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Soviet Force Development and Nuclear Arms Reductions

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Advances in deployed and projected technologies over the past decade have forced Soviet military planners to reevaluate their views on the character of any future war in Europe against NATO. This reevaluation has centered not only on whether a future war will be nuclear or conventional, but also on the effects of technology on the relationship between offensive and defensive combat capabilities. The 1970s saw indications that Soviet military doctrine was being revised at least partially in response to technology and its resultant operational effects on how future wars will be fought. Soviet military writings make it clear that measures to offset NATO force improvements are being evaluated and implemented.

Future War—Nuclear or Conventional?

During the 1960s, the dominant Soviet view concerning the nature of any military conflict involving the superpowers was that it would be nuclear. Conflicts might begin with a short conventional phase but would rapidly develop into strategic nuclear exchanges. This view is most commonly associated with Marshal V. D. Sokolovskii's book *Military Strategy* and was widely accepted by both the Soviet military and political leadership. But as early as 1973, Colonel General N. A. Lomov, in his book *The Revolution in Military Affairs*, voiced the position that future wars would retain their previously assessed overall nuclear character, but with a conventional option: "Effectiveness of nuclear weapons holds first place; however, nuclear weapons will never totally supplant conventional

weapons. Instead, conventional and nuclear weapons complement each other in their employment."[1]

The extent of the shift away from the nuclear orientation of Soviet military doctrine can be seen in a speech by Leonid Brezhnev delivered at Tula in 1977. Brezhnev referred to a "conventional option" in which a war could be fought without either side resorting to the use of nuclear weapons. This conventional option indicated a change in the thinking of the Soviet political and military leadership concerning the course of a future war in Europe and the limitations resulting from an overreliance on nuclear weapons. This view coincided with Soviet conventional force modernization efforts and perhaps provided that process with additional impetus.

Numerous statements on the conventional option appeared in Soviet military writings in the early 1980s. They indicated that the rapid technological advances in NATO's conventional weaponry were being given considerable attention in Soviet military circles. In 1980, Zhilin and Bruel, editors of the book *Military Policies of the Imperialist Bloc*, referred to NATO's renewed emphasis on conventional defense and cited NATO sources on the possibility of a "total conventional war" in Europe and "technological leaps" leading to "new conventional weapons that match nuclear ones in destructive power."[2]

Evidence of the increasing role of conventional forces in Soviet military thinking also came from Minister of Defense D. F. Ustinov. In July 1982, he declared that "in the training of the armed forces, ever greater attention will now be paid to the task of preventing any military conflict from developing into a nuclear war."[3]

In the same year, Marshal N. V. Ogarkov, then Chief of the Soviet General Staff, cited "significant qualitative upgrading of conventional means and methods of armed combat" in NATO forces, particularly in the deployment of improved conventional munitions to strike attacking fire support elements and second-echelon forces (Assault Breaker), and improved antitank weapons to engage assault echelons. He described their impact as "a profound and revolutionary shift in military affairs."[4] Other high-level Soviet military writers cited Western sources in reinforcing Ogarkov's conclusions, stating that improved conventional means "have brought military technology to the threshold of a real revolution in the sphere of conventional arms."[5]

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Colonel General M. A. Gareyeev, a leading Soviet military theoretician and a Deputy Minister of Defense, summarized the seriousness with which Soviet military planners viewed recent advances in NATO conventional weaponry in an article published in the *Military Historical Journal* in 1982: "We may now speak of a turning point in the development of military science . . . especially with the appearance in NATO countries of new types of precision conventional weapons."[6]

Another prominent Soviet military theoretician, Lieutenant General M. M. Kir'yan, addressed in a longer work the increasing effects of technology on the nature of future wars and the more prominent role that conventional weapons would play in modern warfare. He cautioned that the Soviet force modernization process would have to be governed by the "possibility of conducting military operations with the use of conventional weapons only under conditions of a constant threat of the enemy resorting to weapons of mass destruction,"[7] a reference to NATO's nuclear trip-wire. Kir'yan concluded, "The preeminence of one type of weapon to the detriment of others cannot be allowed," indicating his commitment to the idea of a Soviet "flexible response."

In 1984, Gareyeev signaled the complete acceptance of the conventional option and its incorporation in Soviet military doctrine. He asserted that while the Soviet Union had to continue to prepare for all eventualities, increasing attention had to be paid to the possible advantages of improved nonnuclear forces: "In NATO armies there has been a rapid process of modernizing conventional weapons [and] the development of highly accurate guided weapons, which, in terms of effectiveness, are close to low-yield nuclear weapons."

Relegating to the past the excessive nuclear orientation of Soviet military thought, Gareyeev referred to massive stockpiles of nuclear weapons which had "reached such limits that their massed employment can entail catastrophic consequences for both sides."[8] Marshal Ogarkov seconded this conclusion, indicating a growing Soviet perception of the decreasing role of nuclear weapons in future warfare: "Further expansion of nuclear arsenals is senseless."[9] Ogarkov, it should be noted, did not condemn existing nuclear weapon stockpiles or even their expansion on moral or humanitarian principles. Rather, he pragmatically approached the issue of nuclear weapons as a military strategist concerned with the impact of recent technological developments on his country's military doctrine and the Soviet army's operational and tactical concepts.

The evolution of Soviet attitudes toward conventional and away from nuclear forces can also be seen more recently in General Secretary Gorbachev's January 1986 proposal for total nuclear disarmament. The centerpiece of Gorbachev's plan is complete nuclear disarmament by the year 2000, coinciding with the date set for completion of his economic plan to revitalize the Soviet industrial/technological base. Nuclear disarmament

is to be accomplished in three stages. The first stage, on which the basis for agreement was reached by the superpowers in September of this year, calls for the elimination of intermediate-range ballistic missiles from Europe—the "zero-zero option." The second stage, to be completed in the mid-1990s, calls for the elimination of tactical nuclear weapons. This is in consonance with previous Soviet positions regarding removal of tactical nuclear weapons from Europe. Such sweeping nuclear weapon reduction proposals imply a growing appreciation for the strategic possibilities of non-nuclear forces. Present Soviet military and political leaders appear to acknowledge that upgrading their non-nuclear forces is consistent with two emerging possibilities as the nuclear threshold is eliminated: first, enhancing the credibility of the implied threat of using conventional forces in Europe; and second, on failing to achieve the political goals through bluff, conducting military operations without having concerns for the NATO nuclear trip-wire leading to a strategic nuclear exchange.

Offense vs. Defense—The Effect of Technology

The apparent Soviet preoccupation with the impact of technology on combat capabilities is closely linked to the Soviets' historical experiences. In the major modern wars (excepting Afghanistan, which is neither major nor modern) that both Imperial Russia and the Soviet Union have fought, their opponents either have won or, in losing, have inflicted heavy damage and casualties. In these cases, despite numerical superiority, the Russian armies were hard-pressed because their enemies enjoyed a significant technological advantage. Numerical superiority and a preparedness to absorb large personnel and materiel losses have historically been the Russian (and Soviet) counter to a technologically superior opponent.

The concern expressed by senior Soviet military leaders over conventional warfare options and equipment is not limited solely to new technologies and weapons, however. It may also reflect concern within military circles over the effects that such weapons and technologies could have on the basic tenets of Soviet military doctrine, the principles of mass and mobility, and the fundamental relationship between offensive and defensive capabilities, namely, ability to mass and deliver firepower. While Ogarkov has stated that Soviet military doctrine is defensive in nature, it is only true in the broad sense of defending the nation. In reality, the overall thrust of Soviet military doctrine, extending to strategy, operational art, and tactics, indicates more than a tacit acceptance of the classical concepts of the use or threatened use of military forces to achieve national objectives. It is clearly offensive: "Maneuver and primarily offensive forms of battle will predominate with military operations taking place over tremendous expanses."[10]

The recent Soviet conventional force modernization effort, which increased in momentum in the 1970s, illustrates a continuation of the course set by Soviet military doctrine as early as the 1920s. It has been directed at providing the forces necessary to conduct the "deep battle" concept envisioned for use by Soviet forces on future battlefields.

"Deep battle" remains the cornerstone of contemporary Soviet operational art. It is based on the writings of such classical Soviet military theoreticians as Isserson, Triandafillov, and Tukachevsky, and it was fully outlined in the Field Service Regulations of 1929. These regulations centered on expected improvements offered by extensive mechanization in the Red Army and the concept of "battle in depth." The theory involves an attempt to destroy enemy defenses in one continuous and rapid offensive operation:

> When conducting deep operations, there are two missions. First, destroy the enemy defensive line with a combined infantry, armor, artillery, and air strike . . . second, exploit this tactical success by continuing the attack deep within the enemy's zone using mobile and airborne troops and air strikes.[11]

Success in these operations would depend on superior mobility for Soviet forces, mobility which would allow them to mass for an attack with sufficient speed to avoid enemy counterfires.

Clearly, the technological revolution in NATO armies has prompted not only a reevaluation of the nature of future wars, but of the effects of technological change on the Soviet deep-battle concept and the force modernization process as a whole. In 1978, Ogarkov pointed to the current developments of "qualitatively new types of weapons and equipment" and emphasized the advantage that improvements in firepower would provide a defending force. In classical Marxian dialectic terms, he cited the contradictions between offense and defense, but specifically underlined the requirement to mass forces for an attack and the subsequent exposure of these forces to destruction by enemy defensive firepower. Emphasizing the "age-old struggle between the means of attack and defense," Ogarkov argued that, historically, quantitative growth of new weapons led to qualitative changes in the relationship between the offense and the defense.[12] These changes were, in turn, offset by others. He referred to this Hegelian process as the "negation of the negation."[13] Specifically, Ogarkov pointed to the emphasis on mobility in Tukachevsky's and Triandafillov's original deep-battle concept and cited examples of how recent technological improvements in NATO's defensive firepower have, to a great degree, countered Soviet offensive mobility.

Realizing the limitations on force modernization presented by the current state of the Soviet economic system, Ogarkov may well have been questioning the wisdom of continuing the conventional-force buildup as it had been planned in the early 1970s. Pointing out the contradiction between

the potential capabilities the new technologies represented and the "requirements for costly weapons and equipment and the economic potentials of the state," he appeared to be counseling a reappraisal of Soviet weapon research, development, and acquisition programs.[14]

Major General I. Vorob'yev, an authoritative military theoretician and contributor to the 1984 revised edition of *Taktika*, further developed Ogarkov's point concerning defensive firepower and offensive maneuver in an article published in 1980. Vorob'yev approached modern warfare from the view that it is based on an operational triad of firepower, combat and technical capabilities, and mobility. Identifying firepower as the principal catalyst in the evolution of conducting combat operations, he concluded that recent improvements in the range, maneuverability, mobility, effectiveness, and accuracy of weapon systems have had an even greater impact on how modern combat operations will be conducted. Firepower, in Vorob'yev's opinion, has become the chief stimulus for restructuring or reorganizing combat units, for modification of tactics and methods of engagement, and, even more importantly, for enhancement of mobility to avoid or counter enemy firepower.[15]

Major General N. Kuznetsov, sensitive to the destructiveness and lethality of modern weaponry, perhaps best characterized the impact of the technological revolution in conventional firepower on Soviet planning:

> A situation in which massive casualties are incurred due to the lack of in-depth research on protective measures cannot be accepted . . . . Problems of the redisposition of forces and of securing freedom of action for troop concentrations are those which need to be studied more deeply.[16]

Kuznetsov added that the application of long-range conventional firepower on combat forces massing for an attack at a decisive time and sector of the battlefield could be devastating: "Employing long-range conventional means, it would be possible to prepare and conduct rapid fire strikes throughout an enemy formation, thereby having a decisive impact on the outcome of an operation.[17]

Kuznetsov was also concerned over the capability of NATO's nominally defensive force alignments—based upon their firepower potential—to "initiate and conduct decisive large-scale combat operations with limited objectives."[18] Soviet military doctrine does not recognize weapons as being either offensive or defensive in nature, but as having both offensive and defensive uses. In Kuznetsov's estimation, apparently, not only are Soviet offensive capabilities at risk, but the ability of Soviet forces to concentrate for a counterattack, the precursor to regaining the initiative and resuming further offensive actions, is severely affected.

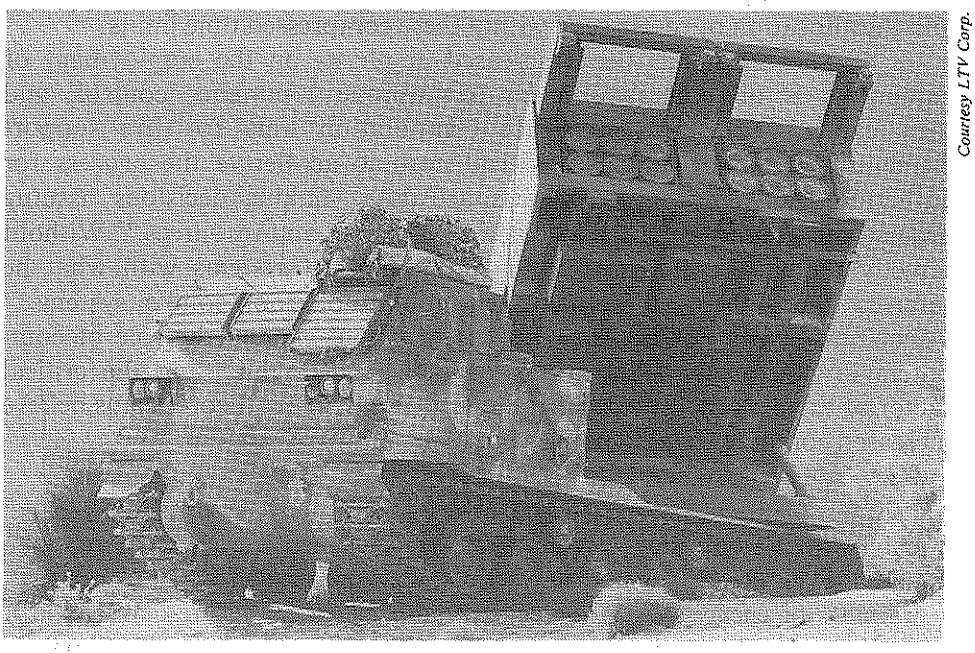
The ultimate effect of technological developments is the establishment of a balance between offensive and defensive combat capabilities.

Vorob'yev points to the experiences of World War I, which began with defensive firepower and offensive mobility essentially in balance, as an indicator of what a future war in Europe could be like.[19]

Vorob'yev clearly stresses that unless the Soviet military leadership addresses the current balance between the offensive capabilities of the Soviet army and NATO's defensive firepower, the character of a future war in Europe could be an initial period of maneuver rapidly degenerating into a war of attrition. The result, by Soviet estimation, would be prolonged, positional warfare. This argument was reinforced by Ogarkov's suspicion that "future war will be protracted."[20] Such a war would not only be extremely costly in both manpower and materiel resources, but could lead to a political situation which many Soviet leaders would consider disadvantageous, if not destabilizing.

Soviet Countermeasures

Interim Soviet solutions to the effects of improved NATO firepower have already been noted in reorganization efforts, new equipment deployments, training programs, and efforts to modify and streamline command and control procedures. Soviet maneuver divisions have been expanded, reorganized, and "up-gunned." These divisions now possess the firepower to operate more efficiently as semi-autonomous, combined-arms elements on either conventional or nuclear battlefields. They have sufficient



Courtesy LTV Corp.

NATO technological advances are forcing changes in Soviet operational doctrine. The multiple-launch rocket system, for example, can saturate an area the size of five football fields in a single salvo.

forces to cover greater frontages, making them less compact targets. This dispersion is complemented by their inherent mobility in countering NATO defensive firepower. Corps-like structures, commonly referred to as New-type Army Corps, have also been introduced into the Soviet army. These units are almost twice as large as current Soviet maneuver divisions and are ideally suited to conduct the high-speed, sustained operations envisioned in Tukachevsky's and Triandafillov's deep-battle concept.

Deployment of new equipment, particularly technologically advanced forms of munitions, still reflects an interim solution based on the view that the improvements in defensive firepower can also be applied to offensive firepower. Soviet military planners have adopted a dialectic approach based on the process of the "negation of the negation" to find a long-term response to NATO technological advances. In an article published in October 1985, Vorob'yev approached the dilemma presented by defensive firepower from the standpoint of time in combat operations. He argued that time is the critical factor in modern warfare and that "the increased relationship of speed, space, and time has become a feature of modern warfare."[21] He attributed this to "increased capabilities and mobility, which have influenced the overall tempo of combat." He argued that since increased accuracy, mobility, and effectiveness of NATO weapon systems have increased combat tempo and reduced the time required to engage enemy combat formations, the Soviet army must improve its "ability to rapidly solve problems involving battle planning, command and control, and the allocation of resources" within these compressed time limits.

The result has been increased emphasis on the employment of computers at all command levels to improve command, control, and logistical support, and to reduce computation time for fire support elements. Vorob'yev cited a "critical need to accelerate the process for gathering and analyzing reconnaissance data, making decisions, issuing orders, and coordinating the interaction of forces and resources." Without directly linking an increased need for automated systems with what he referred to as "the need for increased mobility of troop control systems," Vorob'yev clearly portrayed Soviet intentions to expand the role of computers in Soviet army operations.[22] Further, in highlighting the critical factor of time, Vorob'yev outlined how essential Soviet theoreticians believe increased computer deployment to be:

> It is possible to defend oneself and engage highly mobile systems in combat only when all operations of the command and control cycle from reconnaissance to commands and instructions are implemented so as to permit warnings of enemy strikes, the concentration of forces and resources, and maneuver on the battlefield. It is fully understood that today this is only possible through automated command and control.[23]

Clearly, Soviet military planners fully appreciate the advantages that increased automated command and control systems could provide in terms of operational success and survivability. Vorob'yev's statement can also be considered an assessment of a potential weakness associated with high levels of automated command and control, especially if the human factor is eliminated from the decision loop. By indicating that highly mobile forces can be countered only when "all operations of the command and control cycle . . . are implemented," he makes clear the Soviet appreciation of the need to degrade enemy command, control, and target-acquisition capabilities in relation to the factor of time.

Soviet military leaders are well aware of what the United States has identified as the necessary "key operational capabilities" for success on future battlefields: reconnaissance, surveillance, and target acquisition; lethality; command, control, and communications; sustainability; and enhanced soldier and unit performance. They have apparently analyzed and assessed these operational capabilities and associated technologies, in light of their own military thinking, to ascertain the capabilities of their potential enemy and to determine weaknesses or vulnerabilities that could be exploited.

They are equally aware of the critical tasks implied in these key operational capabilities, specifically, synchronization of the battlefield, deep-attack capability, and enhanced joint and combined operational capabilities, all of which are heavily dependent on effective command, control, and communications. They have devoted significant resources to developing countermeasures to anticipated high-technology equipment that the United States is developing to meet the critical tasks of its key operational capabilities. From Vorob'yev's comments one can assume that the Soviets might well deploy smart munitions and electronic countermeasures to degrade NATO command and control just as they would use computerization to enhance Soviet command and control. Soviet military planners likely believe that by striking enemy command and control centers and blinding electronic target-acquisition means, they could negate much of an opponent's ability to engage second-echelon forces and fire support elements as well as to counter highly mobile forces. This would permit the rapid concentration of forces for an attack demanded by Soviet operational concepts, while reducing exposure to enemy firepower.

Contemporary Soviet military writings lead to the conclusion that Soviet military planners desire to reduce reliance on nuclear arms in favor of pursuing high-technology non-nuclear weapons, most particularly terminally guided or homing munitions, which are frequently referred to as having capabilities close to low-yield nuclear weapons. In the final analysis, the elimination of nuclear weapons would simultaneously preserve the Soviet homeland from the degree of destruction it suffered during World War II and deny NATO its nuclear defense. Gorbachev's January 1986 arms

control proposal, part of which is already coming to fruition, and the announced economic initiatives to modernize the industrial and technological bases all support important shifts in Soviet military doctrine toward nonnuclear forces.

Reorganization, the interim measure which historically has preceded major technological developments in Soviet force modernization, is well underway. The reorganization objective is to put in place the organizational framework necessary to absorb the new technologies in order to realize fully the advantages which these technologies are expected to bring to Soviet operational concepts. Thus NATO's much-publicized determination to operationalize a capability for Follow-On Forces Attack is not going unanswered in the Soviets' own doctrinal, organizational, and technological ferment.

NOTES

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4. N. A. Ogarkov, *Vsegda v Gotovnostii k Zashchitye Otechestva* (Moscow: Voenizdat, 1982), p. 31.
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7. M. M. Kir'yan, *Voenno-Teknicheskii Progress i Vooruzhonniye Sili SSSR* (Moscow: Voenizdat, 1982), p. 313.
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9. N. A. Ogarkov, "Zashchitye Sotsializma, Opita Istorii i Nastoyashiye Vremeni," *Krasnaya Zvezda*, 9 May 1984, p. 3; and "Neoslabnaya Slava Sovyetskikh Oruzhiyakh," *Kommunist Vooruzhonnikh Sil*, No. 21, 1984, pp. 16-25.
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11. A. B. Kadishev, *Voprosii Strategii i Operativnovo Iskusstva v Sovyetskikh Voennikh Trudakh, 1917-40* (Moscow: Voenizdat, 1965), p. 13; A. A. Strokov, *Istoriya Voennovo Iskusstva* (Moscow: Voenizdat, 1966 and 1984), p. 312.
12. N. A. Ogarkov, "Voennaya Nauka i Zashchita Sotsialisticheskovo Otchestva," *Kommunist*, No. 7, 1978, p. 115.
13. Ibid., p. 117.
14. Ibid., pp. 118-20.
15. I. N. Vorob'yev, "The Relationship and Interaction Between Offense and Defense," *Voennaya Mysl* (April 1980). Major General Vorob'yev has written numerous articles concerning deep attack and deep combat operations. See "Forward Detachments in Offensive Operations and Battles," originally published in *Voennaya Mysl* in April 1965 and reprinted in 1979 in the USAF *Selected Readings from Military Thought, 1963-73, Part I* (Washington: GPO, 1979).
16. N. N. Kuznetsov, "On the Categories and Principles of Soviet Military Strategy," *Voennaya Mysl*, January 1984, p. 36.
17. Ibid., p. 30.
18. Ibid., p. 35.
19. Vorob'yev, "Relationship," p. 22.
20. N. A. Ogarkov, *Istoriya Uchit Bditel'noste* (Moscow: Voenizdat, 1985), p. 73.
21. I. N. Vorob'yev, "Time in Warfare," *Krasnaya Zvezda* (Moscow: Voenizdat, 9 October 1985), p. 2.
22. Ibid.
23. Ibid.