Chapter 8

European Views on FOFA

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Chapter 8

European Views on FOFA

INTRODUCTION

FOFA, when first proposed, appeared to be quite ambitious and evoked considerable skepticism—and some outright opposition—on the part of the European members of NATO. As this report goes to press, the European attitude has become one of cautious support, tempered by concern over funding limitations and a great reluctance to buy U.S. weapons or even U.S. weapons technology. The governments of the Federal Republic of Germany (FRG) and the United Kingdom (U. K.) have taken a cautious approach, emphasizing that FOFA implementation will be slow and incremental; the opposition parties have generally declared themselves against the concept. The smaller nations in the region have generally followed the approach of the German Government.

Clarification and refinement of the initial FOFA concept–particularly to answer European concerns–led to the November 1984 approval of the Long Term Planning Guideline for FOFA by the NATO Defense Planning Committee. While this provided a political-level endorsement by the Allies of FOFA as one of several key mission concepts, commitments did not extend further than to study how FOFA should be implemented. Much skepticism remained among the Europeans regarding its implementation and the priority it should have within NATO's strategy.

Over the past 2 years, the European Allies have come to understand that some of their early objections were based on misunderstandings of FOFA, while military planners at Supreme Headquarters Allied Powers Europe (SHAPE) and in the Pentagon have come to redefine FOFA in ways that are less technically challenging and more in keeping with the common views of the Allies.

The staff at SHAPE has been working to define FOFA in more specific terms as a basis for operational and procurement planning, and discussions have been proceeding in the Conference of National Armaments Directors (CNAD) and other fora to define the systems the nations will procure to support FOFA. As these proceed and interact, there is movement toward a consensus: the individual nations are becoming more supportive of FOFA as a concept, and FOFA is being modified to take into account their concerns and their existing defense programs.

Currently, the ability to attack follow-on forces to great depths remains part of the FOFA concept and a possible long-term goal. In the near term, however, interest has focused on shorter ranges. Agreement is emerging to define systems already in the development pipeline-e. g., artillery enhancement, MLRS and RPVs—as contributions to FOFA, and some progress has been made toward signing agreements for cooperative development and production of other systems such as the modular stand-off weapon. As yet, the United States has obtained no official European interest in what it views as two key systems: Joint STARS and ATACMS, although within some nations there is growing interest.

This chapter reviews the current positions of our Allies and the evolution of those positions, discussing the reasons for their early opposition and why this opposition has so greatly diminished. It provides insights into some of the underlying differences in national interests of the NATO Allies, and into the process by which these differences can be reconciled, given an overriding political commitment to keep NATO working together. In particular, the chapter:

- discusses the positions of the Central Region Allies regarding FOFA;
- presents the principal European views of

FOFA, including those of major opposition parties;
- describes the evolution of European attitudes toward FOFA;
- analyzes the factors that underlie the European positions; and
- identifies ways the United States might gain additional support for FOFA.

CURRENT POSITIONS OF THE ALLIES

In contrast to such issues as Pershing II deployment in Europe, which required the Allies to make sharp and clear choices, FOFA provides ample room for each nation to define its contribution in the way it chooses. FOFA could encompass all systems that reach from just behind the close battle to as far into eastern Europe as possible, and thus could include missions that have previously been considered as traditional close air support and interdiction fire support within NATO. Although the United States has favored an ambitious deep strike effort, the Europeans have a pronounced preference for shorter range systems. Thus, European response to FOFA thus far has been largely a re-labeling of previously planned short-range weapons, sensor systems, and air interdiction improvements as contributions to FOFA, but there also appears to be growing interest in developing and producing more advanced systems.

The process of defining national positions and arriving at a consensus within NATO on major initiatives such as FOFA has traditionally been slow, and may still be in an early stage of evolution in the case of FOFA. The concept was originated by SHAPE and refined by the NATO international staff; it has now passed primarily to the CNAD to work out the means

Photo credit: U.S. Department of Defense

The Multiple Launch Rocket System, which most Central Region Allies plan to buy.

of implementation. The characterization of a European position on FOFA is further complicated because the concept is still undergoing development and revision by its two original supporters, SHAPE and the United States.

Nonetheless, there appear to have been significant shifts in European attitudes over the past year. Despite two major NATO studies that found great merit in the FOFA concept (one conducted by the SHAPE Technical Centre and the other by the NATO Defence Research Group), early 1986 evidenced much skepticism, particularly among the Germans, who argued that FOFA should be no greater than third priority, after the close battle and the air battle. FOFA was seen as a new dimension of warfare, competing with and detracting from the close battle. There was also skepticism regarding the feasibility of the technologies needed to implement FOFA.

More recent indications suggest that the initial strongly skeptical attitude has been changing. The Europeans now appear willing to discuss possible development of FOFA systems with ranges up to 150 kilometers beyond the FLOT, in distinction to their previous position which would limit consideration of FOFA systems to a range of about 30 kilometers. Concern for diverting resources from the first echelon battle, and insistence on setting a relatively low priority for FOFA have become muted. Emphasis is on cost, cost-effectiveness, comparisons of U.S. and European systems, and how to produce the necessary systems. Work is now under way to agree on the systems that would be candidates to fill the various needs that fall under FOFA.

These developments were paralleled during 1986 in the activities of the FOFA II working group, a quasi-official body created by the U.S. Department of Defense (DoD) Defense Science Board to explore strategies for cooperation on FOFA systems with the Allies on a bilateral basis. Participation of European governmental and industrial representatives in the meetings of the FOFA II working group has broadened. It is expected that the working group will be able to offer recommendations on five to seven FOFA-related programs when it reports to NATO in the spring of 1987.

West Germany

The FRG, as the major European contributor to NATO and the country most likely to be affected by FOFA deployments, wields considerable influence on the Allies' views concerning FOFA. While affirming support for FOFA in principle, the FRG has thus far underlined that FOFA ranks behind first echelon defense and counter-air in its military priorities, although the Germans appear to have dropped an effort to get NATO to assign priorities among the key missions.[1] The German Government views FOFA as a supplement or supporting function for the main mission of forward defense and preventing a breakthrough.

This arises, at least in part, from fundamental political considerations: forward defense is a cornerstone of membership in NATO for the FRG with one-third of its population and one-fourth of its industry within 60 miles of the Warsaw Pact. Early German concerns that FOFA was too aggressive for NATO, and that rapid advances by the stronger nations would discourage the weaker nations and put strains on NATO—although still present—appear to be waning.

Nevertheless, Germany is procuring some systems for FOFA, is developing others, and is at least exploring cooperative efforts on still others. The Germans believe that killing deep is more expensive than killing at shorter ranges, and that therefore only a limited FOFA capability will be affordable. This cannot be applied in a “hose” approach, but must rather be related to finding and blunting the "schwerpunkt, ” or focus of an attack.

[1] FRG officials have consistently emphasized the first echelon threat in commenting on FOFA. FRG Defense Minister Woerner stated: “It (FOFA) is a concept we support, but there must not be the slightest doubt that stopping the first echelon has first priority for the FRG and the Alliance as a whole, because it would make little sense to fight the second echelon once the first one has reached the Rhine. ” Quoted in *Wehrtechnik*, February 1984.

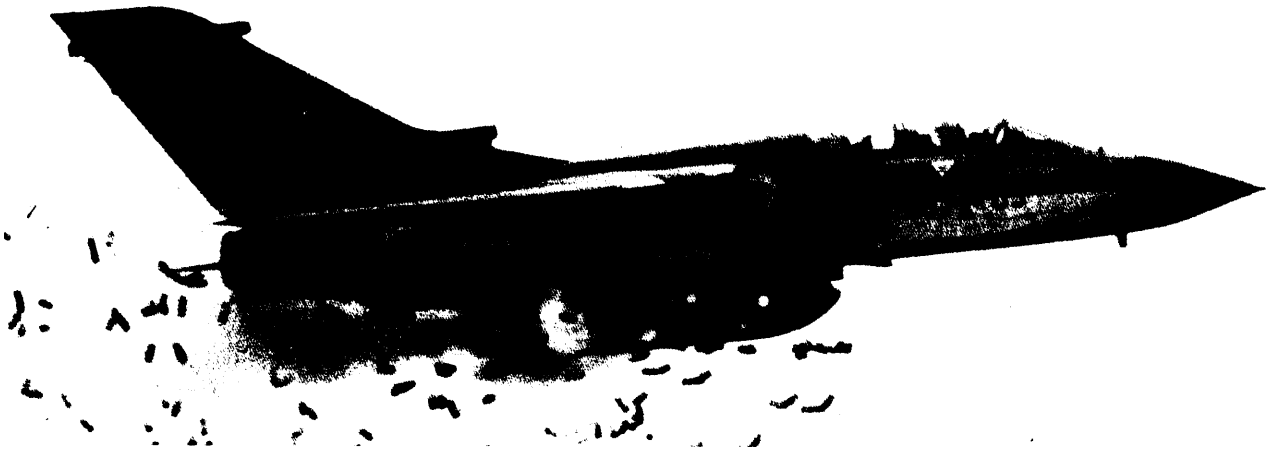

Photo credit Messerschmitt-Bolkow- B/ohm GmbH

West German Tornado aircraft dispensing KB-44 submunitions.

The Bundeswehr is interested in improving 155mm artillery and buying the Multiple Launch Rocket System (MLRS), as well as in improving reconnaissance through the CL289 and other RPVs. For longer ranges, they see ballistic missiles, like ATACMS, as primarily suited to stationary soft targets, and are developing combat drones to attack tanks.[2] For air interdiction, the Luftwaffe wants to upgrade the combat role of the Tornado fighter aircraft, which it produces jointly with the United Kingdom and Italy. The Germans believe that the KB-44 submunition dropped by the Tornado is the best anti-armor submunition currently available. For the future, they are investigating the "vertical ballistic weapon, a sophisticated dispenser for a submunition of greater lethality than the KB-44, and are participating in the Modular Stand-Off Weapon (MSOW) program.

The Germans may be slowly developing an interest in Joint STARS, but they appear to be very cautious about it. Although they recognize the value of continuous broad area surveillance, they see Joint STARS as going beyond the Army's needs (out to 75 kilometers), but not satisfying the Air Force's needs for surveillance out to as much as 500 kilometers.

[2]The FRG Ministry of Defense has budgeted DM 650 million for reconnaissance RPVs during 1989-97. Antitank combat drones are not budgeted until 1997. See Karl Schnell; "Pilotless Small Air Vehicles for the Army," *Wehrtechnik*, May 1985.

The FRG position appears to be evolving. Some U.S. observers have linked this to a recently heightened West German concern, frequently enunciated by Defense Minister Manfred Woerner, about the need for defense against the threat posed by Warsaw Pact conventionally armed theater ballistic missiles (TBMs). Although TBM defense could involve a wide variety of active and passive measures outside the scope of FOFA, an important element might be the development of a conventional missile that could strike Warsaw Pact TBM launchers beyond present artillery range. It should be noted, however, that thus far the FRG has not indicated an interest in the development or deployment of such a missile.

The Germans are great believers in cooperative ventures; roughly 70 percent of their capital expenditures are for cooperative programs. However, unlike the British and French, their focus is almost exclusively on systems for use in the Central Region and they tend to shy away from exporting military equipment. Consequently, their defense industries are not nearly as large as the British or French. They believe that successful development programs ought to stimulate technology development among all the partners, but that the partners ought to be on comparable technological levels. They see themselves as being advanced in munitions, delivery sensors, and attack drones.

United Kingdom

While maintaining some reservations about whether the concept and technology can actually be made to work, the British are quite receptive to FOFA. From a pragmatic perspective, however, neither the Army nor the Royal Air Force (RAF) is confident about getting the resources to implement it. Continued economic problems in the United Kingdom will sharply limit Britain's ability to invest in expensive new systems. The U.K. defense budget will likely decline in real terms over the next several years,[3] and heavy commitments for the Trident II program will make it very difficult for the United Kingdom to undertake any major initiative in conventional defense improvements.

Like the other Europeans, the British are planning to improve their artillery and buy the MLRS. Investment in any longer range ground systems would occur farther in the future, if at all. The British are concerned about having the targeting systems to employ even MLRS in their corps sector. Beginning in 1988, they will procure the Phoenix Remotely Piloted Vehicle (RPV) for this purpose. They are developing the ASTOR system and keeping an open mind on the possibility y of a jointly funded Joint STARS for the entire Central Region. For interdiction, the British are planning to improve the BL755 anti-armor cluster weapon and procure an improved Harrier aircraft with longer range. The mainstay of their interdiction capability will remain the Tornado.

The British believe that they have strong defense industries that can contribute to cooperative programs in important ways. However, they point to difficulties of cooperating with the United States, particularly on highly classified (so-called black) programs.

France

Although France is not a member of the NATO integrated command, it exerts considerable influence on European thinking about conventional defense issues. The French have no direct involvement in a SHAPE concept; the French military has expressed some interest, however, in equipping its forces stationed in France and the FRG with deep strike conventional weapons. Budget constraints, however, and a lack of strong interest in such systems by the French armaments industry will serve to limit French options. The French take it as a general principle that their forces should be light and mobile; they are hesitant to burden their ground forces with cumbersome systems for deep attack, and they build small aircraft that are less capable than those of other nations of carrying the larger ordnance loads necessary for FOFA.

In general, the French are not enthusiastic about major conventional defense enhancements in NATO, which they see as diluting the threat of nuclear retaliation on which France bases its defense strategy. The trend, however, is toward greater French interest in participation in NATO's conventional defense, and the French have been active in technological developments. This may reflect recent efforts at improving coordination with the FRG on conventional defense matters as well as the desire of the French armaments industry to keep up with developments that may affect the NATO arms market.

Because France exports about half of its armaments production, it is extremely sensitive to the economic and commercial aspects of U.S. defense initiatives such as the "Emerging Technologies" program, SDI and FOFA, and thus has tended to crystallize European discontent with what is perceived to be an unfair imbalance in U.S. high-technology defense trade with Europe.[4] The recent decline in Middle East oil revenues has sharply affected French arms exports, and has increased French

[3] For 1987, the British defense budget is scheduled to remain flat in cash terms, with a forecast real decline of 3 to 4 percent. See "Pay Up or Cut Up, " The *Economist*, Mar. 29, 1986.

[4] The threat to French industry from FOFA was noted by a leading French journal: ". . . it is impossible to ignore the American pressure to sell this new generation of [FOFA] weapons to its European Allies. The future of the French armaments industry—No. 3 in the world—and hundreds of thousands of French jobs are at stake. " "Can France Defend Herself?" Le *Nouvel Observateur,* January 1984.

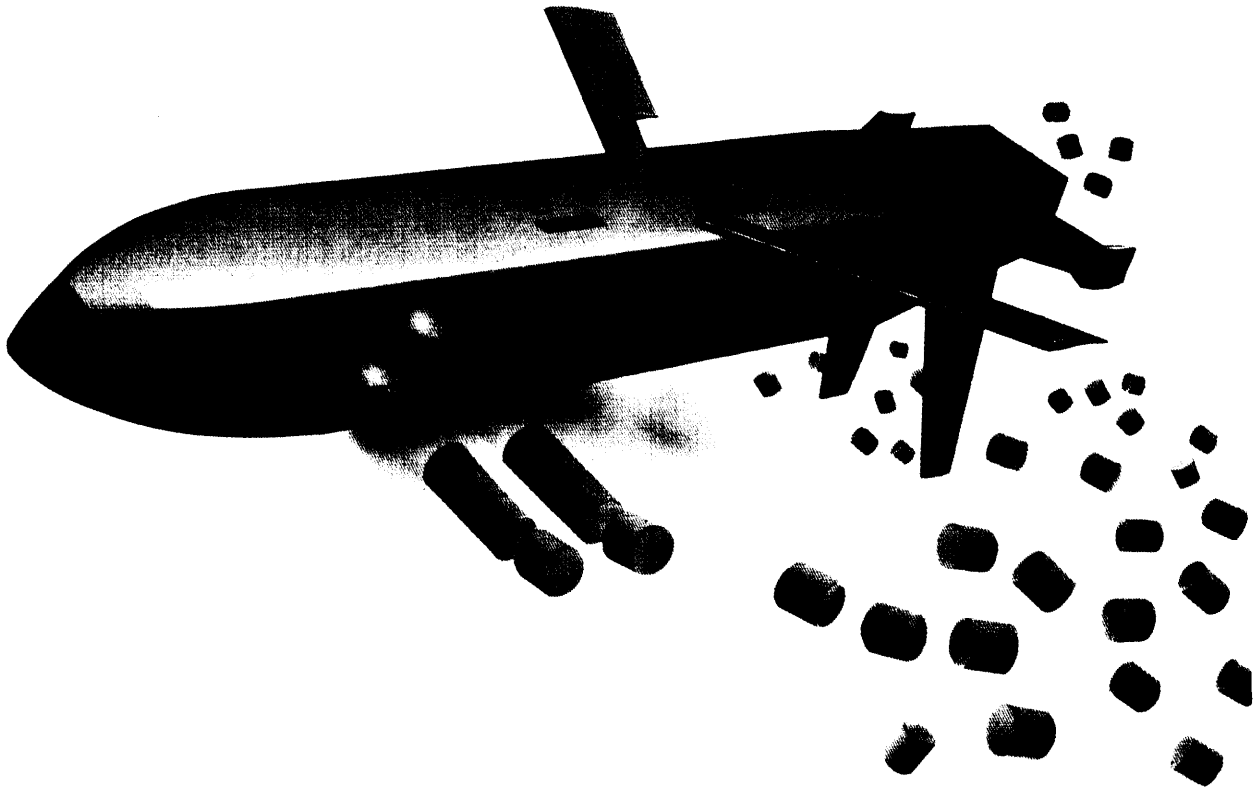

Photo credit: Messerschmitt-Bolkow-Blohm GmbH

Developmental French-German Apache dispensing submunitions.

interest in the NATO market and intra-European cooperative production arrangements, including some short-range FOFA systems. The French are very interested in cooperative ventures, but view them as complex affairs and are skeptical about their potential success. Protection of French cash flow, defense industries, and technology base will all be factors in joining cooperative programs.

The Netherlands

The Dutch fully support FOFA as a key mission concept, but within their own forces, place higher priority on defeat of the lead echelon, air defense, and air support of the Army. They support NATO's current focus on the region within 150 kilometers of the FLOT, but will focus their own efforts on ranges out to about 30 kilometers, and on improvements in the ability of the Royal Netherlands Air Force to perform battlefield air interdiction.

The Royal Netherlands Army believes that greatest effect can be obtained by attacking ground combat units, particular those regiments of the second tactical echelon that are moving to join the battle. These can best be identified when they are 25 to 30 kilometers beyond the FLOT. To satisfy these requirements, they look to improved 155mm artillery, MLRS, and improved RPVs with real-time capabilities. The Dutch are buying MLRS directly from the United States to avoid delays in the European cooperative MLRS program. They believe that the systems necessary for deeper attack are beyond their means, al-

though they might be interested in NATO–as distinct from national-procurement of systems like Joint STARS.

The Dutch have an all F-16 Air Force which they are interested in upgrading with better munitions, self-protection, reconnaissance pods, and equipment to allow them to operate at night. Both the Army and the Air Force are interested in smart anti-armor submunitions.

The Dutch are interested in cooperative programs as preferable to simple purchase of military equipment abroad, but tend to be cautious. They have withdrawn from some programs which did not meet their needs–e.g., the MLRS program because it was too slow, and some air-delivered weapons because they became incompatible with single-seat F-16s. While recognizing the success of the F-16 program, they are uncomfortable with co-production of systems designed elsewhere, because these do not stimulate Dutch technological development.

Belgium

The Belgians have never doubted the soundness of the military principles behind, or the need for, FOFA, but their ability to contribute is limited both by funding and by a problem common among small nations–the inefficiency inherent in a small force maintaining a large variety of systems.

The Belgian Army falls far short of what it believes it needs to defend with high confidence against the lead echelon. Future funding is therefore likely to be directed primarily toward the close battle. Belgium would like to buy the MLRS, but that would be at least 10 years into the future and would require timely RSTA and C^3 that the Belgian corps currently does not have. The Belgians are looking toward improvements to their Epervier drone system, first fielded in 1964, to make it more compatible with MLRS and to programs such as Limited Operational Capability-Europe (LOC-E) and Battlefield Information Collection and Exploitation System (B ICES). Belgium has the conventionally armed Lance missile which, when targeted by Epervier, could be used against soft targets that do not move often (although its accuracy is not high). In considering a replacement for Lance, first priority would be on the nuclear mission. They would be unlikely to buy a conventional tactical missile system, such as ATACMS.

The Air Force is not likely to invest in high-tech, special-purpose weapons anytime soon. They consider themselves to be too small to maintain a variety of weapons and supporting systems. Instead, they will concentrate on general-purpose bombs—including some laser guidance kits—that can be used to support a variety of missions. They see themselves as contributing to delay and disruption, and are willing to accept a large degree of specialization among the various national air forces.

Intra-European Cooperation on FOFA

While FOFA has contributed to intensifying intra-European discussion of independent armaments production, it appears that cost considerations, among other factors, will tend to limit the range of cooperative interest to shallow strike weapons and sensors. The Independent European Programme Group currently lists 31 cooperative projects, only 5 of which have direct FOFA application: RPVs; Surveillance and Target Acquisition; 155mm artillery; Maverick D; and third-generation Anti-Tank Guided Weapons. Most of these systems are for attack at ranges of less than 50 kilometers. Further, intra-European cooperation on weapons production has been hampered due to divergent national interests and priorities. Long-range FOFA systems are not likely to be of priority cooperative interest due to their high cost and specificity to the Central Front threat, which makes them unlikely candidates for export to third countries.[5]

[5]The relationship between range, cost and export potential which influence European thinking about FOFA systems production is evidenced in an article by Emile Blanc, then French Delegate General for Armaments:

> What is involved in the case of emerging technologies that are repeatedly mentioned are terminal guidance, microelectronics, highly sensitive sensors and the like. These are relatively difficult to solve, but not unsolvable, As for the danger to ex-

The 1985 Nunn Amendment

In an effort to respond to European industrial concerns, reduce duplication of effort, and improve the climate for U.S./European armaments cooperation, the 1985 Nunn Amendment authorized DoD funding of cooperative research and development projects and side-by-side comparative tests of U.S. and European weapons systems. The appropriation for these purposes for fiscal year 1986 was $145 million, which was increased to $185 million in fiscal year 1987. To qualify for funding, proposals must have at least one European partner. The forum for discussion of Nunn Amendment proposals has been the CNAD, in which national armaments directors may indicate initial interest in participating in a cooperative venture by issuing "statements of intent, which may result in signing of contracts among armaments firms in the interested countries. The first such contracts are expected to be signed in the fall of 1987.

Although the Nunn Amendment was not specifically designed to foster cooperation on FOFA, five of the ten proposals for which "statements of intent" have been issued thus far have a FOFA application. These are:

1. MSOW–Modular Stand-off Weapon (air-launched, short and long range for fixed and moving targets, independent guidance);
2. APGM—155mm Autonomous Precision Guided Munition;
3. ARDS–Air Radar Demonstration System (ground based data systems to demonstrate the interoperability of the U.S. Joint STARS, the French ORCHIDEE and the U.K. ASTOR sensors);
4. NIS–NATO Identification system (Identification Friend or Foe); and
5. BICES–Battlefield Intelligence and Communications Exploitation System (C' I and data fusion)

All except ARDS predated FOFA.

European reaction to the Nunn Amendment initiative has been quite positive but it is not evident that the positions of the Allies in this regard have been influenced much by FOFA. Of the five proposals noted above, only ARDS appears to have directly resulted from NATO's adoption of FOFA as a key mission concept, and here the concern is to ameliorate what may be an undesirable duplication of effort on national sensor systems. European North Atlantic Assembly parliamentarians have commented that none of the agreed proposals would commit the Alliance to a "deep strike" posture.

The United States withdrew a proposal for cooperation on ATACMS because no European partner could be found. There has also been a fair amount of criticism from European academics about the economic and political justification for cooperative projects with the United States, on the grounds that this is a distraction from essential intra-European technology cooperation, and that Europe is in danger of giving away its technology too cheaply to the United States. Thus far the Europeans seem to prefer European-produced systems, even if that eventually means paying more for less capability.

Initial European Reaction to FOFA

The concept of striking behind the enemy's lines to blunt an attack has been a standard part of warfare for centuries and an agreed element of NATO defensive strategy since the founding of the Alliance. Over the years, significant improvements in NATO's ability to accomplish this mission with conventional artillery weapons and air forces—including the capability for deep strike at Warsaw Pact (WP) airfields and other fixed targets-have been introduced as a matter of course. Moreover, the idea of employing NATO's superior technological capacity for producing advanced

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port, I would like to differentiate between medium range and long range types. Medium range types are unlikely to become too expensive. For the long ranges it appears that the technological goals have been set very high, Therefore the whole thing can look expensive.

See, "High Priorities to French-German Arms Development, " *Wehrtechnik*, February 1984.

deep strike weapons and thereby offsetting the WP advantage in ground forces received enthusiastic endorsement from distinguished military experts on both sides of the Atlantic.[6]

Nevertheless, when FOFA was formally introduced for NATO-wide consideration in 1982 —in the form of a SHAPE recommendation to the Defence Planning Committee—the concept aroused considerable controversy among the Allies.' The following concerns and objections were noted among the Europeans; we do not know how widespread or strongly held they were:

- The WP first echelon is by far the greatest threat to NATO. In concentrating on the defeat or disruption of the follow-on forces, FOFA sets the wrong priorities and may siphon off resources needed to respond to the more urgent threat.
- FOFA presupposes a deep echeloning of WP forces to achieve overwhelming local force superiority and breakthroughs by standard attrition warfare. However, recently observed developments in WP doctrine suggests a greater emphasis on a first echelon attack, with the creation of Operational Maneuver Groups (OMGs) designed to penetrate quickly into NATO's rear. FOFA also assumes that a WP attack can be repulsed by delaying the arrival of follow-on forces, but observations of WP maneuvers indicate there is considerable slack time planned in the movement of forces, and delays occasioned by FOFA deep strikes can be recouped. FOFA is thus not applicable to NATO's current understanding of the WP threat.[8]
- The FOFA concept, in particular the idea of deep strikes against moving armored targets, relies too much on the development of unproven technologies. Deep strike systems would be costly and vulnerable to WP countermeasures. Even if individual components of FOFA systems could be demonstrated to work under ideal test conditions, there is no guarantee that highly complex FOFA systems would function as supposed in a battle environment.[9]
- The deployment of highly lethal deep attack systems on the Central Front is too aggressive a stance for a defensive alliance such as NATO. Conventional weapons that could reach hundreds of kilometers into eastern Europe are not consonant with NATO's goals, and change the character of the Alliance from defense to that of offense.[10]

[6]The 1983 and 1985 reports of the privately funded European Security Study (ESECS 1 and 2) which figured prominently in the evolution of the FOFA concept had extensive participation of European military experts, including retired Bundeswehr General Franz-Joseph Schulze and retired UK Chief Air Marshal Sir Alistair Steedman. It should be noted, however, that as early as 1983 General Schulze cautioned:

> the strengthening of our conventional deterrence anyway can only be implemented gradually', not only for reasons of limited budgetary funds, established armed forces and armaments plans, available equipment and weapons, but also for reasons of differences in the national interest situation, For the United States, the solutions will possibly look quite different simply because of its obligations outside the NATO area.

Speech to the Clausewitz Society, Hamburg, August 1983.

[7]SACEUR General Bernard Rogers wrote an extensive rebuttal of European criticisms of FOFA: "Follow-on Forces Attack: Myths and Realities, " NATO Review, December 1984. However, the major European objections to FOFA are reiterated in a report of the North Atlantic Assembly, a group of European parliamentarians considered pro-NATO. See *Conventional Defense in Europe: A Comprehensive Evaluation,* NAA Sub-Committee on Conventional Defense in Europe, Karsten Voigt, Rapporteur, December 1985.

[8]One European analyst writes:

> (The WP Operational Maneuver Group) is a means to an end, the end being the rapid collapse of NATO and the limiting of the war to the battlefield, and the means being a surprise attack on a broad front with several axes, I f the offensive is in one operational echelon, NATO's plans for interdiction against a second operational echelon wilf be in vain. There may be no such second echelon within Eastern Europe for several days.

Christopher Donnelly, quoted in NAA *Conventional Defense in Europe,* pg. 25.

[9]Farooq Hussain, Director of Studies at the U.K. Royal United Services Institute for Defense Studies, commented on the application of "emerging technologies" for FOFA:

> . . . vulnerability would considerably reduce the predicted effectiveness of the weapons, requiring that they be bought in large numbers or expensively re-designed to reduce their vulnerability. These considerations would seem to accord FOFA a far lower priority than other conventional defense weapons whose characteristics and costs are more familiar and predictable.

See, "NATO's Conceptual Military Framework, " *Armed Forces,* September 1985.

[10]The charge that FOFA is an aggressive strategy was the rallying point of European leftist criticism during 1984 and early 1985. "Concealed behind the name (FOFA) is the further development of a military doctrine which in the years ahead could saddle the Alliance with a new arms race—thus making the already precarious balance of terror even shakier, opined the West German mass circulation weekly *Der Spiegel, Nov.* 26, 1984.

- The presence of FOFA systems on the Central Front would be destabilizing in a crisis. Faced with a "use or lose" situation, field commanders may be tempted to launch preemptive deep strikes with weapons that may be dual capable. The WP would be unable to distinguish between a conventional FOFA deep strike and a tactical nuclear attack during the time of flight of the initial missiles, and may respond immediately with a nuclear barrage.
- FOFA would set back prospects for arms control. The WP response would be to field a new generation of conventional weapons, for both defense and offense, and fuel a new round of the arms race. It would also be likely to make the Soviets more intransigent on Mutual and Balanced Force Reduction (MBFR) negotiations, and cause them to further front-load the WP forces.
- The basis of NATO's defense is the threat of nuclear retaliation. FOFA is designed to make a conventional defense of Europe more calculable, and thereby signals wrongly to the WP that a conventional attack might not be met with a nuclear response.

To some extent, these and other European objections to FOFA represented differences of expert opinion, and reflected views of some U.S. critics of FOFA.[11] However, there were other more general political and economic factors that may serve to explain the Allies' largely negative reaction during the time the endorsement of FOFA was under consideration in NATO.

The Political Background

During the early 1980s all of the European Allies were deeply embroiled in domestic political debates concerning Intermediate-range Nuclear Forces (INF) deployments. Even strongly pro-NATO governments, such as the Conservatives in the United Kingdom and the Christian Democrats in West Germany, felt the INF issue left little room for maneuver within their political constituencies for major new defense efforts, however meritorious. Associated with the INF issue was the rise—for the first time since the 1950s–of anti-NATO "peace" movements in most European countries as significant political forces. Having lost on the INF issue, some of these political movements, such as the Greens and the left-wing Social Democrats in West Germany, believed they had found a new avenue of attack in FOFA. They were aided in this regard by a commonly held view in Europe that FOFA—while ostensibly an independent SHAPE recommendation to NATO—was in fact of U.S. origin, and closely associated with on-going conventional deep-strike weapons developments of the U.S. Army and Air Force.

Particular emphasis was placed on the alleged relationship between FOFA and the "AirLand Battle" doctrine recently adopted by the U.S. Army.[12] The charge that FOFA was a thinly disguised attempt to impose a new, more aggressive and unpredictable strategy on NATO found considerable resonance in the FRG that for domestic political reasons cannot adhere to a declaratory defense policy which envisages either strategic advances or withdrawals much beyond the inner-German border. The West German opposition parties formally condemned FOFA, and put forward alternative conventional defense concepts, such as small and lightly armored anti-tank units, which they claimed would make NATO physically incapable of aggressive action. These ideas were shared in large measure by the U.K. Labor Party and other European socialist parties.

[11] See, for example, *The New Technologies: Technological Brilliance or Military Folly?* by Steven L. Canby, November 1983.

[12] AirLand Battle was promulgated by the U.S. Army in Field Manual 100-5: *Operations* in 1982. In envisaging the integrated use of chemical, nuclear and conventional forces in "rapid, violent and disorienting" operations, AirLand Battle became a prime target for the European left. The specific charge was that the U. S., through the "Rogers Plan" (i.e., AirLand Battle and FOFA), wants to ready NATO for an attack on the WP in the event of a U. S,-Soviet clash in the third world. See, for example, *Angriff als Verteidigung: Airland Battle, AirLand Battle 2000, Rogers-Plan*, a major study published in 1984 by the West German Greens which focuses on U.S. plans for "lateral escalation."

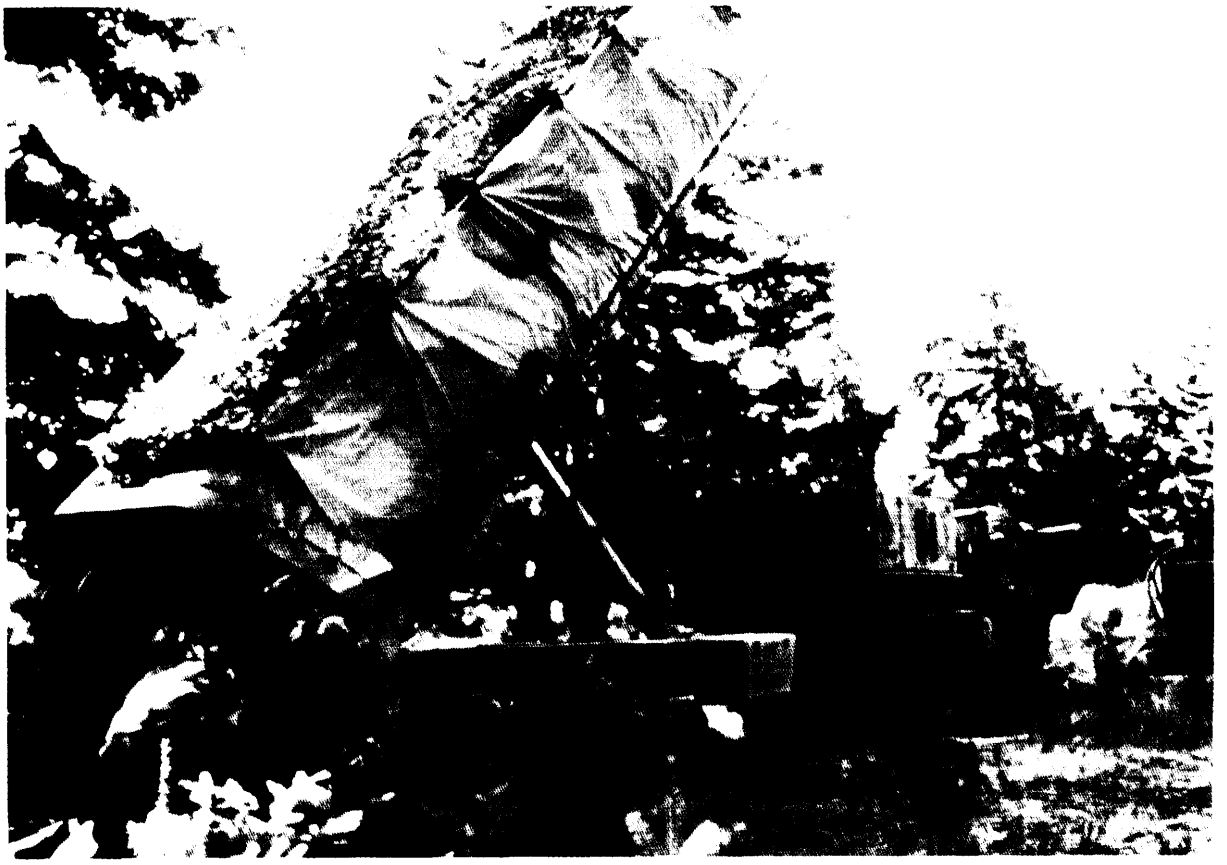

Photo credit: NATO

Protest against deployment in Europe of nuclear weapons, such as the ground-launched cruise missile shown below, formed a backdrop to the initial FOFA debate.

The European left was able to dominate the public discussion of FOFA, due in part to the reluctance of pro-NATO governments to engage in polemics on a NATO issue. In the view of many European political leaders, any publicity about NATO initiatives was undesirable, because it enabled the opposition to draw on latent anti-NATO and anti-American sentiment. For these leaders, what NATO needed most was a period of relative calm. As a new and potentially major departure for NATO, FOFA thus found few political advocates in Europe.

The "Burden Sharing" Issue

A further constraint on European acceptance of FOFA was the ongoing debate with the United States over equitable sharing of NATO's defense costs. Due to continued high unemployment and lagging economic growth, most European Allies felt it increasingly difficult to meet previous defense commitments to NATO. Their 1978 pledges to strive for increases in real defense spending of 3 percent per year had in most cases not been fulfilled. Likewise, none of the conventional force deficiencies identified in the 1978 NATO Long Term Defense Program had been adequately addressed. While the Europeans were unable to meet past obligations, newer studies—largely of U.S. origin-pointed to the need for even greater defense efforts. In addition to FOFA, other ideas–SDI, Emerging Technologies, Counter-Air 90, chemical weapons and the 1984 Nunn-Roth Amendment—appeared as politically difficult and potentially costly new issues.

Faced with what some European parliamentarians called an "acronym avalanche," the Allies were uncertain where FOFA stood in U.S. priorities. " The 1984 Nunn-Roth Amendment,[14] while it failed to pass the Senate, sent a strong signal of U.S. displeasure about lagging European conventional defense efforts, but was mainly directed at improving first echelon sustainability. It thus appeared to the Allies that, whatever priority the United States attached to FOFA, increased European spending for FOFA could not be offset by reduced attention to other NATO missions.

Although SACEUR General Rogers and other FOFA advocates initially claimed that FOFA deployment could be covered by an additional 1 percent real increase over the 3 percent spending pledge, a later study by the Defence Research Group (DRG)[15] reached significantly higher estimates: i.e., $40 billion to $50 billion over a 10-year period. Assuming that FOFA implementation would be shared by the Allies in rough proportion to their overall financial contributions to NATO, this would have required the major Allies to achieve between two to three times the rates of defense spending increases they had been able to make in recent years. Initial European reluctance to endorse FOFA can thus be understood, in part, as an unwillingness to make or imply a further financial commitment the Allies would be unable to fulfill, and thereby exacerbate the "burden sharing" issue."

"The reaction of many Europeans to U.S. defense activism in 1984 may be reflected in the following quote from a U.K. member of Parliament at the time of the November 1984 Defence Planning Committee meeting: "Governments can't even meet their existing commitments. When you add the cost of SDI to the cost of FOFA and all the other things, it is mind-boggling." Bruce George, rapporteur to the North Atlantic Assembly's Political Committee; cited in *Aviation Week and Space Technology*, Mar. 18, 1985.

[14]The 1984 Nunn-Roth Amendment called for the phased withdrawal of U.S. forces if the European Allies failed to increase their conventional defense efforts to:

1. meet the annual 3 percent real defense expenditure increase,
2. meet the NATO sustainability goal,
3. raise infrastructure funding for aircraft shelters and support facilities for U.S. tactical air reinforcement, and
4. make progress in raising the nuclear threshold.

[15]The Defence Research Group is an advisory body to NATO's Defence Planning Committee. The DRG study of FOFA, *Relative Value of Attack on Follow-on Forces,* was issued July 10, 1985.

[16]Final 1984 NATO statistics indicate that, without the United States, the Alliance failed to meet its 3 percent spending goal, and that in 1985 fewer NATO Allies met this goal than in 1984. *AP Wire,* May 13, 1986.

EVOLUTION OF EUROPEAN ATTITUDES TOWARD FOFA

Despite the Allies' political and economic reservations about FOFA, they had little desire to act divisively on an issue which appeared of high interest to the United States, particularly at a time when the INF debate had taken on the overtones of a test of Alliance solidarity. The 1984 decision by the Defence Planning Committee (DPC) can be seen as something of a compromise solution, in that it provided a general endorsement of the FOFA concept, but without an indication of its priority or a financial commitment regarding its implementation.[17] As an additional precaution, on West German initiative, NATO agreed to undertake simultaneously a Conceptual Military Framework study, to place FOFA in the context of overall NATO defense priorities.

Since the DPC decision, some of the sharp edges have worn off the transatlantic discussion of FOFA. The successful resolution of the INF issue has given European governments some additional political scope to concentrate on other defense priorities, although budgets for most of the Allies continue to remain very tight.

Public pronouncements by NATO headquarters and allied governments have been low key, emphasizing that NATO would concentrate first on the shallow strike systems in which a present capability exists; decisions on deep strike systems—which aroused particular European concerns—could be deferred well into the next decade. The European left, which

"During the DPC debate, some of the European allies reportedly insisted that they could endorse FOFA only on the condition that no additional defense spending be required. See. *Aviation Week,* Mar. 18, 1985.

had controlled the public debate on FOFA in 1984, has also markedly abated its criticisms.

Opposition parties have found that FOFA is too complex and abstract an issue to raise much public attention. Moreover, the rise in popularity of many of the "peace" movements was based largely on the scare of nuclear war; to be now perceived as attacking too strongly NATO's conventional alternative would lose the centrist votes they had attracted. The intrusion of SDI and arms control issues have also contributed to keeping FOFA off the front pages.

In contrast to the previous year, the Allies also sensed during 1985 that there was some easing of the U.S. posture on FOFA and other conventional defense issues. European pledges to increase ammunition stocks and infrastructure spending have responded in some measure to U.S. concerns reflected in the 1984 Nunn-Roth Amendment,[18] and have added weight to the European argument that financial limitations will necessitate slow FOFA implementation. Another favorable development lay in the 1985 Nunn Amendment, which provided a financial incentive for greater U.S.-European cooperation on FOFA systems research. FOFA was again routinely endorsed at the May 1985 conference of NATO Defense Ministers, which pledged "special and coordinated efforts to strengthen conventional defense with the means available, but without designation of FOFA as a priority.[19]

The European Allies thus appear comfortable with the present trend. Criticism by the opposition parties has been muted. Allied governments view the on-going studies and consultations within NATO as tending to confirm their preference for concentrating effort on air interdiction, reconnaissance and short-range fire support improvements, which accord with standard NATO conceptions regarding artillery and air interdiction missions, and which were well under way before NATO's endorsement of FOFA.[20] There is also the perception that the United States has scaled back its expectations for FOFA in the light of the Gramm-Rudman spending cap and the present emphasis on SDI. Some European analysts have gone as far as to state that FOFA, as a definable initiative, is already over.[21]

During 1986, the focus of FOFA activity moved "indoors" to expert military fora such as the CNAD ad hoc FOFA working group, the FOFA II working group and the Independent European Program Group (IEPG). Although recent developments within these groups offer some basis for encouragement, it will ultimately be the parliaments of the NATO countries that will decide how, and at what pace, FOFA will be implemented. Whether current political and economic conditions in Europe will permit the type of broad consensus needed for a significant FOFA deployment is still at best questionable.

[18] For example, in May 1985, the Defence Planning Committee pledged $3 billion to construct 665 aircraft shelters by 1990. At the same time, the FRG indicated expenditures for munitions would be 13 percent higher than initially planned for the period 1984-87. See, Reserves, Reinforcements Stressed at NATO Defense Conference; *Suddeutsche Zeitung,* Mar. 18, 1985.

[19] At this meeting, FRG Defense Minister Woerner reportedly emphasized: "special efforts do not mean special programs. *Quoted in Suddeutsche Zeitung,* May 23, 1985.

[20] In early 1986, for example, senior Dutch Ministry of Defense officials indicated in a briefing to OTA staff that NATO's endorsement of FOFA had not at that time affected defense procurement planning in the Netherlands.

[21] "FOFA has lost much of the political attention that was once focused on it to the Strategic Defense Initiative . . The high technology all-conventional defense of Europe is back on the drawing boards. " Farooq Hussain, "Conventional Weapons Have a Long Way to Go, " *New Scientist,* July 18, 1985.

FACTORS UNDERLYING EUROPEAN ATTITUDES TOWARD FOFA

A common view is that European reluctance to go as far or as fast on a conventional defense initiative such as FOFA is due largely to the unwillingness or inability of the Allies to increase their overall defense spending. This is true up to a point, but is hardly the whole story. Although the Allies' ability to raise defense budgets will vary with general economic

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conditions (which at present are not favorable) the divergence of U.S. and European opinion about FOFA also reflects fundamental transatlantic tensions on two key issues in the Alliance: i.e., the degree to which NATO defense should rely on conventional forces, and the role of high technology in force modernization. How these more general issues are resolved will strongly affect the future course of FOFA.

The Role of NATO's Conventional Forces

Since the founding of the Alliance, the linchpin of NATO defense has been the deterrent threat of a U.S. strategic nuclear strike in the event of a WP attack on Europe. During the period in which the United States possessed strategic nuclear superiority over the Soviets, the task of defending Europe through the threat of massive retaliation was relatively straightforward and did not pose an undue economic burden. However, beginning in the 1960s, as the Soviets built up their nuclear forces and attained strategic parity, the situation became considerably more complicated. In the European view, ensuring that the United States remained strategically coupled to the defense of Europe–despite the risk of annihilation of American cities by a Soviet nuclear response—and convincing the Soviets of this coupling became of paramount importance.

In 1967, the Alliance responded to the changed situation by adopting the Flexible Response strategy, based on a triad of forces—conventional, theater nuclear, and strategic nuclear-to deter and frustrate the WP across the broad spectrum of threat scenarios. The continued presence of large numbers of U.S. forces on the Central Front constituted the visible guarantee of the coupling of U.S. strategic deterrence to the defense of Europe. While

Flexible Response does not require NATO to match the WP tank for tank or division for division (which the Allies maintain is not economically or politically possible), the credibility of the strategic deterrent became linked to a robust NATO conventional force posture. The presence of U.S. troops in NATO's conventional force structure is not only to serve as a "nuclear trip wire," but to aid in deterring an all-conventional WP attack and, if deterrence fails, to ensure NATO's ability to escalate to a nuclear response if necessary.

Since the promulgation of Flexible Response, the question of how much conventional defense is enough has become the source of considerable transatlantic friction. Successive U.S. administrations have urged the Europeans to greater conventional defense efforts to counter the rapid rise in WP conventional force capabilities. The lackluster European reaction has been due, in part, to the greater costs of upgrading conventional rather than nuclear forces, especially when the latter is paid for largely by the United States. However, to a substantial number of Europeans, U.S. pressure for increasing NATO's conventional defenses on the Central Front is perceived as partly motivated by the desire to reduce U.S. nuclear exposure in Europe, by making a conventional war fought solely in Europe more calculable and thinkable.[22]

SACEUR General Rogers, in advocating FOFA, has attempted to bridge the gap between the U.S. and European perceptions by dramatizing that the credibility of nuclear deterrence has been eroded through the WP conventional force build-up.[23] His argument is that FOFA and other conventional force improvements are needed because the ability of NATO to exercise its nuclear option is put in doubt if the WP has the ability to overrun the Central Front in a matter of days. Yet none of the European Allies have publicly seconded General Rogers' assessment, reflecting the generally skeptical reaction to U.S. efforts to gain more public support in Europe for defense increases, such as the DoD annual *Soviet Military Power* and other public reports. Some European defense experts have questioned the factual basis for General Rogers' scenario,[24] while others indicate that U.S. emphasis on the precariousness of NATO's Central Front posture—even if accepted—tends to weaken political support for NATO.[25]

The psychological impact of the issue of the role of conventional defense is most strongly felt in West Germany, in which one-third of the population lives within 100 kilometers of WP forces. To many West Germans, the devastation caused by the outbreak of conventional war on their-soil would be equivalent to defeat, no matter which side technically "wins." The INF issue has so sensitized the West German populace to the nuclear threat that many now believe that any change in NATO's posture somehow increases the

"European fears of the U.S. nuclear decoupling from the defense of Europe has led some Europeans to adopt what they call the doctrine of "conventional insufficiency." This is based on the assumption that what deters the Soviets is the threat of nuclear destruction of the Soviet homeland, a consequence all out of proportion to what the Soviets could hope to gain by an attack on Europe. Deterrence would actually weaken if NATO conventional forces became too robust, because this would undermine the certainty of a NATO nuclear strike in the event of a WP conventional attack. "In the view of some Europeans, should conventional forces become too strong, deterrence would be undermined as the risks of war become more calculable." North Atlantic Assembly: *Conventional Defense in Europe,* p. 6.

[23]"If war breaks out today, it would only be a matter of days before I would have to turn to our political authorities and request the initial release of nuclear weapons." General Rogers, cited in Conventional Defense Improvements; "Where Is the Alliance Going," James Moray Stewart, *Nato Review,* 1985.

[24]See, for example, *Extended Deterrence; implications for Arms Limitation and Reduction,* by Eckhard Lubkemeier, Friedrich Ebert Foundation, Bonn:

> ... the conventional force balance in Europe is not nearly as bleak as NATO's estimates would have it. For many years now, the International Institute for Strategic Studies has been stating that "there would still appear to be insufficient overall strength on either side to guarantee victory. Given this situation, conventional force improvements are not superfluous undertakings; however, NATO can do without those massive rearmament proposals advanced by SACUER and the ESECS group, entailing spending increases which NATO governments would not be able to sustain anyhow.

"The distinguished British historian, Michael Howard, describes the situation as follows:

> A certain American tendency to hyperbole, an attachment to worst-case analysis and some unfortunate attempts to make our flesh creep with official publications in gorgeous Technicolor whose statistics have been questioned by our defense specialists, have not improved matters. Such propagandistic efforts are widely discounted, and even when they are believed they are likely to engender not so much resolution as despair.

"Deterrence, Consensus and Reassurance in the Defense of Europe; published in *The Domestic Aspects of Western Security,* Christoph Bertram (cd.), IISS, 1983.

chances of war. In addition, the special relationship the FRG has assiduously cultivated with the GDR has considerable influence on attitudes regarding the types of weapons and forces NATO should have that are capable of striking into eastern Europe. These concerns are codified in the doctrine of Forward Defense, which in theory at least envisages that a WP conventional attack could be repulsed at the inner-German border, and that NATO incursions into eastern Europe could be limited to tactical and operational counter-attacks near the border.

FRG official policy tries to achieve a difficult balance between the need to provide declaratory support for FOFA in the interests of Alliance solidarity, and the requirement to affirm Forward Defense for domestic consumption." U.S. actions that might upset the delicate balance required by the politics of Forward Defense would likely be met with resistance. A senior Bundeswehr General indicated, for example, that the FRG would reject the unilateral deployment of deep strike FOFA systems in the U.S. sectors, on the grounds that this would demoralize the Allies in the sectors that were less well-equipped, and would tend to funnel a WP attack into these weaker sectors." This argument, which ignores the already great imbalances among the Central Front corps and the cross-corps support role FOFA might serve, maybe judged on its own merits. It is, however, indicative of the difference in U.S. and West German expectations regarding conventional force improvements.

[26]The compatibility of AirLand Battle and FOFA deep strikes with the doctrine of Forward Defense seems to trouble the FRG military. The difficulties in presentation can be discerned in the FRG 1985 Ministry of Defense White Paper:

> In the future, other long-range conventional weapons will be available to the Alliance, permitting effective operations against the Warsaw Pact follow-on forces before they can join the battle once the WP attack gets started. These operations have nothing to do with offensive operations. (p. 29)
>
> . . . the Bundeswehr and the allied forces are not equipped, organized, trained or prepared for a strategic offensive in the Central Region. (p. 79)
>
> AirLand Battle . . . is only applicable in Europe in so far as it is reconcilable with the underlying principles of NATO defense. There can be no question of any intention of the U.S. to revise the principles of NATO strategy by national operational doctrines. (p. 30)

[27]1n a 1986 briefing to OTA staff.

High Technology and NATO Defense

The balance of NATO's nuclear and conventional forces is largely the concern of military experts and academics; of much more immediate concern to allied governments is the relationship between NATO defense, employment, high technology, and national economic advantage. The Europeans seem to have, in general, less enthusiasm than the United States about the potential for high technology to correct NATO's deficiencies. In the broadest sense, this may reflect the more pervasive view in Europe that high-technology "fixes" seldom work as advertised, and almost always cost more than planned. Contributing to this difference in expectations is the European view that advanced U.S. systems are frequently developed and tested under ideal conditions, such as the U.S. desert, which would bear little relationship to a warfighting situation on the Central Front.

For most of the past decade, the Europeans have been troubled by high unemployment rates and sluggish economic growth, coupled with the perception that European high technology is falling rapidly behind that of Japan and the United States.[28] It has also been a period of increasing transatlantic disputes over general trade issues and the economic aspects of NATO defense, including 'burden sharing, sanctions and export trade controls. The extraordinary sensitivity of European governments to U.S. influence in the defense sector was demonstrated in 1985 by the near collapse of the Thatcher government over the proposed purchase of the Westland helicopter company by a U.S. firm. In this environment, suspicion of U.S. defense policies and initiatives runs high.

[28]"European perceptions of U.S. high-technology dominance appear to be considerably exaggerated. In 1955, for example, the U.S. export share of the world high-technology market was 35 percent. In 1980, the U.S. share dropped to 18 percent, while the combined shares of the FRG and France alone accounted for 30 percent of world high-technology export trade. See *Science Indicators*, The National Science Board, 1983, p. 23. As of 1986, the United States became a net importer of high technology.

For example, in February, 1986 the European Parliament voted a unanimous resolution rebuking the United States for alleged manipulation of COCOM trade controls to obtain commercial economic advantage.[29] Recent U.S. defense initiatives such as FOFA, SDI, and Emerging Technologies have been perceived as threatening the European technology base (in part by luring away engineers) and costing jobs, and have resulted in calls for greater intra-European armaments development cooperation and demands that the United States reduce alleged protectionist practices.[30]

There is also a widespread belief that the United States enjoys a very large defense trade balance, on the order of 10 to 1, while U.S. claims that the difference in the "two-way street" has grown much narrower in recent years have not been received with much credence.[31] U.S. overtures to allay European concerns, such as funding SD I research contracts in Europe and the 1985 Nunn Amendment, have been criticized by some Europeans as attempts to obtain European expertise at bargain prices and interfere with the development of intra-European high-technology cooperation.

The sensitivities of European governments to high-technology defense issues have tended to dampen the desire for the introduction of advanced armaments in European military circles. European military leaders are acutely aware that national economic policies make it risky to request the procurement of foreign-produced, high-technology systems, particularly because the long-term outlook for static defense budgets implies that expensive new procurements would divert funds from current military readiness. This situation may serve to reinforce an intrinsic conservatism in European military circles about the deployment of advanced armaments.[32]

[29]The European Parliament resolution states that U.S. unilateral defense related export controls:

> . . can only be assumed to be intended to restrict Western Europe's access to American technology on normal commercial terms and is contrary to good neighborly policy among allies . A common view in Europe is that U.S. provisions which exceed those agreed by COCOM are in part motivated by general national commercial practices emanating form political rather than business circles.

Quoted in *Journal of Commerce,* Feb. 24, 1986.

[30]Francois de Rose, a former French representative to the Atlantic Council and an advocate of stronger European conventional defense, stated:

> It is obviously inconceivable that a modernization effort would be limited to Europe's purchasing massive quantities of American weapons incorporating new technologies . The United States should thus face this problem at both the governmental (Administration and Congress) and industrial levels with a breadth of vision we are unaccustomed to in this area.

Politique International, summer 1984.

[31]See, "Two Way Street Balance Falls to 2:1, Most Equitable Ratio Ever, " *Armed Forces Journal International,* April 1986.

"In an article which pleads for more competitive European buying of weapons as a means to reduce costs, an influential European journal nevertheless concludes:

> Politically astute generals and admirals know the money saved would probably not come to them: they might not get even as much as they do now, It is one thing to ask for a ship to be built in a national shipyard. It is quite another to ask for one to be built abroad, never mind that it might be better and cheaper. That is why they tend to cling to the do-it-at-home approach.

"Cheaper Weapons: Europe Does It the Second Best Way, " *The Economist,* June 21, 1986.

OPTIONS FOR CULTIVATING ADDITIONAL EUROPEAN SUPPORT FOR FOFA

SACEUR General Rogers and other U.S. military leaders are well aware of European reservations about FOFA and a number of useful remedial steps already have been taken. In addition, the following options for further stimulating European support for FOFA have been suggested. If the U.S. Congress believes that the United States should try to stimulate greater European support, it might want to consider some or all of them.

Clarify the U.S. Priority for FOFA

The Europeans profess to some confusion as to where FOFA stands in U.S. military priorities. They note, among other signals, the first echelon priority signaled by the 1984 Nunn Amendment, and question how FOFA will compete with SDI for scarce U.S. R&D funds under the Gramm-Rudman spending cap. Some also seem to believe that FOFA may

be a "pet project" of SACEUR General Rogers, and that U.S. attention may wane under his successor. The United States should again clearly state its intentions regarding FOFA and, to respond to specific European objections and concerns, indicate the relative importance it attaches to shallow strike (i.e., up to 50 kilometers) versus deep strike systems. To avoid making FOFA a public issue again, U.S. views should be communicated largely through nonpublic NATO channels, such as the Conceptual Military Framework study.

Set Realistic Funding and Deployment Goals

Currently available studies of FOFA, such as ESECS and DRG, estimate costs for full FOFA deployment at between $20 billion and $50 billion over a 10-year period. Some critics claim these figures are gross underestimations. But even if they were accepted, it is unrealistic to expect the Allies to cover their proportionate share of the cost through increased defense spending at a time when European defense budgets are static or heading downwards. If trade-offs are acceptable, the United States should specify what other NATO missions could take a lesser priority to balance increased European spending for FOFA. The 10-year deployment goal, including systems that are now in the research phase, seems too optimistic in light of NATO's national R&D planning cycles and its track record on force modernization. It might be useful at first to narrow the focus to a few shallow strike weapons and sensor systems—such as improved MLRS and RPVs–which are relatively inexpensive and are at or close to the production stage, and which would not require complex data fusion systems. A demonstration that FOFA is effective at the shallow ranges, and with systems that could be produced in Europe, could boost allied support for the more ambitious FOFA goals.

Present FOFA in a More Positive Light

The major argument for FOFA by the United States and SACEUR until now has been that it is needed to raise the nuclear threshold to preserve the deterrent credibility of NATO's triad of conventional, theater nuclear, and strategic nuclear forces. However necessary this appears to military strategists, the prospect of spending large sums of money merely to stave off the collapse of the Central Front for a few more days is not a strong selling point from the European perspective. A more appealing approach might be to link FOFA to crisis stability and deterrence.

A major question mark for NATO has always been the length of time which the Warsaw Pact would need for mobilization before launching an attack: while obviously the Soviet commanders would need at least a few days for mobilization and would prefer a few weeks, short Pact mobilization might well make it difficult for NATO to decide upon and implement its own mobilization before the attack commenced. Furthermore, longer Pact mobilization would provide time for NATO to demonstrate its resolve (by counter-mobilization) and then negotiate a satisfactory settlement of the crisis.

A strong NATO FOFA capability would call into question the ability of the Soviets to bring their forces forward after a war had started, and therefore increase their need for pre-attack mobilization. FOFA can therefore be seen as a means of deterring the Soviets from rushing to attack before NATO is ready. Increasing deterrence and negotiating time in a crisis is a far more popular objective in Europe than increasing NATO's staying power in a conventional war.

FOFA might also usefully be linked in the future to negotiations for withdrawal of intermediate-range nuclear forces from Europe. The immediate reaction of European

leaders to reports that INF withdrawals had been discussed by President Reagan and Soviet Premier Gorbachev at their October 1986 meeting in Reykjavik was sharply negative, due in part to the realization that the current conventional force imbalance would pose an even greater threat to European security in the absence of INF missiles. Focusing European public attention on the need to redress this imbalance as a necessary precondition for such withdrawals might gain additional support for conventional force improvements such as FOFA.

Emphasize Dual-Use, Reemphasize Dual-Capable

The Europeans give highest priority to conventional weapons and surveillance improvements against the first echelon threat. The United States might clarify to the Europeans that deep strike weapons and sensor systems would enhance NATO's capabilities against both the first and follow-on echelons. On the other hand, proposals that tend to blur the distinction between FOFA and tactical nuclear weapons cause Europeans a great deal of anxiety. An idea tentatively advanced in 1984, for example, to modify Minuteman missiles to carry conventional warheads and base them in Europe to perform conventional missions, was emphatically denounced.[33] Likewise, proposals for conventional versions of the Pershing II or the successor to the Lance missile have been questioned by the Europeans on the grounds that they would decrease crisis stability.

Accommodate European Industrial Interests

The Europeans have made it amply clear that FOFA implementation cannot be premised on their purchasing U.S.-produced weapons systems. Discussions in NATO have correctly focused on the need to standardize FOFA systems and reduce overall R&D costs in the Alliance by eliminating duplication of effort through cooperative industrial projects among the NATO partners. In this regard the financial incentive offered by the 1985 Nunn Amendment has proved particularly promising in fostering U.S./European cooperative ventures. Congress may wish to consider continuing Nunn Amendment funding at a level of $200 million per year to maintain the momentum of cooperative projects now under study and allow for a number of new starts each year.

Special emphasis might be placed on reaching agreement on a NATO-wide IFF[34] system in the Nunn Amendment context, because NATO's present capacity to carry out deep strike interdiction relies exclusively on air forces. If no agreement can be reached on IFF, which all Alliance partners agree is urgently necessary and which has been under discussion for the last 20 years, the likelihood of U. S.-European cooperation on the more controversial elements of FOFA would appear dim.

Clarify Unilateral Deployments

There seems to be some opposition in the FRG to a unilateral U.S. deployment of deep strike FOFA missile systems in the U.S. sectors of the Central Front, on the grounds that this would concentrate the WP thrust into the other sectors. To counter this argument, the United States could attempt to provide the FRG with a better appreciation of the role FOFA could play in cross-corps support which would tend to level rather than heighten the current inequalities among the Central Front sectors. If, nevertheless, the FRG position were not to change, the United States might consider an offer to consult formally with the FRG on deployments when the deeper strike systems become available.

[33] In a 1985 press conference, FRG Defense Minister Woerner rejected stationing of Minuteman missiles in Europe for conventional defense purposes. He reportedly labeled the missiles "incredible hulks" at the press conference. See, Interview with Dr. Manfred Woerner, *Armed Forces Journal,* August 1985.

[34] "Identification, Friend or Foe, A system for identifying aircraft so that NATO's air defenses do not kill NATO's aircraft. Also called the NATO Identification System (NIS).

Clarify the Relationship Between FOFA and AirLand Battle

While the United States has affirmed that elements of AirLand Battle are appropriate in the Central Region only to the extent that they are compatible with NATO doctrine, the Europeans evince some confusion and concern about how FOFA would be integrated under this arrangement. One major difficulty is that AirLand Battle envisages counter-attack by ground forces up to 150 kilometers beyond the close battle, which seems incompatible with the doctrine of Forward Defense, and has been questioned by the Europeans on political and military grounds. Another issue is the allocation of air resources for deep strike missions, since AirLand Battle appears to center control at Corps level or lower, while FOFA would require multi-corps and multinational coordination.

Emphasize the Role of FOFA in Enhancing Deterrence and Improving Crisis Management

One of NATO's widely recognized weaknesses is that it must mobilize for at least several days before it can put up a credible defense. In particular, the period during which troops would arrive from the United States by air, take equipment out of storage sites in the FRG, and organize themselves into battle-ready divisions would be a period of vulnerability which might tempt the Soviet Union to attack preemptively. The possibility of such an early Soviet attack would not only be threatening in a military sense, but would reduce the time available for negotiations to resolve the crisis short of war. FOFA, by threatening the Soviet forces moving up from rear areas once a war has started, would give the Soviets an incentive to defer any attack until after extensive Warsaw Pact mobilization, which in turn would buy time for NATO mobilization and for crisis management efforts.

Emphasize the Role of Joint STARS, in Particular, in Crisis Management

Apart from all the questions and issues about the survivability and value of Joint STARS in battle, nobody doubts that it would greatly enhance NATO's ability to monitor Warsaw Pact troop movements during a crisis. Accurate and extremely timely information about such troop movements during a crisis could be invaluable to NATO for crisis management. Such information would facilitate NATO decisionmaking, thus enhancing deterrence by discouraging Soviet hopes of dividing the Allies; it would also facilitate deployment of NATO forces to meet the evolving threat, thus enhancing deterrence by discouraging Soviet hopes of victory by quickly breaking through maldeployed and unprepared NATO forces.

FOFA AND THE NATO ALLIANCE

In the light of the history of the FOFA initiative, it is not currently possible to predict with any certainty its future course in NATO. There have been a number of plusses and minuses. On the positive side, it has helped focus attention on recent developments in WP doctrine, such as the Operational Maneuver Groups, and contributed to the discussion of what should be the appropriate NATO response. It has also highlighted current NATO deficiencies in air and ground fire support, reconnaissance and C^2, and may ease the introduction of advanced sensors such as Joint STARS, even if the Allies remain uncertain concerning the deep strike elements of FOFA. At the very least, FOFA could add cogency to U.S. arguments for increased European attention to the first echelon threat, which the Allies claim FOFA underestimates.

FOFA has also been the object of considerable criticism by the Allies, although this does not mean that the concept itself is inherently devisive. FOFA, like any major initiative in

NATO, has brought to the surface the long-standing underlying transatlantic frictions concerning burden sharing, the nuclear threshold and defense trade. The Allies, as a group, have a fundamental resistance to any major change in NATO strategy, which, whatever its defects, has preserved peace in Europe for two generations. This resistance is manifest in their skepticism of U.S. "bean counts' of WP forces, and in their arguments that substantial change in NATO force structure would necessarily weaken the political cohesion of the Alliance.

This conservatism, however, also has its positive points with regard to the future of FOFA. Now that the Alliance has given FOFA its political blessing, it would be unlikely that the Europeans would be moved to renounce the DPC decision, even if the opposition parties which are now on record as condemning FOFA win in forthcoming elections, but this is not a certainty. This does not mean that FOFA will be implemented as originally conceived or could not again become a devisive issue if, for example, the United States decides on unilateral deployment of deep strike missiles in the U.S. corps sectors.

At the most basic level, the differences in the U.S. and European views on FOFA, and all its associated issues, will tend to narrow or widen depending on the degree to which the NATO partners can achieve a common perception of the political and military aspects of the WP threat. In a 1986 discussion with OTA staff on FOFA, European parliamentarian members of the North Atlantic Assembly described the current difference in threat perception as follows: "You Americans believe the situation on the Central Front is like 1938; we believe it is more like 1914"–i.e., the greatest threat to peace is an uncontrolled escalation of belligerency, not the failure to deter a determined aggressor. This view has historical merit if the sole criterion of NATO's success is to deter the WP from a direct attack on Europe; it has been a long time since the Europeans had to consider this seriously as an imminent possibility. Judged by other factors, such as denying the Soviets the ability to coerce Europe economically and politically through the growing imbalance between NATO and the WP in conventional forces, the record of the Alliance is not as certain.

The history of the FOFA initiative thus far suggests there is still some variance between U.S. and European understanding of some of the basic purposes of the Alliance. It also suggests that it is possible for the United States and its Allies to work together, given time and a willingness to accommodate each other's views.