

Soviet Force Posture: Dilemmas and Directions

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William E. Odom

The Soviet General Staff has embarked upon a third revolution in military affairs in its history. The first revolution occurred in the 1920's, the second in the 1950's, and the third dates from the late 1970's and continues to this day. Each has had a major impact on Soviet economic, social, and scientific policies. Each has to date received priority over virtually all other aspects of public policy in the Soviet Union. This primacy of military affairs has become a powerful—perhaps the most powerful—constraint and determinant in Soviet political development.

Each of these revolutions has involved a major change in force development policy. Most states do not build military forces randomly, or just to be in fashion, or purely because of bureaucratic momentum. They build toward some mission, to meet some threat, in accordance with some doctrinal rationale—that is, with purpose. To speak of force development policy, then, is to speak of the rationale for developing specific kinds and sizes of forces. Why have tank divisions instead of infantry divisions? Why ICBM's, IRBM's, and ABM's? Why chemical weapons? And why a particular number of each? Why not more? Why not fewer?

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The Soviet Union has generally been very advanced in working out new rationales for force development. Its unclassified military literature is among the richest in the world, which is indicative of the existence of an even more extensive classified analysis. Even a casual familiarity with Soviet military force structure would convince a reader of Soviet military literature that there is a strong causal relationship between Soviet force development policy and actual Soviet force building. The kinds and numbers of forces cannot be wholly explained by theories positing "bureaucratic momentum" (according to which no one at the top appears able to control the military-industrial complex) or "action-reaction" (according to which the United States "acts" and the Soviet Union merely "reacts"). Someone with a plan does seem to be in charge, even if that someone does not always succeed in realizing the plan's goals. Traditionally, the Soviet General Staff has played the key role in planning Soviet force building, a role that has grown stronger with time.

Yet, despite all its previous force building successes, the General Staff today faces several new and troublesome challenges with consequences for nonmilitary areas of policy that are likely to be profound. It has succeeded in designing a doctrine and force structure for nuclear war at all levels—strategic, operational, and tactical—that the United States and its allies would find difficult to defeat. The whole Soviet economy has been giving priority to this task for well over two decades. Although the costs have been high, the yields probably appear worth the price as the Politburo assesses the change in the international correlation of forces over these decades. Nonetheless, like Sisyphus who was condemned in Hades to push a rock up a hill only to see it constantly

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roll back down, the Soviet General Staff appears to see the rock of its military labor rolling back to the bottom of the hill, presenting the Soviet military with a repetition of the same task: another long-term force building. Not only will this task be costly, but it will probably place nuclear weapons modernization into a secondary role as the competition with the West shifts into areas where the Soviet Union is less well prepared to compete. Moreover, the new force building may deprive Moscow of continued success in the political and propaganda aspects of arms control negotiations by raising questions about the ostensible Soviet rationale for such negotiations.

The fundamental cause of the new task is new technology, namely, microcircuitry, directed energy systems, and genetic engineering. But Soviet success in dealing with these new challenges can be significantly affected by Western policies. They can make it easier or harder for the Soviet General Staff to roll the rock up the hill again. However, as I shall argue below, the causal relations between some Western policies and Soviet force development are not what conventional wisdom has suggested; in fact, they are the reverse in some instances. For example, contrary to the view popular in the 1970's, expanded East-West trade is likely to hurt, not help, arms control. Certain kinds of arms control agreements could actually contribute to a more rapid buildup of weapons by helping Moscow out of its force building dilemmas; some aspects of military competition, particularly in the quality of weapons, can improve the prospects for arms control agreements as well as increase Western security.

To make the case for the centrality of new technologies in Soviet force development, as well as to gain some historical perspective on the current dilemmas facing the General Staff, it is necessary to review how the Soviets have handled major changes in force development policy on two previous occasions.

The First Military Revolution

To understand Soviet military problems, one must understand Soviet military purposes. At the highest level of generality, there is little reason not to take key aspects of open Soviet military policy at face value. How do the Soviets explain publicly the need for military forces? After all, in 1917 it had been Bolshevik policy to abolish all regular forces and to replace them with a workers' militia. In the Bolsheviks' view, if the army were distinct from the working class, it could be used as an instrument of suppression. However, if

worker and soldier became synonymous, the army could hardly be used against the working class.

This policy, to be sure, was quickly reversed in 1918 when civil war broke out in Russia. But when revolution did not spread to the rest of Europe following the Bolshevik victory in the civil war, the Bolsheviks quickly found a new rationale for their regular army or an "army of a new type," as they called it. The Red Army was necessary to defend the fledgling socialist republic against international imperialism. Thus, "socialism" would have to be preserved behind the shield of the Red Army until the international correlation of forces favored the socialist camp. And this shield would be needed until true peace came with the final and decisive victory of socialism over capitalism.¹

The Soviet definition of peace is unique and incompatible with Western definitions.² Defense, in this peculiar Soviet sense, means offense. Peace means the destruction of all nonsocialist states. If that can be accomplished without interstate wars, that is, through internal revolutions, so much the better. The term "coexistence" also does not mean what most people in the West would understand by it. In fact, peaceful coexistence in the Soviet definition is a continuation of the international class struggle by other than direct military means whenever possible. This policy was conceived in the early 1920's as a strategy for avoiding war with the West, which Lenin believed the young regime would lose. It meant building domestic industrial power to support a military establishment that could prevail in a showdown. It meant maintaining "correct" relations with the advanced capitalist states in order to derive the advantages of economic interaction with them. And it meant supporting revolutions and wars of national liberation in what today is called the Third World. In other words, peaceful coexistence was a strategy for irreconcilable struggle, political and military, with capitalism. Peaceful coexistence remains Soviet policy today.³

¹ In a speech printed in *Pravda* (Moscow) on Nov. 30, 1920, Lenin stated: "As long as capitalism and socialism exist, we cannot live in peace; in the end, one or the other will triumph. . . ."

² Paul Nitze, I was delighted to see, recently discussed this difference in definitions at some length. See his "Living with the Soviets," *Foreign Affairs* (New York), pp. 360-74.

³ The policy of peaceful coexistence between socialism and capitalism was proclaimed by Nikita Khrushchev and reiterated by his successors. *Scientific Communism, A Glossary* (published in Moscow in 1975) gives the following official explication of the term: "The CPSU . . . views peaceful coexistence as a form of class struggle developing in the political, economic, and ideological spheres on the international arena. By fighting against the outbreak of another world war, and organizing and leading the worker, national liberation, and all-democratic movement, the communists . . . pave the way to the triumph of socialism in the whole world."



Prominent commanders of the Bolshevik forces in the Russian civil war, from left to right: Semën Budënnny, Mikhail Frunze, and Kliment Voroshilov.

—SOVFOTO.

If one takes seriously this political rationale as providing the basis for Soviet military policy, then the force development of the Red Army in the 1920's and 1930's was remarkably logical and even predictable. Its development was guided by an extensive doctrinal review concerned primarily with the implications of new technologies for future war. Aviation, motorization, and chemical weapons had appeared in World War I. They portended, as Red Army theorists pointed out, a less clear distinction between the "front" and the "rear" in war. Bombing of cities, industrial plants, and military forces deep in the rear areas could be expected. Motorized forces could conduct much deeper operations. The new weapons would also require a well-trained officer corps and a literate manpower pool for military recruitment. Moreover, an adequate research and development (R&D) base and an advanced industrial capacity were imperative for the underdeveloped Soviet Union.

The doctrinal review did not go smoothly in the early 1920's. Debates on almost all aspects of military policy were acrimonious and conducted openly. Struggles within the leadership clique affected the review, particularly Leon Trotsky's removal in 1925 as Commissar of War. Mikhail Frunze, his successor, synthesized all views, capped the debate, and established the general directions of Soviet military doctrine in several short pamphlets, including *A Unified Military Doctrine and the Red Army* (1921) and *Front and Rear in Future War* (1925).⁴ The goals were not modest. The Soviet Union was committed to build military power that would ensure the eventual success of the Bolshevik revolution throughout the advanced industrialized world.

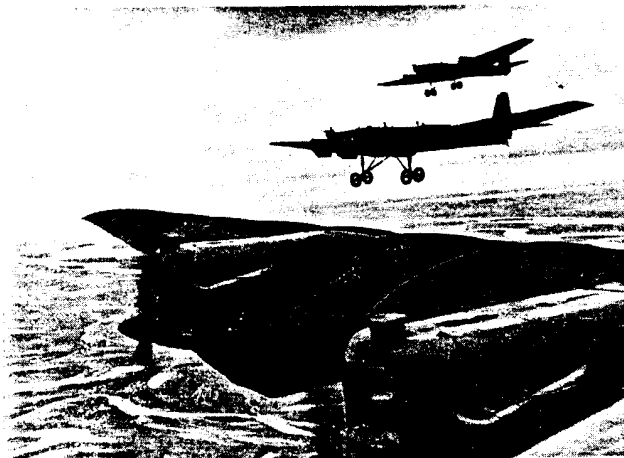
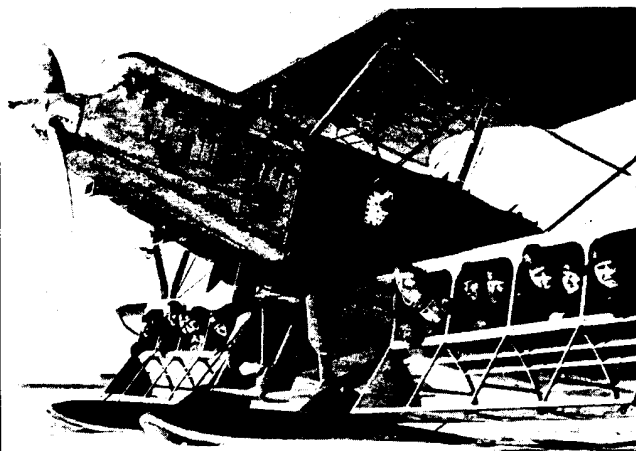
Soviet actions followed doctrine. The standing Red Army was reduced to about half a million soldiers in active units backed by a large militia force—a policy designed to save manpower in peacetime. The Red Army became a school for literacy. Officer education became a top priority, prompting the establishment of a general staff academy and a host of other measures.⁵ In active combat power, the Red Army was allowed to become quite weak. A foreign observer might have concluded that the Soviet regime was quietly disarming itself, a view that would have been as misleading about Soviet military policy as was the contemporary view that the New Economic Policy meant that the Bolsheviks were reintroducing a full-scale market economy. In reality, the Bolshevik leaders were taking a short-term risk in order to have a large, modern military force in the future.

By the mid-1930's, the regular forces were being expanded. New equipment was being produced by Soviet industry, and operational doctrine for deep operations had inspired not only the development of new tanks and airborne forces, but also a massive effort to build a modern aviation fleet. Before Stalin's purge of the Red Army's general officer corps in the late 1930's, there had accumulated a fairly large number of trained officers as a result of the military's education policy. But war came faster than Stalin had

⁴ M. V. Frunze, *Izbrannyye proizvedeniya* (Selected Works), Moscow. Voenizdat, 1957, pp. 4-21, 133-42.

⁵ Trotsky introduced "literacy" classes into the unit training programs and called the Red Army a school for literacy. Officers were encouraged to form "military scientific societies," to publish papers, and to compile their experiences from World War I and the civil war. A general staff college, later to be named the Frunze Academy, was founded for senior staff and command training. See A. Yovlev, "The Perfecting of Military Educational Institutions in 1921-28," *Voyenno-istoricheskiy zhurnal* (Moscow), No. 2, 1976, pp. 93-98; and Dmitri Fedotoff-White, *The Growth of the Red Army*, Princeton, NJ, Princeton University Press, 1944.

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Soviet responses to the post-World War I technological revolution in warfare, from top to bottom: an early Soviet aircraft for rapid delivery and parachuting of troops behind enemy lines; Soviet tanks lining up for a May Day parade in Moscow; Soviet bombers on their way to attacking Japanese positions in Manchuria.

—UPI/BETTMANN.

expected, and many aspects of the long-range military force development program were still incomplete. This should not, however, obscure the essential rationale that guided force development and the cluster of coherent policies that it produced. The policies were impressively perspicacious in retrospect.

Soviet military historians ascribe an orderly and "scientific" character to the process of analytical review in light of new technological, political, and economic realities, followed by doctrinal proclamations, a programmatic building of weapons and forces, and a working out of what they refer to as operational and tactical art. While they impute to this process a tidy causal chain of events that abuses the historical record in a number of ways, their writings do show both a series of actions and a record of policy intention that appear linked by more than chance correlation. In any event, this is the approach that Soviet military leaders have come to believe they should take with regard to the overall task of force development. In fact, they virtually repeated the process after World War II.

Second Military Revolution

In the late 1940's, the Soviet military found itself in a position analogous to what it had faced in the 1920's. The economy was largely destroyed by war, and the number of soldiers under arms was far too large to maintain. The educational level of all ranks was too low for modern technology. And three new technologies—nuclear weapons, rocketry, and cybernetics—appeared to affect fundamentally the nature of future war.

The Soviet response, perhaps not surprisingly, was also analogous to that of the 1920's. In the process of rebuilding the economy, the military sector was given the highest priority. Most of the active duty manpower was demobilized, bringing the force levels down to relatively small numbers. The system of military education was revamped, in order to bring about a long-term upgrading of commissioning schools and military academies. The nature of future war was redefined in light of the new technologies, and the General Staff set to work on changes in operations and tactics necessary to take these technologies into account. The flurry of activity in the late 1940's and throughout the 1950's gave birth to much of the present Soviet doctrine and force structure.

Assuming that the three technologies would change the nature of future war, Soviet theorists considered it essential that military doctrine come to grips with two central effects arising from them: the

large firepower that nuclear weapons bring to the battlefield, and the great range and accuracy in the delivery of that firepower made possible by rocketry and cybernetics.

Although a great deal has been written about Soviet doctrinal development in the 1950's and 1960's, most Western analysts tended to see Soviet doctrine as developing along lines similar to those evolving in the West in response to the same problems. However, as the Soviets themselves became more explicit and as the nature of Soviet weapons development became clearer, Western analysts began to uncover a quite different picture of that doctrinal evolution.⁶ The overall impression one gains from these later interpretations is that of a pragmatic Soviet effort to master the new weapons, to make them usable for strategic, operational, and in some instances even tactical objectives. This is not to say that there was a Soviet desire to use nuclear weapons. Rather, it is to say that the Soviets assumed that these weapons *might* be used. In that event, they wanted to know how to use them purposefully in support of war aims, rather than viscerally in a sort of hopeless retaliation or bluffing deterrence.

The post-World War II phase of Soviet force development policy was based on three key points. First, weapons of mass destruction require that one's own forces be dispersed in order to present few targets worthy of a nuclear strike. The Soviets solved this problem by echeloning their forces, that is, by spreading them out evenly to the rear so that no really large concentrations could be targeted.

Second, breaking through an enemy's defense requires a massing of maneuver forces. The solution to this problem was found in a high speed of attack, requiring the echeloned forces to move forward at 60 to 100 kilometers per day. This causes rapid accumulation of forces at the front, in close contact with the enemy's defense, and thereby permits breakthroughs and allows redispersion by deep operations into the enemy's rear.

Both of these techniques required the abandonment of a number of traditional principles of military



Marshal Vasiliy Sokolovskiy at a USSR Supreme Soviet meeting in March 1949.

—SOVFOTO.

art. In particular, the dispersion of forces made it impossible to mass them for a "main effort" in one sector. The high-speed offensive meant either breaking through where opportunities occurred or along an entire front. Placing a concentration of forces forward for a main effort would put them at risk under the enemy's tactical nuclear fire.

Third, this doctrine would remain empty theory until the equipment and weapons systems for implementing the doctrine were produced in sufficiently large numbers to make its implementation feasible. Thus, Marshal Vasiliy Sokolovskiy's 1962 volume, *Military Strategy*,⁷ was not a statement proclaiming a Soviet capability to implement this kind of combined arms offensive with nuclear weapons and rocketry support. Rather, it was a statement about the technical capabilities of the new weapons, their implications for future war, and some rough ideas about how the new problems that they presented could be resolved. So-

⁶ For more recent analysis of Soviet military doctrine, see John Erickson, "Soviet Military Operational Research: Methods and Objectives," *Strategic Review* (Washington, DC), No. 5, 1977, pp. 63-73; Peter Vigor, "Soviet Echeloning," *Military Review* (Fort Leavenworth, KS), August 1982, pp. 69-74; Amoretta Hoerber and Joseph Douglass, *Conventional War and Escalation: The Soviet View*, New York, Crane, Russak, 1981; Fritz Ermarth, "The US and the Strategic Balance," paper presented at a conference on US-Soviet Relations, Washington, DC, Mar. 18, 1983. A recent paper by Notra Trulock, III, and Daniel Goure, "Soviet Perspectives on Limited Nuclear Warfare," Washington, DC, Nov. 16-17, 1984, is notable for the sources it cites—classified Soviet materials that trace a much earlier Soviet interest in limited and discriminating use of nuclear weapons than is generally appreciated.

⁷ V. D. Sokolovskiy, *Voyennaya strategiya* (Military Strategy), Moscow, Voenizdat, 1962. The volume was published in English translation under the editorship of Harriet Fast Scott with the title *Soviet Military Strategy*, New York, Crane, Russak, 1975.

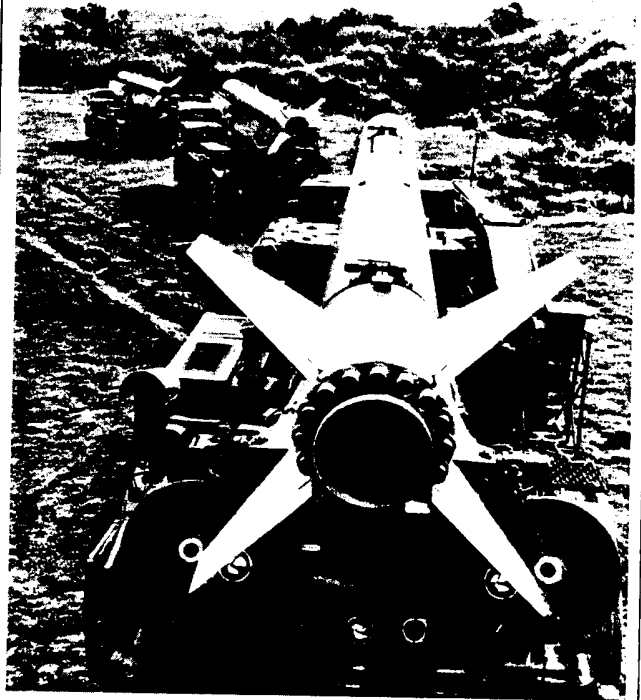
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kolovskiy and his collective of contributors were actually doing what Frunze had done in the mid-1920's. They were providing a synthesis of a plethora of classified discussion, debate, and analysis that had been conducted in military circles in the 1950's. They were distilling it into a text for officer general education about the major directions and problems for Soviet force development in the future.

If one looked at the Soviet force structure as it emerged in the 1970's, one saw a growing inventory of capabilities to implement the doctrine. Therefore, it is not surprising that more and more references appeared in open Soviet military literature to techniques for conducting war, nonnuclear and nuclear, at the tactical, operational, and even strategic levels.* Again, these references do not mean that the Soviets necessarily want to conduct war at the nuclear level. Rather, they indicate that the Soviets realized that such a war could actually be conducted, and that they were gaining the means to do it. Those means encompassed more than just large numbers of small-yield nuclear weapons. They include armor-protected infantry vehicles, artillery carriers, air defense carriers, engineering equipment, tactical rockets, and frontal aviation.

It is also important to note that strategic defense of Soviet territory, very much a part of the Soviet doctrine in Frunze's day, was not abandoned during the post-World War II period. It has remained a strong element in Soviet doctrine and practice. Civil defense, hardening of command and control, air defense, and ABM development have been generously supported. Whether or not these programs would be effective in an all-out war may be a matter of dispute in the West; but there is no doubt that the Soviet leadership has remained willing to commit significant resources to the pursuit of survivability of sufficient command and control, military forces, and industrial capacity and manpower to sustain a long and drawn-out campaign even if nuclear weapons were to be used massively. In other words, Soviet actions strongly suggest that the

* For older references to Soviet war-fighting capabilities, see the citations found in the sources in fn. 6. For quite recent examples, see M. A. Gareyev, *Frunze-voyennyi teoretik* (Frunze: Military Theoretician), Moscow, Voenizdat, 1985; and V. G. Reznichenko, Ed., *Taktika* (Tactics), Moscow, Voenizdat, 1984. Gareyev offers a fascinating critique of Sokolovskiy's *Military Strategy*, in which he argues that the work was essentially sound in the 1960's but that conditions of war have changed, making many of the traditional principles and concepts of military art, which Sokolovskiy had rejected, once again relevant. In other words, Gareyev is saying that earlier Soviet views on the extent to which nuclear weapons have changed the nature of war and, thus, of military art have proven to be overdrawn: Soviet doctrine is restoring many of the old principles. As my argument proceeds, the centrality of this latest change in doctrine will become apparent.



A column of Frog tactical missiles on maneuver in the Carpathian Military District in autumn 1984.

—TASS from SOVFOTO.

Soviets believe that they can evade the "assured destruction" imputed in the West to nuclear retaliatory forces.

Thus, in order to understand why we have witnessed in the last two or three decades the largest military buildup in history, we must grasp the doctrinal rationale behind it. The action-reaction theory, the bureaucratic momentum thesis, and other such explanations miss the critical rationale for the buildup. New technologies, military experience, and fundamental policy aims originating in the early years of the Bolshevik regime were its causes. Actions by the West represented constraints, not causes.

Direction of Third Military Revolution

If this is the historical record to date, what about the present dilemmas and future directions for Soviet force development? To answer this question, we must begin by looking for three kinds of evidence. First, are there any new technologies that promise to have major implications for the nature of future war? Second, is there any Soviet doctrinal writing on those implications? And, third, of course, are there weapons devel-

opments and organizational changes that have followed from the doctrinal changes?

There is now abundant evidence in all three categories. The new technologies are microcircuitry, directed energy systems (DES), and genetic engineering. Microcircuitry helps make possible what are called "smart weapons," that is, warheads with a variety of conventional energy munitions that are guided to targets with virtually no error, warheads that can seek a target without external assistance and can discriminate between tanks and trucks, and so on. Directed energy systems are also a part of the set of technologies required for these new families of weapons. They make ranging and guidance possible to a degree inconceivable in previous decades. Genetic engineering is less developed for weapons application, and precisely what it may yield in this area is far from clear. What is clear is that drugs for medicinal purposes could also be used for destructive purposes. New genes could be cloned for a variety of effects on the human body, from debilitating to fatal. The Soviets have made a large commitment of resources to genetic engineering, suggesting that the requirements of the Soviet General Staff affect policy in this area as well.

Interest by the Soviet military in the doctrinal implications of all three technologies dates back to the early 1970's, and possibly even earlier. When Marshal Nikolay Ogarkov was promoted to the position of chief of the General Staff in 1977, a number of other senior officers also moved into key positions, officers who were already noted for their writings about changing technologies and warfare. During the past five or six years, Soviet doctrinal writings have shown a concern for exploiting new weapons and technologies. Ogarkov himself published a notable booklet in 1982 that signaled a major shift in direction, although it did not represent a watershed of the kind seen in the 1950's.⁹ In this work, Ogarkov spelled out clearly the tasks for future force and doctrinal development, and he chided his fellow officers for being slow to exploit new technologies.

The focal point of this revision of Soviet doctrine is the "theater strategic operation." Ogarkov argues that wars before 1600 tended to be a series of regimental-sized engagements. In the 17th century they became a series of "brigade" operations, in the 18th century "division" operations, and by the close of that century, "army" operations, that is, battles involving simultane-

ous operations by two or more divisions, thus requiring an "army" headquarters and staff to coordinate and control the battle. That form of operation continued, in Ogarkov's judgment, through the 19th century until the Russo-Japanese war of 1904, when the Russian command controlled two armies simultaneously. This level of command in the Russian and Soviet lexicon is a "front," that is, two or more armies under one commander. By the end of World War II, the Soviet command structure was managing two "fronts" simultaneously as a single operation.

The task today and in the foreseeable future, Ogarkov asserts, is to master this multi-front operation or "theater strategic operation," to use the Soviet terminology.¹⁰ Geographically, it would involve an attack on a front 500 to 750 kilometers wide and proceed about 1,200 kilometers in offensive depth. The current standard Soviet doctrine for a "frontal operation" is 150 to 300 kilometers of frontage carried to a depth of 300 to 600 kilometers into the adversary's territory. Thus, two or three fronts conducting side-by-side offensive actions to at least twice the depth of a front would roughly cover an area 500 to 750 kilometers wide and reach an offensive depth of 1,200 kilometers.

Needless to say, the scale and speed of offensive operations envisioned by Ogarkov are unprecedented, and it is highly doubtful that the Soviet Armed Forces could execute a "theater strategic operation" of that magnitude today. Thus, Ogarkov's articulation of the direction of force development and doctrine should be seen as an aspiration, akin to Frunze's *Front and Rear in Future War* and Marshal Mikhail Tukhachevskiy's 1936 *Field Regulations* setting the depth of the offensive operation at 150 kilometers.¹¹ Both were stating goals in light of technological capabilities. The same was true of Sokolovskiy's 1962 volume. Although somewhat less radical, Ogarkov's little volume nonetheless sets forth incredibly demanding new offensive depths and frontages. Perhaps the geographical scale is less astonishing than the speed. There will be no pause between "frontal" operations within a "theater strategic operation," thus shortening by weeks the time estimated for reaching the 1,200-kilometer depth.¹²

The stimuli for this change in doctrine, of course, are the new technologies that permit, in theory, the communications, control, and accuracy of fire sup-

⁹ N. V. Ogarkov, *Vsegda v gotovnosti k zashchite otechestva* (Always in Readiness for Defense of the Fatherland) Moscow, Voenizdat, 1982.

¹⁰ Ibid., pp. 34-35.

¹¹ M. N. Tukhachevskiy, *Izbrannyye proizvedeniya* (Selected Works), 2 volumes. Moscow, Voenizdat, 1964.

¹² Ogarkov, op. cit., pp. 35, 36.

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port for operations conducted on such a scale and at such a tempo. Changes in Western military doctrine, as we shall see, are also a factor. Even without these stimuli, however, it is easy to see how a Soviet strategist would seek this speed and scale. For some time, he has had the theater fire support means to strike the "full depth" of the theater—to use Soviet terms—with nuclear means. Soviet short-range ballistic missiles and frontal aviation are sufficient to execute such a fire plan.¹³ The longer Soviet ground forces require to penetrate to the "full depth" of the theater, the less effective those deep theater missile and air attacks will be because the opposing NATO forces will have time to recover, reorganize, and meet the attack. It is a matter of "leaning into the artillery" which, military commanders of maneuver forces have always known, is imperative for a successful attack. That is, attacking infantry and tanks try to get as close as possible to friendly artillery falling on enemy positions so as to cover their assault. Heretofore, Soviet ground maneuver forces have not been able to "lean into" theater fire support to the "full depth" of the theater. In a sense, Ogarkov's "theater strategic operation" represents an attempt to achieve precisely this exploitation of deep targeting within the theater.

Although Ogarkov has not spoken as explicitly of strategic defense as he has of combined arms offensive operations, this should not be taken to indicate a lack of Soviet interest in the matter in the current revolution in military doctrine. The new technologies also create new possibilities for active defenses. The assumption by the General Staff that a "theater strategic operation" can be executed implies a belief in the possibility of riding out and degrading significantly Western nuclear retaliatory attacks. Moreover, this belief has inspired efforts in comprehensive strategic defense, a Soviet "strategic defense initiative" that appears to exceed the ABM limitations now in effect.¹⁴

A great deal of organizational change took place while Ogarkov was chief of the Soviet General Staff. Much of it appears to have been directed toward anticipating not just the so-called "revolution in military affairs" created by nuclear weapons but also the lesser revolution prompted by the latest technolo-



Then Chief of the General Staff Nikolay Ogarkov at a December 5, 1983, press conference in Moscow at which he explained the Soviet position at the Intermediate-Range Nuclear Force talks suspended the month before by a Soviet walk-out.

—Jean-Pierre Quittard/GAMMA-LIAISON.

gies. To get some idea of the significance of this additional shift in military affairs, we only need to read the 1984 interview with Marshal Ogarkov published in *Krasnaya Zvezda*. Conventional weapons are becoming so efficient and destructive, he said, that a global war in which nuclear weapons would not be used is a possibility.¹⁵

The trend in the West toward new, nonnuclear weapons has been under way for more than a decade. That trend, combined with shifts in US military doctrine, has clearly had a role in bringing about changes in Soviet operational doctrine. In the mid- and late 1970's, the US defense establishment began to grasp what the Sokolovskiy directions had begot in Soviet doctrine and force structure. NATO forces would be facing deeply echeloned Warsaw Pact forces that

¹³ See Stephen M. Meyer, "Soviet Theater Nuclear Forces," *Adelphi Papers*, Nos. 187 and 188, London, The International Institute for Strategic Studies, Winter 1983/84, for a remarkably thorough examination of Soviet capabilities.

¹⁴ For Soviet strategic defense and space programs, see *Soviet Military Power*, Washington, DC, US Government Printing Office, 1985, esp. pp. 46–52. For organizational changes in all types of Soviet divisions, see *ibid.* and also W. E. Odom, "Trends in the Balance of Military Power Between East and West," in *The Conduct of East-West Relations in the 1980s*, Part III, *Adelphi Papers*, No. 191, 1984, esp. pp. 19–20.

¹⁵ *Krasnaya Zvezda* (Moscow), May 9, 1984.

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would rapidly grind down NATO defenses through successive attacks at the forward edge of the battlefield. The first echelon of Warsaw Pact divisions, and even the second, might be defeated, but as succeeding echelons—in effect, the next army—arrived, the NATO defense would be facing fresh forces while its own were diminished through attrition. The issue for American planners was whether US forces could afford to let the deeply echeloned forces arrive at the front in such a phased fashion. US Army analyses showed that if the fight were carried through long-range targeting against the follow-on echelons as a "deep battle," while another battle occurred at the front, the follow-on forces would not arrive in good shape, and the estimated battle outcomes would begin to shift against them. That shift is a function of the effectiveness—accuracy and warhead power—of deep targeting. Tactical nuclear weapons could be used for these purposes, but the concept of echelonment was intended to make forces less vulnerable to nuclear attacks. In contrast, "smart" conventional warheads and bombs promise to be more efficient for such "deep attacks." Moreover, as new NATO ground force weapons—higher speed tanks, infantry fighting vehicles, and attack helicopters with precision guided weapons—are fielded in sufficient numbers, this change in tactics and operations promises to create opportunities for ground force counterattacks to tactical, and possibly even operational, depths.

As this new doctrine was taking inchoate shape for the US Army and Air Force under the name "AirLand Battle," it galvanized Soviet attention. The Soviet military had to consider whether this doctrine could destroy the synchronization of deep echelonment moving into battle that is necessary to keep the tempo and to exploit breakthroughs. If weapons and forces for AirLand Battle are fielded, current Soviet doctrine is unlikely to cope adequately without changes. This has provided the second set of stimuli for major revisions of Soviet doctrine, and it is thus not surprising that Soviet authors are openly pointing out flaws in Sokolovskiy's concepts of 1962.¹⁶

¹⁶ See Gareyev, op. cit., Gareyev specifically mentions choosing the direction of the main effort in the traditional fashion as needing to be revived. Massing and concentrating forces on a main axis, of course, is precisely what echelonment was designed to prevent. Massed forces were too vulnerable to a nuclear strike, in the Sokolovskiy view of war. Insofar as we understand the "operational maneuver group" concept, it amounts to concentrating forces on an axis of the main effort and moving them forward ahead of the dispersed echelons of follow-on forces (see Gareyev, pp. 239-40). Gareyev's critique of Sokolovskiy has a number of other implications that go beyond the argument in this article, but the thrust is the same: pre-nuclear concepts of military art cannot be dismissed in the wholesale fashion dictated by Sokolovskiy's volume.

One such change had received wide attention in defense circles in Europe and the United States: the so-called Operational Maneuver Group.¹⁷ It is a concept for committing the second echelon forces across the front much earlier and much deeper. In other words, the scheme seems to be to mass forward earlier to avoid a US "deep attack" and to carry a Soviet "deep attack" into NATO's rear. While attractive in theory, this concept puts even greater stress on command and control, synchronization of movements, fire support, air support, and logistics. At the same time, it may offer earlier and more vulnerable targets for the opponent. The forward massing of forces on an axis of the main effort, implicit in the "operational maneuver group" concept is precisely what the Sokolovskiy doctrine of echelonment was designed to prevent.¹⁸ The Operational Maneuver Group seems to be a return to traditional offensive doctrine but on a larger scale and at a faster pace. It is, of course, a part of Ogarkov's larger concept, the "theater strategic operation." It should be understood as one technique in such an operation for getting maneuver forces deeper and sooner to "lean into" the long-range supporting fire.

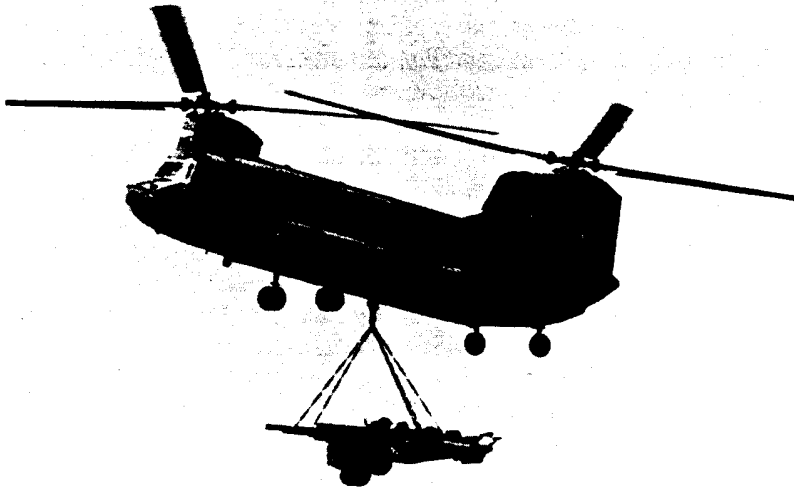
Although the Soviet General Staff has defined fairly well the directions for future force development, taking into account both technological change and Western doctrine and forces, it still faces a number of dilemmas in attempting to realize these goals. First, it is already evident that the Soviets recognize the shortcomings in the doctrine that had guided 20 years of force development and officer training. Now, the "theater strategic operation" concept places even greater demands on the Soviet officer corps, demands that probably exceed its already impressive education and training achievements in the postwar decades. This bold and unparalleled concept of operations will undoubtedly require considerable improvements in command and staff training. Is the officer education system up to another dramatic qualitative upgrading after having just gone through perhaps the greatest one in both Russian and Soviet history?

A second dilemma is whether the Soviet scientific and technological base can support the exploitation of the new triad of technologies for military applica-

¹⁷ C. W. Donnelly, "The Soviet Operational Maneuver Group: A New Challenge for NATO," *Military Review*, March 1983, pp. 43-60.

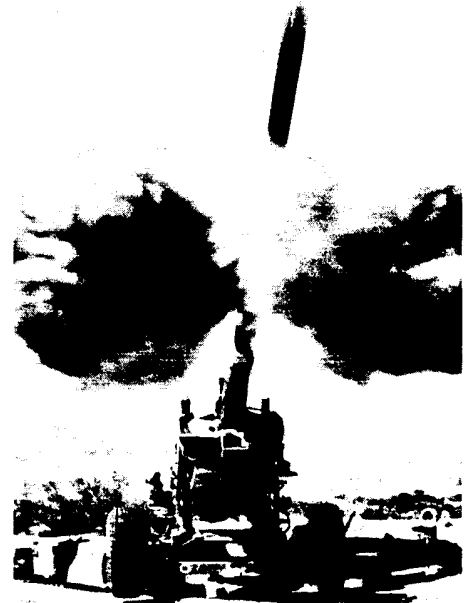
¹⁸ Gareyev, op. cit., esp. pp. 240-44. Gareyev's revision of Sokolovskiy is an explicit confirmation of my argument about the nature of the most recent changes in Soviet doctrine. A return to more traditional principles of military art—even in the age of nuclear weapons—is, Gareyev says, essential. As a colonel-general, doctor of military science, and professor, Gareyev writes with considerable authority. His book, which was tied in with the commemoration of Frunze's 100th birthday, can be taken as representing the present official line of military doctrine.

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Advanced US combat equipment in operation, clockwise from top left: (1) a US Army CH-47D transporting an M198 howitzer; (2) a Ground Locator Laser Designator for fire control; (3) firing of a 155mm Copperhead projectile from the howitzer; (4) the projectile honing in on the target tank; and (5) destruction of the target.

—US Army photos.



tions. Or will it simply bog down under the demands placed on it by the military? The answer to this question is not yet clear, perhaps not even to the Soviet leadership. The 1960's and 1970's placed heavy demands on Soviet research and development capabilities, which were met in no small part by exploiting East-West economic interaction. What Soviet scientists could not develop, they usually could count on the KGB to buy or steal from the West. Today the acquisition of Western technologies is both more difficult and more necessary because of the increasing complexity of new weapons. A Soviet T-62 tank is remarkably simple compared to a T-72 or a T-80 tank to which computers, laser equipment, and more advanced metallurgical construction have been added. In rocketry, aviation, and command and control, the applied technologies are much more costly and complex to develop and involve many more ancillary technologies and products that must be developed, borrowed, or stolen from abroad.

The weapons for the future, that is, those that are highly dependent on the new technologies—microcircuitry and directed energy—can in all probability not be developed in the USSR without extensive access to Western economies and R&D communities. The "smart weapons," or precision guided munitions, which Soviet military analysts see as changing the nature of war, rely on a variety of innovations in the use of these new technologies. Most of these innovations are being made in the West, and moving them into serial production is not easy, even for Western firms. Although espionage may give the USSR access to the new technologies, only extensive cooperative relations with Western firms that have applied them in mass production will allow the USSR to achieve a respectable indigenous production capacity. Moreover, dependence on Western sources of supply, for example on high-grade silicon, is likely to grow as the USSR develops its own production programs.

Third, can the Soviet economy handle the new production demands? This is really a twofold question. Can the economy meet both qualitative and quantitative requirements for the anticipated force development and modernization? Again, as in the case of the S&T base, the requirements of the 1970's were easier to meet. Future requirements will place higher per unit costs on industry, and the quality will have to be much higher for many items. According to the dictates of Soviet military science, new technologies cannot have a significant impact on doctrine until sufficient quantities of new weapons are available.

All three of these dilemmas must seem cruel to the Soviet leaders. After a 20-year struggle to get ahead

with forces and a doctrine for nuclear weapons and rocketry, they find themselves confronted with a new and analogous struggle to stay ahead. In many categories of forces they have achieved a clear edge. Yet, if NATO now proceeds with modernization programs that lead to fielding many systems with the new technologies, those leads may well vanish.

In Leonid Brezhnev's last years and under Yuriy Andropov's general secretaryship, it seemed that the Soviet leadership had committed itself fully to undertake yet another major modernization effort, yet another 20-year program.¹⁹ The doctrinal modifications were set forth, and there is as yet no sign that they have been discarded. The rate at which modernization will go forward, however, may well be in question. We will not know this for some time, and the answer will depend to a significant degree on Western policies. Trade policy, arms control policy, and force development policy in the United States and NATO will either complicate these dilemmas for the Soviet General Staff or ease them somewhat. Since conventional assumptions about the causal nexus in each of these policy areas are open to question, some elaboration of this point is essential.

Role of Western Policies

Since 1980 many analysts in the West have been suggesting that US policies were forcing Moscow to review its basic foreign policy premises and to revise significantly its commitment to détente. However, an assessment of Soviet gains from the détente period and the lack of attractive policy alternatives led me to conclude that while détente might offer less today to the Soviets than in the 1970's, it would still be advantageous for the USSR.²⁰ For one thing, the confluence of Soviet economic needs and a changing political climate in Europe has made it unprofitable for the USSR to continue to outdo the hard-line US policy. For another, the dilemmas in force development policy have made it necessary for the Soviet leadership to revive as much East-West trade as possible. Without this trade, the Soviet Union will have neither the S&T

¹⁹ While neither was more explicit than offering the usual public statements about providing the Soviet Armed Forces with all that they need, the clearest action implying Brezhnev's commitment came with the decision in 1975 to meet economic planning dilemmas by reducing "investment" instead of defense or consumer goods. Andropov did not alter this priority for defense even as he tried to shift resources to free up bottlenecks in energy and transportation. See Myron Rush, "Guns over Growth in Soviet Policy," *International Security* (Cambridge, MA), Winter 1982/83, pp. 167-79.

²⁰ William E. Odom, "Choice and Change in Soviet Politics," *Problems of Communism* (Washington, DC), May-June 1983, pp. 1-21.

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base nor the industrial capacity for its preferred force development path.

Détente in the 1970's facilitated Soviet force development through arms control agreements and the arms control process. SALT I did two important things for the Soviet Union. First, it ratified a large Soviet advantage in a number of strategic systems. Second, it closed off US strategic defense programs, giving the Soviets time to catch up in ABM technology. It thus permitted the General Staff not to have to choose between a mix of ICBM and ABM programs and allowed for the accelerated buildup of the ICBM force without having to fear that the United States would deploy ABM's. The Soviets took advantage of the situation to stay well ahead in ICBM's and to catch up and actually deploy the one ABM site around Moscow permitted by the 1972 ABM treaty.

Two American programs, the MX missile and the B-1 bomber, have both run afoul not because of technical limits in the SALT treaty, but because of congressional opposition to the programs generated in part by the political disputes between proponents and opponents of the SALT process and in part by debates over practicability. In the case of ABM, the United States has not deployed even the one site permitted by the treaty. Yet now, as the Soviet General Staff faces a second postwar modernization program of enormous dimensions, it sees a reviving US interest in strategic missile defense. The Soviet Union's decision in late 1984 to return to the arms negotiations was to be expected, and the primary Soviet goal will remain to defeat the US interest in ballistic-missile and space-based defenses as effectively as it had defeated ABM in 1972.²¹

Another factor, Western force development policy, can work either of two ways. If NATO does not go ahead with developing and fielding significant numbers of the more advanced conventional weapons, the degradation that the Soviets anticipate in their combined arms doctrine of the 1970's would not occur. If, on the other hand, NATO fields impressive numbers of the weapons, the nuclear issue, heretofore the center of arms control attention, would increasingly be pushed into a secondary place. This trend has been under way for some time. The megatonnage of the US arsenal has been decreasing since the 1960's as the accuracy in delivery systems in-

creased. Now, as the Soviet General Staff sees it, further technological changes could make nuclear weapons unattractive for military purposes.

There is a certain irony in seeing military force developers being more effective than arms control negotiators in reducing the explosive potential of nuclear stockpiles. There is even greater irony in seeing military force developers, through their efforts to make nuclear weapons practical for tactical and operational use, become proponents of more limited and controlled use and perhaps even nonuse of nuclear weapons. The ultimate irony, of course, would be if the West were to make arms control concessions of a kind that would facilitate the modernization of Soviet military forces while denying NATO forces such modernization.

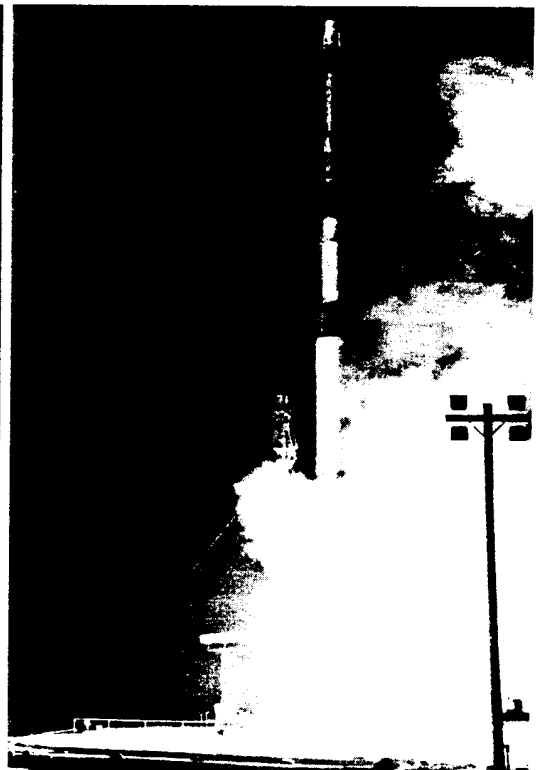
Conclusion

Three major propositions arise from this analysis. Although they might be obvious, they are worth restating:

There is a direct relationship between arms control and trade control. For reasons not altogether clear, there has been a widespread belief among Western analysts that expanded West-East trade would encourage the sort of political change in the USSR that would generate Soviet interest in effective arms control and even arms reductions. While there is little historical evidence to support this view, there is massive evidence in both Russian and Soviet history to refute it. Military imperatives have governed much of Russian economic policy at least since the time of Peter the Great, the tsar who called money the "artery of war." In the Soviet period, as has been indicated above, the same has been true even though the ideological rationale was different. Young Soviet Russia in the 1920's feared economic isolation from the West as much as anything else. By concluding the treaties of Rapallo (1922) and Berlin (1926) with Weimar Germany, Moscow avoided a Western coordinated trade policy.²² Moreover, the Red Army was able to enlist large German credits and technical assistance in the three new military technological areas of the 1920's. The Soviet aviation industry, motor and tank construction, and chemical weapons all depended centrally on

²¹ Criticisms of the Strategic Defense Initiative have been appearing almost daily in the Soviet media since its announcement by President Ronald Reagan. For some examples, see A. Bovin in *Izvestiya* (Moscow), June 18, 1985, and the article in *Krasnaya Zvezda*, Mar. 8, 1985, attributed to F. Aleksandrov.

²² Harvey L. Dyck, *Weimar Germany and Soviet Russia 1926-1933*. New York, Columbia University Press, 1966, pp. 50-63. This monograph, based on German Foreign Ministry documents, sounds surprisingly contemporary in the context of East-West trade and arms control.



A test launch of a US ballistic missile defense rocket on May 28, 1983, from Kwajalein in the Marshall Islands.

—US Army photos.

German aid. Subsequently, in World War II, the Soviet T-34 tank was considered to be the best.

The infusion of technology from defeated Germany in the aftermath of World War II gave Soviet military industry a needed boost, but that boost had begun to run down by the early 1960's. Within the decade, Western trade and credit expansion were helping to support the new Soviet military modernization. In the 1970's, the expansion became accelerated.

It may be, as many critics insist, that it is impossible to achieve a fully coordinated Western trade policy or even a narrow Western embargo on strategic technology exports. If this is true, then it means that the West can expect both a quantitative and a qualitative arms race for the indefinite future. However, a trade policy that merely slowed down the diffusion of technology and credits to the Soviet Union could have a significant effect. The trade control/arms control connection is a reality whether or not this is recognized by proponents of arms control and proponents of extensive East-West trade.²³

²³ See Office of the Undersecretary of Defense for Policy, *Assessing the Effect of Technology Transfer on U.S./Western Security*, Washington, DC, Department of Defense, February 1985.

A qualitative arms competition between the US and the USSR is likely to make the use of nuclear weapons both less attractive militarily and less probable. The record to date suggests that the qualitative competition between the superpowers is already having this effect. As Samuel Huntington pointed out many years ago, qualitative arms races have tended to be substitutes for war; by comparison, quantitative arms races have tended to lead to war.²⁴ The point is clear, although it is at odds with contemporary conventional wisdom: some kinds of arms control are not good, even if they are effective in restraining competition. The Strategic Defense Initiative, as well as many of the US Army and the Air Force precision guided munitions and target acquisition systems, would seem to fall into the category of competition that helps to avoid war, not lead to war.

The connection between arms control and arms development is primarily a political rather than a technical matter, a form of political competition. The past decade of arms control experience is a compelling re-

²⁴ Samuel Huntington, "Arms Races: Prerequisites and Results," in Carl J. Friedrich and Seymour E. Harris, Eds., *Public Policy, Yearbooks*, Vol. 8, Cambridge, MA, Harvard University Press, 1958, pp. 41-80.

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minder of this proposition. It is difficult to imagine that the present force levels would be higher than they are even if there had been no SALT treaties in the 1970's, and it is possible that without SALT the Soviet military edge in some categories of forces would not be as great. (It is probable that Soviet ICBM's would be less numerous and the Soviet ABM system technically less advanced.) This need not have occurred. The fault is not so much with arms control as with illusions that an essentially political matter like the East-West military balance can be depoliticized through arms control negotiations. The Western inclination to change the nuclear weapons issue from a political into a technical matter is at the root of the problem. If the West could control this tendency, the chances for successful arms control would be improved. Both the Mutual and Balanced Force Reduction (MBFR) and the Intermediate-Range Nuclear Forces (INF) negotiations are examples of effective Western competition in arms control. Both sets of talks have helped to maintain NATO force levels or redress adverse trends, given Soviet intransigence on arms reductions. In both cases, the West understood Soviet force developments and gave military capabilities first place in designing Western arms control positions. In most other arms talks in the past, the West let technical factors take precedence over military and political realities.

In spite of this, the West has new prospects for success. The USSR has another force modernization task before it, one that will be very costly to execute. New technologies more than Western military policies have created this task. Yet, this gives the West a new opportunity to redress the NATO-Warsaw Pact military balance significantly. Changes in US land warfare

doctrine are concerned with ways to exploit new kinds of nonnuclear weapons. To make the doctrine effective, NATO has to field a modicum of the new weapons systems and show that it can employ them effectively. At the same time, this opportunity could escape if NATO fails to connect the doctrine rationally to its arms control and trade control policies.

It may appear to some that the West too is condemned to the fate of Sisyphus, destined to respond to military buildup after military buildup. In one respect that is true. No single strategy or weapons system will provide security indefinitely. Security is maintained through continuous efforts, frequent reviews, periodic changes in doctrine and strategies, and rhythmic acquisition of weapons and forces using new technologies. Security cannot be bought cheaply, and there are no panaceas to be had, not even in nuclear forces capabilities. There are, however, more effective and less effective approaches to building security for the West. The present juncture, understood from the dynamic perspective of past and potential Soviet force development, seems to offer rare and genuine opportunities for the West to acquire security more effectively. The West can make the Sisyphean task for the Soviet General Staff much heavier and its own task relatively lighter by understanding the rhythm of the competition and by exerting itself in ways that shape the competition. Most important, however, is that the competition be shaped into "a substitute for war," rather than "a prelude to war." The West cannot escape the military competition, but it can complete in ways that make war less likely.