The Director of Central Intelligence

Washington, D.C. 20505

National Intelligence Council

NIC #03141-84 30 May 1984

MEMORANDUM FOR: Director of Central Intelligence

Deputy Director of Central Intelligence

VIA

: Chairman, National Intelligence Council

Vice Chairman, National Intelligence Counci

FROM

SUBJECT

: Major General Edward B. Atkeson, USA

National Intelligence Officer for General Purpose Forces

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: The Evolving Warsaw Pact Threat in Context

1. On 30 April, during our return flight from MacDill Air Force Base, I summarized for you the briefing I had previously provided to Ambassador Abshire and his staff in Brussels. You expressed interest in the topic and asked that I prepare a paper on the subject for possible use elsewhere.

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2. The attached typescript outlines the evolution of Soviet military thinking over the last two decades and points out significant continuities and discontinuities in the process. It also speculates, to some extent, upon the sorts of developments which we may see in future Soviet forces development and identifies constraining factors.

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3. The paper has not been formally coordinated within the Intelligence Community, and while issues have been discussed with knowledgeable individuals in the Community, the paper is best considered "an NIO's perspective."

Attachment: As stated

Regrade this memorandum CONFIDENTIAL when separated from attachment

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SECRET



THE EVOLVING WARSAW PACT THREAT IN CONTEXT (An NIO's Perspective)

The purpose of this paper is to review the evolution of Soviet and other Warsaw Pact military forces in order to identify patterns, continuities and discontinuities illustrative of broad trends in Soviet military thinking and to outline likely future force objectives and capabilities. The paper is primarily concerned with Soviet general purpose forces; however, these forces exist in context of the totality of Soviet perceptions of their military requirements. Hence, the review encompasses other force elements as necessary.

To understand the basic Soviet approach to defense matters we must recall the historic Russian penchant for mammoth land armies--dating back to the Czars and to their early Soviet successors. World War II--the "Great Patriotic War", in Soviet parlance--confirmed for them the essentiality of huge forces for slowing and eventually defeating the qualitatively superior armies of Nazi Germany. Soviet losses in the struggle were immense, but ultimately numbers began to tell, and the historic Russian faith in large, mass troop formations in the field was vindicated. The principle of numbers runs deep in Soviet strategic thinking.*

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^{*}In a postscript to his revised projection of World War III, Sir John Hackett portrays the Soviet Defense Minister commenting to a colleague after the war, "Using all we had was in the Russian traditional mode of making war." The hypothetical remark is apt.

The latter 1950's witnessed a significant deviation from this principle under Premier Khrushchev. Many political leaders around the world were impressed with the last-word-on-the-battlefield aspect of the nuclear weapon, and Khrushchev was no exception. Just as US conventional forces were pared down under the "New Look" of the Eisenhower Administration, Khrushchev cut the size of Soviet forces by some two million men, gutting large sections of the army. In their place he created a new arm, the Strategic Rocket Forces (SRF). The atomic weapon was seen as the instrument of decision, while the role envisioned for conventional land forces was scaled down to one primarily for maintenance of security over subject peoples in satellite territories and exploitative actions on the battlefield in the wake of nuclear strikes. In accordance with this thinking, the Soviets continued to maintain large troop formations in Eastern Europe, opposite NATO, but forces in the USSR were reduced drastically.

At approximately the same time that these reductions were being made, there was a strong movement within the Red Army for modernization and mobility. Marshal Zhukov, as Minister of Defense, and his successor, Marshal Malinovskiy, pressed for mechanization of the infantry divisions. With the emphasis on nuclear warfare, the most feasible way of providing for troop survival and exploitation of nuclear strikes was to mount the troops in armored personnel carriers and to teach them to line the floors of their vehicles with sandbags to protect them from radiation as they delivered quick thrusts across contaminated terrain. The tank was seen as a natural player in nuclear war. It offered mobility and firepower together with armor protection from blast and radiation. The numbers of tanks in the tank divisions were

increased, and the new motorized rifle divisions received large allocations of the vehicles.

At sea, Stalin had hoped to build a large, ocean-going fleet. These plans were shelved. Khrushchev saw the SRF as the decisive arm, and restricted the navy to modest contingents capable of dominating the Baltic and Black Sea basins and protection of the Soviet coasts. Within the naval program, Khrushchev emphasized missile-bearing submarines and small surface combatants, supported by land-based aircraft.

The major turning point in this excursion from the traditional path was the Cuban Missile Crisis of 1962. US naval and air superiority in the Western Hemisphere, coupled with general strategic strike superiority, proved too dangerous a combination for the Soviets to challenge. Khrushchev's dream of achieving significant military leverage on the cheap collapsed. The public humiliation which the Soviets sustained prompted Deputy Foreign Minister Kuznetsov to make his famous statement that the Kremlin would never be caught like that again. And so it has not.

Khrushchev, himself, could not survive the aftermath of the crisis. He had not only engaged in risky confrontation at great distance from the homeland, he had undertaken his excursion without regard to the historic principle of mass--"correlation of forces," in Soviet terms. He had to be removed. With his departure, the Soviets began the great buildup of forces which has transformed the USSR into a military power second to none in the world today.

It is quite possible that the great Soviet investment in military wherewithal might have leveled off some years later at a point considerably below its current standing, had it not been for a second major impulse generated by the Sino-Soviet break. Soviet awareness of the vulnerabilities of their long line of communication to the Far East along the Transiberian Railway greatly stimulated the growth of forces in that region. Today over 50 Soviet ground divisions and almost as many frontal aviation regiments are deployed in Mongolia and in military districts facing China. This amounts to between a quarter and a third of all Soviet ground and air forces designed for theater combat.

For at least the first 10 years of this buildup--until the mid 1970's-the Soviets clung tightly to a doctrine of the inevitability of nuclear
exchange in war between major powers. Marshal Malinovskiy argued that such a
conflict would be a final settlement of accounts between the great political
camps and that the most vital interests of each would be at stake. Under
these circumstances, he asserted, it was unimaginable that either side could
accept defeat without resort to the ultimate arbiter: the nuclear weapon.

On the one hand, particularly among Soviets who feared that nuclear war was inherently boundless, this belief stimulated interest in Khrushchev's concept of peaceful coexistance and in detente. The potential destructiveness of nuclear war was obvious, and in the view of many it tended to relegate existing differences between the USSR and the US over such sticky issues as Vietnam and the Middle East to a second order of importance. On the other hand, the doctrine spurred Soviet efforts to expand their nuclear arsenal to unprecedented levels and to explore in detail theories of nuclear warfighting,

survival and victory. What had been (and largely continues to be) considered virtually unthinkable in the West became a subject for intensive scrutiny and for innovative adjustment of forces and techniques for survival of essential elements of society in the Soviet Union. Under the aegis of the legitimacy of superpower strategic equality, codified in SALT, the Soviets strove to match the US at the highest level of potential conflict.

A third major spur to Soviet force development occurred in the late 1970's with the emergence of the Persian Gulf and Southwest Asia as a potential theater of East-West conflict. Previously a quiet military backwater with modest garrisons of largely ill-equipped, low readiness forces, the Soviet Southern Theater of Military Operations (today including first line forces deployed in Afghanistan) has grown in prominence. Soviet forces in the theater now include some 30 ground maneuver divisions and almost 2,400 tactical aircraft of all types, with rapidly expanding concepts for offensive operations threatening Eastern Turkey, Iran, the Arabian Gulf States and Pakistan.

The Soviet venture into Afghanistan has reinforced the trend. In addition to combat elements, the occupation and efforts towards pacification have generated increasing requirements for security forces, enhanced logistical support and new command and control apparatus. And there appears little prospect for reversal of the Soviet effort.

To understand the Soviet perspective of the conflict, we need to view it in context with Russia's traditional quest for security through expansion and hegemonism on the Eurasian Continent. The nature of the Soviet regime

provides a resiliancy to its policies when the security of the state is perceived to be at stake. Soviet frustrations and setbacks notwithstanding, the military situation is probably deemed to be manageable, and few incentives for withdrawal are apparent. Barring an internal crisis or collapse in the USSR, we must consider that an eventual settlement or the evolution of a modus vivendi satisfactory to Moscow is a likely denouement.

Acutely aware of the complexities of relationships among the growing number of nuclear powers and potentially shifting alliances, the Soviets sought unquestionable continental nuclear dominance. As their technology permitted, they pressed vigorously ahead with development of a new, intermediate-range nuclear system, the SS-20. This weapon promised to provide them at once with accurate, multiple target strike capabilities and the survivability of mobility. It also offered the advantages of reload and refire design. It could reach the homelands of all of the potential enemies of the USSR in the Eastern Hemisphere and was essentially immune from restrictions under existing or pending strategic arms limitations accords with the United States. In essence, it offered a formula for capturing the Eurasian-strategic "high ground" without necessarily upsetting the superpower balance. It was an important milestone in the development of Soviet forces for theater and hemispheric security, as perceived from Moscow.

Beginning in 1977 the Soviets have deployed 42 SS-20 missile regiments with some 380 mobile launchers and over 1,100 warheads throughout the USSR. Citing US counterdeployments of Pershing II and cruise missiles as the reason, they have broken a self-imposed moratorium on deployments, and appear bent upon fielding as many as 150 more launchers over the next few years. This

growth has not significantly affected the total number of Soviet IRBM/MRBM deployments, as the Soviets have pursued a policy of removing their older SS-4's and SS-5's as they have proceeded. There has, however, been a substantial increase in the number of warheads.

A significant related move at the next lower, "operational-strategic," level has been the deployment of SS-12/22 SCALEBOARD missiles from bases in the Soviet Union to new forward posts in Eastern Europe. While political factors may have been dominant in precipitating the move, the military advantages of the shift are important. With a range of over 900 km, the weapons can now reach targets in England and France from garrison positions. Not only does the shift reduce warning time, but (at least in Western eyes) it facilitates their employment in a theater nuclear conflict by removing them from the Soviet Union, which, under some scenarios, might remain a privileged area as long as no nuclear strikes were launched from there.* The accuracy and effectiveness of the SCALEBOARD are being enhanced as conversion from the SS-12 missile to SS-22 progresses.

Further down in the structure, at <u>front</u>,** army and division levels, other important changes are taking place. Several of the SCUD missile regiments at <u>front</u> and army level are being converted to a new system, the SS-23, with almost double the range and accuracy of the older system. In the meanwhile, the number of launchers in each of the three <u>frontal</u> brigades is

^{*}The Soviets may not recognize this refinement. They make little distinction between tactical and strategic nuclear warfare where the superpowers are involved. (See Marshal Ogarkov's remarks, p. 9.)

^{**}Front is an echelon of command generally equivalent to NATO's army group.

being more than doubled, from 12 to 27. At division level, the familiar free-rocket-over-ground (FROG) is being replaced by a guided missile system, the SS-21, again, doubling the range and accuracy.

Possibly most significant of all is the proliferation of nuclear artillery systems among Soviet ground forces. First came deployment of the nuclear capable 203mm self-propelled (SP) gun in the Group of Soviet Forces Germany (GSFG). Next was the deployment of a nuclear capable 152mm SP gun, the 2S5. Now it appears the Soviets may be developing a nuclear shell of 152mm caliber which could be fired from virtually any weapon of that size, greatly surpassing in numbers NATO's ground tactical delivery systems.

The total impact of these developments in the nuclear area is a matter of major importance. In a few short years the Soviets have achieved:

- o Strategic nuclear parity with the United States.
- o Eurasian-strategic nuclear superiority over all combinations of hemispheric competitors.
- o Probable tactical nuclear parity (and a prospect for early superiority) with respect to NATO. There has never been a question of Soviet nuclear supremacy on other fronts.

These developments come on top of the Soviets' traditional conventional superiority. They demonstrate a clear intent to develop effective escalation control in their warfighting capabilities. We must conclude that their goal

is to build and maintain a capacity for fighting successfully at virtually any level of conflict.

Our knowledge of evolving Soviet operational and tactical concepts confirms this judgment. Beginning in the mid 1970's more and more discussion of conventional phases of conflict became the norm in Soviet journals. More frequently, Soviet exercises featured extended periods of conventional hostilities. Nuclear conflict did not fade from their consciousness, but it no longer enjoyed the inevitability which Malinovskiy attributed to it. Conventional conflict, they came to believe, lent itself to far fewer risks and was more readily calculable for the determination of their precious "correlation of forces" than was nuclear war. At the theater level the Soviets became far more comfortable with conventional operations, and they recognized the advantages they would enjoy if conflict could be contained at that measure of intensity.*

More recently, Marshal Ogarkov, Chief of the Soviet General Staff, advanced this thinking one step further. In an interview in the military journal, Red Star (8 May 1984), the Marshal remarked that qualitative changes in conventional munitions, including longer range delivery systems, more accurate terminal guidance and greater lethality are bringing these weapons closer in effectiveness to nuclear systems. He inferred that these changes

^{*}This view of Soviet thinking has been challenged by Ilana Kass and Michael Deane of the Advanced International Studies Institute, Bethesda, Maryland, and Georgetown University. Relying primarily on a 1982 Soviet monograph, Tactical Maneuver, by Colonel F. D. Sverdlov, they argue that the nuclear weapon is an integral instrument of the Soviet concept of the battlefield. In the opinion of NIO/GPF their argument is overdrawn.

will "inevitably" change wars by placing more emphasis on improved conventional munitions and techniques.

The Marshal dismissed the notion of limited use of nuclear weapons as "Utopian" and supported by "no foundation whatever." Any limited use of nuclear weapons, he said, would "inevitably lead to the immediate use of the whole of the sides' nuclear arsenal."

He evidenced little more respect for the military utility of strategic weapons. While strategic aresenals are increasing, he argued, the ability of either side to inflict a disarming strike upon the other is decreasing. Each side has many times the number of nuclear weapons it needs to destroy all the important targets in it's opponents' territory. It is clear that in his view the most interesting areas of future military development lie in the sphere of high technology conventional arms.

Still another dimension which the Soviets apparently considered in the past, but have essentially set aside in recent years is large scale chemical warfare (CW) out of context of other weapons of mass destruction. Until the mid-1970's the Soviets may have viewed chemicals as offering some degree of counterweight to NATO's nuclear dominance at the tactical level, but it is doubtful that the attraction of CW was ever as strong to the Soviets as imagined in the West. Chemicals have many unpredictable properties, not least of which is the form of retaliation which their use might provoke from a modern, well equipped adversary. Soviet efforts to develop a robust decontamination capability has often been cited as evidence of an inclination toward CW on their part. However, it should be noted that decontamination

units would still be essential to the Soviets on a nuclear, but non-chemical, battlefield, particularly in view of the traditional NATO tactical nuclear advantage. Nuclear and chemical decontamination require essentially the same procedures and equipment. Further, we must consider the fundamentally antithetical nature of CW (or BW, for that matter) to Soviet concepts of manageable, predictable "correlatable" war. The compatibility of CW/BW with Soviet operational doctrine is low.

Soviet ground operational concepts have long emphasized a need for speed. As long as nuclear conflict was considered the norm, battle was seen as an intensive, destructive spasm, to be delivered and concluded as rapidly as possible. Any prolongation of the battle in the west was perceived as an advantage to NATO as it would afford time for the Alliance to organize and bring its superior resources into play. Large armored formations afforded the means for meeting Soviet objectives. With the evolution in Soviet thinking of the possibility of conventional hostilities, the need for speed assumed even greater importance. Marshal Orgarkov pointed out in the early 1980's that front level offensive operations in World War II were often separated by pauses of from five to seven days, and sometimes more. These were necessary to resupply the forces, to consolidate the gains, and to prepare for the next major offensive. Now, he said, there can be no pause; there must be continuous operations. The enemy must be given no respite. A major concern was that the enemy might have time to regroup his forces and perhaps to launch counterstrikes. More cogent, however, was a realization of the risk that a nuclear armed enemy would be afforded time to develop targets, to discuss and to reach decisions regarding the use of nuclear weapons. However confident the Soviets may have been that in time they might build a true tacticaloperational nuclear superiority, they clearly understood that escalation of a conventional conflict to theater nuclear level would introduce high uncertainties, as well as intensifying the rate and extent of damage.

The Soviets make little differentiation in their writings between theater and strategic nuclear war, as is so often done in the West--particularly the US. This is partially due to their continuing inability to gauge with confidence the likely outcome once the use of nuclear weapons is initiated and partially to their sense, as Europeans, that the US might escape the penalties of nuclear war in Europe while they might not. In all of their planning they seek a high degree of assurance that a given force applied against a given foe will attain predictable objectives. Their professional training is strongly oriented toward mathematical calculation of battlefield factors. Where their determination of the correlation of forces is not heavily in their favor they seek to avoid action and to focus energy on the correction of the balance. Theater nuclear war remains a sort of "wild card" with which they remain uncomfortable. That is why escalation control is so important to them.

One technique they have developed to maintain the continuity of their attack is the Operational Maneuver Group (OMG). This is a high-speed exploitation force designed to operate deep in enemy rear areas. The force is rich in armor, mobile air defense, helicopters and self-propelled artillery. At the army level a division may be used for this purpose. At <u>front</u> level it might be an independent corps or perhaps an entire army. In any case, the concept adds great continuity to operations and is designed to insure that the defender is given no pause for regroupment or resupply. The OMG provides a relentlessness to the offensive which is intended to bring the entire conflict to a conclusion as rapidly as possible.

The Soviets have formed three new independent corps by beefing up and restructuring existing divisions to create organizations with flexible brigades as the major internal maneuver control units rather than the more rigid regiments we find in the divisions. These corps may have been used as OMG's in exercises, but we should not conclude that the OMG is necessarily to become a designated entity among Soviet ground forces. On the contrary, the OMG appears appears to be as much a frame of mind as it is a military force. It is predicated on the exercise of judgment and skill on the part of field commanders to seize opportunities for achieving maximum effectiveness from their forces.

However, the OMG is a demanding concept and we have some doubts that the training of Soviet commanders, their C³I structure, logistical arrangements, and air defense are presently up to these requirements. OMGs have their vulnerabilities as well as their advantages—they appear particularly susceptible to ground attack on the flanks and attacks from the air. As OMGs might achieve local successes by penetrating deeper, they would incur greater liabilities—stretched lines of communications, long flanks, and separation from friendly fire support and air defense. A key matter, of course, would be the quality of leadership, because shortcomings in that area in highly fluid tactical situations could prove catastrophic.*

^{*}Almost the antithesis of the Soviet approach to troop leadership is the West German concept of <u>auftragstaktik</u>, heavy reliance on the initiative of subordinate commanders and non-commissioned officers. German leaders are trained to act first and to report back later. The Soviets are more comfortable with frequent status reports and continued supervision from above.

Another concept the Soviets are experimenting with is the Reconnaissance Strike Complex (RSC), a technique for operationally linking tactical aerial reconnaissance assets with long range artillery and missile systems. The idea is similar in some respects to the US Airland Battle doctrine for looking and striking deep behind enemy front lines. We can assume that the principal focus of Soviet interest is essentially, as Marshal Ogarkov has described, to marshal the benefits of emerging technologies to substantially enhance the effectiveness of weapons in the conventional realm. We can also assume that the opponents' nuclear delivery systems will continue to be priority targets, but we must consider that the projected US assault breaker class of weapon will loom large in Soviet eyes as they draw up their target lists. The assault breaker, which Marshal Ogarkov undoubtedly had in mind, is intended to attack the second echelon forces of the Warsaw Pact. In any event, the purpose is clearly to enable the Soviets to impose their ceiling on our options—in a sense, to contain us operationally.

We cannot be sure just yet what possible connections there might be between the OMG and the reconnaissance strike complex. Obviously, both are designed to add great depth to the battlefield. Whether the Soviets see these forces working together as a team, in the manner one would expect under our Airland Battle concept of "see deep/strike deep," we do not know. The Soviets cannot expect NATO to deploy as many combat forces in its rear areas as the Warsaw Pact would with their second and third echelons. The situation is not symmetrical. The Soviets follow our conceptual developments very closely, so they are not working up their tactics in a vacuum. But we cannot assume that they are simply mirror-imaging our concepts. They have their own purposes in these initiatives. We will have to watch them carefully as their ideas mature.

There is a continuing vigorous growth in other aspects of Soviet theater force structure. They have about four million men under arms, not counting internal security, railroad and construction troops. The army is largely disposed in some 212 divisions, deployed throughout the country and in Eastern Europe, Mongolia and Afghanistan. For the past several years they have been adding some four new divisions to the structure each year--many of them essentially equipment pools with few combat personnel, and most have been deployed in areas that are not a direct threat to NATO.

In Central Europe, in the NATO guidelines area, Warsaw Pact forces outnumber NATO forces by about 150,000 troops, and possess about three times the number of tanks, artillery pieces and armored personnel carriers. Their edge in tactical aviation is about two to one. Even the Czars might have been comfortable with these ratios.

But the Soviets are not. They are continuing to add formations to their structure and to beef up existing units. They are reorganizing their forward deployed divisions at a rapid pace: they are upgrading the divisional helicopter detachments to squadron size, adding tanks to the reconnaissance sections and upgrading the artillery contingents in the regiments from battery to battalion size. This will triple the amount of direct artillery support available to the maneuver units. However, thus far it does not appear that manpower authorizations for the forward units have been raised commensurate with the equipment augmentations. Demographic problems may be catching up with them. The practical effect of this has been to lower the apparent readiness of many units. Paradoxically, other than the forces in Afghanistan,

there are now no Soviet tank or motorized rifle divisions maintained at or close to full authorized manning. Divisions in the forward area, for example, range in strength from 85% to 90% of their wartime requirements for manning. Also, in recent months it appears that the motorized rifle regiments in many tank divisions have only two battalions, instead of three. This development might also be driven in a fair measure by manpower considerations.

Another important area of force enhancement is air defense. We now see an almost continuous belt of interlocking SA-5 batteries located in East Europe. This serves both to afford a measure of safe haven to Pact airfields in the east and to project the air defense umbrella well to the west to provide coverage for offensive forces without having to displace forward in the initial stages of a campaign. Beneath this mid to high altitude cover, Pact units can maneuver, relying upon their organic air defense assets for low level protection. The forward deployment of SA-5 batteries also has important indications and warning implications. The West counts heavily on detection of mobilization and forward movement of forces for warning of hostile intent. The more the Soviets can accomplish from their peacetime locations, the fewer preparations there are to detect in time of crisis.

Looking slightly ahead, we should also note the SA-X-12 system, now in R&D, which will soon provide a formidable enhancement to the air defense of Soviet field armies. For the first time, Soviet units will have a capability to intercept tactical ballistic missiles as well as manned aircraft. As the SA-X-12's are introduced in the next year or two, it is expected that the present SA-4's will be phased out.

In the armor field the Soviets have recently moved ahead with the deployment of three new varieties of tanks. The T-64B is a missile-firing version of the T-64. The vehicle which NATO has designated 1981/3, previously believed to be the T-80, is apparently a much improved T-72, particularly with its additional turret armor. The T-80, which has now been confirmed in the hands of troops in East Germany, is a gas turbine engine vehicle with a missile-firing capability like the T-64B. The benefit of the turbine engine is to provide a much higher horsepower to weight ratio, permitting additional armor without reduction in performance. In the meanwhile we see some T-72's replacing older tanks in many of the non-Soviet armies. But production programs of the T-72 in Eastern Europe have run into a number of problems and continue to suffer delays.

The Soviet emphasis on missiles for their tanks is unsurprising. The Soviets were very impressed with the effectiveness of anti-tank and anti-aircraft missiles in the 1973 Arab-Israeli war. Since then, we have detected considerable discussion in their military writings about the threat posed to armored forces by precision guided munitions. They apparently realized that they had a virtually "canned" army, and there was some uneasiness that the anti-tank guided missile might be the can opener.

The initial Soviet response was to beef up their artillery to provide heavy suppressant fires upon enemy anti-tank missile positions. They also developed smoke tactics to blind the launcher operators. Now we are seeing, with greater frequency, the mounting of smoke grenade launchers on the turrets of their tanks to provide a protective screen for the vehicles when under attack. Most recently we have detected probable deployment of guided missiles

to artillery units in GSFG which could be used to attack anti-tank missile positions. These weapons may be similar to the US Copperhead laser guided system. This development puts the Soviets about a year ahead in this area of where we thought they were in their R&D program. We expect that they will begin to field battlefield lasers of moderate power in the next year or two. These will probably be capable of interfering with our weapons' optics and of inflicting blinding flashes on unprotected troops.

The T-64's and T-72's were the first Soviet tanks to be equipped with laminated armor designed to defeat shaped charge weapons. The quality and protective value of the armor on later models of tanks has been substantially enhanced. We do not believe that any kinetic energy round now in the hands of western troops will penetrate the new Soviet frontal armor, but we are confident that the improved TOW missile can score a kill from any direction.

In the future we expect the Soviets to experiment with radical changes in tank design. A likely development would be a turretless vehicle or one with reduced turret size to minimize weight and exposed area. Another would be a vehicle with enhanced protection against top-attack weapons, such as the proposed US assault breaker which would eject multiple homing missiles from a larger one overhead.

In the air the Soviets are moving ahead with significant enhancements of their theater strike and battlefield interdiction capabilities and are improving their forces for air-to-air combat. Their theater strike capabilities are being improved by the continuing deployment of SU-24 Fencers into the forward area and by the steady buildup of the Backfire force. Soviet

front-level ground attack capabilities have been improved by the conversion of at least 10 fighter regiments to Flogger-equipped fighter-bomber units. Research and development of these aircraft began in the mid 1970's just as the Soviets began to seriously consider the possibility of conventional war in Europe. It is apparent that a key function for which they were developed is deep strike against enemy nuclear weapons delivery means. We also expect shortly to see the SU-25 Frogfoot ground attack aircraft deployed widely in Eastern Europe. This aircraft, similar to the US A-10 tank killer, has been undergoing field tests in Afghanistan for several years. Also, the MIG-29 Fulcrum fighter and the SU-27 Flanker fighter are expected to enter service this year. These latter aircraft are equipped with look-down/shoot-down capabilities which will enhance Soviet air defenses against low altitude penetrators.

We have recently seen a dramatic exercise of the capabilities of the Soviet northern fleets for rapidly generating their forces at sea. The Soviets have made great strides since Khrushchev's day in raising their navy to first class rank in the world, but we must consider that they have some very special problems. First, they have the problem of geography. They are largely landlocked. Where they enjoy access to the sea they perceive themselves vulnerable to attack by American power projection forces, particularly sea-based air.

They also have a problem of technology. While they have been making progress, they have been unable thus far to achieve submarine quieting approaching that of Western fleets. This tends to inhibit their entering into full fledged competition in the open ocean. Their lack of sea-based air cover, of course, has reinforced this shyness.

Still another problem has been their concern for the safety of their ballistic missile submarines in the initial stages of a conflict, which might be conventional but could turn nuclear at any moment. The Soviets must consider that quieter NATO submarines might stalk their SSBN's and attack them with conventional weapons before they could be usefully employed in the conflict. Their response to this threat has been an attempt to develop secure bastions in waters close to home in which their missile submarines would be protected by other naval forces.

In pursuit of these goals, the Soviets have looked to creation of broad sea areas of denial to western forces, particularly in the central Norwegian Sea and the North Pacific. They want to deny US attack carrier air groups access to their coasts and hostile ASW forces access to their ballistic missile fleet. These factors have been the dominant concerns shaping their maritime forces in recent years.

While these objectives may sound fundamentally defensive in nature, the Soviets have sought ways both to increase their effectiveness and to break out of their strategic cul-de-sac. They have developed new classes of submarines with all-titanium hulls and more powerful propulsion plants. Their Alfa attack submarine is the fastest, deepest diving submarine afloat today, and the double hull design of their boats raises questions about the ability of Western torpedoes to penetrate the protected inner pressure hull. The Soviets have developed a class of aircraft carrier, the Kiev, which can provide rudimentary on-the-spot VSTOL and helicopter support to naval forces at sea or to friendly ground forces operating near the coast, and they are testing a new

model aircraft to replace their Forger. They have built a new class of battle cruiser, the Kirov, which is the largest non-aircraft surface combatant built by any country since World War II. Now they are assembling a very large aircraft carrier at the Nikolaeyev Shipyard which will accommodate conventional, high performance jet aircraft. They may be a long way from having a real power projection force in the western sense, but they are working at it.

Most recently they have been working at the antisubmarine problem from a number of directions. They are vigorously pursuing research in all types of submarine detection—acoustic and non—acoustic. They probably know a good deal about our towed array sensors, having snagged one with a Victor class submarine earlier this year. They are also experimenting with under ice operations. If their SSBNs can regularly count on operating back under the arctic ice pack and breaking through the surface to fire, they will have gone a long way toward sawing off two legs of the Western ASW triad—the surface and air elements. With this approach they can tuck their missile submarines out of the way, stationing attack boats along the edge of the ice waiting in ambush for NATO attack boats to come after them. The more modern Soviet subs are very quiet when they are stationary or moving very slowly.

If this becomes a regular practice, we could see a shift in Soviet tactics. With better protection for the SSBN's, large numbers of their other assets now devoted to SSBN protection could become available for other missions. These could include interdiction of NATO transatlantic shipping or even stronger support to the battle on the continent.

A special note must be taken of the role of the non-Soviet members of the Warsaw Pact alliance. While there are serious questions regarding the political reliability of the states to Soviet interests, we cannot readily discount their participation in a conflict in Central Europe.

The Soviets are highly dependent upon their European allies and probably could not count on success in an attack on Western Europe without participation by the smaller states. The Soviets are aware of this dependence and have taken a number of political and military steps to ensure that the allies are responsive to their desires.

First, we must consider that the Soviets have a great advantage of geography. Caught between the forces of the major powers, and effectively surrounded by Russians, it would be very difficult for Polish, East German or Czechoslovak governments to opt out of a major conflict. These countries face quite a different situation than that of the smaller states in NATO which are located to the rear or on the flanks of the central potential scene of action. Certainly, part of the Soviet strategy in wartime would be to so discourage or to so frighten the political leadership among the smaller partners of NATO that they would wish to become neutrals rather than to risk the penalties of heavy bombardment. Geography makes this option an easier matter for smaller NATO states than for their Warsaw Pact counterparts.

Second, the Soviets have instituted important control mechanisms through the Warsaw Pact structure to make all forces responsive to their orders.

Through political, doctrinal, support and command and control devices they have effectively subordinated almost all of the various national contingents

to the operational directives of the Soviet General Staff. Expecially in the early stages of a conflict it would be difficult for non-Soviet Pact forces to act significantly differently than the Soviets desired. Later on, particularly if the campaign did not progress well, the situation might change. But in the beginning, as the SACEUR has pointed out, it would be difficult for the East European forces to defect or surrender to retreating NATO armies.

Finally, we must consider the very substantial developments in Soviet military power projection capabilities overseas. Soviet ability to exert influence around the world--hence to claim global, or superpower, status--stems largely from these developments. Without them, the USSR would be constrained for most practical purposes to the exertion of leverage around its geographic periphery and to such political benefits as the existence of its strategic forces might provide.

There are three fundamental dimensions to Soviet power projection: military assistance to client states, enhanced capabilities for long range forces, and actual deployments of Soviet forces.

Military assistance programs, currently averaging some nine billion dollars per year in equipment deliveries and 20,000 Soviet advisors and technicians abroad, have grown sharply in the past decade. These programs provide political leverage for the Soviets in the regions affected and contribute to the development of friendly forces. In some cases the client forces may be employed as surrogates for Soviet forces for the pursuit of common goals or as indigenous support or augmentation for Soviet forces

dispatched to or stationed in the area. Cuba is a prime example of a country which has served both in the surrogate and co-operational roles.

In the area of enhanced power projection capabilities, the Soviets have turned to construction of larger, better armed naval vessels, extended operation of naval units in distant waters and to an expanded long range air transport fleet (VTA). In addition, they have exercised extended reconnaissance and bomber aviation operations, and the Soviet merchant fleet has acquired broad experience in delivering military cargos to Third World ports. They have also begun to experiment with in-flight refueling techniques. One of their principal weaknesses in the area of power projection appears to be their continuing lag in force maintainability at long distances. Soviet airborne divisions have undergone substantial enhancement in their combat effectiveness through the provision of BMD armored infantry fighting vehicles, but, paradoxically, this has tended to reduce their strategic deployability. VTA lift developments have not kept pace with moves to "heavy up" the units.

Overseas deployments have not assumed proportions comparable to those of the US, but the Soviets now maintain force contingents of varying size in six different countries. Commitments to Syria, with some 2,000 air defense troops and about 4,000 technical advisors are the most extensive. In addition, the Soviets have an armored brigade in Cuba, some naval infantry and a Badger long range aerial reconnaissance and strike squadron in Vietnam, and smaller detachments in Yemen, Angola, and Ethiopia. Naval commitments to distant waters, especially the Mediterranean, the Indian Ocean and the South China Sea, typically total nearly one hundred ships. One of the most important

aspects of the Soviet trend in foreign stationing has been a dramatic increase in the quality of the C^3I . Their ability to track Western movements and to control forces in distant regions has been substantially strengthened.

In the future, we can expect Soviet military presence overseas to expand as they develop greater confidence in their ability to maintain command and control of increasingly diverse far-flung assets. By the end of the decade they will have launched their first conventional take off and landing aircraft carrier, providing them their first true seagoing air cover. Additional carriers are expected to join the fleet later on in the 1990's, enhancing Soviet capabilities for independent naval and amphibious actions at greater distances.

The totality of Soviet military programs and the evolution of their operational concepts and doctrine convey a clear sense of continued Soviet insecurity and defensiveness. They continue to see themselves ringed by hostile neighbors and baited by a malevolent US. They also appear determined to enhance their stature as a global superpower and as the leader of the "Socialist Camp." They seek unquestionable preeminence on the Eurasian Continent in all measurable dimensions of military power and equivalency with the US at the intercontinental level. Unfortunately, their belief in the importance of numbers in their calculations of the "correlation of forces" gives little cause for optimism for restraint in the future. While economic and demographic considerations may impose practical limits, there is little reason to believe that the Soviet force buildup, now twenty years old, is topping out. The immense growth in cost of high technology air and sea based systems, in particular, may limit the numbers of weapons platforms produced in

the future, but we cannot expect that there will necessarily be any reduction in the share of national wealth or human effort devoted to the military sector. The phenomenon of continued growing Soviet military power is the most likely prospect for the foreseeable future.