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**Intelligence Forecasts of Soviet
Intercontinental Attack Forces:
An Evaluation of the Record**

Summary

*Information available
as of 1 March 1989
was used in this report.*

The US Government's primary projections of Soviet intercontinental attack forces have been published annually in National Intelligence Estimates (NIEs). These projections have contained cases of both intelligence successes and failures.

During the early 1960s, the Intelligence Community took seriously Khrushchev's boast that ICBMs would be "turned out like sausages" and, in the absence of confirmation from overhead photography, substantially overestimated the number of ballistic missiles that would be deployed. After the first overhead imagery became available, few ICBMs were found to be deployed and the Intelligence Community's projections were scaled back accordingly. By then the Soviets had largely completed deployment of medium-range ballistic missiles opposite Europe and had solved the technical problems they had encountered with their early ICBMs. The Soviets were thus ready to begin a massive buildup in their ICBM force, which the NIEs published during the mid-1960s did not anticipate.

Once the magnitude of the Soviet buildup became clear, the NIEs depicted large uncertainties about the Soviet Union's ultimate strategic force levels. These uncertainties began to diminish after the Strategic Arms Limitation Talks (SALT) began. By 1971 the SALT ceiling on total numbers of strategic nuclear delivery vehicles (SNDVs), coupled with assumptions regarding Soviet willingness to remain within the agreed constraints, became the "governor" for SNDV force projections. Because SALT reduced uncertainty about the future, throughout the 1970s the Intelligence Community's projections of SALT-limited forces accurately reflected the number of SNDVs in the Soviet force.

With the acquisition of MIRV technology in the early 1970s, Soviet strategic forces began to expand rapidly in terms of the number of deployed RVs. The Intelligence Community predicted well in advance when the Soviets would field MIRVed ICBMs and in 1970 began to include in its projections estimates of the total number of weapons deployed on delivery vehicles. The high and low projections made from 1970 to 1977 successfully bracketed the actual number of nuclear weapons in the Soviet force. The accuracy of the record in the early 1970s was due to a combination of correct estimates of the numbers of MIRVs on ICBMs and

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of the rate at which these missiles would be deployed. In the mid-1970s, however, the accuracy of the overall record was fortuitous because it was the product of two offsetting errors:

- The projected number of RVs per missile deployed on submarine-launched ballistic missiles proved to be about half the number the Soviets deployed.
- The projected rate of modernization with new missiles carrying MIRVs was much greater than that which the Soviets actually achieved.

The rate of Soviet strategic force modernization has proved to be the most difficult aspect of Soviet strategic forces to project. For example, the figure shows the NIE projection made in 1975 for the year 1985. The Intelligence Community predicted that during this 10-year period over 90 percent of the delivery vehicles would be replaced. In reality, the Soviets replaced less than 60 percent of them. This tendency to substantially overestimate the rate of force modernization occurred in every NIE published from 1974 through 1986, and it was true for every projected force—whether it assumed high, moderate, or low levels of effort. The NIE published in 1985 projected that virtually the entire ICBM force would be replaced within 10 years. More than one-third of the projection period has passed, and so far only about 10 percent of the force is new.

The overestimates of force modernization have had two components. The date of initial operational capability (IOC) of a weapon system often was predicted to occur earlier than the actual date, and the rate of deployment was projected to be faster than it actually was. Of the 17 weapon systems that have been predicted to reach IOC since 1970, the Intelligence Community predicted that 10 would become operational earlier than they did, six were projected accurately, and one was projected to reach IOC later than it did. There are three reasons the projected IOC dates were often early:

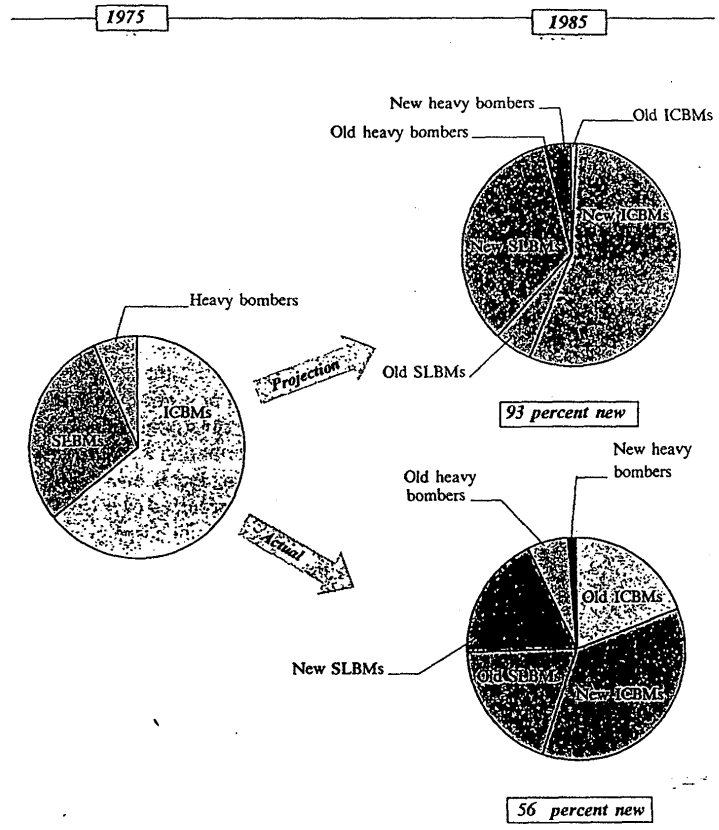
- The Intelligence Community did not correctly understand Soviet military requirements.
- The Soviets slowed some weapon programs to conform to arms control limits.
- Some programs had serious (and expensive) technical problems.

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Forecasting Soviet Force Modernization:
An Example of the Record



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Overestimates of deployment rates also contributed to the overall record on force modernization. Analysts used the rapid Soviet missile buildup in the late 1960s as a guide for future deployment rates, but that rate of deployment was never approached again. Examination of deployment rates also revealed that sometimes, when the follow-on to a weapon system was projected to arrive too soon after the original weapon system was fielded, the Intelligence Community anticipated the arrival of the follow-on by rapidly phasing in and phasing out the original weapon in the projections.

The lessons that emerge from this examination suggest several steps that could be adopted by the Intelligence Community to help improve the accuracy of projections in the future:

- *Institutionalize evaluations of the projections record by making them part of the annual Community product.* This is perhaps the simplest step to take, but, for it to succeed, the most recent projection must be evaluated in terms of all projections that were made over the last 10 years. Comparing last year's projection with this year's projection does not provide enough information to indicate trends in the forecasting record. Moreover, making incremental adjustments to a projection based upon changes that have occurred over the last year can mask fundamental trends and thereby prolong misperceptions.
- *Continue to develop measures for the projections to more sharply define the key changes that occur in the force.* The need to periodically evaluate and measure forces from a different perspective is a direct result of the changing technologies, functions, and capabilities embodied in military forces. Today the major Soviet weapon families—ICBMs and SLBMs—are reaching technological maturity. Although further improvements in accuracy and survivability are likely, if Soviet strategic delivery systems start to evolve in an entirely different direction—for example, by carrying advanced conventional munitions rather than nuclear payloads—the rate of modernization might no longer be a major focus of interest. Other measures of force capability would be needed to correctly depict force modernization.

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- *Continue to examine the full range of factors bearing on force developments, the assumptions regarding the direction of force developments, and the magnitude of the effect of such factors.* Evaluating the many competing factors that the Soviets weigh in setting their procurement goals has been a perennial problem in making the force projections. Crediting one factor as having a central influence on force projections, especially for an extended period of time, obscures the roles that other factors play. Economic difficulty is one example of a factor that was given little weight in the past, but has now become important. In the current situation in the USSR, where traditional approaches are being swept aside and Gorbachev's national security policy is the subject of intense debate, the relative weights of the factors that influence future forces need to be carefully scrutinized each time a new projection is developed.
- *Continue to look at the potential for discontinuities in the future—not only highlighting which weapon systems might change more often or to a greater degree than others, but also examining the implications of major economic and political events.* Discontinuities are often the most imponderable of all analytical problems associated with developing projections. Defining "low" and "high" force projections in terms of a range of specific political, economic, or military developments—instead of as representations of different levels of effort—would help anticipate the consequences of these potential developments. [REDACTED]

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