NATO AND THE INF CONTROVERSY:
NUCLEAR WEAPONS, DETERRENCE, AND THE ATLANTIC ALLIANCE

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Abstract

The Intermediate-Range Nuclear Force (INF) controversy was one of the most intense intra-Alliance debates experienced by NATO. The depth of the dispute, especially between the US and the European NATO members, threatened the very unity and cohesion of the Alliance itself. The INF controversy was the result of two factors: first, the establishment of strategic parity by the Soviet Union which brought into question the credibility of the US security guarantee to Europe; and second, the widening gap in the political and strategic interests of the US and its European allies.

These factors combined to produce the two central—and conflicting—forces at work during the INF debate. The Europeans sought strategic reassurance, in the form of theatre-nuclear systems, to restore the integrity of the seamless web of deterrence. The divergence of political and strategic interests between the US and Europe, however, meant conflict over the posture and character of any new force. In the interests of preserving the unity of the Alliance, these problems were "solved" in typical Alliance fashion; through compromising to a consensus.

The December 12 decision was based on erroneous and outdated conceptions of the significance of nuclear weapons for deterrence in Europe. What NATO planners, and many western analysts, have failed to recognize is the
diminishing effectiveness of US nuclear weapons in maintaining effective deterrence in Western Europe. Deterrence in Europe is not primarily dependent on US nuclear forces and the threat of deliberate nuclear escalation they imply. Rather, deterrence in Europe should be understood as a compound product of many risk factors. Henceforth, thinking about NATO's deterrent requirements must recognize the limited utility of successive deployments of US nuclear forces as a deterrent. Greater reliance must be placed on the deterrent value of other risk factors which exist in the European theatre, most notably the increasingly powerful and discriminating capabilities of the French and British nuclear forces.
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CHAPTER I: THE EVOLUTION OF NATO's NUCLEAR AFFLICTION

Since its inception in 1949, the North Atlantic Treaty Organization (NATO) has grappled with the political and doctrinal dilemma posed by the presence of nuclear weapons in Europe. During the so-called Golden Age\(^1\) of US nuclear supremacy in the 1950's, nuclear systems and warheads were deployed in Europe in ever increasing numbers, with little or no regard for military needs or employment doctrines. The potential problems these weapons could create in the future were dealt with in typical Alliance fashion; they were ignored.

The development of strategic parity between the US and the USSR signalled the end of haphazard nuclear deployments to Europe and the beginning of attempts to mold a nuclear policy consensus within the Alliance. After notable failures such as the MLF controversy (which contributed to the withdrawal from the Alliance of one of the larger member nations, France) and the Neutron bomb fiasco, the NATO nations seemingly reached a consensus on nuclear force posture and weapons deployments in 1979. This seeming consensus, however, was a facade; it was less a consensus than a compromise between persistent inter-alliance disagreements on security and political issues.

At a meeting in Brussels on December 12, 1979, representatives of the member nations of the North Atlantic Treaty Organization announced the intention of the Alliance
to modernize its nuclear arsenal. 572 new long range ground launched systems were to be placed in Europe. Of this total, 464 of these systems would be Ground Launched Cruise Missiles (GLCMs) deployed in five European countries, while a further 108 Pershing II Intermediate-Range Ballistic Missiles (IRBMs) would be deployed in West Germany. At the same time, both to demonstrate the Alliance's commitment to arms control and to emphasize that the deployment decision was not a wanton act of escalation, NATO representatives announced their willingness to engage in negotiations with the USSR to achieve a balance in Intermediate-Range Nuclear Forces (INF) in Europe. This announcement of the intent to deploy new INF systems in Europe while simultaneously pursuing arms control has come to be known as the Dual Track decision. The political debates leading up to the December 12 decision encountered the same difficulties as past NATO nuclear planning. These difficulties are the result of the contradictory strategic and political interests between the Alliance members who are separated by the Atlantic Ocean. Essentially a characteristic NATO compromise between those who desired enhanced European security through strengthened defences and those who viewed arms control as the best method of achieving stability and security, the Dual Track decision was meant to increase levels of Alliance cohesion, cooperation, and unity; instead, it was to have the opposite effect.

Conflict emerged over what shape the new INF force
should take and whether or not the deployment of new systems could adequately restore the credibility of extended deterrence and the operability of flexible response. The divergence on these issues was greatest between the US and the European NATO countries. Clashes of political and strategic interests across the Atlantic were to dominate inter-Alliance debate.

This study will focus on two dimensions of the INF debate. It will demonstrate the extent to which strategic and extended deterrence considerations were lost in the politics of contradictory political interests among Alliance members. These intra-Alliance differences over NATO doctrine, force structure, and negotiation posture reduced the formulation of NATO nuclear policy to an emphasis on the lowest common policy denominator which ensured a consensus on modernization. The December 12 decision was a great compromise between NATO's nuclear requirements and differing political and strategic perspectives on the shape that posture should take.

This study emphasizes that the significance of US nuclear weapons in maintaining effective deterrence in Europe has been greatly overestimated. Alliance governments and NATO elites have held fundamentally erroneous and outdated conceptions about the utility of US nuclear weapons in ensuring effective deterrence of Soviet aggression against Western Europe. Over the past five years in particular, the credibility of NATO's deterrent posture has
unfortunately and incorrectly come to be equated with the credibility of NATO's Intermediate-Range Theatre Nuclear Forces (INF). This study demonstrates that such views are mistaken. Deterrence in Europe is best seen not as a result of a unitary element of risk of nuclear escalation, but rather must be seen as a compound product of multiple risk factors. Such factors include: 1) the probability that NATO's conventional defence will succeed; 2) the probability of deliberate French or British escalation in the face of Soviet aggression; and 3) the probability of inadvertent or accidental escalation occurring during non-nuclear hostilities.

NATO leaders and military planners must come to recognize the compounded nature of deterrence in Europe. Such recognition requires a change in the traditional NATO view of US nuclear weapons in Europe. There has been a persistent failure to recognize that the utility of US nuclear weapons as an effective deterrent factor in Europe has declined. This fact should have been recognized during the initial stages of the INF debate. However, NATO leaders and planners failed to consider, or wrongly dismissed, the implications of the changed strategic environment in Europe. NATO's traditional reliance on US nuclear weapons has created a decision-making paralysis, a cult of US nuclear dependency, which has led to an inflexible adherence to established norms of what is considered necessary for robust deterrence in Europe. In order to successfully manage NATO's
nuclear policy in the future, NATO leaders and planners must move away from the outdated concepts which have guided NATO nuclear policy since the inception of the Alliance. For a precise understanding of the genesis of NATO's nuclear affliction and why adherence to traditional modes of thinking about US nuclear forces in Europe has been so pervasive, it is necessary to examine the evolution of NATO's nuclear dependency.

The Genesis of NATO's Nuclear Affliction

The damage inflicted on the countries of central and Western Europe during World War II, coupled with the swift withdrawal and demobilization of the majority of Allied military forces left behind a security quandary for the nations West of the furthest line of Soviet advance. The destruction of the greater part of the Western European industrial base, the losses incurred by their populations, and the laborious and resource-consuming process of reconstruction made any independent defence effort against further Soviet expansion virtually impossible. Those Western nations still capable of fielding militarily significant forces, especially the US, were feeling the economic and domestic pressures of maintaining such forces and were hastily demobilizing the vast bulk of their World War II soldiery.

As the military forces of the USSR appeared to show few signs of a similar scale of withdrawal and demobilization,
it was belatedly recognized that some mutual security arrangements were required to ensure that Western Europe did not come under direct or indirect attack. Two fundamental conditions of any Western security pact were immediately recognized; first, that the Western nations could not hope to match the USSR's alleged conventional force levels, and second, the only capability in which the West enjoyed superiority was in nuclear weapons.

Accordingly, the initial concept of the North Atlantic Alliance centred around the fact that the Western European nations could not match the conventional strength of the Soviet Union, and therefore the security of Europe was to be guaranteed by US nuclear forces. The ultimate deterrent to Soviet aggression in Europe was to be the US pledge to use its strategic nuclear weapons against the USSR rather than accept defeat in Europe. Implicit in this guarantee was the US recognition that the loss of Europe would be disastrous for its own interests.

This posture was reinforced by the desire of Europeans to avoid another conventional war on their territory. Deterrence, based on the US strategic nuclear force and Forward Based Systems (FBS), was to keep the peace in Europe. In this context, early NATO nuclear doctrine called for the use of strategic and FBS nuclear weapons in response to any significant aggression. From these early strategic rationales, therefore, the nuclear policy of the Alliance rested on a fundamental strategic paradox; that "...NATO's
nuclear doctrine rests on an American response even when
American soil is not attacked."

The reality of European dependence on the US as the
ultimate guarantor of its security despite this paradox has
had a deep and persistent consequence; the credibility of
this guarantee is a central Alliance issue and is under
constant scrutiny, especially from Europe, where reassurance
is a military, political, and psychological necessity.

The first reassurance provided by the US was the
deployment of Tactical Nuclear Weapons (TNW) to Europe as a
visible means of ensuring an escalatory link between Europe
and Strategic Air Command (SAC). This solidified the US
commitment to the view that any attack in Europe would upset
the strategic balance and threaten the position of the US.
With the deployment of TNW, therefore, "...strategic
deployment rather than a decision taken at the moment of
attack would determine the US response."

It was this political commitment, combined with the
deployment of nuclear weapons to Europe, that laid the
foundation for a security relationship that has struggled to
find a nuclear doctrine and a force structure that satisfies
both the extended deterrence logic of the security guarantee
and the divergent political and strategic interests among
Alliance members.

Early NATO Nuclear Doctrine: More is Better

From 1960 on, ever greater quantities of tactical
nuclear weapons were deployed in Europe. From 1960 to 1965 the number of nuclear weapons in Europe rose from 2500 to 5000. This increase in European based nuclear stockpiles was made without a clear military/doctrinal role for their employment. NATO nuclear policy seemed to follow the adage that if some nuclear weapons were a good thing for European security, then more had to be better. Only the military had any conceptual frameworks for tactical nuclear use, and these were bound to conventional battlefield tactical thinking. As Henry Kissinger has observed, TNW's were placed in Europe with "...no very precise idea of what to do with them." Morton Halperin, in his presentation to the Senate Committee on Foreign Relations in 1974, pointed out that

...the deployment of tactical nuclear weapons to Europe during the late 1950's occurred without any extensive discussion between governments as to how these weapons might be used. Nor was there any substantial discussion involving civilian officials in the American government on the strategy for deploying nuclear weapons. Rather, these discussions were by and large left to the military.

The military, however, concentrated exclusively on the battlefield employment of the weapons, intending them for use against concentrations of Soviet armoured formations and choke points. The idea was to "hold at risk" such concentrations and discourage the Soviets from massing their forces in the quantities required for an armoured breakthrough.

The key behind this lack of strategic or doctrinal planning is that European TNW deployment was instigated as a
quick fix for perceived conventional force deficiencies. This quick fix was motivated by the political reluctance to spend scarce resources on conventional military forces. Nuclear weapons were an attractive political option. Uwe Nerlich points out that since the early days of European deployment, TNW have traditionally been viewed as a substitute for conventional force spending, and as such TNW planning has never received the doctrinal and strategic development associated with weapons that serve a clear, defined military purpose and strategy. This nuclear heritage was to lead to persistent Alliance controversy over all aspects of nuclear doctrine and planning in the future.

Early Alliance strategy calling for an automatic nuclear response—confirmed in the NATO Political Directive of 1956—was less a product of a conscious, calculated decision than a choice between a political impossibility and a strategic unknown. A conventional defence was known to be impossible given resource constraints; a nuclear defence, on the other hand, might be possible, or at least could not be proven impossible. The hopelessness of the conventional option was brought home to NATO planners after two failed attempts to establish conventional force requirements for the Alliance. The first of these attempts was unveiled in 1949. Known as DC-28, the plan called for some 100 divisions and over 9000 combat aircraft. The second, and more famous, plan was the Lisbon Force Goals of 1952. Established by the "Three Wise Men" (composed of Averell Harriman, Sir Edwin
Plowden, and Jean Monet, in an Executive Group set up by the Temporary Council Committee), the Lisbon force goals called for 96 divisions and 4000 combat aircraft, not including the forces of Greece and Turkey.

When it became obvious that such conventional force levels could never be attained, fears arose within NATO that the disparity between perceived defence needs and available resources would cause the break up of the Alliance. NATO planners (and US planners seeking to augment the combat strength of their reduced conventional forces) began to search for the means to reduce conventional force requirements. Nuclear weapons, both strategic and tactical, were seized upon as the best means of maintaining a high level of defensive firepower while reducing conventional force needs. With the cost of the Lisbon Force Goals seen as prohibitive, the Eisenhower Administration in 1954 adopted the 'New Look' approach--based on massive retaliation and early use of battlefield nuclear weapons--in which every military conflict of significance would be met with nuclear weapons. This policy, general by nature, lacked any specific employment doctrine for TNW in Europe. The de-facto abandonment of the force levels called for in the Lisbon Force Goals was made official by the US Radford Plan proposal. Relying heavily on greater deployments of TNW under the double veto system, the Radford Plan proposed a conventional force level of 30 divisions. The NATO Atomic War Plan of 1954-1956, which established the foundation of a
tactical nuclear warfighting doctrine, attempted to integrate nuclear use with conventional force posture, in recognition of the enormous impact TNW could have on the battlefield.11

Each successive NATO force structure plan placed increased emphasis on nuclear weapons, as conventional force levels continued to fall short of planning goals. The reliance of the New Look and NATO nuclear war plans on the early use of nuclear weapons to defend Europe allowed the gap between force posture and force requirements to narrow to a credible margin, thus avoiding any serious challenges to the unity of the Alliance.

NATO governments accepted the New Look and the tactical nuclear war plans but failed to meet the two critical requirements of the strategies; readjustment of force posture for nuclear combat and availability of nuclear weapons to NATO forces at the outset of any war. Force readjustment was critical to the premise of using nuclear weapons to defend Europe. The great destructiveness of nuclear strikes meant that old style military formations were highly vulnerable. Without force restructuring, more, not fewer, conventional forces would be required. In addition, early first use of nuclear weapons depended upon early availability. Otherwise the practicality and credibility of the strategy was highly questionable.

The failure of NATO governments to adopt measures to satisfy these requirements led to the introduction of the
Pause concept, which called for an initial conventional defence to provide time for negotiations and perhaps some second guessing on the part of the aggressor. This led to a demand for 'dual capable' forces which could wage both a conventional and a nuclear war. By 1960, the emphasis on TNW in NATO planning had lead to the deployment of over 7000 TNW in Europe. By the mid-1960's, however, the credibility of massive retaliation and early use was soon questioned in the face of increasing Soviet strategic capabilities. In late 1963, Soviet ICBM programs had succeeded in ironing out persistent development problems and by the mid-1960's the USSR began a rapid buildup of strategic and theatre nuclear weapons, which threatened both the US and Europe. As a result, with the Thor and Jupiter missiles withdrawn from Europe and the SAC bombers re-based in the US to reduce their vulnerability, pressure was put on the security link between the US and Europe well before parity was truly achieved. For most of the mid-to-late 1960s, with little or no conventional or Limited Nuclear Options (LNOs) in Europe or at the strategic level, the US was faced with the prospect of having to respond to aggression in Europe with massive, poorly controlled nuclear strikes. In the face of ever-increasing Soviet nuclear capabilities, the credibility of this form of response was steadily weakening.

The Kennedy Administration, desiring greater flexibility in its strategic options, introduced the concept of flexible response into Alliance planning. The underlying
premise of the new concept was to provide a credible response across the entire spectrum of possibilities. Responses to aggression were to be made at a level consistent with that of the threat.

Flexible Response was formally adopted in 1967, during the Nuclear Planning Group's Healy-Schroeder exercise. This signalled the abandonment of the principles of massive retaliation and the firm adoption of a policy based on the tactical use of nuclear weapons. Formal NATO strategy, both conventional and nuclear, was set out on January 16, 1968, in a document known as 14/3 and entitled "Overall Strategic Concept for the Defense of the NATO Area". Replacing 14/2, which articulated the old strategy of massive retaliation, 14/3 based Alliance doctrine on the principle of flexible response. It called on NATO to

1) meet initially any aggressor short of general nuclear attack with a direct attack at the level—conventional or nuclear—chosen by the aggressor,
2) conduct a deliberate escalation if the aggressor cannot be contained and the situation restored by direct defense,
3) initiate an appropriate general nuclear response to a major nuclear attack.¹³

The strategy of flexible response was not accepted without some anxiety on the part of the Europeans. In their view, the new doctrine removed the automaticity of nuclear response, which would now take place after deliberation. This raised fears over whether the US was trying to disengage from its nuclear linkage to Europe. The Multilateral Force (MLF) controversy, an attempt to resolve
Europe's developing security isolation by creating a collaborative regional nuclear deterrent, only exacerbated European fears. The political imbroglio that the MLF controversy created shook European confidence both in the Alliance and in US leadership. It helped confirm DeGaulle's view that the US was not a reliable guarantor of European security, and France withdrew from NATO's integrated military structure in 1966, just prior to the official adoption of flexible response. As reassurance, both military and political, some 400 Poseidon SLBM warheads were assigned to Europe under SACEUR's command. However, because they were US central strategic systems, these warheads were never regarded by Europeans as a credible demonstration of the US commitment to Europe. In fact, they were frequently regarded as an example of US reluctance to firmly commit itself to Europe's security.

In the US, the Kennedy administration policy was seen as an attempt to shift TNW policy towards nonuse, to avoid having to make a difficult future choice between backing down in a crisis or risking an all out nuclear action. For the most part, this was seen as an advisable course of action for the US to pursue, and this rationale prevailed through to the Nixon Administration. Nixon himself stated in 1972 that:

*Sole reliance upon early resort to nuclear weapons...would leave us no option between capitulation and risking all out mutual destruction. Twenty years ago...when our conventional forces returned to Europe in*
strength, the US enjoyed a nuclear monopoly and had perhaps less military need of a massive conventional presence. Today, when we no longer have this unilateral advantage, a NATO conventional option is needed like never before.\textsuperscript{14}

During the Nixon Administration, little attention was paid to nuclear force structure or doctrine in Europe. Emphasis was placed on US strategic systems and the MIRVing of US ICBMs and SLBMs effectively tripled US warhead totals from 2000 to 6000. The implications of this for extended deterrence were limited, however, as little was done to improve the command and control systems necessary to carry out LNOs. The target mix was expanded, but the range of options was not. Only when the USSR began to MIRV her ICBMs did the US begin to shift to an LNO strategy, in an attempt to graduate deterrence from limited use up to all out-war.

The US rationale for a TNW presence in Europe were summarized in Foreign Relations Committee hearings by Secretary of Defense James Schlesinger:

We deploy nuclear weapons to Europe for three major reasons.

First, maintaining nuclear capabilities is essential to deterrence as long as the Warsaw Pact maintains roughly comparable theatre nuclear capabilities. These weapons help to deter use of nuclear weapons by the Warsaw Pact and, along with the conventional and strategic nuclear forces, provide a general deterrent across the entire spectrum of possible aggression.

Second, should deterrence fail, our tactical capabilities provide a source of nuclear options for defense other than the use of strategic forces.

Third, in keeping with the flexible response strategy, we do not rule out the use of nuclear
weapons by the US and its allies if necessary to contain and halt major conventional aggression.\(^{15}\) However, NATO nuclear forces and planning were largely neglected. The Lance warheads were modernized, improvements were made to the Pershing Is, Nuclear Operations Plans (NOPs) were established to limit collateral damage in any European exchange, and the Priority Strike Plan (PSP) was provided with a greater range of lower intensity strike options. There was, however, no clear strategy or framework to guide modernization or deployment, and these programs amounted to little more than minor modifications to NATO's nuclear forces.

In the end, Flexible Response was accepted by the NATO countries because of its inherent ambiguity.\(^{16}\) Flexible Response permitted US planners to indefinitely suspend any decision on a strategic nuclear strike, while allowing West European leaders to depend on such a decision as an assurance of the credibility of the US nuclear guarantee. Leon V. Sigal has pointed out that flexible Response is "...less a strategy than an agreement not to disagree over strategy."\(^{17}\)

The political necessity for ambiguity in force structure and doctrinal planning set the context for the INF modernization debate of the late 1970's and early 1980's. The original strategic rationale behind the deployment of nuclear weapons in Europe was to create a security bridge across the Atlantic. However, little or no regard was given to how these weapons could best be employed to strengthen
European security. Their mere deployment was deemed sufficient, and that greater levels of security could be attained by deployment of nuclear weapons in ever greater numbers.

The dominant security issue in NATO continued to be the maintenance of the security guarantee, but in the face of changes in the military equation both strategically and in Europe, the mere presence of nuclear weapons was not sufficient to guarantee security. Force structure and doctrinal planning were becoming the crucial determinants of the credibility of the nuclear force in Europe. The dearth of such planning in the past—and the miserable failure of such planning that had been attempted—was to make the INF process the most troublesome in Alliance history.

**Challenging the US Security Guarantee**

The impetus behind the INF modernization decision originated from three main points of concern over the credibility of Western defense posture: a) the impact of strategic parity; b) Soviet INF modernization; and c) the obsolescence of NATO's existing INF systems.

**a) Parity and Its Impact on Strategic Rationales:**

All too frequently, strategic nuclear parity is referred to as if it were a military condition which appeared without warning in international politics. In actuality, the arrival of parity went through several stages
of development, each stage leading to progressively more equivalence, both in a military and perceptual sense. At its lowest level, parity does not necessitate equality of capability. The ability of the ostensibly weaker party to inflict unacceptable damage on the stronger is enough to create a basic condition of deterrent reciprocity. Often referred to as 'sufficiency', this condition was present and recognized as early as the late 1950's. The recognition that parity has developed through various stages is crucial to any argument which stems from its achievement. Richard Betts, in his recent study *Nuclear Blackmail and Nuclear Balance*, provides an excellent summation of the developmental stages of parity;

If [parity] meant mutual vulnerability to unacceptable damage, parity came in the mid-1950's; if it meant nearly equal levels of civil damage, it arrived by the early 1970's; if equality in missiles or delivery vehicles, by the mid-1970's; if the measure is the balance of forces as a whole or of counterforce capacity, by the late 1970's.

The impact of parity on extended deterrence did not become a major political issue until the SALT process was under way. The implicit recognition of parity embodied in SALT I--even though parity had really been achieved only in terms of population vulnerability and not in any balance of force capabilities--heightened already significant anxieties in Europe over the security guarantee. Politically recognized parity had arrived in the early-1970's. However, there was little outward expression over its implications
for extended deterrence in the early-to-mid 1970's. The reason for this seeming lack of concern was that the condition of politically recognized parity developed at a time when superpower relations were unusually cordial. The relative amiability of the political situation softened the political significance of the change in the strategic equation. Consequently, political leaders were not disposed to address the situation with the urgency that would have been demanded in a period of more hostile relations. As Betts points out,

The embrace of vague parity on both sides of the Atlantic muddled the implications for extended deterrence because detente dampened worries about deterrence altogether as politics took precedence over strategy.²⁶

As the detente process began to decay and then eventually collapse, the implications of parity became fully clear against the backdrop of renewed East-West tensions. Henry Kissinger was to remark:

...the change in the strategic situation that is produced by our limited vulnerability is more fundamental for the United States than even total vulnerability would be for the Soviet Union because our strategic doctrine has relied extraordinarily, perhaps exclusively on our superior strategic power... Even an equivalence in destructive power, even assured destruction for both sides is a revolution in NATO doctrine as we have known it.²¹

The reality of rough strategic parity under conditions of heightened international tensions posed two fundamental yet contradictory concerns for Western security policy. On the one hand, the West European elites (and many elites in
the US) questioned the credibility of the US security guarantee in conditions of parity. How could the US, during war or crisis, be expected to initiate a strategic nuclear exchange with the USSR in response to a Soviet invasion of Western Europe when such an exchange would result in the destruction of the US? The Europeans were immediately to seek reassurance that the security umbrella was still raised above their heads, and wished to strengthen deterrence by ensuring that aggression in Europe would inevitably escalate to a general nuclear war. Above all, the Europeans sought to avoid the nightmare scenario; a limited nuclear war fought exclusively in Europe. On the other hand the US, perceiving the leaks in the credibility of its security umbrella and aware of the choice any President would face should aggression in Europe occur, sought every means to ensure that a rapid, uncontrolled escalation would not occur. The US desired to construct as many rungs as possible in the escalation ladder, in the hopes of dominating the intermediate stages of any future conflict. Such an approach would: a) ensure that aggression would not occur in the first place; and b) help to ensure that if war did break out, that it would be terminated short of general nuclear war and on favourable terms. The history of recent and contemporary Alliance nuclear policy-making revolves around this fundamental strategic contradiction between the US and its European Alliance partners across the Atlantic, brought about by the development of strategic parity.
Subsequent US nuclear policy followed two general courses. First, theatre nuclear forces were deployed in Europe to act as local deterrents, and second, a capacity to engage in Limited Nuclear Options (LNOs) was sought to provide a strategic nuclear option short of all-out nuclear war. Joseph I. Coffey has observed that...

...the US endeavoured to substitute for a concept of deterrence through retaliation one that relied primarily on denial (i.e. a successful conventional defence) and secondarily on risk (i.e. the threat of selective nuclear strikes which would increase the likelihood of all out nuclear war without actually starting such a war).

The official announcement of the shift from the policy of Mutual Assured Destruction (MAD) to a policy of (LNOs) came in 1974 under Secretary Schlesinger. The US now found itself caught in several intertwined doctrinal dilemmas. The strategic forces of the US now had to be capable of: 1) carrying out graduated nuclear deterrence in the absence of strategic superiority to avoid all out escalation in war; 2) ensuring the credibility of first use of strategic nuclear weapons in response to significant aggression without creating the impression the US was striving to attain a counterforce capability capable of imposing escalation dominance on the USSR; and 3) providing reassurance to Europe that the US was committed to the nuclear guarantee and capable of carrying it out. In short, the US was grappling not only with how best to defend itself in a situation of parity, but how to defend Europe as well. Both
Schlesinger's 1974 LNO targetting program and President Carter's 'countervailing strategy' were rationalized as staving off any Soviet attempts to attain escalation dominance and as reinforcing the strategic link to Europe. These policies were attempts to juggle the military requirements for LNOs brought about by parity and the political requirements of reassuring the Europeans.

With the introduction of flexible response, the European elites had begun to question both the depth of the US commitment to the defence of Europe in general and the willingness of the US to escalate to nuclear war on their behalf in particular. European anxiety intensified when it was announced that the US had adopted a counterforce LNO strategy. Such a strategy brought with it the prospect of selective, low-intensity strikes rather than the general nuclear response desired by Europeans for its deterrent value. Calculations of strategic vulnerability and damage disparity, which are so important a part of US strategic analysis, are much less prominent in European thinking. European governments tend to look more to the psychological and political elements of stability, rather than the military elements. Expressions of European concern over the new US targetting doctrine were met with criticisms of the European position from both Europe and the US. Manfred Woerner pointed out that "...strategic thinking in the Federal Republic and in Western Europe more generally, is handcuffed to a conception of deterrence that dates back to
the era of nuclear monopoly—the conception that the mere existence of nuclear weapons is enough to deter a potential adversary from military adventures." Henry Kissinger was to remark that "... it is absurd in the 1980's to base the strategy of the West on the credibility of the threat of mutual suicide." In Kissinger's view:

...our European allies should not keep asking us to multiply strategic assurances that we cannot possibly mean or if we do mean, we should not want to execute because if we do execute, we risk the destruction of civilization.

The European conception of 'pure deterrence', it was argued, was no longer a credible basis for Western security. Hans Afeldt argued:

...the necessity for rational planning, even for the situation where deterrence fails, follows from the possibility of war. The fact that deterrence itself is not credible if the options with which one threatens are fundamentally violating the particular interest of the one who is threatening, is a further cogent argument for rational planning for emergency.

The realization that parity undermined the basis of western security policy led not only to the restructuring of strategic targetting policy in the US, but also to the realization that the US commitment to Europe required a more visible and militarily capable force to strengthen linkage. Similar sentiments came from Europe, where the same concerns were aggravated by anxieties over improvements to Soviet theatre nuclear and tactical nuclear capabilities.
b) Soviet Theatre Force Deployments:

The second factor which prompted concern over the credibility of Western defence posture was the continuing buildup of Soviet theatre-nuclear forces. In the late 1970's, in addition to building up its strategic nuclear arsenal, the Soviet Union began to upgrade its theatre nuclear forces in Europe. The USSR's short-range missile forces--built around the aging SCUD, Scaleboard and FROG systems--were being replaced or complemented by deployments of the SS-21, SS-22, and SS-23, each a significant improvement in performance capabilities over its predecessor. In 1978-79, the USSR had some 1,300 SRBM's in Europe. The modernization of these SRBM systems was accompanied by the large-scale deployment of nuclear-capable artillery and new, longer range dual-capable aircraft (such as the Su-24), and theater-strategic aircraft, especially the Tu-22m Backfire bomber.

However, it was the deployment of the SS-20--a 5000 km range IRBM with three independently targetable warheads which was intended to replace the obsolete SS-4 and SS-5 missiles--that caused the most concern, and was to become the focus of Western anxieties over improving Soviet theatre-nuclear capabilities. Despite the relatively small significance of the SS-20 when viewed in the context of theatre nuclear warhead totals, the missile was seen as a significant qualitative improvement for the Soviet theatre nuclear force. The SS-20's accuracy (a 400m Circle Error
Probable)\textsuperscript{29} and comparatively low-yield warhead (150 kt) made it suitable for counterforce missions,\textsuperscript{30} rendering NATO TNF highly vulnerable to pre-emption, while its mobility made it difficult both to locate and to destroy. In addition, its solid fuel enabled the SS-20 to be readied and launched quickly. Its reload capability also provided a measure of protracted warfighting capability. The SS-20 was seen as providing the Soviet Union with the capability to strike promptly\textsuperscript{31} and destroy with a high degree of confidence NATO's nuclear-capable systems and stockpiles, including those of the land-based French force, should the Soviets be so inclined.

This capability fostered fears that with these improved TNF the Soviet Union could destroy the escalatory chain upon which flexible response depends. Should it attain escalation dominance in Europe, the USSR would disrupt the 'seamless web' or 'continuum of deterrence' upon which European security depended.

Western anxiety and alarm, especially in Europe, soon surfaced. Uwe Nerlich identified these improvements as part of a "...tireless Soviet effort to drive NATO into a condition of self-deterrence [and as a result] Soviet coercive power looms large over the continent."\textsuperscript{32} The Soviet Union, Nerlich argues, has "...gained control of the nuclear deterrence game in Europe..."\textsuperscript{33}

Further, concerns have been raised that with these new forces the Soviet Union may have a selective, damage
limiting TNF posture against Europe designed to aid in a rapid military takeover. With their new prompt counterforce capabilities, the Soviets may not be as self-deterred as before. A few voices of disagreement did surface; some argued the SS-20 was a no more significant threat than the numerous Soviet IRBM and SRBM systems already in place or being deployed. Karsten D. Voigt argued that an INF deployment in response to Soviet SS-20 deployments would in no way determine whether or not Western Europe would become vulnerable to Soviet blackmail. Others pointed out that as the missile was mobile it was in this respect more stabilizing than than the older Soviet systems. Gregory Treverton has pointed out that the SS-20 has become a great threat largely because of the attention it has received, unlike the older, less publicised SS-4 and SS-5 systems.

However, these voices were drowned out by the numerous and loud expressions of concern over the Soviet drive to undermine the basis of European security. As Joseph Coffey has pointed out, whether or not this was the Soviet intention mattered little; it was Western perceptions of the damage done to the military balance in Europe that counted. The SS-20 deployments and the furor they caused in the West brought home the unpleasant realization that NATO's military forces and programs were shaped more by Soviet force posture and weapons deployment than by the requirements of NATO military strategy.
c) Existing INF Obsolescence:

The third major factor contributing to the desire for modernization of the existing INF capability in Europe was the increasing obsolescence of Alliance delivery systems, which were virtually all air-based. The F-111 had been deployed in 1967, and the Vulcan in 1960. Further, dual-capable TNW systems, such as the F-104 (deployed in 1958) and F-4 (deployed in 1961) were also aging and in any case were not designed for the nuclear strike role. The age of these systems, their concentration in fixed bases, their vulnerability to pre-emption, and the improvements to Warsaw Pact air defences placed the ability of these systems to carry out their allotted tasks in grave doubt.

The nuclear missile systems deployed in Europe were also dated or lacking in capability. The 180 Pershing Ia missiles in Europe (108 US launchers and 72 West German launchers) with a range of 740 km were first deployed in 1964, and were in need of replacement. The Lance missile systems deployed to Europe in 1972 had a range of only 125 km, which, along with the Pershing Ia IRBM's and nuclear artillery shells, meant that they could only threaten targets in Western Europe (and parts of Eastern Europe in the case of the Pershing I). The collateral damage from such strikes, therefore, would fall primarily on NATO territory. This, it was argued, effectively imposed self-deterrence on their use. (The 400 Poseidon warheads assigned to SACEUR were not, in the view of the Europeans, sufficiently
linked—i.e., visible and land-based—to the defence of Europe).

These deficiencies in NATO's nuclear force posture hardly inspired confidence in Alliance TNF. The European nuclear force suffered from: a) an inability to place targets in Eastern Europe and the USSR at risk; b) an ever increasing vulnerability to pre-emptive attack, both nuclear and conventional; c) an over-reliance on nuclear weapons whose short ranges and high yields made their use incredible; d) a highly inflexible command and control system constraining the operational availability of the weapons; and e) a virtual lack of training or preparedness among NATO forces for combat in a nuclear environment. The condition of European nuclear forces in the mid-1970's was regarded as so poor that James Schlesinger once referred to NATO's TNF as "...a pile of junk." The dismal state of affairs aggravated the anxieties over the inability of NATO to successfully implement flexible response. Modernization was seen as necessary to restore the capability and credibility of NATO's TNF arsenal.

Pressures for Modernization: More is Necessary

In Europe, the development of strategic parity, along with the improvements to the Soviet TNF, all in the face of the obsolescence of NATO's existing TNF and its continuing inability to match Warsaw Pact conventional force levels,
led to a crisis of confidence in the US security guarantee. The fundamental concern was whether Western European countries could continue to rely on the US for their security in the absence of both a credible strategic nuclear option and a capable theatre nuclear force.

These worries were publicly expressed in the 1977 Alastair Buchan Memorial Lecture given by the then West German Chancellor Helmut Schmidt. Schmidt argued that the development of strategic parity between the superpowers, as realised by the SALT process, had 'neutralized' the strategic nuclear forces of both sides. This, Schmidt asserted, "...magnifies the significance of the disparities between East and West in nuclear and conventional weapons." While Schmidt articulated the importance of conducting arms control negotiations on all categories of weapons, he emphasized that Europeans had to be "...particularly careful to ensure that these negotiations do not neglect the components of NATO's deterrence strategy." And further, should no arms control agreement be forthcoming,

...the Alliance must...be ready to make available the means to support its present strategy, which is still the right one, and to prevent any developments that would undermine the basis of this strategy.

Schmidt's speech was not the first articulation of the need for improvements to NATO's nuclear arsenal. European and US defence analysts had been arguing the case for new European-based forces before the Schmidt speech. Senator
Sam Nunn raised the issue in the US in 1974, in a report on US force posture in Europe, entitled "Policy, Troops, and the NATO Alliance." As a result of this report, the then US Secretary of Defense James Schlesinger proposed a force modernization program, which was continued by his successor, Donald Rumsfeld, from 1975 to 1977. Rumsfeld's efforts led to the inclusion of a review of TNF in NATO's Long Term Defence Programme, and in 1977 the Nuclear Planning Group (NPG) established the High Level Group (HLG) to examine NATO's TNF and study modernization proposals. Henry Kissinger, with characteristic plaintiveness, pointed out that:

...the strategic imbalance that I have predicted for the 80's will also be accompanied by a theater imbalance in the 80's. How is it possible to survive with these imbalances in the face of the already demonstrated inferiority in conventional forces?"

The need for US TNF in Europe, however, was not in question:

If there is no theater nuclear establishment on the continent of Europe, we are writing the script for selective blackmail in which our allies will be threatened, and in which we will be bound into a decision whereby we can respond only with a strategy that has no military purpose...""5

And Uwe Nerlich warned that "NATO continues to adhere to deliberate dependence on escalatory threats without significant efforts to control escalation.""6 Schmidt's speech, however, provided the vital political momentum which publicized the issue and spurred Alliance governments, and especially the US, into examining TNF modernization.""7 The
aim of the Schmidt request was not to deploy a direct counter capability to the SS-20, but rather to repair the perceived damage done to the spectrum of deterrence. The deployments were, above all, needed to restore the perceived weakening of the extended nuclear guarantee. As Johan Jorgen Holst put it:

The recurrent psycho-political theme of coupling between the American nuclear deterrent and a dependent Western Europe had re-emerged. Reassurance was requested.¹⁸

However, the official European position was largely split. There was, on the one hand, the perception of the SS-20 as a great threat that warranted a strong counter. On the other hand, the prevalent desire was to preserve what was left of detente. The West European public consensus largely favoured a continuation of detente.

A prominent concern in the US over INF modernization was the question of US leadership of the Alliance. Should a US response to European concerns not be forthcoming (especially after the MLF and neutron bomb fiascoes), it would place US leadership in doubt, both in the eyes of the Europeans and the Soviets. The troubles in US/West European relations brought about by the Neutron Bomb, MLF and SALT II conflicts caused the Carter administration to respond in a more forthcoming fashion to the European desire for an INF modernization program. The Carter administration had, after all, opposed INF modernization as late as 1977; by January of 1979 the US was fully in favour of the project.

This provision of political reassurance to its European
allies played as much of a role in the US response to European desires as military and strategic factors. Indeed, to the State Department, INF modernization was worth pursuing because it could help persuade the European allies that the US did not intend to bargain away European interests at the SALT II negotiations.

Proponents of INF modernization on both sides of the Atlantic felt new INF forces could strengthen deterrence in two aspects. First, by achieving a capacity to impose intrawar deterrence and increase NATO's nuclear options; and second, by providing the political reassurance critical to extended deterrence and the basis of Western security policy. In addition, new INF would reduce the reliance on short-range systems and improve the credibility of NATO's nuclear force.

Furthermore, modernization was needed to rectify political perceptions as much as the technical aspects of deterrence and defence. A crisis of political confidence would emerge in Europe should the perception become widespread that NATO was at an irreparable military disadvantage vis-a-vis the Warsaw Pact at all levels. In such a situation, the credibility of the political will behind the threat to escalate suffers a considerable blow. Western European security depends as much on the political confidence arising out of a belief in its security as from the actual nature of the military balance itself.

One of the more frequently cited political arguments
contended that should NATO not upgrade its INF in Europe when faced with a growing INF disparity, it would signal to the Soviets that NATO lacked the resolve to respond to threats to its own defence. In this context, modernization was portrayed as a case of weapons for weapons sake, rather than to support NATO strategy or doctrine.

Publicly, the most widely cited justification for INF modernization was the need to counter the SS-20; politically, it was much easier to point to expanding Soviet capabilities than to explain NATO doctrine to the public. As Gregory Treverton asserted, "To the extent that public opinion in Western Europe supports the NATO [INF] Plan, it does so in the belief that it is necessary to counter the SS-20." The official US position picked up on this rationale: "Full deployment of LRINF missiles will increase NATO's nuclear capability significantly and help offset SS-20 deployments." However, the emphasis placed on countering the SS-20 produced confusion both in the public and among Alliance governments over the exact objectives of the December 12 decision. Was the modernization intended to counter the SS-20? Or was it to restore the credibility of NATO doctrine? These different purposes required different INF deployments.

West German officials tended to stress the 'counter the SS-20' rationale, and eagerly attempted to have the SS-20 deployments cited as the main rationale for INF modernization. A West German official once argued, "It is
important to make it known to the Russians that they are the source of the problem that we have and we would not need a two-track decision had it not been for their buildup."

British officials pointed to the need for modernization to maintain the credibility of flexible response. It was essential to have the capability to strike at targets in the Soviet Union from Europe. In the face of the condition of existing TNF in Europe, this necessitated INF modernization.

US officials stressed the need to maintain the credibility of flexible response, but also suggested the need for NATO to possess a wider range of nuclear options, to increase the military capacity and utility and thus credibility of the European nuclear force.

These differences illustrate the varying perceptions of the need for INF and the varying domestic climates which influenced public government statements. Although the principle of the Dual Track decision was not challenged, these differences over rationales and perceptions led to more significant divergences over the number and capability of INF forces in Europe. Alliance conflict over force structure was thus not only a function of the different strategic interests between Europe and the US, but also was a function of the different rationales for modernization put forth by Alliance governments. Divergences over force structure were to have a great impact on the discussions leading up to the implementation of the December 12 decision.
Most fundamentally, however, the December 12 decision was prompted by the belief of Western analysts and decision-makers that INF was necessary to maintain a strong deterrent in Europe. The conventional defence of Europe, it was believed, was a hopeless undertaking. Existing nuclear forces in Europe were deemed insufficient or totally inadequate. In the absence of what they believed was a viable alternative, Western decision-makers looked once again to the nuclear crutch.
CHAPTER II: THE US/EUROPEAN STRATEGIC AND POLITICAL SPLIT

One of modern man's greatest achievements lies in the fact that his studies of nuclear war consist entirely of speculations.

Alton Frye

Extended Deterrence in Theory

Despite the prolific literature on the subject, there is no firm, precise definition of general nuclear deterrence or extended deterrence. William Kaufmann feebly explained general deterrence as a "...means of preventing certain types of contingencies from arising." The costs and risks of taking certain actions are made clear to an opposite party, and this knowledge constrains that party from undertaking those actions in the first place. Presenting the Soviets with the likelihood that they will incur an unacceptable level of damage in response to an attack on Western Europe is the essence of deterrence. It is this 'forecast' nature of deterrence (to use Kaufmann's term) that makes deterrence 'work'. Extended deterrence involves the threatened use of US nuclear forces (including strategic nuclear forces) in response to Soviet aggression in Europe. The threat posed is that a Soviet invasion of Europe will result in the release of US tactical nuclear weapons, provoking a similar Soviet response. Nuclear exchanges in Europe, this threat implies, might then escalate to the strategic level. Extended deterrence thus largely depends on invoking the threat explicit in general
nuclear deterrence.

In more practical terms, extended deterrence is not solely a function of the threatened use of US strategic forces to deter a conflict in Europe. Rather, it is a function of a wide set of strategic and political variables, which differ according to various scenarios. Extended deterrence is thus more accurately portrayed as the deterrent effect arising out of various strategic nuclear, theatre nuclear, and conventional force postures, further muddied by the uncertainties of political objectives, crisis decision making, and peacetime contingency planning.

The result is that it is virtually impossible to reduce extended deterrence to a set of clearly defined operational requirements. The one common element in all calculations is the Soviet perception of both Western credibility (in terms of the willingness to carry out the threat) and Western capability (in terms of a force structure capable of carrying out the threat). The capability and willingness to escalate are the cornerstones of extended deterrence. Without the capability, declarations of will lack military credibility. Without the will, or the perception of that will, capabilities lack political credibility.

Of course, the risk of laying down an explicit threat—be it intended policy or bluff—is that the antagonist may decide to challenge the threat. Establishing a high degree of credibility, therefore, is necessary to ensure that:
* the enemy believes the capability to carry out the threat exists;
* the costs and risks of challenging the threat are considerably greater than the political or military value of any advantage that might be gained;
* the threat could be carried out if the contingency did arise.

The credibility and the will behind the threat is especially crucial for extended deterrence, where the territory of the threatened and the retaliator are separated by 3000 miles of ocean.

There is, however, no clear relationship between US and NATO force structure and more stable levels of extended deterrence, because extended deterrence ultimately depends on Soviet perceptions. All that can be said is that US and NATO forces require the capability to respond adequately over a wide range of military possibilities, in which the threat to escalate is credible to the USSR.

Anthony Cordesman has perhaps provided the most concise articulation of the relationship between Western force structure and extended deterrence:

Where both strategic and theater forces are well suited to the defense of Europe, and where US forces are strong enough to limit any Soviet incentive to escalate to even broader levels of conflict, then the level of deterrence extended is likely to be high.55

This is perhaps as specific as one can get about the force
structure/deterrence relationship.

Further, extended deterrence does not apply solely to the deterrence or prevention of conflict; it applies with equal importance to intra-war deterrence and war termination. While the most important function of extended deterrence is to prevent large-scale aggression from ever breaking out, should such aggression occur extended deterrence still plays a critical role in preventing unfavourable escalation from taking place. Intra-war deterrence does not necessarily mean the absence of escalation—extended deterrence, after all, relies on exactly that threat—but rather the prevention of unwanted escalation. The role of intra-war deterrence, then, is to ensure that the deterrent and war termination advantages to be gained by escalation remain firmly in Western hands. Commonly, this is referred to as "escalation control".

Extended deterrence, because of the important role played by perception, is hard to define, difficult to measure, and impossible to test. It is this very ambiguity of extended deterrence which has led to the politically charged nature of the debates surrounding it. Various views of extended deterrence requirements or criteria are often determined by the personal political viewpoint of the individual. One's politics is more likely than not the key determinant of one's view of extended deterrence requirements. The intellectual obscurity of extended deterrence has made it difficult to construct an objective
analysis of what is required to maintain or ensure it. Questions of specific military needs cannot be answered, nor can the effectiveness of various doctrines designed to enhance it be evaluated. Not surprisingly, the elusive nature of extended deterrence has created problems for its practical implementation into political reality. The US has, in its own strategic interests, one set of requirements and criteria for extended deterrence. The Europeans, again in their own interest, have another different set.

NATO defence policy in general—and nuclear policy in particular—is more often than not a struggle with the inherent ambiguities of the underlying theoretical rationales of extended deterrence on the one hand and the practical realities of different strategic interests on the other.

The Perspectives

For the purposes of this study, the US debate on INF is divided into four perspective groups: the US deployers, the US balancers, the US arms controllers, and the US conventional deterriers/defenders.56

US Deployers:

For the US deployers, deployment of INF is essential for deterrence. The increasing military capability of the Soviet Union, which is viewed as an aggressive, hostile power, requires a strong counter and heightened military preparedness on the part of the West. In the face of
increasing Soviet advantage in both conventional and nuclear capabilities in Europe, failure to deploy INF would leave a conspicuous gap in the spectrum of deterrence which the Soviet Union could exploit to its advantage, either militarily or politically. Deployment would demonstrate that NATO "...will not fight a war on [Soviet] terms, will not permit them to regionalize a conflict to exclude Soviet territory, and will not permit them to hold Europe hostage." A failure to deploy would be tantamount to a failure of Western resolve to respond to threats to its security. This would be viewed as a sign of Western weakness.

Arms control is anathema to US deployers. James A. Thomson, for example, wrote recently that "[Arms control] has become part of a general political trend weakening the security consensus in the West." For US deployers, it is increased military capabilities which ensure stability and a strong deterrent; arms control results only in unilateral advantage for the Soviet Union. An offshoot of the US deployer group are those who can loosely be labelled "warfighters". Warfighters also view INF deployment as a security essential, but differ in that effective deterrence and defence require the adoption of a nuclear warfighting capability in Europe, which at least matches and could preferably defeat the USSR. Soviet strategy is viewed as a warfighting, warwinning doctrine, and an effective counter to it necessitates that the West develop a similar
philosophy and install the capacity to carry it out.\textsuperscript{59}

US deployers, then, hold that effective deterrence in Europe requires a strong united NATO with a powerful military capacity (possibly disposed toward warfighting), of which INF systems are an essential component.

US Balancers:

The US balancers, composed largely of Reagan administration officials, emphasize the importance of maintaining a balance between Soviet military capabilities and western military capabilities. To this end, balancers advocate either deployment of INF or arms control, though the former option is preferred. Balancers are aware, however, of the political imperatives behind arms control and are willing, if unenthusiastic, about achieving military balance through negotiation.

Balancers also view failure to achieve a balance in Europe as having dire consequences for theater stability and political confidence in the Alliance. The aggressive nature of the Soviet Union, coupled with its ever-expanding military forces in Europe\textsuperscript{60}, presents a bona fide threat to the countries west of the intra-German border.\textsuperscript{61} An absence of offsetting NATO capabilities would leave a gap in the deterrence spectrum, and concede escalation dominance to the Soviet Union. The disparity in capability between NATO and the WTO, if not addressed, would also have a dire political impact: the increased vulnerability of western Europe to
political blackmail. Eugene Rostow predicted in 1983 that the "...wide divergence in NATO and Soviet military capabilities in Europe...would have a profound political effect throughout the Western world." For the balancers, the fact of deployment itself is more important than deployment on the basis of military criteria. The primary purpose of deployment is to demonstrate resolve and to nullify the Soviet strategy, as balancers see it, of separating the US from its European allies. However, if an INF deployment is judged to be insufficient in quantity to carry out this purpose, or if certain military capabilities are lacking in any new INF force, balancers would oppose it.

By and large, balancers do not accord a lot of attention to allied sentiment about INF. A sub-group of the US balancers, the coupler balancers, place the US commitment to Europe and the necessity of sensitivity to allied concerns as the main policy priorities. Consultation and accommodation of European concerns (with the greater levels of European support such a process engenders) is of tantamount importance for deployment, to strengthen not only the military aspects of deterrence, but the political unity of the Alliance upon which European security depends.

US Arms Controllers:

The US arms controllers, composed largely of ex-arms control officials and academicians, have had to battle the widespread skepticism of arms control which is prevalent in
elite US opinion. The arms controllers view INF as unnecessary and potentially dangerous. The destructive potential of both existing strategic arsenals and the nuclear systems already in place in Europe is so great that additions to these forces essentially have little meaning militarily or for deterrence. The introduction of new weapons systems to already bloated arsenals can only increase the danger of inadvertent war, which for the arms controllers is a serious threat. INF, especially, are viewed as destabilizing, as the Pershing II missiles are seen as first-strike prompt counterforce weapons. McGeorge Bundy pointed out that: "With a single important exception there is nothing the new warheads can do that cannot be done as well by other systems that we already have or plan to have." The "single important exception" was the "...new possibility of a super sudden first strike." Christopher Paine argued along similar lines:

The deployment of such weapons as the Pershing II will heighten rather than lessen the danger of nuclear war, by tempting decision makers in a crisis to pursue illusory nuclear 'options' when none, in fact, exist.

The Soviet Union is not viewed as inherently aggressive, but as caught up in the arms race dynamic, forced into large military expenditure by a combination of US provocativeness and an historical anxiety bordering on paranoia. The Soviet Union, if offered reasonable terms, is amenable to arms control and negotiated reductions in destabilizing systems in Europe and elsewhere.
Arms controllers emphasize the need to maintain peace and security through accommodation and negotiation, rather than through rivalry. Stopping the arms race should be the dominant policy concern. Calls for the maintenance of the military balance in Europe through deployment of INF are essentially an irrelevant and dangerous attempt to tinker with the margins of the reality of assured destruction. The way to increased security in Europe lies along the path of fewer and less vulnerable weapons and mutual confidence-building measures, to reduce the likelihood of war by miscalculation or mistake.

US conventional Deterrers/Defenders:

This grouping contends that the INF issue is essentially irrelevant. Linkage of Europe to the US strategic nuclear guarantee is assured by the 300,000 US troops and the US nuclear systems already in place in Europe. As Cyrus Vance argued,

There should be no question about America's commitment to defend Europe with all the means necessary... The substantial forces we have deployed to Europe are one concrete evidence of that commitment."

Expansion of the US nuclear force in Europe to balance or offset improvements in Soviet theatre nuclear forces are unnecessary for effective deterrence. With or without the SS-20, the Soviet Union is capable of destroying Europe through use of its theatre arsenal.
US conventional deterriers/defenders instead emphasize the expansion of NATO's capability to wage and win a conventional war and cite the difficulties facing a Soviet attack in Europe and the low likelihood of its success.\textsuperscript{67} Improvements to NATO's conventional capability would have the greatest impact on deterring a WTO attack and would circumvent concerns over the credibility of NATO's escalatory option by raising the "nuclear threshold". The innovations in modern conventional weapons technology, encompassing Precision Guided Munitions (PGMs), free fall and sub-munitions, and sensor and targeting improvements, inspire confidence for US conventional deterriers/defenders in the viability of the conventional defence option.\textsuperscript{68} INF, therefore, is criticised because of its decreasing relevance to the European theater, and because it does nothing to ensure the most effective deterrent factor in Europe, namely, conventional defence.\textsuperscript{69} Strong conventional forces would reduce NATO reliance on nuclear weapons in Europe and enable the level of nuclear weapons to be substantially lowered. US conventional deterriers/defenders however, have yet to reconcile their position with elite European sentiments favouring retention of the first use threat and fearing any policies which make Europe safe for conventional war.

The European spectrum of opinion is divided into three perspective groupings; the Euro-couplers, the Euro-negotiators, and the Euro-disarmers.
Euro-couplers:

The Euro-couplers, found mostly among the conservative elements in European opinion but also among some centrists, support both the deployment and negotiation tracks of the INF decision. Euro-couplers, however, tend to emphasize deployment. New INF in Europe are seen as essential to uphold deterrence and the viability of NATO strategy. For Euro-couplers the conventional defence option is hopelessly unrealistic. The Soviet military buildup is viewed as a considerable threat that, if not countered or offset by INF, could lead to a situation in which Europe is de-coupled from the US and therefore vulnerable to Soviet blackmail. Increases in Soviet theatre nuclear capabilities—especially the SS-20—in the context of parity, have profound implications for the strength and credibility of extended deterrence. INF is seen as essential to "re-couple" the Europe to the US strategic guarantee.

Euro-couplers are not opposed to arms control as a means of achieving a stable balance in Europe. Indeed, for many Euro-couplers it would be the preferred option. However, practical progress towards a negotiated solution is only possible if the Alliance deploys INF to demonstrate its commitment to European security. Negotiation from a position of strength is imperative for equitable arms control.

Euro-couplers, then, seek the maintenance of Allied cohesion, NATO strategy, and above all the link between the
US and Europe. They seek these goals through the deployment of INF, either to offset Soviet military capabilities or to prompt a fair and equitable arms control agreement which would achieve the same strategic effect.

Euro-negotiators:

This grouping is composed largely of the center-left in European politics, typified by the SPD government of Helmut Schmidt. The Euro-negotiators seek a restoration of the European balance and are firm supporters of the Dual Track. Caution and prudence dictate the need to maintain a stable European military balance, a balance upset by Soviet modernization of both its conventional and nuclear forces directed against Europe. Although the USSR is not viewed as likely to initiate aggression in Europe, a stable European balance between NATO and the Warsaw Pact is seen as necessary to uphold deterrence, maintain Alliance unity, and thereby restore European security. Helmut Schmidt, in the Alastair Buchan Memorial Lecture, warned against "...the illusion that there may be grounds for neglecting [the European balance]." For the Euro-negotiators, the provisions of SALT II held for Europe the spectre of decoupling; the codification of strategic parity weakened the credibility of deterrence through punishment, and Soviet conventional and nuclear attack in Europe was now "freed" from the constraints of the supreme escalatory threat. Further, the rise of parity placed escalation outside the US
strategic interest. Restraining a war to Europe had now become the most favoured American outcome.

The Dual Track decision was therefore a security necessity, to restore the viability of extended deterrence through deployment if necessary, but preferably through negotiated reductions. The Euro-negotiators reject unilateral disarmament as unrealistic and potentially disastrous for European security. They are aware of the problems arms control faces, but view the arms control track as the best means towards improving the military balance in Europe. East-West accommodation, negotiation, and detente—in short, political over military means of restoring the military balance—are the policy preferences and desires of the Euro-negotiators.

Euro-Disarmers:

The Euro-disarmers, composed traditionally of left-wing officials and analysts, are openly critical of both tracks of the INF decision. NATO strategy is viewed as misguided in its emphasis on nuclear weapons. Successful conventional defence is seen as a viable option against what is viewed as the extreme unlikelihood of a Soviet attack. Euro-disarmers place little faith in calculations of the military balance. In an era of strategic overkill, they argue, such calculations have little meaning. For the Euro-disarmers, deployment of INF is militarily superfluous, as the number of nuclear weapons deployed in Europe already far exceeds
any practical military role they could possibly have. As Frank Barnaby pointed out: "...if there was a nuclear war in Europe, security as we know it would cease to exist."75

Euro-disarmers greet the rationale for the new INF force—the need to offset Soviet deployments to ensure a stable military balance—with varying levels of skepticism. INF is viewed as another component in the US drive to establish warfighting dominance over the Soviet Union. The Pershing II is singled out in this respect as it makes a first strike pindown or decapitation attack feasible. The GLCMs are assailed for their adverse impact on verifiable arms control. In addition, Euro-disarmers criticize INF as a highly destabilizing addition to the military equation in Europe. Their vulnerability, coupled with the threat they pose, increases the likelihood that the USSR would be compelled to pre-empt them in crisis or war. Euro-disarmers are also critical of the arms control track of the INF decision, as they are critical of western arms control proposals as a whole. They view western initiatives as lacking in enthusiasm and faith, and are seen essentially as propaganda efforts to mollify public sentiments.76

A sub-group of the Euro-disarmers are the unilateral disarmers, found primarily in the European peace movement. This sub-group has similar sentiments to the Euro-disarmers, but advocates as the ultimate aim a nuclear-free Europe achieved through disarmament, unilaterally if necessary.77 More nuclear weapons are seen as an unnecessary
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and immoral evil. NATO itself is viewed as arcane and outdated, a contributor to the problem rather than a promoter of peace.

The US/European Threat Perception Split

The political and strategic constraints of the North Atlantic Alliance make the practical implementation of extended deterrence into Alliance policy, doctrine, and force structure extremely difficult. The fundamental strategic and political interests of Western Europe and the US diverge on several important aspects of their security relationship. Critical areas of divergence include differing views over the nature of the Soviet threat, the role and character of the nuclear force in Europe, and the split on arms control. Attempts to formulate the Dual Track decision ran straight into these key areas of the US-European strategic divergence.

As the detente process began to decay during the late 1970's, two different perceptions of the Soviet threat emerged across the Atlantic. All elements of West European opinion—and especially the Euro-negotiators who dominated Western European decision-making at the time—equated enhanced security and international stability with the policies of detente. The spirit and dialogue of detente, they argued, served to moderate Soviet behaviour. Indeed, Helmut Schmidt's political slogan as Chancellor was "defence and detente", taken from the wording of the 1967 Harmel
Report. The Harmel formula had established detente and defence as the two foundations of NATO policy. However, the balancers who now made up the government of the United States viewed the era of detente as a period of unilateral Soviet advantage. In their view detente, welcomed in the West in good faith and with high expectations, had been used by the Soviet Union to make virtually unopposed incursions into the Third World and to undergo a massive military buildup. The Soviet expansionist drive had been exposed and proven; the West now had to respond firmly and resolutely to deny any further Soviet gains.

Increasingly, therefore, attitudes diverged; US elites became increasingly preoccupied with defence and disillusioned with detente, while European elites sought to maintain detente and showed little enthusiasm for defence. The invasion of Afghanistan intensified the US-European debate on Western strategy vis-à-vis the USSR. The US deployers and balancers viewed the Soviet invasion as proof of Soviet aggressiveness, to which the West had to respond with firm punitive actions and unity of resolve. The European negotiators (and many couplers), despite their condemnation of Soviet actions in Afghanistan, saw little point in sacrificing East-West detente for the sake of what they saw as a peripheral Soviet gain.

When the Reagan Administration entered office, it brought with it attitudes and rhetoric reminiscent of the Cold War. It launched a renewed effort to contain and
isolate the USSR politically, economically, and militarily, and it instituted the beginning of the largest peacetime military buildup in US history. The Europeans saw no advantages in a renewal of East-West confrontation and called for the maintenance of the détente process. The US deployer and balancer view of the USSR was not shared across the Atlantic except by some Euro-couplers. The Reagan Administration's continual rhetoric and confrontational tone, coupled with the US military buildup and attempts to expand NATO's mandate outside of Western Europe, aroused more anxieties in Europe about US intentions and leadership than did the Soviet threat.

The Reagan administration's Cold War rhetoric, anti-arms control stand, strategic force modernization and 'limited nuclear war' pronouncements began to tell on Alliance unity and confidence. These US policies were to weaken support for the NATO Dual Track decision in many European parliaments, notably the West German Bundestag. Fragile coalition governments (usually composed of Euro-negotiators and Euro-disarmers) were divided over deployment. The governments of the Netherlands and Belgium were forced to avoid a concrete commitment to deployment to satisfy their conflicting coalition constituencies. The popular mood in Europe ranged from discontent to outright hostility to the December 12 decision. The result was hesitancy and delay on the part of European governments.

The uncertainty of Euro-negotiators was also a reaction
to US actions. The Euro-negotiators saw in the failure to ratify SALT II and the consistently anti-arms control stand of the Reagan Administration the de-facto abandonment of the spirit of the double track formula. What was viewed as the separation of security and arms control in US policy did not sit well with the middle ground in the Western European debate. US statements on limited nuclear war and persistent accusations that the Europeans were not "pulling their weight" also aroused anxiety and resentment. The INF modernization program came to be widely viewed in Europe as a US demand on the deploying countries. Proceeding with deployment was viewed as an accession to that demand.

In the US, however, European hesitancy was viewed with suspicion and annoyance. The INF decision would, in the view of the US deployers and balancers, increase the risk to the US by deploying land-based systems in Europe which increased the likelihood of escalation to the strategic level. The perceived failure of the Europeans to support a program which increased the level of risk to the US on their behalf upset the Reagan Administration. Moreover, the original impetus for the modernization decision had been European. Now that the US was prepared to respond to European concerns at considerable political cost, the Europeans appeared to be backing down. The scale of the mass protests in Europe, and their anti-American sentiments, was viewed in the US as proof of European naivete and lack of resolve. The view of INF in US government circles had swung dramatically:
In 1979 the argument in favour of LRTNF was that it provided a demonstration of an American commitment to the defense of Europe. By 1982 the argument was that unless the Europeans agreed to host the missiles, the Americans would not consider Europe worth defending.  

As a result, the capacity of West European nations (especially the nations that were to host INF) to carry out their obligations successfully came to be regarded by the administration as "...symbolic of European readiness to accept its share of the risks and responsibilities of NATO membership." The balancers in the Reagan Administration increasingly came to identify the INF deployments as a test of European resolve, loyalty, and commitment to the Atlantic Alliance. European recalcitrance over deployment issues and continuing struggles with parliamentary politics led conservative unilateralist elements in the US to question the value of the Atlantic Alliance. Was it worthwhile defending the Europeans, these analysts argued, when they showed so little interest in defending themselves?  

For their part, the European NATO nations took little comfort in the fact that the US had increased its share of nuclear risk in the Alliance. For Europeans, nuclear risk was a political given, and US policies were seen as increasing, not alleviating, that risk. As William G. Hyland observed:

The growing clash between what the Europeans came to believe was American unilateralism and what Americans believed was European pacifism or neutralism became a vicious circle feeding on itself.
Tensions across the Atlantic intensified as Europeans in the political mainstream identified both the US and the USSR as threats because of their global rivalry. The US, understandably, resented being identified by its allies as no better than their enemy. As if this strain on the Alliance was not sufficient, other areas of dispute also fuelled Alliance tensions. Foremost among these was the role of economic links in Western security strategy.

The European NATO members were skeptical of US attempts to use economic sanctions as an instrument of control or to punish Soviet behaviour. European refusal, by and large, to agree to US sanctions on the USSR after the invasion of Afghanistan, or against Poland after the imposition of martial law, or against Iran, exposed the US-West European split on the utility of economic coercion, to the increasing frustration of the US.

Trade credits also became a subject of dispute. West Germany favoured the extension of credit aid to Poland in the face of that country's bankruptcy, resisting calls from the more conservative elements in the Reagan Administration who called for a cancellation of aid to Poland and a declaration of Polish default. The West Germans saw no advantage to taking such a position and refused to modify their credit policy vis-a-vis Poland.

US-West European relations reached a low point over the proposed Soviet European pipeline. Western European sentiment, especially in West-Germany and France, strongly
favoured the deal. In the US, concerns were raised about the subsequent vulnerability of Western European governments to economic manipulation and the technology transfers involved in the construction of the pipeline itself.

The economic policy clashes between the US and Europe were a result of two conflicting policy aims. The US sought to enhance the power of its economic sanctions by bringing its European Allies on board. The European Alliance members wished to form their own economic policy vis-à-vis the Soviet Union. US pressures for Alliance unity in economic and trade policy only provoked the anger in Europeans which stemmed from perceived intrusions on national policy and sovereignty.

There were also US-European clashes over the role of NATO in "out of area" disputes, most notably in the Middle East over the persistent Arab-Israeli dispute. The US has attempted to expand NATO's mandate to world hotspots which it regards as important to all Western nations, thereby increasing the credibility and weight of Western action in any given region. The European Alliance members, however, did not view NATO's mandate as extending beyond Europe. US pressures for NATO involvement in out-of-area disputes also contributed to European centralist and neutralist sentiments. Mounting US impatience with European recalcitrance and lack of enthusiasm for economic sanctions and out-of-area involvement soon led to both public and official resentment, although there were calls for more
consideration for allies in US policy. 

The problems encountered by the Alliance in formulating policy consensus on everything from nuclear policy to East-West relations had never been so severe. Andrew J. Pierre pointed out in 1983 that: "In a rather fundamental manner, the dominant political perspectives and societal moods have diverged on the two sides of the Atlantic." 

The Europeans desired to constrain the USSR by maintaining a dialogue; the US, concerned over Soviet military buildups and expansionism, emphasized strong military power to restrain Soviet behaviour. Nor was there much hope for a renewal of consensus on the Soviet threat. William G. Hyland pointed out in 1984 that "...without a common evaluation of the East-West contest...the trend towards separation between America and Europe is likely to continue."

The US-European Strategic Split

Despite the significance of intra-Alliance differences over the Soviet threat, the differences which were to have the greatest impact on the INF debate were the contradictory US-European views on what shape the nuclear force in Europe should take and what doctrines should guide their deployment. There were three fundamental areas of policy disagreement: automaticity of nuclear response, the role of escalation in NATO strategy, and the feasibility and desirability of nuclear warfighting in NATO strategy.
Disagreement over automaticity of response and its relationship to deterrence is a result of a direct clash of strategic interests. The West European couplers and negotiators desire, in the words of the West German White Paper of 1983, a "continuum of deterrence," with no 'gaps' between forces at the conventional, theatre nuclear, and strategic levels. In their view, NATO nuclear policy should threaten the early and widespread use of nuclear weapons. Faced with such a prospect, the Soviet Union would be deterred from initiating a conflict in Europe.

The US, on the other hand, has sought to create gaps or levels in deterrence to control escalation and avoid a strategic nuclear exchange. Further, it is in the US interest to maintain a conventional firebreak for as long as possible, so as to avoid the use of nuclear weapons and the prospect of escalation their use entails. Should NATO have to resort to nuclear weapons, the US would prefer they be used both to achieve an advantage in the war, and to terminate the war at a 'gap' in deterrence short of strategic nuclear strikes. Accordingly, the US has attempted to maintain authority over the capabilities required to 'jump' these gaps. Though the US controls much of NATO's TNW's and some of NATO's theatre nuclear weapons, US attempts to gain complete control of nuclear decision-making in Europe have fallen short.

European attitudes which favour early first use as a deterrent in contrast to US desires for a long conventional
firebreak stem from Europe's experience of the destructiveness of conventional war. However, attitudes towards conventional war are different in North America, as Paul C. Warnke has pointed out:

...for a citizen of the United States or Canada, the risk of conventional attack produces few nightmares. Deterrence on this side of the Atlantic usually is construed to mean prevention of nuclear war.  

Not surprisingly, given the divergence over the desirability of 'gaps' and conventional firebreaks in deterrence, the US and European NATO countries have developed differing interpretations over the function of escalation. The European conception sees escalation as an unstoppable process leading inevitably to a strategic nuclear exchange. For couplers and negotiators, the threat to escalate involves both the capacity and the credibility to escalate to a general nuclear war, and emphasis should be placed on the threat that the level of violence may be uncontrolled. Europeans believe that by posing the threat of quick and virtually automatic escalation up to the use of US strategic systems, the effect and credibility of deterrence is increased. In the words of Manfred Woerner:

The Soviet Union cannot be invited to contemplate a war limited exclusively to Western Europe, or even to German territory. Moscow must at all times be forced to reckon with the full ladder of escalation.

The US, on the other hand, with its vested interest in avoiding escalation to the strategic level, sees escalation
as a means of gaining a military or political advantage, or as an opportunity to manage a crisis after a conflict has broken out. To achieve this, a credible capacity must exist that will enable NATO to gain strategic advantage through escalation. In this way, in the US view, deterrence is enhanced.

The fundamental intra-alliance differences over deterrence and escalation have, however, taken a back seat to the intense, and more publicized, conflict over the warfighting role of theatre nuclear weapons in Europe. US deployers (and some balancers) have pressed for a warfighting capability in the event that hostilities do break out. The West European's dominant concern is linkage, with theatre-nuclear capabilities largely subordinated to the political requirements of coupling rather than the military criteria of warfighting. This was emphasized by the West German White Paper, which stated that

The initial use of nuclear weapons is not intended so much as to bring about a military decision as to achieve a political effect. The intent is to persuade the attacker to reconsider his intention, to desist in his aggression, and to withdraw. At the same time, it will be impressed upon him that he risks still further escalation if he continues to attack.90

Europeans of all perspectives do not consider nuclear weapons to be warfighting weapons. They are viewed primarily as political instruments of deterrence. Suggestions from US deployers and many Reagan administration officials that a nuclear warfighting posture for NATO would be a sensible option arouse European fears and anxieties about the US
commitment to extended deterrence. Tones of resentment can also be detected in some European remarks:

For the first time in its existence... the US itself is in a vulnerable position—being liable to nuclear attack—and Washington is reluctant to accept the risks, trying instead to delegate it to others or at least keep it as far away as possible from the USA.  

The West European view has always been more concerned with deterrence and the maintenance of deterrence rather than with the use of nuclear weapons should deterrence fail. Desiring the strongest possible link to the US strategic nuclear guarantee, the Europeans have striven to ensure both the credibility of that guarantee and assurances that a nuclear war would not be limited to Europe. Helmut Schmidt spoke for all Europeans when he stated that the use of tactical nuclear weapons in Europe would

...lead to the most extensive devastation of Europe and to the most extensive loss of life of its peoples... Those who think that Europe can be defended by the massed use of such weapons will not defend Europe but destroy it.  

From the European perspective, nuclear weapons should be used early in a conflict against a wide range of targets, to signal Alliance resolve to prosecute the war at any and all levels. The credible threat to invoke this use is the cornerstone of the European deterrence perspective.

Selective Employment Plans (SEPs) and other LNO strategies worry Europeans of all perspectives because they imply an attempt to confine nuclear war to Europe. Such plans also seem to foster the view that theatre-nuclear
forces are a substitute for US strategic forces. US arguments about the need for SEPs are "...bound to prompt questions about US willingness to commit strategic systems if necessary."93

The challenge posed by US warfighting proponents to Alliance policy of deterrence and detente is also a challenge to the entire European conception of NATO as a deterring, not warfighting, organization.

As the nuclear guarantor of NATO, however, the US has felt it must consider what might happen should deterrence fail. This has resulted in the consideration of a variety of LNO and warfighting strategies, globally and in Europe, intended to make the use of nuclear weapons more credible than the threat of all-out nuclear response. A policy marriage exists in the US position on the credibility of nuclear use. While US deployers stress that adopting a warfighting strategy strengthens deterrence, US balancers welcome the shift towards policies which provided nuclear weapons with a clear military role for both central and extended deterrence missions.

From the US deployer perspective, the use of nuclear weapons should be delayed as long as is possible and then used to strike at predominantly military targets to achieve a rapid resolution of the war. Secretary of Defense Schlesinger articulated what has been the predominant US view to the Committee on Foreign Relations in 1974, "...our nuclear weapons in Europe are present for deterrence, and
deterrence is made credible by a credible warfighting capability. US balancers are in general agreement. Henry Kissinger argued that "...it is imperative that we finally try to develop some credible military purposes for the tactical and theater nuclear forces that we are building."

The push by the US to adopt strategic and theatre warfighting strategies has forced the US to face the political and public relations dilemma brought on by those strategies. Any policies that make the use of nuclear weapons more credible also makes their use seem more possible.

In formulating a consensus on nuclear policy, the Alliance must grapple with this central, contradictory strategic reality. It is in the strategic interest of the United States to minimize the risk of escalation to the strategic nuclear level, which is the key premise of extended deterrence. It is in the strategic interest of the Western Europeans, to maximize the probability of rapid escalation should war occur so as to strengthen pre-war deterrence. The positions of both sides are driven by the purest motives of self-interest. Neither wants nuclear weapons to explode on their territory first or exclusively. The Europeans, if given a choice, would prefer to see the US and the USSR conduct a nuclear war above their heads. The US, if pressed, would rather see a nuclear war confined to Europe. These dark motives are only occasionally expressed in the interest of maintaining the visage of political
politeness and Alliance harmony. However, the havoc these contradictory interests pose for nuclear policy consensus in the Alliance is a reality NATO has been unable to ignore. As Richard Betts has pointed out, "...policy on TNF has traditionally remained muddled because of the latent contradiction between American and Allied interests." 96

Not surprisingly, the difficulty in achieving a nuclear policy consensus made it all the more difficult for NATO to decide what shape the new INF force in Europe should take. Conflict over the force structure characteristics of the prospective INF force was a result of a lack of a doctrinal consensus. Contradictory strategic interests led to contradictory force structure desires.

The Force Structure Split

This conflict over the Alliance's fundamental strategic posture led to disagreement over the character and deployment of the new theatre-nuclear systems. The different perspectives required dissimilar force structures. In the US conception, a new theatre-nuclear force in Europe required a large number of delivery vehicles capable of absorbing a pre-emptive strike and launching significant strikes on military targets. In the European conception, the new force required that delivery systems be survivable but not necessarily numerous, as they are intended to provide an interim strike demonstrating resolve and threatening escalation to strategic nuclear war.
Prior to the 1979 decision, controversy arose over basing schemes for the new missile force. A large number of officials and analysts advocated basing the force out at sea, on SLBMs or missile carriers. Such systems, it was argued, would be virtually invulnerable to pre-emption, and would possess a high degree of deployment flexibility. Politically, basing the INF force at sea would avoid the political furor which land-based deployments would arouse.

Sea-based systems were, however, excluded from the INF decision due to the European refusal to accept such a basing scheme. The Euro-couplers and Euro-negotiators insisted the modernization program should entail a visible political commitment by the US to the security of Europe. This required visible, land-based nuclear systems. Sea-based systems were not visible, and therefore were not a sufficient security link, as they did not constitute a tangible US nuclear presence in Europe. Other objections that sunk the sea-based option were the costs and probable delay in developing or retro-fitting SLCM carriers and problems associated with command and control, especially in crisis. Other political objections were also raised. Risk sharing, a key West German demand, was not plausible with offshore sea-based systems. Further, several NATO governments (especially Norway) expressed fears that their territorial waters would become submarine sanctuaries and therefore targets. Finally, the sea-basing option was too reminiscent of the MLF controversy that few NATO officials
were willing to try a similar route again. In the end, the basing debate was quickly settled by the political imperatives of the Europeans.

While the basing scheme debate was settled with comparative ease, the controversy over the numerical size of the force involved a somewhat more complex problem. The US administration desired a numerically large force, one capable of absorbing a first strike and retaining the ability to launch significant damaging attacks on important military installations as the war progressed. A credible force, US officials argued, had to be large enough to survive a pre-emptive strike and still pose a credible threat to the USSR.

The Euro-couplers and negotiators, on the other hand, only saw the need for a force capable of starting the escalatory ball rolling. This did not require a numerically large force. The Europeans were instinctively suspicious of US calls for a force of some 600 missiles, which many saw as an attempt to place a large, highly capable force in Europe which could prosecute a war without the use of US strategic systems.

Once again, contradictory interests clashed. A token nuclear deployment to act as a tripwire was the most politically desirable option in Europe, but it was not a credible deterrent. However, a larger, more credible force carried with it the prospect of large-scale nuclear use in a European war, which raised fears in Europe about US
intentions to confine a war to European territory. The actual arrival at the number 572 in the 1979 decision is discussed later.

Conflict also emerged over what warhead yields the new INF systems should have. In the US view, warhead yields should be low, to enable the INF force to carry out discriminate strikes on military targets, with low levels of collateral damage. This, US deployers and balancers argued, would enhance the usability and therefore the credibility of the INF force. From the European perspective, however, this implied a reduced US commitment, by making nuclear weapons more usable in Europe. The controversy over warhead yield was comparatively quiet, largely because of the ambivalence of the European position. Although low-yield warheads made the use of nuclear systems in Europe more feasible, the lower levels of collateral damage the Soviets would incur might make the Soviet leadership more disposed to terminating a conflict.

A more intense intra-Alliance debate revolved around the issue of the range of the new force and its targeting priorities. Both US and European analysts largely agreed that the credibility of the forces largely rested on an ability to reach Soviet territory. The US deployers, however, sought this capability for its warfighting advantage, while US balancers sought it for enhanced credibility. Explicit in the US position was the ability to target military targets throughout the European theatre. The
US sought to deploy a long-range force, intended for discriminate strikes against a wide range of military targets. In addition, longer-range systems would be less vulnerable to pre-emptive strikes as they would be based further to the rear of the NATO theatre.

The Euro-couplers and negotiators, by contrast, sought a long-range capability for escalatory purposes. The European position, though never explicitly expressed in public, was that long-range systems with a non-discriminate targeting posture would best ensure the integrity of the escalation process. The threat to initiate indiscriminate strikes on Soviet territory would, in the estimation of many European analysts, perform the strongest deterrent function.

Finally, the US sought to construct an extensive, survivable command and control network capable of directing and controlling LNO strikes. Furthermore, control over nuclear weapons had to be tight, to avoid unauthorized use, and to maintain strict control over the instruments of escalation in periods of crisis or during a conventional war.

By contrast, the Europeans saw the need only for as much command and control as was necessary to launch an escalatory strike. There was also anxiety over the LNO and warfighting capability explicit in extensive command and control structures. The Europeans found it difficult to accept controls over nuclear weapons which were too tight. While the desirability of preventing unauthorized use was
recognized, the Europeans, especially the Euro-couplers, felt that overly strict controls over nuclear release damaged the credibility of the nuclear threat and indeed imposed self-deterrence on their use.\(^9^8\)

There were also perplexing internal paradoxes unique to both positions. For the past twenty years, US administrations have attempted to avoid situations which could lead to prompt and automatic escalation to the strategic level. INF modernization was to strengthen the US nuclear guarantee, by providing the US leadership with the option of striking at Soviet territory from Western Europe. However, as critics argued, this very capability may make the US leadership less disposed to release a weapon in Europe with the knowledge that it could (and probably would) result in a retaliatory strike against the continental US. The USSR has in fact made it repeatedly clear that it will not respond to a nuclear attack based on the location from which it was launched. Rather, it would respond according to the targets hit. Marshal Nikolai Ogarkov, for example, made it clear that the Continental United States (CONUS) would be targeted regardless of whether the Soviet Union was struck from US-based systems or European-based systems.\(^9^9\) In addition, although the deterrent value of the new INF force was to depend on its ability to strike at targets in the USSR, this very capability could induce the USSR to pre-empt them in a crisis.

The anxiety over the prospective INF deployment exposed
the tightrope walk involved in formulating nuclear policy in Europe. The reality of Europe's nuclear dependency has resulted in a persistent sensitivity to nuclear deployments. On the one hand, INF deployment aroused European fears about the likelihood of nuclear use in Europe. On the other hand, failure to deploy would arouse fears that NATO could not be depended upon to guarantee European security. Further, if US nuclear forces in Europe fall below a certain level, they are considered inadequate as military and political deployments. If they rise above a certain level, they are considered excessive as they could be used to the exclusion of US strategic systems. Coupling, therefore, is a matter of balance between extremes that could lead to decoupling.

These force structure conflicts were an inevitable result of the clashes in strategic interest and perspective between the US and European NATO members. The Dual Track decision had to accommodate these conflicts of interest and force structure divergence. However, even as conflict intensified over the deployment track, the split in perspective on arms control emerged as yet another contentious issue between the US and Europe.

The Arms Control Split

While Alliance cohesion and policy unity is dependent on at least a measure of agreement on objectives and solutions, no such agreement exists between Europe and the
US on the utility of arms control. This lack of consensus was especially significant during the INF controversy, as there was pressure from Euro-negotiators in power to include the pursuit of arms control in the modernization decision.

The US and European Alliance members differ even over the fundamental raison d'etre of arms control. The US places emphasis on military stability and balancing of weapons capabilities. For the Europeans, emphasis should be placed on achieving political stability through negotiation. To exacerbate this divergence, both extremes in the East-West arms control climate arouse European anxieties. Too much superpower cordiality and accommodation worry Europeans who fear a US-Soviet deal at the expense of their own security. Tense superpower relations and Cold War politics raise anxieties over the preservation of stable East-West relations.

The United States, on the other hand, is impatient with what it perceives as a European preoccupation with arms control at the expense of support for Western security programs. The INF controversy brought the arms control dichotomy to the forefront. Managing this divergence was another Alliance task.

For the European Alliance members, arms control was a political way out of the INF dilemma. A negotiated reduction in INF would reduce or eliminate the Soviet INF threat and would spare NATO the politically disruptive effects of any INF modernization. Deployment, or the threat of deployment,
should therefore be implemented in accordance with its political purpose as a bargaining chip. However, in the view of the Reagan Administration, unless bargaining chips have a clear military purpose, their bargaining power is limited. And to deploy INF with bargaining chip intentions restricts the ability to deploy with a clear military purpose. Consensus on arms control was another casualty of the dichotomy in strategic interests between the US and Europe.

European anxieties over the conduct of US-Soviet arms control negotiations were twofold. First, there were questions as to the commitment of the US to arms control. Second, there was the worrisome possibility that the US might bargain away certain European interests in the process of securing a favourable deal for itself.

European angst over the US commitment to arms control was understandable in view of their position. The Europeans insisted on an arms control component to the modernization decision, yet had no involvement in the conduct of those negotiations. As a result, it was widely felt in Europe that arms control negotiations (specifically the 1980 Geneva negotiations), could well be a diplomatic ruse by the US to get the INF decision agreed to and implemented by the European Alliance members. There was no way the Europeans could know if the US was negotiating in good faith. Anxieties that the US would regard any arms control track as a concession to get European countries "on board" persisted
throughout the INF process. When the US suspended arms control talks in January of 1980 after the invasion of Afghanistan, the Europeans found themselves caught in what was in many ways a worst-case position: imminent deployment of the new missiles, no arms control negotiations on those systems under way, an atmosphere of East-West confrontation, and all this without having had any say in the matter.

US negotiating posture, both prior to the Geneva walkout and after arms control talks had resumed, also aroused European concern. Euro-couplers and negotiators react strongly when arms control measures begin to affect forces which they see as crucial to the maintenance of extended deterrence. This was the case with the cruise missile. The Europeans viewed the GLCM as a relatively inexpensive and highly useful weapons system for NATO's nuclear forces.¹⁰³ US willingness to negotiate restrictions on cruise missile range and inclusion of noncircumvention provisions prohibiting technology transfer, while failing to obtain restrictions on the SS-20 and Backfire bomber, was seen in Europe as a purely self-interested arms control policy. The US, in looking after its own interests, was forsaking those of the Alliance. As Simon Lunn pointed out, "There was real concern that in its enthusiasm for an arms control agreement the administration would jettison European security interests."¹⁰⁴

Euro-couplers and negotiators were largely dismayed at the SALT II protocol which restricted GLCM/SLCM range to 600
miles and imposed a deployment ban on cruise systems within range of the USSR. European confidence was further shaken when a paper was circulated to NATO capitals by the US attempting to dampen European enthusiasm about the capabilities and desirability of the GLCM. The Europeans saw this as an attempt by the US to downplay the GLCM to promote and secure support for SALT II. The US, Europeans pointed out, had adopted ALCMs as the weapon of choice for SAC bombers. This display of transparent political hypocrisy did little to bolster European confidence in the US.

When Gerald Ford and James Schlesinger, both proponents of cruise missile deployment, were replaced by Jimmy Carter and Harold Brown, two arms controllers, official US attitudes on the cruise missiles shifted abruptly. The new administration regarded the cruise missile as an obstacle both to arms control and nuclear stability. With such views now residing in the White House, conflict with Europe over arms control was inevitable. In addition, Europeans feared the emphasis in SALT II on intercontinental-range systems would likely lead to a buildup in European theatre-range systems, with all the implications for Europe such a buildup entailed. The Europeans viewed the GLCM as a defence bargain. It was relatively inexpensive and highly useful for NATO's nuclear forces. The US, however, viewed it as a bargaining chip.

The arms control schism at the official level was never widely publicised. The size and potential impact of domestic
peace movements, however, attracted considerably more attention.

**Domestic Protests: Less is Better**

Although it is not the purpose of this study to examine the European anti-nuclear movement in great detail, the impact of Euro-disarmers on European governments and parliaments during the INF controversy does warrant mention.

The European anti-nuclear movement experienced a tremendous surge in both visibility and popularity in the early 1980's. The primary catalyst for the massive demonstrations\(^{105}\) of this period was the intent of the Atlantic Alliance to modernize its theatre-nuclear arsenal. This modernization program was viewed by the anti-nuclear movement as an unnecessary expansion of an already overly-large NATO nuclear arsenal.

There was a strong national nature to the anti-nuclear movements; each movement possessed characteristics or views particular to its countries social and cultural heritage.\(^{106}\) The common desire, or goal, as discussed earlier, was to prevent deployment of the new INF force and to de-nuclearize Europe at least partially, if not totally. The proposed INF force was viewed as destabilizing and an unnecessary provocation to the Soviet Union. The GLCM was universally accorded especially heavy criticism due to the perceived blow it dealt to verifiable arms control. Another common link among the movements was their often explicit anti-
American overtones. Robert Pfaltzgraff was understating the case when he suggested that the European peace movement had "...at least a slight anti-American orientation." The US was clearly the prime target of protest: the new missiles were, after all, American; the vast bulk of nuclear weapons already in Europe were American; and it was the Reagan administration which was discussing limited war possibilities in Europe and reviving the confrontational policies and inflammatory rhetoric of the Cold War. The protest movement charged that Europe was trapped in a NATO political and security culture dominated by the US. European countries had lost any significant input into European security arrangements.

As the movement grew in size and began to attract participants and support from the middle of the political-ideological spectrum, the movement began to have an impact on center-left parties in Europe and the cohesion of centralist coalitions. In Germany, for example, positions on deployment cut across party lines. In a special debate on deployment in the Bundestag from November 21-22 in 1983, Schmidt and 38 others abstained on an SPD resolution to cancel deployment and voted against a CDU resolution to supporting deployment. Meanwhile, Herbert Wehner, Egon Bahr and Willy Brandt, other SPD members, harshly criticized deployment. In Holland and Belgium, shaky coalition governments divided on deployment and under pressure from both the anti-nuclear movement and popular sentiment
opposing deployment procrastinated on making a final decision. For European governments, the deployment program had become as much a socio-political issue as a military-strategic one.

The protest movements were instrumental in creating the political climate in Europe that necessitated European government insistence on an arms control track. Though held largely in contempt by Alliance officials and US and European conservatives, there were a few voices in the wilderness who argued that the protest movement was a positive phenomenon, as it stimulated public interest and debate on security issues, and required protestors to develop depth and coherence to their positions. Indeed, the ultimate failure of the protest movement to prevent deployment lay in its inability to persuade the bulk of the political middle ground in Europe of the credibility of its position as a viable political option. As a result, it failed to widen its base of support in European parliaments for either opposition to INF or the ultimate goal of a nuclear-free Europe.

Despite the high visibility of the Euro-disarmers and the arguments forwarded by more centrist perspective groupings, NATO decision-making at both the planning and political levels was dominated by US-deployers and Euro-couplers. Deployment of INF was seen by US-deployers and Euro-couplers as essential both for the maintenance of effective deterrence in Europe and to bolster the
credibility of NATO strategy. For US-deployers and Euro-couplers, the conventional defence of Europe was impossible in the face of overwhelming Warsaw Pact advantage. In their view, US nuclear weapons were the only viable option available to the west to bolster deterrence in Europe.
Throughout the history of Alliance relations, fundamentally conflicting approaches among its members have plagued Alliance policy. The challenge for NATO has been to develop strategies and force postures that satisfy, or at least accommodate, contradictory strategic interests, divergent views on arms control, and the political moods of member nation populations. The Dual Track decision was such a compromise.

Christoph Bertram has observed that "Major military decisions can rarely be traced to one cause or to one justification." This was certainly the case with the decision to deploy new INF in Western Europe. There was a fundamental military rationale behind deployment. New INF were needed in Europe to restore the theatre nuclear balance and the viability and compatibility of both the strategic doctrine of the Alliance and its military posture. The security link between the US and Europe had to be restored. In an address to the North Atlantic Assembly in 1981, the Assistant Secretary of State Lawrence Eagleburger put it this way:

The placement of modernized US nuclear systems in Europe is a response to allied concerns that the Soviet Union is creating the means to devastate or intimidate Europe with theater nuclear weapons, while holding the US at bay with its strategic forces. TNF modernization will end Soviet hopes of regionalising a nuclear conflict based on an
ability to strike at the European allies from a Russian sanctuary.\(^{110}\)

These were the fundamental military-strategic imperatives behind the original calls for INF modernization. However, military and strategic concerns were rapidly diminished by the political implications of any deployment decision. Deployment became less of a military program and more of a political imperative. Politics came to dominate both the policy formulation and the weapon deployment process to the virtual exclusion of military or strategic requirements.

The Dual Track Concept and Alliance Politics

In the Double Track decision of December 12, 1979, the NATO nations agreed to the deployment of 572 GLCM and Pershing II single warhead missiles in five European countries. At the same time, the Alliance agreed to attempts to negotiate limits on the deployment of these same intermediate-range systems, conditional upon comparable Soviet limitations. The very nature of the Dual-track was a compromise. It accommodated two divergent perspectives on how best to ensure European security into a single policy package. The intent of the double track decision was to demonstrate and strengthen the cohesion of the Alliance, through the accommodation of the differing views on security policy which existed between its members. This was a political necessity. In the name of Alliance cohesion and policy unity, the decision had to satisfy all member
...the double track decision of 12 December 1979 was a political compromise to manage NATO's nuclear dilemma against the background of a fundamental difference of interests.\textsuperscript{111}

And yet there was even dispute over the reason behind the need for a double-track decision. The US contended that the arms control track was included to encourage allied support for the deployment track; it was a concession to bring the European allies "on board" on INF. The European governments argued that support for the INF decision in their respective parliaments and publics could only be sustained if there was a credible arms control dimension to the NATO decision. Many analysts agreed. Leon V. Sigal, for example, asserted that "...deployment without a good faith attempt at arms control would not have mustered even the tepid public and parliamentary support it now has."\textsuperscript{112} The broad West German and European consensus favoured the policy of detente; deployment, therefore, had to be consistent with the detente mood in Europe and allow for the possibility of negotiations and reductions.\textsuperscript{113} The double track decision was above all a function of the fundamental US-European divergence on strategic and political perspectives.

The Political Necessity of Deployment

The INF program rapidly gained its own political momentum. Deployment for deployment's sake became as much an impetus behind the decision as any other rationale.
Deployment of the new INF systems came to be regarded as essential in order to demonstrate Alliance will and resolve. Failure to deploy would signal the inability of the Alliance to formulate and implement defence programs vital to its security. As Simon Lunn wrote in 1983: "...the decision is now more than a question of deployments and negotiations, it has become a litmus test of the internal strength and cohesion of the Alliance." There was an overwhelming desire "to demonstrate the ability and willingness of the Alliance to act effectively and cohesively in the face of Soviet force expansionism." It was widely felt that should NATO not be capable, for whatever reason, to deploy the new systems, the future ability of the Alliance to reach major defence policy decisions would be put in grave doubt. "At stake," wrote Uwe Nerlich, "...is the Alliance's capacity to act multilaterally on virtually any major defence issue."

Unique political pressure for deployment also rested on the US. The US had promised the European allies that strategic reassurance in the form of deployment would be forthcoming. To back off, it was argued, would be tantamount to an admission of a severe case of policy wishy washiness. Failure to deploy would irrevocably damage the already weakened position of the US as a credible Alliance leader, would undermine NATO cohesion and direction, and would create the impression of US indecisiveness and weakness. The then Secretary of State for European Affairs, Lawrence S.
Eagleburger, expressed these concerns in 1981, during the height of European recalcitrance:

We would lose our credibility with the Soviets, while demonstrating that they have a veto over NATO deployment decisions. We would raise a doubt in the minds of many Americans who would not understand why our allies are less committed to their security than is the United States. And worst of all, we would all be profoundly uncertain of our future ability to take difficult decisions.117

The Carter Administration, with its credibility as an Alliance leader already reeling from the Neutron bomb affair, recognized the critical importance of the modernization issue. INF came to be viewed largely as a near term political opportunity to repair damage done by the Neutron bomb fiasco. The Carter Administration doubted the military and strategic advisability of deploying the new systems and was especially concerned with the arms control implications, but proceeded with deployment preparations out of political necessity. Reassuring the European allies of the competence of US leadership was high on the Administration's agenda, along with other priorities—especially SALT—for which European confidence and backing was critical. Zbigniew Brzezinski expressed these sentiments rather candidly:

I was personally never persuaded that we needed [the new weapons] for military reasons. I was persuaded reluctantly that we needed [them] to obtain European support for SALT. This was largely because Chancellor Schmidt made such a big deal out of the so called Euro-strategic imbalance that was being generated by the Soviet deployment of the SS-20. To keep him in line we felt that some response in Europe on the intermediate nuclear
level would be necessary.\textsuperscript{118}

These pressures were compounded as the Reagan Administration took power. Backing out of the Dual Track decision would be viewed as a confirmation of the new regime's uncompromisingly hawkish image. It would create the appearance of an Administration which was insensitive to allied concerns, anti-arms control, and unreliable as a guarantor of past US commitments. The administration could not afford to fail to follow through on both tracks. As a result of these political pressures, the INF debate in the US became highly symbolic, with deployments seen less as a means of addressing a perceived theatre nuclear imbalance in Europe and more as a political issue over the image, leadership, and direction of Western security policy.

The Weapons and Deployment: GLCM and Pershing II

The selection of two substantially different weapons systems for the modernization of NATO's INF came as somewhat of a surprise. The rationalization behind the choices was that deployment of two different types of weapons would strengthen the deterrent value of the new force. Such a mixed force, the then Secretary of Defence Caspar Weinberger argued:

\textit{...provides the flexibility to select the best weapon for a given mission while hedging against the unexpected neutralization of either system, thus greatly complicating enemy planning.}\textsuperscript{119}

However, while enhanced survivability was a consequence of
the selection of two systems, it was not a central factor in the actual decision to select two systems. That decision was influenced by far more than mere military issues. No single weapon system could possible accommodate the varied political requirements of any new INF force. However, the GLCM and Pershing II together satisfied the divergent political and force structure desires of the Europeans and the US.

The GLCM was particularly suited to the political demands of the new INF force. Politically, it was visible. It was a land-based system whose carriers and bases were tangible symbols of the US nuclear presence in Europe. It would, it was thought, have a favourable impact on Alliance cohesion which was in bad need of reinforcement after the neutron bomb debate: The GLCM's range permitted deployment "risk sharing" among various European Alliance members. With the GLCM, full participation by many European nations was possible, and so the symbolic unity of NATO territory as embodied in article Five of the North Atlantic Treaty could be reinforced. Caspar Weinberger remarked that the 2,500 km range of the GLCM

...allows it to attack targets deeper in enemy territory and to be based further rearward, thereby increasing its prelaunch survivability and offering an opportunity for broader participation among the allies by hosting US deployments on their soil.  

The deployment scheme also reflected a key West German demand for greater distribution of political risk. The range
of the Pershing II meant that all 108 of the IRBM's would have to be deployed on FRG territory. At least one other non-nuclear continental power—the candidates being Holland, Belgium, and Italy—had to to share in the deployment of the GLCM, both to diffuse and undercut domestic political backlash, and any possible retaliation from the USSR. The West Germans insisted that the new weapons be exclusively under US control, rather than under a double-key system. Not only did this avoid requiring the European countries to purchase the missiles (which may well have tipped the sensitive political scales on modernization in many countries), but it also ensured the most unambiguous level of US commitment to Europe. The West Germans also sought greater US risk-sharing, a desire "...provoked by pervasive German resentment of recent American failures of Alliance leadership." In addition, it allayed Soviet fears that West Germany might be closer to acquiring its own nuclear weapons.

The size and potential maximum territorial dispersal of the GLCM deployments meant that a pre-emptive strike intended to neutralize the European GLCM force would be of such a scale as to virtually guarantee a response from Great Britain, France, or US strategic systems, thus enhancing deterrence. In addition, the GLCM were readily available, cost less, and had smaller manpower requirements than would a new generation of IRBMs.

The military-strategic drawbacks of the GLCM—greater
vulnerability, slower speed, and doubtful penetration abilities were outweighed by its political advantages. The GLCM met the political requirements of the Alliance at its lowest common denominator. As Uwe Nerlich observed, military planning in NATO, and especially nuclear planning, must be formulated to ensure the maintenance of a "bureaucratic operational consensus" within NATO institutions.¹²²

The addition of the Pershing II provided for the new INF force what the GLCM could not: a prompt, time urgent counterforce capability.¹²³ Its greatest attraction to Europe was its classification as an IRBM. It served the political end of countering the SS-20 with a weapon of at least marginally comparable characteristics. If deployed alone, the GLCM would not have been an adequate measure to restore the European nuclear balance or the integrity of extended deterrence. The GLCM was slow, and could not strike time urgent military targets nor deliver the payload weight of the SS-20. The Pershing II provided the INF force with a ballistic missile dimension deemed more comparable to the capabilities the SS-20 provided to the Soviet Union. That even loosely matching the Soviet IRBM force facing Europe was irrelevant to NATO strategy was ignored; the political need to deploy a comparable response overrode analysis of what was really required militarily to support NATO's security policy. In addition, the Pershing IIs replacement one-for-one with the 108 Pershing Is in Europe lent credibility to the modernization rationale of the decision.
The time-urgent capabilities of the Pershing II, meanwhile, satisfied the desire of the US for a system capable of prompt strikes against military targets, to lend a military legitimacy to the INF force not present with only GLCM deployments.

The choice of the GLCM and the Pershing II as the new NATO INF weapons did not go unopposed. Strong arguments were presented by the advocates of SLCMs, who pointed to the highly flexible deployment capabilities and excellent survivability of such missiles. However, the SLCM proposal was rejected. Although detractors pointed to the command and control difficulties associated with sea-based systems, the SLCM was rejected largely on political grounds. The most prominent of these political concerns was raised by the European Alliance members. Because SLCMs were not visible, they would not constitute a tangible US nuclear presence in Europe. Land-based systems, it was believed, had a stronger deterrent effect and as they would be on European territory they would be identified directly with European defence. Such characteristics would provide an unambiguous coupling of the US to Europe.

Another factor which prompted the land-basing scheme was cost and time delay. Land-based systems were cheaper, and the time delay and cost of retro-fitting submarines and surface vessels with SLCMs was viewed as too great. Moreover, the cost of building any new SLCM carrier design for the future was seen as prohibitive.
In addition, the Pentagon preferred the land-based option because of its own program schedule and priorities. The GLCM and Pershing II programs were nearing completion. The Army may also have put pressure to bear for its Pershing II system. The final deployment scheme involved 9 sites for the 572 INF missiles. The FRG was to deploy all 108 Pershing II's at Mutlangen, Heilbrunn, and Neu-Ulm. In addition, 96 GLCM's would be based at Bitburg. Great Britain would deploy 96 GLCM's at RAF Greenham Common, and 64 at RAF Holesworth. All of Italy's 112 GLCM's would be stationed at Comiso. The Dutch and Belgian deployments, 48 each, for a considerable time much in doubt, were eventually to be based at Florennes in Belgium and Woensdrecht, Holland.

The deployment of two systems achieved what deployment of a single system could not; they satisfactorily fulfilled the force structure desires of both the US and Europe.

Criticisms of Deployment

The final deployment decision, determined as it was largely by political imperatives, came under heavy criticism on the basis of its military inadequacy and even irrelevance. The final deployment decision may have made political sense, but it made very little military sense. The denunciations of the INF deployments cut across political lines. Critics were as bipartisan as they were vehement in their critiques.
Critics who challenged the INF deployments on military grounds did so from two different perspectives. One theme of criticism was that the INF deployments were militarily insignificant, and that a far larger deployment was necessary to satisfy the military and strategic requirements of a new INF force. The other line of criticism argued the INF decision was militarily unnecessary, or at least far too large. Ironically, the blame which proponents of both these perspectives cited for their dissatisfaction with the December 12 decision was identical. Political factors had dominated the debate and interfered with what should have been the proper course of action for NATO to take on the new INF systems. Both perspectives provided a valid case, and the military deficiencies of the deployments was made more evident by the fact that no matter what the critical approach, the shortcomings of the deployment were rather stark.

The critics who attacked the INF deployment on the basis of its perceived military inadequacy, usually associated with the US deployers and Euro-couplers perspective, argued the 572 INF launchers were not a militarily meaningful or adequate deployment. These critics concentrated on two shortcomings of the new INF: vulnerability to pre-emption and inadequate range and target coverage.

The survivability theme was a dominant concern. The final deployment structure adopted by NATO was highly
vulnerable to pre-emption, especially if targeted in their fixed bases prior to dispersal. And even when dispersed, the new INF systems were highly distinctive and subject to attack by nuclear or conventional Soviet attack. Jeffrey Record pointed out that the entire GLCM force, organized as it was into flights of four launchers and 16 missiles, posed only 29 target points. The 464 GLCM's of the new INF force were, therefore, theoretically destroyable by 10 SS-20s. The perceived vulnerability of the INF force led William Van Cleave and S.T. Cohen to remark that the US was "passing the buck" on the use of nuclear weapons in Europe by providing the Soviets with an opportunity to guarantee non-use of INF through pre-emption.

Another criticism levelled at the INF force was its lack of range compared to Soviet INF systems, particularly the SS-20. A lack of comparable range, it was argued, effectively provided sanctuary for these Soviet systems deep in Soviet territory, while they could still threaten NATO INF. This condition of invulnerability enjoyed by Soviet SS-20s based far enough to the rear exacerbated concerns over the vulnerability of the new INF force. Not only was the force vulnerable to pre-emption, it was vulnerable to pre-emption from systems it could not threaten. Further, while the range of the SS-20 provided target coverage of most of Europe, including critical NATO ports and staging areas, NATO INF systems were not capable of destroying, or even threatening, comparable targets. The Department of Defense
annual report of 1981 expressed such concerns:

> We cannot permit a situation in which the SS-20 and Backfire have the ability to disrupt and destroy the formation and movement of our operational reserves, while we cannot threaten comparable Soviet forces.¹²⁸

For these critics, any new INF in Europe had to be capable of absorbing a pre-emptive counterforce strike, penetrating Soviet defences, and striking at a wide and varied target mix deep into Soviet territory. Target coverage was also a concern. Despite the ability of the Pershing II to strike time-urgent command and control centers and hardened military targets, 108 missiles would not be sufficient to destroy all such targets within range. A more meaningful deployment, these critics argue, would be an INF force between two and three times the one announced on December 12. The current numerical limit was criticised as utterly useless. The then SACEUR Alexander Haig for example, dismissed the 572 missiles as mere "...political expediency and tokenism."¹²⁹ There were suggestions that several hundred long-range missiles were needed to provide NATO INF with the survivability and target coverage required to restore some semblance of a nuclear balance in Europe. The then Assistant Secretary of Defense (Atomic Energy) Donald R. Cotter argued for the deployment of over 3000 long-range missiles in Europe, which would guarantee the capacity of the European nuclear force to absorb a pre-emptive strike.¹³⁰

Support for the 572 INF to be deployed was granted only
when it was understood that such a deployment would serve only as a first step towards a more satisfactory capability. The official Defense Department view agreed: "This step [the INF deployment] alone, however, will not provide the diverse set of modern nuclear forces needed to maintain effective deterrence in Europe and worldwide." The inadequacy of the INF deployments, in the view of the conservative critics, is due not to an inability to identify the military requirements of an upgraded European nuclear force. The failure to deploy a militarily meaningful force was due to the interference of political imperatives and the accommodation of widely varying political desires. Jeffrey Record argued in 1981 that "The political controversy that continues to engulf the [INF] program has all but drowned needed recognition of its military inadequacy." 

Opposed to this view was the position that the INF deployments were neither a military nor doctrinal necessity, and were in fact more potentially destabilizing than no NATO INF program at all. These critics challenged the fundamental rationale behind the modernization decision. The alleged need to counter-balance the SS-20 and restore the nuclear balance in Europe. The SS-20, it was argued, added little to Soviet capabilities, as Europe had been threatened since the 1950s by the SS-4 and the SS-5 IRBMs. Further, given that there had not been an increase in the actual number of Soviet launchers or megatonnage (the total number of Soviet IRBM launchers and megatonnage actually declined due to the
phase out of the SS-4 and SS-5) deployable against targets in Western Europe, INF modernization was therefore was viewed as unnecessary. The imbalance they were supposedly intended to redress did not in fact exist.

Nor were the new INF systems deemed necessary to restore or enhance the NATO's nuclear forces; they would constitute a very small addition to the forces already available, and the extent of collateral damage involved in the use of the nuclear weapons already available in Europe made further INF deployment superfluous.  

In response to conservative critiques demanding a larger INF force, moderates countered that "...effective deterrence does not necessarily require parity or superiority at the theater nuclear level." Several other objections were raised questioning the rationales behind the deployment decision. The foremost of these concerned the reassurance imperative. New INF forces were needed to demonstrate the continued commitment of the US to Europe. The US commitment to Europe was already tangibly expressed by the 300,000 US troops based on the Central Front. Further reassurance, especially in the politically charged form of nuclear weapons, should not have been necessary. Second, targets in the Soviet Union were covered by the SLBMs
assigned to SACEUR. The threatened use of these systems was sufficient to deter and was no less credible than the land-based INF force. Third, presidential authority for the release of the new weapons in the eventuality of war was highly uncertain, certainly more so than with shorter-range systems. Deployment of an INF force which suffered from a lack of credibility ran contrary to the logic of the deployment rationales.

Surprisingly, many Reagan administration officials viewed INF along these lines and were skeptical of the military necessity of deployment. Both Fred Ikle and Richard Perle expressed misgivings about the Dual Track decision. Ikle was not convinced of the survivability of the new weapons and saw their disadvantages as outweighing any potential advantages. Richard Perle criticized the December 12 decision's multi-billion dollar cost as "...a hell of a price tag for a marginal military fix."137

Outside the administration, Paul C. Warnke argued the 572 new missiles were largely redundant, covering targets already covered by US strategic systems.138 Further, political controversy surrounding the deployment could prove highly damaging to Alliance unity, to the benefit of the Soviet Union. McGeorge Bundy pointed out that:

If the West European's willingness to deploy these essentially irrelevant weapons becomes a test of Alliance solidarity, we'll be handing the Soviets a splendid bludgeon with which to split the Alliance.139
Finally, the critics who challenged the need for deployment pointed to the potentially destabilizing impact of the INF decision. One of the driving concerns behind deployment was that without INF, the Soviet Union could strike Europe and place the US in the position of having to retaliate with strategic systems. Moderate critics charged this would not change with INF deployment. The GLCM and Pershing II missiles could not survive a Soviet pre-emptive attack, and this vulnerability to pre-emption meant the GLCM and Pershing II added little to the deterrent provided by the nuclear systems already in place in Europe. In fact, the capabilities of the new systems, particularly those of the Pershing II, might compel the Soviets to pre-empt them in crisis or war. "Indeed, the principle consequence of the [INF] deployment might be to make a Soviet pre-emptive attack more likely." Richard Betts pointed out that even the GLCM "appears to offer enhanced deterrence when considered in isolation from the responses it may provoke." Clearly, however, the political requirements of any new INF systems overrode the strategic ones; the vulnerability issue was papered over by loose references to concealment and dispersal plans.

Several criticisms of the deployment cut across political cleavages, although the policy prescription for correcting the problem differed widely. Particularly heavy criticism was levelled at the "countering the SS-20" rationale. The deployment of an INF force, it was argued,
need not match the SS-20 capability for capability. The strategies and doctrines of the USSR and NATO were not comparable, and required different systems and force structures. Gregory Treverton asserted that "If there is a military rationale for deploying continental range cruise missiles in Europe, it exists almost independent of the Soviet SS-20." And Leon V. Sigal added, "The rationale that GLCMs and Pershing IIs were intended to offset the Soviet SS-20 is a political argument parading in military uniform." However, the political demand for a counter to the SS-20 led the INF deployments to be characterized as such, which resulted in confusion over the requirements and rationales behind the new INF force.

Criticism was also levelled at the lack of doctrinal planning or forethought behind the INF decision. Far from resolving NATO's nuclear policy conundrums, the INF deployments were add-ons to a doctrinal structure sorely lacking in operational plans or concepts.

Nor will the program alleviate the doctrinal befuddlement over the operational deployment of theater nuclear weapons that has plagued NATO for well over two decades. New weapons and technologies are, in effect, simply to be slapped onto a politico-military establishment that has yet to figure out how to use the weapons it already has..." Lawrence Freedman argued that "What has been lacking is a doctrine that links the NATO arsenal's military force to its political purpose." As a result, the INF deployments were dominated by the need to satisfy the political necessities.
associated with nuclear weapons in Europe. Without a clear operational concept for nuclear weapons, the military and strategic issues of the deployment were pushed aside in the favour of the more salient political imperatives.

First, the numerical size of the new force—572 missiles—was arrived at almost exclusively through assessments of political rather than military criteria. There was a political requirement for a sufficient number of launchers to allow a wide dispersal to several NATO countries and to allow some dispersal within those countries as well. This satisfied the West German demand for risk sharing within the Alliance.¹⁴⁷

Second, the number of missiles chosen had to be viewed by the western public as a meaningful response to the Soviet SS-20 deployments. At the same time, the deployments could not be so large as to match the SS-20's missile for missile. The Alliance could not create the appearance it was deploying a first strike counterforce capability against the Soviet Union.

Third, the final number arrived at had to be large enough to ensure that the force could absorb any negotiated arms control reductions and still leave a significant force in place. A small deployment, it was argued, would not be an effective bargaining chip for the negotiations at Geneva.

Finally, political and military organizational imperatives had an influence on the nature of the deployment. The 108 Pershing II missiles were to replace the
108 Pershing I's, to ensure consistency with the official line which maintained the program was a modernization of existing INF capabilities. The number of GLCMs--464--was determined by military organization. The deployment consisted of 29 flights, each flight composed of four TELs, and each TEL composed of four GLCMs. As Leon V. Sigal argued:

The number of weapons to include in the deployment was a matter of political rather than military arithmetic; it bore no relationship to any relevant Warsaw Pact targets nor to considerations of survivability, reliability, penetrability, and kill probability.¹⁴⁸

The debate over the military requirements of the new force was buried in the political aspects of deployment. The political imperatives of deployment were the key determinants of the size, capabilities, deployment and rationales behind the new INF force.

The critical element of the INF decision was the political dimension. Alliance unity and the credibility of western defence, essentially political imagery items, were at stake, with the political symbolism of nuclear weapons the primary playing pieces. The purely military elements of defence capability--damage expectancy, survivability, launch planning, targetting--were dominated by the need to present the proper political image.

The US, determined to avoid a repetition of the Neutron bomb controversy, sought a firm alliance consensus for INF. As a result, there was little coordination or debate over
purely military and strategic criteria, areas in which the US and the European NATO countries had fundamental differences. Managing the strategic dichotomy and political schisms between the US and Europe was the challenge of the modernization decision. The force characteristics of any deployment had to be reconcilable with the differing strategic and political perspectives within the Alliance. A political consensus, or compromise, or agreement to disagree, was reached on political grounds for political ends. That the final decision bore little connection to military criteria was inevitable, in view of the political schisms and contradictory interests which had to be papered over in any decision. This was the nature of the December 12 decision. It was a compromise to a consensus.

Strobe Talbott alluded to political dominance of nuclear decisions in noting that "...since they are not intended for use in military conflict so much as they are intended to serve as symbols and safeguards of political arrangements."\(^9\) In the same vein, Gregory Treverton wrote that they had come to be regarded as "...tokens of US commitment." From Treverton's perspective, "NATO had to reach a positive decision on GLCM's and Pershings because it had made the decision a political test of its ability to take a joint action in the face of Soviet hostility."\(^0\) And further, "It is clear that once the focus of argument moved to political terrain, the rationale for the new systems became clouded."\(^1\)
The fact that the rationale for the INF deployment was obscured by political debate may, in fact, have performed a service to the US-deployers and the Euro-couplers who were pushing for deployment. The rationale behind the INF deployment was based on questionable suppositions and assumptions, and may not have withstood a detailed examination had they been at the forefront of the debate.
CHAPTER IV: THE REALITY OF COMPOUND DETERRENCE IN EUROPE

Past NATO strategy and thinking about deterrence in Europe has been dominated by the US deployer and Euro-coupler perspectives, and is based on the premise that the Atlantic Alliance cannot hope to defend itself against conventional attack by the Soviet Union. Therefore, US nuclear forces deployed in Europe, and their link to the US strategic arsenal, have been viewed as the key to effective, credible deterrence in Europe. This has been the prevalent view amongst analysts and Alliance decision makers and it this conception of deterrence in Europe which led to the deployment of INF.

However, this view of deterrence in Europe has been outdated for the last decade. The military/strategic environment in Europe is undergoing fundamental change, which will continue into the foreseeable future. The INF deployment was the result of the failure of Alliance analysts and decision makers--dominated by the US deployers and Euro-couplers--to recognize this change.

This chapter will make two arguments. First, it will be demonstrated that the logic behind the US deployers' and Euro-couplers' position on INF is false. NATO's conventional forces are not at the hopeless disadvantage that is assumed by these perspective groupings. Secondly, deterrence in Europe is no longer a function of only US nuclear forces, INF, and their link to the US strategic arsenal. Rather,
deterrence in Europe has become a function of a number of compound, autonomous deterrent elements or risk factors. Deterrence in Europe can no longer be thought of as solely a dyadic relationship between the USSR and US nuclear forces in Europe.

This argument was originally forwarded by Richard Betts, one of the leading strategists and commentators in the US defence debate. This theme can be found throughout much of Betts' work, and especially in his 1985 article "Compound Deterrence vs. No First Use: What's Wrong is What's Right."\(^1\)

Reassessing the Conventional Option

One key assumption of the conventional wisdom on deterrence in Europe is that NATO's conventional forces are hopelessly outnumbered and outgunned by their Warsaw Pact counterparts. As was made clear in Chapter I, NATO's conventional forces are believed to be capable at best of defending the central front for only a few days. Deterrence in Europe, therefore, depends to an enormous extent on a credible nuclear escalatory capability. US nuclear weapons in Europe, and the threat of escalation upwards to the use of US strategic forces is the central deterrent element of western defence posture in Europe.

However, it has become increasingly apparent in recent years that NATO's conventional disadvantage in Europe is not as great as it has been made out to be. Indeed, the
prospects for an extended, successful conventional defence of Europe are at least reasonable, and deterrence by conventional denial in Europe is fairly robust. At the very least, it has become apparent that the obstacles facing a Soviet attack in Europe are considerable and that a far greater degree of uncertainty faces any such Soviet offensive in Western Europe. This reappraisal of the conventional option in Europe is based on four seldom recognized aspects of the military situation in Western Europe: a) the numerical balance of conventional forces; b) the geographical nature of Western Europe; c) problems in Soviet attack force design; and d) Warsaw Pact force cohesion.

The Numerical Balance of Conventional Forces

First, the conventional force balance between NATO and the Warsaw Pact is much closer than is often assumed. Typical Western pessimism on this score is the product of worst-case calculations in most western threat assessments of the European military balance. NATO weaknesses are overemphasized and Warsaw Pact strengths exaggerated. The reality is quite different. As John J. Mearsheimer has argued:

The fact of the matter is that the balance of conventional forces is nowhere near as unfavourable as it is so often portrayed to be. In fact, NATO's prospects for thwarting a Soviet offensive are actually quite good.
An examination of the ground and air force balance between NATO and the Warsaw Pact bears this out.

In terms of manpower, within the NATO region and the European USSR the Warsaw Pact deploys some 995,000 active duty ground troops. NATO has approximately 796,000 active duty ground troops, a numerical disadvantage that is hardly overwhelming. Nor does the Warsaw Pact have a large numerical superiority in ground force reserves. The Warsaw Pact can deploy some 1,030,000 reserve troops; NATO some 922,000. Again, the Warsaw Pact does not possess anywhere near a decisive numerical advantage. In terms of ground force divisions, the Warsaw Pact has 49, with 200 after full mobilization. NATO deploys some 32 divisions, with 149 after mobilization.

Nor does the Warsaw Pact have an overwhelming advantage in two other key indicators: Main Battle Tanks (MBTs) and combat aircraft. The Warsaw Pact possess some 18,000 MBTs in the region, with mobilization raising this to a total of 52,000 MBTs. NATO possesses 12,700 MBTs, with 22,200 after mobilization. Although this may seem to be a large advantage, many of the reserve Soviet tanks are T-62's and T-55's, which are obsolete.

Much has been made of the Warsaw Pact's mobilization capabilities and the huge reserves the Soviet Union can deploy after mobilization. Despite this, NATO's mobilization schedule is capable (assuming a swift political decision to mobilize) of maintaining the same approximate pre-
mobilization force balance. As John Mearsheimer has noted, "The notion that the Soviets can rely on some massive second echelon that NATO cannot match is a false one." 159

In the air, the Warsaw Pact has an advantage of 2,644 to 1,277 in terms of combat aircraft. After mobilization, the same approximate force ratio remains; the Warsaw Pact could deploy 7,524 aircraft and NATO 3,292. Here, NATO is perhaps at its worst numerical disadvantage. However, numbers do not tell the whole story.

In the air, where the Warsaw Pact's numerical superiority is greatest, qualitative differences place the significance of this superiority in doubt. NATO pilots are better trained and more experienced in performing a variety of roles, especially those which fly NATO's dual capable aircraft. NATO pilots are trained for both ground attack and air defence. Warsaw Pact pilots, by contrast, are trained for a single role only, and receive less flight time than do NATO pilots. Further, NATO ground crews are more thoroughly trained and better equipped than their Warsaw Pact counterparts, resulting in faster turn around times and sortie rates. In short, an examination of the conventional military balance in Europe simply does not yield the enormous Warsaw Pact superiority which is widely believed to exist by US Deployers and Euro-couplers.

In addition to a pure numbers count, which can be misleading, other elements of the conventional balance in Europe invalidate the theory of overwhelming Warsaw Pact
advantage. John Mearsheimer has pointed out the need to consider not only the balance of forces, but the force-to-space ratio as well. In calculating force-to-space ratios (the number of forces needed to hold a section of territory against assault) Mearsheimer concludes that NATO is in a very strong military position.\textsuperscript{160}

Moreover, it is generally accepted that a three-to-one attacker to defender ratio is required for successful offensive operations. The Warsaw Pact simply does not possess this superiority. The Warsaw Pact falls even shorter of possessing a required force ratio for offensive success if Soviet estimates of what constitutes a decisive numerical advantage are used.\textsuperscript{161}

An important element of the military balance which is left out of comparisons of manpower and equipment levels is qualitative differences in weaponry. Here, NATO has the advantage, especially in electronic warfare and countermeasures, Anti-Tank Guided Weapons (ATGW), night fighting technology, and target acquisition technology in tanks, missiles, and aircraft.\textsuperscript{162}

Finally, NATO has a long-term advantage with respect to its wartime economic potential, should an East-West conflict remain sub-nuclear over a prolonged period. As James Meacham has argued, "...in a long conventional war there is no doubt that the population and industrial capacity of the NATO could overwhelm the Warsaw Pact."\textsuperscript{163}
The Geographical-Topographical Factor

A second, seldom acknowledged fact about the military situation in western Europe is that the terrain in NATO's central front, where the main Soviet offensive effort would take place, is not suited to mass armoured warfare, and is particularly advantageous to the defence.

In the 500 kilometer-wide Central Army Group (CENTAG) area, the terrain is very rough, and is characterised by numerous rivers and forests. This terrain would force any Soviet armoured offensive into three channels, or corridors. These are the Thuringer Bulge (more commonly referred to as the Fulda gap), the Gottingen Corridor, and the Hof Corridor. However, even these so-called channels are far from obstacle-free. The Fulda Gap is traversed by the Fulda river, and much of the Thuringer forest encroaches in this corridor. The Gottingen Corridor is traversed by the Leine and Weser rivers, and the southern part of the Harz mountains. The Hof corridor is covered in uneven terrain and in any case leads to Stuttgart, which would not be a major Warsaw Pact objective.

It is the Northern Army Group (NORTHAG) area which is held to be the most suitable for large armoured operations, especially in view of the alleged weakness of the I Netherlands Corps and the I Belgian Corps. However, the NORTHAG front is only 225 kilometers wide, and almost half of this distance is covered by the northern part of the Harz mountains and the Luneberger Heath, which is largely
impassable to armoured vehicles. The NORTHAG area is also traversed by the Elbe river. In addition, there is considerable urban sprawl centered around Hannover, Bremen, and Bremerhaven. In fact, urban growth throughout the Federal Republic has made it increasingly difficult for an aggressor to avoid large-scale urban fighting which greatly slows offensive operations. In short, the terrain in West Germany is largely unfavourable for swift armoured operations and presents a strategic and tactical advantage to NATO forces.

Problems in Soviet Attack Force Design

Third, it has been established that the Warsaw Pact does not possess the numerical advantage *vis-à-vis* NATO that is typically portrayed by Western military authorities. As a result, John Mearsheimer is persuasive in suggesting that "success will be a function of strategy, not overwhelming numbers." The likelihood of Soviet success therefore depends largely on the ability of the USSR to conduct a swift, armoured breakthrough on the Central Front. However, the ability of the Warsaw Pact to conduct such a campaign is in grave doubt, for a variety of important yet rarely recognized reasons.

In the first place, great attention has been paid in the West to the ever increasing 'weight' of Soviet divisions. Soviet divisions today deploy more tanks, infantry fighting vehicles, artillery, air-to-air missiles,
and mechanized elements than ever before. However, Soviet divisions may in fact be too large and unwieldy to carry out the swift, flexible operations required of a breakthrough strategy. As Mearsheimer points out, "Past a certain point...there is an inverse relationship between the mass and velocity of an attacking force." The 'weight' of Soviet divisions also creates logistical and command problems, all of which adversely affect the speed of a military formation. The likely speed of a Soviet advance into West Germany has often been grossly overstated. Pessimists have supposed a Soviet advance of 100 kilometers a day. More realistic assessments are far lower, assuming a 20 to 40 kilometer daily advance prior to a breakthrough and a 50 to 80 kilometer rate after breakthrough. Even these latter estimates may be too great.

Secondly, a swift armoured breakthrough strategy requires a highly flexible command structure, which allows initiative at the division and brigade level. However, the Soviet command structure is highly inflexible, with a rigidly enforced hierarchy of command:

The Soviet command structure is stratified almost to ossification, with each echelon highly dependent on authority from above and little allowance provided for initiative at lower levels.

Although a rigid command structure can be a virtue if an offensive proceeds as planned, if battlefield realities require a change in plan this inflexibility can be a great operational weakness.
A fourth obstacle to Soviet success in a swift armoured assault is the Warsaw Pact logistical infrastructure. Warsaw Pact forces are neither trained nor equipped with the support units required for long-term combat, as are NATO units. While much has been made of the Soviet advantage of interior lines of communication, fast reinforcement and resupply of units in Europe would be constrained by a poor road network and a track gauge change in Eastern Europe. Ammunition, spare parts, replacement equipment and other critical supplies would have to travel this rail and road network early in a conflict. When these supplies did reach rear-area logistics centers behind the front, they would reach Warsaw Pact support units that are not well trained or equipped to disseminate supplies to the small unit level. ¹⁶⁸

Warsaw Pact Force Cohesion

Finally, close to half of the Warsaw Pact divisions available for an offensive against NATO are East European. Except for certain elite and regular units of the East German and possibly Czech armed forces, the reliability and fighting capacity of Eastern European units is questionable. As John Erickson argues, it is highly implausible that "...any non-Soviet national force would be allotted an independent role on any scale." ¹⁶⁹ This would reduce the number of Soviet divisions available for front-line offensive operations and breakthrough exploitation on all axes of advance.
To briefly conclude, it should be recognized that NATO's conventional position in Europe is not the hopeless case it has been made out to be. Critics such as Henry Kissinger who have argued that NATO strategy is 'to fight for three days and then blow up the world' are doing a great disservice to the reality of the conventional balance in Europe. The conventional balance which exists in Europe does not guarantee NATO success, but it is a far better match for a Warsaw Pact offensive than most give it credit for.

The danger of erroneously emphasizing NATO's conventional weakness is that the willingness to spend resources on a supposedly hopeless military endeavor will erode. Mearsheimer is correct in stressing the demoralizing effects of such commentary: "Those Allied leaders who continually denigrate NATO's substantial conventional capability are, in effect, undermining popular support for continued spending on NATO's conventional forces." 170 In addition, to constantly emphasize NATO's conventional weakness will weaken morale in the NATO armies. These armies, however, are in far better shape to defend Western Europe than is widely assumed: "In short, NATO is in relatively good shape at the conventional level. The conventional wisdom which claims otherwise on this matter is a distortion of reality." 171

Reassessing the Nuclear Deterrent Balance in Europe

Because US deployers and Euro-couplers are incorrect in
assuming the weakness of the conventional force "deterrent" in Europe, the emphasis they place on US nuclear weapons in Europe as the only viable NATO deterrent is largely misplaced. However, the credibility of the conventional defence of Europe is not the primary reason why the deterrent value of US nuclear weapons in Europe is accorded far too much importance. Other major deterrent elements are in place in Europe, making deterrence in Europe a function not of a single deterrent (such as US nuclear weapons) but a compound of a number of deterrent elements. The French nuclear arsenal, the British nuclear arsenal, and the possibility of inadvertent or accidental nuclear release in Europe, will all contribute to a robust, credible compound deterrent posture in Europe. Each of these factors deserves deliberation.

The French Nuclear Force

The French nuclear arsenal is based on the concept of proportional deterrence (dissuasion du faible au fort). This concept holds that the USSR is deterred from attacking France because the damage the French arsenal can inflict on Soviet society is greater than any potential gains to be made from an occupied or devastated France.

The official rationale for France maintaining an independent nuclear force is that it permits France to distance itself from Alliance commitments that might reduce French policy flexibility and autonomy. In addition, an
independent nuclear force enables France to avoid a close alliance with the US, which is viewed—especially by Gaullists—as an unreliable security guarantor. Finally, the possession of an independent nuclear force provides France with security in an unstable international environment. The present international situation may change or collapse, and France believes that it must therefore provide for its own security.

The role of the French nuclear force for European security has historically been ambiguous and unspecified. The French maintain that ambiguity is to their strategic advantage. The deterrent effect of the French force is enhanced by policy ambiguity, which promotes greater uncertainty in the minds of Soviet invasion planners. However, French analysts (DeGaulle included) have in the past maintained that their nuclear arsenal is a purely national deterrent, useful only for protecting French territory.¹⁷² For the French, the effectiveness of nuclear forces depends on the principle of national territorial security and independence. "Control of nuclear strategy," Andre Beaufre has written, "cannot be collective in peacetime."¹⁷³ The French nuclear force has, therefore, traditionally been regarded as reserved exclusively for the defence of French territory and borders.

However, a major shift in French nuclear strategy is now under way. There were, in fact, indications that this view was changing as early as 1975. The then Armed Forces
Chief of Staff General Guy Mery outlined a policy of 'enlarged sanctuarization' (sécurisation élargie) which suggested that the deterrent protection of the French arsenal might extend to France's allies in Western Europe. Giscard d'Estaing and Jacques Chirac also made similar statements challenging the traditional posture of the force de dissuasion. Giscard d'Estaing, for example, pointed out that:

> It would indeed be illusory to hope that France could maintain more than a reduced sovereignty, if her neighbors had been occupied by a hostile power or were simply under its control. The security of Western Europe as a whole is therefore essential for France.

This was the beginning of a new approach to French security matters, with greater attention accorded to France's allies and to defence cooperation with other members of the defence community. None of this, however, was to affect the autonomy of French military (and especially nuclear) decision-making or the development of the French nuclear arsenal.

That a completely independent French military policy was neither practical nor credible was recognized by Giscard d'Estaing. However, changes in French defence thought encountered swift opposition from Gaullists. The Gaullists, who wielded considerable political power, sought to preserve the traditional French tendency toward decision-making autonomy and the avoidance of defence cooperation with other European nations. Recent shifts in French attitudes towards defence policy are the result of the revival of concepts first introduced in the Giscard era.
The change in French defence policy, especially with regard to nuclear policy, is now very real. François Mitterand has made it clear that the defence of West Germany and the Benelux countries is now considered a vital interest of France, and greater defence participation with other European nations and NATO is growing. This shift away from absolute security independence is the result of a number of factors. First, the French have realized that a purely national and isolationist military policy would allow an aggressor to advance to the French border and avoid reprisal. This, however, would leave France in an unacceptable political and strategic position. The Defence Committee of Parliament criticised the Gaullist doctrine of 'splendid nuclear isolation' as a policy which could force France into a humiliating neutrality or could lead to the Finlandization of France. Thus, the vital interest of France demanded that its nuclear deterrent protection be expanded to its neighboring allies.

Second, this extension of French nuclear protection, coupled with increasing Euro-French defence cooperation, has forced French leaders to pursue a more multilateral defence policy. As Robbin F. Laird put it: The French are increasingly finding themselves in the position of having to link their 'independence' more directly and publicly with the efficacy of overall Western defence capabilities in order to deter the Soviets. As the French increasingly identify their security interests with their European
neighbors, they inevitably will become increasingly involved in cooperative and joint measures for European defence.

Third, the shift in French defence policy is based upon a recognition of the steadily rising costs of sophisticated military hardware. It is fast becoming economically infeasible for France to continue to pursue a wholly independent military policy. Although French leaders continue to refuse to re-integrate their forces under NATO's military structure, cooperation and contingency planning between NATO and France have reached such a high level that this political independence, once a very real obstacle to NATO-French defence coordination, is becoming largely symbolic. France has developed, for example, the 47,000 man Force d'Action Rapide (FAR). The FAR, in the words of Robert S. Rudney, "...represents a major shift in French conventional strategy."181 Prior to the FAR, the French commitment to West Germany was composed of three divisions of some 50,000 men, deployed east of the Rhine. Such a deployment meant that these forces were not committed to the front-line defence of West Germany, and at best would constitute a theatre reserve. The FAR, however, is designed for such a front-line commitment. Defence Minister Charles Hernu has admitted that if deployed for such a mission, the FAR would automatically come under the command of SACEUR.182 Indeed, the creation of the force was motivated in part by the political objective of increasing Franco-German defence cooperation.183
Besides the creation of the FAR, other French defence changes reflect a greater NATO emphasis in French defence policy. The entire French army is being re-oriented to the north and east of the country, closer to West Germany and the Benelux countries. The national police (gendarmerie) have been made responsible for territorial defence, freeing up regular army formations for front-line duty outside French territory.¹⁸⁴

France has also engaged in other defence cooperation initiatives. A joint West German-French brigade has been established to facilitate greater understanding between the militaries of the two countries.¹⁸⁵ In the past several months there have been tentative steps towards British-French cooperation on the development of nuclear-armed cruise and short-range attack missiles.¹⁸⁶

This new defence policy direction will draw France into closer defence ties with its European neighbours. Increased Euro-French cooperation and the re-orientation of the French army toward a European defence role can only serve to enhance the deterrent value of NATO's conventional forces.

However, it is the French nuclear force which has the greatest implications for NATO's overall deterrent posture in Europe. Despite the steps toward re-integration in NATO conventional force planning outlined above, the French nuclear force remains absolutely autonomous, under exclusive French control. The continued autonomy of the French nuclear arsenal, and the significance of its expansion program,
places France in the position of being a credible regional nuclear deterrent in Europe.

At present, France deploys a nuclear force based on a rough 'triad' arrangement. The French Air Force deploys 18 Mirage IV bombers equipped with short-range attack missiles. The ground-based missile force consists of 18 S-3 IRBMs based on the Albion Plateau. The S-3 carries a one-megaton warhead and has a range of 3500 kilometers. At the tactical level, the French army deploys the mobile Pluton tactical nuclear missile system, which has a range of 120 kilometers. However, the heart of the French nuclear force is its SLBM force—the FOST (Force Oceanique Strategique) which presently consists of 5 Redoutable class and 1 Inflexible class SSBNs. The Redoutable class SSBNs carry 16 single-warhead M-20 missiles, while the Inflexible deploys 16 new M-4 missiles, each carrying 6 Multiple Re-entry Vehicles (MRV).

France has recently embarked on a five year, $100 billion (Cdn) defence modernization program. Some $32 billion of this is to be devoted to upgrading the warheads and delivery systems of the French nuclear arsenal. The viability of the aging Mirage IV bomber fleet, and to a lesser extent the nuclear role of the Mirage 2000, will be enhanced by deployment of a new nuclear attack missile, the ASMP (Air-Sol-Moyenne-Portée). The S-3 IRBMs will be replaced with a much more survivable mobile land missile designated the S-4 (formerly the S-X). The Pluton tactical
The French army is to be replaced by the Hades medium-range tactical nuclear missile system, which may well be armed with an Enhanced Radiation Warhead (ERW). The range of the Hades system is about 350 kilometers. Robert Rudney has pointed out that this range, not coincidentally, is the distance from the Rhine to the Elbe. It should be noted, however, that the original order of 40 Hades systems has been halved to 20, and France is likely to come under strong international pressure to abandon the Hades program now that the Soviet-American agreement on INF has been negotiated. Nevertheless, the shift in French tactical nuclear force planning is quite clear.

The greatest emphasis of the nuclear modernization program is being placed on expanding the capabilities of the FOST. This program is likely to remain wholly immune to any future US-Soviet arms agreements. Four of the five Redoutable class SSBNs are to be refitted with the six-warhead M-4. As a result, the French SSBN force will expand from 176 warheads to 496 warheads by the mid-1990's. Furthermore, the M-4 represents a dramatic qualitative improvement to the SSBN force. The range of the M-20 is said to be some 3000 miles, whereas the range of the M-4 is about 4000 miles. The great increase in warhead totals as a result of the MRVed M-4 is similar to the effect MIRVing had on the superpower arsenals. Indeed, when the SSBN Inflexible joined the French SSBN fleet with its M-4 missiles, the
French SSBN-based warhead total more than doubled. In addition, a seventh submarine is planned, which will deploy the 10-warhead MIRVed M-5 SLBM, the successor to the M-4. The addition of this seventh submarine, and the much more capable M-5, will expand the capabilities of the French nuclear arsenal far beyond the levels attained by the current modernization program.

The credibility of the French nuclear arsenal as a deterrent element in Europe, especially in the face of these modernization programs, cannot be in doubt. The Soviet Union has little choice but to regard the French nuclear force as a significant element of risk in any calculations regarding an invasion of Western Europe. According to John Prados, Joel S. Wit, and Michael J. Zagurek Jr., in 1985, a full-scale strike by the French strategic force (comprising the FOST, S-3 and Mirage systems) would have resulted in 23-34 million Soviet fatalities, and would have destroyed 16-25% of Soviet production capacity. By the early 1990's, a strike by the modernized and expanded French arsenal will result in 38-55 million Soviet casualties and the destruction of 25-40% of Soviet production capacity.¹⁹²

The capacity of the French nuclear force to threaten the Soviet Union with the prospect of such crippling and unacceptable damage is one element of its credibility as a deterrent. A second element of the credibility of the French nuclear force involves the US strategic arsenal. A strike on the Soviet Union by the French nuclear force would cause
military and societal damage of such scope that the USSR would be placed in a dramatically inferior position in successive dealings with the US. As Robbin F. Laird put it: "The Soviets are deterred in part by recognizing that the damage inflicted by the French might be significant enough to allow the United States to dominate the war termination process." 193

Another strong possibility that must be considered is the risk that the use of the French arsenal could trigger a superpower strategic exchange. This risk will rise as more MIRVed SLBMs which are capable of suppressing the command and control of Soviet nuclear forces are deployed. Such a threat further increases the deterrent credibility of the French Force. France cannot hope to match the USSR in terms of overall force capability, but the credibility of the French force is considerably reinforced enhanced by the existence of the US arsenal, whose use might be provoked by unilateral French action. The deterrent relationship between France, Great Britain and the US has been aptly characterised by Laird as "the strong deterred by the strong augmented by the weak." 194

By far the most significant factor contributing to the credibility of the French nuclear force is its status as an autonomous, independent force controlled by a European decision-making center which is wholly independent of Washington. Any decision to fire French nuclear weapons will be a decision made by French leaders alone. The Soviet
Union, therefore, is faced with the possibility that not one, but two decision-making centers—Washington and Paris—might respond to aggression in Europe with nuclear firepower. The greater degree of uncertainty created by the existence of multiple independent centers of nuclear decision-making thus enhances the deterrent effect of the western nuclear arsenals.

The concept of the deterrent value of multiple nuclear decision-making centers has a long tradition in France. Andre Beaufre, writing in 1965, argued that since increasing the uncertainty felt by the enemy was the primary objective of deterrence, it was useless to create any new force dependent on US decision-making or US strategy. Instead, Beaufre argued, deterrence could best be strengthened by having a western deterrent force based on multiple autonomous decision-making centers. This was consistent with the traditional French view that a credible nuclear deterrent can only be national, not international, in nature. As Robbin F. Laird pointed out, the fact that France is a European nation enhances the credibility of the force: "To the Soviets, France, with its national survival at stake in a European war, would appear more likely to have the political will to use nuclear weapons." The French nuclear arsenal, at present and for the foreseeable future, will remain consistent with the principles of a national nuclear deterrent, under exclusive French control.

With France engaging in greater levels of defence
cooperation and consultation with its European neighbors, while at the same time maintaining and expanding a credible nuclear force over which it has exclusive, autonomous control, France has emerged as an effective, credible regional deterrent in Europe. As General J. Lacaze argued, the new French defence policy reinforces deterrence in Europe because: "The possibility of our participation [in European defence] would signify for the adversary that henceforth he takes the risk of encountering very early the forces of a nuclear country which, on the other hand, maintains the independence of its [nuclear] decisions." 197

The British Nuclear Force

The British nuclear force has had a much less independent tradition that that of the French. Heavily dependent on US technology and weapon transfers, the British nuclear force was not originally conceived as a fully autonomous force. Rather, it was intended to be part of the British contribution to an allied defence effort. During the period of 1958 to 1963, the British nuclear force was part of an integrated US nuclear strike plan against the Soviet Union. Britain's V bomber force was under the operational command of SACEUR, as were the Polaris systems when they were acquired in the late 1960's. Despite this higher level of integration into US and NATO planning, Britain has always reserved final authority over its nuclear arsenal, especially control over the sea-based force. Moreover,
British leaders have made it clear on several occasions since Prime Minister Macmillan originally declared this doctrine to President Kennedy in 1962, that Britain reserved the right to use its nuclear force if 'supreme national interests' were at stake. Accordingly, the British nuclear force possesses two separate target sets, one for nuclear use in conjunction with NATO warplans, and a second for autonomous, independent use. The British nuclear force thus has a theatre role and a strategic role, the latter facilitated by the development of the all-British Chevaline Multiple Re-entry Vehicle (MRV) warhead system, which is designed to penetrate the Galosh ABM system deployed around Moscow, thus maintaining Britain's "decapitation" option in the face of Soviet investments in ballistic missile defence.

Under the Thatcher government, emphasis has been placed on the independence of the British nuclear force, and its effectiveness as a strategic deterrent. The Thatcher government has also stressed the deterrent value of multiple independent centres of nuclear release authority. The doctrine of the 'second centre of decision' has become a prominent component of contemporary British nuclear policy. As the 1981 British White Paper on Defence states:

The crucial role which our nuclear forces play in enhancing Alliance security lies in providing a nuclear deterrent capability committed to the Alliance yet fully under the control of a European member. Even in some future situation, if Soviet leaders imagined that the United States might not be prepared to use nuclear weapons, having to take account of the enormous destructive power in
European hands would compel them to regard the risks of aggression in Europe as still very grave.  

To carry out such a deterrence-enhancing mission, Britain relies almost exclusively on its SSBN-based nuclear force. Currently, the British SSBN force consists of 4 Resolution class SSBNs, each deploying 16 Polaris A3 and A3TK missiles. The British-designed Chevaline warhead dispensing system carries 3 to 6 non-MIRVed RVs, some of which are decoys to confuse ABM defences. The British SLBM arsenal deploys some 160 warheads in the 40 kiloton or 200 kiloton range. Britain intends to modernize this force, through the acquisition in the 1990's of the Trident II D-5 missile. The D-5 will be retro-fitted into the Resolution class submarines, and also represents a dramatic qualitative and quantitative improvement to the British SLBM force. The warhead total of this force will grow from 160 to 512 warheads, and the improved accuracy of the D-5 will offer much more flexible targeting options, including attack on the most hardened command and control posts on Soviet territory.

The British nuclear force, though much smaller than its French counterpart, is nevertheless still capable of delivering a crippling nuclear assault on the population and industrial capacity of the Soviet Union. In 1985, a nuclear attack on the USSR by the British nuclear force would have inflicted 6 to 21 million casualties, and destroyed 5 to 15%
of the Soviet Union's industrial capacity. With the introduction of the Trident II in the mid-1990's, the British force will be capable of inflicting 24 to 68 million casualties, and destroying 50% of the Soviet Union's industrial capacity. Perhaps of greater importance, British leaders will have a highly credible option of penetrating whatever Anti-Ballistic Missile defences that may be deployed around Moscow over the next twenty years.

As with the French nuclear force, the MIRVing of the British SLBM force will have a tremendous impact on the destructive potential of the British arsenal. The Soviet Union is thus faced with not only the US arsenal and a growing French force, but with an increasingly capable and equally independent British force as well. In addition, the British force has the same implicit relationship with the US nuclear force as does the French force. Not only is the British force capable of inflicting severe damage to the USSR on its own, the effect of such a British strike would leave the Soviet Union in a detrimental strategic and military position vis-à-vis the US, and might thereby provoke US command authorities into an opportunistic counterforce strike on the Soviet military.

The Soviet Union is thus faced with multiple independent nuclear decision-making centers, any of which are capable of inflicting unacceptable damage on the USSR. Further, the credibility of the two European decision-making centers is enhanced by the existence of the US arsenal, and
especially by their own independent modernization programs. As John Prados, Joel S. Wit and Michael Zagurek point out: "...the level of damage [the European nuclear forces can inflict] approach, if they do not exceed, the assured destruction criteria set for US strategic forces in the 1960's."  

The prospect of joint Anglo-French cooperation on nuclear defence projects, such as a jointly designed and produced cruise missile, would be a further display of an increasingly independent European deterrent capability, both in terms of attitudes and technological autonomy. The credibility and capability of these autonomous national nuclear forces as independent deterrents would increase all the more. Whether the joint procurement proposals mature or not, the key point, as Laird notes, is "the fact that both forces will be augmented in the 1980's and 1990's enhances the nuclear protection for Europe."  

The Risk of Inadvertent or Accidental Escalation

The risk of inadvertent or accidental escalation is not a factor that is generally emphasized in Western security writings. However, the risk of inadvertent or accidental escalation must be treated more soberly by Soviet military planners. Military success for the Soviet Union is based largely on the likelihood of avoiding nuclear escalation, which is dependent not only on escalation through deliberate action, but on accidental or unauthorised firing of nuclear
weapons as well. Inadvertent or accidental nuclear escalation would destroy any Soviet prospect of victory just as surely as deliberate nuclear escalation would. Soviet uncertainty over the possibility of inadvertent or accidental nuclear release in Europe ought to be considered, therefore, as a very real deterrent factor.

There are two main elements contributing to uncertainty over the possible unauthorised or accidental release of European-based nuclear weapons in war or crisis. These are: 1) the threat of decentralized, predelegated authority to release nuclear weapons in Europe in war or crisis, and 2) the ambiguity of the command and release authority of those weapons. The extent to which the command and control of European nuclear weapons is decentralized or delegated during war or crisis is a major element of uncertainty in calculations about the risk of inadvertent nuclear release. There are thousands of nuclear weapons deployed in Europe, most of which are subsumed under the command structure for conventional ground and air forces. Predelegation of launch authority during war or crisis to tactical commanders in the field would almost certainly increase the likelihood of inadvertent use. The pressure to delegate release authorization before nuclear-capable forces are dispersed with their warheads is very high. In crisis or war, predelegation of launch authority avoids the great unreliability of wartime communications with forces dispersed in the field and ensures that launch authority
will reach the tactical level.

The Permissive Action Link (PAL) codes, which are designed to reduce the chance of inadvertent release are effective measures which ensure "negative control" by central authorities in peacetime. However, their utility during hostilities is less certain. As Paul Bracken has observed, PALs "...are neither designed nor intended as a means of providing centralized political control in battle."\(^{20}\) Even with the PAL system in place, there remains a great degree of ambiguity over command decentralization and delegation of nuclear weapons in Europe. This ambiguity can only promote uncertainty in the minds of Soviet planners over the likelihood of inadvertent nuclear release regardless of command and control measure such as PALs. Richard K. Betts has observed that: "Ambiguity has some deterrent value...[the Kremlin leaders] ...would have to reckon either that low-level commanders have secret authority to launch their forces in the event that national command is destroyed or that some isolated commanders would do so even without explicit authority."\(^{205}\)

The ambiguity over command and release authority of nuclear weapons in Europe is a direct result of the dual-key nature of the authority to use them. The dual-key arrangements between the US, which controls the warheads, and the host country, which controls the launchers, are not part of a universal NATO process or program. Instead, they are bilateral arrangements, and their conditions are largely
secret. This presents the Soviet Union with the possibility that in a period of crisis or war, command decentralization or delegation of release authority could place nuclear weapons in the hands of non-American NATO military commanders. Such a situation would create an environment of even greater uncertainty: "The intense uncertainty and lack of clarity that surrounds command mechanisms of the non-American members of NATO make it virtually impossible to discount the chances of retaliation, once NATO has gone on alert."\(^{206}\) The ambiguity of over the command and control of nuclear weapons, and the resulting uncertainty over the likelihood of inadvertent or accidental nuclear release, contributes to deterrence in Europe. It is another element of risk which must be considered by the Soviet Union.\(^{207}\) As Donald M. Snow has observed, "The inability to predict the consequences [of an attack] with any measure of confidence becomes the great inhibatory factor that serves to deter..."\(^{208}\) As Paul Bracken has pointed out in somewhat greater detail:

> Complexity of decision-making contributes to deterrence because it raises the risk that the military aspects of a crisis would get out of political control. Once nuclear weapon dispersal has occurred, the forces of decentralization and delegation and the ambiguity of command authority make nuclear usage so unpredictable as to create a threat that no attacker can discount.\(^{209}\)

To briefly conclude, the risk of inadvertent or accidental nuclear escalation cannot be dismissed as either unlikely or too irrational to assess. For the Soviet Union,
the risk of provoking inadvertent or accidental nuclear release by NATO forces is very real. Given the significance to Soviet risk assessment of the likelihood of any escalation to the nuclear level, Soviet planners are not likely to dismiss the chances of accident or mistake lightly.

Compound Deterrence: Present Reality and Future Policy

In their assessments of deterrence in Europe, the logic of US deployers and Euro-couplers is based on a central supposition. They believe that in attacking Western Europe, the Soviets must evaluate and assess two elements of risk. First, that NATO will not respond by escalating to the nuclear level, and second, that Soviet conventional armies can defeat those of NATO. Analysts and officials from these perspective groupings emphasize NATO's conventional weakness vis-à-vis the Warsaw Pact. As this chapter has pointed out, this is not at all a given. For US deployers and Euro-couplers, however, NATO's conventional weakness means that deterrence in Europe is dependent on the strength and credibility of US nuclear forces in Europe and their linkage to the US strategic arsenal. In this conception, US nuclear forces in Europe—and especially INF—constitute the central risk element and thus the basis of strong, robust deterrence in Europe.

However, as the previous discussion has demonstrated, deterrence in Europe is function of much more than just the
risk of escalation by US nuclear forces. Soviet warplanners must also consider the risk of deliberate nuclear escalation by France and Great Britain, as well as the risk of nuclear escalation through accidental or inadvertent release. Therefore, Soviet leaders must make five assessments about five independent, autonomous elements of risk. In such an environment, US nuclear forces are no longer the only, or even the most important, deterrent element in Europe. What must be recognised by western policy makers is that deterrence in Europe is compound in nature, and as a result US nuclear forces deployed in Europe are less central to deterrence of war in Europe than has previously been assumed. Officials and analysts must become much more cognizant of the increasing strength and viability of the French and British nuclear arsenals, and of the very real risk of inadvertent or accidental nuclear escalation. It is important that they recognize as well that the conventional defence of Western Europe is not the hopeless task that many claim it to be. As David P. Calleo has observed, "...American strategic thinking never has focussed on the positive possibilities and implications of multiple deterrence."210

The removal of INF from Europe is not the military or strategic disaster that US deployers or Euro-couplers make it out to be. The other risk elements in Europe are more than capable of assuring 'robust' deterrence in Europe, and the effectiveness of the remaining US nuclear forces
deployed in Europe is in fact complemented by the French and British arsenal. David Calleo has argued that: "A multiplicity of national deterrents ... can augment the effectiveness of a general extended deterrent because two or more retaliatory triggers add greatly to the uncertainty or complexity of the risk faced by any would be aggressor." David Calleo goes on to argue that the Soviet leadership, even if it desires war, is unlikely to risk aggression in Europe unless it believes that it is likely the USSR will escape serious damage. As he points out:

...they would be far less likely to reach such a conclusion if faced by an array of indigenous and secure European deterrents, supported by an American guarantee, rather than only a devalued American promise to sacrifice itself for Western Europe.

Indeed, the INF agreement may in fact strengthen compound deterrence in Europe, as it removes potentially destabilizing and expensive weapons systems from an otherwise better balanced compound deterrence relationship between remaining US nuclear forces and the independent Anglo-French arsenals. Paradoxically, removing the GLCM and Pershing II systems may in fact weaken the overall deterrent in Europe, as the potential risk of inadvertent nuclear release would decline. It is inherently preferable, however, that the Western nuclear deterrent effect is achieved by survivable nuclear systems under firm negative control.

The strongest potential argument against greater reliance on the French and British arsenals for deterrence
in Europe is that it places greater emphasis on the nuclear forces of nations which might be more disposed to firing them in war or crisis. However, to argue that Britain or France would be more likely to initiate nuclear hostilities irresponsibly or hysterically than the superpowers is dubious at best. The superpowers can conceivably deceive themselves into believing they can preserve some level of national survival after a nuclear exchange. Some US and Soviet strategists may even believe that discriminating strikes are feasible. However, the European nations cannot entertain such illusions. France and Great Britain know that they would be destroyed in the event of a nuclear war. No European nation can underestimate the national implications of even a 'limited' nuclear war, nor hope to win it. In short, the European nations should be regarded as safe guardians of nuclear weapons.

Deterrence in Europe should be seen as the function of a number of independent, autonomous elements of risk. All of these risk factors must be considered in any accurate evaluation of the strength of deterrence in Europe. Risk factors should not be viewed as deterrent alternatives. Instead, they should be thought of as deterrent complements. Deterrence in Europe is, therefore, not a function of the strength or credibility of one, or perhaps two, elements of risk. Rather, deterrence in Europe is a function of multiple, independent compound risk elements. An heuristic expansion of this argument is provided in Appendix I.
CHAPTER V: CASHING IN THE BARGAINING CHIP

Barring a significant downturn in US-Soviet relations, the INF treaty signed on December 8, 1987 will close the INF circle. The Pershing II and GLCMs, deployed at great political cost amidst turmoil and controversy, will be withdrawn, along with comparable Soviet systems. The superpowers have extolled the virtues of the new pact, the first in history which eliminates an entire class of nuclear systems. However, the removal of INF from Europe has reopened debate over the same strategic and doctrinal dilemmas that sparked the INF controversy of the early 1980s. The same contentious issues so tenuously "resolved" by INF deployment have now resurfaced, and NATO is once again faced with the prospect of trying to manage its nuclear policy. This time, however, there is a new constraint; the restrictions imposed by the INF treaty.

The removal of the Pershing II and Cruise missiles has re-opened the strategic debate over extended deterrence and the strength of the security link between the US and Europe. Although the SS-20 missiles are also to be withdrawn, in the view of the majority of western analysts and decision makers NATO remains vulnerable to its pre-deployment strategic dilemmas.
The Terms

The provisions of the INF treaty call for the elimination within three years of all ground-launched missiles with ranges between 1,000 and 5,500 kilometers. This provision covers the US Pershing II and the GLCM, as well as the Soviet SS-4, SS-5, SS-20, and SSCX-4 missiles. In addition, within 18 months missiles with ranges between 500 and 1,000 kilometers will be eliminated. This provision covers Pershing 1A and the Soviet SS-12 and SS-23. The treaty will therefore eliminate 859 US missiles, with 429 deployed warheads, and 1,836 Soviet missiles, with 1,667 warheads, many of which are older, obsolete systems. Not explicitly mentioned in the treaty are the West German Pershing 1As. The US warheads earmarked for these systems are to be removed, and the West German government has already announced its intention to retire the aging missiles.²¹³

The treaty also provides (in great detail) for the physical destruction of the weapons systems covered by the agreement, either by launch or by literally cutting them into pieces. Also restricted is flight testing of any new missiles with ranges between the 500 and 5,500 kilometer limit.

Extensive verification measures are included in the agreement, most notably the on-site inspection provisions, which cover pre-designated sites and short-notice inspections. Inspection teams are permitted to visit pre-
designated sites to verify weapon numbers, the destruction of the missiles, and the razing of site facilities. One team of inspectors shall reside in the other's country for 13 years at one manufacturing facility to guarantee that no illegal missiles are being built.²¹⁴ Short-notice inspections are also included, allowing an inspection team to search one of 20 pre-designated sites. The host country is obliged to transport the team to the chosen site within nine hours. These short-notice inspections are restricted to fifteen for the five years after the elimination deadline of three years, and ten inspections per year are allowed in the five years following.

Although it is not the purpose here to go into detail about the impetus behind the INF agreement in the US and the USSR, some key points are worthy of mention. For the USSR, the INF agreement removes NATO's Europe-based decapitation-capable nuclear forces. The Pershing II (with its short flight time and high accuracy) and the cruise missile (which could fly under radar) were systems of great concern to the USSR. Further, although the USSR does give up a disproportionate number of both launchers and warheads, the INF deal still leaves the USSR with a powerful battlefield nuclear capacity, totalling some 2000 warheads, based on SS-21, SS-22, SCUD and FROG launchers, with another 5000 warheads in stockpile.²¹⁵

Several explanations have been advanced to account for Soviet acceptance of the INF deal. An INF agreement would be
a major political success for Gorbachev both in terms of the Soviet Union's image in the West, an evident concern of Gorbachev, and for his position vis-a-vis any critics in the Politburo. Prior to the INF negotiations Gorbachev had still not achieved a major foreign policy success with the United States. After the collapse of the Reykyavik summit, a foreign policy success was even more imperative. The achievement of an accord with an anti-arms control administration would surely win international public support but more importantly deflect criticism of his reform programs from within the Soviet leadership. Further, a relaxation of the East-West atmosphere would enable Gorbachev to devote more political and economic resources to revitalizing the Soviet economy.

In the US, the impetus to reach an agreement was largely political. For the Reagan Administration, an INF agreement would bring a badly needed political boost. The Administration's popularity--reflected largely in the personal popularity of Reagan himself--was at its lowest point since the Administration took office. The Iran-Contra scandal had seriously damaged both public confidence in the White House and the Administration's ability to muster support for other items on its agenda in Congress. An INF agreement would restore both public and congressional confidence. The prospective achievement of an INF accord enjoyed wide public support, and Congress was also largely amenable to an agreement, with the exception, ironically, of
opposition from conservative senators.

If the Administration was to have any success in its final year in office, the damage of the Iran-Contra affair had to be diminished. An arms control agreement with the Soviet Union appealed to both critics and supporters of the administration in the public, and held bipartisan support in Congress as well. It would be a badly needed political windfall for the administration. President Reagan's much vaunted desire to go down in history as a peacemaker may also have had influence on the US warming to an accord.

Even the Pentagon, despite its disapproval of the INF deal, could find a bright spot. An INF deal leaves the force structure in Europe ideal for justifying a wide range of new weapons development programs, especially the W79 and W82 artillery shells, the Advanced Tactical Missile System (ATACMS), the Lance missile system modernization, and new Air-Surface Missile (ASM) programs.\(^2\)\(^1\)\(^6\)

Regardless of the pressures favouring an INF deal, the accord drew heavy criticism, particularly among deployers and some balancers in the US, where a lively Senate ratification debate took place, and amongst couplers in Europe. These perspective groupings have refused to recognize the new nature of deterrence in Europe and cling to old assumptions and practices. The accord also reopened key areas of the intra-Alliance dispute over nuclear doctrines and and force posture.
Opposition in the US

The provisions of the INF treaty, both before and after it was signed, came under heavy fire from deployers and many conservative balancers in the US. NATO strategy, they argued, would be severely crippled by the withdrawal of the cruise and Pershing II missiles. Flexible Response, dependent on the escalatory threat of theatre nuclear systems for its linkage to the US strategic arsenal, would no longer be considered a credible strategy. An INF agreement would leave a "...large gap in the capability for flexible response." Donald R. Cotter argued that an accord would "...result in the loss of the 'mid level escalatory potential' of INF." It was not only the adverse military implications of any INF deal which prompted criticism. There would be, deployers and conservative balancers argued, a negative political impact as well:

What the United States and its European allies face in the wake of the pending INF reductions will be dangerous instabilities not only in the strategic-military context of deterrence and defence in Europe, but in the political psychological dimensions as well.

Another key area of conservative opposition centered around the verification measures to be included in the treaty. James Hackett of the Heritage Foundation neatly summed up the US deployer and conservative balancer position: "The administration is proposing verification arrangements which do not guarantee that the Soviets won't
cheat."\(^{220}\) Senator Orrin Hatch (Rep-Utah) was more diplomatic but no less insistent on the inadequacy of the verification procedures: "I think the administration's proposals will prompt a hue and cry for stronger verification measures."\(^{221}\) More specific criticisms of the verification process centered around the inspection provisions. Richard Perle raised concerns over the lack of measures permitting short-notice inspections anywhere in the USSR.\(^{222}\) Ambassador Edward Rowny, Special Advisor to Ronald Reagan and Secretary of State on arms control, questioned the ability of the US under the treaty to verify mobile missiles.\(^{223}\) Finally, the similarity of the SS-20 to the first two stages of the SS-25 raised objections over the ability of the USSR to circumvent the provisions of the treaty.\(^{224}\)

Where the criticism of US deployers and conservative balancers was most intense was over the alleged advantages that the INF accord provided to the Soviet Union. Donald R. Cotter warned that the INF agreement would "...mark a triumph—potentially a decisive one—of Soviet Strategy in Europe."\(^{225}\) The INF deal would enhance the perceived Soviet conventional superiority in Europe by weakening the nuclear leg of the Flexible Response strategy. In addition, a pact would leave the USSR with battlefield nuclear preponderance in Europe. Soviet short-range systems could strike at targets in Western Europe from Pact territory or behind advancing Pact forces, while the Treaty eliminates those US
systems capable of striking at Soviet territory in return. For US deployers and conservative balancers, an INF deal would "...accentuate the nuclear imbalance in Europe," and is the first step toward a de-nuclearized Europe, a "...longtime Soviet objective."  

A final concern of conservatives in the US is the recent swing of US policy in the direction of arms control. Gorbachev is seen as skillfully playing on the need of the Reagan administration for an arms control agreement to salvage political credibility. In the process, he is securing a deal favourable to the USSR. The INF agreement is not seen as a complete disaster, because, as Eugene Rostow has noted: "The West still has lots of nuclear weapons in Europe, has lots of nuclear options in its strategic forces, and that bastion of credibility--American troops in the heart of Europe--is still there."  

However, others such as James Thomson cautioned that without Western care and caution, an INF deal would "...become a disaster, weakening or destroying the Western coalitions, leading a number of important industrial countries to become neutral or go nuclear and leaving America isolated in a cold climate."  

US deployers and balancers are worried that the West is "...on the road to the de-nuclearization of Europe through progressive zero options." US deployers and balancers are increasingly worried that arms control has come to dominate security policy, rather than being a component of it. Arms
control, conservatives charge, has failed to address the threat—namely, the conventional force preponderance of the USSR—which dictates the necessity of NATO's nuclear requirement. The Soviet arms control initiatives and concessions on INF are part of a calculated Soviet policy. Eugene Rostow asserts that "The Soviet Union is counting on the West to relax in the glow of an INF agreement."²³¹ For US deployers and many balancers, the INF agreement represents the absolute limit to which the West should move on arms control. Richard Perle, for example, stated after the treaty was signed that: "This is a train that has reached the end of the line. This is the end of the productive potential for nuclear arms control in Europe."²³²

Supporters of the treaty were impatient with conservative criticism of the accord and their opposition to it in Senate. US arms controllers and more moderate balancers have argued that the treaty traded some 400 US warheads for over 1,600 Soviet warheads, and with little military loss on the part of NATO. The coupler argument, for treaty supporters, is an irrational one. Any damage done to the European deterrent through the loss of the US INF systems, they argue, is more than made up for by the British and French nuclear deterrents. Others point out that the negotiations have seen numerous Soviet concessions, among them the acceptance of a worldwide ban, the dropping of demands for reductions in nuclear capable aircraft, the dropping of demands for the inclusion of French and British
warheads, and the acceptance of on-site verification.\textsuperscript{233}

The Opposition and Senate Ratification

With Senate ratification of the INF treaty virtually assured by both public sentiment and Reagan's endorsement, the question was not the Senate would ratify the treaty, but whether the hardliners would attempt to use the INF debate to secure support for other strategic issues on their agenda, and whether they would succeed in attaching significant revisions onto the agreement.

The campaign against the INF treaty was led by Senator Jesse Helms (Rep-NC) who pressed for revisions to the accord to repair what he termed "significant defects and loopholes".\textsuperscript{234} Senator Dan Quayle (Rep-Ind) argued that verifying a missile's range for treaty purposes cannot be determined by analyzing a flight test. Quayle also wanted to ensure that the verification procedures contained in the accord were not considered a precedent for future arms control agreements.\textsuperscript{235} Other critics, such as Malcom Wallop (Rep-Wyo), argued that the technical data supplied by the Soviets was incomplete or inconsistent. US deployers outside the ratification process urged the Senate to "...not consider ratifying the INF treaty until satisfactory agreements are reached on the other ... elements of the nuclear balance."\textsuperscript{236} For the US deployers and other hard-line critics, the INF debate was an opportunity to promote their views. Conservative senators like Jesse Helms, Dan Quayle
and Malcom Wallop, for example, made it clear during Senate debate on INF that they would insist on setting specific sets of conditions which must be met before any START agreement was ratified. Alan Cranston, the majority Whip, expected these conservative senators—who he called "radical right wing extremists"—to attempt to undermine any future START deal by prolonging the INF debate.

The INF Treaty enjoys the support of mainstream arms controllers in the Senate, such as Alan Cranston, and of most balancers, such as Ted Stevens of Alaska and Richard G. Logan of Indiana. US conventional deterrers/defenders such as Sam Nunn (Dem-Ga) who have had some misgivings about the accord supported it in the interests of NATO. Outside the Senate, US coupler balancers such as Henry Kissinger endorsed the Treaty "...not because I see any merit in it, but because I think the damage of not ratifying it would be greater." 

The Treaty also had the support of officials of the Reagan Administration, especially after hard-line deployers in the administration, such as Richard Perle, had left public office.

The problem for conservative opposition to the treaty was that they were caught in a difficult political position. First, they were going against public opinion which largely favoured the accord, and second, they were attacking President Reagan for being too soft on matters of security. US deployers were not the only critics of the accord,
however. In Europe, the response from Euro-couplers was equally negative.

European Opposition and the Revival of European Angst

Opposition from Euro-couplers to the INF accord was swift. Euro-couplers saw the removal of the Cruise and Pershing II as the de facto de-linking of Europe from the US strategic nuclear guarantee and the beginning of US retrenchment. Franz Joseph Strauss, former West German Defence Minister and President of Bavaria asserted that the INF agreement "...means the decoupling of America from Europe."\textsuperscript{280} Volker Ruhe, a conservative deputy parliamentary leader, summed up Euro-coupler concerns over the possibility of further US withdrawals when he stated that "If there were a withdrawal of [US] troops on top of [the perceived trend toward de-nuclearization], it would really be disastrous and give the wrong signals".\textsuperscript{281} For Euro-couplers, the INF agreement placed pressure directly on the key weakness of NATO's military posture--its conventional forces. As Volker Ruhe argued, "No one can conceive of conventional deterrence alone."\textsuperscript{282} Alfred Biehle, of the conservative Christian Social Union, criticised the deal as an accord which increased Germany's exposure to conventional forces and short-range nuclear weapons.\textsuperscript{283}

Euro-couplers, traditional supporters of US and NATO policy and longtime advocates of Alliance unity (especially between the US and Europe) expressed doubts about the
rationality of the US position on the INF treaty. The voice of West German conservatism, (Frankfurter Allgemeine Zeitung), called for West European opposition to an INF agreement and criticised the arms control postures of the superpowers, "...whose positions are so often mercurial and determined by domestic political considerations." Some Euro-couplers, however, did criticize the decoupling argument. Lord Carrington asserted that:

The tangible manifestation of the American commitment to the defence of Europe is not in the theater missiles, but the presence of 326,000 in place troops and their dependents. Flesh and blood count for more than abstract deterrent concepts.

In the same breath, however, he warned Europeans against feelings of 'euphoria' over the INF accord.

In West Germany, the INF agreement created unique problems for the Kohl government. To begin with, the government was split between two factions; those favouring the INF deal (led by Foreign Minister Hans-Dietrich Genscher) and those opposed (such as former Defence Minister Manfred Woerner) who rejected the deal for military reasons. Chancellor Kohl is therefore caught between the Euro-negotiators in his government and broad public support for the treaty and the need to satisfy West German couplers that the US strategic guarantee is still intact, and that West Germany will not be exposed to conventional or short-range nuclear war. Such assurances were difficult to give, however, in the face of the pending withdrawal of all US theatre-range missiles.
In an attempt to work out a compromise agreement, Bonn favoured a deal permitting deployment of shorter-range intermediate nuclear forces (with a range of 500-1000 km). However, while the West German government sought only permission to deploy such systems, the US made it clear that under such circumstances it would insist on deploying such systems. Such a deal would reopen the European nuclear debate, a potential political storm Kohl had no desire to provoke again. A "zero deal" on intermediate-range missiles, however, would leave behind only those weapons capable of fighting a nuclear war exclusively in West German territory. Bonn was thus faced with the politically awkward situation of questioning the wisdom of the US in signing such a deal, while trying to organize European opposition to it. Attempting to do so with public opinion, the US administration, and the majority of European parliaments in favour of the accord was virtually impossible politically.

West Germany's last potential means of retaining even a token theatre-capable missile force in Europe was removed when the Kohl government announced on August 26 that West Germany did not intend to modernize its aging Pershing Is and that these systems would shortly be withdrawn. This decision eliminated one of the last obstacles in the path of an INF deal which was hardly favourable to West German interests. Despite opposition to withdrawing the Pershing Is, Chancellor Kohl managed at least to gain political praise for what was an inevitable decision anyway. The West
German government was not prepared to fight the domestic political battle over modernization, and it was not willing to risk almost certain US and Soviet anger over derailing a potential INF accord. In the end, even hard-line critics such as Manfred Woerner endorsed the agreement. Germany's political position was too sensitive to make large political waves.

With the INF agreement, the strategic situation as many Europeans see it has come full circle, and the same strategic and political anxieties of a decade ago are manifesting themselves once again. Foremost among these is a renewed desire on the part of many Europeans for reassurance of continued US commitment. The fear of abandonment—a consequence of parity—which was temporarily quelled by the INF deployment has surfaced once again. Anxiety over the perceived conventional force disparity between NATO and the Warsaw Pact remains, as does the reality of strategic nuclear parity. The short-range nuclear systems in Europe, though numerous, are not seen as a credible deterrent to Warsaw Pact invasion or as adequate strategic "couplers". Their range restricts their use primarily to West German territory. As a result, they provide no threat to military targets in the USSR and provide no reassurance to West Europeans that deterrence through the threat of escalation is viable. With such systems, the Soviet Union is not held at risk from US missiles based in Europe. Scarcely a decade before, this strategic condition had prompted the political
momentum for an Allied response to restore the strategic foundation of Western strategic policy. Some analysts have argued that the 320,000 US troops in Europe are a tangible expression of the US commitment to European security, and that a nuclear commitment is neither a political nor military necessity. However, the US troop presence in Europe was not judged a sufficient presence in debate leading up to the deployment of INF. It is hard to see how sentiments would be different in post-INF Europe, especially if superpower relations begin to deteriorate.

The Battlefield Nuclear Modernization Debate

The importance of battlefield nuclear weapons became apparent as the INF negotiations began and progress was made. Conventional force improvements to compensate for the loss of INF were dismissed as impractical. This sentiment was typical of analysts and officials inside and outside the Alliance decision-making process. "NATO conventional modernization...cannot be expected to fill the gaps in the Alliance's deterrent and defence posture consequent to an INF agreement..."  As a result, NATO officials once again reached for the traditional deterrent crutch in Europe, US nuclear weapons.

As early as 1983, the NATO Ministers laid the foundation for the modernization of NATO's short-range nuclear forces at a meeting in Montebello, Canada. The decision was made quietly, with little fanfare, in what was
to become the characteristic approach to the battlefield nuclear modernization issue. To avoid a repeat of the domestic upheaval which plagued the INF decision, debate over the short-range systems has been kept deliberately low key.

As a prospective agreement drew closer, however, the frequency and intensity of the NATO meetings grew. The HLG met in April of 1987 at Albuquerque, New Mexico, to study the implications of a possible INF accord. The NATO Defence Ministers met the next month in Norway, where a number of proposals for adjusting NATO's nuclear forces in the wake of an INF deal were tabled. A meeting of the NPG in November at Monterey, California, discussed these proposals in greater detail, with an urgency brought about by US officials encouraging allied support for an INF treaty and battlefield nuclear modernization.

At these meetings, proposals for improvements to NATO's post-INF nuclear force—otherwise referred to as 'compensatory measures'—centered primarily around aircraft, missiles under the 500 kilometer range ceiling, and to a lesser extent, shipborne and artillery systems.

Suggested improvements to NATO's air-delivered nuclear capability mainly involved the enhancement of capabilities already in place. The deployment of additional aircraft to Europe on a permanent basis—particularly the FB-111 bomber—was discussed at Monterey. Also examined was the possibility of deploying additional F-15 and F-16 aircraft,
equipped with nuclear capable air-to-surface missiles (ASMs) with ranges of several hundred kilometers, to enable them to strike into Eastern Europe from NATO airspace. The possibility of deploying B-52s to Europe in time of crisis was discussed in two variants. One option was to fit 150 B-52s to carry conventionally armed ALCMs or ASMs to bolster NATO's conventional defence option. The second option was to deploy nuclear-armed ALCM B-52s to airfields in Britain in crisis to bolster NATO's theatre-nuclear capability.

The modernization or improvement of NATO's battlefield nuclear missile systems also received a great deal of attention. The only existing battlefield nuclear missile system in place in Europe is the 120 km range Lance. The 36 launchers and several hundred missiles deployed in Europe are obsolete and their performance is questionable, especially in terms of accuracy. The Improved Lance, with a range of 300 kilometers, is a possible replacement, although before retiring as SACEUR General Bernard Rogers was pushing for the lifting of the ban on nuclear warheads for the Army's Advanced Tactical Missile System (ATACMS) imposed by Congress. Full deployment of the ATACMS, which has a range of some 250 kilometers, would entail several hundred launchers and nearly 1000 missiles, though most of these would probably be equipped with conventional warheads. It is likely the US would seek to improve the range of ATACMS to approach the 500 kilometer range ceiling.

General Rogers also placed emphasis on replacing the US
stock of nuclear artillery projectiles. The existing 155mm nuclear shell has an unpredictable yield and the 8-inch shell is somewhat unstable once assembled. Production of new 155mm shells goes ahead in 1989, although with a production limit of 925 imposed by Congress. Suggestions were also put forward, first at Monterey, and later by General Rogers in Norway, that SLCMs be deployed on submarines or surface ships.

However, any Alliance attempt to come to a decision on modernizing NATO's battlefield nuclear forces faces a potentially bitter political obstacle. At the crux of this obstacle is the West German opposition to any modernization of these systems, which are traditionally viewed as weapons with no purpose other than to be exploded on West German soil. As a result, the West German government is opposed to improving short-range nuclear forces to compensate for the loss of INF, and instead favours immediate negotiated reductions in short-range weapons as a follow-on agreement to INF. By contrast, the official US and British positions are opposed to short-range weapons negotiations to avoid encouraging public support for withdrawal of all nuclear missiles in Europe. Conventional and chemical negotiations are higher on the US and British agendas. Volker Ruhe summed up German attitudes when he stated, albeit somewhat bluntly, "The shorter the range, the deader the Germans".250

In addition, the political position of the West German government is very difficult. Besides the natural West
German instinct to oppose reliance on short-range nuclear weapons, any acceptance of the need for battlefield nuclear modernization would be difficult to sell at home. In the words of one West German defence official: "It is very hard to argue that this is a good agreement that enhances our security and then turn around and say we need to take steps to compensate for that."\textsuperscript{251} Another West German official concurred: "We have big problems explaining this issue to the public."\textsuperscript{252}

The battlefield nuclear modernization issue has yet to be resolved. In the recent NATO summit in Brussels in March of 1988 (the first in six years) the issue was characteristically papered over. In a rather ambiguous statement, the Brussels summit called for: "...a strategy of deterrence based upon an appropriate mix of adequate and effective nuclear and conventional forces which will continue to be kept up to date where necessary."\textsuperscript{253}

Typically, the Brussels summit attempted to satisfy everyone, as it was open to enough interpretation to enable the political leaders of the Alliance to achieve their political goals. President Reagan obtained the Alliance unity he was seeking prior to another superpower summit. Chancellor Kohl got a somewhat ambiguous statement on battlefield nuclear force modernization and a call for short-range nuclear weapons arms control negotiations. Prime Minister Thatcher, despite her failure to ensure short-range nuclear force modernization,\textsuperscript{254} could interpret the Brussels
declaration as saying such. Francois Mitterand gained a high profile return to NATO politics after a twenty-two year French absence from such summits.

The Brussels declaration, however, solved little. The phrase "up to date" was interpreted by Thatcher, Lord Carrington and Secretary of State Shultz as meaning "modernised", while Chancellor Kohl made it clear that he had not committed Germany to battlefield nuclear modernisation. The Brussels Summit was a typically ambiguous Alliance political consensus. Difficult issues were glossed over in the interests of projecting an image of unity and avoiding any political boat-rocking at a critical stage of superpower relations. Sooner or later, the difficult issue of the future direction of NATO nuclear force posture will have to be addressed.

Towards a Coherent Nuclear Force Posture in Europe

It is ironic that in the wake of the politically traumatic INF episode and its dramatic arms control climax, the question now facing the Atlantic Alliance is how to manage its nuclear posture for the future. Many of the available options—the most obvious being the contentious issue of of battlefield nuclear missile modernization—threaten the renewal of an inter-Alliance nuclear debate fraught with political and policy devisiveness. Further, each of the proposed compensatory measures have strategic or military drawbacks of their own. It is clear that only some
combination of them will provide an adequate future nuclear posture for Europe, but only if western officials and decision makers recognize that deterrence in Europe is no longer solely a function of US nuclear weapons in Europe.

Reliance on manned aircraft for NATO's nuclear deterrent poses several problems, mostly of a military nature. Aircraft are relatively slow delivery vehicles, they are not capable of delivering prompt strikes against time-urgent targets in Eastern Europe or Soviet territory. They are also highly vulnerable to Warsaw Pact Surface-to-Air (SAM) defences (which have been greatly improved) and to interceptors. This vulnerability to being shot down, not only when penetrating hostile airspace but also during flyaway, creates targeting problems for NATO planners and reduces confidence in mission success. The attrition problem is exacerbated by the fact that there are insufficient numbers of manned aircraft available for the nuclear strike role. The bulk of these aircraft will be needed for conventional roles in the air war over the central region, and any withholding of such aircraft for nuclear missions will only enhance the Warsaw Pact's numerical superiority in the skies. Further, manned aircraft are tied to airfields and, even when dispersed, are vulnerable to pre-emption or can be destroyed on the ground during hostilities. Even if sufficient numbers of aircraft and airfields survive, the reaction and turnaround times of manned aircraft can be greatly reduced by Pact use of runway cratering munitions or
chemical interdiction, thus forcing ground crews to wear restrictive protective clothing. The final problem with reliance on manned aircraft is economic. Such aircraft are extremely costly, and require highly trained personnel to service and maintain them.

Battlefield nuclear weapons, in addition to their negative warfighting implications for West Germany, also have other military and political drawbacks. Their short range (by treaty necessity under 500 kilometers) means that they are unable to reach targets in the Soviet Union. They therefore have no capacity to impose escalation dominance on the USSR, or to hold at risk Soviet second echelon formations or rear-area chokepoints deep in Eastern Europe or the USSR. The even shorter range of most systems in place in Europe (under 120 kilometers) creates a credibility problem. How disposed can NATO be to carrying out nuclear strikes on Western European territory? Reliance on battlefield nuclear systems also poses a "use them or lose them" problem. They are tempting targets for pre-emption (especially by conventional means) and are vulnerable to rapid attrition as well as to being overrun. Should NATO come to rely heavily on such systems, the Soviets would assuredly place a high priority on their destruction in the early stages of any pre-nuclear conflict. Further, dependence on battlefield nuclear systems creates a command and control dilemma. Because of insecure communications during conflict, the credibility of the force would depend
on substantial levels of pre-delegation of launch authority to battlefired commanders. Control and coordination of such widely dispersed nuclear systems, many of which would be supporting the conventional battle at the time, would be extremely if not impossibly awkward. Finally, because of the the range restrictions of battlefield systems, most of them would have to be based in West Germany, rendering impossible the nuclear risk sharing which has been so important an issue to Bonn.

Another option—also a potential political headache—is a return to a number of offshore basing schemes involving SLCMs. Any serious revival of this option suffers from an unfortunate historical precedent—the MLF controversy of the late 1960's. Any prospective SLCM force has the same drawbacks which led to the rejection of a SLCM force early in INF debate. There are command and control problems with offshore systems, particularly submarines. In addition, as with aircraft, the bulk of surface warships and SSNs are needed for conventional roles, particularly to defend the Atlantic convoy routes. Assigning nuclear roles to some of these vessels effectively removes badly needed maritime assets from influencing any conventional outcome. Moreover, the costs of new carriers, or even retro-fitting existing surface or subsurface craft, is prohibitive. The political negatives associated with offshore-based systems are substantial; problems of visibility, credibility and political sharing in the force still are formidable
obstacles to this option.

A more manageable option is a commitment by the US to deploy ALCM armed B-52s to airfields in Europe--most plausibly in Great Britain--during times of crisis to augment the European nuclear force. This proposal has the advantage of being politically the least contentious. There would be no permanent deployment of new nuclear forces, and none of the domestic-political controversy surrounding such a deployment. In military or deterrence terms, however, it suffers from a number of disadvantages. Such a system would not provide a prompt strike capability, and although the range of the ALCM permits the B-52 to avoid penetrating Soviet airspace, they can still be pre-empted at their bases. Further, since such systems would be deployed to Europe in times of crisis, such an act would be an escalation of any superpower tension. This in turn raises questions about whether the US would be self-deterred from such an action, and whether Europeans would consider US assurances to deploy B-52's to be reliable. The B-52 option does not provide the in-place deterrent which has in the past been deemed an essential to the structure of the nuclear force in Europe.

The New Nuclear Force

It is clear that for a variety of political and military reasons, the Alliance cannot rely entirely on any one of the above options. Each one carries with it problems
which make the option politically infeasible or militarily insufficient. However, it must be recognized that NATO does not have to rely on one of these options. NATO should look to combining various parts of the above options into a force posture that is both politically feasible and militarily significant, and which can best perform its deterrent role alongside the independent nuclear deterrents of Great Britain and France. The new European nuclear force should emphasize the deterrent value of these national nuclear forces and their autonomous decision making centers.

First, however, NATO's conventional forces must be recognized as a formidable deterrent in and of themselves. Strengthening the conventional deterrent should be the highest priority. There is simply no substitute for the impact a stronger conventional posture can have on deterrence in Europe. Conventional deployments would reduce Soviet confidence in achieving military success in Europe and would raise western confidence in deterrence without resort to continued deployment of nuclear weapons. Deterrence is increasingly insensitive to deployment of greater numbers of nuclear weapons, and conventional improvements can make more of a difference in the risk equation. Unfortunately, large improvements, especially numerical improvements, are probably unrealistic. In the past, the NATO nations have shown a reluctance to meet even minimum agreed upon floor levels on defence spending. US calls for increases in NATO spending on conventional
armaments have never succeeded in producing dramatic results. When the US calls for increased conventional preparedness, it usually means increased European conventional preparedness, and increased allocation of economic resources involved in expanding conventional arsenals are seen as politically prohibitive in most European capitals. In addition, two of the nations capable of fielding militarily significant conventional forces—Great Britain and France—are allocating a great part of their defence budgets to their respective national nuclear programs. Today, the spiralling cost of conventional weapons systems, the improved East-West political climate, and the trends in population demographics showing a decline in men of military age all stand in the way of any dramatic improvement to the Alliance's conventional force posture. On the other hand, it is important to remember that NATO's conventional forces do not have to ensure a successful conventional defence of Europe; their role is to ensure that the Soviet Union cannot have a high degree of confidence in any conventional invasion. A credible conventional force posture must be the cornerstone of NATO defence planning into the foreseeable future.

As in the past, however, the absence of assured conventional defence and the need to deter Soviet nuclear first use dictates the demand for a credible land-based escalatory capacity in Europe. But again, there are political constraints on the establishment of such a
capacity, and it is unlikely that any extensive deployment of battlefield nuclear systems--specifically missiles such as the ATACMS--can be undertaken. On the other hand, smaller improvements can be made which will have a favourable impact on the credibility of escalation. Deployment of the Improved Lance, for example, should be politically manageable for West Germany, as it is a replacement for an obsolete system. This measure, combined with improvements to the artillery-delivered nuclear munitions stockpile already under way, ensures that the Soviet Union will be faced with battlefield nuclear systems capable of striking into rear-area targets in Eastern Europe and holding Warsaw Pact formations at risk. In addition to the threat of deliberate escalation by these systems, the Soviet Union would be faced with the possibility of the increased chance of inadvertent or accidental escalation brought about by the command and control problems associated with battlefield nuclear systems.

Despite their admitted drawbacks, manned aircraft will have to play a key role in NATO's future nuclear force. Rather than commit all of its front line air superiority aircraft to nuclear strike roles, NATO should look to outfitting its older strike aircraft, equipped with ASMs, for this role.

The demand for a theatre-range commitment is unlikely to go away. There will continue to be a desire, however unnecessary, to couple the European nuclear force to the US
strategic arsenal. This can be adequately satisfied by assigning ALCM-armed B-52s for deployment to bases in Europe in crisis. This presents the Soviet Union with an escalatory potential capable of striking at targets deep into Soviet territory, which is not provided by battlefield systems.

The last element of this new European nuclear posture is an implicit European reliance on the French and British independent nuclear deterrents. The deterrent significance of both nuclear forces would have increased in any case, in view of the expansion programs under way. With the elimination of US theatre systems, however, the importance of the British and French arsenals as a theatre-capable, European-based, and European-controlled nuclear force has been enhanced. In the future, France will become much more the producer of European nuclear security, which the rest of Europe will implicitly consume.\textsuperscript{255} The expansion of the French and British nuclear force will create that much greater an element of risk for Soviet planners, further strengthening the overall Western deterrent.

With US land-based theatre-range nuclear systems withdrawn, and the strategic link therefore--at least in the psychological sense--weakened, the European Alliance members may in any case look increasingly to their own security.

There has been speculation over increased inter-European participation on defence issues, most notably on nuclear cooperation. With the withdrawal of INF, and in the face of the spectre of a US nuclear pullout from Europe, the
European NATO countries have belatedly recognized the advisability of increased nuclear participation and even development and procurement of nuclear weapons. The late Hedley Bull argued that Europe "...should look to nuclear forces that are controlled by European governments and serve the interests of European peoples." Franz Joseph Strauss, for example, argued that it is time to "...create a common European nuclear potential." He went on to state that "The British-French discussion on this topic would provide a start." Raymonde Barre, a conservative candidate for the French Presidency, called for a new "Franco-British Entente Cordial" that would include consultation on nuclear planning and joint procurement agreements. General Georges Fricoud Chagraud went a step further, admitting that France and Great Britain had been "flirting with the idea" of expanded nuclear cooperation. The renewed interest in the Western European Union (WEU) is another example of increased European defence participation. The implication of such interest, whether intentional or not, is a reduced dependence on the US for security guidance and leadership. Such developments should not be viewed as a weakening of deterrence in Europe.

As it has been demonstrated throughout this thesis, deterrence in Europe is a function of several risk elements. The strength of NATO's deterrent posture is not solely a function of US nuclear weapons deployed in Europe. Because of the significance of the expanding French and British
nuclear arsenals, the risk to the USSR of accidental or inadvertent nuclear escalation, and a conventional defence option which is more credible than has been believed, deterrence in Europe is at present very robust, possibly more so than ever before. With compound deterrence a reality, it will remain so regardless of any eventual de-emphasis on US nuclear weapons.

The INF affair did illustrate the advantages, at least in the short and medium term, of NATO's traditional policy of compromise on key defence policy issues. The papering over of disputes, and the pursuit of a policy of constructive ambiguity, help to preserve the image of an united Alliance. However, the INF affair has also illustrated the disadvantages of formulating policy in this manner. Confusion and distrust are created amongst Alliance members, and key areas of political and strategic divergence are never resolved. The result is policy paralysis. NATO has been unable to turn away from old concepts and methods and has failed to recognize the new strategic environment in Europe, let alone its policy implications.

This is not to argue that NATO will collapse if it continues to operate by old concepts and methods. Presumably, the Atlantic Alliance could continue to muddle through. Its effectiveness, however, would deteriorate into irrelevance, as its policies and force postures became increasingly inconsistent with strategic reality. To maintain itself as a relevant and effective alliance, NATO
must demonstrate the flexibility to adapt to the new strategic environment in Europe. Adopting the principle of compound deterrence might not eliminate intra-alliance conflict, but it will ensure the robustness of deterrence in Europe into the foreseeable future.
Endnotes to Chapter I

1 Some analysts, such as Richard Betts, have questioned the existence of a Golden Age of US nuclear superiority. See Richard K. Betts, Nuclear Blackmail and Nuclear Balance (Washington, D.C.: The Brookings Institution, 1987), pp. 144-171.

2 Various classifications have been forwarded for the Pershing II, for example Short-Range Ballistic Missile (SRBM) and Medium-Range Ballistic Missile (MRBM). For the purpose of this paper, the Pershing II will be referred to as an Intermediate-Range Ballistic Missile (IRBM).

3 Classifications of the Pershing II and Ground Launched Cruise Missile (GLCM) deployments vary widely throughout the literature on the INF. They have been referred to as Long-Range Intermediate Nuclear Forces (LRINF) in NATO and Pentagon terminology, and frequently as Long-Range Theater Nuclear Forces (LRTNF) in Academic literature. This distinguishes the Pershing II and GLCMs from the rest of NATO's Theatre Nuclear Forces (TNF). For this study, the most common term INF will refer to the Pershing II and GLCM, while NATO nuclear forces in general will be referred to as TNF. Tactical Nuclear Weapons--referring to battlefield nuclear weapons--will be referred to as TNW.

4 Gregory A. Treverton, "Nuclear Weapons and the 'Gray Area'," Foreign Affairs, 57 (Summer 1979), p. 1083.


7 Morton Halperin, in US, Congress, Senate Committee on Foreign Relations, Hearings on Nuclear Weapons and Foreign Policy, 93rd. Congress, 2nd Session, 1974, pp. 17-18. See also Alain Enthoven, in Hearings on Nuclear Weapons in Foreign Policy, 1974, pp. 84-85. Enthoven observed that the placement of tactical nuclear weapons in Europe "...was done without any coherent plan or doctrine for the conduct of a theater nuclear war. It was simply a race to equip everybody--even the infantry--with nuclear weapons."

8 Uwe Nerlich, "Theater Nuclear Forces in Europe: Is NATO Running Out of Options?" in Myers, ed., NATO: The Next Thirty Years, pp. 63-75.
This was subsequently modified when John Foster Dulles provided assurances that this did not mean automatic escalation to nuclear war.

A similar plan, the Ridgeway Plan of 1952-53 never got beyond the planning stage at SHAPE.


Christoph Bertram goes so far as to assert that with the age of the ICBM, the "...age of geographic deterrence identity between the US and its European allies had come to an end." Christoph Bertram, "The Implications of Theater Nuclear Weapons in Europe," Foreign Affairs, 60 (Winter 1981/82), pp. 302.


Secretary of Defence Schlesinger, in Hearings on Nuclear Weapons and Foreign Policy, Senate Committee on Foreign Relations, 93rd Congress, 2nd Session, (March/April 1974), p. 209.


Betts asserts that the US, fearing the loss of escalation dominance and needing to maintain the credibility of extended deterrence strove to maintain a level of "escalation equity". Betts, Nuclear Blackmail and Nuclear Balance, p. 197.

Betts, Nuclear Blackmail and Nuclear Balance, p. 197.

Betts, Nuclear Blackmail and Nuclear Balance, p. 197.

22 Coffey, *Deterrence and Arms Control*, p. 9.


26 The SS-21, with a range of 120 km is to replace FROG; the SS-22, with a range of 900 km is to replace the SS-12 Scaleboard, and the SS-23, with a range of 500 km is to replace the SCUD at Army and Front levels. The SS-21 was first deployed in 1978; the SS-22 and SS-23 in 1979.

27 In 1978-79, 50 Tu-22M and some 190 Su-24 (then known as the Su-19) were in service.


29 See *The Military Balance*, p. 204. Circular Error Probable (CEP) is the radius of a circle around a target in which there is a 50% chance the warhead will land. The real significance of this figure is therefore rather dubious.


31 Western Europe would have some 5 minutes advance warning of an imminent strike.

32 Uwe Nerlich, "Theater Nuclear Forces in Europe," p. 83.

33 Uwe Nerlich, "Theater Nuclear Forces in Europe," p. 85.


37 Coffey, Deterrence and Arms Control, p. 14


46 Uwe Nerlich, "Theater Nuclear Forces in Europe," p. 81.

47 For an excellent account of the other factors that led to the Schmidt speech see David N. Schwartz, NATO's Nuclear Dilemmas (Washington D.C.: The Brookings Institution, 1983).


Endnotes to Chapter II


53 This can, of course, apply to other possible theatres of war, but in the context of this paper refers solely to NATO Europe.

54 Guido Vigeveno has pointed out that "Any significant erosion of deterrence is difficult to quantify, because it ultimately depends on assumptions about Soviet perceptions." Guido Vigeveno, The Bomb and European Security (London: C. Hurst and Company, 1983), p. 57.


56 These perspective groupings are loosely adapted from those outlined in Joeph Coffey's excellent study, Deterrence and Arms Control.


64 McGeorge Bundy, "America in the 1980's," p. 133.


68 See Senator Sam Nunn, "NATO: Can the Alliance be Saved?" Excerpted in Survival, 24 (September/October 1982), pp. 234-236; and Sam Nunn, "NATO Saving the Atlantic Alliance," Washington Quarterly, (Summer 1982), pp. 192.


73 Even the most pro-arms control of the Euro-negotiators, such as Egon Bahr and Willy Brandt, were prepared to support INF if no progress on arms control was made. See John Vinocur, "Setback to North Europe's Missile Foes," The New York Times, (24 March 1981), p.1


See Mary Kaldor, "Is There a Soviet Military Threat?"


For example, Irving Kristol and Norman Podhoretz advocated withdrawal from Europe unless there was a considerable hardening of European attitudes to the USSR. Meeting of the Committee for a Free World in Washington, D.C., January 22, 1982; Jeffrey Record advocated withdrawal and realignment with France. Jeffrey Record, "Should America Pay for Europe's Security?" *The Washington Quarterly*, (Winter 1982); In 1982, Senator Ted Stevens (R-Alaska) and Senator Howard Baker, the Republican Majority Leader, advocated a review of the US commitment to Europe. Bernard Gwertzman "Some Congressmen Suggest Bringing the Boys Back Home," *The New York Times*, 14 March 1982. US conservatives were by and large overreacting; the presence of US missiles in Europe is much less welcome than the presence of US troops. Many in the Reagan Administration mistook European attitudes on nuclear weapons for attitudes on the US presence as a whole.


As General Rogers put it, "We must...disabuse those
who believe that the two superpowers should be placed on the same moral plane. That is wrong." General Bernard Rogers, "NATO: The Next Decade," in Christopher Coker, ed., The Future of the Atlantic Alliance (Southampton: Royal United Services Institute, 1984).

McGeorge Bundy, for example, stressed in 1982 that the US, when making foreign policy, should "...think more about the interests and concerns of our friends and allies, and less about the Soviet menace, than seems to be the habit of the present administration in Washington". McGeorge Bundy, "America in the 1980's; Reforming our Relations with our Friends and Among Our Allies," Survival, 24 (Jan/Feb 1982), p. 24.


Manfred Woerner as quoted in Alex A. Vardamis, "German-American Military Fissures," Foreign Policy, 34 (Spring 1979), p. 98.

Quoted in Alex A. Vardamis, "German-American Military Fissures," Foreign Policy, 34 (Spring 1979), p. 92.

Luthar Ruehl in Die Zeit, as quoted in Vardamis, "German-American Military Fissures," p. 93.


Popular discontent with land-basing—and the attractiveness of the sea-basing option—was epitomized by a jingle popular during the MLF controversy: "Put the missiles out to sea/ Where the real estate is free/ And they're far away from me..."

NATO's nuclear release procedures, often referred to as impossibly cumbersome, do however contain an important caveat relating to use. Expressed in the Athens Guidelines is the phrase "time and circumstances permitting" theoretically at least allowing circumvention of the consultative process involved in nuclear release.


For this reason, the Europeans have a strong dislike for the term "Eurostrategic", often used in reference to weapons systems or the European nuclear balance. The term implies a separate strategic equation restricted to Europe, a conception the Europeans largely refuse to recognize.

Further, the US was distracted with the potential impact an arms accord would have on its relationship with other allies. Japan, for example, despite its firm support of the Zero Option, persistently sought US assurance that an INF deal in Europe would not be negotiated at the expense of Japanese security.

Gregory Treverton articulated this view in another way when he pointed out that using military means to achieve political ends will fail if the military means themselves are incredible. See Gregory Treverton, "Managing NATO's Nuclear Dilemma," International Security, 7 (Spring 1983), pp. 93-116.


Simon Lunn, "INF and Political Cohesion in NATO," In Hans Henrik Holm and Nikolaj Petersen, eds., The European Missiles Crisis. p. 211.

On October 22 1988, the largest demonstration in FRG history involved over 500,000 people. See James M. Markham, "Vast Crowds Hold Rallies in Europe Against US Arms," New York Times, October 23, 1983.

William E. Griffith observed, for example, that the
German peace movement was a revival of German Kulturpessimismus, or cultural pessimism, rejecting "...materialism, consumerism, economic growth, bureaucracy, liberalism, bourgeois lifestyle, and conventional morality." See William E. Griffith, "Bonn and Washington: From Deterioration to Crisis?" *Orbis*, Vol. 26 No. 1 (Spring 1982), p. 118.

Endnotes to Chapter III


109 European critics of the deployment charged that INF was part of a larger US strategic purpose. Karsten D. Voigt argued that the primary military strategic rationale behind the INF decision was to ensure that NATO possessed the capacity to engage in controlled nuclear escalation. In this view, the deployment gives NATO the capacity to carry out selective first-strike counterforce attacks into Warsaw Pact and Soviet territory, a capability not in the interests of the European members. See Karsten D. Voigt, "Nuclear Weapons in Europe: A German Democrat's Perspective," in Andrew J. Pierre, ed. Nuclear Weapons in Europe, pp. 98-118.

110 Assistant Secretary of State Lawrence Eagleberger. Address before the North Atlantic Assembly. 15 Oct. 1981.


112 Leon V. Sigal, Nuclear Forces in Europe: Enduring Dilemmas, Present Prospects, p. 2.

113 European insistence on the arms control track of the December 12 decision led to the establishment of the Special Group (SG) to study the arms control dimension of the INF decision.


116 Uwe Nerlich, "Theater Nuclear Forces in Europe: Is NATO Running Out of Options?" in Myers, ed., NATO: The Next Thirty Years. p. 64.

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122Uwe Nerlich, "Theater Nuclear Forces in Europe," p. 65.

123The 1,800 km range Pershing II, according to the JCS, "...provides an additional capability because it can strike time urgent targets." *US Military Force Posture, Fiscal Year 1986*, p. 34.


125Both Parliamentary votes in Belgium and Holland, conducted on 9 November 1983 and June 14 1984, respectively, were conditional upon the progress of the INF negotiations. See John Cartwright and Julian Critchley, *Cruise, Pershing and SS-20: The Search for Consensus*.

126Jeffrey Record, *NATO's Nuclear Force Modernization Program*, p. 65. Jeffrey Record also brushed aside the concealability argument; each flight, he argued, was composed of 41 vehicles, an easily recognizable convoy.


130Quoted in Jeffrey Record, *NATO's Nuclear Force Modernization Program*, p. 70.

131See, for example, Jeffrey Record, *NATO's Nuclear Force Modernization Program*, p. 5.

133 Jeffrey Record, NATO's Nuclear Force Modernization Program, p. 63.


135 Joseph I. Coffey, Deterrence and Arms Control, p. 88.


139 Quoted in Strobe Talbott, Deadly Gambits, p. 43.


141 Betts, p. 554.

142 For examples of the critiques leveled at NATO's concealment and dispersal plans see Jeffrey Record, NATO's Nuclear Modernization Program, pp. 64-66.


144 Leon V. Sigal, Nuclear Forces in Europe: Enduring Dilemmas, Present Prospects, p. 45.

145 Jeffrey Record, NATO's Nuclear Force Modernization Program, p. 67.

Further, due to munitions and maintenance costs, any single national deployment of below 48 GLCM's was not cost effective.

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149 Strobe Talbott, *Deadly Gambits*, p. 23.

150 Gregory Treverton, "NATO Alliance Politics," p. 431.

151 Gregory Treverton, "NATO Alliance Politics," p. 431.
Endnotes to Chapter IV


153 'Successful' here is taken to mean the halting of a Warsaw Pact offensive in West Germany and the imposition of a strategic stalemate, with advantage shifting to the West as the Western European, US, and Japanese economies mobilize to a full war footing.


156 The figures used here are drawn from the 1987-1988 Military Balance (London: The International Institute for Strategic Studies, 1987). These figures do not include police or paramilitary forces. They do include French and Spanish ground forces.

157 Figures include Warsaw Pact category II divisions. NATO figures do not include US and Canadian forces in North America earmarked for Europe.

158 It is also important to note that NATO has an advantage in terms of Anti-Tank Guided Weapons (ATGW) of 6,500 to 4,500.


See James Meacham, "The Sentry at the Gate," p. 10.


See James Meacham, "The Sentry at the Gate," pp. 2-17.


Mearsheimer, "Why the Soviets Can't Win Quickly in Central Europe," p. 36.


183See Rowland Evans and Robert Novak, "Mitterand Looks to Germany," Washington Post, 16 Dec. 1983. Further French incentive to strengthen its defence ties to the Federal Republic may come from an anxiety over the future direction of West German defence policy should the US withdrawal from Europe. The possibility of the Federal Republic acquiring its own nuclear force under such circumstances, however unlikely, is a daunting prospect to the French. If increasing cooperation with West Germany and expanding the scope of its nuclear protection will help prevent such a situation, the French would willingly pay the price of greater cooperation in European defence affairs.


188See Lewis, "France Approves Arms Plan Linked to European Allies."


See Lewis, "France Approves Arms Plan Linked to European Allies."


Paul Bracken, The Command and Control of Nuclear Weapons, p. 171.
This aspect of deterrence in Europe is not new. Thomas Schelling and Herman Kahn noted in the 1960's that there was a deterrent element in the ambiguity of NATO policy. Thomas C. Schelling, The Strategy of Conflict (London: Oxford University Press, 1960) and Herman Kahn, On Escalation (Baltimore: Penguin Books, 1965).


Paul Bracken, The Command and Control of Nuclear Forces, p. 174. Some analysts have suggested that the West should adopt a nuclear strategy based on uncertainty. Donald M. Snow, for example, has argued that: "A more prudent and sensible approach to serving the deterrent purpose is to accept and make the best of the very real uncertainties involved in predicting the outcome of employing nuclear weapons as the central reality for strategy." Snow, The Nuclear Future, p. 158.

David P. Calleo, "NATO's Middle Course," Foreign Policy, 69 (Winter 1987-88), pp. 135-147.

Calleo, "NATO's Middle Course", p. 146.

Calleo, "NATO's Middle Course", p. 147.
Endnotes to Chapter V


214 The Soviet plant is in Votkinsk, near the Urals, and the US plant is in Magna, Utah. The Soviet plant produces the SS-25, and the US plant components of the Trident II.


216 See David Evans, "Much Remains the Same Under Superpower Treaty."


220 "Closing the Gap", Time, 7 September 1987, p. 15.

221 "Closing the Gap", Time, p. 15.


224 "Arms talks Snagged by Missiles' Likeness," Globe and Mail, 13 Nov 1987. p. 8. This could be done, critics charged, in one of two ways. First, the production of SS-25s could be altered to build an illicit stock of SS-20s. Second, the third stage of the SS-25s could simply be removed to achieve the same effect. In addition, the SS-25s themselves could threaten Europe, especially through depressed trajectory launch to reduce warning time, or from a lofted trajectory to render a Euro-ABM system ineffective.


See John Deutch et al., "The Danger of the Zero Option."


Eugene Rostow, "Beware the INF Risks,"


"Senate Now Turns Scrutiny to INF-and Beyond," Congressional Quarterly, 46, 23 January 1988, p. 149.

See "Senate Now Turns Scrutiny to INF," p. 149.

Eugene Rostow, "Beware the INF Risks".

"Senate Now Turns Scrutiny to INF", p. 149.


In fact, recent administration appointments of officials favourable to arms control into key positions (such as the appointment of Paul Nitze to the Directorship of the ACDA) have increased the administrations position in the Senate ratification battle. Opposition by conservatives to such appointments has been active, and has prompted anxiety amongst US conservatives over the future intentions of the administration. See "Conservatime Storm Brews over Reagan's arms policies," Christian Science Monitor, 14-20 September 1987.


Quoted in Elizabeth Pond, "Europe Questions


244 "Quoted in Elizabeth Pond, "Europe Questions America's Promise," p. 11.


249 See Daniel Charles, "NATO looks for arms control loopholes".

250 Quoted in Daniel Charles, "NATO looks for arms control loopholes," p. 11.


252 Quoted in Daniel Charles, "NATO looks for arms control loopholes," p. 7.


255 There are potential problems with the practical management of such a security structure. The non-nuclear NATO countries would have little or no input into nuclear policy issues in such a situation. The national nuclear forces of both France and Great Britain are guided almost exclusively by national and strategic self-interest, and might demonstrate little or no interest in subordinating or implementing the force structure desires of the non-nuclear NATO countries into their respective nuclear forces. Reliance of the European NATO members on regional nuclear deterrents could isolate the bulk of NATO nations from any input into nuclear policy questions. Resentment might be the result. The non-nuclear countries, frustrated by their lack
of influence on nuclear issues, and the annoyance of Britain and France over repeated "suggestions" (read "meddling") of non-nuclear European countries on how to run their national nuclear forces, could result in the development of severe political rifts in the NATO.


257 Quoted in Daniel Charles, "NATO looks for arms control loopholes," p. 12.


BIBLIOGRAPHY

Government Publications


Books


Articles


Bundy, McGeorge. "America in the 1980's: Reframing Our Relations with our Friends and Among Our Allies."
Survival, 24 (Jan/Feb 1982), pp. 24-29.


Calleo, David P. "NATO's Middle Course." Foreign Policy. 69 (Winter 1987-88), pp. 135-147.


NATO." *Survival.* (May/June 1985),


"Senate Now Turns Scrutiny to INF and Beyond." Congressional Quarterly. 46 (January 1988), pp. 149-153.


Sigal, Leon V. "Rethinking the Unthinkable." Foreign Policy. 34 (Spring 1979), pp. 35-52.


Treverton, Gregory. "Nuclear weapons and the Grey Area'." Foreign Affairs. 57 (Summer 1979), PP. 1075-1089.


Vardamis, Alex A. "German-American Military Fissures." Foreign Policy. 34 (Spring 1979), pp. 87-107.


Newspaper Articles


"NATO Chief Warns of Euphoria." The New York Times, 18
September 1987.

"Outflanked by Thatcher, Missile Foes Look Past the Law."  
Wall Street Journal. 6 April 1983.


Pond, Elizabeth. "Kohl A-Offer makes splash, but not a wave."  

Pond, Elizabeth. "Kohl Caught in a Bind Between Zero Options."  
Christian Science Monitor, 4-10 May 1987.

Pond, Elizabeth. "Europe Questions America's Promise."  


Quester, George. "Soviet Military Debate."  

Rostow, Eugene. "Dangerous Dreams of Peace."  
The Chicago Tribune, 29 March 1983.

Rostow, Eugene. "Beware the INF Risks."  

Steele, Jonathan. "Paris Moves to Early Use of N-Weapons."  

Thatcher, Gary. "Reagan Aide calls Soviet Offer only an interim step'."  
Christian Science Monitor, 4-10 May 1987.

Thompson, E.P. "A Letter to America."  
The Nation, 24 January 1981.

"US Ready to Remove Warheads."  


Warmser, Oliver. "Quell Politique de Defense?"  
L'Express, 9-15 December 1983.
Assessing the impact of INF on deterrence is unavoidably a subjective enterprise. As pointed out earlier, deterrence, besides being hard to define, is difficult to measure and impossible to test. Attempts to draw conclusions about the relative influence of certain factors on deterrence are muddled by the varying assumptions and divergent frames of reference used by commentators or groups of commentators. The ideology of the individual or group is a prominent component of any deterrence perspective. Further, deterrence ultimately depends on Soviet perceptions. The difficulty here, of course, lies in making inferences or projections of Soviet risk assessment and judging the impact certain factors have on that assessment. This enterprise involves considerable guesswork and in the absence of a means of verifying these judgements (the Soviets themselves, in fact, may not be sure) they remain guesses about Soviet perceptions. Accordingly, when attempting to assess the impact of INF on deterrence, it is impossible to make a quantitative judgement. Furthermore, deterrence assessment is highly dependent upon ideological perspective and what Richard Betts has referred to as the "muddle of risk".

It is possible, however, to extrapolate tendencies. The relative direction of the impact a given factor would have on deterrence can be assessed. Such a model would have
several analytical uses. First, such a model would serve as an instrument of clarification, to organize the perspectives of certain groupings of opinion and the relative weights they attach to various elements of the deterrence equation. Second, through adjustment of one or more of these elements it could be seen how shifts in these elements affect the deterrence equation as a whole. Third, by introducing a whole new element into the equation, coupled with the views the groupings hold of the new element, the relative impact of a new factor—such as INF—on the deterrence equation can be shown relative to all deterrence perspectives.

The basis of the analytical tool used in this appendix is adapted from one put forward by Richard Betts in his article "Compound Deterrence vs. No First Use: What's Wrong is What's Right." The framework presents deterrence as the function not of single risk factors considered in isolation, but of compounded risk factors considered interdependently. Each factor has an influence on a comprehensive assessment of the risks involved in challenging deterrence. However, since risk factors are cumulative, it is the total "package" that makes up the deterrence equation.

Ostensibly, deterrence in Europe is maintained by the duality of capability explicit in Flexible Response. Contained in the conventional forces in place in Europe is the element of denial through defence, while nuclear deterrence poses the threat of punishment. Therefore, two separate probabilities face any Soviet calculation of risk
involved in an attack: first, the likelihood that NATO's conventional forces will fail to defend Europe against Warsaw Pact forces, and second, the likelihood that NATO would not deliberately escalate to the nuclear level. Should NATO choose to escalate, victory in a meaningful sense essentially vanishes. These two probabilities must be considered jointly. To ignore one or the other on the Soviet's part would result in an inaccurate assessment of the risk involved in an attack.

However, as Chapter IV points out, these are not the only factors involved in a Soviet assessment of the risks faced in attacking Europe. The likelihood of escalation is not a single unitary probability. Rather, the probability of avoiding escalation is a function of four different possibilities: the possibility of escalation by the US; the possibility of escalation by France; the possibility of escalation by Great Britain; and despite the fact that is is frequently forgotten or ignored in western security writings, the likelihood of accidental or inadvertent escalation. Any assessment of the likelihood that escalation can be avoided is therefore not dependent on an examination of one probability, but of four, each with its own decision dynamic. The probability of NATO's conventional forces successfully repelling an attack adds a fifth independent deterrent factor. Finally, the propensity of the Soviet leadership to seek its goals through armed confrontation in Europe must be included as well. Intent, as Betts
emphasizes, is not a constant, or at least should not be, in evaluating deterrence. The Soviets will not necessarily attack the moment they feel they will be successful. The desire to achieve their goals in this manner, balanced with fluctuating potential risks and costs, is not a constant probability. From these five separate probabilities which Soviet risk assessment must consider, the cumulative probability that deterrence will fail can be tabulated.

The perceptive groupings outlined in Chapter II replace the analytically more limited groupings—at least for this study—used in the original. Added to the separate risk factors where relevant is the allowance for their relative impact in the deterrence equation with INF in place and without INF in place. This enables illustration of the prospective impact INF has on the various risk factors according to the perspective of each grouping. It also allows for an assessment of INF's relative impact on deterrence as a whole.

The numbers in both tables, as in the original Betts conception, are the author's own, and are acknowledged as subjective estimates. They are not intended to be representations of real empirical probabilities. They are intended to be representative of the relative positions held by the groupings and the direction of shifts in these positions. Similarly, they are not intended to represent empirical probabilities of Soviet risk assessment or western deterrence confidence, but are designed to show positions
and directional shifts in Soviet and western calculations. No assumption is being made that Soviet leaders think in purely in terms of such probabilities. However, the presumption is that in planning an invasion, or while under the pressure of crisis, they would be forced to evaluate risk in a similar manner.

The Groupings and Their Positions

Explanations of the perspective groupings, views on INF are explained in detail in chapter II, but a brief reiteration of their positions relative to tables II and III is offered here to clarify the opinions held by each grouping.

For the US deployers, as illustrated in Table II, the credibility of the threat of escalation depends upon deployment of INF. Without INF, the likelihood that the US will not escalate is very high. With INF, the escalatory potential of NATO is restored and confidence in escalation rises. The US deployers place little faith in the possibility of deliberate escalation by the European nuclear powers and have little faith in the deterrent value of the threat of inadvertent escalation.

From the US deployers' perspective, therefore, the Soviet view of the cumulative chances of avoiding escalation are quite favourable without the new INF force in Europe. With INF, however, Soviet assessments of the likelihood of avoiding escalation drop dramatically. Table II represents
the key indicators—including estimates of the likelihood of avoiding escalation—that inspire confidence, or a lack of confidence, in the strength of deterrence. For US deployers, the ability of NATO's conventional defences—even with limited use of TNWs—to withstand the perceived Soviet conventional force preponderance is very much in doubt. Therefore, the likelihood that NATO defence will fail is virtually a given.

The Soviet desire to attack is based on Soviet calculations of the plausibility of attaining victory at acceptable cost. Without INF, US deployers argue, the military chances for the Soviets in Europe look attractive. There is a reasonable chance of avoiding escalation and high confidence in the chances of conventional victory. With INF deployed, however, the Soviet propensity to attack is greatly reduced. For US deployers, then, the overall probability that deterrence will fail will drop dramatically if INF is deployed. If INF is not deployed, and the integrity of extended deterrence is not restored, the likelihood of deterrence failing is quite high.

The US balancers have similar attitudes to the deployers and differ only in the relative emphasis they place on certain hypothetical risk assessments. Without INF, for example, the likelihood that there would be no deliberate US escalation is high,
Table II
Hypothetical Probabilities of Perceived Risk of Escalation By Perspective Groupings

<table>
<thead>
<tr>
<th>Schools of Thought on European Security Issues</th>
<th>No Deliberate NATO Escalation¹</th>
<th>No Inadvertent/Accidental Escalation²</th>
<th>Cumulative Prob. of Avoiding Escalation³</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No US INF</td>
<td>INF</td>
<td>No GB INF</td>
</tr>
<tr>
<td>US Deployers</td>
<td>.9</td>
<td>.9</td>
<td>.9</td>
</tr>
<tr>
<td>US Balancers</td>
<td>.8</td>
<td>.7</td>
<td>.7</td>
</tr>
<tr>
<td>US Arms Controllers</td>
<td>.5</td>
<td>.4</td>
<td>.4</td>
</tr>
<tr>
<td>US Conventional Deterers</td>
<td>.9</td>
<td>.9</td>
<td>.9</td>
</tr>
<tr>
<td>Euro Couplers</td>
<td>.9</td>
<td>.7</td>
<td>.7</td>
</tr>
<tr>
<td>Euro Negotiators</td>
<td>.7</td>
<td>.3</td>
<td>.3</td>
</tr>
<tr>
<td>Euro Disarmers</td>
<td>.4</td>
<td>.1</td>
<td>.3</td>
</tr>
<tr>
<td>Author's Assessment</td>
<td>.7</td>
<td>.7</td>
<td>.5</td>
</tr>
</tbody>
</table>

¹ These four columns display the varying subjective perceptions that occur in the debate concerning the probability of deliberate military escalation across the nuclear threshold by the three nuclear-armed governments of NATO.

² These two columns display the perceived risk of inadvertent escalation through an arbitrarily assigned probability of avoiding unauthorized or technical-accidental detonation of nuclear weapons by NATO forces.

³ These two columns display the net perceived probability of successfully avoiding escalation across the nuclear threshold by the various perspective groupings—with and without INF systems.
Table III
Varying Perceived Risks of Failure to Deter Soviet Attack on Western Europe

<table>
<thead>
<tr>
<th>Schools of Thought on European Security Issues</th>
<th>NATO's Non Nuclear Defence Will Fail</th>
<th>Perceived Likelihood Escalation Will Not Occur&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Index of Perceived Soviet Desire to Attack&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Cumulative Compound Prob. that Deterrence Will Fail</th>
</tr>
</thead>
<tbody>
<tr>
<td>US Deployers</td>
<td>a</td>
<td>No INF b INF b' c INF c' abc ab' c'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>US Balancers</td>
<td>.9</td>
<td>.66 INF .07 INF .8 INF .2 INF .48 INF .01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>US Arms Controllers</td>
<td>.9</td>
<td>.35 INF .09 INF .7 INF .5 INF .22 INF .05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>US Conventional Deters</td>
<td>.5</td>
<td>.06 INF .02 INF .1 INF .1 INF .003 INF .001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Euro Couplers</td>
<td>.1</td>
<td>.44 INF .66 INF .5 INF .5 INF .02 INF .03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Euro Negotiators</td>
<td>.8</td>
<td>.22 INF .02 INF .7 INF .3 INF .12 INF .005</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Euro Disarmers</td>
<td>.7</td>
<td>.17 INF .07 INF .3 INF .2 INF .04 INF .01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Author's Assessment</td>
<td>.1</td>
<td>.01 INF .002 INF .1 INF .1 INF .001 INF .001</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup> These columns are derived directly from columns from the compound Probability columns in Table II.

<sup>b</sup> These figures are for illustrative purposes, although they do reflect the author's assessment of the various perspective grouping's estimation of innate Soviet aggressiveness.
though not so high as the deployers. US balancers place some faith in Soviet hesitancy over the threat of battlefield nuclear use and over nuclear capable aircraft. Deployment of INF would, however, significantly restore the credibility of NATO's escalatory threat.

For the US balancers, Soviet concern about the likelihood of deliberate escalation by the independent European deterrents is significant. Soviet risk assessment cannot discount these independent deterrents entirely. The risk of inadvertent or accidental escalation, in the balancers' view, is sufficiently small for the Soviets to discount as a negligible threat.

Without INF, then, US balancers see Soviet calculations of the likelihood of avoiding escalation as fair, if not so high as the deployers. If INF is deployed, however, US balancers agree that Soviet assessments of the plausibility of avoiding escalation drop to virtually nil. US balancers, like US deployers, have little confidence in the ability of NATO to conduct active defence, either conventionally or with limited TNW use.

The impact of INF on the Soviet desire to attack, however, is not as great for the balancers as for the deployers. While Soviet calculations of attaining victory at acceptable cost are more favourable without INF, INF alone cannot be expected to drastically reduce Soviet incentive to attack. Comprehensive improvements to western force posture in all areas is needed to effectively dissuade Soviet
adventurism.

Overall, the US balancers view INF as a positive force for deterrence. The likelihood that deterrence will fail without INF is not viewed as nearly so great as the deployers, but it is significant enough to warrant attention, preferably through deployment, and if necessary through arms control. For US balancers, deployment of INF restores the credibility of deterrence, and greatly reduces the likelihood that it will fail.

US arms controllers are generally skeptical of the impact INF would have on Soviet threat assessment and on deterrence. Deterrence is seen as much more a function of risk probabilities other than those presented by INF. There is ambivalence on the part of US arms controllers over the likelihood of deliberate NATO escalation. Deliberate escalation by NATO is not seen as especially probable, and deployment of INF, it is argued, makes little difference to NATO's propensity to escalate. For the US arms controllers, the Soviet Union would have to consider the risk of deliberate escalation by France or Great Britain to be highly probable.

Where INF is liable to have an impact, in the arms controllers' view, is on Soviet assessments of the likelihood of accidental escalation. Without INF in place inadvertent or accidental nuclear use was a function of existing weapons and control procedures. With INF deployed, the threat of key escalatory nuclear systems being overrun
meant an increased likelihood of unauthorized or accidental launch.

For the US arms controllers, then, Soviet calculations of the likelihood of avoiding nuclear escalation during an invasion of Western Europe are not encouraging. The probability of avoiding escalation is very low, with INF lowering the likelihood marginally not because of its escalatory potential but because of its impact on the chances of inadvertent use. US arms controllers are ambivalent about the ability of NATO to defend itself militarily. Generally, however, they place much more confidence in the defence option than do deployers or balancers.

In the end, for arms controllers, many of these calculations are irrelevant. The USSR has little or no desire to attack Europe, whatever the shifts in the military balance might do to its chances of victory. Accordingly, for arms controllers the overall likelihood of deterrence failing is extremely low, with INF having only an infinitesimal influence on the risk assessment equation. INF, for all its vaunted military and political potential, is essentially irrelevant to the credibility of Western deterrence. For arms controllers, of course, the importance of the new INF force lies in the realm of its arms control implications, not its military importance.

The US conventional deterriers are highly skeptical of the credibility of the escalatory threat, whether the threat
is that of the US or Great Britain of France. The Soviet Union can, with high confidence, expect the US and European nuclear powers to be self-deterred. This does not change with the deployment of INF. No US president, the US conventional deterrers argue, would order a nuclear strike on the Soviet Union from Europe, knowing what the response to such an attack would almost certainly be.

For US conventional deterrers, therefore, the cumulative chance of avoiding escalation is quite high, regardless of whether or not INF is deployed. Deployment of nuclear forces to Europe avoids addressing the crux of the European security problem. The key to deterrence in Europe, the conventional deterrers argue, is improved conventional preparedness. To this end, as George Quester argued, there is a real need to "...reconfigure conventional forces in Europe."³

Confidence in conventional defence would be most enhanced through the deployment of new conventional technologies married to new operational concepts. Only increased levels of conventional preparedness, not deployment of new nuclear systems, can truly enhance deterrence in Europe.

US conventional deterrers also evaluate the Soviet desire to attack Europe as low. A moderate increase in NATO's conventional capability would therefore be sufficient to buttress a deterrent based on a credible defence capacity, not on transparent nuclear promises. For the
conventional deterrers, the likelihood that deterrence would fail in such conditions is extremely small. For Euro-couplers, INF is absolutely essential to maintain the credibility and viability of the nuclear guarantee and to ensure the continued linkage of Europe to US strategic nuclear forces. Without INF, the threat of escalation upon which western security depends will not appear at all credible. With INF, the escalatory chain or "seamless web" of deterrence will be restored and Soviet estimates of the probability of US escalation will be restored to a healthy level.

Euro-couplers emphasize the escalatory link of Europe to the US, and place less emphasis on the credibility of escalation by the European nuclear powers. They generally concede, however, that although the likelihood of deliberate British and French escalation is low, the Soviets do, at least, have to consider the possibility. In the words of Air Marshall Sir Peter Terry (DepSACEUR): "...it would be a brave Russian who risked a Polaris or Trident response to any attempt to subjugate us by force."

Similarly, the plausibility of accidental or inadvertent nuclear use is a further risk the Soviets must take seriously. The abundance of nuclear weapons in Europe, and the "use or lose" nature of many of them, pose a unique, non-rational escalation threat that is more effective in some ways than threats of deliberate escalation.

Largely because of these other escalatory risks, Euro-
couplers view overall Soviet confidence in avoiding escalation as lower than US deployers or balancers. However, without deployment of INF, the Soviets may see some chance of avoiding escalation. With INF deployed, Euro-couplers argue, Soviet confidence in avoiding escalation is minimal.

For Euro-couplers, the feasibility of a conventional defence of Europe is marginal. The conventional superiority enjoyed by the USSR is seen as too great to be realistically matched by the NATO nations. Accordingly, Euro-couplers place little faith in NATO's conventional defence, emphasizing instead the nuclear deterrence dimension. As a result, without INF deployed the Soviet desire to attack and confidence in victory is quite high; with INF deployed, Soviet desires to gain advantage by applying force in Europe drop significantly. For the Euro-couplers, failure to deploy INF would leave a chance that deterrence might fail; deployment of INF would ensure the continued strength of the western deterrent.

The Euro-negotiators also believe INF is necessary to restore the integrity of the escalation process. They place more faith in the existing escalatory threat than do the Euro-couplers and are not as confident that INF will entirely restore the credibility of extended deterrence. Parity has placed deliberate escalation in some permanent doubt. INF deployment would, however, influence Soviet risk assessment in a positive manner.

Euro-negotiators, along with the Euro-couplers,
emphasize the importance of the security link to the US strategic nuclear force and minimize the impact the threat of escalation from the British and French nuclear forces would have on Soviet risk calculations.

Euro-negotiators also view the likelihood of inadvertent escalation as a very real influence on Soviet assessments of the chances of avoiding escalation. For the Euro-negotiators, INF will have a positive impact on Soviet risk assessment. Although Soviet confidence in avoiding escalation is quite low without INF in place, with INF deployed this confidence will be reduced to almost nil.

Euro-negotiators also place little faith in the viability of conventional defence. However, Euro-negotiators do not accept arguments warning of the imminence of a Soviet attack on Europe. They see the Soviet desire to use force in Europe as being extremely low, and it would only be marginally reduced further by deployment of INF.

Euro-negotiators are confident in the strength of deterrence. Although INF is desirable to restore the credibility of the security guarantee, the overall likelihood of deterrence failing is extremely low, largely due to the influence of other factors in the risk equation. In this broad sense, INF will only marginally enhance the western deterrent. Using arms control to achieve western desires is the preferable option.

The Euro-disarmers, for whom the imperative is disarmament, do not place much emphasis on calculations of
the military balance. For them, the greatest risk are nuclear weapons themselves and the threat of accidental war. Their position holds that escalation is likely and is more so with INF deployed. Deliberate escalation by the European nuclear powers is also likely. The dominant concern of the Euro-disarmers is that the risk of inadvertent or accidental nuclear release is high, and that risk is compounded with INF in place. The Soviets must realize, therefore, that the chances of avoiding escalation with or without INF, are very small.

The Euro-disarmers, in advocating a nuclear-free (or at least nuclear-reduced) Europe, place a great deal of confidence in the viability of conventional defence, but this confidence is largely a function of the extent of the threat. The Euro-disarmers argue that the threat of attack from the Soviet Union is virtually non-existent. E.P. Thompson, for example, wrote: "The basic posture of the Soviet Union seems to me...to be those of siege and aggressive defence." Real disarmament initiatives, either bilateral or for some, unilateral, will remove the Soviet military capacity deployed in Europe. As a result, Euro-disarmers argue that the chance of deterrence failing is minimal. The absence of aggressive intent on the part of the Soviet Union, coupled with strategic parity (preferably reduced to minimum deterrence levels or at least halved) ensures the peace.
Turning the Tables: INF and Deterrence

Several conclusions can be drawn from the notional outcomes illustrated in Tables I and II. First, and most notable, is how deterrence as a whole is a function of a number of separate, autonomous risk calculations, all of which must be considered in assessing both the likelihood of successful attack (for the Soviets) the strength of deterrence (for the West). Because of this compounded nature of risk, the impact of a shift in one risk factor is less in terms of the entire risk equation than it is if considered alone. While marginal changes to a single risk factor have a minimal impact on the whole, even large shifts in a single risk factor are "diluted" by other risk factors in the final assessment of risk. For example, for the US deployers, INF has a very significant impact on the likelihood of deliberate escalation by the US. The differential between the two notional cases—with INF and without—is 0.8. However, when the other risk factors are included, the cumulative probability of avoiding escalation narrows to 0.59, while the impact of INF on deterrence as a whole drops to a differential of 0.47 (assuming here for illustrative purposes that the Soviet desire to attack is constant). For most other perspective groupings, where INF is judged to have a less dramatic impact on one risk factor, the relative impact of INF on the entire risk equation is much less.

What this implies is that changes to Western defence posture must be considered in terms of their impact as part
a larger whole, not in terms of their impact on a given risk factor. Extolling the virtues of how a given program or policy can favourably influence one aspect of the risk equation is misleading in terms of its impact on deterrence as a whole.

Second, it is evident that the impact of INF on deterrence as a whole is, for most groupings, either small or virtually infinitesimal. Where INF is assumed to have the most significant impact is with the US deployers. However, the significance US deployers attach to INF is largely due to their lack of faith in the credibility of other deterrent factors and in their view of the likelihood of a Soviet attack. As an illustration, if their faith in conventional defence was improved, for example to .5, then the cumulative probability of deterrence failing with and without INF would drop to .007 and .26 respectively, a decrease in differentiation of .47 to less than .26. Similarly, if their view of the Soviet propensity to attack without INF in place was moderated, for example to .4, the cumulative probability of deterrence failing without INF would drop to .24, and the differentiation with INF and without falls to a much less dramatic .23.

US deployers and Euro-couplers overemphasize the impact a nuclear weapons system can have in the deterrence equation. As Betts points out, in an era of countervalue redundancy and rough equality, nuclear credibility is largely inelastic. Increases to nuclear capabilities do not
have the impact they might otherwise have had. Nuclear improvements are no longer an easy, economical means of increasing deterrence. The security returns on such deployments have become less and less significant. The US deployers make the mistake of overemphasizing the importance of a single risk factor to the virtual exclusion of the influence the others might have on Soviet risk assessment.

Third, the tables demonstrate the importance of the autonomous British and French nuclear capabilities. The influence of these independent nuclear deterrents is often de-emphasized in the West due to their relative insignificance next to the US arsenal. However, they are significant to Soviet planners in their potential to wreak destruction on the USSR. The autonomy of the European nuclear forces means the Soviets are forced to consider three different reactions to any attack from three different decision making centers: Washington, London, and Paris. This cannot be ignored in Soviet calculations of risk. The complexity of the situation is made worse by the possibility that the use of one of these independent nuclear forces could draw the US into a nuclear conflict. The US, regardless of its wishes or the suitability of the situation, might feel compelled to strike the USSR rather than attempt to ride out a sporadic and indiscriminate Soviet response.

Fourth, the importance of the risk of inadvertent or accidental escalation is clearly evident. Again, this is a
risk factor not generally emphasized as such in western security writings. Usually, it is referred to in arms control or Confidence Building Measures (CBM) enhancing literature. However, the risk of inadvertent or accidental escalation must be very cogent to Soviet planners. Military success for the Soviet Union is based largely on calculations of the likelihood of avoiding escalation, which is dependent not only on the threat of nuclear escalation through deliberate policy, but on accidental release as well. Inadvertent or accidental escalation would destroy Soviet chances of victory just as deliberate escalation would.

Fifth, evaluation of the Soviet desire or intent to attack are as important a part of the deterrence equation as estimates of how the Soviets evaluate the risks of attack. "Formal deterrence theories usually ignore the estimation of intent, positing it as a constant—the enemy will attack if he thinks he can get away with it." However, the desire to achieve objectives through war cannot be posited as a constant. It is subject to shifting leadership attitudes, political events and influences, and evolving military calculations about the potential risks and costs of aggression. The desire of the Soviet Union to achieve its objectives through war is an important influence on the risk equation. If the USSR desires war, a certain probability of the likelihood of victory may be sufficient for it to attack. If the USSR does not desire war, substantially more
favourable estimates of the probability of success are not likely to change the Soviet propensity to attack.

Those who favour deployment of INF view the Soviet desire to use force in Europe as high. Deployment of INF has various influences on the Soviet desire to attack, but it is largely construed to weaken Soviet confidence in an attack. It only does so, however, because estimates of Soviet aggressiveness by these perspectives are high, an evaluation doubtful in the face of Soviet preoccupation with its internal economic and political agenda.

A more moderate threat assessment which judges Soviet desire to engage in conflict as somewhat less changes the relative impact of INF on deterrence. If US deployers, for example, had a less negative view of Soviet intentions (i.e. .5), this would lower the cumulative likelihood of deterrence failing to .3, a differential of .18.

Finally, it is evident that given the size of nuclear arsenals and the impact of other risk factors on compound deterrence, additions to nuclear capabilities have less and less relative impact. Such is the case with INF. However, additions to conventional forces can have a much greater impact on risk calculations. Improvements to NATO's conventional force posture can significantly improve the chances for a successful conventional defence. Even for those who place little faith in the credibility of the other risk factors, improvements to NATO's conventional force posture would go a long way towards improving deterrence.
For example, if US deployers had moderate confidence in the chances of a successful conventional defence (i.e. .4) the cumulative probability of deterrence failing with and without INF drops to .006 and .21 respectively. This differential would actually be somewhat less, as reduced chances of conventional success would reduce Soviet incentives to attack. The potential impact of conventional improvements becomes even more noteworthy if other risk factors are accorded the significance they deserve.

This is not to argue that improvements to conventional forces in Europe would guarantee a successful defence. The point is that when the compound nature of deterrence in Europe is recognized, improvements to conventional defence are the best means of increasing the strength of deterrence. Such improvements would raise NATO confidence in defence and lower Soviet confidence in an attack. In addition, this does not mean to suggest a large conventional military buildup for NATO (a political and economic implausibility in any case), and neither does it display insensitivity to European concerns about making Europe safe for conventional war. The aim should be to improve NATO's conventional force posture within the context of its influence on the compound deterrence equation and with relation to the other risk factors. The temptation is to adopt the rationale of many of the INF deployment enthusiasts and argue that massive conventional improvements are the only way to strengthen deterrence and that the credibility of the other risk
factors is negligible. Plainly, this is not the case. The US nuclear capacity in Europe must be maintained to provide the element of the risk of escalation to a strategic exchange. Similarly, the credibility and impact the other risk factors have on Soviet risk assessment must be accounted for in NATO estimates of how much effort should be placed on conventional preparedness.
Endnotes to Appendix I


7Richard K. Betts, Compound Deterrence vs. No-First-Use," p. 710

8Richard K. Betts, "Compound Deterrence vs. No-First-Use," p. 710
Glossary

ACDA....Arms Control and Disarmament Agency
ADM.....Atomic Demolition Munition
ALCM....Air-launched Cruise Missile
ASM.....Air-Surface Missile
ASW.....Anti-Submarine Warfare

BAOR....British Army of the Rhine
CENTAG..Central Army Group

ERW.....Enhanced Radiation Warhead

FBS.....Forward Based Systems

GLCM....Ground-Launched Cruise Missile

ICBM....Intercontinental Ballistic Missile
INF.....Intermediate-Range Nuclear Forces
IRBM....Intermediate-Range Ballistic Missile

MAD.....Mutual Assured Destruction
MBFR....Mutual Balanced Force Reductions
MBT.....Main Battle Tank
MIRV....Multiple Independently Targeted Re-entry Vehicle
MLF.....Multilateral Force
MRBM....Medium Range Ballistic Missile

NATO....North Atlantic Treaty Organization
NORTHAG..Northern Army Group

PAL.....Permissive Action Links
PGM.....Precision Guided Munition
PSP.....Priority Strike Plan

QRA.....Quick Reaction Alert

SAC.....Strategic Air Command
SACEUR..Supreme Allied Commander Europe
SALT....Strategic Arms Limitations Talks
SAM.....Surface-Air Missile
SHAPE...Supreme Headquarters Allied Powers Europe
SIOP....Single Integrated Operation Plan
SLBM....Sea-Launched Ballistic Missile
SLCM....Sea-Launched Cruise Missile
SRBM....Short-Range Ballistic Missile
SSBN....Subsurface Ship Ballistic Nuclear
SSM.....Surface-Surface Missile

TAC.....Tactical Air Command
TNF.....Theater Nuclear Force
TNW.....Tactical Nuclear Weapon
USAF....United States Air Force

WP.....Warsaw Pact