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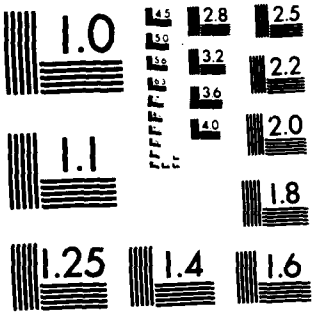

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SOVIET THEATER NUCLEAR CAPABILITIES: THE EUROPEAN NUCLEAR BALANCE IN TRANSITION

by

Robert Kennedy

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This memorandum examines the changing strategic and theater nuclear environment; Soviet theater nuclear force improvements and doctrine; the implications of Soviet theater nuclear buildup for deterrence and the defense of Europe; and NATO's response. The author concludes that the changing balance of theater capabilities has resulted in a devaluation of deterrence, a decline in Western self-confidence, and an increase in NATO's vulnerabilities. The author also contends that if the Soviet Union is unwilling to negotiate a significant reduction intermediate-range nuclear forces that now pose a serious threat to

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20. ABSTRACT

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STABILITY

DISCLAIMER

The views expressed in this article are those of the author and do not reflect the official policy or position of the Department of Defense or the US Government.

Composition of this memorandum was accomplished by Mrs. Janet C. Smith.

FOREWORD

This memorandum examines the changing strategic and theater nuclear environment, Soviet theater nuclear force improvements and doctrine, the implications of Soviet theater nuclear buildup for deterrence and the defense of Europe, and NATO's response. The author concludes that the changing balance of theater nuclear capabilities has resulted in a devaluation of deterrence, a decline in Western self-confidence, and an increase in NATO's vulnerabilities. In response, the author contends that if the Soviet Union is unwilling to negotiate a serious reduction in the intermediate-range nuclear forces that now pose a serious threat to the West, the NATO deployment of Pershing II and cruise missiles will not only help to restore balance to the NATO/Warsaw Pact nuclear equation, but will also enhance deterrence, reduce NATO's vulnerabilities, and, thus, contribute to crises stability in Europe.

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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.

DALLAS C. BROWN, JR.
Brigadier General, USA
Acting Commandant

BIOGRAPHICAL SKETCH OF THE AUTHOR

ROBERT KENNEDY, Ph.D., is currently the Professor of Military Strategy in the Department of National Security at the US Army War College. A graduate of the US Air Force Academy, Dr. Kennedy completed his graduate work in political science at Georgetown University. Dr. 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. Prior to his present position, he was a senior researcher at the Strategic Studies Institute.

SUMMARY

Over the last decade and a half, the Soviet Union has been methodically improving the theater nuclear forces at all levels. Today, the composite of theater nuclear capabilities now available to the Soviet Union suggests that the NATO/Warsaw Pact balance of nuclear forces has shifted from one that once favored the West to one that now favors the Soviet Union and its Warsaw Pact allies. As a result, there has been a devaluation of the Western deterrent, a decline in Western self-confidence, and an increase in the vulnerability of the West's nuclear forces, critical command and control nodes, and transportation and resupply nets.

In response, NATO foreign and defense ministers agreed in Brussels (December 1979) to modernize NATO's nuclear forces by deploying US land-based, intermediate-range Pershing II and cruise missiles in Europe. At the same time, they agreed to seek negotiations with the Soviet Union to limit intermediate-range nuclear forces (INF) and announced that NATO's INF requirements would be examined in light of the results achieved through negotiations.

If, however, the Soviet Union is unwilling to negotiate a significant reduction in the INF systems which now pose a serious threat to the West, the NATO deployment of Pershing II and cruise missiles will help to restore balance to the NATO/Warsaw Pact nuclear equation. It will also enhance deterrence, reduce NATO vulnerability, and contribute to crisis stability in Europe.

While it is important to examine alternatives for improving NATO's conventional capabilities in light of the changed theater nuclear balances, it is even more important to insure that a balance of NATO/Warsaw Pact nuclear capabilities exists and that the linkage to US strategic retaliatory forces is preserved. As one European statesman has observed, many conventional wars have been fought throughout the world while there has been no outbreak of war in Europe. And it is "precisely nuclear weapons, with their tremendous powers of devastation, that forced the great powers to the green table and made the amicable settlement of disputes the only acceptable form of political agreement."

SOVIET THEATER NUCLEAR CAPABILITIES: THE EUROPEAN NUCLEAR BALANCE IN TRANSITION

PHASES IN WESTERN DEFENSE

Since World War II, the principal focus of Western defense policies has centered on efforts designed to offset what has been perceived generally as a preponderance of Soviet conventional power on the European continent.[1] To this end, Western defense policies can be viewed as having passed through three phases and are currently in the fourth.

The American Nuclear Monopoly. Phase I began immediately after the close of the war, lasted until the early 1950's, and was characterized by America's nuclear monopoly. Shortly after VE Day, the United States, Britain, and Canada withdrew most of their forces from Europe. Within a year, the combined strength of their forces, which had approached five million men at the close of the war, had dwindled to about 880,000.[2] The Western nations were left with about 12 or so understrength divisions confronting 175 Soviet divisions, the great majority of which were then believed to be at battle strength.[3]

In addition, the Soviet Union appeared to be sustaining its armaments production at wartime levels and maintaining its military forces on a wartime footing. Soviet expansion, which was already well underway before the war's end—outright annexation

of Latvia, Lithuania, Estonia, and areas of Finland, Poland, Romania, and eastern Czechoslovakia—continued. Moreover, the presence of the Soviet army in the heart of Europe had compelled Albania, Bulgaria, Romania, Eastern Germany, Poland, and Hungary to fall under the Kremlin's domination. Furthermore, the failure of the Moscow Conference (March and April 1947) to reach a settlement of the differences between the Kremlin and the West over Germany; the actions of the Soviet Union in Iran, Turkey, and Greece; Moscow's clandestine support of the Italian and French strikes; and finally, the events surrounding the "coup" in Czechoslovakia compounded Western anxieties over Soviet intentions.

In response, Western states forged a trans-Atlantic partnership which, above all, tied US strategic nuclear forces to the defense of Europe. While there may have been little fear of the massive Soviet invasion,[4] Western European states were concerned that the vastly superior Soviet forces would prove to be a useful psychological tool in affecting the political infiltration, subversion, and the ultimate takeover of Western Europe. On this point, Lord Ismay, the first Secretary-General of the North Atlantic Treaty Organization, noted:

> The situation all over the world was going from bad to worse. It was proving impossible to reach agreement with the Soviets on any international issue . . . . From behind the Iron Curtain came nothing but slander and bullying.[5]

Europeans had already begun to move toward increased defense cooperation. In March 1947, the British and French had signed the Dunkirk Treaty, establishing a basis for collaboration between their two countries. One year later, Belgium, France, Luxembourg, the Netherlands, and the United Kingdom joined in signing the Treaty of Brussels and, thus, committed themselves to a joint defensive system, as well as to a strengthening of economic and cultural ties. In the aftermath of an exhaustive war and in light of the immediacy of economic recovery, few Europeans believed, however, that Europe could muster the forces necessary to offset Soviet conventional military power. So, in April of 1949, through the formation of the North Atlantic Treaty Organization, the US Strategic Air Command (SAC) was tied to the deterrence of Soviet aggression in Europe. The US monopoly of strategic nuclear power

was seen generally as a sufficient deterrent to overt Soviet aggression. Furthermore, under such a protective umbrella, it was believed that European states would be freed from the psychological constraints imposed by the huge Soviet army and, thus, would be able to devote their resources and energies to the pursuit of the economic recovery necessary for their long-term stability.

Developing Soviet Strategic Power. Phase II began early in the 1950's, lasted until sometime in the early 1960's, and was characterized by the Soviet development of strategic nuclear weaponry. The explosion of an atomic device by the Soviet Union in late 1949 did little to change Western faith in the deterrent value of US strategic weapons. Most knowledgeable observers concluded that for deterrence to be effective the United States simply had to maintain its nuclear superiority.[6] With the outbreak of the Korean War, however, new perceptions of the Soviet threat began to emerge. Some defense specialists were concerned that the North Korean attack on South Korea might be a prelude to a Soviet aggression on Europe.[7] A number of Europeans and Americans were becoming increasingly uncertain as to whether America's nuclear weapons were sufficient to deter the Soviet Union. Some Western analysts reasoned that the Soviet possession of nuclear weapons might deter America's punitive use of such weapons, except in response to a nuclear attack on the United States or on Western Europe.[8] What, then, would deter Soviet conventional aggression?

In response, Western leaders met in Lisbon, and in February 1952 agreed to improve substantially their collective conventional capabilities. By the end of 1952, NATO's member states were to contribute to the joint defense a total of 50 divisions, 4,000 aircraft, and "strong naval forces," and provisionally 75 divisions and 6,500 aircraft by 1953 and 96 divisions and 9,000 aircraft by the end of 1954.[9] Despite considerable progress in improving NATO's conventional capability, however, it was becoming evident by mid-1953 that the alliance was either unwilling or unable to meet the force goals set at Lisbon and that a serious imbalance would remain between Soviet and NATO conventional capabilities.

Once again, NATO turned to its technological superiority in nuclear weapons—this time in the form of tactical atomic munitions. By 1953, the United States had successfully tested low-yield, battlefield atomic devices. Later that same year, President

Eisenhower authorized the deployment of tactical nuclear weapons to Europe. Reactions in Europe to the NATO decision to deploy tactical atomic munitions were mixed, reflecting an uneasy balance between apprehension and hope[10] (perhaps presaging things to come). On the one hand, Western Europeans were clearly concerned over the potential impact of atomic weapons used in the defense of Europe. Such concerns were exacerbated by the Supreme Headquarters Allied Powers Europe (SHAPE) wargame "Carte Blanche" held in Western Germany, the Lowlands, and northern France in June 1955. The simulated dropping of 355 atomic bombs on military targets resulted in an estimated 1.7 million killed and 3.5 million wounded—a vivid suggestion of the magnitude of the immediate destruction that could be anticipated if tactical nuclear weapons were actually used in the defense of Europe.[11] On the other hand, Western Europeans could reason that at a time when the Soviet Union possessed neither tactical atomic weapons nor a credible strategic second strike capability, the deployment of tactical nuclear weapons appeared to provide NATO with an effective deterrent to Soviet conventional aggression which was of a tolerable cost in terms of men and money. After all, wouldn't Soviet leaders, contemplating aggression in Western Europe, be deterred by the potential for the annihilation of their forces by these battlefield devices?

Impending Strategic Parity. Phase III began in the early 1960's and lasted until the mid-1970's. This phase was characterized by an impending US-Soviet strategic balance and expanding Soviet theater nuclear capabilities. Soviet advances in medium range and intermediate range ballistic missiles (MR/IRBMs), the launching of two earth satellites, their successes with intercontinental ballistic missiles (ICBMs), and the growing availability of tactical nuclear munitions to Soviet ground forces served notice that a NATO first use of tactical nuclear weapons might be met by a Soviet response in kind. Writing in 1960, Liddell Hart expressed his pessimism concerning the fundamental question underlying Western defense plans—namely, can Europe be defended? His reply:

> For defense in a real sense of the word, as defined in dictionaries, means to 'preserve, protect, keep safe, by resisting attack.' At present, if nuclear weapons . . . are actually used no country can hope to keep safe, or even to avoid fatal destruction.[12]

In response, NATO once again focused its efforts on improving Western conventional defenses. By 1967, NATO had adopted the concept of *flexible response* and signaled its intent to respond effectively regardless of the level of aggression. Many Europeans, however, were never completely satisfied with the concept of *flexible response*. For economic reasons, Europeans generally were spontaneously hostile to improvements in conventional capabilities of a magnitude likely to be sufficient to offset Soviet conventional forces.[13] For some Europeans, *flexible response* and its emphasis on conventional force improvements seemed to decouple the defense of Europe from the American strategic deterrent, thus making a prolonged conflict in Europe more likely.[14]

Nevertheless, NATO did make some significant gains in improving its conventional capabilities. Moreover, those who argued for increased conventional capability were encouraged by the effective use of precision-guided conventional munitions in both the latter days of the Vietnam conflict and during the 1973 Arab-Israeli War.[15] Nevertheless, by the mid-1970's most nations of Western Europe, suffering from a crisis in energy and economics and confronted with multiple competing demands in the domestic sectors of their economies, were reluctant to consider matching the conventional capabilities of the Warsaw Pact. Detente further complicated the problem of allocating resources for military forces since Western publics were unconvinced of the need for additional military expenditures in the absence of a clear or present danger.[16] Thus, NATO continued to rely principally on the threat of nuclear escalation to offset the continued preponderance of Soviet conventional power and to deter the Soviet Union not only from conventional aggression, but also from the use of chemical[17] and nuclear munitions. After all, Western leaders could still reason that senior Soviet leadership would be deterred from an aggression that might reach a level of conflict at which Soviet forces were still at some *relative* disadvantage.

The Changing Theater Nuclear Balance. The latest phase began in the mid-1970's. It has been characterized by an approximate balance of US and Soviet capabilities at the strategic level and by what appears to be a Soviet attempt to achieve superiority at the theater nuclear level. In a landmark speech delivered at the International Institute for Strategic Studies in London in 1977, Helmut Schmidt expressed his concern over the changing

conditions which were now confronting the alliance. According to the Federal German Chancellor, the Strategic Arms Limitation Talks (SALT) had codified the Soviet-American strategic nuclear balance; thus, neutralizing the strategic nuclear capabilities of the superpowers. As a result, he cautioned, the significance of the East-West balance of tactical nuclear and conventional weapons had been magnified.[18]

Since Western Europeans and Americans had long been aware of what has generally been perceived as a clear Soviet conventional advantage in Europe, Schmidt's remarks focused public attention on a series of issues which were already commanding high level NATO interest and, thus, sparked an intensification of the debate over the nature of the Soviet theater nuclear buildup, over the implications of that buildup for deterrence and defense, and over appropriate NATO responses.

SOVIET THEATER NUCLEAR FORCE IMPROVEMENTS[19]

Over the last decade and a half, the Soviet Union has methodically improved its theater nuclear forces at all levels. In short-range systems (systems with ranges of 160 km or less), NATO once possessed an overwhelming superiority that in some quarters was perceived as one of the primary pillars of the Western deterrent. Today, the Warsaw Pact has over 600 FROG and SCUD A missile launchers readily available to the central front. Over 400 of these can be considered to have a nuclear mission. Moreover, they are now replacing these older FROG rockets with the SS-21. While little information is currently available on the SS-21, it is reported to be more accurate and have almost twice the range of the FROG missiles, and presumedly has incorporated improvements in reaction time, missile reliability, and handling characteristics. NATO, on the other hand, has about 100 short-range nuclear-tipped Lance and Honest John tactical missile launchers.[20] Even when French systems are included, the West only has about 140 short-range launchers. As a result, the Soviet Union and its Warsaw Pact allies now have a three to one advantage over the West in short-range tactical missile systems.

The Soviet Union is also now deploying dual-capable, self-propelled 152 mm, 203 mm and 240 mm artillery. Today, the Soviet military has about 450 nuclear-capable artillery tubes; NATO has

about 1050. Until recently, it was thought that Soviet nuclear artillery was deployed only in the western military districts of the Soviet Union. According to the US Department of Defense, however, the Soviet Union has now begun deploying these systems with their forces in Eastern Europe.[21]

While NATO still retains a relative overall advantage in short-range systems, as a result of its substantial deployment of nuclear artillery, it should be noted that these weapons whose warheads fall on the territory of the defender, are least usable in the eyes of the Europeans for the reasons described above by Hart. In any event, the gap between NATO and Warsaw Pact battlefield capabilities has narrowed considerably over the past decade and a half and the overwhelming superiority once enjoyed by NATO has disappeared (see Table I).

The Soviet Union also has been upgrading its intermediate-range nuclear forces (INF). In shorter range INF systems (forces with ranges from 161-900 km), the Soviet forces have currently deployed approximately 600 SCUD B and SS-12 (SCALEBOARD) missile launchers and a large number of tactical aircraft, of which about 350 can be presumed to have a nuclear mission.* Today, Moscow is capable of delivering nearly 1,000 warheads with these systems not counting refires. Furthermore, they are now replacing their older SCUD B and SCALEBOARD missiles with SS-23s, and are rapidly improving the nuclear strike capabilities of their tactical aircraft. The addition of later versions of FITTER (SU-17) and MiG-21 aircraft with improved avionics and generally greater ranges than the older Soviet fighters suggests an improved capacity for low altitude penetration and attack.[22]

In comparison, NATO fields 180 Pershing 1a missiles and about 350 tactical aircraft.* Additionally, the French have about 100 aircraft in this category which are likely to be reserved for nuclear

*While both the Warsaw Pact and NATO have a number of additional aircraft (e.g., FENCERS, FLOGGERS, F-4s, F-111s) that can be employed against medium-range targets, because of the longer maximum operational ranges of such aircraft, they have been considered in the comparisons of the longer range intermediate-range nuclear forces (LR/INF).

TABLE I
SHORT RANGE NUCLEAR SYSTEMS*

	Deployed	PNM	Rx
Warsaw Pact			
Artillery			
152mm	–	150	–
203mm, 240mm	–	300††	–
TOTAL		450	
Tactical missiles			
Frog/SS-21	492	328	70/120†
Scud-A	150	100	70
TOTAL	642	428	
NATO			
Artillery			
155mm	1706	853	14
203mm	431	215	29
TOTAL	2137	1068	
Tactical missiles			
Lance	100††	100	110
Honest John			40
TOTAL	100††	100	
French-Pluton	42	42	120

*Short-range nuclear systems are those systems having a range ≤ 160 km. Warsaw Pact systems are all systems in Eastern Europe, including those in the western military districts of the Soviet Union; NATO systems are all systems assigned to the European theater. French forces, which are not a part of NATO, have been included for illustrative purposes only. With respect to Warsaw Pact nuclear capable artillery, NATO has estimated that the Soviet Union has deployed a total of 300 203mm guns and 240mm mortars. The US Secretary of Defense in the 1983 version of *Soviet Military Power* has confirmed that the Soviet Union has now deployed nuclear capable 203mm guns and the 240mm mortars, as well as the 152mm guns to Eastern Europe. It is reasonable to assume that at least 150 152mm guns haved a nuclear mission. PNM = probable number of artillery systems/missile launchers with a nuclear mission. Rx = approximate maximum range in kilometers.
SOURCES: †Department of Defense, *Soviet Military Power*, Washington, DC: US Government Printing Office, March 1983; ††*NATO and the Warsaw Pact Force Comparisons*, Brussels: North Atlantic Treaty Organization, n.d.; and *The Military Balance 1982-1983*, London: The International Institute for Strategic Studies, 1982.

missions. Such differences suggest a stark imbalance in shorter-range INF systems in favor of the Warsaw Pact (see Table II).

Perhaps of most concern on both sides of the Atlantic has been the slow but methodical change that has taken place in the balance of capabilities of the longer-range intermediate-range nuclear forces (LR/INF), the *Eurostrategic* or grey area forces as they once were called. In the middle to late 1960's, the West was perceived to have a clear advantage in such systems. US Polaris submarines committed to NATO, US intermediate-range strike aircraft deployed on the continent or offshore on carriers, the British bomber and Polaris submarine fleets, and the French Mirage IVA strike aircraft and their expanding ballistic missile submarine fleet were seen as a more than adequate match for Soviet medium bombers and the over 600 or so medium and intermediate-range ballistic missiles (MR/IRBMs) the Soviet Union had deployed to support long-range nuclear operations in Europe.

During the last decade and a half, however, the Soviet Union has made what appears to be a determined effort to achieve a superiority in intermediate-range nuclear forces.[23] With the introduction of the FENCER (SU-19/24) and the FLOGGER (MiG-27) aircraft, the Soviet Union has substantially improved the range, payload, avionics, and electronic countermeasure capabilities of its European nuclear strike air arm.

According to the Secretary of Defense, the FENCER and FLOGGER:

> . . . have had a particularly profound impact on Soviet offensive capabilities. The Fencer with its all weather, low-altitude penetration capability manifestly increases Soviet ability to carry out deep strikes into NATO territory with little advanced warning.[24]

Coupled with improvements in their nuclear-capable fighter aircraft, the Soviet Union has also been deploying a new generation of variable geometry supersonic bomber, the BACKFIRE. A product of the Tupolev design bureau, the BACKFIRE is reported to have a maximum speed at high altitude of Mach 2.0 and a low altitude supersonic capability. It can carry a full range of free fall/gravity weapons, as well as the most technically advanced air-to-surface nuclear cruise missiles available in the Soviet inventory. To date, the Soviet Union has deployed approximately 75

TABLE II
SHORTER RANGE INTERMEDIATE NUCLEAR FORCES*
(SR/INF)

	Deployed	PNM	Rx
Warsaw Pact			
Missiles			
SCUD-B/SSX-23			3-500†
SS-12/SS-22	623	623	900†
TOTAL	623	623	
Tactical aircraft			
Su-7 (Fitter-A)	198	66	400
Su-17 (Fitter-C/D/H)	516	172	700†
Su-20 (Fitter-C)	35	12	600
MIG-21 (Fishbed J-N)	—	100	400
TOTAL	—	350	
NATO			
Missiles			
Pershing-I	180	180	740
TOTAL	180	180	
Tactical aircraft			
F-104	209	97	800
Jaguar	72	35	600
F-16	68	23	900
TOTAL	349	155	
French			
Jaguar	—	45	600
Sup Etendard	36	18	560
Mirage IIIE	105	30	600

*Shorter range intermediate nuclear forces are those having a range of 161-900 km. (See Table I for definitions of PNM and Rx). It was assumed that one-third of all tactical aircraft, approximately one-half of the Jaguar and Super Extendards would be retained in a nuclear role. Ranges for tactical aircraft assume a hi-lo-hi combat mission profile.

SOURCES: †*Soviet Military Power, 1983, NATO and the Warsaw Pact Force Comparisons, Jane's All the World's Aircraft 1982-1983,* and *The Military Balance 1982-1983.*

BACKFIRE bombers to the European theater and an additional 75 in a maritime role. Production continues at the rate of 30 aircraft per year, with an expected total deployment including those for maritime uses of 250-400 aircraft.[25]

The system that has caused the most concern in the West has been the introduction of the SS-20 IRBM. The SS-20 is a solid-fueled, two-staged, mobile missile with multiple independently targetable reentry vehicles (MIRVs). It is currently replacing or augmenting the older, less accurate SS-4s and SS-5s. One expert, formerly a senior Department of Defense civilian official now writing under the name of Justin Galen, has contended that the reliability, accuracy, reload, and retargeting capability of the SS-20 could permit its use in a mass strike "against virtually every NATO air base, weapons storage site, C^3 (command, control, and communications) site and fixed missile site with negligible warning."[26] A more poignant illustration of the concern raised by the SS-20 is to be found in the remarks of French strategist Pierre Gallois. Gallois contends that with the addition of the SS-20 the Soviet Union can now destroy NATO's entire inventory of nuclear weapons in 10 minutes.[27]

Today, while there is an approximate parity in long-range INF aircraft with a dedicated nuclear mission and when SS-20 missiles available as reloads to SS-20 missile launchers are counted, the Soviet Union fields about 770 MR/IRBMs (SS-4s, SS-5s, SS-N-5s, and SS-20s) with over 1,700 warheads. NATO, on the other hand, does not field any land-based LR/INF missile systems and only about 160 SLBMs when British and French forces are counted. Thus, Soviet missile deployments outnumber the West by well over 4 to 1. Even when the 40 US Poseidon missiles already included in SALT counts, but supposedly dedicated to SACEUR for theater use, are included, the Soviet Union still has almost a 4 to 1 advantage in missiles (see Table III) and about a 3 to 1 advantage in warheads.

The inherent "softness" of the data available on Soviet and Western nuclear capabilities prohibits precise calculations of the balances of theater nuclear capabilities. We are captive of the many assumptions that must be made, especially with respect to aircraft.[28] Nevertheless, given the data available, the composite of theater-nuclear capabilities now available to the Soviet Union suggests that the NATO/Warsaw Pact balance of nuclear forces has shifted over the past decade from one that favored the West to

TABLE III
LONGER RANGE INTERMEDIATE NUCLEAR FORCES*
(LR/INF)

	Deployed	PNM	Rx
Warsaw Pact			
Missiles			
SS-4 (Sandal)	248†	248	2000†
SS-5 (Skean)			4100†
SS-20	243	486	5000†
SS-N-5 (Serb)	39	39	1400
TOTAL	530	773	
Aircraft			
SU-24 (Fencer)	412	137	1800†
MiG-23/27 (Flogger)	412	137	1200†
TU-16 (Badger)	232	116	2800
TU-22 (Blinder)	94	47	3100
TU-26 (Backfire)	75	38	5500†
TOTAL	1225	475	
NATO			
Missiles			
Polaris	64	64	4000
French			
SSBS-S3	18	18	3000
MSBS-M20	80	80	3000
Strategic			
Poseidon	40	40	4600
Aircraft			
Vulcan-B2	48	48	2800
Buccaneer	50	25	950
F-111	156	78	1900
F-4	424	141	1000
A-6	20	10	1600
A-7	48	24	950
TOTAL	746	326	
French Mirage-IVA	34	34	1800
Aggregate LR/INF Capabilities			
Warsaw Pact	1755	1248	—
NATO	810	390	—
NATO (Incl French & US StrategicSystems)	982	562	

*Longer Range Intermediate Nuclear Systems are those systems having a maximum range of 901-4800+ km. (See Table I for definitions of NATO, Warsaw Pact, PNM, and Rx). French forces which are not a part of NATO forces have been included for illustrative purposes only, as have been US Poseidon missiles which are counted under SALT as strategic. It is assumed that 243 SS-20 missile launchers are deployed within range to strike targets in Central Europe and that one reload is available per launcher.

SOURCES: †*Soviet Military Power, 1983, The Military Balance 1982-1983,* and *Jane's All the World's Aircraft 1982-1983.*

one that now favors the Soviet Union and its Warsaw Pact allies. While the West may retain an advantage in short-range systems, the Soviet Union is certainly ahead in intermediate-range forces. On this point, the prestigious International Institute for Strategic Studies has concluded that "the balance is distinctly unfavorable to NATO and is becoming more so."[29]

SOVIET DOCTRINE

For those concerned about Soviet theater nuclear force improvements, an understanding of Soviet doctrine has compounded the anxieties. Since the days of Nikita Khrushchev, Soviet military writers have rejected Stalin's World War II idea of adopting the strategic defensive during the early phases of conflict.[10] Today, Soviet doctrine extols surprise, rapid offensive, high-tempo operations. Surprise is seen as one of the most important principles of the military art. As a result, "the desire for surprise has begun to permeate all decisions for the conduct of operations and battles."[31] Indeed, Colonel A. A. Sidorenko, in a work listed as recommended reading in "The Officer's Library" and intended for reading "by officers of the Soviet Army, students in higher military schools and reserve officers" has argued that the history of conflict itself has emphasized the value of surprise. "Extremely often the absence of surprise turned out to be the reason for the failure of an operation at its very beginning."[32]

Equally stressed by Soviet military theorists is the importance of rapid offensive combat operations. Soviet military science considers the offensive as the foremost type of military combat action. V. Ye. Savkin writes: "the offensive is the basic form of combat actions, since only by a decisive offensive conducted at a high tempo and to a great depth is total defeat of the enemy achieved."[33] Similarly, Sidorenko in his seminal work on offensive warfare, stressed the need for "swift development of the breakthrough," the value of a rapid "offensive in depth" and, in general, the importance of maneuver and shock action on the modern battlefield.[34] Likewise, Division Commander Colonel Lobachev has argued that "a high tempo is not a goal in itself, but a means to achieving victory in combat. The speed of movement of the attackers denies the enemy the opportunity to freely maneuver with his forces and equipment, to utilize the reserve . . . and it neutralizes many of the strengths of the enemy defense."[35]

What is disconcerting, however, is that Soviet military theorists have consistently contended that nuclear weapons—indeed all weapons of mass destruction, nuclear, chemical, and biological—enhance the element of surprise and rapid offensive operations. Likewise, surprise and rapid offense increase the value of nuclear weapons in securing victory. Describing the relationship between nuclear warfare and Soviet doctrine and defense planning, Soviet writers have proclaimed the nuclear weapon to be the "most important element of the battle,"[36] "the basic means of destruction."[37]

They contend that "the side which employs nuclear weapons with surprise can predetermine the outcome of battle in his favor."[38] They further argue that the combat qualities of highly mobile shock forces permit rapid exploitation of "the results of the employment of nuclear and other means of mass destruction most effectively, overcoming the enemy's defense at a high rate, breaking through into his deep rear swiftly, advancing over any terrain including that contaminated with radio-active substances, and inflicting powerful blows on the enemy."[39] Moreover, "nuclear strikes can destroy the strongest centers and strongpoints in the enemy defense, his reserves, means of mass destruction, and other important objectives." Consequently, Soviet military writers have concluded that through "the stunning effect of surprise attacks by nuclear and conventional weapons and decisive offensive operations by troops, the enemy's capabilities are sharply lowered, . . . the correlation of forces changes immediately . . . . He may panic and his morale will be crushed."[40]

Thus, a number of defense analysts on both sides of the Atlantic are not only concerned about Soviet theater nuclear force improvements but also the harmony that exists between those force improvements and current Soviet doctrine.

IMPLICATIONS FOR NATO

A Devalued Deterrent. As Klaas de Vries, former chairman of the Dutch Defense Committee, has argued, Soviet theater nuclear force improvements have not neutralized the ability of the West to deter conflict in Europe.[41] Moscow is likely to harbor few illusions about the destructive potential of the West's nuclear arsenal—which by any standards remains formidable. Soviet leaders are not

likely to set out deliberately on a course which they believed might lead to a nuclear war.

Nevertheless, in a broader sense, Soviet theater nuclear force improvements have resulted in a depreciation of the deterrent value of the West's nuclear arsenal. From a Western perspective, the deterrence once provided by Western nuclear superiority was simply never limited to the notion of deterring the deliberate initiation of conflict. Rather, an effective deterrent was also viewed as one which served to limit Soviet policy options in time of crisis and, thus, reduce the potential for a slow slide to nuclear war based on mutual miscalculation. In theory, while Soviet leaders could be expected to test Western resolve in any number of ways, ultimately they would be deterred not only from the deliberate initiation of conflict, but also from specific actions which might lead to conflict and an ensuing escalation to levels at which they were at a relative disadvantage.

Today, in an age of strategic parity, Soviet INF superiorities are likely to provide Moscow with a sense of increased room for political maneuver. While Soviet leaders are basically conservative in outlook and well aware of their own limitations as well as of the probable consequences of conflict in Europe,[42] they are also keenly aware of Western European concerns about the potentially devastating effect of a nuclear war in Europe. In light of such concerns, Soviet leaders now are likely to believe that "sober" assessments by the West of the new balance of nuclear capabilities on the continent of Europe further reduce the risk of war erupting from serious disputes. Thus, in a crisis with the West, Soviet leaders are likely to feel somewhat more confident today that they can successfully engage in political coercion, crises bargaining, and bluff than they felt, say in the early 1960's. Unfortunately, coercive bargaining and bluff on the part of Soviet leadership during a crisis are likely to increase the possibility of miscalculation and confrontation and, thus, the potential for the very conflict all sides seek to avoid.

A Decline in Western Self-Confidence. Perhaps as significant as the potential for Soviet miscalculation during crises is the debilitating effect knowledge of that potential and of Soviet military capabilities has on Western elites during peacetime. As the balance of nuclear capabilities moves increasingly in favor of the Soviet Union, Western confidence in its ability to provide an

effective deterrent declines. Few, if any, believe the Soviet Union is likely to attack Western Europe in the foreseeable future. The West is uncomfortable, nevertheless, with Soviet conventional, chemical, and nuclear might. Today, we in the West are uncertain what current imbalances mean in light of detente as amended by events in Afghanistan, Poland, Africa, and Latin America and by continued Soviet arms acquisitions. We are uncertain about the nature of security provided through the NATO link. Under such circumstances, consensus for action diminishes. Confidence and determination are replaced by confusion, anxiety, hesitation, and political fragmentation—the resulting combined effects further weaken our ability to achieve consensus within and among the member states of NATO.[43]

The bottom line is that the Kremlin knows full well the potential political impact of superior military power. According to Thomas W. Wolfe, long-time Soviet specialist for the Rand Corporation, civilian and military elements of the Soviet leadership elite appear to share similar attitudes toward military power, ascribing to it a more positive value than is generally the case in the West. Wolfe notes that among the values ascribed to military power are its utility for gaining political objectives, for supporting an ambitious foreign policy, and for opening opportunities to advance communism in the world.[44]

In short, the Soviet elite believes military strength pays dividends beyond deterrence, that superior military power is a useful peacetime psychological tool, with a subconscious component that can serve in subtle ways to secure Soviet interests in Europe. As Josef Joffe, senior editor of the German weekly *Die Zeit*, has noted while speaking on a related subject: A kind of "psychological setting" can be created "where arm twisting becomes superfluous." Power—real power—"is when you don't have to threaten."[45]

Increased Vulnerabilities. In 1971, the late Minister of Defense Marshal Grechko detailed Soviet targeting priorities for their longer-range theater nuclear forces. Top on the priority list were US Pershing missile bases, nuclear-capable NATO air force units, tanker bases, British and French nuclear submarines, tactical nuclear weapons storage sites and US aircraft carriers. Such targets were then followed by major ports, military bases and barracks, nuclear reactors, command and control centers, and the

transportation and supply nets.[46] Thus, the West's nuclear forces and critical command, control, and supply nodes have been principal candidates for Soviet attack for over a decade. However, the addition of the SS-20 and the continued deployment of new generation tactical fighter/bomber aircraft such as the FENCER and BACKFIRE has significantly increased the vulnerability of Western forces.

The high accuracy of the SS-20 has reduced the number of warheads required to assure the destruction of a specific target, while the warhead with MIRV has increased the potential number of targets that can be struck by a single missile by threefold. In the past, it would have been necessary for the Soviet Union to launch two, perhaps three, of their older SS-4 or SS-5 missiles in order to have a high confidence of destroying a specific target—rapidly exhausting their capabilities. Today, with the SS-20 and MIRV, it is theoretically possible for Soviet forces to destroy with slightly over 100 SS-20 missiles the same number of targets it would have taken their entire force of SS-4s and SS-5s to destroy. Likewise, older generation aircraft frequently lacked the avionics, electronic countermeasures, range, and payload characteristics which make the new generation fighter bombers and BACKFIRE-like aircraft a serious threat to NATO's deep rear.

THE NATO RESPONSE

In December 1979, NATO Foreign and Defense Ministers agreed in Brussels to modernize NATO's nuclear forces by deploying US land-based intermediate-range missile systems in Europe. At the same time, in what became known as the dual-track decision, the ministers agreed to seek negotiations with the Soviet Union to limit INF and announced that NATO's INF requirements would be examined in light of the results achieved through negotiations.[47]

Both decisions were the product of extensive alliance consultations on the impact of Soviet nuclear force improvements. By 1977, Western defense specialists were becoming increasingly concerned that while the Soviet SS-20 would not be included in SALT II limitations, the protocol to the SALT II Agreement would ban both ground and sea-launched US cruise missiles with ranges in excess of 600 km. Perhaps even more important, through a series of further SALT restrictions on technology transfers, Moscow was seeking to make certain that none of America's European allies

would be able to compensate for continued Soviet SS-20 developments with their own deployments of cruise missiles. Thus, when NATO heads of government met in May of 1977, they agreed, as a part of NATO's Long-Term Defense Program, to examine ways of modernizing the Alliance's theater nuclear forces (TNF). The following October, NATO's Nuclear Planning Group (NPG), the alliance forum for nuclear policy consultation, created the High Level Group (HLG). Its task was to establish a comprehe ve framework for an assessment of NATO's long-term needs for theater nuclear forces. The HLG met three times in late 1977 and early 1978 and concluded that an "evolutionary adjustment" in NATO's theater nuclear forces that provided somewhat more long-range capability was needed. The initial findings of the HLG were noted at the NPG Ministerial meeting in Fredrikshavn, Denmark in April 1978. NATO ministers agreed then that the issue needed careful attention because of the growing threat from the East and the potential political implications and cost considerations that would attend any move to improve NATO long-range nuclear forces.[48] The position of the United States, however, remained somewhat ambivalent on whether any upward adjustment of NATO's TNF was necessary. While some elements within the US national security community were prepared to accept the HLG conclusions, others were concerned that any theater nuclear force improvements would further complicate SALT and contribute to potential divisive discussions within NATO touching basic alliance nuclear doctrine and practice.[49] Moreover, there was a belief in some quarters that European concerns over growing Soviet power could be offset by some further commitment of US sea-based nuclear forces. By 1979, however, any ambivalence in the US position had disappeared as the United States lined up firmly behind the HLG consensus view.[50]

Western reactions to the NATO 1979 "double decision" have been mixed. Much of the popular opposition to any deployment of Pershing II or cruise missiles has been founded on a general emotional reaction to what has been wrongfully perceived as further additions[51] to the world's already immense nuclear arsenals and to the understandable concerns over the implications for Europe, indeed for mankind, should deterrence fail. Misunderstandings of the fundamental objectives of President Carter's countervailing strategy and concerns over early policies

and pronouncements of the Reagan Administration, both exacerbated by a well-organized Soviet disinformation campaign, have further contributed to public anxieties, added impetus to nuclear freeze and no first use of nuclear weapons movements, and dotted the landscape of Europe with antinuclear protest marches.

Beyond the emotional level, however, alliance deployment of Pershing II and cruise missiles have been opposed for three fundamental reasons. First, some have argued that a balance exists, that any further deployments will only provoke the Soviet Union unnecessarily into further missile deployments in an unending pattern of deployments and counterdeployments, and that the alliance would be better served by accepting the Soviet offer to limit its European SS-20 missile deployments to a number equal to the British and French long-range missile deployments. Second, some observers contend that cruise missiles and, especially, Pershing II, threaten the Soviet Union with a potential first strike. However, because these missiles are vulnerable, they invite Soviet preemption and, thus, contribute to crisis instability rather than stability. Finally, it has been argued that Pershing II and cruise missiles do little to enhance NATO's deterrent posture. Each of these substantive concerns warrants further examination.[12]

The Balance and Britain and France. In November 1977, Leonid Brezhnev declared that the Soviet Union wished to preserve the approximate equilibrium that existed between East and West in Central Europe.[13] At that time, the Soviet Union had deployed about a dozen SS-20s. Since then, Moscow has deployed over 230 additional SS-20 launchers within striking distance of all of Western Europe. Thus, despite Soviet propaganda—which has gone to great lengths in its attempts to portray a balance in Central Europe by excluding from data counts many of its own nuclear-capable aircraft and by grossly inflating the numbers of American aircraft based in Western Europe or on aircraft carriers off Europe,[14] available evidence clearly indicates that the balance of intermediate-range nuclear capabilities has shifted in favor of the Soviet Union. Today, the United States deploys no LR/INF missiles. Even when British and French sea and land-based long-range nuclear forces are included, the Soviet Union has nearly a 5 to 1 advantage in missiles. Likewise, the Soviet Union enjoys an advantage in the numbers of nuclear-capable tactical aircraft (see Table III). With the current imbalance in Soviet and American

capabilities in mind and after close consultations with America's NATO partners, the United States informed the Soviet Union in November 1981 that it was willing to cancel the deployment of Pershing II ballistic missiles and ground-launched cruise missiles (BGM-109G) if the Soviet Union would dismantle its SS-20, SS-4, and SS-5 missiles. President Reagan's initiative—the so-called "zero option"—was widely welcomed in the West as an important first step in attempts to reduce the overall number of nuclear weapons in Europe. Moreover, the initiative was designed to address directly the growing imbalance of intermediate-range nuclear forces where it exists—in intermediate-range missiles.

Moscow responded by first promising a moratorium on INF deployments for the duration of the negotiations and then with proposals which included British and French forces.[15] Moscow's logic for including the British and French forces in its calculations is the demand for "equal security" in Europe.[16] The USSR contended that:

> Making the number of Soviet medium-range missiles in Europe equal to that of the member-countries of the North Atlantic Alliance would conform to the principle of equality and equal security . . . . It is obvious that NATO is *represented* in the balance of medium-range nuclear weapons in Europe by the United States, Britain and France, while the Warsaw Treaty Organization is represented only by the Soviet Union, since there are no other nuclear powers in the latter alliance. All those Western weapons—and not only those of the United States—are targeted against the Soviet Union and its allies.[17]

On the surface, such an argument appears to have a compelling simplicity; however, a number of factors should be considered before conceding to Soviet demands. First, British and French forces are national strategic forces. While British forces are assigned to NATO, they are also reserved for independent strategic deterrent needs. French forces are not even under NATO control. In terms of roles and missions, British and French forces do not differ from the strategic SLBM and ICBM forces of the Soviet Union or the United States. Their fundamental mission is to provide Britain and France minimum deterrent protection from strategic attack.

Perhaps a case could be made for the inclusion of such forces on talks on strategic force limitations. However, one must remember

that as minimum essential deterrent forces, the sum total of British and French forces is small compared to those of the Soviet Union and the United States and that numerical advantage conceded to the Soviet Union in both SALT I and SALT II have more than compensated for British and French strategic capabilities.[4] In any case, because of their strategic characteristics, inclusion of British and French forces in the current INF negotiating forum would appear to be inappropriate.

Second, the INF negotiations in Geneva are bilateral negotiations between the United States and the Soviet Union. Neither the United States nor the Soviet Union have any authority to speak for Britain or France. Nor can either dictate the size of British or French strategic forces. Furthermore, both the British and French have stated explicitly that they oppose having their forces included in current INF negotiations. If Moscow wishes to include British and French forces, it must take the unpopular step of terminating current bilateral talks with the United States and call for multilateral INF talks which include Britain and France. Another, potentially more rational, alternative might be to call for multilateral START negotiations and deal with independent strategic forces in a proper strategic context.

Third, the Soviet demand to include British and French forces in INF negotiations under the guise of "equal security" is tantamount to a call for "absolute security" underwritten by "absolute superiority." What Moscow, in essence, is seeking through arms control is a recognition that it should be permitted to maintain forces equal in number to the nuclear weapons of all the other nuclear powers combined. They have already indicated that their SS-20 missile forces facing China and Japan (both already threatened by Soviet strategic forces) are sacrosanct. Now they demand to have additional forces to offset those of Britain and France as well as those of the United States. In theory, if every country demanded to have nuclear forces equal to those of all other possible combinations of adversaries, arms control would be impossible. Indeed, there would be a rapid spiraling of the nuclear arms race.

Finally, it is the potential for the involvement of US theater nuclear and, ultimately, US strategic forces that serves as the principal deterrent to Soviet conventional or nuclear aggression in

Europe. On this point Lawrence Eagleburger, Under Secretary of State for Political Affairs, has commented:

> Stability (in Europe) depends on a clear American commitment to the security of our allies. Only when it is plain to everybody, especially the Soviet Union, that the full weight of American military might stands ready to defend Western Europe can the Europeans be free from the threat of Soviet intimidation. American nuclear weapons are deployed on the continent to protect our allies, whether or not they have nuclear weapons of their own. Only American weapons can perform this task because only the United States can match the size and strength of the Soviet nuclear arsenal. There is no substitute, strategically or politically.[59]

Since the individual nations of NATO cannot be certain that either the British or the French would actually be willing to use their minimum deterrent nuclear forces in response to a Soviet attack on, say, West Germany, rather than hold them in reserve to deter a direct Soviet attack on their own countries, the only forces that are actually a deterrent counterbalance to Soviet INF deployments are US INF forces. Furthermore, from the Soviet perspective a Soviet planner is likely to reason that the probable link to US strategic forces and a strategic exchange is far stronger if US INF forces are involved in a conflict in Europe than if British and French forces are.

Vulnerability and Crisis Stability. It also has been argued by some that the highly accurate[60] and quick reacting Pershing II missile force will be able to strike high value Soviet targets—Soviet political and military leadership, command and control facilities, and hardened military installations—in a matter of minutes. Thus, these weapons threaten the Soviet Union with "decapitation."[61] It is further argued that since these weapons are relatively vulnerable they invite Soviet preemption and hence, contribute to instability. Indeed, one observer has stated, "more than any other weapon in NATO's inventory, the Pershing II threatens crisis stability."[62] Moreover, Moscow contends that like the Pershing II, cruise missiles with their capacity to fly at low altitudes, elude discovery, and strike targets with pinpoint accuracy also are capable of such a "decapitating" first strike.[63]

This form of crisis instability—preemptive instability or, in this case, the inclination of the Soviet Union to resort to a preemptive first strike in a severe crisis to avoid having its own nuclear

capabilities and command and control nets destroyed by a first strike by US INF systems,[64] however, is more a function of the potential vulnerability of US INF systems than of any first strike capabilities the Soviet Union may perceive these systems to have. That is to say, Soviet leadership is not likely to initiate a nuclear war through preemption if the probability of destroying US INF systems is low despite any notions they might have about US INF first strike capabilities.

Nonetheless, once deployed in Europe, NATO's Pershing II and cruise missile forces will be neither capable of decapitation nor inherently vulnerable to a Soviet preemptive attack. First, the size of the deployment is too small to offer high probabilities of success in such a strike, given the defenses, redundancy, and hardening of Soviet facilities. Second, only the Pershing II ballistic missile can strike targets quickly and its range (1800 km)[65] is insufficient to strike Moscow. Third, despite its potential accuracy, the NATO ground-launched cruise missile force must traverse Eastern European countries and parts of the Soviet Union before striking its targets, thus providing hours of warning.

Concerning potential vulnerabilities, while it is true that in their peacetime locations in Western Europe US INF systems would be vulnerable to a surprise attack, a "bolt out of the blue" attack is simply unlikely. What is, of course, of concern is that warning signals will be misinterpreted or that political warning will not be translated into operational military warning for any of a variety of reasons.[66] In either case, however, a conflict in Europe initiated by Soviet forces with direct deep nuclear and conventional attacks on Western missile forces and command and control facilities would involve such enormous destruction in densely populated Western Europe that it would be of enormous psychological and political consequence in the West. To take such a nuclear initiative in Europe, as Francois de Rose, former French Ambassador to NATO has said: "The leaders in Moscow would have to believe that it would not entail the risk of a major confrontation with the United States;" an assumption which is very unlikely to mark the rationale of Soviet policy.[67] On the other hand, if Soviet planners were to assume the more likely, that such an attack might well invite a US/NATO strategic retaliatory nuclear response, then they would be wise to advise Soviet leadership of the necessity to begin hostilities with a full strategic preemptive attack on America's

retaliatory force in an attempt to limit damage to the Soviet Union. It is difficult, however, to envisage any initial Soviet objectives in Western Europe which would be worth initiating a US-Soviet strategic nuclear war.

Notwithstanding, with a modicum of warning the inherent mobility of Pershing II and cruise missiles makes these weapons largely invulnerable to a Soviet preemptive attack. It has been argued that once these missiles are removed from their storage depots there will be no hardening to protect them, and, although they are mobile, they will not move swiftly nor be easily concealed on the crowded highways of West Germany. Thus, if Soviet overhead reconnaissance cannot keep track of them, Soviet agents on the ground will.[68] However, these missiles when moved will be protected by Western forces. They will be able to be dispersed to a large number of sites. Presumedly, there will always be a portion of the force on the move to new locations. Under such circumstances one should not underestimate the complexity of the problem posed to the Soviet Union in any attempts to target such a force. Even if it received information from its agents or from satellite photography concerning the specific location of some of the dispersed missiles, by the time that information was processed and targets assigned to firing units, what confidence would the Soviet leadership have that all the information was accurate and that the missiles were still in their original location? Indeed, John Erickson, a well-known specialist on the Soviet military, has noted that one point which has not been lost on the Soviet command is that a "high confidence first-strike capability" is an elusive animal.[69] There is little question that the USSR might be successful in targeting some of NATO's Pershing II and cruise missile forces. Once dispersed, however, these systems will be clearly less vulnerable than much of NATO's current nuclear forces. Thus, Pershing II and cruise missiles will reduce, rather than increase, the temptation of the Soviet Union to preempt during a severe crisis or conventional conflict. As a result, there should be a relatively greater incentive to seek solutions to crises or terminate a conventional conflict early before nuclear weapons become involved.

Some observers have argued that NATO would be better served to deploy these forces at sea since Pershing II and cruise missiles deployed in land-basing modes will not be perfectly invulnerable to attack. Under such circumstances, however, from a Soviet

perspective these forces would be virtually indistinguishable from US/NATO's strategic retaliatory forces. Thus, an intermediate option which strengthens the linkage between conflict in Europe and US strategic forces would be lost. Furthermore, while the Soviet Union has already deployed cruise missiles at sea and the United States, for the near term, also is planning to deploy sea-launched cruise missiles with nuclear warheads on attack submarines and surface ships,[70] it may still be possible to limit through arms control such deployments. The problem will be further complicated if NATO moves its Pershing II and cruise missiles forces to sea.

Deterrence in the Age of Strategic Parity. Deterrence depends on the credible threat of pain. It is the expectation of violence, as well as the potential level of violence that might be anticipated in response to one's actions that influences decisions. During the era of US strategic superiority, the linkage between the threat of aggression and the threat of pain was clear. The linkage was forged of a logic that suggested that the side possessing an overwhelming nuclear advantage (the US/NATO) was likely to use that advantage, if necessary (i.e., deliberately escalate a conflict), to assure a favorable outcome should an adversary (the USSR/Warsaw Pact) initiate a major aggression in Europe. Thus, deterrence seemed assured. No adversary would commit national suicide.

Today, that logic, and thus the linkage, is less certain. In the age of US-Soviet strategic parity, deterrence depends less on the concept of "deliberate escalation" and more on the maintenance of capabilities which suggest to a potential aggressor a high probability that the flow of events in a conflict might ultimately result in a strategic nuclear exchange and a concomitant level of pain and horror never before experienced throughout the history of conflict—not because the United States or NATO would deliberately choose such a response in the first instance, but because NATO's capabilities underscore the potential for an interaction, should the Soviet Union attack, which is likely to result sooner or later in an exchange of strategic nuclear forces.

Thus, deterrence in Europe today depends on a balance between certainty and uncertainty. Soviet leaders must be certain that the West has the capacity to respond to any level of aggression Moscow may choose. At the same time, Soviet leadership must remain

uncertain as to just *how* the West will respond, what impact the force of events will have on the potential for escalation, and, hence, what the risks and costs of an aggression would be. This suggests the need for the West to maintain a number of options across the spectrum of capabilities. Indeed, such options forge the conceptual link between Soviet conventional aggression in Europe and US/NATO strategic retaliatory forces and are the bulwark of the Western deterrent in the age of strategic parity.[71] Pershing II and cruise missiles will fill an already existing gap between NATO and Soviet/Warsaw Pact capabilities.

The Soviet Union has argued that Pershing II and cruise missiles are strategic weapons. They can strike the Soviet Union, while SS-20s, indeed the entire panoply of Soviet theater weapons, can only reach into Western Europe. What the Soviet leadership must be made to understand is that from the perspective of the North Atlantic Alliance, including the United States, a nuclear strike on Paris, Bonn, or Bremen is as strategic as a strike on the United States. Thus, if the Soviet Union is unwilling to negotiate serious reductions of its SS-4s, SS-5s, and SS-20s, the deployment of Pershing II and cruise missiles will offer additional options which enhance the ability of the West not only to deter Soviet conventional aggression, but also a Soviet nuclear aggression—including the use of its SS-20s and other intermediate-range nuclear forces. NATO need not match one for one Soviet deployments to accomplish this task. However, a rough balance should be maintained for psychological as well as military purposes. Moreover, to the extent that Pershing II and cruise missiles represent a shift in emphasis from short-range systems which threaten Western Europe with destruction if used to longer-range systems which threaten Eastern Europe, including the Western USSR, there should be a corresponding further improvement in the deterrent effect of the Western nuclear arsenal and an increase in Western self-confidence.[72] Correspondingly, failure to fill the gap in theater nuclear capabilities created by the extensive Soviet deployments of the SS-20 IRBM will further erode the West's capacity to deter aggression in Europe.

A strong criticism of providing additional nuclear options to decisionmakers is that while such options may improve deterrence, they are likely to lower the nuclear threshold. Moreover, from a European perspective, options below the US-Soviet strategic level

might result in a nuclear war confined only to Europe. The common line of argumentation is that US and Soviet leaders might be more inclined to use theater nuclear options than to engage each other's strategic forces with cataclysmic consequence. This, in fact, is the great dilemma of deterrence in the age of parity. Credible deterrence requires options which clearly appear more useable to a potential adversary than the threat of mutual annihilation. Yet, those very options suggest an increased probability that nuclear weapons *will* be used in something less than a full strategic exchange should war actually occur. Here I would suggest that while contemporary wisdom on this issue is correct, at least in theory, in practice the availability of options below a total strategic exchange is not likely to lower the nuclear threshold very much if at all. This is so because of the propensity, especially in a nuclear environment with an eminent potential for total annihilation, for worst case planning on both sides. Thus, for the Soviet leaders' part, they are likely to assume that should their forces succeed in breaking through Western defenses in an attack on Central Europe, the West, driven by bureaucratic momentum, established procedures, and an impetus to use rather than lose its nuclear weapons,[11] would be likely to resort to those weapons to avoid being overrun. On the other hand, the American President and other Western leaders, despite bureaucratic momentum, and so forth, are likely to reason that any use of nuclear weapons would result in a Soviet nuclear response. Hence, nuclear options below the strategic level greatly reduce the probability of a conflict of any kind occurring in Europe without, in practice, measurably altering the nuclear threshold.

CONCLUSION

It is necessary to keep in mind that a relative balance of nuclear capabilities is important for deterrence. There need not be an absolute equality in all categories of weapon systems. In the age of rough nuclear parity, however, the overall balance, as well as the balance in any major category of potential options, should not be allowed to get too far out of line if an effective deterrent to aggression is to be maintained. Soviet theater nuclear improvements over the past decade and a half have succeeded in shifting the balance of nuclear capabilities in favor of the Soviet

Union. This is especially true of both shorter and longer-range INF systems. The effect on NATO of that shift has been a devaluation of deterrence, a decline in Western self-confidence, and an increase in NATO vulnerabilities.

If the Soviet Union is unwilling to negotiate a significant reduction in the INF systems which now pose a serious threat to the West, the NATO deployment of Pershing II and cruise missiles will not only help to restore balance to the NATO/Warsaw Pact nuclear equation, but will also enhance deterrence, reduce NATO vulnerabilities, and thus, contribute to crisis stability in Europe.

While it is important to examine alternatives for improving NATO's conventional capabilities as a means of raising the nuclear threshold, it is even more important to assure a rough balance of NATO-Warsaw Pact nuclear capabilities exists and the linkage to US strategic retaliatory forces is preserved—for as one European statesman has observed: while Europe has been at peace there have been more than 140 wars in the rest of the world. And it has been "precisely nuclear weapons, with their tremendous powers of devastation, that have forced the great powers to the green table and made the amicable settlement of disputes the only acceptable form of political agreement."[74]

ENDNOTES

1. Whether Western fears of Soviet capabilities or intentions were justified or rather served to produce policies which evoked a Soviet reaction and thus contributed to setting the "Cold War" in motion (as a number of alternative explanations of post-World War II history might suggest) is not material to the discussion. The fact is that for the most part the fears were genuine and the policy responses were a natural outgrowth of those fears. For a review of revisionist literature on the origins of the "Cold War" see Robert James Maddox, *The New Left and the Origins of the Cold War*, Princeton: Princeton University Press, 1973; J. L. Richardson, "Cold-War Revisionism: A Critique," *World Politics*, July 1972, pp. 579-612; and Robert W. Tucker, *The Radical Left and American Foreign Policy*, Baltimore: The Johns Hopkins Press, 1971. See also Matthew A. Evangelista, "Stalin's Postwar Army Reappraised," *International Security*, Winter 1982/1983, pp. 110-138.

2. See Lord Ismay, *NATO: The First Five Years 1949-1954*, Netherlands: Bosch-Utrecht, n.d., p. 4.

3. Writing in 1962, Robert E. Osgood in his seminal work on NATO noted that the Soviet Union maintained 25 fully armed divisions in Central Europe and, overall, at least 140 of 175 divisions at battle strength. He did not define what he meant by battle strength, however. See his *NATO: The Entangling Alliance*, Chicago: The University of Chicago Press, 1962, p. 29. By the late 1950's and early 1960's it was becoming more apparent that actual manpower levels of Soviet divisions differed, based on their location, with the more forward divisions more fully manned. See Evangelista, pp. 111-112.

4. Osgood, p. 30.

5. Ismay, p. 6.

6. Osgood, pp. 52-53.

7. For example see President Truman's "Statement, June 17, 1950," *Department of State Bulletin*, July 3, 1950, p. 5 and statement by Secretary of Defense Johnson before the US Congress, Senate, Committee on Appropriations, *Supplemental Appropriations for 1951*, Hearings before the Senate Committee on Appropriations, 81st Cong., 2d Sess., p. 272. Also see Roger Hilsman, "NATO: The Developing Strategic Contest," in *NATO and American Security*, edited by Klaus Knorr, Princeton: Princeton University Press, 1959, p. 18.

8. For example see Andre Beaufre, *NATO and Europe*, New York: Alfred A. Knopf, 1966, pp. 57-58 or Denis Healey, "Britain and NATO," in *NATO and American Security*, p. 210.

9. Osgood, p. 87.

10. For a thorough discussion of some of the factors which contributed to allied uneasiness as the Alliance came to rely increasingly on tactical nuclear weapons for defense see Hilsman, pp. 24-29.

11. See Osgood, p. 127. For an analysis of the impact of "Carte Blanche" on German opinion see Hans Speier, *German Rearmament and Atomic War*, White Plains, New York: Row, Peterson & Co., 1957, especially Chapters X and XI. See also Karl W. Deutsch and Lewis J. Edinger, *Germany Rejoins the Powers*, Stanford, California: Stanford University Press, 1959, p. 27.

12. B. H. Liddell Hart, *Deterrent or Defense*, New York: Frederick A. Praeger, 1960, p. 47.

13. Raymond Aron, *The Great Debate*, Garden City: Doubleday and Company, Inc., 1965, p. 69.

14. See Alain C. Enthovin and Wayne K. Smith, *How Much is Enough?*, New York: Harper & Row, Publisher, 1971, p. 117.

15. For example see Amos A. Jordan, "Introduction: New Technologies and U.S. Defense: Planning for Non-member Conflict," in *The Other Arms Race*, eds. Geoffrey Kemp, Robert L. Pfaltzgraff, Jr., and Uri Ra'anan, Lexington, Massachusetts: D. C. Heath and Company, 1975; Brigadier General John E. Ralph, "Tactical Air Systems and the New Technologies," in *The Other Arms Race*, John T. Burk, "The Changing Nature of Modern Warfare," *Army*, March 1974; and James F. Digby, *Precision Guided Munitions: Capabilities and Consequences*, Santa Monica, California: The Rand Corporation, June 1974.

16. Ronald Wakeford and James Dornan, Jr. in their study on Western European perceptions of NATO contended that "The most crucial dilemma faced . . . by Western Europeans, especially their respective Defense Ministers (was) how to reconcile the need for defense and security with an atmosphere of detente with the Soviet Union." See Wakeford and Dornan, *West European Perceptions of NATO*, Arlington, Virginia: Stanford Research Institute, Strategic Studies Center, November 1975, p. 7. For a further discussion of the effects on Western Europe of the dual Soviet policies of detente and arms improvements see Robert Kennedy, "Nonconsonant Detente and NATO," in *National Security and Detente*, New York: Thomas J. Crowell Co., 1976, pp. 117-129.

17. For an explanation of Soviet chemical capabilities, see John M. Weinstein and Henry Gole, "Chemical Weapons Rearmament and the Security of Europe: Can Support be Mustered?," *The Defense of the West: Strategic and European Security Issues Reappraised*, Boulder: Westview Press, 1983.

18. Helmut Schmidt, "The 1977 Alastair Buchan Memorial Lecture," *Survival*, January-February 1978, pp. 2-10.

19. The following three sections borrow heavily and expand on the ideas presented in an earlier work by the author. See Robert Kennedy, "Soviet Theater-Nuclear Forces: Implications for NATO Defense," *ORBIS*, Summer 1981, pp. 331-344.

20. Department of Defense, *Soviet Military Power*, Washington, DC: US Government Printing Office, March 1983, pp. 37-38 and *NATO and the Warsaw Pact Force Comparisons*, Brussels: North Atlantic Treaty Organization, May 1982, p. 46.

21. *Soviet Military Power*, p. 40. NATO believes the Soviet Union has deployed approximately 300 203 mm and 240 mm nuclear artillery pieces. The Soviet Union, currently, has in excess of 1800 152 mm guns in Eastern Europe and the three Western military districts of the Soviet Union. It is reasonable to assume that as a very minimum about 150 are now nuclear capable.

22. *Ibid.*, pp. 38, 42-43.

23. A wide variety of less than ominous reasons have been offered for the current buildup in Soviet nuclear capabilities. For example see Raymond L. Garthoff, "Moscow's Less Than Ominous Reasons for Deploying SS-20s," *The New York Times*, May 13, 1983, p. 30. However, at a time of continued economic difficulty at home the extensive nature of Soviet "modernization" efforts suggests a more impelling political-strategic rationale.

24. *Ibid.*, p. 42.

25. John W. R. Taylor, ed., *Jane's All the World's Aircraft 1982-83*, London: Jane's Publishing Company, Ltd., 1982, p. 232 and *Soviet Military Power*, p. 24.

26. Justin Galen, "The Nuclear Balance, Part One: Recent Force Trends and Improvements," *Armed Forces Journal International*, December 1977, p. 30.

27. See Joseph Fitchett, "NATO Arms Talks Test US-Europe Ties," *International Herald Tribune*, April 30, 1979, p. 1.

28. This is one reason why the United States to date has sought to exclude aircraft from the INF arms control talks.

29. *The Military Balance 1982-1983*, p. 135.

30. See Thomas W. Wolfe, *Soviet Military Power and Europe, 1949-1970*, Baltimore: The Johns Hopkins University Press, 1979, p. 199.

31. See V. Ye. Savkin, *Operational Art and Tactics*, Moscow: Military Publishing House, 1972, pp. 90, 230, and 234.

32. A. A. Sidorenko, *The Offensive*, Moscow: Military Publishing House, 1970, pp. vi and 30.

33. Savkin, p. 248.

34. See Sidorenko, pp. 11-39.

35. Colonel Lobachev, "A High Tempo of Attack - The Indispensable Condition for Victory," *Voyenni Vestnik [Military Herald]*, February 1977, p. 44, as quoted in Colonel Frederich E. Turner, *Comments on FM 100-5 From a Soviet Point of View*, Carlisle Barracks, PA: US Army War College, 1978, p. 19.

36. Sidorenko, p. 40.

37. Colonel General N. A. Lomov, ed., *Scientific - Technical Progress and the Revolution in Military Affairs*, Moscow: Military Publishing House, 1973, p. 40.

38. Sidorenko, p. 112.

39. *Ibid.*, p. 46.

40. See for example, Sidorenko, pp. 40-70, 109-124; Savkin, pp. 232-233; and Lomov, pp. 40-41, 143-156.

41. Klaus G. de Vries, "Responding to the SS-20: An Alternative Approach," *Survival*, November-December 1979, p. 253.

42. For an excellent view of the uncertainties which would confront Soviet leadership in a time of crisis, see Benjamin S. Lambeth, "Uncertainties for the Soviet War Planner," *International Security*, Winter 1982/1983, pp. 139-166. For a wide-ranging examination of Soviet vulnerabilities see John M. Weinstein, "All Features Grate and Stall: Soviet Strategic Vulnerabilities and the Future of Deterrence," in *The Defense of the West*.

43. Strong American rhetoric, a less than skillful choice of words by some senior American officials concerning NATO strategy, and the skillful manipulation of both of these factors by the Soviet Union certainly have contributed to cross-Atlantic misunderstandings. Nevertheless, the change in the nature of the nuclear balance in Europe—coupled with the politics of detente as currently pursued by the Soviet Union with Western publics—has contributed immeasurably to the malaise which now confronts the Alliance. For a further discussion of the current problem, see Kennedy, "Nonconsonant Detente and NATO."

44. Thomas W. Wolfe, *The Military Dimension in the Making of Soviet Foreign and Defense Policy*, Santa Monica, CA: The Rand Corporation, 1977, p. 38. Similarly, Dimitri K. Simes, former member of Moscow's Institute of World International Relations (IMEMO) and executive director of the Soviet and East European research program at Johns Hopkins School of Advanced International

25. John W. R. Taylor, ed., *Jane's All the World's Aircraft 1982-83*, London: Jane's Publishing Company, Ltd., 1982, p. 232 and *Soviet Military Power*, p. 24.

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Studies contends that the Kremlin believes that a shift in the strategic balance of power in its favor provides greater room for political maneuver. See his "Moscow: Ready to Wage Unwinnable War," *International Herald Tribune*, November 12, 1981, p. 4. It should be noted, however, that while perceptions of Soviet military capabilities and Moscow's capability and willingness to sell modern armaments on the cheap have increased Moscow's room for maneuver in the international community, the Kremlin, so far, has had little success in advancing international communism.

45. See Josef Joffe, "Europe and America: The Politics of Resentment (Con't)," *Foreign Affairs*, Vol. 61, 1983, p. 571.

46. Marshal A. A. Grechko, *On Guard for Peace and the Building of Communism* as cited by Hubertus Hoffman, "SS-20 Multiplies USSR's Nuclear Superiority," *NATO's Fifteen Nations*, December 1978-January 1979, p. 44.

47. See the "Communique of the Special Meeting of Foreign and Defense Ministers" republished in *NATO Review*, February 1980, pp. 25-26.

48. See Stephen R. Hanmer, Jr., "NATO's Long-Range Theater Nuclear Forces: Modernization in Parallel With Arms Control," *NATO Review*, February 1980, p. 4. Also see Gregory F. Treverton, "Managing NATO's Nuclear Dilemma," *International Security*, Spring 1983, pp. 109-110.

49. See Treverton, pp. 109-110.

50. Treverton notes that this shifting of view was as much "a sign of the seriousness of the United States in addressing allied concerns as an indication of clear US preference." *Ibid.*, p. 110.

51. NATO made clear its intent to reduce the overall numbers of warheads in Europe as an integral part of the TNF modernization decision. One thousand warheads were to be withdrawn as soon as feasible. Further, the NATO ministers decided that the 572 Pershing II and cruise missile warheads would be accommodated within the reduced level. See the "Communique of the Special Meeting of Foreign and Defense Ministers," p. 25.

52. For one thorough review of these and other concerns that have been raised, see Eckhard Lubkemeier *PD 59 and LRINF-Modernization: Military Strategic and Security Implications of Extended Deterrence for the Federal Republic of Germany*, Bonn: Friedrick-Ebert-Stiftung, December 1981.

53. Vice President Bush, "Peace and Security in Europe," Current Policy N. 47, Washington, DC: US Department of State, Bureau of Public Affairs, January 31, 1983, p. 3.

54. See for example, *How to Avert the Threat to Europe*, Moscow: Progress Publishers, 1983, pp. 28-29.

55. For greater detail on proposals and counterproposals, see *US Arms Control and Disarmament Agency 1982 Annual Report*, Washington, DC: US Government Printing Office, 1983, pp. 8-12.

56. For another interpretation of the issue of "equal security," see Lawrence S. Eagleburger, "Why We Don't Count the French and British Missiles," *The Washington Post*, May 8, 1983, p. B8. For an expanded discussion of the problem of "threat comparability," see Robert Kennedy, "The Problems and Prospects of START," *The Defense of the West: Strategic and European Security Issues Reappraised*, Boulder: Westview Press, 1983.

57. *How to Avert the Threat to Europe*, pp. 51-52.

58. Article III of the SALT II Agreement limited both parties to an overall aggregate of 2250 strategic systems. In the "Memorandum of Understanding" between the United States and the Soviet Union, the United States indicated it had 2284 systems. This included 574 heavy bombers which, as defined by the Treaty included B-52 and B-1 types. In fact, only by counting B-52s in the "bone yard" at Davis-Monthen Air Force Base in Arizona and thus no longer in service, could the United States be considered to have 574 heavy bombers. In fact, the United States possessed between 316 and 386 operational heavy bombers at the time. Today, while the Soviet Union retains strategic systems well in excess of 2400, the United States has about 1900 ICBMs, SSBNs, and heavy bombers. See *SALT II Agreement*, Washington, DC: US Department of State, Bureau of Public Affairs, Selected Documents No. 12A, 1979, pp. 32 and 49; Caspar W. Weinberger, Secretary of Defense, *Annual Report to the Congress Fiscal Year 1984*, Washington, DC: US Government Printing Office, February 1, 1983, p. 333; *The Military Balance 1979-1980*, p. 88; and *Soviet Military Power*, p. 14.

59. Lawrence S. Eagleburger, "How We Count European Missiles," *The New York Times*, February 7, 1983, p. A19.

60. According to information provided to Congress, "The Pershing II system employs radar area correlation to achieve pinpoint accuracy. Radar 'pictures' of the target area, in cassette form, are inserted in the missile prior to launch. As the reentry vehicle approaches the general target area, it takes its own radar 'pictures' of the terrain, comparing them to the original. By making course corrections until the two pictures coincide, the missile can achieve surgical accuracy." See *Hearings Before the Committee on Armed Services*, United States Senate, 97th Cong., 1st Sess., p. 1365.

61. For example, see Ullman, p. 46. Also see *How to Avert the Threat to Europe*, p. 34.

62. Ullman, p. 47.

63. *How to Avert the Threat to Europe*, p. 34.

64. See Rene Herrman, *Zum Verhaltnis zwischen strategischer Politik and Entspannung*, Ebenhausen: Stiftung Wissenschaft und Politik, January 1974, quoted in Lubkemeier, p. 53.

65. *Soviet Military Power*, p. 35.

66. For an excellent discussion of this form of "surprise attack," see Richard K. Betts, "Surprise Attack: NATO's Political Vulnerability," *International Security*, Spring 1981, pp. 117-149.

67. Francois de Rose, "Inflexible Response," *Foreign Affairs*, Fall 1982, p. 141.

68. Ullman, pp. 46-47.

69. John Erickson, "The Soviet View of Deterrence: A General Survey," *Survival*, November/December 1982, p. 248.

70. *Annual Report to Congress Fiscal Year 1984*, p. 222.

71. On this point Manfred Worner, the West German Defense Minister, has stated that "the best guarantee against . . . conflict is balanced forces at every level and our ability to respond flexibly, fittingly, and incalculably." See "Speech by Defence Minister Manfred Worner (excerpts) 20 October 1982," *Survival*, January/February 1983, p. 37. Moreover, the Soviet Union has further helped to strengthen the linkage between conflict in Europe and a US-Soviet strategic exchange by continuing to argue that nuclear war once begun will inevitably become all-out warfare. See Leslie H. Gelb, "Moscow Angrily Settles Back to Await End of

Reagan," *The New York Times*, March 30, 1983, p. A1; Dusko Doder, "Warsaw Pact Official Warns of 'War Danger'," *The Washington Post*, April 7, 1983, p. A1; and Leslie H. Gelb, "Soviet Marshal Warns U.S. on its Missiles," *The New York Times*, March 18, 1983, p. A1.

72. For a further amplification of this view, see Kennedy, "Soviet Theater Nuclear Forces," pp. 346-350. Also see Treverton, pp. 97-102.

73. This is, in fact, the rationale which, according to one observer, would lead to a US decision to use nuclear weapons. See Richard H. Ullman, "Out of the Euromissile Mire," *Foreign Policy*, Spring 1983, p. 45.

74. Worner, p. 37.

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