H-Net Reviews
in the Humanities & Social Sciences

Michael S. Goodman. *Spying on The Nuclear Bear: Anglo-American Intelligence and The Soviet Bomb.* Stanford University Press, 2007. xv + 295 pp. $50.00 (cloth), ISBN 978-0-8047-5585-6.

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Published on H-Diplo (October, 2008)

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Shadows in the Nuclear Cave

For those of us suspecting that Western intelligence estimates of the Soviet Unionâs nuclear capabilities during the Cold War were based on a combination of off-the-wall numbers, wild guesses, and pure conjecture, Goodmanâs book, *Spying on the Nuclear Bear*, provides welcome reassurance: more often that not that was indeed the case. Based on meticulous research in the archives and private collections, and on the authorâs extensive interviews with those in the know, the book offers a close-up look at the operation of British (and to some extent, U. S.) atomic intelligence in the early years of the Cold War, some of its successes and, alas, its many obvious failures. More importantly, however, Goodman wonderfully demonstrates how, quite apart from the actual results of intelligence gathering, U.S.-U.K. cooperation in atomic intelligence served a host of other aims, none more important than bolstering the special relationship between London and Washington. In other words, there were some important benefits to atomic intelligence–just not in the sphere of atomic intelligence.

Perhaps I should not misread Goodman. While acknowledging persistent failures of U.K. atomic intelligence in predicting the progress of the Soviet nuclear weapons program, he argues that, given the circumstances, it was fairly effective. After all, given the difficulties of penetrating the Soviet Union–a police state with a strictly compartmentalized atomic program–it is not at all surprising that the intelligence experts in the United Kingdom were widely off the mark when it mattered. For example, they were unable to predict the first Soviet nuclear detonation, Joe-1 in 1949, or the Soviet progress in thermonuclear science, or in missile development. A meager list of successful intelligence operations included penetration of the Soviet uranium operations in Germany, sporadic data on nuclear-related industries in the Soviet Union, and the approximation of the Soviet stocks of plutonium. One should also not forget British successes, in cooperation with the Americans, in registering Soviet atomic explosions. Most of these intelligence coups provided plenty of information for a historical narrative of the Soviet nuclear program and much, much less for up-to-date analysis and policy recommendations.

There is no denying, however, that Western atomic intelligence services were remarkably capable in the remote detection of Soviet nuclear explosions. The book is full of fascinating details about some of these little-known monitoring programs, which entailed the operation a large number of stations around the world, regular air sampling, radio interception, and a host of other tricks. Just take the so-called Music program (p.167). The idea was to collect air samples around the world and to check them for the presence of Krypton-85, an artificial gas, which indicated the amount of plutonium production around the globe. By subtracting the known figures for plutonium production in the United Kingdom and the United States, the atomic intelligence people came up with the likely figure for the Soviet plutonium stocks. This is the place where my undergraduate students would comment: âthatâs cool!â Then we are told that the amount of plutonium in the Soviet stocks was actually quite irrelevant in estimating the Soviet Unionâs nuclear capabilities, because one could never know how they used it in the making of bombs. For this reason, the Music program, which probably cost thousands and thousands of pounds, came within a hair-width of being closed down but for the fact that it proved useful in advancing the U.K.-U.S. atomic partnership.

The analysis of the little-known politics of atomic intelligence is one of the stronger aspects of the book. Goodman shows that, at least for the United Kingdom, watching the ânuclear bearâ was a ploy for closer cooperation with the United States, all the more so once a series of espionage scandals cut the flow of technical information across the Atlantic. In a way, then, atomic intelligence helped strengthen the proverbial special relationship between London and Washington, quite irrespective of what the experts predicted or failed to predict. The author gives an interesting, if sometimes overly detailed, analysis of how the head of atomic intelligence in the United Kingdom's Secret Intelligence Service, Eric Welsh, fought off efforts by a rival, Director of Scientific Intelligence R. V. Jones, to swallow atomic intelligence on the excuse, among other things, that such a reform would spoil cooperation with the Americans (pp.132-133). My first reaction to this complicated story was: so what? My second reaction was: it is certainly interesting how bureaucratic politics, personalities, and various political agendas affected as sensitive an area as atomic intelligence.

One area which I wish the author developed a bit further is the connection between the U.K. assessments of Soviet nuclear capabilities and Soviet intentions in the early Cold War. In the conclusion Goodman argues that because atomic intelligence experts downplayed Soviet capabilities to wage a nuclear war at least until the late 1950s, policymakers, linking capabilities with intentions, perceived Soviet intentions in the late 1940s/early 1950s to be âfar less aggressiveâ than one would have thought (p. 215). Goodman makes no attempt to elaborate this point or to show how this assessment of Soviet capabilities and intentions squared with British policymaking vis-Ã -vis the Soviet Union in the early Cold War. The book is missing some of the essential analysis which would help us connect the history of British atomic intelligence with the bigger picture of the early years of the Cold War. Despite this interpretative shortcoming, the book is a welcome contribution to the study of history of intelligence. Full of technical detail and surprising insights, *Spying on the Nuclear Bear* tells the story behind the dry statistics of Western intelligence estimates of the Soviet nuclear program. It is a great story and it deserves to be told.

Citation: Sergey Radchenko. Review of Goodman, Michael S., *Spying on The Nuclear Bear: Anglo-American Intelligence and The Soviet Bomb.* H-Diplo, H-Net Reviews. October, 2008.

URL: http://www.h-net.org/reviews/showrev.php?id=22874