

AD-A202 048

2

AIR WAR COLLEGE

RESEARCH REPORT

THE INF TREATY AND FLEXIBLE RESPONSE

COLONEL JOSEPH W. LEWIS

1988

DTIC
ELECTE
10 JAN 1989
S D



AIR UNIVERSITY
UNITED STATES AIR FORCE
MAXWELL AIR FORCE BASE, ALABAMA

APPROVED FOR PUBLIC
RELEASE; DISTRIBUTION
UNLIMITED

89 1 09 293

AIR WAR COLLEGE
AIR UNIVERSITY

THE INF TREATY AND FLEXIBLE RESPONSE

by

Joseph W. Lewis
Colonel, USAF

A RESEARCH REPORT SUBMITTED TO THE FACULTY
IN
FULFILLMENT OF THE RESEARCH
REQUIREMENT

Research Advisor: Colonel Douglas S. Hawkins

MAXWELL AIR FORCE BASE, ALABAMA

March 1988

DISCLAIMER

This research report represents the views of the author and does not necessarily reflect the official opinion of the Air War College or the Department of the Air Force. In accordance with Air Force Regulation 110-8, it is not copyrighted but is the property of the United States government and is not to be reproduced in whole or in part without permission of the commandant, Air War College, Maxwell Air Force Base, Alabama. Loan copies of this document may be obtained through the interlibrary loan desk of Air University Library, Maxwell Air Force Base, Alabama 35112-5564 (telephone: [205] 293-7223 or AUTOVON 875-7223).

AIR WAR COLLEGE RESEARCH REPORT ABSTRACT

TITLE: The INF Treaty and Flexible Response

AUTHOR: Joseph W. Lewis, Colonel, USAF

This paper examines how the Intermediate Range Nuclear Forces(INF) Treaty affects NATO's military strategy of flexible response. A discussion of the flexible response strategy is provided as background for the reader. Then, relevant terms of the INF treaty are addressed followed by an assessment of the treaty's impact on the military strategy of the alliance.

Accession For	
NTIS GRA&I	☒
DTIC TAB	☐
Unannounced	☐
Justification	
By	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A-1	



BIOGRAPHICAL SKETCH

Colonel Joseph W. Lewis (M.S.S.M., University of Southern California) developed an interest in NATO matters while serving in Europe from 1982-87 with the NATO Airborne Early Warning Force. He has served in a variety of air weapons controller positions in the US and overseas. He is a graduate of the Naval War College's Command and Staff Course and the USAF Air Staff Training program. Colonel Lewis is a graduate of the Air War College, class of 1988.

TABLE OF CONTENTS

CHAPTER		PAGE
	DISCLAIMER.....	11
	ABSTRACT.....	111
	BIOGRAPHICAL SKETCH.....	iv
I	NATO's FLEXIBLE RESPONSE STRATEGY.....	1
II	TERMS OF THE INF TREATY.....	6
III	IMPACT UPON FLEXIBLE RESPONSE.....	8
	LIST OF REFERENCES.....	21

THE INF TREATY AND FLEXIBLE RESPONSE

On 8 December 1987 the United States and the Soviet Union signed the INF Treaty culminating a series of negotiations going back to the early years of the decade. This treaty has been praised by some for eliminating an entire class of missiles aimed at Western Europe while others criticize it as a step toward the Soviet goal of a denuclearized NATO ripe for intimidation or attack. This paper will examine how the INF Treaty affects NATO's military strategy of flexible response. First, a description of the flexible response strategy will be provided as background. Then, the terms of the INF treaty will be addressed followed by an assessment of the treaty's impact on the military strategy of the alliance.

CHAPTER I

NATO's FLEXIBLE RESPONSE STRATEGY

The NATO member nations have long favored the presence of nuclear weapons in military planning. At a 1952 meeting of defense ministers in Lisbon the alliance formulated its conventional force requirements needed to protect Western Europe from Soviet attack. A force of 96 divisions and 9000 aircraft, only slightly less than the Normandy Invasion package, was required. In view of the projected costs to field such a force, the nations elected to furnish 26 divisions, 1400

aircraft, and to deploy tactical nuclear weapons to make up the difference. (16:63) This decision logic has been used ever since by the alliance because nuclear weapons are cheaper than manpower intensive conventional forces.

The original NATO strategy was massive retaliation relying on the US strategic arsenal to deter any Soviet encroachment upon NATO territory. People soon began to realize that a threat to launch strategic nuclear weapons to counter a Warsaw Pact border incident was neither believable nor appropriate. The massive retaliation strategy lacked credibility in a limited war scenario. (12:137) This idea was perhaps best expressed in 1957 by a Harvard professor, Henry Kissinger, in his Nuclear Weapons and Foreign Policy. In this landmark work, Kissinger advocated that intermediate positions between total peace and the total war of massive retaliation were needed. (11:9) NATO began to entertain the premise that the best deterrent may be the threat to respond appropriately to whatever aggression the enemy mounted. (12:136)

Secretary of Defense Robert McNamara formally introduced the flexible response concept on 5 May 1962 at a North Atlantic Council ministerial meeting in Athens. (12:156) In a speech based upon the existing US nuclear superiority, he discussed how counterforce targetting of enemy military assets as opposed to the countervalue approach of hitting cities would reduce damage in NATO countries during a nuclear conflict. (12:157) The persuasive efforts of McNamara over the next few years led

to the adoption of the flexible response strategy in May 1967 by the North Atlantic Council(NAC). (12:191)

In a Military Committee document (MC 14/3), the Military Committee with NAC approval directed the Major NATO Commanders(MNC) "to provide for the employment as appropriate of one or more of direct defense, deliberate escalation, and general nuclear response, thus confronting the enemy with a credible threat of escalation in response to any type of aggression below the level of a major nuclear attack."

(12:187) In promulgating this new strategy, NATO recognized the difficulty of responding to a varied Soviet arsenal with a single form of allied response. Flexible response deterred the Soviet Union by assuring an offsetting, if not identical, balance of conventional, tactical nuclear, and strategic nuclear forces. Aggression would be met by the minimum possible force, but NATO retained the possibility of first use of nuclear weapons to counter a major conventional attack.

(6:9)

Flexible response also altered the role of NATO's conventional forces. Formerly a trigger or trip-wire for massive retaliation, they were now charged with halting a conventional attack by providing a viable forward defense. (1:12) In effect, conventional forces try to turn back the aggressors and force withdrawal from NATO territory. Strong conventional forces allow NATO's political authorities to defer consideration of nuclear options. Instead, the Soviets are

faced with the decision to escalate to nuclear weapons or accept defeat.

However, the European nations in the alliance have never been able to overcome the political problems associated with building up a serious conventional option. (12:190) Questionable assumptions about warning time and rapid mobilization were used to rationalize conventional force levels inconsistent with the flexible response strategy. (6:9) Although the approved NATO military strategy called for a full range of options, Europeans generally thought that escalation to the strategic level was the best policy for deterrence and that the threat of first use would serve to convince the USSR that there could be linkage between conventional hostilities in Europe and strategic nuclear forces in the United States. (6:9) The key to successful deterrence was Soviet perception of this linkage.

The flexible response strategy in use today envisions three types of reaction to aggression: direct defense to stop the enemy advance and to induce him to withdraw; deliberate escalation to raise the intensity in a controlled manner including the possible first use of nuclear weapons; and general nuclear response as the ultimate deterrent. (4:14) To support the strategy, NATO relies upon a triad of forces: strategic nuclear, theater nuclear, and conventional. Each leg should possess adequate capability and be linked to the other legs. (10:48)

The strength of the flexible response strategy lies in the range of available responses which create uncertainty in the mind of a potential aggressor as to how NATO will react. The greater the uncertainty, the greater the deterrence. (10:49) For this logic to work, the continued threat to use nuclear weapons first is necessary along with showing a credible warfighting capability in each leg of the NATO triad. (10:49)

CHAPTER II

TERMS OF THE INF TREATY

Against this backdrop of the flexible response strategy, the Treaty Between the United States of America and the Union of Soviet Socialist Republics on the Elimination of their Intermediate-Range and Shorter-Range Missiles was signed by President Reagan and General Secretary Gorbachev on 8 December 1987. This INF treaty defined the kinds of missiles to be eliminated. Article II, paragraph 5 defines intermediate-range missile as a ground-launched cruise missile(GLCM) or a ground-launched ballistic missile(GLBM) having a range in excess of 1000 kilometers but not in excess of 5500 kilometers. Article III then identifies the specific systems which fit this definition. For the US it means Pershing II and the BGM-109G better known as GLCM. For the USSR it means the SS-20, the SS-4, and the SS-5.

Shorter-range missiles are defined in Article II, paragraph 6 as a GLBM or a GLCM having a range equal to or greater than 500 kilometers but not in excess of 1000 kilometers. Weapons meeting this criteria are the Pershing IA for the US and GE and the SS-12 and the SS-23 for the USSR.

Each signatory has three years subsequent to ratification to carry out the elimination of all intermediate-range missiles and 18 months to do away with all shorter-range missiles. Numbers of missiles to be eliminated and basing locations are

contained in a Memorandum of Understanding Regarding the Establishment of the Data Base for the INF treaty. The US identifies a total of 859 deployed and non-deployed missiles while the USSR lists 1752 such missiles. It is important to note that the INF treaty eliminates missiles or delivery vehicles, not nuclear warheads. During Senate hearings on the treaty, Secretary of Defense Carlucci stated that this provision was drafted by the US to help ease an impending shortage of nuclear materials for new US weapons and to safeguard secret information about warhead design. (14:7)

Article XI of the treaty contains the verification procedures which include the right of on-site inspections at certain missile operating bases and missile support facilities for 13 years after entry into force of the treaty. This date will be whenever the instruments of ratification are formally exchanged between the two nations. A separate protocol regarding inspections spells out in great detail the obligations of each nation.

CHAPTER III

IMPACT UPON FLEXIBLE RESPONSE

To understand the impact of the INF treaty on NATO's flexible response strategy, it is first necessary to address the characteristics and capabilities of the missiles scheduled for elimination. Cruise missiles fly at very low altitudes to minimize the possibility of radar detection and correlate their position with specific terrain features to deliver payload with pinpoint accuracy. (12:203) Their small size complicates enemy efforts to locate and destroy them in flight and they have a relatively low cost. Both Pershing II and GLCM are mobile which enhances pre-launch survivability. (10:52) The Soviets have been especially apprehensive about Pershing II which they see as a first strike system which could threaten their national command authority with destruction within minutes. (11:20) Pershing II is indeed capable of striking targets in western Russia with almost no warning. (11:20)

The US in conjunction with its NATO allies made the decision to deploy the GLCM and Pershing II based upon a public perception that Soviet actions had shifted the theater nuclear balance to the Warsaw Pact. The driving force was the 1977 deployment of the SS-20 with three warheads and a multiple independently targeted reentry vehicle (MIRV) capability. (11:17) Moreover, the SS-20 was more accurate, had greater range, and was more survivable due to its mobility. (1:28)

The Soviets had deployed the SS-4 in 1959 and the SS-5 in 1961 and the SS-20 was a much improved addition to the Warsaw Pact arsenal. (11:17) Yet another weapon system with nuclear delivery capability was the Backfire bomber fielded in the 1970s. (12:220)

Faced with this imposing array of Soviet theater nuclear systems, NATO concluded that there would be a serious gap in the continuum of deterrence provided by the flexible response strategy. NATO should have a progressive series of responses or "rungs" constituting a "ladder" of nuclear escalation options with each level adapted to specific situations and uses. (12:220) If NATO did not respond to the fielding of the SS-20, the alliance would be missing a "rung" because it lacked an adequate weapon system capable of striking Soviet targets without using Western systems normally considered strategic. (12:220)

If a NATO commander wanted to use a theater nuclear weapon against a military target in the western USSR as a signal of intent as well as a military response, he would be inhibited by the structure of NATO's nuclear forces. Theater-based tactical aircraft delivery of a tactical nuclear warhead would be slow and possibly ineffective due to improving Soviet air defenses. As an alternative, the decision to use a strategic weapon would be impeded by a US president or UK prime minister hesitant to risk a Soviet counterstrike against home territory. (12:220) Based upon this type of reasoning, NATO believed that credible

deterrence depended upon improving theater nuclear forces to counter the SS-20 and the Backfire. Hence, in 1979 the famous dual track decision was announced by NATO. The alliance would deploy 108 Pershing II and 464 GLCM while simultaneously pursuing arms control negotiations. By basing these new missiles in five countries (United Kingdom, Italy, Germany, Belgium, The Netherlands), alliance solidarity and deterrence were strengthened. (12:231) The beddown of these new missiles could also free some dual-capable (able to deliver nuclear or conventional weapons) NATO aircraft from nuclear strike quick reaction alert (QRA) and make them available for conventional roles and missions. This reassignment would augment the alliance's conventional capability and revitalize the overall deterrence posture. (13:34)

To understand the military capability of NATO in a post-INF treaty scenario, it is useful to examine the theater nuclear leg of the force triad. This component is obviously reduced by the elimination of Pershing II and GLCM but still contains dual capable aircraft and battlefield nuclear forces such as nuclear cannon (howitzer), and short range missiles (Lance). These latter weapons are limited by range to the immediate vicinity of the tactical battle and are based on old technology. (11:35) During the 1970s the US had about 6000 nuclear warheads for battlefield systems in Europe. (13:157) Most of these warheads in the Central Region were concentrated at 20

odd storage sites whose vulnerability was recognized but dispersal measures were too tough politically. (13:157)

These battlefield nuclear forces do provide benefit and should not be dismissed without proper consideration. Given the numerical superiority of Warsaw Pact conventional forces, these battlefield weapons should serve as a force multiplier for NATO. Artillery-fired atomic projectiles are not affected by night or bad weather and are available for use at any time. The mobility and dual capability of 155mm and 8 inch(203mm) cannons provide the alliance with several options. (16:63)

One obvious benefit occurs when the Soviets have to disperse their conventional forces to avoid presenting lucrative targets for battlefield nuclear systems. (8:4) The chance of any Soviet offensive breakthrough is diminished when Red army units are discouraged from massing. The responsiveness of nuclear artillery(all weather, around the clock) could disrupt Warsaw Pact synchronization and force the Soviets to contemplate changing tactics and, given the inevitable fog of war, reduce chances for success. (16:63) The limited range of these battlefield systems guarantee not hitting the USSR while their accuracy and relatively low yields minimize collateral damage. Hence, their use as part of the theater nuclear leg of the NATO triad is an essential and credible option between conventional forces and a general nuclear response associated with SACEUR's Scheduled Strike Program and the US Single Integrated Operational Plan(SIOP). (16:63)

In 1983 NATO defense ministers addressed battlefield nuclear systems and decided to reduce the nuclear stockpile to 4600 by the end of 1988. (10:52) The ministers also agreed at this Montebello conference to examine several modernization and survivability improvements for theater nuclear forces. In addition to better range and accuracy, mobility and hardening were advocated for enhanced survivability. One of the prime concerns was to strengthen the credibility of such weapons by removing the specter of "use 'em or lose 'em." (10:52)

Discussions of improving tactical nuclear weapons are not received with enthusiasm by our European allies. To Europeans, any nuclear weapon, regardless of delivery mode, exploded in Europe is strategic, not tactical. The Germans have a special aversion to any consideration of nuclear warfighting on their territory. Europeans believe that deterrence should be the chief attribute of all forces. In fact, talk of warfighting weakens deterrence. (11:16) While the US has consistently talked of stronger conventional forces to limit the risk of nuclear escalation, the NATO allies have displayed a reluctance to create too much conventional strength for fear it would weaken the effect of the strategic deterrent. (6:8)

Our European allies have always stressed the concept of "coupling." They want visible assurance that the US would risk Chicago by attacking Leningrad to save Frankfurt. (8:3) Generally, the long range theater nuclear forces based in Western Europe provided the evidence of the coupling of theater

nuclear war in Europe to a strategic nuclear exchange between the US and the USSR and thus formed an important element of deterrence. (11:3)

To assess the impact of the INF treaty on the flexible response strategy, one can start by reviewing the positions of various people. The current Supreme Allied Commander Europe (SACEUR), General John Galvin, believes that flexible response is still valid in the post-INF era, but the means to implement the strategy need buttressing or else the risk is too high. (4:14) General Galvin goes on to state that a mix of adequate and effective nuclear and conventional forces are needed for credible deterrence. The presence of missiles, aircraft, and artillery that can deliver nuclear warheads promotes deterrence. Moreover, these systems should be spread across various NATO countries so any nuclear response would be seen as a "total NATO" response. (4:14)

General Robert H. Reed, USAF, Chief of Staff, Supreme Headquarters Allied Powers Europe (SHAPE), says that the INF treaty returns NATO to its 1979 situation before INF deployment and shifts the bulk of theater nuclear deterrent back to the tactical air forces. (3:29) Once tactical aircraft like the F-16, Tornado, F-111, and F-15E start pulling nuclear strike alert, they are less likely to be used aggressively in the early, critical days of a conventional attack. General Reed also expressed his concern that deterrence is weakened by eliminating several European nations as participants in the

alliance's nuclear strategy once Pershing II and GLCM are removed. (3:29) Reed believes that a new air-to-ground standoff weapon with a range of 250 to 400 kilometers should be developed. When carried on tactical aircraft, the effective penetration range would be increased to threaten more targets. General Reed also favors the deployment of more F-111s in Europe and while warning that the effect of the INF treaty on tactical airpower is severe, he believes that failure to ratify the treaty would fracture the alliance and thus be even worst. (3:30)

General Bernard Rogers, the former SACEUR who retired in June 1987, also has some comments on the INF treaty. The INF pact promotes the fear that removal of INF systems could reduce the possibility that a US president would decide to use strategic nuclear weapons in the event of a conflict on the continent. (2:25) The risk is that both Soviet and West European leaders might believe that the INF treaty would reduce the likelihood of such an American decision. General Rogers would prefer to delay ratification until the USSR agrees to reduce its forward-deployed conventional forces. (2:26)

Another Rogers argument holds that, with the advent of strategic parity, NATO's INF forces make the threat of US nuclear escalation believable to both Soviets and West Europeans. The use of the Pershing II and GLCM against the USSR would unleash a strategic nuclear war because the Soviets would then most likely attack the US with strategic systems.

Consequently, the INF deployment couples or links the defense of Europe directly to the US strategic nuclear deterrent and guarantees, more than any amount of conventional NATO forces, that the Soviets will not attack Western Europe. (2:26) Simply put, INF removal would increase the chance of a Soviet conventional attack or political intimidation.

Others express concern about what comes after the INF treaty. The pact opens the door to bargain away NATO's remaining nuclear weapons and it fails to create a political consensus for a conventional defense structure to take the place of the INF systems. (5:54) The security policies of the European left tend to exacerbate this concern. Taking the cheap way out, they favor nuclear weapons over more costly conventional forces. Acceding to the INF pact puts NATO on what many call the "slippery slope" toward Western disarmament. (5:54)

The INF treaty also has its advocates. Many believe that it yields tangible benefits with manageable risks. It eliminates the Soviet advantage in intermediate range missiles and also requires the USSR to do away with shorter range missiles that the US does not have. (7:172)

Supporters say that treaty critics tend to look at the theater balance in isolation and thus overstate the treaty's significance. The treaty does not apply to tactical aircraft and sea-based systems which have been part of flexible response

since 1967, 16 years before Pershing II and GLCM were ever fielded. (7:176) Advocates point out that tactical airpower and sea-based systems can be augmented to increase defense with little of the political turmoil associated with land-based missile deployments. The 859 INF systems represent only a small fraction of the total US nuclear arsenal estimated to be 11700 long range missile warheads and bombs. (7:176)

Other supporters stress that the INF treaty is the first US-USSR agreement which significantly reduces nuclear arms. Rather than restraining the rate of growth, this agreement is the first to reduce NATO/Warsaw Pact force levels in Europe. The treaty improves the East/West political climate and encourages the reduction process in other areas of arms control. (2:24)

Some treaty supporters look at the remainder of the NATO triad. Tactical aircraft with nuclear delivery capability are untouched. Sea-launched cruise missiles(land-attack Tomahawk) will be available on surface ships while over 400 Poseidon warheads will be replaced by the more accurate Trident D-5 missiles. (2:25) Both Tomahawk and Trident can hit targets in the USSR currently targeted by Pershing II and GLCM.

The current INF treaty debate in the Congress and the media can be confusing. The Reagan White House and the traditional arms control community, a group critical of other aspects of Reagan's policies, have formed a unique alliance in the ratification effort. The opposition also contains some strange

bedfellows. Henry Kissinger and other past supporters of detente are allied with vocal far-right critics like Senator Jesse Helms and Congressman Jack Kemp. (7:172)

The opposition to the treaty is contradictory at times. Critics state that the INF missiles strengthen deterrence by increasing the probability that a conflict in Europe will escalate into a global nuclear war (the coupling concept). They also say that the missiles are needed to ensure NATO's capability to respond flexibly to any attack without encouraging escalation to US strategic weapons. The INF deployment strengthened deterrence because the US National Command Authorities (NCA) would find it easier to use INF missiles in Europe than central strategic systems like the Peacekeeper or Trident, a step that would very likely lead to World War III. (7:173)

To come to a judgment on the INF treaty, it is useful to take a look at the Soviet objectives in signing the document. On a political level, the accord encourages the denuclearization of Europe (the "slippery slope" thesis) while it institutionalizes the arms control process. (7:160) On a military level, it eliminates the weapon which the Soviets fear most, the Pershing II ballistic missile, able to hit targets in the Western USSR minutes after launch. This action fits the evolving Soviet military doctrine which now stresses the importance of trying to limit any conflict in Europe to the use of conventional forces. (7:160)

This writer supports ratification of the treaty because to not do it would be far worse. The NATO alliance solidarity would be undermined if the US Senate rejects ratification or attaches amendments unacceptable to the Soviets. Since 1979 the European people have been reminded frequently about the dual track decision to field INF while engaging in arms control dialogue with the Soviets. The NATO INF deployment decision and the subsequent Soviet decision to negotiate are events which make the dual track decision of 1979 appear to have been clairvoyant. Senate disapproval of the INF treaty would refute the dual track decision and weaken the credibility of political leaders in all member nations.

The best course for the US is one of damage limitation; ratify the INF treaty but be careful to avoid similar problems in the Strategic Arms Reduction Talks (START). INF weapons formed a middle ground between conventional arms and strategic systems in the NATO arsenal. With INF missile systems banned by treaty, a gap appears on the escalation ladder. While NATO returns to its pre-INF posture in theater-based delivery systems, Warsaw Pact air defenses remain at their potent 1988 level. Given this situation, there may well be a reluctance to use either theater-based or central strategic systems in a future NATO crisis and deterrence will decline as the result.

One way to cut losses is to provide decisive leadership in improving the NATO triad, especially the theater-based nuclear leg. In 1985 General Rogers briefed the NATO Nuclear Planning

Group on several recommended improvements. These included a Lance missile with greater range and a nuclear stand-off missile for dual role tactical aircraft. (4:15) Analysts estimate that a better Lance would hold at risk about 45% of all first echelon Warsaw Pact forces which lie within 30 kilometers of the FLOT. (16:63) Such improvements should be implemented immediately.

Shared with General Rogers as another caveat is the need to increase the survivability of dual capable aircraft and to improve their ability to penetrate Warsaw Pact defenses. (4:15) With no INF missiles to worry about, the Soviets can concentrate on neutralizing the remaining theater-based tactical nuclear delivery systems, primarily tactical air power, by attacking such aircraft at their home bases. More and better shelters are needed at both main and dispersal bases along with improved penetration aids.

Another way to improve NATO's delivery capability of both tactical nuclear and conventional munitions would be the use of B-52 bombers as discussed at the 1988 Aerospace Power Symposium held at the Air War College on 2-4 March 1988. Survivability would be high with aircraft based in the CONUS and would be even more enhanced when firing stand-off weapons.

The alliance is addressing many of these concerns with an increased urgency as the treaty has been signed. On 2-3 November 1987 the Nuclear Planning Group met in Monterey, California and discussed ways to correct the maldeployment of

remaining nuclear forces after the INF treaty. (9:24) At future meetings national delegations will be briefed on various deployment options including a follow-on Lance missile, new battlefield nuclear artillery shells with an extended range to 30 miles, and a new air-launched cruise missile with a 350 nautical mile range. (9:24)

Another step in the right direction would be that emerging arms technologies will lead to conventional weapons with destructive power approaching those of nuclear weapons. Gorbachev and Marshalls Ogarkov and Akhromeyev, former and current chiefs of the Soviet General Staff, have all expressed such a view. (5:55) A deterrence not based on nuclear weapons would offer a clear advantage, being able to threaten armies without holding all of mankind at risk.

However, such weapons are not yet in our arsenals so NATO must concentrate on credible deterrence which requires four elements; forces in being, a doctrine for their employment, the will to use them, and the belief by a potential adversary that the will to use the forces exists. Should any element of the equation be lacking, there is a risk that deterrence may fail. (11:29) As Churchill once said, "It is no good saying 'we are doing our best.' You have got to succeed in doing what is necessary." (18:16)

List of References

1. Coker, Christopher. The Future of the Atlantic Alliance. London: The Macmillan Press Ltd, 1984.
2. Dean, Jonathan. "Military Security in Europe." Foreign Affairs, Fall 1987, pp. 22-40.
3. Fulghum, David. "Pacts Mean More Reliance on Tactical Air Power." Air Force Times, February 8, 1988, pp. 29-30.
4. Galvin, John. "Allied Command Europe-Buttressing the Means." NATO's SIXTEEN NATIONS, August 1987, pp. 14-16.
5. Gliksmann, Alex. "NATO After INF: Toward A New Alliance Consensus." National Defense, December 1987, pp. 51-55.
6. Golden, James R. The Dynamics of Change in NATO: A Burden-Sharing Perspective. New York: Praeger, 1983.
7. Gordon, Michael R. "Dateline Washington: INF: A Hollow Victory?" Foreign Policy, Fall 1987, pp. 159-179.
8. Hirschfeld, Thomas. Tactical Nuclear Weapons in Europe: Another Look. Woodrow Wilson International Center for Scholars, March 26, 1986.
9. James, Jesse. "NATO Ministers Endorse INF Treaty." Arms Control Today, December 1987, p. 24.
10. O'Neill, Robert, Editor. Doctrine, The Alliance, and Arms Control. Hamden, Ct: Archon Books, 1987.
11. Reed, Jean D. NATO's Theater Nuclear Forces: A Coherent Strategy for the 1980s. Fort Lesley J. McNair, Washington, D.C.: National Defense University Press, 1983.
12. Schwartz, David N. NATO's Nuclear Dilemmas. Washington, D.C.: Brookings Institution, 1983.
13. Sigal, Leon V. Nuclear Forces in Europe: Enduring Dilemmas, Present Prospects. Washington, D.C.: Brookings Institution, 1984.
14. Smith, R. Jeffrey. "INF Treaty Preserves Nuclear Warheads at U.S. Insistence, Officials Say." Washington Post, January 27, 1988, p. 7.

15. Treaty Between the United States of America and the Union of Soviet Socialist Republics on the Elimination of their Intermediate-Range and Shorter-Range Missiles. December 8, 1987.

16. Weinstein, John M. "Short-Range Nuclear Forces, Arms Control and NATO Security." National Defense, December 1987, pp. 61-63.