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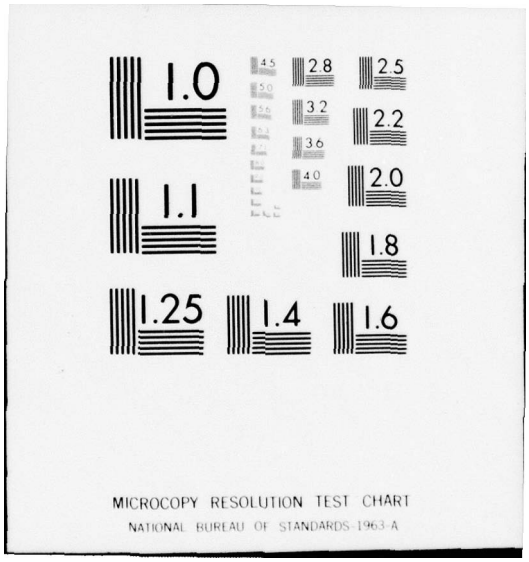
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CARLISLE BARRACKS, PENNSYLVANIA 17013

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# ESSAYS ON MEASURES OF THE STRATEGIC BALANCE

MILITARY ISSUES RESEARCH MEMORANDUM

STRATEGIC STUDIES INSTITUTE
US ARMY WAR COLLEGE
Carlisle Barracks, Pennsylvania

# ESSAYS ON MEASURES OF THE STRATEGIC BALANCE

On Measuring the Strategic Balance

by

Robert Kennedy

TNW and the Strategic Balance

by

Stanley D. Fair

Tactical Nuclear Numbers in the Strategic Balance:
An Uncritical Review

by

John F. Scott

Central Nuclear Forces in the Strategic Balance

by

Thomas L. Wilborn

8 March 1977

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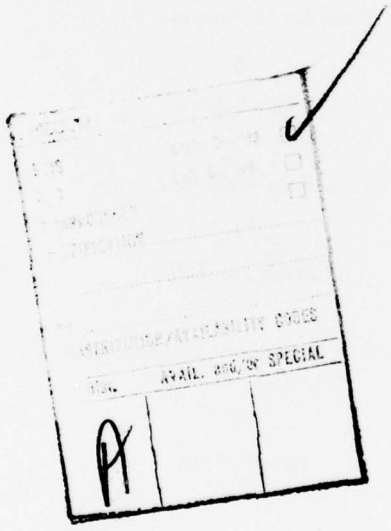

## FOREWORD

Four essays concerning aspects of the strategic balance are included in this research memorandum. The author of the first essay suggests that the strategic equation is a function of the balance of central nuclear, tactical nuclear, and conventional forces where the weight of each of the variables is a function of force utilities and hence, inversely proportional to the destructive power it represents. The authors of the two following essays place emphasis on the importance of tactical nuclear forces in the strategic balance, while the final essay contends that central nuclear forces are the critical components in the strategic equation.

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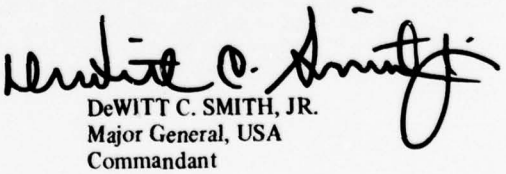
This memorandum was prepared as a contribution to the field of national security research and study. As such, it does not reflect the official view of the College, the Department of the Army, or the Department of Defense.



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Major General, USA
Commandant

## BIOGRAPHICAL SKETCHES OF THE AUTHORS

COLONEL STANLEY D. FAIR served as Deputy Director of the Strategic Studies Institute prior to his retirement from active duty in July 1976. He is a graduate of the US Military Academy and holds a master's degree in radiobiology from the University of California. From 1971 to 1972, he was Commandant of the US Army Chemical School at Fort McClellan, Alabama. Colonel Fair has authored numerous articles for periodicals in the United States, Canada, and Australia, as well as for NATO's *Fifteen Nations* magazine.

MR. ROBERT KENNEDY joined the Strategic Studies Institute in 1974. A graduate of the US Air Force Academy, Mr. Kennedy has a master's degree and is currently completing his doctoral dissertation in political science at Georgetown University. Mr. Kennedy served on active duty briefly with the Army and then with the Air Force from 1958 to 1971 and is currently a reserve officer with the Air National Guard. Prior to his present position, he was a foreign affairs officer, US Arms Control and Disarmament Agency.

MR. JOHN F. SCOTT came to the Strategic Studies Institute in 1963. He holds a bachelor's degree in commerce and finance from Wilkes College and a master's degree in social science from Shippensburg State College. Mr. Scott has contributed to several Army studies on nuclear deterrence and strategy. He has authored several articles on the application of social science to national security problems in professional journals.

DR. THOMAS L. WILBORN has been with the Strategic Studies Institute since 1974. He earned a bachelor's degree in journalism and a master's degree and doctorate in political science from the University of Kentucky. In addition to teaching political science and international relations at Madison College and Central Missouri State University, his professional background includes a position with the University of Kentucky educational assistance program at Bandung, Indonesia.

## PREFACE

International politics can be described as the bargaining process through which states seek to accomplish their objectives in the international arena. In the broadest sense, bargaining at the international level involves a continual interplay of political, economic, psychological, and military forces across a wide spectrum of interactions. The ability to successfully apply such forces in pursuit of national objectives can be defined as power. Hence, the more powerful states in the international system are those states which through the application of appropriate combinations of political, economic, psychological and military forces are better able to influence the flow of world events.

In an environment, however, in which warfare continues to be an expected and legitimate means for the advancement of national interests, military strength remains the ultimate arbiter of disputes. In a narrower sense, then, the ability of a nation to bargain successfully on matters where the potential for violence exists is a function of its military power—its ability to threaten and, if necessary, resort to military force in order to impose its favored view on the world order. Furthermore, as a result of the complex interrelationships between the amorphous political, economic, and psychological and the more definitive military variables of the international political process, military power often serves as the fundamental backdrop for bargaining where violence is neither a prominent nor a potential factor. Hence, international bargaining entails a series of dynamic interchanges in which calculations concerning the capabilities of opposing military forces are continually pursued.

The current debate over the strategic balance between the United States and the Soviet Union reflects this process. Military power continues to be perceived as fundamental to the international bargaining process. Hence, concerns over shifts in the strategic balance are germane to the question of whether this nation will continue to accomplish, with a modicum of success, its foreign policy goals.

The following four essays reflect the complex nature of assessing the strategic balance and relative importance of the forces which shape that balance. The first paper underscores the role conventional forces play in the strategic balance. It is suggested that the strategic equation is a function of the balance of central nuclear, tactical nuclear, and

conventional forces where the weight of each of the variables is a function of force utilities and, hence, inversely proportional to the destructive power it represents.

The two essays which follow emphasize the importance of tactical nuclear forces. Stanley Fair contends that a US policy on tactical nuclear weapons which does not preclude their first use by NATO forces in response to an overwhelming conventional attack is the key to stability in Europe and to the overall strategic balance between the United States and the Soviet Union. Likewise, John Scott focuses on stability. He sees measures of the military balance as meaningless unless tied to values such as stability—the ability to resolve crises without either side feeling compelled to act first with force—and, hence, he emphasizes the psychology of numbers as a clue to the stability of the current balance.

In the final paper, Thomas Wilborn, while recognizing the importance of other military capabilities, contends that central nuclear forces are the critical [although normally somewhat overrated] components of the strategic balance.

ROBERT KENNEDY

## ON MEASURING THE STRATEGIC BALANCE

by

**Robert Kennedy**

Prior to embarking on attempts to measure the strategic balance between the United States and the Soviet Union, one should have a clear notion of what is to be measured and why. Until the early 1960's, US nuclear superiority by any measure was so enormous that little effort was expended on attempts to measure the imbalance. It was generally assumed that the United States had sufficient nuclear weaponry not only to deter a direct attack by the Soviet Union on the United States, but also to deter the Soviets from initiating a major hostile action against its European Allies. Moreover, it was presumed that under the umbrella of its strategic superiority, the United States was largely free to accept challenges and initiate actions in order to influence the course of world events without fear of a direct nuclear confrontation with the Soviet Union–provided that it did not directly threaten the USSR or Eastern Europe. Expressed in terms of its ability to maneuver to seek a favorable outcome to events in the international arena [without fear of a nuclear assault from its major opponent], the strategic balance clearly favored the United States.

The phenomenal growth of Soviet nuclear power over the past two decades and concurrent perceptions of a decline in the ability of the United States to exercise the degree of influence on world events it did in the immediate postwar era have generated concerns over the strategic balance. The declining US position in Asia, the inability to manage OPEC or control events in the Middle East, the potential for fragmentation within the North Atlantic Alliance, Soviet inroads in Africa, and a host of other events have served to reinforce the

contention that the overall strategic balance has begun to shift in favor of the Soviet Union and have led statesmen to wonder whether nuclear parity and the perceived potential for Soviet nuclear superiority have been translated into a meaningful advantage which might alter in a significant manner the strategic advantage the United States has enjoyed since World War II. In short, is the strategic balance shifting in favor of the Soviet Union? Does nuclear parity or perhaps a future Soviet superiority enhance the ability of the USSR to influence the course of world affairs while limiting our own?

## STRATEGIC WEAPONS AND STRATEGIC ADVANTAGE

As concerns over the strategic balance have multiplied over the past few years, so have attempts to measure in a more precise manner the balance of strategic nuclear or central systems. Efforts aimed at determining the balance of central systems have progressed from such "static" measures as relative force size, numbers of warheads, and megatonnage to more dynamic measures which include estimates of force vulnerabilities, command and control efficiencies, targeting and employment doctrine and retargeting capabilities. If, however, the objective is to measure the strategic balance—that balance of military power which offers one nation an advantage over another in the pursuit of its own national objectives in the international arena—then such efforts are doomed to failure. The ability to gain a strategic advantage is a function, in part, of the total military capabilities of a nation and their utility as a means of influencing the behavior of states. Central nuclear systems are but one variable and, perhaps, a variable of declining importance in an age where their employment is likely to lead to mutual annihilation or to costs on a national scale far in excess of any conceivable advantage.

Those concerned with the apparent relative decline in the ability of the United States to influence world events would do better to focus their attention on the utility of the various components of military force. The United States possessed a strategic advantage in the post-World War II era not solely, nor perhaps even primarily, as a result of its strategic superiority, but because it also possessed conventional and tactical nuclear forces and continually demonstrated an apparent willingness and ability to use them. The moment the Soviet Union acquired a thermonuclear capability and a means of intercontinental delivery, the notion that the United States possessed a nuclear

superiority which was meaningful and exploitable in terms of influencing the course of international affairs was brought to question. From that time forward, the cost of a nuclear exchange limited the utility of central nuclear systems. Viewed from the perspective of most states outside Western Europe, US or Soviet central systems were able neither to obtain from them a valued objective nor prevent a valued objective from being secured by some third party at their expense. Central systems served as a deterrent to strategic nuclear conflict between the superpowers and to lesser military engagements and political and diplomatic actions between the United States and the USSR which had a high potential for leading to an exchange of central systems. As a means of influencing the bulk of critical international activities and transactions which in large measure not only determined the strategic balance, but also reflected that balance, central nuclear systems were of little utility. Such systems were a backdrop to international maneuver, served to reinforce perceptions of US strength, and, as a guarantee against retributive nuclear attack, tended to support perceptions of US willingness to employ its conventional and, possibly, its tactical nuclear forces to secure a favorable outcome to critical international events.

Nevertheless, it was the carriers at sea, the marines afloat, and the tactical aircraft and land forces available for rapid worldwide deployment that underwrote US diplomacy and were the principal ingredients of the US strategic advantage. Nation-states, international organizations, and subnational groups were aware that the United States could bring its conventional and, possibly, its tactical nuclear power to bear at any point on the globe. Moreover, despite the enormous land forces of the Soviet Union and the PRC, the United States could do so without the direct opposition of its major opponents [except in land areas contiguous to the USSR or China] because these powers lacked the mobility and supporting forces necessary to project their military power abroad.

The continued relative growth of Soviet intercontinental nuclear capabilities has failed to alter the strategic equation in any significant manner. The strategic balance remains a function of the balance of central nuclear, tactical nuclear, and conventional forces [$B_S = f\ [B_{CN}, B_{TN}, B_{CONV}]$] where the weight of each of the variables is a function of force utilities. Hence, as a result of the declining utility of central nuclear systems, a relative superiority or inferiority of Soviet or US strategic nuclear systems will not alter the strategic balance in any meaningful way.

Just as the United States found its relative superiority of central systems of little utility as a means of forging an international environment to its liking, so the Soviet Union, should it achieve by some measure a superiority in central systems, will find that such a superiority fails to alter the strategic balance. As long as the United States maintains an ability to extract costs in excess of benefits, the USSR will remain deterred from the initiation of a nuclear exchange; and threats to do so, except in the extreme circumstances of national survival, will fail to convince interested audiences. Such is the essence of essential equivalence and has caused Dr. Kissinger to question whether in an age of mass destruction either the United States or the Soviet Union can achieve a meaningful superiority in central nuclear systems. What has altered the strategic balance has been the relative growth in the ability of the USSR to project its ever-improving conventional and tactical nuclear power abroad.

## UTILITY OF TACTICAL NUCLEAR WEAPONS

One might argue that the same reasoning which leads one to conclude that central systems are fundamental to but insufficient as a means of altering the strategic balance can be applied to tactical or alliance or regionally oriented nuclear systems [ARONS]. However, because of their flexibility, the inherent limits of the systems involved, and the host of perceptions which have developed since the early 1950's which have served to categorize such systems as less than apocalyptic, the question of their utility as a means of influencing the course of critical international events remains to be answered.

Clearly, tactical nuclear weapons [TNW's] serve. in conjunction with central systems, as a deterrent to Soviet military action in Western Europe. US interest in Western Europe expressed in terms of the importance of Western Europe to US national security has made the use of such weapons credible. Hence, such weapons play a significant role in preventing the Soviet Union from seeking a drastic alteration of the strategic balance through a quick military thrust into Western Europe. However, their utility as a deterrent to Soviet adventurism in other areas of the world is less clear. Surely both Korea and Vietnam served to define, in perhaps more than a tentative way, the limits to the utility of TNW's. In both engagements the United States was willing to commit sizable military forces in support of its objectives, but also was willing to accept what many have termed as defeat–political if not military–before employing its tactical nuclear power. Moreover, in

neither case was there evidence to suggest that the opponent was deterred from seeking his objectives by the US possession of TNW's.

If these two cases posit the rule which circumscribes the utility of TNW's, then as with central systems, ARONS serve to deter tactical nuclear conflict and lesser military engagements which have a high potential for a tactical nuclear exchange [such as a conflict in Western Europe or perhaps the Middle East] not only because such a conflict, if the superpowers are involved, might lead to an exchange of central systems, but also because potential losses are likely to exceed the potential gains if tactical nuclear weapons are involved.

There remains, however, a sufficient element of doubt in the minds of some as to whether a superpower might, at some point find it advantageous to employ TNW's to secure political objectives in a crisis in which their employment was not likely to lead to a great power nuclear conflict. Hence, TNW's probably possess a greater utility than central systems as a means of influencing the behavior of states. They are valuable not only in Western Europe, but also perhaps in situations which are deemed critical by either the United States or the Soviet Union.

## INFLUENCE AND CONVENTIONAL POWER

In an age when superpowers possess sufficient nuclear weaponry for immeasurable violence and, hence, seek to avoid those open military confrontations which through escalation might result in an exchange of central systems, the most significant factor in the strategic military equation is the balance of conventional or general purpose forces. Of the forces possessed, these are the ones that can add sting to a nation's foreign policy. These are the forces whose use is credible not only because the use of conventional forces is not likely to involve an application of power disproportionate to the objectives sought, as is the case with nuclear forces, but also because their use is less likely to result in a strategic nuclear exchange. Of all the military factors which influence the strategic balance, a nation's ability to rapidly deploy and employ with relative impunity its conventional might during critical international events is in large measure what determines the degree of influence that nation can exercise in the international arena.

During the postwar period up until the mid-1960's, the United States possessed a nearly unchallenged ability to move its forces around the globe. The growth, however, of the Soviet surface fleet, tactical

airpower, and long-range air and surface transport, coupled with a large, modern, mechanized conventional military force, has served notice of the existence of an alternative to American military force which can be rapidly deployed and effectively employed in almost any area of the globe. As a result, not only is there no longer the compulsion there once was to accept American initiatives, but what is perhaps more significant, many nations have come to recognize that their security and internal tranquility may well depend on their ability to reach accommodation with the Soviet Union. Hence, rather than the growth of Soviet nuclear power, it has been the steady but significant improvements the USSR has made to its conventional force posture that have served to alter the strategic balance.

## UTILITY INVERSELY RELATED TO DESTRUCTIVE POTENTIAL

Referring to the balance of central nuclear systems, former Secretary of Defense Schlesinger was correct in noting that there is a "relationship between the political behavior of many leaders of other nations and what they perceive the strategic nuclear balance to be." However, one should exercise caution in any assessments pertaining to the degree of importance of that relationship with respect to the ability of either the United States or the USSR to favorably influence events. Failure to do so could lead to a costly and nonproductive search for a meaningless superiority of central nuclear systems, while forces with a high degree of utility are largely ignored. The balance of intercontinental nuclear systems may be viewed by some as a measure of the relative willingness of a superpower to seriously undertake action in the international arena. However, it is the balance of conventional and secondly tactical nuclear forces which serve as the primary measures of its ability to do so.

Hence, as one attempts to measure the strategic balance between the United States and the Soviet Union, one should not lose sight of the fact that the variables of the strategic equation [$B_{CN}$, $B_{TN}$, $B_{CONV}$] are weighted in inverse proportion to the destructive power they represent. Any measure of the world-wide strategic balance and future trends, therefore, must first of all focus on the balance of conventional capabilities.

## TNW AND THE STRATEGIC BALANCE

by

**Stanley D. Fair**

In the European military balance, the Warsaw Pact has enjoyed an advantage over NATO in conventional force levels since the inception of the Warsaw Treaty Organization. NATO has relied on nuclear weapons to offset this advantage: first, in the strategy of massive retaliation and later, within the strategy of flexible response. In the strategy of massive retaliation, tactical nuclear weapons [TNW] were considered to be an integral part of the total nuclear power available to the Alliance, with no deterrent or defense role independent of US strategic nuclear forces. Now, within the strategy of flexible response and under the conditions of strategic parity, the deterrent and defense responsibilities of TNW have increased in the theater while the role of US strategic nuclear forces in the defense of Europe has been deemphasized. These doctrinal changes have tended to create the impression that TNW and US strategic nuclear forces are separate and almost unrelated capabilities: the former being considered only as a factor in the European military equation, and the latter being limited to comparisons of US/USSR strategic nuclear forces.

The thesis of this paper is that TNW have an impact on the strategic balance between the United States and the Soviet Union because of deterrent interrelationships and potential defense interactions among NATO's theater nuclear and conventional forces and US strategic nuclear forces. Despite doctrinal changes, US policy still does not preclude the first use of TNW by NATO's theater nuclear forces in response to an overwhelming conventional attack by the Warsaw Pact. This threat helps to deter large-scale conventional aggression, and if NATO should need to carry out the threat, the TNW capability, backed up by highly-survivable second-strike nuclear capabilities in Europe and the United States, should deter both a preemptive nuclear strike and a nuclear response by the Warsaw Pact. TNW lend stability to the strategic balance in peacetime, and if they are used early in war to compensate for deficiencies in NATO's conventional defense capabilities, TNW have the potential to influence the course of the conflict and to induce the enemy to terminate hostilities under conditions acceptable to the Alliance.

## EVOLUTION OF DOCTRINE

The Soviet Union reacted to the deployment of US tactical nuclear weapons to Europe by concentrating its efforts on development of missiles to support an opposing theater nuclear capability. The success of the Soviet Union in space technology in the late 1950's and the evidence of sizable Soviet theater nuclear forces opposite Western Europe in the early 1960's prompted US officials to advocate that NATO adopt the strategy of flexible response. Under this new strategy, formally adopted by NATO in 1967, the threat of an immediate and exclusive nuclear response to aggression was to be replaced by the doctrine of graduated deterrence: response to aggression would be in the form and at the level appropriate for the situation. TNW would still be used to support strategic forces in general war, but the threat represented by Soviet tactical nuclear capabilities required that NATO's theater nuclear forces be assigned additional deterrence and defense roles, independent of US strategic nuclear forces. The new strategy of flexible response would also increase the deterrent and defense responsibilities of NATO's conventional forces.

According to Harlan Cleveland, former US Ambassador to NATO, the strategy of flexible response confronted "the enemy with a credible threat of escalation in response to any type of aggression below the level of a major nuclear attack."[1] Thus, the new strategy established a doctrinal relationship between that element of military power representing a direct response to the type of aggression selected by the enemy and that element of military power constituting an escalatory response. NATO's conventional forces shared the deterrence of conventional aggression with NATO's theater nuclear forces; NATO's theater nuclear forces were linked to US strategic nuclear forces to deter the enemy's use of nuclear weapons in Europe. If deterrence of conventional aggression failed, NATO's conventional forces were required to conduct a resolute defense rather than merely serve in a tripwire role. If the efforts of NATO's conventional forces proved to be inadequate, NATO's theater nuclear forces were to carry out the threat of escalation. If the enemy responded with nuclear weapons or initiated their use, NATO's theater nuclear forces were to defend, and NATO leaders were to threaten general war, in which, at that time, the Soviet Union would have been at a disadvantage.

Meanwhile, the Soviet Union was developing a strategic nuclear capability, and France, as a result of disagreement with her NATO

Allies over the strategy of flexible response, withdrew from military participation in the Alliance in 1966 and began also to develop an independent strategic nuclear capability. By 1969 it was apparent that the Soviet Union was approaching rough parity in strategic forces with the United States and that concepts for the use of TNW which relied upon US strategic superiority would lack the degree of credibility they had enjoyed previously. President Nixon reacted to this fundamental change in the strategic balance by questioning the single option for the use of US strategic forces under the concept of assured destruction.[2] He recognized also that the growth of Soviet strategic forces had implications for the "relative role of strategic nuclear forces, conventional forces, and tactical nuclear weapons."[3]

The effect of strategic parity on the deterrent and defense roles for NATO's TNW became evident in April 1975 in a report to Congress by the Secretary of Defense on *The Theater Nuclear Force Posture in Europe.* This report acknowledged that "the threat of mutual annihilation limits the range of hostile actions which can be deterred by strategic forces and places more emphasis on the deterrent roles of theater nuclear and conventional forces."[4] Although US strategic nuclear forces would continue to be coupled to the deterrence of attacks on Europe, strategic parity would require that NATO's theater nuclear and conventional forces shoulder more of the deterrence burden than in the past. Deterrence for NATO could no longer be based solely on the threat of escalation but must rely also on the military capabilities within the theater which a prudent enemy would perceive as sufficient to deny him his expectation of success. Because of strategic parity, the doctrinal emphasis within NATO's strategy of flexible response would be on direct defense rather than on deliberate escalation.

The report on *The Theater Nuclear Force Posture in Europe* explained also that NATO relies on a mutually supporting mix of conventional, theater nuclear, and strategic forces for deterrence and defense. The conventional forces of the NATO Triad are to deter and defend against conventional aggression. Theater nuclear forces deter and defend against theater nuclear attacks; help deter and, if necessary, defend against conventional attack; and help deter conflict escalation. Strategic forces deter and defend in general war, deter conflict escalation, and reinforce theater nuclear forces if needed. This reinforcement role could involve the execution of limited strategic options by US strategic forces in the defense of Europe. These limited

strategic options were described by the US Secretary of Defense in March 1974 as part of the doctrine of flexible strategic response and as "measured responses to aggression which bear some relation to the provocation, have prospects of terminating hostilities before general nuclear war breaks out, and leave some possibility for restoring deterrence."[5]

## THE STRATEGIC BALANCE

In the European military balance, a simple numerical comparison of capabilities will show an advantage for the Warsaw Pact in conventional forces, an advantage for NATO in TNW, and essential equivalence in strategic nuclear systems. This type of presentation is misleading because the large number of TNW deployed in Europe were accumulated to support the earlier strategy of massive retaliation. The objective for using TNW during that period was to destroy or defeat the invading Warsaw Pact forces and to help restore the territorial integrity of the Alliance. Within the strategy of flexible response and under the conditions of strategic parity, the objective for using TNW is "the termination of war on terms acceptable to the United States and its allies at the lowest feasible level of conflict."[6] The current objective reflects an attempt not only to avoid escalation but also to control the collateral effects of using nuclear weapons in Europe.

This exercise of restraint is exhibited also in the concepts for the use of TNW. If NATO should initiate the use of TNW, "first use should be clearly limited and defensive in nature, so as to reduce the risk of escalation. However, the attack should be delivered with sufficient shock and decisiveness to forcibly change the perceptions of WP leaders and create a situation conducive to negotiations."[7] If the Warsaw Pact should be the first to use nuclear weapons or respond to NATO's restrained first use, "efforts would be made to control escalation . . . by a combination of clearly perceivable limits on the NATO nuclear response and the threat of more extensive strikes with theater and strategic forces if the WP chooses to escalate."[8] This policy guidance on first and retaliatory uses of TNW by NATO forces indicates clearly that NATO's numerical advantage over the Warsaw Pact lies more in the deterrent effect of withheld capabilities than in the operational effect of planned uses.

This is not to say that NATO leaders are ignoring the realities of strategic parity. The concepts for first and retaliatory uses of TNW by

NATO do not rely on US strategic nuclear superiority or depend solely upon the threat of escalation. Rather, current concepts for the use of TNW base their credibility primarily on highly-survivable second-strike nuclear capabilities located in Europe and the United States. These second-strike capabilities are currently limited to strategic nuclear systems, but efforts are under way to also reduce the vulnerability of NATO's dual-capable systems to conventional and nuclear attack. NATO's "theater nuclear forces and their essential support [e.g., warheads, delivery systems, intelligence, command, control and communications [$C^3$], and logistics] must be sufficiently survivable to have credible retaliatory capability."[9]

A skeptic might doubt that US strategic nuclear forces are still so closely tied to NATO's theater nuclear forces and consider NATO's in-theater strategic nuclear capability as a surrogate for US strategic nuclear forces. Nevertheless, the provision for limited strategic options, which could be executed in situations short of general nuclear war to reinforce NATO's theater nuclear forces, couples TNW and US strategic nuclear forces almost as closely as they were under the strategy of massive retaliation. The new relationship merely reverses their respective roles of the 1950's, with US strategic nuclear forces now supporting the use of TNW instead of vice versa. An example of a limited strategic option is presented in the report on *The Theater Nuclear Force Posture in Europe:* "SLBM's provide highly-survivable means for striking WP air bases in response to WP nuclear attacks on NATO air bases."[10]

This example also illustrates the lack of a clear division between the strategic nuclear component of NATO's theater nuclear forces and US strategic nuclear forces. NATO's theater nuclear forces now include on-station US Poseidon and UK fleet ballistic missile submarines armed with US-supplied Polaris missiles, as well as US F-111 and UK Vulcan medium bombers,[11] among the assets. If France should join in the military defense of Europe, NATO's theater nuclear forces would be reinforced with "several fleet ballistic missile submarines, a number of intermediate-range ballistic missiles, and bombers for strategic delivery of nuclear warheads."[12] In the example cited above, the SLBM's executing the strikes on Warsaw Pact air bases could just as well have been launched from a fleet ballistic submarine of NATO's theater nuclear forces as from a fleet ballistic submarine of US strategic nuclear forces.

An important point concerning the strategic capabilities of NATO's

theater nuclear forces is that their role in the European military balance must not be viewed as limited to offsetting the IR/MRBM launchers and medium bombers deployed near the western border of the Soviet Union. The highly-survivable strategic capabilities available to the Alliance not only lend credibility to NATO's concepts for the use of TNW, but the in-theater ability to execute deep interdiction strikes is also useful in the event the use of TNW is not sufficient incentive for the Warsaw Pact to terminate the war on terms acceptable to NATO.[13] A similar point can be made also for US strategic nuclear capabilities, which could be used to reinforce NATO's theater nuclear forces with limited strategic options.

## IMPLICATIONS

The deterrent interrelationships and potential defense interactions between NATO's theater nuclear and conventional forces and US strategic nuclear forces continue within the strategy of flexible response and under the conditions of strategic parity. NATO's theater nuclear and US strategic nuclear forces share the responsibility for deterrence of conflict escalation in Europe; these forces support each other in general nuclear war that might evolve from a war between NATO and the Warsaw Pact; and US strategic nuclear forces could be used to reinforce NATO's theater nuclear forces in situations short of general nuclear war, assisting in the defense against nuclear attacks by the Warsaw Pact. The growing offensive nuclear power of the Soviet Union has created doubts that US strategic nuclear forces remain coupled to the defense of Europe, but the doctrine as to the deterrence and defense roles for these forces, especially the provision for limited strategic options, should dispel such doubts.

NATO's in-theater strategic nuclear capabilities help to preserve coupling also because they can threaten or be used against other than battlefield targets and thereby serve to reassure US Allies in NATO that a nuclear conflict need not be confined to the territory of the Alliance. In addition, these strategic nuclear capabilities help alleviate the threat represented by the IR/MRBM and medium bomber forces of the Soviet Union, lending credibility to the doctrine that does not preclude first use of TNW by NATO forces. In-theater strategic nuclear systems provide a highly-survivable retaliatory capability which carries a perceptively lower risk of escalation than the use of US strategic nuclear forces if the Warsaw Pact should decide to respond to limited

use of TNW by NATO. Operationally, NATO's strategic nuclear systems are interchangeable with and undistinguishable from like systems of US strategic nuclear forces.

Thus, an assessment of the US/USSR strategic balance must include an understanding of NATO strategy and the deterrence and defense roles of conventional, theater nuclear, and strategic nuclear forces in that strategy. The key to understanding NATO strategy is that US policy does not preclude the first use of TNW by NATO forces in response to an overwhelming conventional attack by the Warsaw Pact. For as long as that policy remains unchanged and NATO [including the United States] maintains highly-survivable second-strike nuclear capabilities and essential equivalence in strategic nuclear forces, there will be stability in the European military balance and in the US/USSR strategic balance. The uncertainty in the minds of Warsaw Pact leaders as to the circumstances which must prevail before NATO initiates the use of TNW helps to deter large-scale conventional aggression, and the certainty that NATO's theater nuclear forces are highly-survivable deters both a preemptive nuclear strike and a nuclear response by the Warsaw Pact.

## ENDNOTES

1. Harlan Cleveland, *NATO: The Transatlantic Bargain*, p. 81.
2. Richard Nixon, *US Foreign Policy for the 1970's: A New Strategy for Peace*, p. 122.
3. *Ibid.*, p. 33.
4. James R. Schlesinger, *The Theater Nuclear Force Posture in Europe: A Report to the United States Congress in Compliance with Public Law 93-365*, p. 2.
5. James R. Schlesinger, *Annual Defense Department Report, FY 1975*, p. 38.
6. Schlesinger, *The Theater Nuclear Force Posture in Europe*, p. 8.
7. *Ibid.*, p. 15.
8. *Ibid.*, p. 14.
9. *Ibid.*
10. *Ibid.*, p. 13.
11. Donald H. Rumsfeld, *Annual Defense Department Report, FY 1977*, p. 80.
12. *Ibid.*
13. Schlesinger, *The Theater Nuclear Force Posture in Europe*, p. 15.

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# TACTICAL NUCLEAR NUMBERS IN THE STRATEGIC BALANCE: AN UNCRITICAL REVIEW

by

John F. Scott

When the boundaries of the strategic deterrence system are narrowly drawn, the intercontinental nuclear strike forces of the United States and the USSR are the information of interest.[1]

FIGURE 1

| | USA [1975] | USSR [1975] |
|---|---|---|
| ICBM | 1,054 | 1,618 |
| SLBM | 656 | 784 |
| Long-Range Bombers | 432 | 135 |
| TOTALS | 2,142 | 2,537 |

Even this narrow definition of the system is complicated by considerations of pre- and post-launch survivablity, accuracy, megatonnage, command-control, multiple reentry warheads, and other variables which give shape and substance to any critical comparison. The system's "balance" is presumably sensitive to changes in each of these largely qualitative variables. The sensitivity of the system to these changes defines the system—in the sense of the common definition of a system component as some quality or quantity which, if changed, influences the shape of the entire system or influences perceptions of it.

There are problems enough for both the United States and the USSR in this narrow view which incorporates only those scenarios covered by the rubric of central war. Theoretically, no other nation or force exists which can influence evaluations of the balance because, by definition, they do not change the system if they themselves change. The remaining duopoly looks to be, from an uncritical viewpoint, stable—a mutual deterrence relationship.

## EXTENDED DETERRENCE

If this were the whole of it, if Americans and Russians were able to define their strategic relationship as a problem of deterring the other's

nuclear attack on its national territory, their mutual problem of maintaining stability might be easily managed. Moves by one to improve its position could be matched by the other. The irony of it, when the system is expanded to incorporate other interests which can be threatened and protected by military force, is that the forces in this narrow system, as such, cannot necessarily be extended to those other interests. That is, they cannot extend their deterrence power without supplement. Even then, how well the central deterrent works for extended deterrence is largely to be judged not by the central system but by the supplements. Hence, the variables in the expanded system also influence the central strategic system and our perceptions of it. The credibility of both major powers' retaliation to intercontinental attacks is as certain as the credibility of such acts can be. But the credibility of threats to use central strategic nuclear forces to deter or attempt to stop advances on other interests is not at all clear. If strategic stability in the narrow system means that neither side, in a crisis, can add to its chances of survival by striking first, then in the expanded system this stability must mean that neither side can add to its chances of protecting its extended interests by being the first to use its central nuclear strike forces against the home territory of the other.

Mr. Schlesinger's variant on US strategic targeting doctrine seems to be, among other purposes, an attempt to reverse that last meaning of stability in the expanded system. More accurately, it is an attempt to establish stability where it seemed to be falling away. Otherwise, if the interests of the United States and the nations which represent the extended political and strategic interests of the United States are threatened by force against which central strategic forces are unusable, the total system is unstable unless other forces in the expanded system take up the slack.

It is appropriate then to measure force in the expanded system, understanding that it is, like first and second cousins, part of the family but also a family [system] of its own. Figure 2 is a naive or uncritical listing of numbers of Warsaw Pact and NATO weapons delivery vehicles with a range that would allow them to hit targets in the continental United States and in Russia, respectively. The numbers reflect the expanded system, with an assumption that East and West Europe are the interests at issue.

Now Figure 2 might make sense only if the nuances of major war scenarios are discarded and the business comes down to a visceral estimate of what each side could launch at the other when the object is

**FIGURE 2[a]**

| USA/NATO | | USSR/PACT | |
|---|---|---|---|
| ICBM | 1,054 | ICBM | 1,618 |
| SLBM[b] | 786 | SLBM[d] | 1,096 |
| Long-Range Bombers | 432 | Long-Range Bombers | 915[e] |
| Medium Range Bombers and Tactical Strike Aircraft | 1,638[c] | | |
| TOTALS | 3,870 | | 3,629 |

[a] All US/NATO weapon systems with range to reach parts of Russia from the place of their assumed wartime deployment, and all Soviet weapons systems with range to reach the continental United States. Ranges from *Military Balance, 1975-1976.*

[b] Includes French SSBS S-2, British Polaris boats, and French MSBS.

[c] Includes 66 US FB-111A, 750 US strike aircraft [one half of an estimated 1,500], 600 US carrier-based strike aircraft [one half of an estimated 1,200], British Vulcan bombers, British and FRG F-4, and French and British Mirage and Jaguar aircraft.

[d] Includes all sea-launched missiles reported in the *Military Balance* for 1975, on the assumption that each boat could get within striking distance of the United States.

[e] Includes 25 Backfire B and 755 Badger which were not counted in Figure 1.

destruction, pure and simple. Some aircraft could be flown only on one-way missions; some would be given nuclear missions where today they may have none. Perhaps the West could bring even more aircraft to bear if US carriers in the Pacific fleets and their aircraft complements are counted, and the full inventory of US land-based strike aircraft are sent to surviving bases, if any, in Europe, to be launched from there on nuclear missions. What we have, then, uncritically, in Figure 2 is what the United States and Russia could be faced with on the assumption that an attack on the US/Soviet Union is an attack on NATO/Pact, and that all allies with the capabilities to do so would retaliate on the source of the attack. This might be called an upside-down nuclear umbrella.

One would expect that in their worst-case dreams, this is what Soviet planners could imagine. It is also a kind of uncritical listing against which the United States has inveighed in arms control and disarmament discussions—the notorious forward-based systems [FBS] problem—at least in regard to American weapons that could reach Russia were they at a place at a time and fitted for a nuclear mission. Were it the case, however, that the Soviets might see this uncritical

Western potential as a possible price to pay for cracks in the expanded part of the expanded system, they would have no reason to feel comfortable about it, even when within earshot of the latest crisis of perceptions of the balance in the West.

The uncritical numbers in Figure 2 have, ironically, the sloppy virture of being a kind of desperate second-strike capability for the West without being subject to interpretation as a first-strike capability. Those odds and ends of strike aircraft which add numbers to the numbers are hardly the way anyone would go about constructing a serious first-strike force.

## THEATER DETERRENCE

The next uncritical comparison of force should reflect Warsaw Pact nuclear capabilities to strike from afar at military and civilian targets in Western Europe and NATO's nuclear capabilities for like attacks on Eastern Europe. There are at least three reasons for this assumed scenario. The first is that a war might begin at this level, with both sides deterred from striking either superpower's home territory. The second is that a general war could include nuclear strikes on East and West Europe by weapons systems other than those used or held in reserve for use against Russia and the United States. The third is that limited wars within the European theater could escalate to theater-wide nuclear war.

Some of these systems were counted in Figure 2 because they met the range criterion for that comparison. But no matter how total resources are allocated between Figures 2 and 3, they amount to an uncritical healthy capability to destroy not only Russia and the United States, but Eastern and Western Europe as well, with the one system of destruction not necessarily dependent upon the resources used to destroy the other.

Vulnerabilities of theater strike systems to theater-confined attack are passed over in this uncritical assessment, of course. One suspects they are quite vulnerable given a surprise attack at shorter-than-intercontinental distances and a lack of protective antiballistic missile [ABM] defenses. But, how do you preemptively destroy 180 Pershing missiles and, say, half a hundred air bases in Western Europe with the hefty megatonnage carried in Soviet I/MRBM without more or less destroying much of west central Europe in the bargain? To expect NATO's SLBM and other surviving systems to stay attached to their launching platforms is an immodest dream. When there is nothing left but revenge, it may seem to be the highest virtue.

FIGURE 3

| NATO | | Warsaw Pact | |
|---|---|---|---|
| Pershing Missiles | 180 | SS-4 MRBM | 500 |
| IRBM [French] | 18 | SS-5 IRBM | 100 |
| SLBM[a] | 160 | SS-12 [Scaleboard] c | 200? |
| Medium-Range Bombers[b] | 116 | SS-N-3 [Shaddock] | 100 |
| Land-Based Strike ac | 922 | SLBM | 396[d] |
| Carrier-Based ac | 600 | Medium-Range Bombers | 780 |
| | | Land-Based Strike ac | 1,250[e] |
| TOTALS | 1,196 | | 3,326 |

[a] British and French, 112; US 48 [In May 1963, three Polaris boats were assigned to SACEUR by the United States. *NATO Facts and Figures*, p. 91].

[b] US and UK.

[c] The *Military Balance*, 75-76, gives no number for this item. The 200 is a rather arbitrary estimate based on the *Balance's* estimate of less than 300.

[d] Soviet SLBM with ranges less than 750 miles.

[e] One half of the estimated 2,500 land-based strike aircraft listed in the *Military Balance*, 1975, for the Pact.

## PUNISHMENT AND DENIAL

Whether scenarios include the trading of nuclear strikes between America and Russia only, East and West Europe only, or both, the capability of NATO and the Pact to punish is clear. Neither is likely to disarm the other with a first strike. But the capacity to punish is not necessarily the capacity to deny. If either side could mount the military strength to take and control those portions of central Europe now held by the other, the total strategic system becomes unstable by definition. The weaker side either must take up its slack at the denial level or make up for it at the theater-wide or the strategic deterrence levels. Hence, the logic of a multilayered system is that stability in strategic nuclear force is not really stability in the entire system if we assume a disparity at the "battlefield" level. To deny the Pact's many armies the control of Western Europe, NATO needs superiority in the central strategic balance if it cannot block their advance on the battlefield. Even then, the "denial" is figurative—it is rather a deterrence from action by the credible threat of punishment. Such a threat, and the capabilities to execute it, still cannot literally block or deny numerically superior battlefield forces.

There is a middle ground, however, embracing both punishment and denial. The capabilities listed in Figure 3 have this potential for destroying forces which support and reinforce battlefield forces. Some Western writers have pointed to the Soviet potential for a softening-up theater nuclear strike then exploited by their advancing armies rolling over the truncated NATO defenders. One might suppose that the Pact gets off scot-free in all of this, that NATO's longer range theater nuclear systems are not attacking airfields, troop trains, marshalling centers, rear echelon reserves, and the like. The Pact's front line divisions may well try to exploit, but they may be able to do it only to the depth of Soviet armor gas tank capacity.

The potential to deny, as compared to the opposing potential to take, is at the heart of questions of the balance in central Europe. We have suggested, above, that each side's ability to punish seems to offset the other's. And, it is clear that the ability to employ nuclear punishment capabilities in a support-of-denial role is relevant only when we assume that a European war is of, or escalates to, such a level of action. When nuclear potential is discounted, the question of denial rests with the last level of the balance system, conventional forces. That NATO is at a disadvantage here is assumed as a premise to save words and to make a point. [If it is assumed otherwise, no harm will have been done.]

The point is this: we do not know what to do about "tactical" nuclear weapons—how to compare them, in what context or scenario to compare them. We do not know what their influence is on the denial capabilities balance, the strategic-punishment balance, and on the total balance. Uncritically, the ability of battlefield forces to take or hold territory with their battlefield nuclear forces may be glimpsed in the sparse information in Figure 4.

The NATO numerical advantage in tactical/theater nuclear warheads is discounted in the 1975-76 *Military Balance* because, "on the NATO side the strategic doctrine is not, and cannot be, based on the use of such weapons on this sort of scale." The *Balance* writers go on to note that:

> These numbers were accumulated to implement an earlier, predominantly nuclear strategy, and an inventory of this size now has the chief merit of affording a wide range of choice of weapons, yield and delivery systems if controlled escalation has to be contemplated. A point that does emerge from the comparison, however, is that the Soviet Union has the ability to launch a battlefield nuclear offensive on a massive scale if she chooses, or to match any NATO escalation with broadly similar options.[2]

**FIGURE 4[a]**

| NATO | | Warsaw Pact[c] | |
|---|---|---|---|
| Lance | 72 | SCUD | 200-300? |
| Honest John | 150? | FROG | 800? |
| Sergeant | 18 | 203mm Gun | ? |
| Pluton | 12 | Estimated Total | |
| 8in. and 155mm Artillery | 450+?[b] | Warheads | 3,500[d] |
| Estimated Total | | | |
| Warheads | 7,000[d] | | |

[a] "Battlefield" nuclear weapons systems, excluding tactical aircraft, the numbers of which with nuclear missions is unknown.

[b] The number given is for US tube artillery only, as in the *Military Balance*. The numbers of other NATO units capable of using US supplied nuclear warheads for artillery is unknown.

[c] Soviet and other Warsaw Pact.

[d] For all theater nuclear weapons delivery systems, including tactical aircraft.

Indeed, NATO's strategic doctrine includes attempts to stop determined Pact attacks with direct conventional defense or controlled nuclear escalation, and indeed the Soviet Union can match or counterescalate NATO's nuclear acts. But where does that leave both sides? It does not follow that the advantage falls to the Soviet Union if it does escalate, or if it tries to fight a controlled, "battlefield" nuclear war. It may smack of the idea that the superpowers would fight a nuclear war confined to Europe with its resultant destruction, but how does the Soviet Union escape the destruction? How does an aggressor disarm the better part of 7,000 nuclear weapons and the systems that launch them without opening up the battle to higher levels of the strategic balance? And why would an aggressor do so if at those higher levels he would know no advantage, and possibly know disadvantage? Indeed, we are frequently told by Western students of the Soviets that they lack a doctrinal concept of limited or battlefield nuclear war. The Soviets have, one can infer, developed the inspired doctrine that to succeed at a major war against a nuclear equipped alliance, they must blow themselves to hell, and possibly everyone else along with them.

The real and perceptual instability in the total strategic balance comes from the a priori premise that the side which must, because of lack of other choices, resort to nuclear weapons to defend its interests against the other side which can threaten those interests without resorting to nuclear weapons, is the side on the short end of the

strategic military balance. And, whether analyzed with sophistication or uncritically, attempts to even out or reverse that disadvantage through improving its strength at the intercontinental level are open to serious questions of feasibility. That is, how much superiority would the West need in strategic nuclear systems to overcome the system instability at the conventional forces level? Could it be done without throwing the lion's share of the gross national product at the problem?

But one can argue that the NATO position is tolerable for any number of reasons, not the least being its tactical/theater nuclear strength. This strength is the fillip which, sophisticated or uncritically, holds the center when perceptions in the West couple one level of the balance to another to create the larger strategic system. If perceptions are to rule, only the most intransigent idealist philosophy can make those 7,000 weapons lack an existence independent of our minds. The answer is not in numbers, but in ourselves.

The doctrinaire nuclearists of the West are right, I believe, about something but wrong in how they would apply their insight. They are probably correct in believing that if the Soviets might hope to take Western Europe by force, they must accomplish this feat without provoking nuclear action—controlled or otherwise—from NATO. True, the Soviets might also have to turn the trick of achieving surprise in their nonnuclear assault, holding the PRC at bay on their eastern borders, and doing the latter while still having enough troops and tanks to overwhelm NATO forces. But most of all the Soviets must hope—and hope is the proper word—that NATO would choose to accept Soviet occupation of Western Europe rather than risk nuclear war.

The nuclearists are wrong about posing the nuclear threat as the sole reliance of NATO for its protection against nonnuclear attack. Psychologically, this strategem is an admission of despair over NATO's "contest" with the Soviets about "inner" strength and self-confidence. The strategem would have NATO doing what it does not really want to do, which is a definition of power—here, the Soviet Union being the wielder and NATO the subject of power. That the nuclear-early-and-only strategy would convert small aggressions and inadvertent crises and war into nuclear wars as well is a practical defect that we should no longer have to argue about among consenting adults.

## TACTICAL NUCLEAR WEAPONS

The question for measurement is whether tactical nuclear weapons

can be added to each side's capacity for taking or denying territory, or whether they are to be seen only as a means for transition to a higher level of war. If the latter, then they are no more relevant to measures of denial capability than the weapons included in the central strategic balance.[3] If the former, then they are an indication that NATO's European members accept the idea of a tactical nuclear war on their territories, long enough and destructive enough to prevent a numerically superior force's success. To take a middle ground—that the weapons can be *either, neither, or both—only* begs the question of how they are to be displayed and measured with any meaning.

If tactical nuclear weapons are counted as other-than-denial-weapons, however, they must be imbued with an assumption about intentions, a qualification not necessarily applied to other numbers in the balance. We do not assume that either the United States or the USSR intends to launch a first strike at the other, but we assess their respective physical capabilities to do so, for the good reason that it is a standard for stability. Neither do we assume that the Soviet Union intends to attack Western Europe with those numerous conventional armies, yet we give meaning to the relevant numbers by assessing their capacity to do so. It would seem then that it is sensible to assess the meaning of tactical nuclear weapons as the capacity to deny another's armies the control of territory, or the capacity to take it. If we do not "create" a US doctrine of first strategic strike by assessing capacity for it, then we should not be in danger of creating a NATO tactical nuclear warfighting and denial doctrine by assessing its capacity for it.

## CONCLUSION

NATO has no clear reason for complacency or for despair. On the one hand, we had a "highly respected commander" who estimated that "the conventional forces of the Soviet Union and its allies could reach the Rhine in two to four days."[4] These profound insights issue from people who probably mean to stir up activity in NATO to unfulfill their prophecies. If things are *that* bad, one does not necessarily stimulate activity so much as make it seem a waste of time.

In contrast to this gloom, Ken Booth marches the NATO/Warsaw Pact balance to a different drummer.

> While NATO planners understandably concentrate in great detail on their own problems, they tend to overlook the key military question from a deterrent viewpoint. Ultimately, the key behavioral factor is the perception

> of Soviet decisionmakers to NATO force levels. With a reversal of the telescope, the problems of NATO take on a new light. From the Soviet perspective the strengths of NATO–its enormous and horrifying destructive power–are likely to be far more impressive than its weaknesses. 'Do the NATO allies have the political will to make the proper decisions if war breaks out?' is a characteristic worry for the NATO supporter. 'What on earth will be the consequences if the NATO allies start using nuclear weapons?' is a characteristic worry for Soviet planners, and one which even the most optimistic of them can hardly shrug off. The two questions reveal a world of difference about the significance of NATO's problems.[5]

We can suggest then that if NATO's toughest problem is achieving a better balance in conventional forces with the Pact, the Pact's toughest problem is to convince itself that those 7,000 nuclear weapons do not represent a balancing influence in the larger, strategic deterrence system.

## ENDNOTES

1. International Institute for Strategic Studies [IISS], *The Military Balance, 1975-1976*, p. 73, is the source for the numbers in each category and the source for all other numbers in this paper unless otherwise noted.

2. *Ibid.*, p. 101.

3. Albert Wohlstetter has said it better: "If escalation from the use of tactical nuclear weapons were plainly and simply inevitable, the decision to use them would be the *same* as the decision to use strategic weapons and they would serve little or no function at all." "Threats and Promises of Peace: Europe and America in the New Era," *Orbis*, Winter 1974, p. 1131.

4. As quoted by Drew Middleton in "NATO Approves Rules for Defensive Use of Tactical Nuclear Weapons," *The New York Times*, December 3, 1969, p. 14.

5. Ken Booth, "Security Makes Strange Bedfellows: NATO's Problems from a Minimalist Perspective," *Journal of the Royal United Service Institutions [RUSI]*, December 1975, p. 6.

# CENTRAL NUCLEAR FORCES IN THE STRATEGIC BALANCE

by

**Thomas L. Wilborn**

The debate in the United States over the "strategic balance" has focused on the political and military implications of the rapid buildup of Soviet intercontinental range delivery vehicles with nuclear warheads, which has transformed a nuclear force decidedly inferior to that of the United States in 1962 into one which at least equaled America's central nuclear force by the signing of the Strategic Arms Limitations [SAL] agreements 10 years later, and since 1972 has been further expanded and improved. The essay which follows will deviate from what has become the more common use of some rather important key terms in many contributions to the debate. Hence, the phrase "balance of central nuclear forces" is not confused with the phrase "strategic balance" in an attempt to restrain the tendency to compound the imprecision already surrounding the word "strategy" and its derivatives. Those that reserve "strategic" to modify only central nuclear weapons systems assign to such systems, by definition, a significance that is not always necessarily justified, and erroneously degrade, by definition, the importance of other military capabilities.[1] In this paper, attempting to place central nuclear forces in a broad perspective of international politics, strategic balance denotes the distribution between the United States and the Soviet Union of military capabilities which are perceived to have an impact on the outcome of international events. Contrary to common usage and the definitions contained in the SAL agreements, intercontinental range delivery vehicles with nuclear warheads are not referred to as strategic forces; the phrase central nuclear forces is used instead.

In the direct and immediate sense, if the definition just presented is accepted, the military forces of the greatest significance in measuring the strategic balance are those which can be best mobilized to serve as instruments of foreign policy on a day-to-day and crisis-by-crisis basis. Central nuclear forces might fall in this category for the superpower attaining superiority over its adversary—superiority understood to mean the capability to launch a first-strike which would reduce opposing central nuclear forces below the level required to inflict unacceptable

damage in retaliation. For example, with such a capability the Soviet Union might successfully practice nuclear blackmail, or, more realistically, as Frank R. Barnett puts it, "effectively project its *conventional* power and its guerrilla forces all over the world, precisely because Russian nuclear 'superiority' would paralyze the West into inaction at lower levels of defense,"[2] while, presumably, the Soviet Union would not be similarly paralyzed in the face of initiatives by the West. Although the US record of the 1950's and early 1960's, when America did enjoy such superiority, suggests that superior central nuclear forces would not necessarily guarantee Soviet dominance, the achievement of superiority would be ominous for the United States and the rest of the world. Were this situation to develop, or be seen as developing, central nuclear forces would be the most important, although certainly not the only, elements of the strategic balance; in Robert Kennedy's terms, they would have the highest coefficient of utility.[3]

At the present time, however, neither superpower has superiority. An almost universally perceived condition of parity in central nuclear forces exists, with both the Soviet Union and the United States deterred from initiating a nuclear exchange or credibly issuing a nuclear threat by the other's ability to sustain an attack and still execute a retaliatory strike which would impose a penalty greater than any gain the initiator might contemplate. Furthermore, neither superpower can attain superiority in the foreseeable future without the active cooperation of its adversary.[4] Even if the currently unsolved technological problems are overcome [which is not considered likely], the uncertainties of estimating the performance of a weapons system never used in combat and the reliability of human controllers in an absolutely unprecedented situation will be formidable obstacles to any responsible decisionmaker contemplating ordering a first strike. As a practical matter, then, the central nuclear forces of neither can be manipulated to credibly support foreign policy initiatives, nor will they attain such a utility in the future. Either nation might publicly alert its central nuclear forces to underscore declarations of commitment and determination. However, while such a move might be seen as a vivid signal, it is unlikely that it would be interpreted as a serious threat of actual use unless national survival were literally at stake. Other types of military capabilities provide greater flexibility in supporting positive foreign policy goals over a wide range of contingencies, including the type of limited, proxy war which seems most likely to occur.

## NEGATIVE UTILITY UNDER PARITY

Under these conditions, US central nuclear forces do have a valuable negative utility in addition to the necessary function of neutralizing those of the Soviet Union. That is, they can be used to prevent certain kinds of behavior even though they cannot be manipulated to compel activity. Because of the possibility of escalation from even low level conflict to nuclear exchange, parity tends to devalue the currency of all military capabilities in superpower relations. As a result, direct armed conflict apparently has been ruled out by both governments, even if war-by-proxy has not. As a nation with a largely status quo orientation, primarily seeking to maintain rather than expand the territory and influence itself and its Allies, the United States may benefit more from this consequence of the current balance of central nuclear forces than the Soviet Union. The USSR still expresses its determination to assist "historical forces" in establishing a world socialist commonwealth and, if the declarations are not ideological cant, presumably values the opportunities to mobilize military forces more than the United States.

To maintain this benefit, the United States must deploy central nuclear forces, linked with tactical nuclear weapons and conventional forces, which are perceived to be adequate to deter any level of attack in the most likely areas of conflict, e.g., Central Europe and Northeast Asia. This is a more demanding role than deterrence of an attack on US territory, a contingency in which an American response with intercontinental range nuclear weapons is relatively believable, and places special requirements on US force structure. A strategy incorporating the threat of escalation up to the use of central nuclear forces, especially if the threat is supposed to deter many possible contingencies, will lack credibility when the execution of the threat seems likely to elicit retaliation on targets within the United States, including the most populous cities. The Soviets, of course, clearly have the capability for such retaliation. A doctrine and force mixture seems required which, by providing for adequate defense against most attacks the adversary might launch by conventional and/or theater nuclear forces, limits the probable occasions which would require a response by central nuclear forces to only the most massive aggression. Moreover, the central nuclear forces themselves need the capability for flexible, select targeting so that the destructiveness of a strike can be made comparable to the provocation and thereby not necessarily provoke a Soviet attack on US territory. An assured destruction reserve to deter

such a response, if Soviet leaders otherwise conclude it would be effective and justified, also is required. Such a posture, essentially the position announced by former Secretary of Defense Schlesinger in 1974, may not persuade Soviet leaders that a President would definitely escalate if the Soviet Union were succeeding in a conventional conflict. However, it surely must increase the probability sufficiently high for Soviet leaders to recognize that any decision to attack may be tantamount to initiating nuclear war.

## CENTRAL NUCLEAR FORCES' IMPACT ON PERCEPTIONS

Even if central nuclear forces can rarely if ever be mobilized to directly influence the outcome of international events and even if their deterrent role is credible only when coupled with other military capabilities under conditions of parity, they contain the almost incomprehensible power to virtually eliminate entire societies as functioning entities and are perceived by the leaders of the world—including the leaders of the United States and the Soviet Union—as having more significance than their direct utility alone would indicate. In their size and sophistication, these weapons systems are unmatched anywhere else in the world, and represent levels of scientific, technical, industrial, and military accomplishments which leaders of other nations, unable to equal due to lack of material or human resources, must appreciate and envy. There is a special prestige and deference awarded the United States and the Soviet Union, at least in part as a result of the possession of these forces. Indeed, they are the symbol of being a superpower, a status which carries with it a diffuse influence that undoubtedly is often valuable in the international bargaining process. Certainly the Soviet Union's reputation for power increased as a result of attaining parity, especially when formally recognized by the United States in the SAL agreements. And correspondingly, since the United States was forced to relinquish its hitherto unique position with respect to nuclear weapons, its prestige suffered a relative decline. There were two fully certified superpowers rather than one, and in international affairs as in social intercourse, a status seems to be awarded esteem in reverse proportion to the number of individuals who occupy it.

Acknowledging that central nuclear forces are a source of general influence does not mean, as some analysts suggest, that the world's statesmen and politicians view intercontinental nuclear weapons

systems as *the* indicator of the relative power of the United States and the Soviet Union, adjusting their attitudes or behavior as one or the other establishes an advantage in numbers of missiles, MIRV's, throwweight, accuracy, or some other characteristic by which central nuclear forces may be judged. On the contrary, even within NATO [where the strategy of deterrence and defense is explicitly linked to US central nuclear forces], most officials are relatively unconcerned with marginal changes in the structure of the superpowers intercontinental range nuclear weapons systems. To them, the existing forces seem large and destructive enough to perform any conceivable task required of them, they cannot imagine that either power will ever allow the other to acquire an advantage that would be militarily significant, and, in any case, their nations are unable to effect the balance of central nuclear forces. By necessity if not by preference, such matters must be left to the superpowers. While more or less indifferent to the fine tuning of the balance of central nuclear forces, they are sensitive to indications of the level of political commitment of the United States and the Soviet Union. NATO leaders, among others, might view a secular trend of marginal advantages for the Soviet Union, not adequately offset by US developments, as a signal of a weakening of American resolve, and act accordingly. They would not, however, look exclusively, or even primarily, to the state of the balance of central nuclear forces for indicators of US commitment. They would be at least equally sensitive to changes in theater nuclear weapons deployment and conventional forces posture, more visible and probably considered more relevant to their problems and opportunities; statements of officials; and, most of all, by the degree to which US actions reflect a clear policy supported by a broad consensus of the American public.

The psychological impact on the leaderships of the two superpowers of relative position in the balance of central nuclear forces may be more significant than its effect on the attitudes of third party leaders. In roughly the first two decades of the atomic age, American strategists and political leaders, supported by superior nuclear weapons systems could [and sometimes did] approach the problems of foreign policy with confidence and vigor. Central nuclear forces were both a capability to be used if necessary, and the symbol of being "Number 1." The Soviets, figuratively looking down the barrels of US missiles, seemed gripped with an obsession for security that has been described as paranoia. But by the mid-1960's, when the Soviet ICBM and SLBM systems were being dramatically upgraded, the atmosphere of the

Kremlin had become charged with confidence and dynamism. Meanwhile, in the United States, which witnessed the Soviet buildup with only limited compensating responses, a spirit of aimlessness seemed to prevail. In some quarters, pessimistic predictions of doom because of the shift in the balance of central nuclear forces were—and are—expressed. While it would be an unacceptably gross oversimplification to conclude that these contrasting attitudes were caused principally by the developments in the competition in central nuclear forces, they did have an impact, particularly on those with a professional responsibility for security. Self-images, moreover, are important in a bargaining context: confidence leads to bold action based on expectations of success and high morale and efficiency. National achievements in other activities—science, trade, arts, sports—may have the same kind of effect. But, given the adversary relationship existing between the United States and the Soviet Union, the competition in the most sophisticated and destructive military hardware is likely to remain highly salient. US and Soviet strategists and military planners must not only consider the deterrent roles of central nuclear forces, but they must also cope with the frightening possibility that deterrence may fail and nuclear war, with its unprecedented uncertainties and catastrophic potential, may occur. It is understandable that the balance of nuclear forces preoccupies responsible Soviet and American officials and influences their perspective: these weapons are not only perceived as a preeminent symbol of national power, but might be the principal instrument of national survival if the unthinkable became reality.

Central nuclear forces, according to these arguments, are an important component of the strategic balance because they are seen to perform an important function, deterrence, in Soviet-American relations, and because they have been assigned symbolic and psychological significance. Under conditions of parity, they have virtually no utility as instruments to support foreign policy initiatives, however, and cannot credibly provide extended deterrence except in conjunction with other military capabilities. To return to the initial proposition of the paper, the strategic balance includes more than central nuclear forces.

## CONCLUSIONS

Although this discussion was intended to demonstrate that central

nuclear forces are not a more significant component of the strategic balance than other military capabilities, it should not be interpreted to imply the reverse. US interests in the world would be imperiled if Soviet nuclear and conventional forces were not effectively deterred, and both central nuclear forces and other military capabilities are required for this function. Moreover, if Soviet central nuclear forces were not neutralized, other US military capabilities could not be credibly mobilized to support American diplomatic efforts. And it does seem clear that these highly destructive and sophisticated weapons have a greater impact on a nation's prestige and self-image than other military forces.

While a concise equation specifying the optimum characteristics for central nuclear forces to enhance the position of the United States in the strategic balance does not emerge from this analysis, one general standard does: the size and quality of the forces should be determined by the function they must perform. Providing enough delivery vehicles and reentry vehicles with warheads having a wide variety of yields and a sufficiently high degree of accuracy to support the US extended deterrence posture [however that may translate into numbers of missiles, planes, megatons, and CEP] is probably adequate for all possible tasks. Such a capability will deny the Soviet Union the opportunity of obtaining, or appearing to be obtaining, superiority, and probably also serve as a reasonable hedge against the possibility of a failure of deterrence.

A correlary of this standard is the proposition that it is not necessary to match Soviet deployments, except to the extent that they influence the performance of US forces, even to shore up perceptions of American strength and reliability. A force sufficiently credible and destructive to deter Soviet attack will surely also provide that general influence among third parties which is associated with superpower status. Moreover, Soviet policymakers, careful observers of American military activities, are unlikely to derive perceptions from such US capabilities which would justify exuberant confidence. If they make their assessments on the basis of worse-case analysis, as their counterparts in the Pentagon are often alleged to do, they may even have considerably more respect for the US central nuclear forces than the Americans who design and direct them.

## ENDNOTES

1. Initially, the use of "strategic" to refer to intercontinental range nuclear weapons was based on the dichotomy of strategic and tactical. Given that no one at the time contemplated the use of these weapons to directly support theater operations, the terminology was not inappropriate. With the new precision accuracy and low yield warheads now available, this distinction may no longer be reasonable. In any case, the semantic confusion has resulted from substituting the broader, more general meaning of strategic, which implies great military and political significance, for the narrow [opposite or tactical] meaning initially intended.

2. "Alternatives to Detente," speech delivered to the D. C. League of Republican Women, Mayflower Hotel, Washington, D. C., April 1976, p. 17. Emphasis in original.

3. "On Measuring the Strategic Balance," p. 3.

4. Compelling arguments that superiority is not obtainable are found in John D. Steinbruner and Thomas M. Garwin, "Strategic Vulnerability: The Balance Between Prudence and Paranoia," *International Security*, Summer 1976, pp. 138-181, and Donald R. Westerveld, "The Essence of Armed Futility," *Orbis*, Fall 1974, pp. 689-705.

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Military power continues to be perceived as fundamental to the international bargaining process. Hence, concerns over the shifts in the strategic balance are germane to the question of whether this nation will continue to accomplish, with a modicum of success, its foreign policy goals.
The four essays reflect the complex nature of assessing the strategic balance and relative importance of the forces which shape that balance. The first paper underscores the role conventional forces play in the strategic balance. →

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It is suggested that the strategic equation is a function of the balance of central nuclear, tactical nuclear, and conventional forces where the weight of each of the variables is a function of force utilities and, hence, inversely proportional to the destructive power it represents.
The two essays which follow emphasize the importance of tactical nuclear forces. The first contends that a US policy on tactical nuclear weapons which does not preclude their first use by NATO forces in response to an overwhelming conventional attack is the key to stability in Europe and to the overall strategic balance between the United States and the Soviet Union. In similar fashion, the second essay focuses on stability. Measures of the military balance are seen as meaningless unless tied to values such as stability--the ability to resolve crises without either side feeling compelled to act first with force--and, hence, this essay emphasizes the psychology of numbers as a clue to the stability of the current balance.
The final paper, while recognizing the importance of other military capabilities, supports the proposition that central nuclear forces are the critical (although normally somewhat overrated) components of the strategic balance.