



A DESPERATE PURSUIT OF PARITY

A review by Pavel Podvig

The Kremlin's Nuclear Sword: The Rise and Fall of Russia's Strategic Nuclear Forces

By Steven J. Zaloga

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292 pages; \$45.00

The history of strategic competition between the Soviet Union and the United States that shaped much of the second half of the last century could be described as a desperate attempt of the Soviet Union to match the technological, military, and political power of the United States against its strong determination not to let it happen. In the course of this competition both countries invested enormous amounts of effort and capital (financial as well as technological, scientific, and human) into building strategic nuclear arsenals that they hoped they would never use. In his new book, Steven Zaloga describes the Soviet side of the story, documenting development of the Soviet strategic forces and tracing their evolution from the post-World War II days to the end of the century.

The strength of the book is that Zaloga concentrates on development of military hardware—bombers, missiles, and submarines. In doing so, Zaloga uses his profound knowledge of technical issues as well as Soviet organizations that were involved in development of strategic weapons—design bureaus and military institutions. As the book convincingly shows, tough technical choices the Soviet designers had to make, institutional cultures, and personal and institutional rivalries played very important roles in shaping Soviet strategic weapon programs. More often than not, these factors proved stronger than any political or doctrinal considerations.

The book covers all key aspects of the Soviet strategic weapons program, with most attention paid to the Strategic Missile Force, which from the very early days was the strongest and most important component of the Soviet strategic triad. That does not mean, however, that the two other components, the strategic submarine force and the strategic aviation forces, are not discussed in considerable detail. In addition to this, Zaloga presents a very good description

of the evolution of the strategic defense and the strategic command and control system.

Zaloga begins with a short description of the Soviet efforts to produce its first nuclear bombs and quickly moves on to document development of systems that were necessary to deliver nuclear weapons to the U.S. territory. The book then pays considerable attention to probably the most interesting period in the strategic arms race in the late 1950s–late 1960s. Zaloga describes how progress in missile technologies and the logic of the arms race had led to profound changes in the U.S.-Soviet strategic relationship. By the end of the decade, the Soviet Union and the United States found themselves in a situation with thousands of nuclear weapons targeted at each other.

After it achieved numerical parity with the United States, the Soviet Union was confronted with a much more difficult task. Not only did it have to produce missiles, submarines, and bombers to sustain the parity, it had to build a mechanism that would allow it to be done efficiently. And this was where the Soviet Union had largely failed. In the description of the Soviet strategic development during the 1970s and the early 1980s, Zaloga presents compelling evidence of the Soviet Union's inability to efficiently use the little resources it had and to counter the U.S. technological advantages in the area of warfare. The most notorious, but by no means the only, example of the wastefulness of the Soviet program was the story of development of UR-100N (SS-19) and MR UR-100 (SS-17) missiles, described in the book in great detail. Unable and unwilling to make a choice between the two, the Soviet leadership ended up authorizing deployment of both systems.

At the end, however, the picture presented in the book convinces the reader that "the creation of the Soviet nuclear deterrent force was a remarkable technological achievement." As the book demonstrates, despite all problems and inefficiencies, "Soviet engineers had managed to create a force rivaling that of its far richer nemesis, the United States."

The book concludes by describing the transition of the nuclear forces to Russia that followed the dissolution of the Soviet Union and the most recent developments in the Russian strategic force. A set of appendices presents detailed technical characteristics of land-based and sea-based missiles, tables that show evolution of the numerical strength of the Soviet force, and a description of Russian designations and a table that lists them along with the Western ones.

Of course, there is only so much the book can cover. It has virtually no discussion of the Soviet nuclear weapons production complex or nuclear testing program and says very little about tactical nuclear weapons. The discussion of the impact that the U.S.-Soviet arms control negotiations had on the evolution of the Soviet strategic forces is also fairly brief.

The book has something to offer to every reader. For those who are new to the history of the Soviet strategic forces, it presents a detailed and accurate yet compact account of the main developments. Those who know the subject will find enough details and observations to make the book very valuable reading. The book is very well organized and well written. In discussing technical developments Zaloga gives enough details to satisfy a technically-minded reader, but never lets those confuse someone who does not know technical jargon. The result is a book that has a broad appeal and should be essential reading for those who work on technical and political aspects of arms control.