

**Ziegler, Charles A. and David Jacobson.** *Spying Without Spies: Origins of America's Secret Nuclear Surveillance System.* Westport, CT: Praeger, 1995.

Around the year 500 BC, Sun Tzu wrote, "to remain in ignorance of the enemy's conditions, simply because one grudges the outlay of a hundred ounces of silver in honors and emoluments, is the height of inhumanity."<sup>1</sup> This call from the distant past holds a deeper meaning in our more "modern" era, driven as it is by technology and ideological differences. Furthermore, in the shadow of nuclear and chemical/biological weapons, our ability to spy on our neighbors has taken on a new and much more important connotation. However, as the technology for destruction has increased, so has our ability to monitor the activities of other nations. This increased intelligence capability is the result of a complex process of development. Until recently, the method by which the United States was able to monitor other nations for their development of nuclear weapons has been sheltered from public scrutiny. Though modern capabilities are still highly classified, the origins of the extremely complex American Nuclear Surveillance System has finally been revealed, giving us a new perspective on the early Cold War years.

Charles A. Ziegler and David Jacobson have combined their considerable skills in the areas of social networks, physics and anthropology to break the silence on the origins of the American Nuclear Surveillance System in their new work, *Spying Without Spies: Origins of America's Secret Nuclear Surveillance System.* Ziegler and Jacobson have managed to trace the evolution of this system from its earliest roots in late 1944, with the development of radiological surveillance for the detection of the German nuclear program, through the incessant inter-service rivalry and financial battles of the late 1940s and up to the successful detection of the first Soviet bomb in August 1949. Their ability to manage this large and complex process of development in 242 pages (bibliography and index included) is very impressive. When combined with the skill with which they explain the highly technical issues of nuclear surveillance to the lay reader, this book presents a wealth of material in an easy to read and understand format suitable for the lay audiences.

Organized around a chronological study of nuclear surveillance, the first three chapters discuss the period starting from the end of the Second World War through the technical developments of 1945-46. This includes the development of the first nuclear intelligence group which was part of the Manhattan Project, the organizational turmoil that hampered the continuation of post-war nuclear intelligence gathering and the fateful Murray Hill Area project that led to the misconception that the United States would have a nuclear monopoly for at least ten to twenty years. (p. 24) Chapters four and five examine the quagmire of organizational development of the surveillance program. The remaining six chapters trace the technical and organizational (and inevitably financial) hurdles that had to be overcome by the detection of Joe-1, the first Soviet atomic weapon. Collectively, this work provides the reader with a window into both the complex process of creating an entirely technical means of gathering vital intelligence, and into the impact of technical information on early stages of the Cold War. For the historian, Ziegler and Jacobson have

bridged a large gap in historiography on not only the development of nuclear weapons, but the early stages of the Cold War as well.

Probably the two greatest limitations in this work revolve around the intelligence field. For obvious reasons, the current security restrictions serve to limit the scope of the work, though the authors have been able to reveal a great deal of information previously classified. It would be interesting to compare, for example, the system that detected the first Soviet atomic bomb with the system that monitored either the first Chinese atomic test or the first Soviet test of the hydrogen bomb. This would provide a good perspective for evaluating the early efforts and hopefully give a better understanding of how the intelligence product from a technical source was disseminated within the government. The second limitation to this work revolves around the human intelligence effort. Though mentioned in passing, there is no real feel for either the extent of American efforts to gain agents within the Soviet nuclear program or how successful they were. This would help to place the importance of the nuclear surveillance system into a sharper focus. It would also be interesting to compare this with Soviet espionage activities within the United States. Of course, security restrictions aside, this was beyond the original conception of the work. Despite these criticisms, this work provides a wealth of material (both technical and anecdotal in nature) on not only the technical developments that allowed the development of a remote sensing ability for atomic testing, but on the bureaucratic system that evolved to both support and hamper the monitoring system.

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### **Endnotes**

1. Sun Tzu, *The Art of War*, James Clavell ed., (New York: Dell, 1983), p. 77.