

1973

The Polaris System Development

Lawrence J. Korb

Follow this and additional works at: <https://digital-commons.usnwc.edu/nwc-review>

Recommended Citation

Korb, Lawrence J. (1973) "The Polaris System Development," *Naval War College Review*: Vol. 26 : No. 5 , Article 16.
Available at: <https://digital-commons.usnwc.edu/nwc-review/vol26/iss5/16>

This Book Review is brought to you for free and open access by the Journals at U.S. Naval War College Digital Commons. It has been accepted for inclusion in Naval War College Review by an authorized editor of U.S. Naval War College Digital Commons. For more information, please contact repository.inquiries@usnwc.edu.

volume deserve mention here. Unlike many of his predecessors, Mahon pays considerable attention to the "minor" frontier skirmishes in upper Canada as well as the more famous and well-documented battles on land and at sea. Secondly, the author has performed a great service to lay readers by explaining thoroughly, almost painfully, every technical term used in the text. Hence one finds simple and clear definitions of such terms as "weather gage," "tacking," and "abaft the beam" in the narrative of the naval battles.

Though destined, I fear, for the dusty bookshelves, this is a fine work and a significant contribution to historical knowledge.

CRAIG SYMONDS

Lieutenant (junior grade), U.S. Naval Reserve

Sapolsky, Harvey M. *The Polaris System Development*. Cambridge: Harvard University Press, 1972. 261p.

As the Navy prepares to embark upon its controversial \$15 billion Trident fleet ballistic submarine (FBM) program, it might be well to look at the development of the Polaris FBM system in order to see what lessons might be gleaned. For Polaris is not only the forerunner of Trident, but it is also the most successful weapon system development program in the history of the Department of Defense. Fortunately, the first exhaustive analysis of the Polaris program has recently been written by Harvey M. Sapolsky, a political scientist from MIT.

Relying not only on official Navy records but also conducting some 400 interviews with participants in the program, Sapolsky has produced an insightful and detailed case study of a spectacularly successful governmental program. So thorough is the author's study that its completion took almost as long as the Polaris program itself. Sapolsky began his initial research in May 1967, but the book was not published until

Sapolsky finds four causes for the success of the Polaris program. First, it was started at the right time, i.e., when technological opportunity and national needs were converging. Second, the program was managed by a group of brilliant, hard-driving men who were able to impart a sense of messianic zeal to their coworkers and subordinates. Third, the program's sponsors were skilled in the strategies of bureaucratic politics. Fourth, the program's managers used sound techniques.

The most valuable parts of *The Polaris System Development* are the discussions of two of the four reasons for the program's success, i.e., the bureaucratic political strategies and management techniques used by the program directors. During the decade of development and production of Polaris submarines and missiles, the directors employed four strategies: differentiation—developed a unique mission for Polaris and separated the program from the mainstream of naval activities; cooperation—brought potential critics into the program and implicated them in its activities; moderation—worked in unpretentious spaces and did not identify or compensate FBM crews in any way that would mark them as an elite corps; and managerial innovation—introduced techniques that appeared to indicate unique managerial competence, e.g., Program Evaluation and Review Technique, or PERT.

Although the PERT system was developed by the men who directed the Polaris program and although in some quarters PERT has become more famous than Polaris, they did not really use it to manage the Polaris program. Rather, the program directors used what might be described as simple, old-fashioned, straightforward, carrot and stick management techniques. PERT was a "lot of pizzaz" used as a protective veneer to impress outsiders, particularly in the Department of Defense (DOD) and the Congress, and to keep

90 NAVAL WAR COLLEGE REVIEW

these people from challenging the program's goals and methods.

In many ways this book is replete with irony. Although it is the definitive work on the successful production and development of a \$10 billion weapon system, it has been written not by a management expert or a systems analyst, but by a political scientist. Although the directions of this program became renowned for their managerial techniques, their success was due to their political acumen. If Sapolsky's work has any lesson for the Trident program, it would seem to be that just as war is too important to be left to the generals, weapon system development is too important to be left to the managers or technicians.

LAWRENCE J. KORB
U.S. Coast Guard Academy

Weigley, Russell F. *The American Way of War: a History of United States Military Strategy and Policy*. New York: Macmillan, 1973. 584p.

The subtitle of Russell Weigley's book may surprise many students of American military history for it has been generally believed that, at least prior to the onset of the cold war, no such thing as *American strategy* could be said to exist. Only three Americans are mentioned in Edward Mead Earle's classic *Makers of Modern Strategy*, and only one of them, Alfred T. Mahan, produced a systematic treatise on the subject. As Professor Weigley himself observes "throughout American history . . . the United States usually possessed no national strategy for the employment of the use of force or the threat of force to attain political ends. . . . The United States was not involved in international politics continuously enough or with enough consistency of purpose to permit the development of a coherent national strategy . . ."

he has found a consistent pattern running through most of American history which suggests a distinctive American approach to warfare: an "American Way of War." Professor Weigley has found this pattern not in the writings of theorists, of which there are few, but in the actions of American military leaders from George Washington and Winfield Scott to MacArthur and Marshall.

According to Professor Weigley the American Way of War has been to seek the complete destruction of the enemy's armed forces and his means of waging war. "Most American strategists," the author observes have been "strategists of annihilation." From Napoleon and his interpreters who, the author claims dominated the imagination of American military men in the 19th century, they derived the concept of the climactic battle resulting in the complete physical destruction of the enemy's army.

During the Civil War, Grant abandoned the practice of trying to win the war in a single decisive battle which commanders on both sides had repeatedly attempted, for a massive campaign of attrition designed to destroy the Confederate Armies. Nevertheless, the aim remained the same: the annihilation of the enemy. Having learned their lesson in annihilation well, American soldiers, Professor Weigley suggests, then proceeded to practice it with frightening literalness in their campaigns against the Indians.

Alfred Thayer Mahan, with his theories of seapower, and Gen. William Mitchell, with his ideas of airpower, both contributed in their way to the American concept of war: through annihilation. According to Mahan this would be accomplished through the destruction of the enemy's battle fleet in a great battle for "control of the seas"; according to Mitchell, through devastating bombing campaigns which would cripple the enemy's centers of production and destroy his will to resist.