

THE EVOLVING SOVIET STRATEGIC THREAT

Benjamin S. Lambeth

August 1975

P-5493

The Rand Paper Series

Papers are issued by The Rand Corporation as a service to its professional staff. Their purpose is to facilitate the exchange of ideas among those who share the author's research interests; Papers are not reports prepared in fulfillment of Rand's contracts or grants. Views expressed in a Paper are the author's own, and are not necessarily shared by Rand or its research sponsors.

The Rand Corporation
Santa Monica, California 90406

THE EVOLVING SOVIET STRATEGIC THREAT

Benjamin S. Lambeth*

The Rand Corporation, Santa Monica, California

INTRODUCTION

During the three years since the signing of the SALT I accords in 1972, the Soviet Union has been engaged in an intensive strategic arms improvement program. Among other innovations, this program has included:

-- Development of four new ICBMs (the SS-16, SS-17, SS-18, and SS-19), each of which has demonstrated a MIRV delivery capability and one of which (the SS-16) shows indications of being intended for deployment in a land-mobile configuration as well.¹

-- An apparent determination by the Soviet Union to build up to the limits of the 1974 Vladivostok sub-ceiling of 1320 MIRVed missile launchers by replacing its entire SS-9 force and a large portion of its SS-11 component, respectively, with the new SS-18 and a combined force of SS-17 and SS-19 ICBMs.

-- Development and deployment of a new missile submarine in two variants (the DELTA class with 12 launch tubes and the DELTA-II class with an even larger number), along with a new SLBM, the SS-N-8, whose range of 4800 miles will allow patrolling well beyond most United States antisubmarine warfare (ASW) activities.

*This paper has been prepared for publication in the October 1975 issue of *Current History*.

-- Series production and deployment of the new BACKFIRE B medium bomber, a variable-geometry supersonic aircraft primarily designed for peripheral targeting operations, yet whose capabilities appear sufficient to pose an additional threat to the North American continent if one-way missions or inflight refueling are employed.

-- Development and testing of the SS-NX-13, a special-purpose SLBM of approximately 400 miles range apparently intended for anti-shiping operations, with clear threat implications for the United States aircraft carrier contingent.²

-- Vigorous research, development, and testing activities in the realm of advanced antiballistic missile technology.

-- Comprehensive upgrading of Soviet theater forces opposite NATO, including major increases in Soviet armor and motorized infantry strength, enhancement of the Soviet theater air defense posture through large-scale deployments of the SA-3 and SA-6 surface-to-air missiles, and extension of the Soviet air interdiction and ground attack capability through deployment of the new SU-19 FENCER A deep-penetration fighter-bomber, the first Soviet aircraft believed to have been designed expressly for this mission.³

In addition to these innovations in the hardware characteristics of the Soviet military posture, there have also been a number of parallel qualitative advances aimed at bolstering the combat effectiveness and flexibility of the Soviet forces. The new ICBMs now entering deployment, for example, are being installed in superhardened silos, suggesting an increased Soviet concern for enhancing their prelaunch survivability against a potential United States missile attack. Concurrently, they are being equipped with improved on-board guidance packages and high-beta reentry vehicles, providing improved accuracy capabilities with obvious

hard-target counterforce implications.⁴ In the realm of strategic communications and battle management capabilities, the Soviets have reportedly exerted great efforts to protect their national command authorities so as to enable undisrupted leadership and sustained central direction of Soviet strategic forces in the event of nuclear war.⁵ These and related activities add up to an intense and energetic force improvement program whose overall magnitude and breadth stand unprecedented in the history of Soviet-American strategic interaction. Taken together, they suggest that despite SALT and the atmospherics of détente, the Soviets are fully committed to acquiring the most technically advanced and quantitatively substantial force posture that their own resources and American tolerance will permit.

POSSIBLE MOTIVATIONS OF CURRENT SOVIET PROGRAMS

How this Soviet force build-up should be interpreted, and what underlying political and strategic goals it portends, are currently matters of deep concern and intense debate within the United States national security community. Some observers argue that the Soviet leadership is purposefully exploiting détente as a means of lulling the United States into a false sense of complacency and is using SALT merely as a convenient instrument for achieving its strategic ambitions within a legitimate framework of explicit American acceptance. Without passing final judgment on the argument, it must be conceded that those of this persuasion have a powerful case in their favor. The SALT I Interim Agreement, it may be recalled, stipulated a five-year quantitative "freeze" on each side's then-existing ICBM force, with no constraint on qualitative improvements within that agreed limit. The precise terms of the accord granted the Soviet Union a roughly 3 to 2

numerical advantage over the United States (with approximately 1600 Soviet ICBM launchers in place or under construction to the United States' 1054), a concession which the Nixon Administration then justified on the seemingly reasonable ground that the American ICBM posture included a large component of MIRVed missiles (550 MINUTEMAN III boosters with three reentry vehicles each) and other technological advantages--like high accuracy and reliability--which its Soviet counterpart lacked. The Interim Agreement further allowed both sides to expand their respective ICBM silo linear dimensions by up to 15 percent to accommodate larger follow-on boosters, yet placed a sublimit of around 300 on the number of "heavy" ICBMs (generally taken by the United States to mean missiles of the SS-9 class) either side could deploy, while failing, due to Soviet unwillingness, to settle on a clear definition of what minimum weight limit that category embraced.

The intent of the agreement on the American side was obviously to trade the prevailing Soviet ICBM numerical advantage for the assumed United States qualitative advantage and, at the same time, put a lid on any further deployment of SS-9 class ICBMs by the Soviet Union so as to preclude its eventually acquiring a substantial throw-weight ascendancy over the United States. The net effect of the agreement, however, and one that was heavily discounted in the United States at the time, was to grant the Soviet Union a large amount of head-room for future growth by capitalizing on the 15-percent silo expansion provision to replace its SS-11 force with a new missile of considerably greater payload capacity--a fact which became plainly and disturbingly clear when the Soviet Union began flight-testing its SS-17 and SS-19 ICBMs once the SALT I accord was formally on the books. Both of these missiles incorporate (even within the 15 percent limit) a throw-weight increment over the SS-11 of sufficient magnitude to make them "heavy" ICBMs for all practical purposes.⁶ Also, it seems obvious in retrospect that the

SS-17 and SS-19 were well along in their prototype development phase substantially before the SALT I Interim Agreement was signed. For these reasons, the conclusion is inescapable to skeptics of Soviet intentions and critics of the Interim Agreement that Moscow cynically manipulated its SALT negotiating stance in order to accommodate--and elicit formal American acceptance of--a massive ICBM force improvement program aimed at achieving a plausible degree of strategic advantage over the United States which the Soviet leadership had already committed itself to in any event quite irrespective of SALT and thoroughly uninformed by any serious interest in achieving meaningful arms control.

Opposing this view are other, less malign, interpretations of the current Soviet strategic program. On the more moderate side, some analysts maintain that the Soviet leadership is genuinely committed to détente and sees important political and economic benefits to be gained from it, yet has felt obligated to maintain a dynamic weapons development effort as a *quid pro quo* to the Soviet military for assuring its continued cooperation and support. Other observers regard the Soviet leadership as interested in achieving some measure of strategic advantage over the United States while simultaneously reaping the fruits of détente, yet uncommitted to any rigid and predetermined "master plan" and instead disposed to pursue their strategic programs opportunistically in an effort to see how much the traffic will bear.⁷ Still others argue that the Brezhnev regime has persistently labored under a real burden of perceived strategic inferiority to the United States and genuinely regards its current weapons development activity as a necessary final step toward acquiring both full-fledged strategic equality with the West and the legitimate status due the USSR as a self-respecting superpower. Finally, to round out this incomplete but exemplary catalogue of perspectives on the issue, there are those who maintain that the Soviet Union, no less than the United States, is essentially a large

socio-bureaucratic organism dominated by a pervasive military-industrial nexus whose research and production entities have naturally vested interests in perpetuating their existence, whose activities perennially operate in a state of high gear, and whose weapons acquisition process reflects a self-sustaining life of its own more than any outgrowth of rational and purposeful policy choice. As for the question of possible Soviet designs toward ultimately achieving decisive strategic superiority over the United States, most observers in the moderate camp tend to believe that Moscow's acceptance of the "equal aggregates" provision of the 1974 Vladivostok understanding (which allows each side 2400 strategic delivery vehicles--and a sub-limit of 1320 MIRVed missiles--with freedom to mix among ICBMs, SLBMs, and bombers) has had the effect of cancelling any significant advantage the USSR may otherwise have accrued from the 1972 Interim Agreement and guaranteeing that the United States and Soviet strategic nuclear force postures, however asymmetrical in their specific components, will reflect overall "essential equivalence."

Yet however much analysts may disagree about the nature of underlying Soviet force posture objectives (for which, after all, there exists no firm evidence to resolve the issue conclusively), there is one dominant feature of the emerging Soviet strategic capability that seems beyond reasonable doubt, and that is the fact that by any conventional standard it appears vastly "overdesigned" for the simple task of deterring an American attack on the Soviet homeland.⁸ Whether or not the Soviet Union is bent on acquiring a significant edge over the United States in the static measures of strategic power, and leaving aside the important question of what such an edge would confer on the Soviet Union in the way of coercive leverage against the United States in future crises, it is difficult to avoid concluding--based on a combined reading of enunciated Soviet military doctrine and an examination of the evolving

Soviet military posture--that the USSR is studiously attempting to develop the capability for fighting and winning a war against the United States and NATO, should deterrence ever fail, at all levels of the conflict spectrum from conventional theater warfare in Europe to full-blown intercontinental nuclear exchanges.

To say this is scarcely to imply that the Soviet leaders actually prefer war to peace, or to suggest that they regard nuclear deterrence as anything but the paramount objective of their national security planning. It is, however, to argue that Soviet political and military leaders regard deterrence as inherently less than foolproof, that they recognize the finite possibility that it could break down either by inadvertence or through a process of gradual crisis intensification, and that they accordingly see it as a transcendent necessity to prepare for such an eventuality, whatever the relative East-West strategic balance, with a view toward emerging with the best attainable political-military outcome in the event that lesser alternatives prove unavailing.

THE SOVIET DOCTRINAL IMAGE OF NUCLEAR WAR

Unlike the United States, which until recently has tended to hang the burden of its strategic planning almost exclusively on the peg of deterrence, the Soviet Union has traditionally espoused a military doctrine which explicitly admits the possibility of nuclear war and clearly sets forth a strategy of action for dealing with it.⁹ A principal premise of Soviet military thought, and one which has been expressed with almost ritual incantation in Soviet strategic writings throughout the past decade, is the neo-Clausewitzian conviction that war--even global thermonuclear war--is a supremely political act which must be purposefully orchestrated with a clear view toward the overriding political objectives of (a) assuring the continued survival of the Soviet state and (b) preserving Soviet power and interests to the maximum

extent feasible. Flowing from this premise is an abiding Soviet assumption that meaningful victory in nuclear war is indeed possible if the correct strategy is implemented and consistently followed.¹⁰ And that strategy, in the Soviet view, calls for timely preemption, seizure and maintenance of the initiative, and sustained offensive operations at high levels of intensity until the enemy's strategic capability is destroyed or his will to continue fighting is broken.¹¹

This Soviet strategic perspective applies in equal measure both to theater conflict against NATO forces in Central Europe and to the ultimate contingency of intercontinental nuclear warfare against the United States. In the case of a European theater conflict, the Soviets would doubtless prefer that the fighting remain conventional, and both Soviet doctrine and Soviet theater forces are configured for the eventuality of a war in the NATO Center Region solely employing nonnuclear weapons. This disposition to countenance restraint in war, however, is strictly limited to situations where the Soviet side is clearly on the offensive and in no immediate danger of losing the conventional land battle. Once the nuclear threshold is confronted, Soviet military doctrine unambiguously rejects any possibility of limitation and insists on the absolute necessity of massive preemptive nuclear strikes against the entire war-waging machinery of the adversary.¹² In theater warfare, it calls for concentrated air and missile strikes throughout the NATO arena aimed at quickly excising the United States and NATO nuclear attack capability, accompanied by a fast-moving combined-arms assault on the ground directed toward defeating NATO's armed forces, occupying critical portions of its territory, and enforcing its local defeat.

This principle of preemption and initiative applies with even greater urgency and forcefulness to the contingency of global strategic war against the United States. Soviet military writings during the past

decade have been replete with assertions that should an American attack against the Soviet homeland appear imminent, Soviet strategic forces would strike quickly with uncompromising massiveness so as to "break up" and "frustrate" the operation before it could be successfully launched. At this level of violence, moreover, Soviet military doctrine shows no interest whatever in any notion of limitation. While the United States has long contemplated various restrained targeting schemes as instruments of escalation control and intra-crisis bargaining, and is currently engaged intensively in the development of concepts and capabilities for selective nuclear operations in the event of a Soviet attack short of the spasm-war level, the Soviet Union continues to reject such ideas out of hand. Both the logic of Soviet military doctrine and the record of past Soviet crisis behavior suggest that Moscow's attitude toward nuclear war is instead akin to the age-old axiom that one does not hit a king in the face unless one is resolutely determined to kill him. In practical terms, this implies that in any nuclear crisis, the Soviets would be initially inclined toward a policy of conservatism, assiduously avoiding nuclear "experimentation" with demonstration attacks and other resolve-testing ploys which Soviet military leaders tend to regard as more appropriate to poker than to the serious business of war. It also implies, however, that they would move unhesitatingly to full-scale countermilitary operations against the United States--with no intervening half-measures against selected subsets of the American target array--once they became convinced that a major strategic war was inevitable. Such operations, were the Soviets to adhere to the letter of their military doctrine, would probably feature initially a massed and coordinated missile attack against all United States ICBM sites, alert bomber bases, and early warning facilities, closely followed by selective strikes against the American political-military command infrastructure and other war-supporting capabilities such as SLBM ports, airlift departure points, and satellite surveillance systems.

On the critical matter of how a nuclear war would be terminated, Soviet strategic writings and statements have conspicuously little to say. About the closest the Soviets have ever come to articulating any specific concept of victory has been to suggest occasionally that the wrenching dislocations levied by a preemptive nuclear attack would so thoroughly destroy the United States' capacity for organized strategic action that the war could be settled on terms favorable to the Soviet Union without the requirement of Soviet forces physically occupying American soil. This "theory" of victory, such as it is, doubtless reflects a measure of whistling in the dark on the part of the Soviet military and also suggests an implicit Soviet concession to the practical impossibility of actually carrying off a successful invasion of a transoceanic enemy like the United States. Nonetheless, it may also indicate a degree of genuine belief, however guarded, that if a Soviet preemptive attack succeeded in leaving the United States prostrate and the Soviet Union not only undamaged but also in possession of a large residual strategic force, the United States might opt for a diplomatic settlement rather than launch a spasmodic response with its surviving ICBMs and SLBMs which would only assure even greater destruction in reprisal.

This doctrinal perspective, to be sure, is largely the creation of professional Soviet military men, and we have no confident way of knowing to what extent it is shared by the Soviet political leaders who would actually bear the responsibility for making the critical decisions in a nuclear crisis. Also, like all doctrinal constructs, it is highly abstract and stylized in nature, and represents more a general expression of the prevailing Soviet military mind-set than a hard prediction of how the Soviets would actually behave on the unexplored and bewildering terrain of nuclear war. Certainly Soviet military doctrine imposes no *obligation* on the Soviet leadership to follow its edicts dogmatically.

Moreover, in view of the history of Soviet circumspection in past crises, it is not inconceivable that in any situation where Soviet doctrine was actually about to face its ultimate test, the Soviet leaders would have few qualms about discarding it in favor of real-time improvisation if it appeared to them that the doctrine was irrelevant to the problem at hand.

At the same time, however, the Soviet doctrinal image of nuclear war shows an impressive and growing degree of congruence with the emerging Soviet nuclear force posture and must, therefore, be taken seriously by United States strategic planners. During the 1960s, when the Soviet Union was still markedly inferior to the United States in the numbers and quality of its strategic weapons, Soviet military doctrine tended to appear more as a reflection of Soviet strategic desires than as a persuasive representation of actual Soviet force-application concepts. Yet with the ongoing deployment by the Soviet Union of its new generation of MIRVed ICBMs, and with the collateral bolstering of the Soviet theater-war capability opposite NATO, the Soviet force posture has clearly come to give real "teeth" to Soviet doctrine and, in the process, to impart to it a measure of credibility it formerly lacked.

SOVIET NUCLEAR OFFENSIVE CAPABILITIES

In the important realm of ICBM strength, the Soviet Union is now within reaching distance of acquiring both a credible first-strike disarming capability against the United States MINUTEMAN force and a reserve second-strike capability which could be withheld for intrawar deterrence and coercion. If the Soviet Union MIRVs its ICBM arsenal up to the full limit allowed by the Vladivostok understanding, it will succeed in acquiring an active warhead inventory of as many as 7800 armed reentry vehicles (RVs). This impending surfeit of Soviet RV

strength portends a Soviet hard-target attack capability of potentially great lethality against the 1054 aim points which comprise the United States ICBM launcher contingent. With their currently rather poor accuracies, these Soviet systems are not yet believed to possess the capability of credibly destroying the American ICBM force unless cross-targeting tactics and multiple-RV laydowns on each aim point are employed, an attack mode which faces great operational difficulties of timing and coordination and also is constrained by the peculiar feature of nuclear weapons phenomenology known as "fratricide."¹³ By the late 1970s or early 1980s, however, the Soviets are expected to achieve sufficient RV accuracies to allow them to circumvent these problems and achieve high single-shot kill probabilities against United States ICBM silos, even after those silos are upgraded to super-hardened status. Indeed, Defense Secretary Schlesinger has expressed concern that with expected Soviet improvements in accuracy, the Soviets will eventually be able to pose a serious threat to upgraded MINUTEMAN silos solely with a force of around 300 SS-18s, leaving the remaining 1000 SS-17s and SS-19s fully undepleted and available for a wide variety of supplementary targeting and coercive tasks.¹⁴

In SLBM capabilities, the Soviet Union is also making impressive strides. With the introduction of the new SS-N-8 missile with its 4800 mile range, the Soviets have begun to acquire what, for all practical purposes, is a sea-going ICBM which can be fired from great distances away from United States shores and thereby avoid American ASW capabilities where they are most heavily concentrated. Even the obsolescing SS-N-6 SLBM carried aboard the Soviet YANKEE-class nuclear submarine has continued capabilities against the United States, particularly against its alert bomber force if successfully launched close-in in a depressed trajectory mode to catch the aircraft on the ground with insufficient warning time to get airborne.¹⁵

The Soviet bomber force, easily forgotten or discounted in the current age of strategic missilery, also has an important operational capability against the United States in the event of a major war. The supersonic BACKFIRE B now entering the force, while believed to be principally intended for peripheral targeting missions against Europe and possibly China, poses a tangible threat to the continental United States as well and a highly credible one indeed if eventually integrated with a tanker fleet capable of providing in-flight refueling. Moreover, unlike the Soviet Union, whose extremely dense air defense network of fighter-interceptors and surface-to-air missiles confronts American strategic planners with a thorny (though not insurmountable) bomber penetration problem, the United States, with virtually no active air defense capability whatever, offers the Soviet Union almost a free ride if it should elect to employ its bomber force in an intercontinental attack role. Moreover, Soviet bombers attached to the Soviet naval air forces, in conjunction with the SS-NX-13 anti-shipping SLBM and the prospective Soviet ocean-surveillance satellite capability, could pose a serious challenge to United States surface naval forces like aircraft carriers (and possibly SLBM submarines as well) in a nuclear war.

THE EMERGING COMPLEXION OF SOVIET STRATEGIC POWER

The principal theme that emanates from this cursory overview of Soviet strategic capabilities is the unprecedented richness of the evolving Soviet force posture and the broad range of potential options it confers on the Soviet leadership for use in possible future confrontations. During the 1960s, despite the heavy counterforce orientation and war-waging emphasis of Soviet military doctrine, the Soviet Union possessed little more than a high-confidence "assured-destruction" retaliatory posture. It certainly had nothing even approaching the

variegated nuclear force structure that would actually have been required to implement its enunciated strategy. Today, that asymmetry between doctrine and capability has substantially begun to erode with the current and impending introduction of large quantities of MIRVed systems into the Soviet stable of weaponry, and the Soviet Union is now on the threshold, for the first time in its history, of acquiring a credible nuclear war-fighting capability.

In the United States, it has traditionally been characteristic to treat the strategic balance mechanistically, looking principally at comparative *numbers* of weapons rather than concentrating on the more important factor of the relative *strength* that those numbers provide. The Soviet style, by contrast, has tended to reject this arithmetical fixation on the static indicators of strategic power in favor of a perspective that focuses on the dynamic *capabilities* of nuclear forces in warfare. Although maintaining an image of parity with the United States in aggregate strategic forces is undeniably important to the Soviets for political and diplomatic reasons, the Soviet defense planning community tends to appear far more interested in the ability of those forces to fight successfully irrespective of the relative balance. Obviously, an important part of that ability is the possession of an adequate hardware base to implement prescribed strike operations, and the Soviets give every indication of vigorously working toward acquiring that indispensable wherewithal. But an even more important component, in the Soviet view, seems to be the mating of that hardware base with a rigorous and systematic strategy for force application. The strategy, for its part, has been a matter of record for years and is amply documented in the Western analytical literature. What is novel--and highly discomfiting to American strategic planners--is the current and belated development of a Soviet arsenal seemingly tailored to the strategy, a development which, aside from physically

enhancing the military underpinnings of Soviet power, suggests an interesting (if episodic) exception to the general axiom that Soviet military doctrine lags behind innovations in weapons technology.

One may, of course, fairly question whether this threat image outlined above represents anything more than merely one of a number of alternative possibilities. It is, after all, quite true that Soviet military doctrine serves many purposes other than prescribing "rules of engagement" for the Soviet armed forces in war. It also has an important function of bureaucratically rationalizing Soviet weapons system procurements in the highly competitive arena of Soviet economic resource allocations. It has an exhortative role of galvanizing the morale of the Soviet forces and imparting to them a sense of continued mission and purpose in an age of nuclear deterrence where the overriding imperative of Soviet survival is to avoid wars rather than to wage them. Finally, it has an important manipulative function of projecting a credible external image of Soviet military prowess and thereby enhancing the deterrent role and psychopolitical effect of Soviet strategic power in Western perceptions.¹⁶

Additionally, the emerging Soviet strategic arsenal is becoming sufficiently versatile and abundant to underwrite a whole range of specialized strategies and options beyond the massive preemption scenario espoused by declaratory Soviet military doctrine. Although the Soviets publicly continue to reject the concept of limited nuclear operations now being assimilated into United States strategic programs and plans, their force posture is progressively acquiring a plausible capability for conducting such operations. There is no *prima facie* reason, therefore, for dismissing out of hand the possibility that the Soviet leadership might give careful consideration to the idea of selective and restrained targeting in a gradually escalating crisis where blind adherence to the tenets of formal Soviet doctrine would seem inappropriate or dangerous.

If, however, the Soviets chose to follow the edicts of their declared military philosophy and proceeded with the sort of massive preemptive operations we have highlighted in the foregoing discussion, there is a disturbingly strong possibility that they could do so with devastating effectiveness. It has increasingly become an article of faith in many American arms control and defense intellectual circles that such Soviet operations would be doomed from the start (and hence ultimately deterred) by the fact that the United States would still be able to retain a surviving retaliatory force of sufficient size to inflict unendurable retributive harm on Soviet society. Yet the important question in a real conflict situation would not be whether the United States had the surviving *capability* to take such action, but whether its leadership, under the circumstances, would have the reason and resolve to do so. In the arcane and computerized world of abstract arsenal exchange modelling, it is all too easy for analysts to become fixated on the reductionist notion that strategy is simply a matter of comparative statistics, and to forget about the overwhelming power of the initiative and the enormous advantages that would potentially accrue to the side that struck first in nuclear war. The emerging Soviet nuclear force posture, if operationally mated with the concepts set forth in Soviet doctrine and actually unleashed, stands perilously close to comprising an unbeatable combination which can be contained only by a countervailing United States nuclear posture and strategy that provide reasonable assurance that the Soviet threat will never be implemented in the first place. It is a realization of this challenge, and an abiding determination to cope with it successfully, that currently underlie the dynamic changes now under way in American nuclear force structure design and strategic contingency planning.¹⁷

FOOTNOTES

1. These missiles comprise the fourth generation of ICBMs developed by the Soviet Union (the first represented by the SS-6 deployed in token numbers during the early 1960s, the second embracing the SS-7 and SS-8 fielded during the latter Khrushchev years, and the third including the SS-9, SS-11, and SS-13 which achieved major deployment status during the period of intensive build-up in the late 1960s). Each shows discernible evolutionary ties to pre-existing systems. The SS-18 is a follow-on to the SS-9 and has been test-flown with as many as 8 reentry vehicles. The SS-17 and SS-19 are generational offshoots of the SS-11 and have been tested with 4 and 6 reentry vehicles respectively. The SS-16 is a solid propellant missile intended to replace the SS-13. Although it has not been flown with MIRVs, it has demonstrated post-boost maneuvering activities that strongly suggest eventual MIRV applications. United States intelligence currently counts 10 SS-17s, 10 SS-18s, and 50 SS-19s in operationally deployed status. See Murrey Marder, "Schlesinger Sees Build-up in Soviet Arms," *The Washington Post*, June 21, 1975. For publicly released details on these new ICBMs, see also John W. R. Taylor, "Gallery of Soviet Aerospace Weapons," *Air Force Magazine*, March 1975, p. 73.
2. Michael Getler, "Massive Soviet Deployment of Atom Arms Foreseen," *The Washington Post*, November 14, 1974.
3. On Soviet conventional force improvements and tactics, see John Erickson, "Soviet Military Capabilities in Europe," and P. H. Vigor and C. N. Donnelly, "The Soviet Threat to Europe," *RUSI Defense Journal*, March 1975. An excellent compendium of Soviet and Warsaw Pact tactical airpower capabilities may be found in R. Meller, "Europe's New Generation of Combat Aircraft: Part I--The Increasing Threat," *International Defense Review*, No. 2, April 1975, pp. 175-186. Details on Soviet theater nuclear forces and strategies are presented in S. T. Cohen and W. C. Lyons, "A Comparison of U.S.--Allied and Soviet Tactical Nuclear Force Capabilities and Policies," *ORBIS*, Vol. XIX, No. 1, Spring 1975, pp. 72-92.
4. "Beta" is an engineering term used to describe the ballistic coefficient of a reentry vehicle. A high-beta RV is streamlined in the approximate shape of a sharpened pencil point, permitting high-speed penetration through the atmosphere, reduced susceptibility to wind shear and other atmospheric buffeting, and consequently improved delivery accuracy. Due to the intense heating generated by the high-speed reentry, such warheads place a considerable premium on advanced materials technology. Additionally, their slender configuration requires highly refined nuclear weapons packaging techniques. For both reasons, high-beta RVs are a clear indication of high technological sophistication. See Edgar Ulsamer, "The Soviet

Drive for Aerospace Superiority," *Air Force Magazine*, March 1975, p. 46. For an informative discussion of technical considerations bearing on the question of RV accuracy generally, see also Kosta Tsipis, "The Accuracy of Strategic Missiles," *Scientific American*, July 1975.

5. See Jack Anderson and Les Whitten, "Soviets Stage Mock A-Attack on U.S.," *The Washington Post*, May 1, 1975.
6. The throw-weight of the SS-17, for example, is reportedly estimated to be between three and five times that of the SS-11. *Air Force Magazine*, March 1975, p. 73.
7. A variation on this theme is the argument that the Soviet leadership, rather than studiously building its force posture toward some precisely defined goal with specific objectives in mind, is simply "banking" strategic power as a long-term investment against the possibility of some future contingency whose dimensions and character cannot now be foreseen. For an excellent presentation of this thesis, see Herbert Goldhamer, *The Soviet Union in a Period of Strategic Parity* (The Rand Corporation, R-889-PR, November 1971).
8. The current Defense Department posture statement has expressed this point succinctly: "The Soviet Union . . . now deploys a strategic nuclear capability far beyond anything required by the theories of minimum deterrence. Her peripheral attack forces are such as to be able to take under attack every significant target in Western Europe. Her central strategic systems are sufficiently large in number so that she could strike at a substantial number of military targets in the United States, and elsewhere in the world, and still withhold a very large force whose future use we would have to consider in responding." Secretary of Defense James R. Schlesinger, *Annual Defense Department Report, FY 1976*, February 5, 1975, p. II-2.
9. Typical of this Soviet view is the assertion of Colonel I. Sidelnikov that while East-West détente is indisputably a welcome and progressive force working in the interests of peace and international stability, "it would be a mistake to believe that the danger of war has been completely and definitively removed or that the threat of military clashes has been buried forever." "Peaceful Coexistence and National Security," *Krasnaia zvezda*, August 17, 1973. See also Colonel Ye. Rybkin's injunction that "since the possibility of the outbreak of a new war has not been eliminated, there is still a need to study and clarify all of its problems." "The Leninist Concept of War and the Present," *Kommunist vooruzhennykh sil*, No. 20, October 1973, p. 21.

10. With a tone of confidence rarely expressed in Western strategic pronouncements, Soviet Defense Minister Grechko has coldly asserted that in the event of a new world war, "we are firmly convinced that victory in this war would go to us." Report at the Fifth All-Army Conference of Party Organization Secretaries, *Krasnaia zvezda*, March 28, 1973.
11. A detailed presentation of publicly enunciated Soviet perspectives on the nature of a future nuclear war and the strategy to be followed in it may be found in Leon Gouré, Foy D. Kohler, and Mose L. Harvey, *The Role of Nuclear Forces in Current Soviet Strategy* (University of Miami: Center for Advanced International Studies, 1974).
12. For a revealing Soviet account of theater-warfare planning imperatives and operational strategies which sets forth in explicit detail this preemptive concept and the considerations that underlie it, see Colonel A. A. Sidorenko, *The Offensive*, translated by the U.S. Air Force (Washington: U.S. Government Printing Office, 1974).
13. "Fratricide" is a hypothesized consequence of two nuclear weapons arriving closely adjacent to one another in space and time, in which the blast wave, electromagnetic pulse, and surface ejecta produced by the weapon initially detonated effectively disable the second incoming warhead before it can be triggered.
14. *Air Force Magazine*, March 1975, p. 73.
15. Although the Soviets have reportedly not yet demonstrated depressed-trajectory flight testing of their SLBMs, it is believed to be easily within their technical capacity to do so. In this connection, it is interesting to note the recent Soviet deployment of a YANKEE-class missile submarine off its normal patrolling area in the mid-Atlantic and into around 350 miles off the New England coast. Although this unprecedented event is open to a wide variety of alternative interpretations, one may speculate that it was linked to a nascent and exploratory Soviet interest in the possible utility of employing the SS-N-6 for short-range attacks against United States bomber bases. (See "Soviet Missile Sub Detected Closer to U.S. Coast Than Ever Before," *The Los Angeles Times*, June 10, 1975.) Offsetting this possibility, however, is the fact that any such Soviet forward deployment of SLBM submarines *en masse* during a heated nuclear crisis would doubtless be noted in ample time by American ASW detection capabilities to permit the bomber force to get off the ground prior to the time the submarines were in a position to launch their missiles.

16. For further discussion of the diverse roles of Soviet doctrinal writings and pronouncements, see Benjamin S. Lambeth, "The Sources of Soviet Military Doctrine," in F. B. Horton, A. C. Rogerson, and E. L. Warner III (eds.), *Comparative Defense Policy* (Baltimore: Johns Hopkins University Press, 1974), pp. 200-216.
17. One of the best available descriptions and explanations of this highly controversial and widely misunderstood United States policy reorientation is offered in William R. Van Cleave and Roger W. Barnett, "Strategic Adaptability," *ORBIS*, Vol. XVIII, No. 3, Fall 1974, pp. 655-676.

