August 17, 1978

NATO AND THE STRATEGIC NUCLEAR BALANCE

INTRODUCTION

One of the most significant developments in the history of international relations since the Second World War has been the rise of Soviet military power. No other sequence of events has had such an abiding impact upon our security, the security of our allies, and the security of smaller nations incapable of protecting their vital interests.

Throughout the post-war period, the United States has attempted to come to grips with this problem in a manner which would produce a more stable global environment, while at the same time protecting our national interests from encroachment by hostile powers. The unquestioned strategic nuclear superiority we once held, though never fully exploited, prevented a major strategic assault on the Western Democracies and allowed allies of lesser stature to seek shelter under what has been called our strategic "nuclear umbrella."

However, the credibility and integrity of our strategic nuclear deterrent is becoming questionable due to the emerging capabilities of a most determined Soviet Union. No single problem presents a greater challenge to our standing in the world. No other condition, save civil war, could present our principal adversary with a greater historic opportunity. If, indeed, this problem threatens the very fabric of our foreign policy; then it has no lesser effect on those allies who have

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placed their trust — indeed their survival — in the continued strategic power and ultimate nuclear commitment of the United States. The U.S. must not force these allies to seek protection elsewhere. Yet, the U.S. must not sacrifice its own security, and ultimately that of our allies, while we attempt to reverse the trends now working against us.

PERIOD OF VULNERABILITY

Special studies undertaken by the Department of Defense, The General Accounting Office, and others have indicated that the United States will enter a period roughly described as the "early or middle 1980s" during which the land-based portion of the strategic TRIAD (land-based, sea-based, and air-breathing delivery systems) will be extremely vulnerable to a Soviet counterforce first-strike.¹ This vulnerability emerged due to the Soviet advantage in throw weight which is now combined with accuracies comparable to those of U.S. land-based missiles. The Soviet Union now has deployed a greater number of MIRVed ICBMs, of comparable accuracy and greater yield, than has the U.S. Other studies, such as those completed by the Congressional Budget Office, note that the U.S. possesses no comparable hard-target capability against the Soviet Union. Moreover, the forces designed to somewhat compensate for this weakness, if built, would not be deployed in time to cover the period of projected vulnerability.

The U.S. is thus approaching a period in which several sufficiency criteria in effect for U.S. strategic forces will be nullified or at least severely questioned.² The capability for selective and controlled use of strategic nuclear forces and their ability to execute a wide range of options against soft and hard targets would be substantially weakened if the land-based ICBM force were to be eliminated. The concept of "destructive equivalence" is presently undermined by the absence of a prompt, hard-target capability but would be diluted even more without the ICBM force.

The design and distribution of capabilities within the TRIAD suggests that the deficiencies of U.S. land-based missiles are not compensated for in sea-based or air-breathing systems. Sea-Launched Ballistic Missiles (SLBMs) do not possess an adequate combination of yield and accuracy necessary for use against very hard targets such as missile silos. The strategic bomber leg

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of the TRIAD is incapable of meeting time requirements and is subject to degradation by active defenses.

Above all, the vulnerability of U.S. land-based missiles threatens crisis stability. The object of this criterion has been to present no major force vulnerabilities and to preclude the Soviet Union from any incentive to strike first. A major question surrounding the missions of U.S. strategic forces, posed by President Nixon himself, was whether or not a U.S. president, in response to a limited attack on U.S. strategic forces, should have as his only option urban-industrial retaliation. However, the potential loss of the land-based ICBM force would appear to leave no room for so-called "Limited Strategic Options." One cannot prudently ignore the relative security of Soviet ICBMs, their refire capability, and the likelihood that they would be used in retaliation for a U.S. second strike.

The political effects of this growing strategic asymmetry include more provocative Soviet behavior in the developed and underdeveloped world, and the increasing inability of the U.S. to conclude arms control agreements with the Soviet Union which would effectively limit the threat to U.S. strategic assets and thereby contribute to stability.

There is strong evidence to believe that the Soviet Union may be achieving "escalation dominance" over the U.S. This makes it unlikely that our government could end a confrontation, or terminate hostilities, on terms favorable to the United States. If deterrence were to fail at the central strategic level, the U.S. conceivably would have more to lose than the Soviet Union, since after such an exchange the heart of Soviet strategic forces would have emerged virtually unscathed.

PARITY

It is important to note that the loss of unequivocal strategic nuclear superiority has not occurred overnight; nor has it necessarily taken place against our will. In the very highest levels of government, it was thought that parity would provide a unique opportunity to achieve arms control agreements that would yield no unilateral advantages and could therefore contribute to a more stable strategic environment. Some have

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stated directly that the condition of parity could not have been arrived at without conscious restraint on the part of the United States.

Other trends in international security affairs dictated certain applications of strategic nuclear power which, perhaps, were not well understood. Under the so-called Nixon Doctrine, for example, U.S. allies would assume primary responsibility for their own defense while the U.S. would provide military assistance and, ultimately (in some cases), a nuclear shield. However, in light of emerging strategic realities the relationship between U.S. strategic forces and "extended deterrence" is at best tenuous.

FLEXIBLE RESPONSE

This interface between strategic nuclear forces and their potential application in support of U.S. allies is most apparent in the NATO alliance. The alliance strategy of Flexible Response has remained in force since the mid-sixties. Its theoretical objective has been to employ the three basic components of NATO forces -- conventional, tactical and theater nuclear, and strategic nuclear -- in a graduated fashion according to the level of the attack received. Ultimately, however, the U.S. is committed to the employment of nuclear forces, regardless of the nature of the attack, if the conventional defense is in danger of collapse.

In practice, applied theories of arms control have had the effect of turning Flexible Response into a policy of conventional emphasis. This was the result of assumptions which suggest that nuclear war cannot be limited and that use of any nuclear weapon -- however small -- will cause uncontrollable escalation to the strategic level. Modernization of the tactical nuclear stockpile has been resisted by arms control advocates on the grounds that smaller, more discriminate nuclear weapons would be more "useable", thus lowering the "nuclear threshold" and increasing the likelihood that nuclear war might be considered a viable military option. Accordingly, these advocates emphasize the deterrent value of nuclear weapons and, in Europe, the use of tactical nuclear weapons as a demonstrative link to strategic nuclear forces. It is this intended link between tactical and strategic nuclear forces upon which the allies rely as a sign of our ultimate commitment to their security. However, it is also this so-called "guaranteed link" which must come under increasing scrutiny as the strategic balance, at least for the near future, continues to shift in favor of the Soviet Union.
SOVIET MILITARY DOCTRINE

In their military doctrine and exercises, the Soviets emphasize the decisive role of nuclear weapons for the success of the offensive. They view with disdain Western concepts of arms control and nuclear weapons, and the Soviets describe these concepts as "theoretically incorrect and politically reactionary." The Central Intelligence Agency notes that: "Mutual assured destruction as a desirable and lasting basis for a stable strategic relationship between superpowers has never been accepted in the USSR." Thus, their war-fighting/combined arms doctrine is based on the proposition that nuclear weapons are indeed useable and have supreme political significance. There exists no distinction between those forces used for "deterrence" and those used for "defense."

From the Soviet point of view, the Strategic Rocket Forces are at the top of the weapon hierarchy and are an essential element of modern warfare. Strategic nuclear forces are viewed as the basis for the combat might of the entire armed forces. This applies also to the Soviet's evaluation of U.S. military capabilities.

Strategic nuclear forces are also viewed as the "cutting edge" of what the Soviets describe as the world "correlation of forces." Attainment of strategic nuclear superiority would neutralize the strategic nuclear forces of the United States and preclude efforts to undermine U.S. foreign policy. From the Soviet perspective, then, superiority is a necessary prerequisite to the fulfillment of basic foreign policy objectives (such as the "fundamental restructuring of international relations") which the U.S., as a reactionary and counterrevolutionary power, might otherwise prevent. As Senator Moynihan has observed: "that the Soviets intend to surpass the United States in strategic arms and are in the process of doing so, has gone from heresy to respectability, if not orthodoxy."


The doctrinal relationship between Soviet theater nuclear and strategic nuclear forces is not fully understood except to say that the Soviets would appear to prefer that nuclear warfare in Europe not escalate to a central strategic exchange. This is being pursued in three distinct but complementary ways:

1. The unprecedented development and deployment of strategic nuclear forces which are superior to those of the U.S. in total destructive power and prompt hard-target potential has severely reduced the possibility that the U.S. could benefit from initiating a central strategic exchange, or risk such an exchange, under any circumstances.

2. The expansion and modernization of medium and intermediate range nuclear delivery systems by the Strategic Rocket Forces, Long Range Aviation, and Tactical Air Forces, has enhanced Warsaw Pact theater nuclear capability to such an extent that these forces could conceivably overwhelm NATO's theater nuclear assets before they could be deployed. The mobile MIRVed SS-20, in particular, provides an effective first strike capability against NATO air bases and nuclear weapon storage sites. In addition, the Backfire bomber, longer range/higher payload tactical aircraft and a variety of mobile missiles assigned to the Soviet ground forces (including the new SS-21 and SS-22) give them a spectrum of nuclear war-waging capability in Europe which contributes to their regional and overall objective of comprehensive military superiority. In short, it is no longer plausible to assume that NATO forces possess tactical or theater nuclear superiority in Europe.

3. Quantitative and qualitative across-the-board increases in Warsaw Pact conventional force levels, already recognized as the Soviet's "strong suit," are clearly beyond the requirements for defense. These include new tanks, helicopters, armored personnel carriers, self-propelled artillery, and other major items. The Soviet capability to wage chemical warfare and to conduct offensive operations in a contaminated environment is also undergoing continuous improvement.

These concurrent developments suggest a military strategy which is potentially designed to produce a rapid military victory in Europe with a political settlement on Soviet terms, and to simultaneously deter the U.S. from intervening via the application of its strategic nuclear forces.


In the Soviet mind-set, strategic nuclear war will be avoided if U.S. strategic forces are deterred from resisting Soviet objectives. If deterrence should fail at this level, the evidence suggests that the Soviets are planning to fight and win such a war while limiting potential damage to essential industry and command authorities. Soviet experience in the Great Patriotic War, one suspects, has left them with the impression that post-attack recovery would be difficult, but is indeed possible.

FUNDAMENTAL PROBLEMS

NATO is faced with two fundamental problems. First, the unrelenting buildup of Soviet military power at all levels threatens the territorial and political integrity of its disunited members. Second, and perhaps more importantly, the relative decline in American strategic nuclear power has undermined the credibility of this ultimate U.S. commitment. This applies not only to Europe but to other allies as well. The Shah of Iran notes, for example, that the greatest threat to Iran is "the decline of the West". "It is paralyzed."\(^\text{12}\)

In his annual report, Secretary of Defense Harold Brown emphasized that "We must maintain the links between theater and strategic nuclear forces."\(^\text{13}\) In fact, our projected vulnerabilities appear to dictate that this link, for a period of time, must be avoided at all costs.

Consideration of such policy is warranted since, in the near future, we could not credibly threaten the use of our strategic nuclear forces knowing their limited effects on Soviet strategic forces, and our absolute vulnerability to retaliation should we consider their use against urban-industrial complexes. Our NATO allies have, in theory, been aware of this contradiction but, because of their support for détente and strategic arms limitations, have been sidetracked from what has remained the real issue -- the credibility of the strategic nuclear commitment of the U.S.

The primary tactical problem is to maintain the political-strategic link between the United States and Europe, and to actually defend Europe, while minimizing the threat to the U.S. proper. Surely, it is not intended that we should abandon our allies, but they should realize (and probably do) that the vital

\(^{12}\) Interview, Newsweek, July 24, 1978, p. 56.

\(^{13}\) Department of Defense Annual Report FY '79, p. 71.
interests of the U.S. are of preeminent importance from the American perspective. The possibility of an increase or realignment in U.S. strategic nuclear forces as a response to emerging Soviet capabilities cannot be jeopardized during this interim period by imprudent threats of escalation. In the long run, if parity is to be regained, our allies share an interest in avoiding the foreclosure of a potential strategic recovery. However, our historical, political, and economic experience with Europe suggests emphatically that Europe must not be overwhelmed either physically or politically in the meantime; and further, that the primary concern of our allies is not the strategic recovery of the U.S., but their own survival.

WESTERN RESPONSES

There are a variety of methods and tactics which have been contemplated or devised by Western strategists to counter the threat posed by Warsaw Pact forces. Most will not be covered here. However, it seems appropriate that several general principles should be established which are relevant to the subject at hand. Obviously, the response should meet the threat -- though this is not as simple as it sounds. Also, the response should not risk or precipitate a general nuclear attack on the U.S., nor a limited nuclear attack on its strategic forces. Finally, as a general proposition, we should avoid the single solution phenomenon. Many options (precision-guided munitions, enhanced-radiation warheads, anti-tank weapons, etc.) are available, but no single system will solve all NATO's problems. Each has its own merits, and missions, but none can be substituted en masse for another. A proper mix of conventional and nuclear forces, precision and area weapons, moderate yields and very low yields, would not only be inherently more flexible, but also would collectively enhance the individual effectiveness of each weapon. This, perhaps, is the essence of a combined arms defense. Likewise, a budgeting approach which trades off one capability for another only succeeds in reducing the effectiveness of both.

Faced with increasing Warsaw Pact capabilities, the Administration has chosen to prop up NATO's conventional forces. Some apparently believe that nuclear war can be avoided if the conventional defense is strong enough to resist aggression without resorting to the use of tactical or theater nuclear weapons. However, the conventional emphasis approach appears misdirected because it does not address the possibility -- even the likelihood -- that the attack will not be conventional in nature. Given the nuclear emphasis in Soviet military doctrine and exercises, we should be asking ourselves: If the Soviets were
committed enough to launch a major attack on Western Europe, why would they leave the choice of weapons -- indeed, the most decisive weapons -- up to NATO? As Secretary Brown notes: "We must plan for the possibility that the Warsaw Pact, rather than NATO would be the first to use nuclear weapons."\(^\text{14}\)

The most compelling argument in favor of the efficient and integrated use of tactical and theater nuclear weapons is their ability to deter and defend against a combined arms nuclear offensive in which a conventional defense would have no chance of success and a central strategic exchange would be inappropriate. However, the possible use of tactical nuclear weapons by the U.S. and its allies is undermined by very unconventional strategic concepts which emphasize the image of "uncontrollable escalation". Conceptually, tactical and theater nuclear weapons could never be used if nuclear war is really "unthinkable". Extraordinary security precautions to prevent unauthorized use or terrorist attacks, though certainly justified, also make nuclear weapons difficult to use; and by grouping them in storage facilities, we have rendered these weapons vulnerable to pre-emptive attack. Finally, if they survived an attack, and then were released by the President, many would not be used because their collateral effects would be detrimental to friendly territory and assets.

In assessing the role of tactical nuclear and theater nuclear weapons in an environment of strategic parity or (more to the point) vulnerability, attention should be focused on the ability of these systems to meet the local or regional threat without inducing undesirable escalation to the central strategic level. These systems, appropriately configured, could contribute to stability by increasing the effectiveness of a forward defense and sapping momentum from the attack. Requirement for modern tactical and theater nuclear forces include: survivability (with emphasis on dispersal, forward deployment, and mobility); survivable and secure command, control, and communications; a capability for flexible options; and low collateral effects.

THEATER NUCLEAR SYSTEMS

The U.S. and other members of the NATO alliance maintain a range of tactical and theater nuclear systems. Offensive systems are listed below:

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<th>Short Range (to 100KM)</th>
<th>Medium Range (to 1000KM)</th>
<th>Long Range</th>
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<tr>
<td>- 8&quot;</td>
<td>- Pershing</td>
<td>- F-111</td>
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<tr>
<td>- 155mm</td>
<td>- F-4</td>
<td>- Vulcan (Brit.)</td>
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<tr>
<td>- Lance</td>
<td>- F-104</td>
<td>- Polaris (Brit.)</td>
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\(^\text{14. Ibid.}\)
Many of these systems are becoming outdated and require modernization. Even without the disturbing buildup of Warsaw Pact nuclear capabilities, modernization of our tactical and theater nuclear forces would be necessary to meet the requirements listed above.\(^\text{15}\)

The distribution of effort among these systems is also significant. While exact numbers remain classified, the distribution of tactical and theater nuclear forces remains relatively weighted towards shorter range systems.\(^\text{16}\) Additional resources would appear necessary to develop a more balanced theater nuclear force structure. Concluding an analysis of Soviet theater nuclear warfare systems, Secretary Brown states: "NATO and the United States have hardly any forces with characteristics substantially comparable to this capability on the continent of Europe."\(^\text{17}\)

The U.S. currently attempts to compensate for this asymmetry by dedicating resources from the U.S. Single Integrated Operational Plan. In particular, POLARIS/POSEIDON and MINUTEMAN forces have reportedly been earmarked for use by NATO in the event of a general nuclear release. There are two problems which are now becoming readily apparent. First, employment of U.S. land-based missiles for Europe -- even if limited in amount and directed solely against Warsaw Pact forces -- would risk a counterforce response by the Soviet Union which we should be trying to avoid.

Second, use of POLARIS/POSEIDON is hampered by yields of about 40KT or more -- generally insufficient for hard-point strategic targets, but too large for discriminate use in a theater nuclear role. POSEIDON's ability to perform limited options is also constrained with ten re-entry vehicles (RVs) atop each missile. The POLARIS A-3 missiles also pose a tactical/theater collateral damage problem with their 200KT yield and three RV "foot print."

Depending on the outcome of the current SALT II negotiations, ground-launched cruise missiles (GLCMs) may contribute significantly to the augmentation of theater nuclear forces in Europe. However, there are problems and limitations which must be faced: a hostile air defense environment will challenge inflight survivability; a basing concept has yet to be firmly established;

\(^{15}\) Department of Defense Authorization for Appropriations for Fiscal Year 1979, hearings before the Committee on Armed Services, U.S. Senate, 95th Congress, 2nd Session, April 5 - May 8, 1978, pt. 9, p. 6548.

\(^{16}\) Ibid.

\(^{17}\) DOD Report, p. 69.
and a warhead has not yet been chosen. To some degree these problems exist because the mission of GLCM may be somewhat undefined.\(^{18}\) Finally, the TOMAHAWK (the GLCM now under consideration) is also a candidate for the ALCM, and a decision to produce the same basic airframe for both missions will impact directly on the nature and capabilities of potential strategic and theater nuclear forces.\(^{19}\)

Against fixed targets which are time-urgent, a ballistic missile has a significant advantage over sub-sonic cruise missiles due to its shorter time of flight. The present land-based ballistic missile systems in Europe appear to have only limited deterrent value because of their relatively short range. In addition, current systems -- though "mobile" in the technical sense -- have low in-place survivability due to a high rate of time-on-station.

In light of these gaps in NATO's theater nuclear force posture (which exist today and will become even more pronounced with the expected loss of a U.S. strategic nuclear option for Europe), the development of a mobile medium-intermediate range ballistic missile (MMIRBM, also known as project "Longbow") is now under consideration within the Department of Defense and NATO. The development of this program deserves the closest attention of the Congress for two major reasons. First, the concern of the Congress for the future of the U.S. land-based deterrent, when translated into programs and appropriations, should not ignore the effect of our strategic predicament on the NATO alliance. The MMIRBM is required to provide more balance to NATO's theater nuclear posture. In doing so, it gives more credibility to the spectrum of theater nuclear deterrence, and provides the alliance leadership with a viable option in the event deterrence fails. An overall effort designed to affect a change in the present trends of the strategic balance must include short- and medium-range options which will shore up U.S. defense posture abroad as well as at home.

Second, preliminary indications suggest that the FY80 defense budget will be very tight. Under stringent FY80 guidelines, some would question the President's ability to meet his pledge of 3% real growth per annum for NATO. New programs may be out of the question. Yet, while the costs of a new MMIRBM or a substantially modified PERSHING II remain unclear, they must remain in perspective to other costs. PERSHING II modifications represent about 20% of the FY79 TNF budget. Total appropriations (RDT&E, Production, and Procurement) for TNF in FY79 will be around $432 million -- about one-third of one percent of total DOD TOA.\(^{20}\) In addressing the root

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19. Ibid., p. 6625.

20. Ibid., p. 6600; DOD Report FY79.
cause of this entire problem, those concerned should note that strategic nuclear forces account for less than eight percent of the DOD budget. An alliance strategy in which the U.S. nuclear commitment plays such a prominent part would appear to demand more emphasis on U.S. strategic nuclear forces than can be found in the present budget.

ARMS CONTROL CONSIDERATIONS

It will be argued by some that it is possible or preferable to reach an agreement whereby the United States and the Soviet Union could set equal limits on the deployment of MMIRBM systems -- or even ban such systems altogether. The Soviet Union, it will be argued, would be giving up a system already built; and such a ban would eliminate the requirement for a similar system by the U.S. Limiting the SS-20, some will say, would reduce the threat to "manageable" -- perhaps even "acceptable" -- levels. It is possible to anticipate several problems which might arise in conjunction with such negotiations.

First, the fact that the Soviets have already deployed the SS-20 makes it unlikely that they would dismantle or seriously impair its effectiveness. Even so, the Soviets may enter into negotiation with the intention of postponing the development of a MMIRBM system for NATO. Experience suggests that the length of such negotiations could be indefinite and that the outcome may not be truly definitive or necessarily in our best interests.

Such "one for one" agreements, generally, have no relation to the asymmetries which exist between military doctrines and strategies. Even with equality in numbers, the advantage is likely to favor the aggressor; and it would not mitigate the geographic advantages maintained by the Soviet Union were some "withdrawal" to be arranged. Finally, an agreement similar to that above would not address those tactical or strategic problems which are the object of this paper.

In sum, we should not be interested in a MMIRBM system only because the Soviets have one, or because we need a "bargaining chip" in negotiations which might limit theater nuclear systems. Our interests in such a system lay in fundamental NATO requirements -- to deter theater nuclear war if possible, to survive a preemptive theater nuclear attack if necessary, to prosecute a vigorous defense across a broad range of capabilities while limiting damage to friendly assets, and to terminate hostilities on terms favorable to the Alliance. U.S. interests will be served if escalation to the central strategic level can be avoided.
Having gone from broad strategic concepts down to the nuts and bolts of specific programs, we should not lose sight of the basic problem which confronts us -- how best to compensate for the loss of a credible strategic nuclear commitment to Europe. Modernization and further development of theater nuclear systems would be an appropriate response to established tactical requirements (increased survivability, lower collateral effects, etc.) and emerging strategic realities. Development of a sound theater nuclear capability appears essential to a more effective and credible U.S. commitment.

SUMMARY

The credibility of U.S. strategic nuclear support for NATO, questioned even during the period of parity, is likely to be substantially weakened during the period of strategic vulnerability widely projected for the near future.

A conventional defense remains ineffective against the type of war for which the Soviet and Warsaw Pact forces train -- a combined arms theater nuclear offensive. Mobile theater and tactical nuclear systems would be the most credible deterrent against such an attack because of their capability to survive, blunt, and break up the combined arms offensive in a prompt and effective manner. This would also enhance the effectiveness of conventional forces. Emphasis on theater nuclear systems for both deterrence and defense is justified since the threatened application of strategic nuclear forces, and the attendant risks involved, is no longer a viable option for the U.S. and should be avoided.

The most appropriate solution to NATO's pressing problems is for the U.S. to redress the strategic balance. Ultimately, this is the only way to prevent Soviet exploitation of their emerging strategic capabilities and escalation dominance in regional confrontations. A truly "NATO budget" would place greater emphasis on U.S. strategic nuclear forces. Until these forces materialize, and glaring vulnerabilities are erased, the emphasis in NATO should be placed on theater nuclear deterrence through denial, rather than incredible threats of escalation and retaliation at the central strategic level.

Michael B. Donley
National Security Analyst