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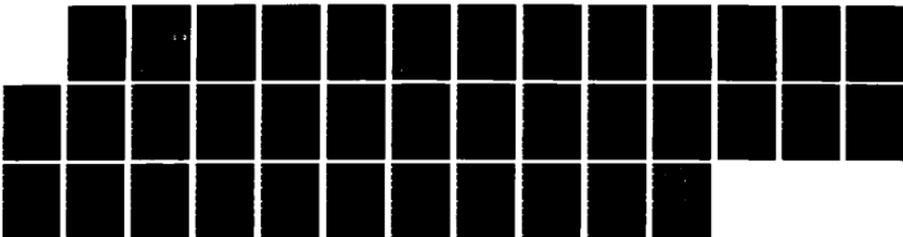
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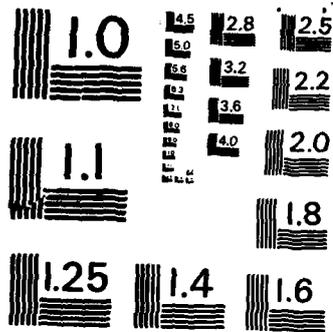
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A RAND NOTE

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**SOVIET REACTIONS TO NATO'S EMERGING TECHNOLOGIES
FOR DEEP ATTACK**

Michael J. Sterling

August 1985

N-2294-AF

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Prepared for

The United States Air Force

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↙ This Note analyzes Soviet reactions to and concern over NATO's use of deep-look reconnaissance sensors, automated command and control, and highly accurate conventional munitions made possible by ("emerging technologies") (ET). It briefly describes the emerging technologies and their application to deep attack concepts, and it examines Soviet commentary on the systems and employment concepts being discussed in the West, Soviet views of the utility of such systems, and their impact on Soviet forces and tactics. It considers Soviet response options in the near and medium terms, and their implications for the West. Among its conclusions are the following: (1) the Soviets are more concerned with the long-range implications of ET rather than with any particular weapon; (2) the West should take care not to squander its lead in this area of weapons development; (3) any reconnaissance, command-control-communication, or attack systems the West develops must be resistant to Soviet countermeasures; and (4) because of the implications for future arms negotiations, future ET weapons should be distinguished from their nuclear counterparts, in terms of both their physical appearance and flight profiles. ↘

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PREFACE

This Note is an outgrowth of research conducted in support of the Project AIR FORCE National Security Strategies Program project "The Future of Soviet Policy Toward Western Europe." It analyzes Soviet reactions to, and concern over, NATO's use of so-called emerging technologies to improve the conventional balance in Europe. Reference throughout is to the deep attack implications, although the NATO initiative is not limited to deep strike and has broader connotations. After a brief description of emerging technologies and their application to deep attack concepts, it examines Soviet commentary on the systems and employment concepts being discussed in the West, Soviet views of the utility of such systems, and their impact on Soviet forces and tactics. Possible Soviet response options are considered in the context of both the near and medium term. A combination of options that the Soviets are likely to pursue, together with their implications for the West, is also considered.

The Note is intended to be of assistance to Air Force officers and planners concerned with the overall political and military environment confronting the Air Force in Western Europe in the coming decades. It should be of interest as well to readers concerned with policy aspects of the military balance in Europe.

Lt. Col. Michael J. Sterling (USAF) was a Rand Research Fellow during 1984-1985.

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SUMMARY

Deep attack is a concept for locating and attacking fixed and mobile targets in enemy rear areas using deep-look reconnaissance sensors, automated command and control, and highly accurate conventional munitions. The feasibility of deep attack results from the emergence of several interrelated technologies which offer the possibility of developing and fielding in meaningful numbers precision-guided stand-off weapons capable of stopping rear echelon forces before they can join the battle.

The prospect of NATO fielding such weapons is of obvious concern to the Soviet Union. In describing the proposed systems and employment concepts for deep attack, Soviet writers, including several senior military leaders, have articulated the following conclusions:

- Weapons based on emerging technologies (ET) have major implications for the future conduct of war.
- These new weapons will have a major impact on future Soviet military planning both in terms of weapons requirements and changes in tactics.
- Deep attack weaponry is an attempt by the United States to shift the correlation of conventional forces in favor of NATO.

Soviet writers describe ET-based deep attack systems as having three parts: deep-look reconnaissance assets; automated assessment, command and control; and precision guided, long-range attack systems. The term they use to describe these interrelated components is "reconnaissance-strike complex" or RSC. Because of the threat posed by a NATO RSC, the Soviets are likely to follow two immediate response options:

- Modify their tactics and forces to make them less vulnerable to attack by an enemy RSC.
- Develop the capability to locate and preemptively attack the components of an RSC.

Over the longer run, it is likely the Soviet military will attempt to develop their own counterpart deep attack systems. Although such an undertaking will present serious technological challenges, the Soviets, in all likelihood, will strive to acquire their own systems because such capabilities would be militarily useful and because it would be risky for them not to match what potentially could be a major Western advance in conventional arms. This is not to say the Soviet RSC will be a copy of U.S./NATO deep attack concepts. Their response very likely will be a uniquely Soviet solution consistent with their technological capabilities and military doctrine.

An additional response option for the Soviets is to attempt to delay or prevent NATO from acquiring deep attack capabilities by mounting a campaign similar to their recent efforts to block deployment of the neutron bomb and halt intermediate-range nuclear forces (INF) modernization. There is considerable skepticism in Western Europe over the feasibility and affordability of deep attack. The Soviet writers have been quick to recognize these issues and use them for propaganda purposes in media articles designed for both domestic and international consumption. At a minimum, this campaign is intended to reinforce and encourage the existing inclinations of European peace groups to attack as "aggressive" the strategy embodied in such concepts as AirLand Battle 2000. As yet, there is no direct evidence to suggest that the Soviets intend to transform their propaganda on this issue into a major INF-style campaign to pressure Western European governments into forgoing deep attack. Thus far, they are probably satisfied that the main arguments supporting Soviet objectives already have been inserted into the European debate. Nevertheless, the option of a much larger campaign remains a possibility for the future.

A Soviet decision of simultaneously countering and emulating ET-based deep attack systems has important implications for the United States and its NATO allies:

- The West's lead in ET is likely to be transitory if strong efforts are not made to protect the technology from transfer or theft.

- Any system fielded by NATO must be resistant to Soviet counter-measures.
- NATO systems eventually will be subject to direct attack by Soviet deep attack assets.
- To minimize potential problems in the areas of verification and counting rules during future East/West arms negotiations, it is desirable to make ET weapons physically distinct from their nuclear counterparts.

Only time will tell whether the deep attack weapons made possible by ET will, in fact, have the revolutionary impact on the conventional balance in Europe predicted by ET advocates. For now, the Soviet Union has made an initial assessment that ET is significant and has taken actions to counter its impact.

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I. INTRODUCTION

Since the mid-1970s, the United States has been working to develop weapon systems for attack of fixed and mobile targets in enemy rear areas using highly accurate conventional munitions. Whereas a number of names have been applied to this concept, the terms most commonly encountered are "deep strike" and "deep attack." The feasibility of deep attack results from the emergence of several interrelated military technologies, all of which benefit from the significant strides made in the miniaturization of computers and electronic components. The various systems and subsystems under development will incorporate highly capable deep-look reconnaissance and surveillance sensors which will be capable of:

- Continuous operations in all weather and light conditions.
- Automated command, control, communications and intelligence analysis systems capable of supporting rapid targeting.
- Supporting precision-guided stand-off weapons (both air and ground launched) capable of attacking fleeting targets deep behind enemy lines.

In the Western defense media, the technological keys to the deep attack concept are often grouped together under the rubric of "emerging technologies," or ET,¹ although the concept is not limited to deep attack. If the projected ET weapons live up to their advance billing, then these new deep attack systems will have the potential to alter the conventional balance in Europe--a troubling prospect to the Soviet Union. This Note examines Soviet concerns and reactions to deep attack and the weapons associated with the concept. It also attempts to demonstrate that articulated Soviet concerns over the deep attack threat are genuine. In all likelihood, Soviet planners have concluded that the creation of ET systems will have major implications for the conduct of conventional

¹Throughout this Note, the term ET is used to cover a variety of advanced sensor, command-control, and weapon technologies rather than any specific set of technologies proposed by particular agencies.

warfare. In response to this concern, the Soviet Union will attempt to both counter and emulate NATO's deep attack systems.

II. EMERGING TECHNOLOGY FOR DEEP ATTACK

BACKGROUND

The concept of deep conventional attack against the Warsaw Pact's second echelon has been evolving since the mid-1970s. In its most basic form, the deep attack¹ concept represents yet another effort to use technology and innovative tactics to overcome the imbalance in conventional forces which exists in Europe.² A basic assumption of the deep attack concept is that, in a conventional war, NATO's forces will be able to blunt the Warsaw Pact's initial thrust, but will ultimately be overwhelmed when the Pact's second, and subsequent, echelons join the battle. To prevent this, the deep attack concept calls for NATO commanders to be provided with long-range reconnaissance and surveillance systems which will enable them to rapidly identify, locate, and categorize enemy force elements far behind the front lines. NATO commanders also would be given the automated assessment means necessary to rapidly analyze the enemy's force array.³ Using this knowledge, a commander could then select those key targets whose destruction would make the greatest contribution to degrading second (or third) echelon forces. Finally, NATO commanders would have a variety of precision-guided stand-off weapons to effectively attack the priority targets once they were located and selected. The efficacy of the deep attack concept depends on having both reconnaissance and attack systems in sufficient quantities to accomplish the stated objective.

¹The term "deep attack" (rather than "deep strike") is used throughout this Note because, in a NATO context, the latter can connote nuclear operations.

²Joel S. Wit, "Deep Strike - NATO's New Defense Concept and Its Implication for Arms Control," *Arms Control Today*, Vol. 13, No. 10, November 1983.

³Rand is investigating the assessment problem under a Project AIR FORCE project entitled "A Critical Time Evaluation of USAF Intelligence Support for Effective Defense of Europe."

GLOSSARY OF TERMS

Some of the systems and concepts associated with the subject of deep attack are listed below. Common definitions are useful when addressing this subject, since Soviet writers--and occasionally Western writers--tend to use these terms interchangeably when discussing deep attack.

- *Assault Breaker* -- a Defense Advanced Research Projects Agency (DARPA) concept based on the proposed use of "smart" submunitions, carried by surface-to-surface missiles and aircraft, against mobile enemy assets such as tanks. Although the original concept spawned several follow-on programs, Assault Breaker is not funded in the current Five Year Defense Program.
- *AirLand Battle* -- Part of official U.S. Army doctrine as spelled out in Army Field Manual FM 100-5. AirLand Battle was adopted in 1982 and emphasizes attacking second echelon forces at distances of up to 150 km behind the FLOT (Forward Line of Own Troops). It features penetrating counter-attacks, high mobility forces, and maneuver-based combat. Integral to the concept is deep, accurate fire support available to Corps commanders.
- *AirLand 2000* -- Also known as "Army 21," the Army's war-fighting concept for the 1995 to 2030 period. It postulates that emerging technology will create a highly fluid battlefield with heavy reliance on maneuver warfare and support from space-based systems.
- *Follow-On Force Attack (FOFA)* -- The concept enunciated by NATO Supreme Allied Commander, General Bernard Rogers. Also known as the "Rogers Plan," the concept proposes to influence the front line battle by employing long-range conventional weapons to attack Warsaw Pact Forces as they are deploying forward from the rear.

- *CounterAir 90* -- A concept for stand-off attack against fixed targets such as airfields and air defense using surface-to-surface and air-to-surface missiles. Primarily developed within the Office of the Secretary of Defense, it also would employ unmanned aircraft (RPVs, drones, etc.).
- *Joint Surveillance Targeting and Attack Radar Systems (Joint Stars)* -- A joint Air Force and Army program to develop an airborne radar which will be able to locate and track moving targets as small as a single tank at extended ranges. The resulting target information is then relayed to a ground station which directs long-range stand-off missiles and aircraft to delay and destroy enemy forces before they reach the front lines. The radar will be carried on a C-18 (modified Boeing 707) aircraft.
- *Precision Location Strike System (PLSS)* -- An integrated detection, location determination, and strike system designed to locate, identify, and attack enemy air defense emitters (such as radars) in all weather conditions at stand-off ranges. The airborne detection component of PLSS will be carried on the TR-1 aircraft.
- *Joint Tactical Cruise Missile System (JTACMS)* -- A joint Army and Air Force program with Air Force lead, to develop a common missile which would dispense terminally-guided and unguided submunitions at targets deep behind enemy lines. The Tactical Missile System (TACMS) is an independent, Army-only ballistic missile development. The Army would use the Multiple Launch Rocket System (MLRS) for both weapons.
- *Joint Tactical Information and Distribution System (JTIDS)* -- A secure, jam-resistant digital data and voice system designed for use by all four Services. The system is now deployed on the E-3A (AWACS) aircraft and at selected ground sites in the United States and Europe.

III. SOVIET VIEW OF EMERGING TECHNOLOGY

During the last two years, Soviet commentary on deep attack has gone through two phases. The first phase included a series of descriptive articles which addressed the technology, proposed hardware, and doctrinal approaches being debated in the United States. These articles contained the pro forma heavy doses of Soviet propaganda condemning the United States for embarking on a "provocative escalation" of the arms race. The articles also accused the United States of seeking to acquire conventional superiority and the means to launch a surprise offensive against the Warsaw Pact. Beginning in the spring of 1984, Soviet commentary entered a second phase in which several authoritative articles were published addressing the topic of deep attack in a more straightforward, analytical manner.

Of the discussions published during this second, more reflective phase, a key article was published in the May 1984 issue of *Krasnaya Zvezda*.¹ It consisted of an interview with then Chief of the General Staff, Marshal N. V. Ogarkov. In this interview, Ogarkov observed that emerging technologies were yielding significant increases in the destructive potential of precision-guided conventional weapons. These developments, according to Ogarkov, represented a fundamental change in the nature of conventional warfare. As a consequence, the Soviet Union was compelled to begin work on similar weapons.

Publication of the Ogarkov interview generated considerable interest in the West by analysts who, at the time, were looking for an explanation of Ogarkov's subsequent unexpected ouster from his position as Chief of the General Staff. While Ogarkov may have been too candid (by Soviet standards) in his assessment of emerging technologies and their impact on the future of East/West arms competition, subsequent articles by other Soviet authors repeated Ogarkov's themes.² For example, a September 1984 *Krasnaya Zvezda* article, appearing under the byline of Professor

¹Interview with Marshal of the Soviet Union N. V. Ogarkov, Chief of the General Staff, "The Defense of Socialism: Experience of History and the Present Day," *Krasnaya Zvezda*, May 9, 1984, pp. 2-3.

²In any event, the predictions of Ogarkov's political demise may

Major General I. Vorobyev, repeated many of the same conclusions reached by Ogarkov.³ Both the Ogarkov and Vorobyev articles will be discussed in greater detail later in this Note.

DEEP STRIKE HARDWARE--THE SOVIET VIEW

Numerous Soviet writers have commented on the deep attack systems being developed in the West. For example, a February 1984 article in *Pravda*⁴ quotes Western press sources and describes a variety of new precision-guided weapons, antitank cluster munitions, "smart shells," and electronic reconnaissance systems under development.⁵ The article categorizes these weapons as being "fundamentally new means." It goes on to describe Assault Breaker as an example of these "new means," which includes "a sophisticated detection system capable of 'seeing' targets deep in the enemy's rear, with highly accurate missiles as its strike component."⁶ The *Pravda* article goes on to suggest that "precision weapons, smart shells, and electronic reconnaissance systems could enable NATO task forces to destroy a potential enemy which is still in its operational deployment [rear staging] area."

Other Soviet writers have taken up the theme that ET weaponry is revolutionary in nature. Marshal Ogarkov also made the following observation in his May 1984 interview:

have been premature. See Hendrick Smith's article in the *New York Times*, July 19, 1985, for indications of Ogarkov's rehabilitation.

³Major General I. Vorobyev, "Modern Weapons and Tactics," *Krasnaya Zvezda*, September 15, 1984, p. 2.

⁴Yu. Kharlanov, "Climbing a Spiral Leading Down: What the Pershing and Cruise Missiles Bring in Their Wake," *Pravda*, February 18, 1984, p. 4.

⁵Citing Western sources when discussing defense policy issues is a common device in the Soviet military literature. It permits writers to discuss subjects without treading on State secrets. It also allows the author to quote presumably authoritative Western sources when discussing issues of policy and doctrine without evoking the authority of the government or party.

⁶As an example of how Soviet media coverage of a subject lags behind the West, *Pravda* was raising the threat of Assault Breaker at about the same time the original Assault Breaker concept was being attacked and discredited in the United States.

Rapid changes in the development of conventional means of destruction and the emergence in the developed countries of automated reconnaissance-strike complexes, long-range high-accuracy terminally-guided combat systems, unmanned flying machines, and qualitatively new electronic control systems make many types of weapons global and make it possible to sharply increase, by at least an order of magnitude, the destructive potential of conventional weapons, bringing them closer, so to speak, to weapons of mass destruction in terms of effectiveness.⁷

A March 1984 article in *Ekonomika, Politika, Ideologiya* concludes that a "quiet revolution" has taken place in the field of conventional weaponry.⁸ According to this article, ET weapons are fundamentally new because their power and effectiveness are "similar to weapons of mass destruction in terms of their combat features."⁹ The article goes on to report that the West has "been working on various theories of 'automated' and 'robotized' warfare and 'long-distance destruction,' in which the main role will be played by qualitatively new weapons systems capable, according to their inventors, of making radical changes in future wars..." A key impact of these new weapons, the article reports, is that they will enable NATO to conduct a "first strike against the Warsaw Pact countries."

SOVIET VIEW OF AIRLAND BATTLE

Soviet writers characterize ET weapons as forming the basis of the "aggressive" AirLand Battle concept. In a December 1983 *Sovetskaya Rossiya* interview of Marshal Vasiliy Petrov, then Deputy Defense Minister and CINC of the Ground Forces, the Marshal notes that ET-based weapons support the "aggressive AirLand Battle concept adopted in the

⁷Interview with Marshal of the Soviet Union N. V. Ogarkov, Chief of the General Staff, "The Defense of Socialism: Experience of History and the Present Day," *Krasnaya Zvezda*, May 9, 1984, pp. 2-3.

⁸V. R. Bogdanov and A. I. Podberezkin, "Notes on the Qualitative Arms Race," *Ekonomika, Politika, Ideologiya*, No. 3, March 1984, p. 125.

⁹The term "weapons of mass destruction" as used by Soviet writers includes, in addition to nuclear weapons, chemical and biological weapons; however, in the context of this article, the author clearly is referring to nuclear weapons.

United States, and the new Army Field Manual for the U.S. Ground Forces, 100-5." Petrov concludes that the adoption of this doctrine "leaves nobody in doubt about the Pentagon's endeavor to ensure, together with the other NATO countries, superiority over the Warsaw Pact and to create and make use of the potential for a 'disarming' first [conventional] strike and concluding the war under conditions favorable to the U.S. [and NATO]."¹⁰

A January 1984 *Krasnaya Zvezda* article continues this theme and explains that the AirLand Battle concept laid down in FM 100-5 promotes the combined use of air and ground forces on the operational/tactical scale "using powerful means of destruction to deliver massive precision strikes...to destroy the second echelon...and thus achieve decisive success in operations in the initial period of the war."¹¹ The article reports that new technology will allow attacks 300 km behind the FLOT. The new weapons which make this concept possible include PLSS, Assault Breaker, multiple rocket launcher systems, and cruise missiles with submunitions. These systems will be able to "deliver powerful strikes to the depth of the enemy's operational structure to ensure the possibility of transferring combat operations to the enemy's territory in a short time."

THE RECONNAISSANCE-STRIKE COMPLEX FOR DEEP ATTACK

Soviet writers recognize that deep attack systems by themselves are not enough to disrupt the enemy's rear. Also needed are deep-look reconnaissance assets and automated command and control systems which are capable of locating, identifying, and categorizing second echelon forces, enabling a combat commander to choose which targets to attack and to execute the attack before the target moves. The Russian term for the means to accomplish these interrelated tasks is "reconnaissance-strike complex" (*razvedyvatel'no-udarnyi*).

¹⁰Colonel V. Morozov, "Superiority - Over Common Sense," *Sovetskaya Rossiya*, December 1, 1983, p. 5.

¹¹Lieutenant General M. Proskurin, "Yet Another Aggressive Concept," *Krasnaya Zvezda*, January 6, 1984, p. 3.

A December 1983 article in *Zarubezhnoye Voyennoye Obozreniye* noted that "special attention is being given [in the West] to the creation of reconnaissance-strike complexes [RSCs], precision guided weapons, and cluster ammunition with homing elements for destroying mobile target groups and fixed objects scattered over considerable areas and at long distances."¹² In his September 1984 article, Major General Vorobyev describes a reconnaissance-strike complex as being a fundamental new type of conventional weapon:

Particular importance abroad is attached to a fundamentally new type of conventional weapon--the reconnaissance-strike complex. In these the means of destruction are coupled with means of reconnaissance based on automated systems ensuring rapid target detection, the preparation of initial firing data, and the precision guidance of the weapon to the target.¹³

General Vorobyev also notes that the deep second echelon attacks made possible by reconnaissance-strike complexes are the central feature of the AirLand Battle concept. The significance of RSC-aided deep attacks, according to Vorobyev, is that they "concentrate, from the very onset of military action, the center of gravity of the fire effort...to the enemy's second echelons and reserves thereby paralyzing its actions and disrupting the system of troop and weapon control."¹⁴ In other words, by disrupting the second echelon, the timing, momentum, control, and ultimate success of a Warsaw Pact conventional thrust into Western Europe could be jeopardized.

¹²Lieutenant Colonel G. Vasil'yev, "Questions of Operational Art in the U.S. Armed Forces," *Zarubezhnoye Voyennoye Obozreniye*, No. 12, December 1983, p. 3.

¹³Major General I. Vorobyev, *op. cit.*

¹⁴*Ibid.*

THE IMPLICATIONS FOR SOVIET FORCES AND TACTICS

Several Soviet writers seem to have concluded that ET weaponry will have a profound impact on future military operations both in terms of the weapons the Soviet Army will need to field and the changes that will have to be made to Soviet tactics and operational art. In his May 1984 interview, Ogarkov suggests that one of the most urgent tasks facing the Soviet Union is to counter and emulate the new weapons being developed in the West. He notes that the weapons based on these "new physical principles" will be available in the near future and that "it would be a serious mistake not to take this into account right now."¹⁵ He also notes that the creation of such weapons "cannot fail to change established notions of the methods and forms of armed struggle."¹⁶

General Vorobyev makes a similar point:

...changes in weaponry [resulting from ET] are exerting a profound influence on the nature of combat and compelling the theory of tactical--and indeed, the art of war as a whole--to seek the appropriate means of preparing and waging combat actions.¹⁷

¹⁵Interview with Marshal of the Soviet Union N. V. Ogarkov, Chief of the General Staff, "The Defense of Socialism: Experience of History and the Present Day," *Krasnaya Zvezda*, May 9, 1984, pp. 2-3. Ogarkov did not explain what he meant by "new physical principles." Some analysts believe he was referring to directed energy weapons. It is more likely he was referring to the whole gamut of strategic tactical weapons based on emerging technology.

¹⁶Terms such as "serious mistake" and "change established notions" could be code phrases used by Ogarkov to chide opponents in an internal policy debate over the utility of ET weaponry.

¹⁷Major General I. Vorobyev, *op. cit.*

IV. SOVIET RESPONSE OPTIONS

The Soviets have three options available to respond to the threat posed by ET-based deep attack systems. First, they could develop their own versions of these weapons. By fielding counterpart systems, they presumably would have the potential to locate and attack NATO's deep attack assets before such assets could be employed against Warsaw Pact rear area forces. Additionally, the Soviets would be motivated to acquire ET-based systems because of the "revolutionary" capabilities of these systems--capabilities which presumably would enable a combat commander to do his job more effectively. Whether or not the Soviets have the technical wherewithal to develop such systems is a separate question beyond the scope of this study. A second response option for the Soviets would be an attempt to negate the effectiveness of deep attack systems through changes in tactics and the development of countermeasures. A third option would be to inhibit NATO from fielding ET weapons. In all likelihood, the Soviets will pursue all three options simultaneously.

ATTACKING DEEP ATTACK

According to General Vorobyev, one of the best ways to counter a NATO reconnaissance-strike complex is by employing a reconnaissance-strike complex of your own. Vorobyev notes that "the struggle for fire supremacy will attain the utmost intensity, and it will be of greater importance to inflict preventive fire strikes with the aim of destroying high-precision weapons systems." To accomplish this, Vorobyev prescribes the following approach:

Success in a battle being waged with quick-reacting, long-range, high-precision combat complexes demands active reconnaissance for the purpose of the timely detection of the enemy's preparations to inflict fire attacks, the maintenance of subunits in constant readiness to repulse the enemy's employment of new weapons systems, and the concealment of measures undertaken in preparation for the battle.¹

¹Major General I. Vorobyev, *op. cit.*

What Vorobyev envisions is the netting together of available reconnaissance assets, especially near-real-time assets, to automated target assessment centers and then having the ability to call on dedicated fire assets to attack the key targets as soon as the targets are identified. These capabilities, which General Vorobyev says are needed to counter NATO deep attack systems, are nearly identical to the capabilities he attributes to the NATO deep attack systems he wants to neutralize.

Initially, a Soviet reconnaissance-strike complex (RSC) would be constructed out of existing force elements. It would not have to be as sophisticated and as capable as its NATO counterpart, since its main task would be reactive. It would not be required to identify and keep track of all of the enemy's rear, only the key components of NATO's RSC, i.e., NATO's deep attack capabilities. Later, as more sophisticated ET-based systems became available, they would be incorporated into the Soviet RSC and its mission would be expanded.

Soviet theater forces already have a wide variety of intelligence assets available to search for enemy RSCs. These assets range from SPETSNAZ (special operations) forces for behind-the-lines reconnaissance to supersonic reconnaissance aircraft such as the MIG-25 FOXBAT. A first step in creating a Soviet RSC would be to modify intelligence collection priorities to focus on the signatures and emissions of the enemy's RSC. NATO's fusion and assessment centers, along with the communication links which tie those centers to their "eyes and ears," would be a top Soviet collection requirement. Locating NATO's deep-look airborne collection platforms would be another, and keeping track of the mobile deep attack assets would be a third. The next step would be the dedication or temporary resubordination of a variety of attack systems to the RSC. The attack means would include, at a minimum, tactical missile systems equipped with area submunitions and tactical ground attack aircraft. The third and most important step in forming a Soviet RSC would be the creation of a command entity empowered with the necessary authority to instantly attack key targets once they have been

identified--without obtaining approval from higher headquarters. This command entity would also have the support staff and data automation means necessary to assimilate the intelligence inputs.

REACTIVE TACTICS AND COUNTERMEASURES

Direct attack aside, the most straightforward counter to a deep attack threat is to disperse and hide. General Vorobyev notes that, because troops in the rear are now more vulnerable, commanders in the rear must devote greater efforts to "skillfully utilize natural features and local terrain, carefully prepare field defenses, and implement camouflage measures."² In a real sense, the Warsaw Pact would be forced to operate as though they were in a nuclear environment--spread out so that individual units would not become locatable, easy to destroy targets. While reducing vulnerability, operating from dispersed, camouflaged formations creates its own problems. In such a mode, it would be more difficult to maintain the rapid movement rates called for by Soviet doctrine. In addition, to be effective, at some point units would have to reassemble into combat formations before they were committed to the battle. Once reassembled, they would again become vulnerable to deep attack munitions.

One way to overcome the increased vulnerability of second echelon units would be to improve the mobility of their logistical "tail." The faster the units and their logistics support elements could move through the operational rear, the less vulnerable they would be.

In the July 1984 issue of a Soviet logistics journal, the First Deputy CINC of Rear Services, Colonel General I. Golushko, assessed the impact of the deep attack threat. The General stated that the new (deep attack) weapons put a great strain on the "objects of the operational and strategic links of the rear."³ As a consequence, the mobility of logistics forces takes on "vital significance." Golushko argues for the creation of special air mobile resupply units to replenish combat units:

²*Ibid.*

³Colonel General I. Golushko,, "The Rear Area Under Conditions Where the Enemy Employs High-Precision Weapons," *Tyl i snabzheniye Sovetskikh Vooruzhennykh Sil*, No. 7, July 1984, p. 15.

Stock packages can be landed or dropped to units whether for restoring diminished combat capability or for initiating action in a new direction. This requires also that the rear forces create airfield-technical, medical, and other special subunits for servicing airfields where material and transport planes can be concentrated.⁴

A number of Western writers have argued that the Soviets are making their forces less vulnerable to attack by ET-based systems by decreasing their reliance on the second echelon.⁵ By increasing the combat power of first echelon forces and by creating special combat formations such as Operational Maneuver Groups (OMGs), the Warsaw Pact could accomplish decisive breakthroughs before a deep attack campaign against the Pact's rear could make a significant impact on the battle. While it is true the Soviets could offset, to a degree, the advantages of the new deep attack concepts with increased mobility and fire power for their forward echelons, Soviet planners, in all likelihood, would still be concerned with the unique threats posed by new technology and seek specific counters.

EFFORTS TO PREVENT OR DELAY DEPLOYMENT

The deep-attack threat to the Soviets posed by ET weapons would cease to be a problem if NATO chose not to deploy them. This might occur if the United States and NATO could be convinced that the deep attack concept and its associated weapon systems were unnecessary-- either because they were too costly or because they would not work. It might, therefore, be in the interest of the Soviet Union to mount a propaganda campaign designed to influence the NATO nations to forsake the deep attack concept.

There is considerable skepticism in Western Europe over the feasibility and affordability of deep attack. The NATO allies have been, to say the least, suspicious of the claims being made for the various deep attack concepts. They are concerned about the impact deep attack might

⁴*Ibid.*

⁵For a detailed discussion of this subject, see Boyd D. Sutton, *et al.*, "Deep Attack Concepts and the Defence of Central Europe," *Survival*, Vol. 26, No. 2, March/April 1984, pp. 50-70.

have on NATO doctrine and its potential for decoupling the nuclear umbrella. The U.S. allies also are not convinced the technology will deliver weapons that will perform as advertised. Many also believe that ET initiatives are part of a U.S. effort to influence European nations to "buy American." And, finally, they are worried by the projected costs associated with acquiring deep attack capabilities. The Soviets have been quick to recognize these sentiments and amplify them in their own media.

Soviet writers assert that deep attack is a totally offensive doctrine. They claim it would lower, not raise, the nuclear threshold. In addition, the Soviets claim the U.S. campaign to get the NATO allies to accept the doctrine and weaponry is yet another manifestation of U.S. domination over NATO. According to the Soviet argument, by following the U.S. lead in this area, the European NATO nations will be forced to choose a path which runs counter to true European security interests.

Western Europe has always been an important target of Soviet propaganda. In addition to the direct circulation of Soviet publications, traditional instruments include weekly and monthly periodicals in West European languages, press releases from TASS, short wave radio broadcasts, and cooperation from the Western European Communist press.⁶ Soviet propagandists are well aware that many Europeans are willing to at least hear, if not accept, Soviet views and concerns on major issues. In addition, Soviet propagandists capitalize on the view held by many in Western Europe that the Soviet Union has legitimate historical reasons to be concerned with programs which have the potential to give NATO an improved capability to conduct offensive operations.

⁶For an excellent discussion of how propaganda themes carried in the Soviet media are transmitted to Western Europe, see John Van Oudenaren's *Soviet Policy Toward Western Europe: Objectives, Instruments, and Results*, The Rand Corporation, R-3310-AF, February 1986.

The Offensive Nature of Deep Attack

Some in Europe, and particularly in West Germany, worry about the implications of deep attack and its potential for giving NATO a more offensive posture. NATO, by design, is a defensive alliance whose stated mission is limited to stopping aggression. The acquisition of a precision deep attack capability obviously can do more than blunt the second echelon--theoretically, it can also support a preemptive attack or a counter-offensive deep into Warsaw Pact territory. The prospective use of ET-based weapons even in a counter offensive is politically and morally troubling to many in West Germany. A January 1984 *Moscow News* article focuses on the offensive potential of NATO's new "AirLand Doctrine:"

The essence of this new offensive doctrine is to build up in NATO's central region, primarily West Germany, a first-strike capability to lash out at the immediate rear of the Warsaw Pact...⁷

Along this same line, in January 1984, *Krasnaya Zvezda* ran an article entitled "Yet Another Aggressive Concept: The Pentagon is Developing the Conduct of Offensive AirLand Operation."⁸ The article notes that the "aggressive" AirLand concept and the deep attack systems which support this concept will allow NATO to launch an offensive "using only conventional means of destruction..." Their task, according to the article, is to "deliver powerful [conventional] strikes against the depth of the enemy's operational structure in order to ensure the possibility of transferring combat operations to his territory within a short time."⁹

⁷Nikolai Portugalov, "The Battle in Europe: The Second Stage," *Moscow News*, No. 2, January 21-29, 1984, p. 5.

⁸Lieutenant General M. Proskurin, *op. cit.*

⁹*Ibid.* The use of the word "transferring" would appear to be tacit Soviet confirmation that "combat operations" would be expected to begin on NATO soil--in other words, that NATO would be responding to a Soviet attack.

The Soviet charge that deep attack is an offensive strategy matches the views that concurrently were being expressed by the West German Peace Movement. In January 1984, the *Manchester Guardian* reported the Peace Movement had a "new rallying cry: 'AirLand Battle.' It is [the Peace Movement's] shorthand for the alleged transformation of NATO from a defensive to an offensive alliance...". This is not to suggest the Peace Movement was following a Soviet lead. It is more likely that Moscow, seeing an issue developing, used its propaganda resources to reinforce European concerns.¹⁰

ET and the Nuclear Threshold

One of the main benefits claimed for a deep attack strategy is that it would raise the nuclear threshold by making a conventional defense more credible. NATO Commander General Bernard Rogers, in describing his version of deep attack, the Follow-On Force Attack, described how deep attack would raise the nuclear threshold:

Defending at the forward edge of the battle area and attacking follow-on forces are complementary and mutually reinforcing. Defending at the forward edge...provides time to attack his follow-on forces, and striking his follow-on forces in depth will help keep the force ratio at the forward edge of the battle area manageable.¹¹

In theory, if a conventional defense of this type could be successfully executed, then NATO would have little need or inclination to resort to nuclear weapons in order to contain an attack by the numerically superior Warsaw Pact forces.

Soviet writers have attempted to discredit this theory. In an April 1984 *Krasnaya Zvezda* article, Lieutenant General Proskurin asserts that the nuclear threshold argument is "nothing but a crudely worked propaganda trick" to get the NATO allies to go along with the

¹⁰Walter Schwarz, "The Peace People in Search of a Second Strike," *Manchester Guardian*, January 31, 1984.

¹¹Charles Doe, "Rogers' Battle Plan Faces NATO Scrutiny," *Air Force Times*, December 17, 1984, pp. 39-40.

Rogers plan.¹² Proskurin claims that "Rogers himself admits that nuclear weapons remain the chief means of armed struggle and the command of the North Atlantic bloc 'will be the first to use them if an appropriate situation arises.'"¹³ The article concludes that a deep attack strategy complements NATO's nuclear modernization to create improved *offensive* capabilities across the board.

Russian commentators also argue that conventional deep attack weapons will complicate the arms control picture. For example, they claim that, since the cruise missile systems which will deliver the deep attack submunitions will be identical in appearance to nuclear systems, "no means of detection are capable of determining whether a cruise missile has a conventional or nuclear warhead."¹⁴ They also imply that there would be no reliable way to immediately differentiate between an attack by conventionally armed cruise and ballistic missiles or their nuclear counterparts, thus raising the likelihood of nuclear response. In making this argument, the Soviets have created a false dilemma. First, conventional systems can be designed to be physically distinct from their nuclear counterparts to aid the verification process. Second, the Soviets have already developed and deployed conventional warheads for battlefield missiles without concern for NATO's ability to differentiate between nuclear and nonnuclear variants.

Intermediate-range Nuclear Forces (INF) Redux

Another Soviet propaganda tactic to discredit deep attack has been an attempt to capitalize on the residual bitterness and polarization that remains following the European debates over INF modernization. This bitterness resulted in large measure from an earlier Soviet propaganda and "active measures" campaign to inhibit NATO theater nuclear modernization. Soviet writers have attempted to draw a parallel

¹²Lieutenant General M. Proskurin, "Strategy of Adventurism. NATO--Bloc of War and Aggression," *Krasnaya Zvezda*, Second Edition, April 28, 1984, p. 5.

¹³*Ibid.*

¹⁴Nikolai Portugalov, *op. cit.*

between U.S. efforts to "sell" INF modernization and the more recent effort to "sell" deep attack concepts to the NATO allies. A January 1984 *Moscow News* article reports:

The USA and its NATO partners, confident that the Pershing II and cruise missiles have been accepted in Europe, are now shifting the accent on the development of modernized types of conventional weapons--more powerful and accurate than the old ones. This is a first-strike battlefield tool against the Warsaw Treaty Organization (WTO) troops and their immediate rear.¹⁵

The article goes on to explain how the United States is trying to manipulate the NATO allies into building a "first strike" capability, but asserts that this time the "sham" will be more difficult to accomplish. "The cat has slipped out of the bag much earlier in this case, and the West European antiwar movement has heightened its vigilance."¹⁶

Mr. Portugalov's article was well timed. During this same period (early 1984), the leaders of the Peace Movement in Western Europe were groping for new themes that would generate the kind of mass following seen during the anti-INF campaign. In March 1984, the *New York Times* quoted Jo Leinen, a key figure in the West German Peace Movement's coordinating committee, as stating, "We are not just atomic pacifists." The *Times* went on to report that Leinen was trying to focus discussion on the allegedly "aggressive" strategy embodied in American military concepts such as AirLand Battle 2000, which proposes counterattacking behind Warsaw Pact lines should NATO be attacked.¹⁷

As proof that the U.S. is attempting to sneak something by the German people, the *Moscow News* article notes that, back in 1982, U.S. Army Chief of Staff General Meyer and German General Glanz, Inspector General of the Bundeswehr (General Meyer's counterpart), signed a secret letter of understanding adopting the AirLand Battle 2000 concept

¹⁵*Ibid.*

¹⁶*Ibid.*

¹⁷James M. Markham, "Germany's Anti-Missile Movement Has Lost Its Thrust," *New York Times*, March 11, 1984.

for the defense of West Germany. German sensitivities were aggravated when the existence of the document was reported in March 1983 by the London *Sunday Times*. The German Social Democrats, who were in power at the time the agreement was signed, were angered that their Defense Minister had not been informed of the document's existence. By reminding the Germans of this incident, the Soviets hope to foment the atmosphere of mistrust that currently exists between the political left and right in the Federal Republic of Germany.

Cruising the Two-way Street

The Soviets have suggested that deep attack is yet another attempt on the part of U.S. "militarists" to tie the Europeans to weapons based on U.S. technology. This is another theme which is likely to strike a responsive chord in Western Europe. The European allies are concerned the AirLand Battle doctrine will cause the balance in the transatlantic arms trade, the so-called "two-way street," to become even less favorable to the Europeans because of the American lead in guided weapons technology. A February 1984 *Pravda* article suggests the chief beneficiary of the AirLand Battle concept will be the California defense industry.¹⁸ To buttress its point, *Pravda* quotes the German magazine *Der Spiegel*:

Europe would protect itself [under the AirLand Battle concept] not with nuclear but with ultra-modern U.S., and for the most part, California-made electronic weapons.¹⁹

Pravda goes on to suggest that the United States is more interested in generating sales for its "manufacturers of death" than enhancing European security. *Pravda* also has an explanation why the United States is not living up to its part of the bargain to promote the two-way street:

¹⁸Yu. Kharlanov, *op. cit.*

¹⁹*Ibid.*

All at once, the Pentagon declares all this [Europe's new generation of conventional weapons systems] is "obsolete," its technologists have apparently invented a "new generation" of weapons whose secrets they do not intend to share with the West Europeans. All right, the West European military concerns argue, but at least buy the classic type weapons that we produce. However, Washington is not even promising that.²⁰

Of course, *Pravda* remains silent on the recent successes of the two-way street, such as the Rapier and Roland air defense purchasing agreements and the procurement of an Italian automatic pistol as the new standard sidearm for the U.S. military.

For the time being, it does not appear that the Soviets intend to go beyond their current propaganda campaign in attempting to encourage NATO to forgo ET systems. They probably are satisfied that the main arguments supporting Soviet objectives already have been inserted into the European debate. In addition, it is likely they have concluded that a more concerted effort to influence the Europeans would be a risky venture at this particular time. Because deep attack does not involve nuclear weapons, Moscow is probably less optimistic about its ability to evoke the kind of strong visceral reaction from the European Left needed to carry the day. Additionally, the timing for a more direct Soviet campaign against ET is inopportune because of the ascendancy of the debate over "Star Wars." The European debate over deep attack, for the time being, has taken a back seat to the debate over President Reagan's Strategic Defense Initiative. Nevertheless, the option of a much larger campaign that might involve direct political pressure remains a possibility for the future.

²⁰ *Ibid.*

V. CONCLUSIONS

The Soviets have listened to the claims being made by Western advocates of ET weaponry and apparently have accepted these claims with more enthusiasm than has been displayed by many in the United States and Western Europe. As a consequence, the Soviets have decided to defend themselves against this new threat to the best of their abilities, while at the same time striving to acquire their own versions of ET weapons. Although the first of these two tasks is within the capabilities of Soviet military planners, the second represents a more serious challenge--because of Soviet deficiencies in the specific technologies which make ET weapons possible.

What, then, are the implications for the United States and its NATO allies? First of all, the fact that the Soviets have expressed concern about ET weapons should not be construed as an endorsement of any of the currently proposed systems or any of the deep attack employment concepts. From the tone of their commentary, it appears the Soviets are more concerned with the long-range implications of the technology than they are with any particular weapon.

Second, given the West's lead in this area of weapon development, we would be well advised not to squander it. Soviet perceptions of the importance of ET weapons make it certain Soviet purchasing and intelligence agencies will make the acquisition of the requisite technology a matter of high priority. Given their history of success in acquiring key military technology from the West, it would be imprudent to assume that they will not achieve further success.

Third, any reconnaissance, C³I, or attack systems we develop for deep attack must be resistant to Soviet countermeasures. There is little utility in fielding expensive systems if they can be spoofed by inexpensive camouflage and deception techniques, electronically defeated or blinded, or decoupled by the destruction of a handful of critical command and control nodes. This may be an obvious point, but, since the Soviets have already announced their intentions in this matter, we should make their task as difficult as possible.

Finally, the fielding of ET-based weapon systems could have implications on future East/West arms negotiations. As indicated earlier, the Soviets already have raised the issues of verification and tactical warning. To minimize these potential problems, it would be useful to ensure that future ET weapons are distinct from their nuclear counterparts, in terms of both their physical appearance and their flight profiles.

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