

# From secret bombs to hearts and minds

Audra J. Wolfe. *Competing with the Soviets: Science, Technology, and the State in Cold War America*, The Johns Hopkins University Press (2013). 176 pp., Hardback, ISBN: 9781421407692.

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Audra J. Wolfe's *Competing with the Soviets* is a good sign for scholarship on American science in the Cold War: the field is mature enough to warrant an introductory synthesis. And this particular synthesis is a pleasure to read. It is a trim, elegantly written, masterly, and accessible bundling of what has become, over the last twenty-five years, a big and complex literature. The book should serve multiple purposes and audiences: as a teaching text, a prolegomenon to deeper investigations of the literature (aided by a handy commentary on sources), and a smart summary for the graduate student facing general exams.

'The fundamental characteristic of Cold War science,' in Wolfe's judgment, 'is the central role that the scientific enterprise came to play in the maintenance of the nation-state' (6). The belief that America's global leadership would spring from superior science and technology found wide acceptance during the Cold War era, and a staggering array of natural and social sciences were conscripted in the effort. How to capture a bird's eye view of this complicated scene? Wolfe does so thematically and more or less chronologically, with individual chapters devoted to major topics of Cold War science. As she discusses in an opening chapter on atomic weaponry and secrecy, and a subsequent one on the military-industrial complex, the astounding success of the Second World War's crash programs carved deep ambiguities into the postwar political economy of science. Everyone agreed that the federal government would be the major patron of American science – but who would sign the paychecks? The answer came unambiguously when military dollars almost immediately overwhelmed all competitors, a situation that would only intensify in the coming years. The already blurry line between civilian and military funding, and basic and applied research, was increasingly smudged by the emergence of 'hybrid institutions' (as Wolfe calls them). These included think-tanks like the RAND Corporation, military-industrial-academic institutions like Johns Hopkins University's Applied Physics Laboratory, the Atomic Energy Commission's system of National Laboratories, and numerous others.

Three terrific chapters discuss the place of science in the wider American Cold War project – particularly after the Soviet launch of Sputnik mocked bland assumptions about the unchallenged preeminence of U.S. science. Wolfe claims 'ideological differences' (55) drove the Cold War, helping to explain the immense power that the image and prestige of science, and the spectacle of grandiose technological accomplishments, held within contemporaries'

mental universe. Economists and other modernization theorists dreamed up plans to win 'hearts and minds' and thwart poverty and disease (and socialist revolution), all by building up material infrastructure and education in less developed nations. At home, social scientists were asked to carry their expertise from the management of complex defense projects to Lyndon Johnson's Great Society initiatives, with decidedly ambiguous success. And in outer space, the world watched a technological competition between the superpowers culminate – and begin to disintegrate – in the Apollo 11 moon landing.

Disintegration was de rigueur after the late 1960s. Protesters attacked the presence of classified research in universities and Richard Nixon dismantled the President's Science Advisory Committee, once a symbol of science's post-Sputnik clout. Even the military was unsure about its pact with science, as the Pentagon's 'Project Hindsight' judged basic research to have yielded negligible advances in weapons technology. Wolfe rounds out her story with the paradoxes of the 1980s – the 'Cold War redux' that wasn't. Inflated defense budgets and Ronald Reagan's anticommunist perorations harkened back to the 1950s. But the cultural and economic shocks of the previous decade had rewritten the rules of the game. Now economic competitiveness seemed more urgent than military relevance; new patent legislation cleared the way for university-based commercial ventures, many in the emerging field of biotechnology. "[B]asic research itself could become a commodity through the patent process. Knowledge could be transformed into 'intellectual property'" (126).

Wolfe has done a marvelous job of X-raying the field, grounding the larger narrative with important case studies. Readers are still left asking questions about the field itself. Scholarly tastes diverge over whether the true subject matter of 'Cold War science' is the impact of the Cold War environment on science, or science's unique role in Cold War enterprises. Wolfe leans toward the latter, discarding an antique debate about whether the military 'distorted' the practice of American science; but her book ably reflects the ways in which recent scholarship tries to see both sides of the content/context coin. The task ahead lies in challenging and enriching – with new topics and novel periodization – the settled framework for interpreting American science in the Cold War. For novice and expert alike, Wolfe's beautifully presented guide is an excellent place to start.

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