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Analyzing Soviet Strategic Arms Decisions

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Spielmann, Karl F. *Analyzing Soviet Strategic Arms Decisions.* Boulder, Colo.: Westview Press, 1978. 184pp.

Few political-military topics are as important, yet poorly understood, as Soviet strategic arms behavior. A pioneering work that sought to demonstrate what could and could not be said about the Soviet arms decisionmaking process was the 1972 study by Mathew Gallagher and Karl Spielmann, *Soviet Decision-Making for Defense* (New York: Praeger). Among the more important conclusions of that study: Western misjudgments about Soviet military policy were less because of the absence of adequate information than the mistaken first assumption that Soviet and American decisionmaking practices and decisionmaker motivations were analogous.

The present study is, in a number of respects, an extension of the earlier Gallagher/Spielmann inquiry. It also provides a critique of prevailing paradigms of Soviet decisionmaking behavior and, like the 1972 work, calls for a broad, multiple analysis approach in conducting future case studies on Soviet defense policy. The principal novelty of the new Spielmann volume is the articulation of an alternative model for analyzing Soviet decisionmaking and the application of a "multiple approach analysis" to Soviet deployment decisions regarding the first Soviet ICBM.

The book is an outgrowth of a study undertaken as part of a project commissioned by the Historian, Office of the Secretary of Defense, on the history of U.S.-Soviet strategic arms competition. It consists of four short sections that deal, respectively, with a depiction of three approaches to the study of Soviet strategic arms decisionmaking, an examination of their general applicability to Soviet defense decisionmaking, a discussion of their relevance for assessing the action-reaction phenomenon in Soviet arms decisions, and a demonstration of their specific applicability in the analysis of the decisions regarding the first Soviet ICBM, the SS-6.

Two of the three approaches discussed by Spielmann are familiar ones: the "rational strategic actor" approach, which emphasizes a centralized, cost-benefit mode of decisionmaking, and the "pluralistic" approach, which combines the nonrational actor assumptions of Graham Allison's organizational process and bureaucratic politics models. Spielmann's discussion of the limitations of these two approaches is perceptive, if not particularly original. More intriguing is his argument about the need for a third: the "national leadership decisionmaking" approach, to bridge the gap between the pluralistic and rational strategic actor perspectives. The rationale for a third approach is to account for those decisionmaking situations in which a decisional outcome primarily reflects the personal preferences of the leadership, rather than either pluralistic pressures or strictly rational strategic calculations. As an example, Spielmann cites the hypothetical case of the Politburo leader who is in a position to act as the "quintessential rational strategic actor" on a particular strategic weapon system decision, but might allow his decision to be influenced by his personal preference for a specific service (based upon his earlier career affiliation) and other preferences he might have as a national leader (e.g., the implications for a pet agricultural program of a large production run on a new weapon system).

Although useful in directing attention to a number of questions about leadership perspectives and preferences that otherwise might be ignored, Spielmann's approach suffers from severe underspecification. It is defined principally in terms of what Allison's other models are not, and would appear not to satisfy Spielmann's own explicit criterion for a useful model—that it "provide a fair amount of guidance as to when and where it is most and least

likely to apply." Even after a demonstration of the "national leadership" approach as part of a three-pronged "multiple approach analysis" of the Soviet SS-6 program, one is impressed by Spielmann's virtuosity but somewhat at a loss about how to apply the approach oneself.

One of the telling points repeatedly made by Spielmann is the difficulty, given present research methods and materials, of reaching firm conclusions about Soviet strategic intentions. His emphasis on the need to pay greater attention to the personal preferences and perspectives of Soviet leaders might well be extended to call for much more systematic research on what the Soviets themselves have to say about strategic arms and military policy. In the absence of such data on Soviet perceptions, even the best of models will be of limited assistance in interpreting Soviet strategic arms behavior.

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Stockholm International Peace Research Institute. *Outer Space: Battlefield of the Future?* London: Taylor and Francis, 1978. 202pp.

Despite its catchpenny title there is little in this book on the lines of Major General Keegan's revelations on the great battle to be joined in space. It is a sober, perhaps too sober, attempt to describe what artificial earth satellites are capable of and how they are being used, in particular by the military.

At one level this book is very good indeed; a straight readthrough, ignoring the mathematics and the copious tables, but paying attention to the excellent, if occasionally rather small, diagrams will give the layman a useful basic background on satellites. It begins with a simple but clear explanation of orbital dynamics so that one can quickly grasp the capabilities and limitations of satellites, and for example realize that it is impossible for the Big Eye in the Sky to be omnipresent. The book goes on to describe the construction and use of reconnaissance/photographic, communications, navigation, meteorological and geodetic satellites. This is mostly factual and descriptive and contains much familiar material reprinted from the SIPRI yearbook, although there is some speculation both scientific and operational. Each section contains a description of appropriate nations' progress in the field and concludes with a table listing all satellites of each type launched as of the date of printing. The last two chapters are on hunter/killer satellites, FOBS and on general conclusions, and naturally contain much more speculation.

But rereading the book, one gets an uneven impression. Who is the mathematics aimed at? Some of it is derived from first principles, which anyone with reasonable numeracy can follow, but some equations are presented fully formed and some of these not in the way normally used by other workers in the field. One or two, I fear, are unsound and contain confusing misprints. On the operational side, too, faults can be found. For example, while it is agreed that three position lines are required for an acceptable navigation fix, the text gives the impression that a *Transit* fix depends on "sights" of three satellites simultaneously, whereas the *Transit* system works by the receiver computer integrating the relative position of one satellite during its 10 to 15 minute passage over the navigator's horizon. Further, the disadvantages of the *Transit* system are not brought out, e.g., the occasional gaps of 12 hours and the frequent gaps of 6 hours in coverage. Similarly when dealing with communications satellites, the problems arising from eclipsing, the power limitations on bandwidth for mobile earth terminals and the limited launch windows available are not developed. My U.S. Naval War College colleagues of 1974-76 also