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TWO PATHS TO STABILITY IN EUROPE

Pershing II and cruise missiles are being deployed on schedule in Europe, and last year's massive protests have vanished from the headlines. But the debates within NATO on arms and strategy are far from over. The storm over nuclear arms in the alliance has led to a new controversy, this time over modernization of conventional weapons.

Their attention having been drawn to the issue by Pershing and Cruise, groups drawn from the foreign policy establishments of the United States and Britain have now issued studies concluding that, as nuclear weapons become less acceptable politically and less credible as deterrent forces, NATO must significantly build up its conventional arsenal. And, as might be expected, arms control is used to justify the buildup. Supreme Allied Commander General Bernard Rogers justifies his appeals for more and dramatically improved conventional weapons as a means of "raising the nuclear threshold," and some arms control groups even see conventional modernization as a price to be paid that will lead to a NATO no-first-use posture.

The approach of building up conventional forces in

order to induce a no-first-use doctrine has a number of difficulties. First, NATO has always tried to modernize its forces and has never done so to its own satisfaction. This is partly because it faces many issues that go beyond new military hardware. As an alliance of soldiers speaking different languages, using different weapons, and having somewhat differing strategic interests, NATO's problems of fighting as a unit go far beyond its military arsenal per se. And none of the new technology on which some would put so much emphasis will change the fact that NATO has little geographical depth for a modern war. In particular, no new weapons or fortifications can ever guarantee not losing West Berlin or cities near the German border.

Moreover, even conventional "adequacy," measured in one way or another and achieved in some fashion, will never provide general assurance that NATO will be able to meet all military contingencies. Conventional war does not lend itself to advance calculation, but depends on surprise, luck, and highly unpredictable interactions. It is both politically and militarily unlikely that any conventional

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A NEW CONSENSUS OR AN OLD MIRAGE?

"It is feasible for NATO to upgrade its conventional defensive capability to the degree needed for an actual and perceived capability of performing...critical missions. The upgrading can be accomplished through (A) new advanced target acquisition and conventional weapons technologies that are realistically available; and (B) an improvement of the conventional forces now in place and under procurement through new concepts and modes of operation."

—*European Security Study*

"NATO should do this by (a) removing battlefield nuclear weapons, whose role could now be fulfilled by conventional weapons (b) exploiting the new technology to acquire a counter-attack capability based on strategic conventional weapons, particularly cruise missiles and other stand-off weapons, and precision-guided munitions."

—*British Atlantic Committee*

"While we believe that careful study will lead to a firm conclusion that it is time to move decisively toward a policy of no-first-use, it is obvious that any such policy would require a strengthened confidence in the adequacy of the conventional forces of the Alliance."

—*McGeorge Bundy, George Kennan, Robert McNamara and Gerald Smith.*

These quotes suggest that some kind of new consensus exists in favor of a NATO conventional buildup. But how does it differ from the long-standing NATO consensus for strengthening conventional capabilities? Is any conventional buildup likely to support a political decision that nuclear use can be reliably and permanently foresworn? Will the new generation of conventional arms in fact lower the nuclear threshold, or will the risk of escalation be increased? Would the buildup stimulate further Soviet arms procurement? Above all, are there alternatives to a new round of the arms race in Europe?



General Bernard Rogers; a major proponent of conventional modernization.

modernization would produce a NATO consensus for accepting a no-first-use declaration.

An alternative path is one of rolling back the clock. In direct response to the perceptions and reality of the Soviet Union's massing of conventional forces in Eastern Europe, NATO developed an overreliance on nuclear weapons. Thus a logical solution is to seek arms control agreements that roll back the cause—Soviet tanks and other offensive weapons—in return for suitable removal or de-emphasis of Western nuclear weapons. After all, militarily, NATO's conventional defense is easier to improve by thinning out Soviet troops in Eastern Europe than by any buildup of conventional forces in the West.

And what is really at issue, anyway? Even those alliance members closest to the frontier consider the Soviet threat rather more political than military. For them, a Soviet withdrawal has more than military significance. And for their Eastern European cousins, such a withdrawal would have important domestic political significance.

Furthermore, the high-tech weapons which some want to emphasize have—like all new gadgets—their as-yet-unobserved down side. On the one hand, increasing numbers of long-range missiles, even though non-nuclear, raise the possibility of crippling preemptive strikes on depots, command and communication centers, and airfields and may introduce added precariousness to a crisis situation. Some such systems actually raise the risk of inadvertent nuclear escalation. Even fortification or redeployment of existing forces raises problems in the West German polity.

What we find most disturbing is an emerging focus that gives less emphasis to mutual balanced force reductions, nuclear-free zones, or other ways to get the military confrontation off Europe's back. Instead, some seem to be turning to an oft-tried but never before successful effort to give the Europeans an improbable impregnable conventional defense.

In the end, the politics of European security may find such a conventional buildup little more desirable than a nuclear emphasis. In West Germany, for example, the older generation is as opposed to a conventional emphasis as the new generation is opposed to a nuclear emphasis. And any buildup will, in one way or another, encourage Soviet responses.

Conventional modernization—whether in search of an unlikely no-first-use policy or for its own sake—simply perpetuates the largest military confrontation on earth. By contrast, the road of mutual withdrawals and disengagement provides an avenue to improved security and political relaxation. Especially now that the West has nuclear cruise missiles and Pershings which the Soviet Union clearly wants removed, new opportunities exist for a trade of nuclear weapons on the Western side for Soviet redeployments back to the Soviet Union.

All things considered, the most feasible and productive path for arms control seems to be one that leads to a negotiated balance at a lower level rather than a buildup to a higher one.

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THE NEW WEAPONS

Common to most of the proposals to strengthen NATO conventional forces is an emphasis on high-tech weapons now being developed for tactical warfare. These weapons, sometimes called Emerging Technology or ET systems, are based on revolutions in reconnaissance, data processing, and guidance technologies.

Research and development money spent on new-generation conventional systems is already significant (perhaps a billion dollars in fiscal year 1985), and it will translate into much higher bills when these systems actually move toward production and deployment.

Descriptions of many of these systems can be found in documents presented by the Department of Defense to Congress as part of the budget process. Among the most prominent systems are the following:

- *JSTARS (Joint Surveillance and Target Acquisition System).*

An airborne radar system, JSTARS will be able to pick out and follow moving targets as small as tanks on the ground up to several hundred kilometers away. JSTARS is designed not only to detect such targets, but also to transmit the information instantaneously to a remote ground targeting station which in turn directs missile and air strikes against the target. When combined with certain kinds of advanced missiles now being developed (see JTACMS), JSTARS will also be able to follow the missiles launched to attack such moving targets and automatically transmit course corrections to the missile while it is in flight, resulting in much more accurate guidance.

Some defense planners hope that JSTARS will transform the deep strike and air-to-ground battle in the same way as AWACS has revolutionized air-to-air combat. JSTARS is being developed both for the Air Force and the Army, and neither service is reported to be entirely happy with the result, since they would use the radar for slightly different missions. Research and development of JSTARS cost some \$110 million in fiscal year 1984, and the administration is requesting slightly over \$200 million for it in FY 1985.

JSTARS was one of the three basic components of the Defense Department's highly touted Assault Breaker program, which tested high-tech long-range anti-armor systems in 1981-82. In the Assault Breaker tests, an earlier version of JSTARS called PAVE MOVER identified targets for surface-to-surface missiles carrying anti-tank submunitions which were to seek out and destroy individual tanks. Due to a variety of malfunctions, the complete system never functioned properly at any one time during the series of tests. The radar seemed to perform satisfactorily during some tests when submunitions failed to work, but the Air Force refused to make PAVE MOVER available for the last test flight, when the submunitions finally scored direct hits on five tanks.

- *JTACMS (Joint Tactical Missile System)*

In 1981, Congress directed the Army and Air Force to try to satisfy their missile desires with a common project. Out of this came JTACMS, a ballistic missile to be launched from either the air or the ground, with a range of some

"The new technologies for implementing the Deep Attack concept have been popularly undercosted by an order of magnitude, the concept proceeds from a false syllogism, and the concept itself is not operationally feasible. Technical and operational feasibility are not synonymous. The concept has yet to be demonstrated in a benign environment, much less in a dynamically hostile one. The Deep Attack system will be vulnerable to attack and jamming, and its many diverse functions have yet to be pieced together. While these deficiencies can with time be corrected, others remain beyond the pale of correction. Its sought vulnerabilities in the opposing force array do not exist, automated command and control leads to deception and inflexibility, and its submunitions can be easily countered."

—Steven Canby, fellow, the Wilson Center

300 km, to attack armored forces deep behind the lines, radar and communication facilities and transportation centers. The specific missile which is to do this job has not been selected, and disagreements between the two services, each of which still wants its own missile, may yet scuttle the project in its present form.

JTACMS would be used in combination with targeting systems such as JSTARS or the Precision Location Strike System (PLSS) and would be capable of receiving very precise guidance. It would be able to carry a variety of submunitions, some of them containing their own precision guidance. In combination with JSTARS, the missile would carry anti-armor munitions for such targets as moving tanks. Used with PLSS, the missile would be directed to sources of radiation such as radar. The missile would greatly extend the range of conventional missiles available to American forces in West Germany—JTACMS would reach the Polish border and well across Czechoslovakia from West Germany.

Although JTACMS has been advertised as a program to reduce dependence on nuclear weapons, the Department of Energy is developing a nuclear warhead for it, which would indicate that the new missile would be dual-capable, like the Lance missile. Last November, reports that the Army planned to include a nuclear warhead among the options for JTACMS raised a brief furor, and the Senate quickly passed an amendment prohibiting such a move. In the FY 1985 budget request, the Defense Department is asking for \$114 million for JTACMS.

- *PLSS (Precision Location Strike System) and HARM (High-Speed Antiradiation Missile)*

PLSS is designed to detect electromagnetic radiation such as radar, and to pinpoint precisely where it comes from. The radiation itself will be detected by a triad of aircraft, which then transmit the data to a central processing center on the ground. This data processing center relays the information to units responsible for missile and air strikes. The primary targets of PLSS are Warsaw Pact anti-aircraft units. Since they rely on radar to detect and locate NATO aircraft, destruction of this radar would

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render them helpless. HARM is designed to perform the same mission. It is launched from aircraft, has a range of some 50 kilometers, and homes in on the radiation emitted by air defense radar. PLSS and HARM will both be ready

for deployment this year or next. The Pentagon is asking for \$280 million for PLSS and \$650 million for HARM in fiscal year 1985.

• (LRSOM) Long Range Stand-Off Missile

This weapon, a long-range missile with a conventional

A PROVISIONAL DEEP STRIKE BUDGET

The following chart contains selected projects for the development of new-generation conventional weapons which are likely to be deployed in Europe, for which the Defense Department and Armed Services are currently requesting funds from Congress. FAS put this list together

on the basis of larger documents which give a more detailed description of each project. The figures for 1983-86 are from the Administration's fiscal year 1985 budget request, and a Pentagon five-year planning document leaked to *Defense Week* provided the numbers for later years.

RDT&E in New-Generation Conventional Weapons With NATO Applications (in thousands of dollars)

	FY 1983	FY 1984	FY 1985	FY 1986	FY 1987	FY 1988	FY 1989
Systems in Early Stage of Development							
62702E Tactical Technology	83,853	99,437	109,000	131,000	160,000	200,000	245,000
62703A Combat Surveillance & Target Acquis.	3,147	3,823	4,768	4,398	3,195	3,802	4,151
62602F Conventional Munitions	38,036	39,500	42,820	49,074	56,490	54,554	58,797
62303A Missile Technology	29,273	30,607	31,177	34,382	40,871	48,417	51,239
62618A Ballistics Technology	25,575	34,596	47,916	41,558	22,594	28,517	30,097
62715A Tac Electronic War Investigations	9,882	7,892	0	0	7,090	5,516	18,113
63208F Reconnaissance Technology	4,600	4,975	8,323	10,484	12,468	13,261	14,124
63306A Terminally-guided Projectiles	6,795	2,948	10,030	29,387	56,833	69,771	72,008
63313A Missile/Rocket Components	8,640	12,119	30,119	33,037	15,979	15,136	6,001
63316A Adv. Rocket Control System	0	0	0	0	50,644	52,357	70,008
63323A Lightweight Air Defense	0	0	0	3,853	18,107	140,961	200,022
63364F Adv. Air-Surface Missile	0	0	54,418	127,994	175,158	269,735	180,314
63725A Remotely-piloted Vehicles	6,326	5,697	6,232	23,780	13,413	10,818	6,001
63612A Adv. Anti-tank Weapon	0	0	24,901	20,801	33,070	59,455	90,129
63302A Anti-tactical Missile	10,000	17,193	92,235	91,434	76,331	50,547	57,187
63303A Surface-Surface Missile Rocket	2,364	15,719	35,384	42,493	40,309	37,104	44,250
63718A Electronic War Vulnerability	16,816	18,670	22,563	24,654	36,242	42,633	43,616
63718F Electronic War Technology	0	20,136	22,105	25,638	24,838	26,480	28,778
63601F Conventional Weapons	19,177	18,000	21,749	28,687	33,522	34,038	33,704
63750F Counter-Countermeasures	5,991	7,960	10,444	12,734	15,800	16,825	21,137
63713A Army Data Distribution System	34,293	25,329	23,213	39,152	16,646	8,101	6,001
63749F C3CM Advanced Systems	0	990	994	4,439	5,974	6,857	7,182
Subtotal	304,768	365,591	598,391	778,979	915,574	1,194,885	1,287,859
Systems in Later Development							
64321F Joint Tactical Fusion	5,495	4,713	17,787	22,761	16,631	13,161	11,447
64321A Joint Tactical Fusion	25,710	54,549	0	0	99,865	75,789	65,080
64324F Joint Tac Missile System	0	0	35,509	86,571	172,000	116,000	95,000
64606F Joint Tac Missile System	24,750	9,821	0	0	0	0	0
64324A Joint Tac Missile System	0	50,160	78,978	119,384	129,838	205,463	171,065
64754F Joint Tac Info. Distrib. System	52,513	45,540	86,703	95,280	0	0	0
64702A Joint Tac Info. Distrib. System	20,715	17,719	21,231	12,775	11,684	9,527	0
64730A Remotely-piloted Vehicle	81,726	132,629	103,140	30,865	10,590	28,916	41,540
63770F JSTARS	0	0	3,318	3,270	0	0	0
64616F JSTARS	29,328	41,019	0	0	0	0	0
64770F JSTARS	0	0	94,966	110,560	48,306	12,636	13,231
64770A JSTARS	0	67,750	108,168	89,306	11,748	10,158	4,000
64604F Submunitions	0	0	48,667	38,776	0	0	25,044
64607F Wide Area Anti-armor	13,729	23,500	27,306	12,558	0	0	0
64710 Reconnaissance	5,088	8,382	9,631	25,372	37,990	51,901	60,643
64733F Surface Defense Suppression	5,705	9,405	24,533	18,396	24	0	0
64742F Precision Location Strike System	78,727	69,027	82,996	63,344	28,551	12,523	17,556
64313A Grass Blade (anti-tac missile)	17,069	22,279	20,725	11,399	9,147	20,924	20,402
64724F Tac C3 Countermeasures	24,626	28,237	28,100	23,941	15,511	24,777	22,175
Subtotal	385,181	584,730	791,768	764,558	591,885	581,775	547,183
Total RDT&E	689,949	950,321	1,390,159	1,543,537	1,507,459	1,776,660	1,835,042

payload designed to destroy Warsaw Pact airfields and other fixed targets, does not exist yet, but the idea has been around for awhile under a variety of names. While the United States has gotten NATO approval for the development of such a weapon system, there is still disagreement about the sort of missile that should be produced. Some favor cruise missiles, and others believe that heavier ballistic systems would do the job better.

The technology for the missile already exists. Additional cruise missiles could be adapted for this mission. Martin Marietta has proposed a variant of its Pershing II missile, and Lockheed has put forward a version of its Trident C-4. "The operational philosophy" of its missile, says Lockheed, "is one of brute force; the large missile delivers, in less than ten minutes, more than six tons of selected ordnance on target." Both these missiles would carry runway-busting submunitions which penetrate hard runways and then explode, buckling and cratering the surface. The range of the LRSOM would be at least 600 km, putting the city of Warsaw within range of missiles based in West Germany.

Up to now, however, political opposition inside and outside the defense establishment has stymied plans to produce such a missile. The Air Force remains unconvinced that land-based missiles are the way to do the job, and Congress remains wary of introducing another deployment of large missiles in fixed, hardened silos on European soil.

• *Submunitions*

The ability of these systems to accomplish their missions depends, in the end, on a dizzying variety of small bomblets, mines, or futuristic projectiles either scattered shotgun-style over a particular area or directed to individual targets by sensors contained in the munitions themselves. Although the random-scatter kinds of submunitions have been available for some time in the form of primitive or refined cluster bombs, most advanced submunitions are still in rather early development. Among the kinds of submunitions on which defense planners are pinning their hopes are the following:

—Skeet. This anti-armor submunition is designed to be used either as an advanced mine or as a bomblet to be carried by missiles such as JTACMS. Carried to the target area by JTACMS, Skeet dispensers would be braked by parachutes before ejecting the Skeet munitions themselves, which are shaped like small disks and spin through the air above the presumed tank force. These small disks have infrared sensors which detect the heat of a tank's engine when the Skeet flies over the vehicle. At that point, the disk ejects a projectile aimed at the heat source. Admittedly complicated, the Skeet has reportedly functioned in tests. During the Assault Breaker test series, however, it did not function properly and no tanks were hit.

—Terminally-guided Submunition (TGSM). The TGSM is a mini-missile containing an infrared sensor which identifies heat sources such as tank engines. Once an appropriate heat source has been identified, the TGSM homes in on it, with the sensor providing information to a tiny data processor, which directs the munition by means of tail fins. The TGSM was also tested in the Assault

Breaker tests. After problems during most of the tests, the submunitions worked splendidly on one flight on December 15, 1982. Five of them were scattered over an array of ten M-47 tanks sitting with their engines running in the middle of the White Sands, New Mexico missile range. The M-47 is particularly easy for heat-seeking missiles to hit because it lacks modern engine covers. All five of the TGSM munitions hit tanks, and that test has been the prize exhibit of Assault Breaker enthusiasts ever since.

RETHINKING THE BATTLEFIELD

An army's weapons help determine how it fights, and the development of this new breed of weaponry has touched off a debate on NATO strategy. The various proposals, despite differences in emphasis, are more complementary than conflicting. All of them call for attacking targets which were previously unreachable, at least not with any assurance of success.

STRIKE DEEP

Under the names "Strike Deep" and Follow-on Force Attack, General Rogers' headquarters and Pentagon research and development officials promote the idea of destroying key Warsaw Pact forces and infrastructure with medium-range conventionally-armed cruise and ballistic missiles or airborne munitions.

Warsaw Pact military doctrine has historically called for sending forces to the front in waves or echelons, with one echelon replacing the previous one as a complete unit. Under the Deep Attack scenario, the West's forward defense would be able to hold off the first of the Pact's attacking echelons, but would be overrun by successive waves of armored forces if they were allowed to reach the front. Follow-on Force Attack would track and attack these forces while they are still deep in Pact territory,

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SKEET anti-armor submunition hits tank.

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preventing them from reaching the immediate battle area.

This "second echelon" approach has been politically popular, largely because it promises to counter directly what NATO sees as the primary Warsaw Pact threat, massed armor. But the ability to attack armored formations will depend on precisely those systems which at present, for simple technical reasons, represent the weakest links in the Deep Strike scenario: accurate identification of targets at long ranges and workable smart submunitions.

The strategy has been sold as an anti-armor approach, but armored formations will probably be among the least feasible deep strike targets for some time to come. More likely are fixed targets, such as air defense radars, communications and transportation centers, and airfields.

COUNTER AIR: ATTACKING PACT AIRFIELDS

Airfields are particularly emphasized as targets in at least some versions of this scenario. Being fixed targets, they are presumably easier to hit, and special munitions are available which crater runways and render them unusable. According to one defense newsletter, the Pentagon estimates that 150 large-payload airfield attack missiles such as the Long-Range Stand-off Missile, or about 250 smaller ones, would be able to shut down for two days enough Pact airbases to reduce sorties by more than 30 percent.

A classified document called Counter Air 90, which contains strategies to keep Pact air forces from getting off the ground or from returning to the same base from which they came, is circulating in the Defense Department. The heart of the plan is reportedly the proposal to rely on missiles to destroy Pact airbases. The United States has presented it to NATO allies for comment, and was successful in getting one NATO force-planning committee to "identify" a NATO requirement for an air/ground-launched missile with a range of about 600 km to attack fixed, hardened ground targets, primarily airfields.

AIRLAND BATTLE

The Army, meanwhile, has been working on its own vision of the battlefield of the future. The results, called AirLand Battle, have been integrated into the current Army Field Manual, FM-105.

The AirLand Battle doctrine grew largely out of disagreement with the concept of "active defense," which set the tone for the previous field manual, published in 1976. Active Defense was conceived as a strategy to avoid the Army's chronic unpreparedness at the beginning of a war, and concentrated on bringing massed firepower to bear on the opponent and avoiding unfavorable "force ratios." Under Active Defense, the opposing sides were seen practically standing toe to toe and slugging it out.

AirLand Battle, on the other hand, emphasizes mobility, counterattack, and above all, initiative. Along with a battle between forces in contact, in which U.S. forces would try to maintain the initiative and keep opposing forces off balance, AirLand Battle envisions a simultaneous deep battle some 100-150 kilometers behind the main front, in which the American commander would use improved sensors and long-range weapons to attack uncommitted forces and support facilities.

"This doctrine (AirLand Battle) replaces Forward Defense with defense based on forward motion; it creates offensive instead of guaranteed denial options and demands a change in the presently valid NATO strategy. It is to be rejected."

—Commission on New Strategies of the West German Social Democratic Party, 1983

Public and Congressional reaction to the new doctrine has generally been enthusiastic. But AirLand Battle requires an unprecedented level of interservice coordination, and the Army has found the Air Force an unwilling partner in its war-fighting plans. "When we say we agree with the AirLand Battle concept, what we are saying is that we agree that the concept is a good concept for the Army," one Air Force official told the *National Journal* last year. The services disagree on which kinds of weapons to use, and the Air Force resists being integrated into a strategy which reflects the Army's battle priorities.

In any case, European distrust of the scheme is a major roadblock in the way of general NATO implementation of the new doctrine. This skepticism has two significant sources. First, AirLand Battle foresees an "integrated battlefield" in which all sorts of weapons, including nuclear ones, will be used if needed to "win" the battle. According to the Army field manual FM-105 "any U.S. force... will use every weapon, asset, and combat multiplier to gain the initiative and to throw the enemy off balance with a powerful blow from an unexpected direction."

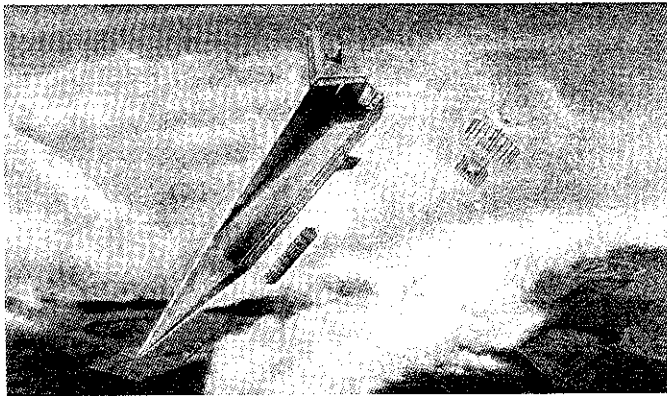
A more visionary follow-up document from the Army, AirLand Battle 2000, which was written to project requirements for the next 20 years, was more explicit. According to this document, "No distinct transition from conventional to nuclear and chemical operations takes place. Chemical, biological, nuclear weapons do not negate the concept of continuous combat." For Germans, whose only rational justification for nuclear weapons is their role as political instruments to ensure that no such suicidal weapons are ever used, such statements are uncomfortable to hear.

Second, AirLand Battle appears to imply that NATO would counterattack and carry the battle into enemy territory, or at least have the capability to carry out extensive offensive operations. Those who take the explicitly defensive charter of NATO seriously see the refusal of NATO to develop such a capability as an essential element of long-term stability in Europe. Any move toward an offensive orientation risks an erosion of confidence in the stability of the central European status quo, and with it an even more fundamental breakdown in the political consensus which supports NATO.

NATO's forces are deployed with political rather than strictly military goals in mind. Forward Defense, which calls for defensive lines as near as possible to the inner-German border, has long been criticized as insufficiently flexible, but it is the only alternative unless all of West Germany is to be turned into a battleground for the defense of France, the low countries, and the United Kingdom.

Similarly, the deployment of NATO forces in national

segments ranged all along the inner-German border certainly makes for an inefficient military operation, but it ensures that all NATO participants are immediately involved in the battle and makes the political consequences of an invasion momentous. AirLand Battle, in its emphasis on "winning" a military engagement, runs the risk of losing sight of the elementary truth that the very start of a battle means that NATO has already "lost" in the achievement of its primary goal, deterrence.



An artist's conception of Lockheed's anti-airfield missile.

DEEP STRIKE AND ARMS CONTROL

What are the implications of all this for arms control and peace in Europe? If the new weapons and strategies are a real opportunity to reduce the risk of nuclear war in Europe, they certainly present an attractive option. When precision-guided munitions first made their appearance in the mid-1970s, many analysts felt that they gave a clear advantage to the defender, making tanks and concentrated forces less of an overwhelming offensive threat and allowing a relatively small force to hold off much larger numbers of attackers.

Some of that hope may still be valid. But as Emerging Technology weapons move from the conceptual stage to actual weapons systems, the negative implications of their deployment are becoming obvious. At the very least, these weapons are not a cure-all, and NATO will be faced with most of the same dilemmas with or without them. Some of the new weapons actually make the situation worse, lower the nuclear threshold, and lessen crisis stability in Europe.

THE NUCLEAR THRESHOLD: IS IT HIGHER?

The idea that new non-nuclear weapons will make the use of nuclear weapons less likely in a conflict has been repeated so often that it is now taken as an obvious truth.

But while the option of using non-nuclear weapons may delay NATO's use of tactical nuclear weapons, long-range conventional missiles may make use of Soviet nuclear forces more likely. This is the case for two separate reasons.

First, nuclear and non-nuclear missiles cannot easily be distinguished from each other, and certainly not in the confusion of battle. Cruise missiles will be present in great numbers on the battlefield, some of them carrying nuclear warheads and others not. If the Pershing II or a similar missile is adapted to carry conventional warheads, or if JTACMS becomes a dual-use system, the problem would only be exacerbated.

Second, Deep Strike would put Pact nuclear forces at risk. Some deep strikes would likely be aimed at command centers responsible for Soviet tactical nuclear forces, or at the SS-20, SS-22, and SS-23 units themselves. Even if such strikes are carried out by non-nuclear forces, they could be regarded as a preemptive escalation to the nuclear level by Pact forces, and the dilemma "use them or lose them," long recognized as a weakness of NATO nuclear posture, would apply to the Warsaw Pact as well.

PREEMPTION CAPABILITY AND CRISIS STABILITY

As weapons capable of destroying targets deep in the territory of the opponent proliferate on the battlefield, more and more of the critical facilities and fixed weapons on both sides become vulnerable. Hundreds of cruise missiles will be available for deployment in Europe during the coming years, and any new non-nuclear ballistic missiles would also be deployed in significant numbers. The ESECS study assumed that at least 900 non-nuclear missiles would be required for attack on Pact main operating bases and choke points, and another 5,000 missiles with appropriate submunitions for interdiction of follow-on echelons. This is in addition to some 1,000 salvos of rockets needed for the battle at the front.

The new technologies, it can readily be seen, do not carry with them a clear shift in favor of defense. While a small, dispersed force equipped with ET weapons may be able to hold off a much larger armored force in some circumstances, the development of long-range weapons with precision-guided warheads also increases the benefits to be gained from surprise, as well as the feasibility of preemption.

What one sees developing is a situation in which all crucial fixed assets of each side within several hundred miles of the border are at risk, and could be destroyed within minutes of an outbreak of hostilities. These fixed assets include airfields, C31 facilities, transportation centers, and supply depots. Theater nuclear forces may also be among the priority targets.

In such a situation, the disastrous consequences of waiting too long before launching deep strikes must be on the mind of every commander. According to a report by Donald Cotter for the ESECS study, a quick-reaction attack on Pact main operating bases "must take place *within 15 or 30 minutes* to be successful." (emphasis in original.) And a longer wait might mean that one would no longer be capable of launching such a strike. There is therefore a strong incentive to strike first, to ensure that one preempts a possible crippling deep strike by the opponent. As soon as such a strike is launched, of course, a massive military engagement in Central Europe is underway, and the likelihood of nuclear annihilation is high.

Could a minor incident be thus transformed into disaster? No one can be sure what would happen. But these technical and tactical developments make a crisis situation more precarious.

In the medium to long term, therefore, a NATO Deep Strike approach cannot be expected to bring about lasting

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advantages over Warsaw Pact forces. This is partly the case because of the technical uncertainties which will remain with the new technologies, and the probable ability of the Soviet Union to devise countermeasures which will render the new weapons less effective than NATO hopes. As one example, Soviet movement away from rigid echelon structures toward a more mobile Operational Maneuver Group structure robs the Rogers Plan of part of its tactical justification. High-tech guidance systems might also be vulnerable to electronic countermeasures such as electro-magnetic pulse weapons, and such uncertainties will make it impossible for military commanders to rely on them completely.

If the Warsaw Pact also develops extensive Deep Strike capabilities, with precisely guided non-nuclear missiles with ranges of about 500 km, many of the ports and airfields which the United States depends on for quick reinforcements would be vulnerable. Such targets can already be reached by Soviet theater nuclear missiles, of course. But the point is that a full-scale conventional buildup of NATO forces with Deep Strike weapons, presumably echoed by the Warsaw Pact, will leave NATO just as vulnerable as before, if not more vulnerable.

IS ET ALL BAD?

Some Emerging Technology weapons may indeed provide positive alternatives to present NATO arms. Precision-guided submunitions do not require a move toward an "extended battlefield" or Deep Strike strategy,

they only make it technically possible. They could also be deployed on shorter-range systems such as the Multiple Launch Rocket System or lightweight anti-tank weapons.

Short-range anti-armor systems which overcome some of the drawbacks of the wire-guided TOW anti-tank systems may very well be a welcome improvement. Technological developments which allow defensive forces to deploy in a more decentralized fashion may play an important role in making possible a more strictly defensive military posture. If such force modernization does clear the way for a reduction in NATO's nuclear arsenals and movement toward military de-escalation and a relaxation of tensions in Central Europe, it should be welcomed.

Unfortunately, the enthusiasm for strengthening NATO's conventional forces with ET as well as more traditional weapons has not stemmed from any great desire to lessen the European military confrontation, and, in most circles, not from any plans to get rid of tactical nuclear weapons. Rather, military proponents of a NATO buildup in the non-nuclear area have favored it for its own sake, to regain some military advantage over Warsaw Pact forces.

While many of these systems do not raise the risk of war or nuclear escalation, they still use up scarce resources and do little more than perpetuate a 40-year-old military stalemate. They may contribute to European stability and security in a narrow military sense, but they are not the ideal way toward that goal. More positive alternatives are outlined below, in the final section.

THE ILLUSORY CONSENSUS: POLITICAL OBSTACLES TO A CONVENTIONAL BUILDUP

As a practical matter, political and financial realities within the Alliance will provide the main obstacle to any major NATO program of conventional modernization. Even conservative governments will find it difficult to scrape the money together to finance procurement of new weapons systems, and much of the West European elite has become intellectually wedded to the military posture of the last decade. European peace movements, which are beginning to question many of the more basic assumptions of NATO's military posture and political purpose, vigorously oppose what they see as another wave of the arms race in Europe. Far from bringing about a new consensus, plans for conventional modernization of NATO throw salt into festering wounds left behind by last year's political battle over deployment of new nuclear missiles.

NATIONAL PRIORITIES: THE BUDGET CRUNCH

The story of Manfred Woerner, the present West German Defense Minister and one of the most visible European advocates for emerging technology weapons, helps illustrate the political dilemmas of conventional modernization. While his Christian Democratic Party was in the opposition, Woerner was a leading spokesman for the party on defense issues and co-authored a report in 1982 which highlighted new-generation weapons as a key element in a strategy to strengthen NATO conventional forces.



Big plans, but no funds:

West German Defense Minister Manfred Woerner

Woerner has since become Defense Minister in a government which says it wants to expand and strengthen West Germany's participation in NATO, but which also is committed to fiscal austerity. Despite all his efforts and military plans, Woerner has a zero-real-growth budget to work with at the moment. It is not even clear that the projected defense budget will support the costs of the various new weapons that Woerner has already agreed to develop and buy, such as American Patriot anti-aircraft missiles and a German-French attack helicopter. Little if any room is left for new high-tech weapons.

ET weapons are not likely to be cheap, at least not as



European peace movements worry about more than the Bomb.

cheap as their supporters hope. The ESECS study, by adding up estimated costs of the various missiles and reconnaissance systems it felt were needed, came up with a figure of \$20 billion, to be spent over ten years. The study disregarded a whole range of support costs which cannot realistically be separated from the weapons themselves. It estimated total research, development, and testing costs for this modernization at \$1-3 billion, clearly an unrealistic assumption. Its estimates of the cost of the weapons themselves seem to have an equally hazy relation to reality. Christoph Bertram, former director of the London-based International Institute for Strategic Studies, has said that the burgeoning costs of current advanced weapons will require real increases in defense spending of some six percent in NATO countries. But no one really expects such growth rates to occur.

Many Europeans are also uneasy about the fact that the most significant of these systems would be produced in the United States, and that American firms with a financial stake in government contracts for development and production of these systems are among the most enthusiastic promoters of this modernization. They suspect that emerging technology may turn out to be American technology.

VIETNAMIZATION?

European defense planners have been chronically and justifiably afraid that the United States might not be serious in its pledge to use strategic nuclear weapons in defense of Europe, and initiatives to strengthen NATO's conventional forces run the risk of being caught up in this classic NATO dilemma. Some European defense experts see the renewed emphasis on conventional weapons as an indication that the United States is backing away from the pledge to use nuclear weapons in a European conflict.

This potential conservative opposition to a conventional buildup has nothing in common with the peace movement. While the latter regards the prospect of nuclear weapons being used in Europe as abhorrent, the security policy elite regards precisely that threat as essential for NATO. They are made uneasy by proposals to conventionalize NATO strategy and are clearly opposed to proposals or a follow-on no-first-use posture. After hearing one speaker advocate eventual withdrawal of tactical nuclear weapons

from Europe after conventional modernization, one conservative Dutch military specialist remarked that he was unalterably opposed to such moves, "precisely because we don't want a Vietnam here," meaning a war which the United States could comfortably fight in a foreign country without putting its homeland at stake.

PUBLIC OPPOSITION

European peace movements are not simply anti-nuclear protests, although knowledge of the horrors of nuclear weapons gives the movements much of their emotional urgency. More generally, the movements oppose what they feel to be the ongoing waste and irrationality of the arms race; this sentiment is shared by broad portions of the Western European populace. Many have an explicit vision of how Europe could be different, once freed from the dangerous but apparently immutable confrontation between the United States and Soviet Union.

Beyond that, the various factions of the peace movement all have their own approaches, and there are as many reactions to conventional modernization as factions. Some, perhaps the most active and militant wing, see AirLand Battle and the Rogers Plan as dramatic new war-fighting approaches which are to serve the same intimidation and first-strike purposes within American global strategy as the Pershing II and cruise missiles. Others are upset that an overstated and overdramatized Soviet threat is once again being used to devote more resources to military purposes. Still others, such as the main line of the German Social Democratic Party, accept the basic assumptions of military defense but call for greater attention to the possibilities of arms control, confidence-building measures, and expanded detente and cooperation with the nations of the Warsaw Pact. While the Social Democrats are willing to discuss possible improvements in NATO's conventional weaponry and tactics, they insist that such measures be part of a larger political goal-reducing political tensions and nuclear arsenals on both sides of the East-West divide.

Peace movement opposition to a new move upward on the arms race spiral will not topple any governments in the near term. But support for the goals of the peace movements is present in a wide spectrum of Western European society, including persons who normally support conservative parties. The governments of West Germany, the Netherlands, Great Britain, and the Scandinavian countries will have to pay attention to these voices of dissent.

THE SEARCH FOR ALTERNATIVES

If NATO is currently in bad shape, a nuclear buildup is not the answer, and proposals to introduce a comprehensive program of modernization are not going to solve any problems either, where can a person look for better solutions?

NATO's critics have done enough creative thinking in recent years in the area of political and military alternatives that it is possible to outline a number of different approaches. Much of this work has been done in Europe, where the questions of alternatives for NATO have been posed much more concretely.

MBFR: STALEMATE AND OPPORTUNITY

According to the conventional wisdom, the Mutual and Balanced Force Reduction (MBFR) talks are something of a dreary exercise, without much prospect of a meaningful agreement. A dozen years have indeed passed without the negotiations bringing any force reductions, but an agreement could now be within grasp, and the significance of such an agreement should not be underestimated.

There has been movement toward compromise in recent years. The Warsaw Pact has agreed that a first stage of troop reductions would involve Soviet and U.S. forces and that each alliance would have collective manpower limits of 700,000 ground troops and 900,000 troops overall. Moreover it has agreed in principle to on-site inspection to verify force levels.

The negotiations are hung up on the so-called "data issue"—disagreement on how many Warsaw Pact troops are actually in the reduction area. While Pact and NATO estimates of air force levels are about the same, NATO says that Warsaw Pact ground forces number about 960,000, and the East claims that it has only 800,000 troops in its ground forces.

Having submitted its data on force levels, the Pact has clung to them stubbornly, and has been unwilling to provide more detailed information on troop structure which would support its numbers. Since the data issue became the main point of deadlock in the talks, the Pact has argued that prior agreement on data is not necessary if subsequent force levels after reductions can be verified. The West has refused to accept that argument, although West Germany is reportedly ready to show more flexibility and accept subsequent verification in place of prior agreement.

DO WE WANT AN AGREEMENT?

NATO proposed the MBFR talks for a number of political reasons, among them the need to head off Congressional pressure for unilateral withdrawal of American troops. Since then, however, one hears persistent reports that Western military planners, particularly in the United States and Great Britain, see the negotiations as fundamentally flawed and would be happier if they never came to a successful conclusion.

The reasons for this feeling are largely geographical. The United States, skeptics argue, would retreat thousands of miles across the Atlantic, while Soviet forces would move back only several hundred miles to their homeland. Reductions in the forces of countries within the reduction area would have to occur by means of demobilization, which would eliminate some of NATO's strongest forces and the Warsaw Pact's weakest, say the pessimists.

These objections overlook the benefits to be gained from an MBFR agreement.

For one thing, the Warsaw Pact has made significant concessions. It has always recognized that more Soviet troops than American troops would have to be

withdrawn. The ratios of withdrawal do take into account higher initial manpower levels for the Pact. The Pact has also withdrawn its insistence on specified reductions on the part of each alliance member, thereby allowing NATO to structure the reductions as it wishes, protecting its most valuable forces.

More importantly, the situation after mutual withdrawals offers clear military benefits to NATO in countering the attack scenario which NATO planners generally consider the most threatening—the so-called "standing start" attack in which Pact forces already stationed near the border attack with little warning and no reinforcements. Warning time and mobilization are much more important than force levels for successful defense or deterrence of attack, and it is in precisely this area that an MBFR agreement would prove useful.

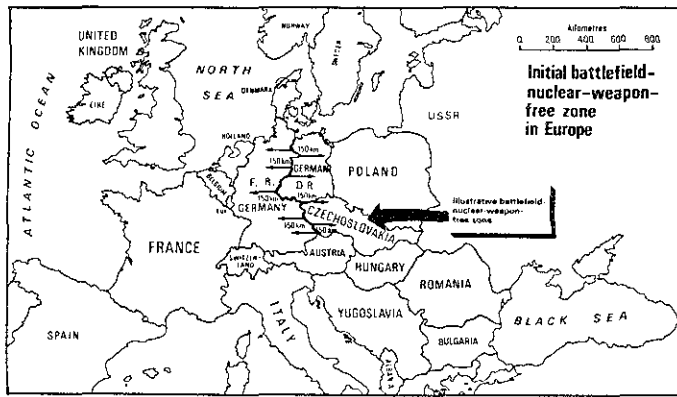
If a significant portion of the Soviet troops stationed in East Germany were redeployed to the Soviet Union, the Pact's ability to concentrate forces quickly for such an attack would be greatly impaired.

In addition, there are important political reasons for pursuing troop withdrawals. It is generally conceded that the Warsaw Pact is not about to invade Western Europe, but its troops in Eastern Europe play an important political role—as the cement which holds the various Eastern European nations in line and limits their internal and external freedom of movement.

Balanced troop withdrawals, quite apart from their military benefits for NATO, would set a political signal which matters a great deal to the Poles and Czechs. In the longer term, this is the direction Europe should move; in the process of getting foreign forces out of central Europe, greater freedom and flexibility may become possible for Europeans in East and West.

In the end, however, even those who remain unconvinced by the military and political arguments for an MBFR agreement will be forced, for quite simple financial, demographic, and political reasons, to recognize that an MBFR agreement is the best alternative. Pressures in Congress to withdraw American forces from Europe periodically return and are presently on the increase once again, spurred by budget deficits and a feeling that U.S. interests can be quite adequately served without this massive investment of national resources in the military defense of Western Europe. An alliance between liberal non-interventionists and conservative isolationists will at some point succeed in forcing the unilateral pullback of U.S. troops. In addition, demographic developments are already putting in question West Germany's ability to fill its military manpower requirements, even with the draft.

So if forces are going to be cut back anyway, it makes sense to get something in exchange, in a deal with the Warsaw Pact for mutual reductions. If the West unilaterally reduces its forces, it will be seen as a sign of weakness. But as part of an arms control agreement, it can be a political triumph.



The Palme Commission's proposal for a nuclear-free zone

The main points of many of the suggestions are summarized here in a way which risks oversimplification but is meant to offer an overview of some of the positions in the debate and provide a few criteria for future discussions of the issue.

DENUCLEARIZATION

Because of the suicidal effects of the use of nuclear weapons, political opposition to heavy reliance on them has increased. Most of the alternative proposals are efforts to reduce the likelihood that nuclear weapons will be used, and many call for withdrawal of the weapons from specific areas, or the creation of demilitarized zones along the East-West border.

One of the less radical of these proposals is that of the Palme Commission, contained in the Commission's report, *Common Security* (Simon & Schuster, 1982), the implementation of which would not require any fundamental changes in political or military structures. The Palme Commission called for negotiated parity of conventional forces in Europe and the creation of a nuclear-free zone along the East-West dividing line. The point of such a nuclear-free zone would be to lessen the dangers of an early use of the weapons due to their being quickly overrun in the confusion of conflict.

The British Alternative Defence Commission, a group of British defense and foreign policy specialists sympathetic to the cause of nuclear disarmament, published a book called *Defense Without the Bomb* (Taylor & Francis, Ltd.) in 1983 which proposed various alternatives to the British nuclear force in the defense of the United Kingdom. Such a nuclear-disarmed Britain could not in the long term participate in a nuclear-dependent NATO strategy, the Commission argued, and suggested that Britain make further participation dependent on NATO's progress toward denuclearization. Specific steps in this process would be declaration of a no-first-use policy, withdrawal of battlefield nuclear weapons, withdrawal of theater nuclear weapons, and decoupling the strategic forces of the United States from NATO.

The German Social Democratic Party (SPD) has established a working group of experts to consider the question of NATO strategy and weapons. Their most recent report called for gradually putting aside the dependence of NATO on early use of nuclear weapons. While the group's conclusions have not yet been adopted

as the position of the party, they reflect the general center of gravity within the SPD on nuclear strategy.

The question, of course, is how NATO can get to the point where these proposals to withdraw nuclear weapons could become reality. In other words, under what circumstances would it become politically possible to renounce a degree of dependence on nuclear weapons? To the extent that a unilateral buildup by NATO or an arms control agreement between the alliances convinces people that nuclear weapons are not needed, it brings NATO closer to that point. A revision in the widely-held perception of Soviet aggressive intentions in Europe or NATO's ability to meet that threat, which might happen independently of any actual changes in the military balance as a result of political developments or the introduction of confidence-building measures between the blocs, would have an equally significant effect.

All strategies to move toward a no-first-use policy or a lessened reliance on nuclear weapons contain some combination of these elements.

DEFENSIVE DEFENSE

Military forces which are proclaimed to be defensive also have offensive potential and are thus seen as threats by others, who respond accordingly. In an effort to break through this classic vicious circle, some proposals focus on developing a military posture for NATO which would provide effective non-nuclear defense but which would be useless for offense, thereby creating a situation more conducive to arms control and relaxations of tensions.

One of the better known of these theorists is the West German Horst Afheldt. He calls for a form of territorial defense in which large numbers of small, lightly-armored infantry and artillery units are integrated into a defensive "network." Tank forces and attack aircraft would be eliminated. According to Afheldt, the great increases in effective firepower now available even to small units as a result of technological developments in the area of communications and anti-tank weapons allow these units to blunt any massed offensive. The decentralization which characterizes this structure would rob the opponent of any rational military targets for nuclear weapons and make it exceedingly difficult for an attacker to deal a crushing blow to any major defensive formations. In short, Afheldt feels that such a structure makes eminent military sense and also promises great political benefits in curbing the arms race and bringing more stability to the central European front.

POLITICS AND SECURITY

In the end, military and technical fixes to ensure European security are never the solutions they pretend to be. As long as nuclear weapons remain on European soil, any attack is likely to lead to nuclear escalation. In fact, if the Warsaw Pact is really serious about attacking Western Europe and has decided that it is ready to accept the political and military consequences of such an attack, it is reasonable to assume that the attack will be full scale, with long-range and possibly nuclear missiles from the start, in which case none of the marginal changes which could be

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made in Western defense posture will make any difference anyway.

The simple fact is that the foolproof military posture does not exist. The most that military defense can offer in a nuclear age is the assurance to the opponent that aggression will have a significant cost in lives, material destruction, and political acceptability. Beyond a certain point, both military resistance and attack lose any rational basis, and all one can hope for is rationality on both sides.

In view of this, arrangements with the potential enemy to make conflict and crises less likely, and to deal with them in a constructive manner when they do arise, are essential. As the members of the Palme Commission put it, security in today's world cannot simply be assured *against* the opponent, but rather must be worked out in some sense *with* the potential enemy. In practice, this would mean a variety of "confidence-building measures," expanded exchange of information under conditions of renewed detente, and agreed-upon procedures to defuse a crisis.

Others, such as the German Green Party or Mary Kaldor and similar thinkers from the British peace movement, see the political geometry of Europe itself as a fundamental part of the problem. The cold war has generated its own constituency among the military and political elites of each alliance, they argue, particularly in each of the super-powers. On both sides, emphasis on responding to an external threat and internal cohesion within the alliance stand in a mutually supporting relationship. The one requires the other. In this view, a program for peace in Europe must move in the direction of non-alignment.

THE FAS NATO PROJECT

Although NATO is the focus of most U.S. military expenditures, few in the American defense and peace community have the time, skills and inclination to monitor the ever more important and rapidly changing political developments in Europe and to relate technological and military developments in weaponry to these political debates. But the Pershing and Cruise missile debacle demonstrates the importance of doing so. If Europeans see arms modernization exacerbating the arms race or heightening military confrontation, many will feel their security weakened rather than strengthened, and NATO's consensus will actually be undermined.

The FAS NATO Project proposes to link interested elements of the peace and arms control community to European developments, to monitor funding and creation of new weapons systems designed for deployment in Europe, to assess the implications of technological developments for arms control, defense and security in Europe, and to follow the debate over NATO's military posture and the progress of the Mutual and Balanced Force Reduction talks. Through analytical reports and discussions with other groups, it aims to create the basis for a common American and West European approach that can diminish the danger of war in Europe over the coming decades.

Daniel Charles, FAS Research Associate, prepared this report and will lead the FAS NATO project.

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