was openly using chemical weapons in Vietnam. Similarly, Britain itself was using chemical dispersants in Northern Ireland, and Egypt used chemical weapons in Yemen in 1967. If the use of chemical weapons became an accepted method of warfare, what would stop biological weapons from becoming acceptable as well if both remained subject to the same international covenant? This and other issues guided internal conversations regarding British policy in what became the 1972 Biological Weapons Convention, which effectively classified biological weapons as no-use-ever weapons and ended offensive research programs for the convention’s signatories, although this is almost precisely when the USSR began ramping up its covert, industrial-scaled Biopreparat. In the end, the United Kingdom’s actual effect on the convention in its final form was minimal, leaving her hopeful for credit of coauthorship. As Walker acknowledges, “‘Keeping the Union Flag associated with any emerging text would be an important consideration. Moreover, the UK should not be seen as following US reactions as one in a line of states echoing welcoming US statements,’ which is exactly what they do, again and again” (p. 76); and “‘There comes a time to stop banging one’s head against a brick wall” (p. 90); and “‘If the UK did not co-sponsor, then its role in the Convention’s elaboration would be lost from view. There were no other disarmament measures in sight with which the UK would be likely to be associated by name” (p. 93).

In the plethora of drafts of international treaties and agreements dealing with nuclear weapons, the story is similar. Walker demon-

strates that while Britain did have a major stake in the decisions made by the superpowers, the United Kingdom was so marginalized that all she could realistically expect was recognition for having done something—anything—with the hope that her interests would be served in the end. Walker notes British frustration with SALT I: “British officials throughout our period were concerned that UK interests would be marginalized by any wide-ranging bilateral (US/USSR) agreements” (p. 204). With regard to SALT II, he points out that “the first Soviet draft appeared in April and Kissinger was quick to share a copy with the UK. (This issue was under very close hold in Washington, so British access was indeed a privilege.)” (p. 251). While the United Kingdom did get most of what it needed for its nuclear weapons program—continued support from the United States in plutonium supply and assistance with warhead and missile technology—this had as much to do with American interests conveniently dovetailing with the needs of the United Kingdom as with British negotiating or policy choices. Indeed, Walker implicitly suggests that Britain’s voice in general disarmament during the Cold War was far removed from what was happening in Washington and Moscow.

There are, then, two noticeable weaknesses in the book. The first pertains to the role of scientific advisors in the United Kingdom, which is largely ignored outside of the eight-page Chapter 7. Scientists, the advice they offered, and the political power some were able to muster were incredibly important during this period, as Greg Herken amply demonstrates in *Cardinal Choices* (Oxford, 1992) and as others have recognized. If this was not the case in the United Kingdom as it was in the United States, a brief explanation as to why would be welcome. Second, Walker provides little deep analysis. His narratives of behind-the-scenes conversations in the United Kingdom are a welcome addition to the literature, but his thesis is confined to the importance of terms and their consequences or, as he rightly puts it, to the observation that “words matter” (p. 122) in international treaties, conventions, and diplomacy generally.

RICH HAMERLA

Audra J. Wolfe. *Competing with the Soviets: Science, Technology, and the State in Cold War America.* vii + 166 pp., app., index. Baltimore: Johns Hopkins University Press, 2013. \$19.95 (paper).

A useful way to think about Cold War science and technology is as another of the proxy wars that characterized this period. While not put in such blunt terms, this theme runs throughout Audra J. Wolfe's short and smart introduction to the history of Cold War science and technology, *Competing with the Soviets*. Her account pulls together a tremendous number of secondary sources, folding the complexities of this period into a broad overview that takes the reader through many familiar, and some less familiar, topics. No one will be surprised to see the birth of the atomic age, big science, the military-industrial complex, spies, and the space race covered. But, in an era where even such "innocent" sciences as ornithology fell within the compass of the military, Wolfe includes less anticipated topics such as the social sciences—she looks particularly at their role in theorizing "Third World" development and also U.S. domestic social policy—as tools for fighting the Cold War by proxy.

The United States is the center of attention here, and, given the brevity of the book, Wolfe is rightly unapologetic about this focus. This U.S.-centric account does, however, help to underline the markedly claustrophobic geography of the period, coupling it to the deep sense of paranoia, fear, and secrecy that pervaded many of the activities associated with Cold War science and technology. At several points in her book Wolfe contrasts this submerged world with a second picture of science, portrayed by some academics, policy makers, and the media as open, universal, and disinterested. For example, the space race was "as much about producing missiles and spy satellites as [it was] about creating new scientific knowledge. The pretense of civilian leadership gave American image-makers the possibility of having it both ways" (p. 5). Wolfe's emphasis is on complicity within the military-industrial (and academic) complex, but she does not ignore the emerging historiography of scientists as dissenters—particularly around nuclear issues and the Vietnam War. All of this material gives ample scope for those (such as myself) who are looking to use this introductory text as a teaching resource that opens up some larger themes: the moral responsibility or neutrality of scientists, professional autonomy and accountability, or the changing nature of the scientific vocation.

Although not, strictly speaking, a chronological account, *Competing with the Soviets* covers the entire Cold War, including, in the final chapters, the collapse of détente and the Second Cold War. Wolfe outlines the spreading separation of the military from campus life and the rise of

biotechnology alongside what Martin Kenney in 1986 termed the "university-industrial complex" (*Biotechnology: The University-Industrial Complex* [Yale, 1986]). Wolfe also includes a discussion of the Strategic Defense Initiative ("Star Wars") to illustrate continuities with the earlier Cold War; and discontinuity is illustrated with the example of biotechnology. She is keen to stress that this period did not simply witness the emergence of biotechnology as a new scientific and engineering paradigm. Instead, a new professional identity and ideology began to take shape and transform the university from this time. This is a familiar account, but it is presented clearly and succinctly in this introductory text; and, again, Wolfe provides wider material for discussing larger themes in history and social studies of science, particularly the questions of what science is for—and for whom.

Historians of science need little reminding that introductory books—particularly textbooks—are their own disciplinary markers. Wolfe's synthesis of Cold War academic study will provide a much-needed route into this topic for many undergraduate and more advanced courses. The book will also raise many questions about what else happened that is not covered—for example, how to understand the obsession with science and technology in popular culture during this period, or whether Cold War science was only about the Cold War, or what less U.S.-centric and nuclear-centric accounts of the Cold War might look like. These are not criticisms of *Competing with the Soviets* but, rather, examples of what this fluent and engagingly written overview is inviting us to ask next.

BRIAN BALMER

■ Sociology and Philosophy of Science

Dominique Pestre. *À contre-science: Politiques et savoirs des sociétés contemporaines.* 251 pp., bibl. Paris: Éditions du Seuil, 2013. €21 (paper).

Dominique Pestre, a French physicist and historian, has worked on the history of electromagnetism (especially on Louis Néel and Heinrich Hertz), on the development of CERN, and on the relationships between science and the military. In this book, he takes a broader view and seeks to illustrate how the sciences have transformed our social, political, and economic worlds—and vice versa—from the mid-nineteenth century to the present. Until now, this methodological perspective has mainly been applied to microstudies—for example, in the social studies of tech-