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Geneva Conference on Disarmament

The Conference on Disarmament (CD) is the principal forum established by the international community for the negotiation of multilateral arms control and disarmament agreements. In operation since 1979, the 40-member CD (which includes all five nuclear weapon states), meets in Geneva for two, three-month periods annually. The CD predecessor bodies, which date back to 1962, successfully elaborated a number of disarmament agreements, notably the Nuclear Non-Proliferation Treaty, the Biological and Toxin Weapons Convention, the Seabeds Arms Control Treaty, and most recently the Environmental Modification Convention (which prohibits environmental warfare), signed in 1977.

The CD conducts its business through plenary sessions in which representatives make basic policy statements, through informal meetings in which there are detailed exchanges on issues in a more relaxed atmosphere of give and take, and through "ad hoc Committees" set up to deal with specific questions. Plenary meetings are open to the public and have verbatim records. The ad hoc Committees submit reports to the Conference, which are incorporated into the CD's annual report to the General Assembly. Many delegations submit and circulate proposals and working papers but there are no formal records of meetings other than plenaries.

Of particular importance to the US are the CD negotiations on a chemical weapons ban. In February of 1983, Vice President Bush gave added impetus to the US commitment to seek a ban on chemical weapons by calling for more intensified efforts, and this was followed up with the introduction of a paper containing "Detailed Views" of the US on a chemical weapons ban. In the summer of 1983, the United States tabled a detailed paper addressing verification procedures related to chemical weapons stockpile destruction, including on-site inspection. In November 1983, the US sponsored a workshop for member and observer countries of the CD to demonstrate potential instrumentation and continuous on-site-presence techniques for the verification of the destruction of chemical weapons. In April 1984, the Vice President returned to the CD and presented the US draft convention on a chemical weapons ban which would prohibit the development, production, stockpiling, acquisition, retention, transfer or use of chemical weapons. The US continues to place a high priority on successful negotiation of the chemical weapons convention.

During the 1986 session, four ad hoc Committees which had met in 1985 were reestablished. Negotiations in the CW Committee on a comprehensive and verifiable ban on chemical weapons were more active in 1986 compared with recent years, due largely to the fact that the Soviet Union finally began to address the substantive issues involved. The RW Committee continued discussions of a ban on radiological weapons and on attacks on nuclear reactors and other nuclear facilities. The Committee on a non-binding "Comprehensive Program of Disarmament" continued its deliberations. The fourth ad hoc Committee, on arms control in outer space discussed the existing legal regime with respect to outer space. Consensus was reached on a non-negotiating mandate for this body.

1987 Session

The formal opening of the 1987 session of the Conference on Disarmament in Geneva took place on Tuesday, February 3.

Before the formal session began, there were three weeks of intersessional negotiations on chemical weapons in the ad hoc Committee on Chemical Weapons. The focus of these negotiations was on the verification regime for providing assurance that chemical weapons are not being produced in the civil chemical industry.

Since the opening plenary of the CD on February 3, five ad hoc Committees have been established. The Chemical Weapons Committee is meeting under the chairmanship of Ambassador Ekeus of Sweden and the Committee on the Comprehensive Program of Disarmament under the chairmanship of Ambassador Garcia Robles of Mexico. The Outer Space Committee, chaired by Italian Ambassador Pugliese, has held one meeting to formulate its work program. The Radiological Weapons Committee will begin meeting soon under the chairmanship of Ambassador David Meiszter of Hungary. The Committee on Negative Security Assurances was reestablished, but has yet to meet.

Two other items on the CD's agenda which are considered in plenary rather than in ad hoc Committees are the "cessation of the arms race and nuclear disarmament," and the "prevention of nuclear war, including all related matters."

Membership of the CD

The following 40 states are members of the Conference on Disarmament: Algeria, Argentina, Australia, Belgium, Brazil, Bulgaria, Burma, Canada, China, Cuba, Czechoslovakia, Egypt, Ethiopia, France, German Democratic Republic, Federal Republic of Germany, Hungary, India, Indonesia, Iran, Italy, Japan, Kenya, Mexico, Mongolia, Morocco, Netherlands, Nigeria, Pakistan, Peru, Poland, Romania, Sri Lanka, Sweden, Union of Soviet Socialist Republics, United Kingdom of Great Britain and Northern Ireland, United States of America, Venezuela, Yugoslavia and Zaire.

Although the CD decided in 1983 to expand its membership by up to four states, there is no consensus on the proposed candidates.

Nuclear Test Ban

Following a Presidential decision in July 1982, the Administration announced that the US would not resume trilateral (US, UK, USSR) negotiations on a comprehensive test ban (CTB) Treaty because of major verification difficulties and national security concerns. However, the President has stated that we remain committed to the ultimate goal of the total elimination of nuclear testing, but only when we do not need to depend on nuclear deterrence to ensure international security and stability, and when we have achieved broad, deep, and verifiable arms reductions, substantially improved verification capabilities, expanded confidence-building measures, and greater balance in conventional forces. We have continued to agree to participate in an ad hoc Committee at the CD in Geneva to discuss issues related to the verification, compliance and scope of a Comprehensive Test Ban, as long as such a committee would have a non-negotiating mandate. However, because of continuing disagreement on the mandate, an ad hoc Committee on nuclear testing was not formed during the 1986 CD session, the third consecutive year in which the CD has failed to form a test ban committee. And thus far in 1987, there has been no agreement on a mandate for such a Committee.

The US is also an active participant in the CD's Group of Scientific Experts (GSE), which was set up to specify the technical features of a possible international seismic data exchange system and to provide factual results and analyses on data exchange methods. The GSE met twice during 1986, and held its spring 1987 meeting from March 2-13. In 1986, the Group completed and submitted its report on the Technical Test which the GSE sponsored in 1984-85. The Test was a lengthy exercise of methods to exchange and process large amounts of seismic data on a global basis to investigate the possibilities of a communications system which might be used in monitoring the underground environment under any future comprehensive test ban.

Chemical Weapons

Existing Agreements

The US is party to two existing international arms control agreements affecting chemical weapons:

-- The Geneva Protocol of 1925 prohibits the use in war of chemical or biological weapons, but not the development, production, possession or transfer of such weapons. Most major states have reservations making clear a right to retaliate in kind if such weapons are used against them.

-- The 1972 Biological and Toxin Weapons Convention prohibits the development, production, stockpiling, acquisition, retention and transfer of biological and toxin weapons.

Neither of these agreements contains the necessary provisions for verification of compliance. The President has concluded that the Soviets have violated both agreements.

Spread and Use of Chemical Weapons

In 1963, 5 countries were judged to possess chemical weapons. The US now believes that at least 15 do, and that others are trying to acquire them. Since the late-1970s, Soviet-sponsored Lao and Vietnamese forces have used chemical and toxin weapons in Southeast Asia. Moreover, Soviet forces have used chemical and toxin weapons in Afghanistan. Allegations concerning the use of lethal chemicals or toxins in Kampuchea, Laos, or Afghanistan subsided in 1985. Iraq has used chemical weapons against Iran repeatedly since 1984. Iran now threatens to retaliate with chemical weapons of their own.

The US has raised concerns through diplomatic channels with countries implicated in chemical weapons and toxin use and has issued three Presidential non-compliance reports to Congress as well as other special reports on the use of these weapons in Southeast Asia and Afghanistan. The UN has reported on the use of chemicals in the Gulf War; however, chemical agents are still being acquired and used.

Chemical Weapons Negotiations

The primary US objective in the CW field is the elimination of chemical weapons under a comprehensive, effectively verifiable global ban. The US and Soviet Union have been discussing a ban on chemical weapons for over a decade. Bilateral negotiations, begun in 1977, were allowed to lapse in July 1980. Efforts to achieve a CW ban were shifted to the multilateral arena of the 40-nation Conference on Disarmament (CD) in Geneva in 1980.

In April 1984, Vice President Bush presented to the CD the US draft chemical weapons convention which would prohibit the development, production, stockpiling, acquisition, retention, transfer or use of chemical weapons. Verification would be accomplished by a combination of national and international measures, including systematic international on-site inspection and mandatory challenge inspection. While there has been progress in Geneva, the Soviets have not accepted the full range of necessary on-site verification measures, and a large number of details remain to be worked out. We desire completion of a CW ban as soon as possible, but there are still many difficult issues to be solved and we will not be bound by artificial deadlines.

In 1984, as a complement to the multilateral negotiations, the US initiated bilateral discussions with the Soviets to consider how to ensure confidence in each other's compliance with the provisions of the convention. Those talks continued in 1985 with little progress.

Following the agreement reflected in the Reagan-Gorbachev Summit communique in November 1985 to intensify the bilateral discussions on a CW treaty in Geneva, we began such talks on the margins of the CD in February 1986. There have been five rounds of discussions. While disagreements remain, these discussions have been frank and serious and have given impetus to the multilateral negotiations in the CD.

It was also agreed at the 1985 Summit to initiate a US-Soviet dialogue on prevention of the proliferation of chemical weapons. To date, two such discussions have been held at which information on export controls has been shared and areas of concern addressed. Further discussions are anticipated, but no dates arranged.

Congressional Authorization of CW Funds

It is important that the production of binary weapons continues to go forward as planned. We believe there is a relationship between our negotiation efforts and the chemical modernization issue. We think the Soviets have felt the pressure of our binary modernization program and have, to some extent, responded to this pressure with increased actions in negotiations. As the binary production issue continued to move through Congress, the Soviets realized that the US was serious about modernization and became more serious in the CW negotiations. In the future, we would expect that the Soviets' negotiating posture will reflect, to a degree, Soviet efforts to influence Congressional debate on binary weapons.

Modernization Program

For years the US has tried to achieve an effective chemical arms ban while at the same time unilaterally freezing production of chemical agents and delivery systems.

The approach has not worked. Since the United States unilaterally ceased CW production in 1969, the Soviet Union has continued to expand and modernize its chemical weapons stockpile, accumulating a huge investment in chemical warfare equipment and personnel. This resulting Soviet CW military superiority has left them, for much of this time, with little incentive to negotiate seriously a universal ban on CW. We believe it was not accidental that the recent more serious Soviet approach to the CW negotiations followed Congressional support for the binary program. Should Congress reverse itself on the binary there is a real danger that the Soviets will cease negotiating seriously toward a CW ban.

Modernizing our chemical weapons does not mean attempting to match the magnitude of the Soviet effort. In fact, the projected binary stockpile will be smaller than the current unitary one. Modernization does mean having a deterrent that will raise questions in the minds of the Soviet leadership on the utility of initiating use of their chemical weapons

offensive capabilities. US commitment provides a clear signal of our resolve in the absence of the effective arms control agreement. Until the threat posed by chemical weapons is eliminated by a comprehensive and effectively verifiable treaty, the US must have a credible chemical weapons deterrent.

Soviet Actions in CW Arms Control Negotiations

The unwillingness of the Soviet Union to accept the full range of necessary verification provisions continues to impede progress at the negotiations. A number of important issues remain outstanding: e.g., provisions for the full and necessary range of challenge inspections, random monitoring of the commercial chemical industry to ensure that it is not misused to produce chemical weapons, and verifying the elimination of CW production facilities. At the November 1985 Summit, General Secretary Gorbachev made a commitment to intensify work on all aspects of the chemical weapons negotiations, including verification of a comprehensive CW ban. We observed an increase in the pace of the negotiations during 1986 in which the Soviets spelled out their views on the technical aspects of monitoring the chemical industry and elaborated on Gorbachev's January comments on the elimination of chemical weapons production facilities. Some of the differences in these areas have narrowed and in principle, the Soviets will now permit systematic international on-site inspections to verify the elimination of declared CW production facilities and to monitor the chemical industry. In February 1987 the Soviets accepted the early declaration of the location of all CW stockpiles. In addition, they accepted the mandatory nature of challenge inspection in cases of suspected CW use and at declared facilities. However, they are unwilling to accept mandatory challenge inspection provisions necessary to address compliance concerns at undeclared facilities and locations. In addition to the major differences mentioned, many details on a variety of issues remain to be addressed. Even under the best conditions, the resolution of these questions will require considerable negotiation.

Related US Actions

In the absence of a complete ban on chemical weapons and to complement efforts in that direction, the US has participated in informal discussions with other countries (EC-12 members, Australia, Canada, Japan, New Zealand and Norway) which have imposed export controls on certain chemicals related to the manufacture of chemical weapons. The purpose of these meetings is to discuss ways of optimizing our existing export control programs with a view to improving the effectiveness of our efforts to curb illegal use of chemical weapons through international cooperation.

Biological and Toxin Weapons Convention (BWC) Review Conference

The 2nd Review Conference of the 1972 Biological and Toxin Weapons Convention (BWC) was held September 8-26, 1986 in Geneva. Sixty-three parties attended including the three depositaries (US, UK, USSR).

The US sought a serious review of operation and effectiveness of the BWC, recognition of legitimacy of US concerns about Soviet violations and recognition by parties of the necessity to responsibly address and investigate allegations of noncompliance. The US also sought an understanding of the impact of new scientific and technological developments which have increased verification difficulties and made development and production of biological and toxinn weapons easier.

In light of new scientific and technical developments making verification more difficult and the need to not undermine our ongoing efforts to achieve an effective verification regime for a CW ban, the US opposed efforts to amend the BWC through development of a verification protocol. Instead, the US sought to strengthen the effectiveness of the norm established by the BWC through recognition of and commitment to address compliance concerns and through adoption of informal measures to increase the transparency of biological activities which would help reduce suspicions and increase cooperative efforts among parties.

The US believes the outcome of the BWC RevCon was positive. It was conducted in a serious, nonpolemical fashion. We strongly expressed our noncompliance concerns and several other countries expressed concern as well. Most countries acknowledged the impact of new scientific and technological developments as increasing verification difficulties and making production of biological and toxin weapons easier. The final declaration noted compliance concerns, called for parties to deal seriously with compliance concerns and contained agreement on several measures. The RevCon provided for a technical experts meeting March-April 1987 to work out the details of implementation of the agreed measures and called for a third review conference no later than 1991.

Outer Space

Each year since 1981, the UN General Assembly has requested the CD to consider further measures for outer space arms control. In March 1985, the CD established an ad hoc Committee on the "Prevention of an Arms Race in Outer Space" with a non-negotiating mandate. The outer space Committee was reestablished in 1986, with a mandate similar to that adopted in 1985.

In this Committee, the United States continued its analysis of the existing legal regime which had begun in 1985, and offered to continue reviewing new measures in this area that are verifiable, equitable, and compatible with national security interests. Thus far, the US has not identified any as appropriate for multilateral negotiation.

The outer space ad hoc Committee has been reestablished in 1987 under the chairmanship of Italian Ambassador Pugliese, but the Committee's work program has not yet been finalized.

Negative Security Assurances

The term "negative security assurance" refers to an undertaking by a state possessing nuclear weapons not to use or threaten to use them against a state which does not possess them. Particularly since the conclusion of the Nuclear Non-Proliferation Treaty (NPT), many of the non-nuclear weapons states that are Parties to the Treaty have demanded such assurances, in return for having eschewed nuclear weapons. They have been joined by many states not party to the NPT. At the first special session of the United Nations General Assembly devoted to disarmament (SSOD I), held in 1978, the five nuclear-weapon states each gave such an assurance. The United States assurance was reaffirmed in 1982.

The CD established a working group in 1979, which has been reestablished in most of the succeeding sessions, to negotiate with a view toward reaching agreement on effective international arrangements to assure non-nuclear weapons states against the use or threat of use of nuclear weapons. The ad hoc Committee did not meet in 1986, however. It has been reestablished in 1987, but has yet to meet.

Radiological Weapons

The US supports the establishment of an effective, verifiable and meaningful international norm against the use of radiological weapons (RW) through an appropriate ban on the hostile use of radioactive material and by requiring states to take measures necessary to prevent terrorists from obtaining radioactive materials. Since 1979 the US has supported negotiation of a treaty banning RW in the Geneva Conference on Disarmament (CD). In 1985 the US reviewed the RW treaty under negotiation in the CD and concluded that additional verification provisions should be identified. Late in the 1985 session of the CD the US informed other members of our concerns regarding verification provisions, and that we would seek to develop additional verification mechanisms that will assure compliance with a ban.

The ad hoc Committee on Radiological Weapons was reestablished in 1986. Without dividing its work into two separate "tracks", the Committee continued its examination of the two major issues it has faced for a number of years: (1) the prohibition of radiological weapons and (2) the prohibition of attacks against nuclear facilities. On both issues, major differences over substance and approach continued.

The 1987 session of the Conference began in February, and the RW ad hoc Committee was reestablished on February 10. Amb. David Meiszter from Hungary was named as the new chairman of the Committee on March 19, 1987. The Committee will begin meeting soon.

Comprehensive Program of Disarmament

Negotiations have taken place at the CD and at the second special session of the UN General Assembly devoted to disarmament (SSOD II) to elaborate a non-binding Comprehensive Program of Disarmament (CPD). The United States has participated actively in the negotiations on a CPD, a project advocated by the Neutral and Non-Aligned states to provide a detailed guide to eventual general and complete disarmament under effective international control. President Reagan stated at SSOD II that "one of the major items before this conference is the development of a CPD." He went on to state that the United States "support(s) the effort to chart a course of realistic and effective measures in the quest for peace."

The ad hoc Committee on CPD met throughout the 1986 session, but was unable to finish its task. The current target for completion of the CPD document and submission to the UN General Assembly is the spring of 1987. The US Delegation to the CD will continue its efforts to complete this task.

Britain and France Try to Put Chauvinism (1066 and All That) Behind Them

U.S.-Soviet Missile Talks Pull Europeans Together

By JAMES M. MARKHAM

BONN

SPEAKING in Brussels last week, Sir Geoffrey Howe, the British Foreign Secretary, caught a mood that has crystallized since it became apparent that the United States and the Soviet Union might very well remove their medium-range missiles from Europe. It was a plea for Western Europe to get its act together.

"A Europe which gets its ideas straight is a far more rewarding partner for the United States, and far more likely to have its views taken seriously, than a Europe which speaks with a multitude of voices," Sir Geoffrey argued. "If we want our particular European concerns to be clearly perceived and taken into account in negotiations between the United States and the Soviet Union, then we must argue them out clearly among ourselves and come wherever possible to a common view."

The idea of strengthening the so-called "European pillar" of NATO is not at all new, but it got a tremendous fillip in October when the Reykjavik summit raised the possibility of the superpowers' striking a deal over the heads of the allies. It has gathered momentum as West Europeans try to fathom the implications of upheavals in Washington and Moscow. And despite mutual suspicions rooted in centuries-old European rivalries, which seem always ready to flare up destructively, it has gained plausibility thanks to two long-term developments — a growing emotional commitment to Europe by most of Britain's political establishment and the emergence of France from hermetic Gaullist nationalism.

French-British Coordination

Significantly, President François Mitterrand of France chose to go to London two months ago to deliver an elegant lecture on the European idea. His musings were heavily colored by Reykjavik. "France is my homeland," the French President said. "Europe is our future. Is it possible to miss this rendezvous?"

Close cooperation between France and West Germany has become an operating assumption in Western Europe, but it is only recently that France and Britain, the two European nuclear powers, have started talking seriously about defense. In Paris this month, their Defense Ministers, André Giraud and George Younger, agreed to coordinate procurement policies and consult on the strategic environment. The British and the French are being drawn together by the logic of an assumed Soviet-American arms deal that might first eliminate Europe-based medium-range missiles — the so-called "zero option" — and then move to 50 percent cuts in strategic forces. At that point, the pressure would inexorably build for limitations on the French and British nuclear deterrents — Britain's 16 Polaris submarines and French missiles in submarines, planes and land silos. After Reykjavik, Prime Minister Margaret Thatcher is said to have commiserated with President Mitterrand, adding that her predicament was worse than the French President's since Britain, unlike France, gets its submarine-launched missiles from the United States.

As France is in the midst of a big buildup of its nuclear force de frappe, it faces the choice of going it alone in the Gaullist manner or seeking European cover. President Mitterrand has evidently seen the wisdom of the second course and, with the help of Prime Minister Jacques Chirac, has muffled the objections of Defense Minister Giraud and Foreign Minister Jean-Bernard Raimond to the "zero option." Some of France's allies privately found the ministers' objections faintly ridiculous, since France has no American missiles on its soil, but sounded determined that others should hang onto them. Last week, Mr. Mitterrand smiled on an initiative by Jacques Delors, the French president of the European Commission, for a meeting of the European Community leaders on post-Reykjavik defense issues. "Does Europe take the view that its security future is going to be settled above its head?" asked Mr. Delors provocatively. Some Community members, notably neutral Ireland, are likely to oppose such a meeting. But an instrument already exists for asserting West European views on defense policy — the seven-nation Western European Union.

A European Helicopter

A postwar relic, the union has been revived as the Europeans have sought to assert themselves without arousing suspicions that they might want to do without American protection. It is a tricky exercise, since many in Washington would like a more self-reliant Europe, but one that is self-reliant on American terms. Yet the very process of discussing Europe's interests, and its perception of the Soviet threat, accentuates differences with the United States. Among strategists, there is already talk of forging a Western European nuclear planning committee. The Western European Union foreign and defense ministers will meet next month, but they are not expected to venture into such deep waters or do anything to stir sentiment in America for bringing its G.I.'s home.

The European pillar is likely to be fortified by less ambitious undertakings, like last week's discussions that brought France and West Germany close to agreement on the joint production of a combat helicopter. In his Brussels speech, to the Royal Institute of International Relations, Sir Geoffrey said that within the North Atlantic Treaty Organization, the Europeans already supply 90 percent of the manpower, 85 percent of the tanks, 95 percent of the artillery and 80 percent of the combat aircraft facing the Warsaw Pact. Washington today, he observed, remains fully committed to NATO. "But we need to be alert to trends in American thinking," he warned, "which might diminish our security — perhaps not today or tomorrow, but possibly in the longer term."

Missiles and manpower

NATO countries Warsaw Pact countries

NATO's military might in Europe

	Total U.S. troops on duty*	Domestic troops, by nation**
Belgium	3,325	91,428
Britain	29,458	323,800
Denmark	394***	29,525
France	0	557,493
W. Germany	246,852	485,800
Greece	3,488	209,000
Iceland	3,091	0
Italy	15,082	387,800
Luxembourg	0	690
Netherlands	3,072	105,134
Norway	223	37,300
Portugal	1,630	68,252
Spain	9,136	320,00
Turkey	4,923	654,375
U.S. at sea: Mediterranean, North and Baltic seas	23,892	

*as of Dec. 31, 1986 **as of July 1, 1986
***includes 324 troops stationed in Greenland

Medium-range missiles in Europe

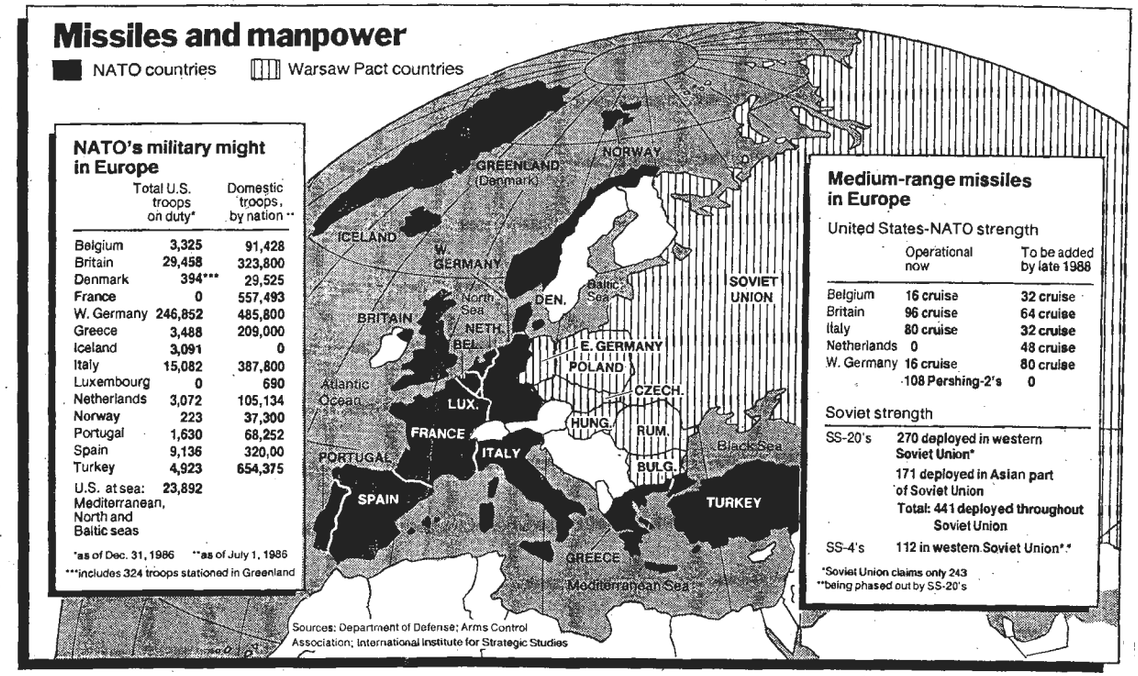
United States-NATO strength

	Operational now	To be added by late 1988
Belgium	16 cruise	32 cruise
Britain	96 cruise	64 cruise
Italy	80 cruise	32 cruise
Netherlands	0	48 cruise
W. Germany	16 cruise 108 Pershing-2's	80 cruise 0

Soviet strength

SS-20's	270 deployed in western Soviet Union* 171 deployed in Asian part of Soviet Union Total: 441 deployed throughout Soviet Union
SS-4's	112 in western Soviet Union**

*Soviet Union claims only 243
**being phased out by SS-20's



Sources: Department of Defense; Arms Control Association; International Institute for Strategic Studies

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Pentagon

Lehman's Sea-War Strategy Is Alive, but for How Long?

By BERNARD E. TRAINOR
Special to The New York Times

WASHINGTON — Secretary of the Navy John F. Lehman Jr. unveiled a daring maritime strategy a few years ago.

According to this strategy, should war ever break out with the Soviet Union, the Navy plans to send submarines and aircraft carrier battle groups directly north into the north Norwegian Sea and the Barents Sea, home waters of the Soviet Navy above the Arctic Circle. At the same time, a United States Marine contingent would be rushed to northern Norway to keep the Russians from seizing airfields there that would be crucial for supporting the Navy.

A primary goal of this offensive would be to destroy Soviet nuclear missile submarines situated in the area and to prevent other Soviet submarines from pouring into the Atlantic to sink ships taking critical supplies and reinforcements to Western Europe.

Another goal would be to threaten the Soviet homeland on its northern flank and thus weaken an anticipated Warsaw Pact attack against NATO defenses along the border between West and East Germany.

Defense Secretary Caspar W. Weinberger and the Joint Chiefs of Staff and NATO have never formally approved the Lehman strategy, which has drawn its share of critics and, in fact, remains a hot topic of conversation in the capital.

Some civilians who are skeptical of the concept consider it suicidal.

Yet, despite the debate, the concept seems to have taken on a life of its own and is now widely viewed as official United States and NATO strategy. Some 4,000 United States marines are conducting maneuvers in Norway this week to sharpen their ability to carry out their intended role.

But will the strategy continue to be viewed as viable after Mr. Lehman steps down next month after heading the Navy and Marine Corps for six years? The answer is far from clear.

The incoming Secretary, James Webb, a former marine who fought in Vietnam, declined to comment on the Lehman strategy, saying it would be inappropriate for him to express his views before being confirmed in his new post. But some of Mr. Lehman's critics do not hesitate to speak out.

They say the real reason the Secretary of the Navy came up with his plan was not so much to contain the northern Soviet threat as to justify his program to build a 600-ship Navy. That program, they concede, appears to be too far along to be seriously threatened once he has left. But they hasten to point out that the new Chief of Naval Operations, Adm. Carlisle A. H. Trost, was not Mr. Lehman's choice for the post and appears less vocal in support of the Lehman strategy than was his predecessor, Adm. James D. Watkins, now retired.

Some civilians who are skeptical of the strategy, such as Richard D. Delauer and Robert W. Komer, both former Defense Department officials, consider it suicidal in the face of the Soviet air and sea power concentrated in the Barents Sea. Other critics contend that many admirals see unacceptable dangers in the Lehman strategy but have not spoken out because it buttressed the push for a modernized Navy and, more important, because they did not want to jeopardize their careers by disagreeing with the Navy Secretary.

"They may not say it publicly, but many aircraft carrier skippers pale at the thought of taking their giant ships into the waters of the Barents," said John M. Collins, senior specialist in national defense at the Library of Congress. "They know they will be facing Soviet attack submarines and land-based airpower operating under conditions most favorable to the Soviets and least favorable to us."

Senior Navy officers deny there is serious internal opposition to the maritime strategy. They say it is not a full-steam-ahead doctrine but a dynamic and evolving concept of naval warfare that is supported by, among others, Admiral Trost.

"This is not a recipe for soup to be blindly followed," said one officer. "We are not going to rush blindly north regardless of circumstances. But neither are we going to signal the Soviets exactly what we will or will not do."

The detractors outside the Navy, this officer added, do not fully understand the flexibility of the strategy. And it is just as well, he argued, if the Soviets do not either.

According to Vice Adm. Henry Mustin, the Navy's deputy for operations, the maritime strategy is basically one of deterrence. "In the event of a confrontation with the Soviets," the admiral said, "we propose to take certain steps to demonstrate to the Russians that their powerful northern fleet would be bottled up and destroyed in its Arctic bastion should the shooting start. If our preventive moves convince the Soviets they won't be able to come south to cut NATO's lifelines to the United States, they may think twice about going to war in Europe."

The National Military Command Center at the Pentagon. Global strategy is not always decided harmoniously, as evidenced by a continuing debate over the Lehman plan to attack the Soviet Navy in the Arctic.

Whether such preliminary moves by the Navy would, in fact, deter or, on the other hand, prompt a reaction by the Soviets is frequently debated in Washington military circles.

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Submarines and anti-submarine patrol aircraft would try to destroy the Soviet undersea threat to the American aircraft carriers that would be moving up into the Norwegian and Barents Seas. Soviet surface ships, which are viewed as a lesser threat, would be dealt with by a combination of attacks by air and sea.

It is the proposed destruction of the Soviet submarine fleet that makes the maritime strategy unacceptable to some critics. They doubt that the Navy could tolerate the losses necessary to carry out such a campaign. More important, they say, no distinction is made between the sinking of nuclear missile submarines, known as "boomers," and conventional submarines.

The Soviets maintain the bulk of their strategic nuclear missile reserves aboard submarines stationed below the Arctic ice cap, where they are largely undetectable. They are protected by undersea minefields, attack submarines and anti-submarine aircraft.

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Brig. Gen. Michael K. Sheridan, senior planner for the Corps, says that north Norway is the key to the strategy. "If NATO can't hold on to the north," he said, "the strategy won't work because the Soviets will counter any Navy moves by launching devastating attacks out of Norway and the Soviet Union's Kola Peninsula.

"On the other hand, if we hold north Norway, the advantages are ours. We can use our early warning radar and command and control system to spot and counteract Soviet bombers flying out of the Kola before they get within missile range of the carriers. We can also use Air Force and Marine and allied aircraft in Norway to work with the carrier planes both in defense of Norway and to protect our anti-submarine aircraft."

The big question for the marines is whether they can get to Norway in time to assist the Norwegians in a successful defense of the north in the event of a NATO-Warsaw Pact war. To this end, the marines have been stockpiling heavy weapons and equipment in Norway. In case of a crisis, the marines and their accompanying tactical aircraft would then hope to fly quickly to Norway, pick up their

VANGUARD IRA

Briefing

Israeli 'statement' ■ Bracing for marathon questioning at Iran hearings ■ Baker's popular aide ■ Remembering a well-respected aide

On the Ledeen Case

Although it found no evidence to support it, the Tower Commission, in its report last month, published a memorandum written by Lieut. Col. Oliver L. North saying that Michael Ledeen, a consultant to the National Security Council, had profited from the Iran arms deals, making as much as $50 a missile. The commission said the allegation had been made to Colonel North by Amiram Nir, a senior adviser to the Israeli Prime Minister.

After the report came out, Mr. Ledeen vehemently denied the allegation and threatened to sue Mr. Nir for libel if the Israelis did not issue a statement clearing his name. The Israelis relented — sort of. According to Mr. Ledeen, the Israeli Government put out such a statement but insisted that it was "on background," meaning that it could be attributed only to an unidentified Israeli source.

According to Mr. Ledeen, no newspaper published the statement, since it did not carry the weight of the Israeli Government.

Now, 26 Questioners

The decision by the Senate and House committees investigating the Iran-Nicaragua affair to meld their investigations and hold joint hearings has been widely applauded. It seems likely to avoid what Daniel K. Inouye, the Hawaii Democrat who heads the Senate panel, has called "an unseemly competition for headlines" between the two committees.

Drawings by Nicolae Aschu

But the result of the merged hearings is that 26 legislators — 15 from the House and 11 from the Senate — will be on the platform questioning all the witnesses, and no one is sure how that will work out. The Senate Watergate committee had only seven members, and sometimes the interrogation of witnesses lasted for days on end. Unless some restraints are placed on the questioning, some people could be on the witness stand for weeks this spring and summer.

Griscom Tug-of-War

Early this year, Jody Powell, who was President Carter's press secretary, and Thomas C. Griscom, who was press secretary for Howard H

are skeptical of the concept consider it suicidal.

has drawn its share of critics and, in fact, remains a hot topic of conversation in the capital.

Yet, despite the debate, the concept seems to have taken on a life of its own and is now widely viewed as official United States and NATO strategy. Some 4,000 United States marines are conducting maneuvers in Norway this week to sharpen their ability to carry out their intended role.

But will the strategy continue to be viewed as viable after Mr. Lehman steps down next month after heading the Navy and Marine Corps for six years? The answer is far from clear.

The incoming Secretary, James Webb, a former marine who fought in Vietnam, declined to comment on the Lehman strategy, saying it would be inappropriate for him to express his

land-based airpower operating under conditions most favorable to the Soviets and least favorable to us."

Senior Navy officers deny there is serious internal opposition to the maritime strategy. They say it is not a full-steam-ahead doctrine but a dynamic and evolving concept of naval warfare that is supported by, among others, Admiral Trost.

"This is not a recipe for soup to be blindly followed," said one officer. "We are not going to rush blindly north regardless of circumstances. But neither are we going to signal the Soviets exactly what we will or will not do."

The detractors outside the Navy, this officer added, do not fully understand the flexibility of the strategy. And it is just as well, he argued, if the Soviets do not either.

According to Vice Adm. Henry Mustin, the Navy's deputy for operations, the maritime strategy is basically one of deterrence. "In the event of a confrontation with the Soviets," the admiral said, "we propose to take certain steps to demonstrate to the Russians that their powerful northern fleet would be bottled up and de-

United Press International

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stroyed in its Arctic bastion should the shooting start. If our preventive moves convince the Soviets they won't be able to come south to cut NATO's lifelines to the United States, they may think twice about going to war in Europe."

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The idea of an attack on the Soviet nuclear missile reserves always prompts a spirited argument between those who maintain that such attacks will trigger a nuclear war and those who maintain that as long as land-based Soviet ICBM's are not attacked, the Russians would rather lose the submarine missile submarines than use them in a mutually suicidal nuclear exchange.

For its part, the offensively oriented United States Marine Corps applauds the maritime strategy and sees itself playing a key role as its landward extension in Norway.

Brig. Gen. Michael K. Sheridan, senior planner for the Corps, says that north Norway is the key to the strategy. "If NATO can't hold on to the north," he said, "the strategy won't work because the Soviets will counter any Navy moves by launching devastating attacks out of Norway and the Soviet Union's Kola Peninsula.

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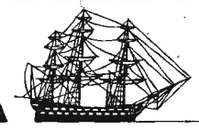
The marines trained for Arctic warfare who flew to Norway from their home bases in the United States last week are testing the rapid reinforcement concept and gaining more experience in cold-weather maneuvers.

VANGUARD

IRA



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Government at Work, Dept. of Trinkets

Special to The New York Times

WASHINGTON, March 22 — Doling out trinkets and memorabilia is a longstanding practice at the White House and throughout the Government. And rare is the recipient who does not like to show off his or her gift.

The White House took inventory at one point in the Presidency of Lyndon Johnson and reported that it had on hand, among other things, 6,000 pens, 500 small medallions, 130 lighters, 100 pairs of cuff links, 100 charm bracelets, 400 penknives and 50 small metal and felt boxes.

These were not just ordinary trinkets. The pens bore the initials L.B.J., and most of the cuff links, medallions and other items bore Presidential seals or initials.

Mr. Johnson kept them on hand to give as good-will gifts, as mementos. Other Presidents, before and after, including Ronald Reagan, have done the same.

The practice has recently come under fire, as it does from time to time, as unnecessary and wasteful. The latest item to be questioned: packs of playing cards.

much is spent yearly.

A White House spokesman, Mark Weinberg, says the Republican National Committee pays for all the pins, key rings, bookmarks and jelly-bean jars and other items that President Reagan gives out.

David Powers, one of President Kennedy's close aides, said the cost of the PT-109 tie clips Mr. Kennedy gave to White House visitors, perhaps the most famous of all Washington mementos, "came out of his own pocket."

As for Senator Proxmire, members of his staff say he does not hand out any gifts. Which surely makes him an exception in Washington, especially on Capitol Hill.

'A Way of Sharing'

"People really get a charge out of taking home a key chain with the Capitol insignia," said Jerry Burkot, press secretary for Representative Nick J. Rahall 2d, Democrat of West Virginia.

The dispensers of the gifts say that a $2 key chain gains from the recipient no more than good feeling, and that no influence is thereby peddled. "It's a way of sharing the Pre[illegible] Nunn said he did not know

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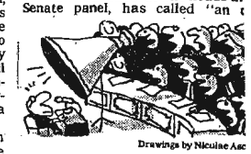

Drawings by Nicolae Asc

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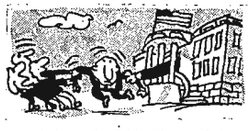
Griscom Tug-of-War

Early this year, Jody Powell, who was President Carter's press secretary, and Thomas C. Griscom, who was press secretary for Howard H. Baker Jr. when Mr. Baker was Senate majority leader, joined forces to run Ogilvy & Mather Public Affairs, a Washington subsidiary of the national public relations firm of Ogilvy & Mather. Mr. Powell became chairman and chief executive officer, and Mr. Griscom became president and chief operating officer.

The partnership ran smoothly — for about three weeks. Then, Mr. Baker replaced Donald T. Regan as President Reagan's chief of staff and summoned Mr. Griscom to the White House to help out in the transition. Mr. Baker makes no secret of the fact that he would like Mr. Griscom to stay on permanently. Mr. Powell, of course, would like his partner back at work.

With the President, the First Lady and the President's chief of staff all against him, Mr. Powell has begun what he calls "a shameless campaign" to put pressure on Mr. Gris-



com to leave the White House. He has passed out dozens of big white buttons with red letters saying, "Free Tom Griscom." And he made a videotape called "Griscom Held Hostage." The videotape features Mr. Griscom's wife, Marion, and their three small children and carries the basic message, "Daddy, won't you please come home!"

Harlow Anecdotes

Few people in Government in recent years have been as widely respected as Bryce Harlow, adviser and confidant of Presidents of both parties whatever the [illegible] come see him im-

THE U.S. ANTI-SATELLITE (ASAT) PROGRAM

A KEY ELEMENT IN THE NATIONAL STRATEGY OF DETERRENCE

> "The United States will proceed with development of an anti-satellite (ASAT) capability, with operational deployment as a goal. The primary purposes of a United States ASAT capability are to deter threats to space systems of the United States and its Allies, and within such limits imposed by international law, to deny any adversary the use of space-based systems that provide support to hostile military forces."
>
> President Ronald Reagan
> National Space Policy, July 1982

Anti-satellite Systems

In July, 1982, President Reagan called for a prudent, measured response to the Soviet military space threat in order to protect U.S. and Allied security interests. The two aspects of the Soviet space program of greatest concern in 1982, remain today -- their ability to destroy U.S. satellites and to use satellites for targeting of U.S. and Allied air, land and sea forces. While the United States abandoned our first anti-satellite (ASAT) program in the early 1970s, the Soviets continued their program and now maintain the world's only operational ASAT system. The Soviets have also developed reconnaissance satellites which provide targeting data that can be used to direct attacks against U.S. and Allied surface fleets and land-based forces. In view of the importance of our space assets and the continued need to project power to deter war and control escalation during conflict, it is essential that the United States develop and deploy an operational ASAT to deter the Soviets from exploiting their present ASAT and space-based targeting capabilities.

The Soviet Military Space Threat

The Soviet Union has a large and continually expanding military space program. We believe Soviet military space assets serve two basic functions: 1) to support terrestrial operations; and 2) to wage war in outer space. The attainment and maintenance of military superiority in outer space is the essential condition for the performance of both functions. According to U.S. intelligence assessment of Soviet military space doctrine:

> The Soviet Armed Forces shall be provided with all resources necessary to attain military superiority in outer space sufficient both to deny the use of outer space to other states and to assure maximum space-based military support for Soviet offensive and defensive combat operations on land, at sea, in air, and in outer space.

In the Soviet view, military superiority in outer space is achieved, in the first instance, by the use of ASAT systems to degrade or destroy the space-based command, control, communications and intelligence systems of an adversary and in the second instance, by successful use of space to support military operations including the use of satellites to target an opponent's forces.

The Soviet Union is, therefore, fully aware of both the strategic importance to the United States of military satellites and of the severe impact of their loss upon the U.S. capability to alert and direct our military forces in the event of a war. This knowledge has prompted the Soviets to develop their ASAT capability.

The Soviet ASAT system has been operational for well over a decade and has demonstrated an effective capability to destroy low-altitude satellites where many critical U.S. space systems orbit. In the past, the Soviets regularly conducted ASAT tests to practice satellite interception and to refine their system. Their present, self-imposed moratorium on testing is possible only because they have a proven and deployed ASAT, and this moratorium has not eroded their operational proficiency. As long as it serves their political and military purposes by tying our hands, the Soviets are likely to refrain from further testing. However, we believe that they have additional ASAT weapons and their associated boosters available, and we are certain that they can resume testing to improve their system or employ it operationally at any time.

The Soviets also have ASAT capabilities in some systems designed for other purposes. For example, the nuclear-armed GALOSH ABM interceptor deployed around Moscow has an inherent ASAT capability against low-altitude satellites. Two high-powered lasers at Sary-Shagan may be capable of damaging sensitive components on-board satellites. Although weather and atmospheric beam dispersion may limit the use of ground-based laser ASATs, such systems have the major advantage of being able to fire repeatedly and therefore to disable many satellites over time.

During the next decade, the Soviets are likely to retain their current ASAT-capable systems while moving aggressively ahead in developing and deploying new, more advanced ASAT systems. Their large-scale efforts in laser, particle beam, radio frequency and kinetic energy technologies may provide them with significant ASAT capabilities.

There is a growing and destabilizing threat posed by present and projected Soviet military satellites whose sole purpose is to help defeat U.S. and Allied terrestrial forces in the event of conflict. These systems include ocean reconnaissance satellites which use radar and electronic intelligence to provide real-time targeting data to Soviet weapons platforms which can quickly attack U.S. and Allied surface fleets. They also include photographic and electronic intelligence satellites which provide data and other information useful in supporting Soviet land forces.

In view of the fundamental importance of U.S. and Allied force projection in crisis and wartime, including the need for Allied reinforcement by sea, the protection of U.S. and Allied forces against such targeting is critical. As Soviet military space technology improves, the capabilities of Soviet targeting satellites are being enhanced and therefore will present a greater threat in time of conflict, conventional or nuclear, to our national security and that of our Allies.

Strengthening Deterrence

The fundamental purpose of our national security policies is to maintain and strengthen deterrence -- deterrence for both conventional and nuclear conflict. Continued, unilateral ASAT limitations on the United States undermine deterrence.

Since the Soviet Union has an operational capability to destroy satellites while the United States does not, the current situation is destabilizing. An operational U.S. ASAT would increase stability by providing a true deterrent-in-kind to a potential Soviet ASAT use. Past military exercises have revealed that in absence of a U.S. ASAT capability we have two choices if the Soviets attack and destroy one of our satellites -- do little or nothing or take some other military action.

The first case could lead to serious military losses, and our inaction might invite further attacks and show a lack of resolve. In the second case, our retaliatory response could be interpreted by the Soviets as an escalation of the conflict. By having an operational ASAT, we would be able to provide an unambiguous response in-kind, thereby avoiding a serious military disadvantage without the risk of unintentional escalation.

In addition to the need to deter Soviet attacks on our space systems, the lack of a U.S. ASAT capability would afford a sanctuary to existing Soviet satellites designed to target U.S. naval and land-based conventional forces. The absence of a U.S. ASAT capability to put at risk Soviet satellites could be seen by the Soviets as a substantial factor enhancing their

ability to attack U.S. and allied forces. On the other hand, a U.S. ASAT capability would contribute to deterrence of conventional conflict by generating Soviet uncertainty over their ability to employ satellites to target U.S. and allied forces. Thus, the development of an ASAT capability is essential to our ability to deter conventional conflict.

The United States must take the necessary steps to avert a situation in which the Soviet Union has full freedom during a crisis or conflict to target our assets from space while the United States has no capability directly to attack the Soviet satellites providing targeting information. We would never allow a similar situation to exist in the atmosphere, on land, or at sea.

The continued development of a credible ASAT system is an integral part of the steps needed to avert such a situation. An operational U.S. ASAT will provide us with a capability to protect our forces in the field that is urgently needed to support our global commitments and strategy.

Utility of a U.S. ASAT Capability

The U.S. ASAT system now under development consists of a miniature vehicle warhead mounted on a modified Short Range Attack Missile (SRAM) booster as the lower stage and a modified Altair II rocket motor as the upper stage. This is carried aloft and launched from a specially modified F-15 aircraft. The ASAT mission will involve the F-15 flying to a launch point identified by mission control and launching the inertially guided missile toward a rendezvous area. After the upper stage burns out, the miniature vehicle separates and is guided by an on-board sensor to the target. The system is planned for deployment at Langley Air Force Base, Virginia.

The U.S. ASAT program is focused explicitly on those Soviet satellites which most threaten U.S. and Allied terrestrial interests in times of crisis or limited war. All of these threatening Soviet satellites operate at low altitude. Without low altitude satellites, Soviet space-based targeting data would significantly degraded. By reducing the likelihood that a Soviet attack using those satellites would be successful, deterrence would be enhanced.

At the President's request in the fall of 1986, the Secretary of Defense completed a comprehensive study of the U.S. ASAT program. The current restructured program implements the Secretary's recommendations to the President of how best to continue the ASAT development program in light of two years of Congressionally-imposed funding and testing constraints.

The study found the present air-launched MV ASAT system to be the only viable path to providing a near-term counter to the Soviet threat. The Department of Defense (DOD) plans to continue the present program by conducting three tests against Instrumented Test Vehicles in space during 1988, restarting the production verification program in 1988, and requesting advanced production funds in 1988.

The study also determined that with recent improvements in Soviet space systems which threaten U.S. and Allied forces, it is prudent for the United States to research alternative ASAT systems that could ultimately complement the F-15 air-launched MV system. To that end, the DOD will accelerate an ongoing study during the remainder of the fiscal year to select the best method for enhancing the altitude capability of the MV-ASAT within the low-earth orbit regime by changing the system which boosts the MV-ASAT into space. The study will compare the cost and mission effectiveness of improving the thrust capability of the F-15 air-launched lower-stage booster, versus developing a ground-launched system using an available lower-stage booster. Additionally, the study is investigating the feasibility of ground-based laser technologies for ASAT application.

U.S. Space Policy and Arms Control

The United States is committed to the exploration and use of space by all nations for peaceful purposes and for the benefit of mankind. Among the activities conducted by the United States in space is the pursuit of fundamental national security objectives. Arms control arrangements for space would serve these objectives if they contributed to our overall deterrence posture and reduced the risk of conflict.

With those objectives in mind, President Reagan articulated the national space policy of the United States on July 4, 1982, and reaffirmed in his March 31, 1984, Report to Congress of U.S. Policy on ASAT Arms Control:

> The United States will consider verifiable and equitable arms control measures that would ban or otherwise limit testing and deployment of specific weapon systems, should those measures be compatible with United States national security.

Guided by these criteria, the United States has studied a range of possibilities for ASAT arms control. We have been unable, to date, to identify a specific ASAT proposal which meets the Congressionally-mandated requirements of verifiability and consistency with U.S. national security.

ASAT arms control involves a number of difficulties, including the problem of defining an ASAT weapon for arms control purposes. ASAT weapons could include, among other things, interceptors as well as space systems not designed as weapons which have inherent ASAT capabilities that are difficult to distinguish from those of weapons. These definitional difficulties pose serious problems for assessing compliance with treaty limits.

Verification is crucial because satellites that serve U.S. and Allied security are few in number and therefore cheating, even on a small scale, could pose a grave risk. Yet verification of an ASAT agreement would be very difficult, or, for certain limitations, impossible. Furthermore, ASAT arms control verification measures that required any form of access to U.S. space systems might create an unacceptable risk of compromising the protection of information regarding certain U.S. space systems associated with national security.

Arms control measures banning ASAT activities would not ensure survivability of other elements in a space system. Ground stations, launch facilities and communications links may, for example, in some case be more vulnerable than the satellites themselves. There is also the risk that a country could gain unilateral advantage through breakout from an agreement and obtain a head start in building or deploying a type of weapon which has been banned or severely limited. Finally, certain current and projected Soviet space satellites, although not weapons themselves, are designed to provide radar and electronically derived targeting data to Soviet weapon platforms. We must be able to counter these satellites which could enhance Soviet capabilities for attacking U.S. and Allied surface fleets and land forces.

The United States is presently involved in negotiations in Geneva on the whole range of nuclear and space issues. At these negotiations, we are seeking to explore with the Soviet Union the merits of a strategic relationship characterized by a greater reliance on defenses. We are seriously exploring with the Soviet Union arms reduction agreements intended to prevent an arms race in space while facilitating a possible transition to a more effective deterrence posture based on the increasing contribution of strategic defenses.

The Congressional ASAT Test Moratorium

For two years now the Congress has denied us the ability to test our U.S. miniature vehicle ASAT system against targets in space. As in any weapon development program, we must conduct extensive and realistic testing to demonstrate to ourselves and our adversaries that we have a real military capability. To date, we have conducted just one test of the MV

ASAT against a target in space -- which was successful -- and several tests against a point in space. To be confident that we have an effective system, we must be able to conduct additional tests of the MV ASAT against objects in space.

The Congress demands realistic testing of other military systems; it should not lower its standards in the case of this important program. Any extension of the testing moratorium against objects in space will prevent us from achieving an ASAT capability comparable to that possessed by the Soviet Union, with all the attendant risks to U.S. national security.

Conclusion

This is the year of decision for our U.S. ASAT Program. We cannot disregard our responsibilities to our people and to our Armed Forces by ignoring the growing threat created by the present Soviet monopoly on ASAT systems.

We must work together as Americans to find ways to insure our national interests are protected in space as well as on earth. Our non-nuclear miniature vehicle ASAT Program is the only near-term response to the growing Soviet threat in space. Our U.S. ASAT must be tested and deployed to protect our national security and maintain deterrence.

This is a crucial time when all members of Congress should stand together in bipartisan support of our programs as our representatives meet with the Soviets in Geneva. We cannot and must not undercut our chances for the long-term benefits of peace through arms reductions by unilaterally restricting or cancelling U.S. programs, such as the ASAT Program, which are so essential to our national security.

Ronald Reagan

CURRENT NEWS
SPECIAL EDITION

5 May 1987 No. 1577

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THE CENTER FOR STRATEGIC AND INTERNATIONAL STUDIES
GEORGETOWN UNIVERSITY

Tactical Nuclear Weapons In Europe

arms race

Thomas J. Hirschfeld

SHORT-RANGE OR tactical nuclear weapons (tac-nucs) are no longer a cheap NATO make-weight for Soviet conventional strength. For one thing, the Soviets now have comparable numbers. Furthermore, Soviet success in matching Western nuclear arsenals from the strategic to the artillery level reduces the belief that a conventional Soviet attack on NATO Europe will be met by a nuclear response. And over the past decade, allied willingness to deploy nuclear weapons on their soil has declined, requiring reductions in deployed weapons in exchange for any modernization.

The same allies who resist new nuclear deployments also resist paying for the conventional improvements that would balance further nuclear reductions. Not feeling immediately threatened, many take comfort from the deterrent role that tactical nuclear weapons still play. Some non-nuclear allies continue to value the element of shared nuclear responsibility, if not the shared risk these systems provide.

In the 1950s the United States planned for 15,000 tactical nuclear weapons in Europe but only deployed half that number; in the 1980s, NATO reduced the stockpile to 6,000, is dropping it to 4,600, and contemplates fewer still. Does the West still need thousands of tactical nuclear weapons in Europe? The short answer is that we can live with fewer if we modernize our nuclear forces, keep our conventional guard up, and keep Soviet capabilities proportional through arms control.

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The Changing Tactical Arsenal

In 1957, about 7,000 tactical nuclear weapons (warheads) were deployed in Europe for direct battlefield support. These included nuclear land mines, mortar rounds, recoilless rifle loads, air-dropped nuclear bombs, nuclear warheads for air defense missiles, and nuclear artillery shells. Later, intermediate-range nuclear force (INF) missiles were introduced and withdrawn (Thor and Jupiter) and reintroduced as Pershing II and the ground-launched cruise missile (GLCM). The United States also deployed shorter-range surface-to-surface missiles (SSMs) of increasingly better accuracy, mobility, and survivability. The British and French deployed their own national systems.

Today's NATO launcher panoply for tactical nuclear weapons consists of aircraft carrying nuclear bombs, surface-to-surface missiles that have a

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range of less than 1,000 kilometers, and artillery shells for the 8-inch howitzer and the 5-inch gun. Other launchers either are being replaced with conventional systems (air defense missiles) or removed because they have become obsolete or incredible (land mines, Honest John, and Sergeant missiles). Modernization made it possible to reduce the stockpile. More can be done.

Why Tactical Nuclear Weapons? Tactical nuclear weapons are supposed to deter nuclear or conventional attack on Europe. The absence of a Soviet attack for more than 30 years is cited as evidence that deterrence has worked. Deterrence depends on the opponent's belief that, in extremis, nuclear systems will be used. The visible integration of tactical bombs, artillery shells, and surface-to-surface missiles at many levels down to squadrons and battalions suggests intended routine use of these short-range weapons (like the localized nature of launch and strike suggests intention to employ).[1] NATO has sought to make its tactical nuclear weapons credible in three ways: by articulating a strategy that allows use of nuclear weapons to stop an attack and restore the status quo, by maintaining a conventional force posture that leaves ambiguous whether the initial forward defense will hold without nuclear use, and by modernizing the nuclear force. Modernization boils down to the shopkeeper's argument that surely the United States would not spend billions on weapon loads, survivability, electronics, and delivery systems for weapons it would never use. Modernization is supposed to suggest determination, absent other indications of political will.

Alliance cohesion in sharing nuclear risks and responsibilities is another justification for tactical nuclear weapons. Both NATO and the Warsaw Pact spread nuclear roles by spreading nuclear-capable launchers among alliance members, although NATO has done more. Warheads remain in the hands of a few: the United States, Great Britain, and France on the Western side, and the USSR on the Eastern side. However, almost all allies on both sides have launchers and nuclear storage sites in many countries.

For NATO allies, especially those without nuclear warheads of their own, the coupling of tactical weapons to U.S. intercontinental systems by some uninterrupted escalatory ladder has always been primary. Basically coupling means continued visible assurance that the United States would risk Chicago to save Frankfurt. There are arguments that the INF deployments have increased confidence in coupling U.S. strategic forces to the defense of Europe because INF can strike deep into Soviet territory from West European soil. The same argument could be made for a pre-INF tactical system, the British, German, and Italian Tornado aircraft, which can also strike targets in the USSR with U.S. nuclear loads, although this claim is seldom made for the Tornado. For that matter, the Hades and S-X systems, which France hopes to deploy in the 1990s, are also coupling in the sense that they could be taken to suggest French willingness to sacrifice Paris for Frankfurt, if anyone wants to believe that.

Although the Soviets cannot be sure that a nuclear outbreak in Europe will escalate to an intercontinental exchange, nuclear arsenals at all levels have become so large and complex that measuring the coupling or decoupling effects of some particular tactical

systems becomes more of an exercise for medieval schoolmen than for strategists.

The best argument for the tactical nuclear systems is the observable military effect of their presence. Their presence in Europe apparently compels the USSR to disperse conventional forces in the attack to avoid presenting lucrative targets. This has made force concentration in the attack very difficult. The need for dispersal also raises questions about the significance of the often mentioned Soviet tank superiority along the expected axes of approach to the allied forward area. As Donald Cotter pointed out,[2] planned troop density for Soviet forces in the attack has declined from some 500 per square kilometer in the immediate postwar period to around 20 by the mid-1970s; Cotter speculated that with further modernization of tactical nuclear forces the density can be cut to 8 per square kilometer, not a trivial benefit if true. Thus, tactical nuclear weapons still have value, although less than previously; using them has become less credible, but not incredible.

Why So Many Tac-Nucs? The variety and number of NATO's tactical, intermediate-range, and strategic weapons allow response at many levels but give no clue at what level or when a nuclear response might come. The variety of choices allows a small symbolic response or a larger one. The avowed purpose of NATO forces is to deter war and, if war breaks out, to restore the status quo ante bellum as quickly as possible while defending all of NATO territory as far forward as possible (rather than defeating the enemy and invading his territory). That doctrine begs the questions of what nuclear response, how, and when. Its deliberate ambiguity helps deterrence but is useless as a guide for nuclear employment in the event of war.

Flexible response, NATO's announced strategy, requires many kinds of launchers. For credible deterrence, launchers must have loads to suggest that they will be used. The actual numbers of weapons (warheads) in Europe are determined in the first instance by the estimated number of weapons needed for target coverage. That is, how many weapons are needed to destroy suitable targets promptly and reliably? The key word is suitable. The number of stationary objects and facilities or moving military targets that nuclear weapons could destroy is virtually infinite. Target numbers drop with more rigorous judgments about which of them are best covered by nuclear weapons such as hardened storage and area targets like airfields or choke points, and, on the other hand, which targets are easily destroyed by available conventional means. Judgments or calculations relating to the reliability of target destruction by nuclear means are also factors requiring explanation, because the stockpile is always bigger than the anticipated number of reasonable targets.

Thus, to assure target destruction the stockpile must reflect additional warheads to assure survivability. Each weapon is assigned a survivability factor between 0 and 1 according to location and weapon system. The same weighting system is used for the reliability factor, which is determined by the results of warhead testing. The third factor is penetration probability, which is the highest for missiles (in contrast, for instance, to bombs). A 100 percent penetration probability is assigned to missiles. Thus, for a weapons system that has a survivability fac-

tor of 0.9, a reliability of 0.7, and a penetration probability of 1.0, the probability of arrival on target is 0.63 percent. If there are 100 targets to damage by some anticipated amount, divide 100 by 0.63 and establish a requirement for 159 warheads.[3]

Fewer is Better? These calculations make perfectly good sense as abstractions; their concrete results do not. They lead to enormous stockpiles and to an uneasy sense that there are circumstances under which much if not all of the stockpiles may be used. For publics and politicians, ambiguous doctrinal blather about the deterrent purpose of nuclear weapons is less compelling than the physical presence of thousands of warheads. Political controversies in Europe about nuclear energy, the deployment of enhanced radiation weapons (neutron bombs), INF deployment, and now the Strategic Defensive Initiative (SDI) have created a public climate suggesting that the nuclear stockpile must decline if it is to survive. European publics are more aware of the danger of and effects of nuclear weapons than ever before. Arkin, von Hippel, and Levi calculated in 1982[4] that a small, defensive nuclear release of tactical weapons would cause between one and ten million unintended civilian deaths, in addition to the inevitable military casualties in the attacking and defending forces. Accurate or not, those results are popular culture now, and they are one of the reasons countries of deployment want warhead reduction as the political price of deploying any new launchers on their soil.

Soviet force improvements provide no brake on U.S. nuclear removals from Europe. This is so despite Secretary of Defense Caspar Weinberger's public announcement in June 1983 about forward-deployed Soviet warheads in Europe, the actual forward deployment of Soviet short-range tactical launchers in 1983–1984, and their active and continuing modernization. Indeed, the forward deployment of Soviet nuclear missiles and warheads and the modernization of these missile launchers initially had more negative resonance in East Germany, Poland, and Czechoslovakia[5] where the deployments are going on than in NATO Europe, the threatened party.

Soviet force changes not directly related to some threatening act—like an invasion of Poland—no longer have much political effect. This reflects changed European perceptions of the United States rather than of the USSR. Europeans tend to regard the two as normal states increasingly similar in their international behavior if different in their value structure. To Europeans, the principal threat increasingly seems to be the dynamics of superpower conflict rather than the USSR and its military strength.[6]

In other words, the European political consensus supporting deployment of nuclear weapons is thin. What remains of a majority consensus is an uneasy one; the consensus is one that recognizes that there is probably no alternative to some nuclear deployments, asks that more be done with less, and requires that deterrence be enhanced while reducing the chances for actual nuclear use.

The actual choices suggested by these soft criteria include acquisition of new surface-to-surface missiles with a longer-range denuclearization of aircraft and some artillery, and the substitution of conventional precision-guided munitions to cover some targets now ascribed to nuclear systems. In combination, these changes should permit fewer warheads and reduce the

likelihood of early nuclear weapons use. Stockpile reductions are the result of more efficient target coverage (substitution of fewer, more reliable missiles for more questionable air-delivered bombs) and denuclearization of some launchers (while retaining the military effects of forward deployments). These moves require conventional changes like acquisition of precision-guided conventional munitions to cover targets now treated by nuclear weapons.

A longer-range SSM of less than 500 kilometers, substituting for the Pershing 1A (160–720 kilometers) and gradually replacing some of the Lance (110 kilometer) launchers as well, would provide such effects. For political reasons such a launcher should be multipurpose—that is, capable of launching conventional loads. If multipurpose, such a system could also provide a counterbattery answer to Soviet short-range SSMs that now threaten key NATO facilities with conventional munitions. That would be cheaper than some elaborate antitactical ballistic missile defense system. The Lance itself included a conventional capability to permit deployment in Belgium and the Netherlands. Yet mobility or hardness for survivability will make such a new U.S. SSM an expensive acquisition. Thus there would be fewer of these SSMs than earlier SSM generations.

Second, the shorter-range multirocket launcher systems (MRLS) now being purchased for NATO forces could carry short-range nuclear loads instead of the artillery, or at least one class of guns, either 155 meter or the 8 inch. Nuclear loads for MRLS could have a longer range than the present artillery (e.g., perhaps 60 kilometers or more). These launchers might provide the same deterrent and attack complicating effects as artillery, but with fewer loads. Finally, tactical aircraft could be taken off quick reaction nuclear alert, and those assigned to nuclear roles could be reduced altogether. Removal of the remaining nuclear loads for the obsolete Nike Hercules antiaircraft system is the other obvious unilateral stockpile-reduction initiative.

Thinout of nuclear artillery loads (and partial substitution by MRLS), acquisition of longer-range SSMs, and an end to quick reaction alert status for aircraft should suggest a force posture change that makes early nuclear release less likely without changing NATO's nuclear strategy. That change derives from an end to the visible threat of immediate use as suggested by quick reaction alert status, the reduced number of warheads (with its implied deemphasis of tac-nucs), and the longer range of the remaining launchers.

The Soviets. What would the USSR do then? Perhaps not much, beyond some continuation of modernization, provided these NATO changes are accompanied by conventional force improvements and arms control efforts. Of course, no one really knows what role nuclear weapons play for the USSR, or how the Soviets would use their nuclear weapons, were they to go to war. As Ian Clark has pointed out in *Limited Nuclear War*, experts on Soviet military strategy are as divided on most of the major issues as they are on the rules of evidence by means of which these issues might be resolved.[7] Some analysts cite Soviet military authorities as evidence of a lack of Soviet interest in limited nuclear war. For example, Thomas Wolfe wrote in 1966 that

> the main body of Soviet writing on the conduct of theatre warfare begins with the assumption that both tactical and strategic nuclear weapons will be used in any major theatre campaign that develops as part of a general war. In the same way some Soviet writers still advance the standard argument that introduction of tactical nuclear weapons in local war situations would mean escalation into World War.[8]

Others say that declaratory policy and open writings are only part of the picture. That is, even if no Soviet statements can be found actually favoring limited nuclear options, the USSR would have reasons to limit escalation above the level of initial use as strong as those of the West, should nuclear war break out. B.S. Lambeth of the Rand Corporation wrote in 1977 that

> notwithstanding the heavy handed themes enunciated in open Soviet military writings, there are valid reasons for suspecting in their private thinking and planning, Soviet political and military leaders are closely attuned to the issue of strategic target selectivity and are fully prepared, both intellectually and operationally, to wage less than insensate strategic offensive warfare, should they conclude that the exigencies of the moment warranted it as a preferred course of action.[9]

Regardless of what Soviet doctrine is or is not, at this point the Soviets' nuclear force dispositions give them all the necessary options, or so it would appear, according to Jeffrey D. McCausland, who wrote in 1985 that

> the Soviets have an expanded capability to commence an attack by using short range nuclear weapons, but the acquisition of this capability should not necessarily be construed to indicate intent. They have in fact multiplied their options of commencing an offensive with either a nuclear strike or conventional assault, while maintaining the ability to escalate to battlefield nuclear warfare either in response to first use by NATO or if their [own] conventional attack should stall. . . . In addition the [Soviet acquisition of a full range of tactical nuclear weapons] gives NATO an incentive not to escalate, if its conventional defense should fail.[10]

It is hard to tell whether or not these three sets of views reflect mirror imaging—that is, ascribing to the Soviets some doctrine that made sense in each case of the then-current NATO strategy and nuclear force dispositions. Soviet acquisition of mobile, nuclear-capable artillery and modernized, more accurate SSM spanning the full range of escalation possibilities now gives the USSR the same range of escalatory possibilities as NATO, whether or not that matches some doctrine we currently ascribe to them. The use of that force posture for deterring a NATO strike is clear; its actual utility in the offense makes no more sense than earlier Soviet force postures.

It is hard to believe that the USSR would know how to use nuclear weapons any better than NATO, or that many of the same or reciprocal confusions and questions that bedevil NATO staffs would not also affect Soviet planning. Many now believe that the USSR plans for a conventional rather than nuclear war and that the Soviet tactical nuclear force posture is designed to deter a NATO launch. Nevertheless, an attack on NATO Europe, especially a surprise attack, is

not a military problem confined to the European theater.

There are strategic problems that the USSR would face in attacking NATO Europe, regardless of whether it intended first or any other nuclear use. To begin with, all nuclear weapons in the world except Soviet weapons are pointed at the USSR. Furthermore, all neighboring countries, including those with which the USSR is allied, have governments or populations that are unfriendly toward the Kremlin. Afghanistan has an active guerrilla war that requires considerable Soviet attention, while to the east China poses a direct military confrontation—a threat complicated by it being a major land power as well as a nuclear one.

The military consequences of this strategic situation are awesome, to say the least. All Soviet land force choices outside Europe (stand pat, draw down, buildup, and preempt) are fraught with danger once an attack on Europe appears imminent or has started. Yet that is the easiest problem. How can the Soviet Navy, including some missile boats, be put to sea without signaling Soviet intent to go to war? Would the USSR risk its vulnerable Asian frontiers and sacrifice its fleet in order to achieve tactical surprise in Europe? Finally, what about the Soviet Union's land-based strategic force, its most valuable and accurate missile force? Will that force sit in its silos hostage to the U.S. strike that might come any time after it becomes clear that the USSR has initiated a European war? An intermediate posture such as placing the intercontinental ballistic missile (ICBM) force on an advanced state of alert seems prudent; yet how does the USSR do so without inspiring reciprocal escalatory alerts on the U.S. side and without drawing attention to its own higher state of alert? In short, attacking Europe by surprise is a bigger problem than just building up forces opposite Europe and launching them, in itself a difficult task.

Purely military questions aside, actually attacking Europe has its own political problems. First, about half the forces normally presumed available for attack in the center region are Polish, East German, and Czech. These divisions are of variable quality, and absent some compelling motivation—like a NATO attack spearheaded by Germans—of uneven reliability. Although prudent military planning requires counting these forces as part of the threat, no one would contend that they are as useful to the USSR in all foreseeable circumstances as the Soviet forces. Indeed, one could say that the principal function of the Warsaw Pact military organization (and its own military experience) has been to assure its own structural survival as a political and military glacis protecting the USSR, as demonstrated by the invasions of Hungary and Czechoslovakia.

The latter event is often cited as evidence that the Warsaw Pact has an offensive military doctrine, and that Warsaw Pact allies are cooperatively integrated in the execution of that doctrine. It is true that the USSR, assisted by neighboring Warsaw Pact countries, invaded and occupied Czechoslovakia in 1968. Furthermore, all the units involved had been trained in the offense, and as a combined allied operation against a defined objective the invasion was a success. It is also true that the experience in political cooperation, communications, combined staff work, and actual exercise of a combined force on the ground strengthened the Warsaw Pact.

How relevant that experience is to an attack on NATO Europe is another

matter. First, everyone knew that the attack was coming—NATO was simply unsure of the precise day it would occur. This may have been deliberate—to warn the Czechs into submission—or it may have been unavoidable. The doctrine of surprise normally ascribed to Soviet military planning was either ignored or ineffectively applied. Second, as in 1938, the Czech Army stayed in its barracks, so there was no resistance. Third, the Czechs had no nuclear weapons to force the invaders to face stark choices. Fourth, the scope of the operation was far smaller than an invasion of NATO Europe would have to be.

The invasion of Czechoslovakia raised serious questions about the utility of non-Soviet Warsaw Pact forces in the offense. It is true that Warsaw Pact forces are trained almost exclusively in the offensive mode. Yet there are at least two respectable interpretations for that phenomenon. First, offense (labeled counterattack) is the Warsaw Pact doctrine imposed by the USSR on its allies as the preferred way to fight initially in the event of war. Second, forces not trained in the defense have trouble organizing one. The first purpose supports fear that offensive doctrine implies offensive intent. The second, however, is supportive of the avowed Soviet purpose of preventing Soviet allies from learning how to defend themselves effectively against the USSR. Which of these is the primary Soviet purpose is debatable and cannot, obviously, be proven. But the training of national forces in the offense only is resented in Warsaw, Prague, etc., and should be no surprise. That the largely conscript Eastern European forces would be difficult to motivate in a surprise assault on NATO seems likely. The Czechs, after all, have had two opportunities in this century to defend their soil, and have prudently decided that the costs of military resistance were too high in each case. The scenario under which the Czech Army invades Bavaria is thus hard to imagine.

Yet if attacking NATO Europe is no easy matter for the Warsaw Pact, even with numerically superior forces, NATO's defense problem involves much more than adjusting a nuclear force posture. The principal issue is conventional defense.

Keeping Up the Guard

NATO forces have been numerically inferior since the founding of the alliance. The reasons for the visible NATO-Warsaw Pact imbalance were always budgetary: NATO could not afford to do more, meaning that allied governments, including the United States, were unwilling or saw no reason to do more. Neither would they match the Warsaw Pact countries in tank or artillery tube numbers, aircraft, and other major items of equipment. Instead, NATO routinely claimed qualitative superiority for its own systems. NATO's better aircraft did provide command of the air for much of the last 30 years. Whether it still does is questionable. NATO's real edge came first from nuclear monopoly and then from nuclear superiority. That advantage made possible a strategy that required forward defense of all NATO territory, and threatened nuclear response in the event of attack, but confined NATO ambitions to the restoration of NATO territory and stopping the war. These limited objectives required thinner and smaller conventional forces than would be necessary for a real conventional forward defense.

It is primarily the West Germans who insist that the alliance defend the Federal Republic of Germany (FRG)

as far forward as possible. As the most likely target of Soviet attack, and because the loss of 100 kilometers of German territory means the loss of a third of the population, this is not unreasonable. Because the FRG provides about half of the ground forces in the center region, the FRG deserves a dominant voice in how its frontage is defended. Less compelling, however, are the German arguments that because modern war will be so destructive, it is not to be contemplated, and that therefore NATO should concentrate on the deterrence of war rather than on the means of fighting it. Without nuclear superiority that posture is incredible. After all, a deterrent posture lacks conviction without the evident capacity to fight, particularly to defend the territory which the opponent may wish to occupy. And surely the horrors of nuclear war are greater than the horrors of modern conventional conflict. Thus the answer to an eroding nuclear deterrent is an enhanced conventional war-fighting capability.

Although willing to concede this point in theory, NATO officials remain divided on what is to be done. Yet no NATO government would argue that the nuclear security blanket be done away with or even that the nuclear strategy be changed. There is allied consensus that there are only limited resources available for conventional improvements. With slowly growing economies, declining draft age populations, high unemployment, and other social problems, few European governments are inclined to generate the additional means to meet the defense requirements which threat analysts and military staffs can imagine.

Only 6 out of 16 NATO countries met NATO's agreed goal of a 3 percent increase in defense spending after inflation in 1985, and fewer may do so in 1986.[11] Therefore hierarchical choices between desirable improvements will be necessary, and some desirable improvements may be set aside. For example, the present enthusiasm on both sides of the Atlantic for antitactical ballistic missiles (ATBM) (e.g., upgrading the Patriot surface-to-air missile [SAM] to provide a point defense around 160-odd potential Soviet SSM targets) will have to be balanced against other expensive alliance goals such as acquiring enough ammunition to fight a 30-day war. And the desirability of striking the second attacking Soviet echelon 300 kilometers behind the front in the early days of war may have to give way to hitting the second echelon more reliably and more cheaply at distances of 100 kilometers. Building mobile forces to stop Soviet Operational Maneuver Groups (OMG) or infiltrators may have to be weighed against building cheaper intermittent barriers up front against tank forces first, even though such barriers mean symbolic divisions between the two German states. Rapid movement toward computer-based communications to manage air-land battles may have to give way initially to systematic use of the dense but efficient West German telephone network by military forces.

Not every desirable system is obtainable, and not every threat can be met. It may be that the Soviet Commandos (Spetznaz) threaten the nuclear storage sites immediately behind the lines, and that those sites should thus be more heavily defended. They also threaten the Luneberger Heide farmers' daughters, communications, airfields, and other targets. Which first?

It is clear that Soviet forces continue to improve, that the nuclear deterrent is no longer what it was, and that conventional improvements are needed.

Every year the International Institute for Strategic Studies (IISS) says it best, in slightly different words. In 1985, *The Military Balance: 1985–1986* declared that

> our conclusion remains that the conventional overall balance is still such as to make general military aggression a highly risky undertaking for either side. Though possession of the initiative in war will always permit an aggressor to achieve a local advantage in numbers sufficient to allow him to believe that he might achieve limited tactical successes in some areas, there would still appear to be insufficient overall strength on either side to guarantee victory. The consequences for an attacker would still be quite unpredictable, and the risks, particularly of nuclear escalation, incalculable.[12]

Chances are that incrementally the alliance will find a new credible balance between its conventional and tactical nuclear forces to assure the defense of NATO Europe into the next century. Fixing the conventional balance to the point where the alliance appears capable of mounting a credible initial defense is expensive but doable, if the alliance is willing to concentrate on that problem rather than fixing ancillary threats with new technology like ATBM. The voluminous literature on fixing the balance suggests increased munition stocks, barriers, more reserves, reorganization, wheeled armored vehicles, improved communications, hardening of aircraft shelters and storage facilities, and so forth. Not all of these things need to be done at once. Like changes in the nuclear force posture, such changes will occur piecemeal.

As noted, the tactical nuclear element requires modernization with a smaller stockpile, and fewer and more capable longer-range tactical launchers. If most of the potential launchers, whether airborne or ground-based, are well back from the front, and if the number of nuclear launchers has been reduced, the chances of early use will be visibly diminished. Once such a force is in place or on order, NATO can then decide whether that change warrants a shift in the declared strategy. This is preferable to a priori theoretical debate about what the strategy should be, whether it is no first use, some first use, no last use, or 'lunch' on warning. Changing the strategy first assures nothing more than further debate and avoids the essential accompaniment to any change in the tactical nuclear force posture-conventional force improvements.

In that worthy effort, the modernization of the tactical nuclear forces will itself play a role. Each new generation of SSMs has required fewer personnel to man and maintain the system and this should also be true of later generations. The release of many aircraft from nuclear roles (which would accompany an end to quick nuclear reaction assignments and conversion to standoff rockets from gravity bombs) should help restore a more favorable air balance. The denuclearizing of a class of artillery, like 155 guns, should release significant numbers of guns for conventional fire. Furthermore, the reduction in the number of warheads to be transported, stored, and maintained should save personnel for conventional war.

Fixing the balance in the longer term requires one more element, arms control, or at least some cooperative measures to break the cycle of deployment and counterdeployment in Europe. It is still possible that the Mutual and Balanced Force Reduction (MBFR) negotiations in Vienna and the Conference on Disarmament in

Europe (CDE) in Stockholm will help stabilize the conventional force balance. The increasing costs of new weapon systems and the decline in draft age population on both sides suggest a degree of common interest in progress. An arms control scheme that would affect the tactical nuclear forces on both sides has yet to be tried, although Soviet leader Mikhail Gorbachev raised the idea again on April 18, 1986, in East Berlin.

Arms Control Considerations

Who Wants Arms Control? Tactical nuclear arms control has more support in general than in particular. Some Westerners will consider deploying fewer tactical weapons and hope the Soviets will follow suit, or they espouse unspecified weapon tradeoffs or particular nuclear weapon-free zones (NWFZs). The Soviets have proposed denuclearized zones in central Europe (and, for that matter, in northern Europe and the Balkans), and have expressed interest in nuclear arms reductions within the MBFR framework.

In the West, even arms control enthusiasts wonder if unilateral nuclear force changes could happen if there were progress in tactical nuclear arms control negotiations. Why should the Soviets trade away some force component of theirs against nuclear antiaircraft warheads, for example, which are coming out anyway? Thus, NATO must choose between retaining some force component to be traded away against a desirable force change on the Eastern side, or rationalizing its own nuclear forces unilaterally before engaging in arms control. Having made that choice, NATO could try to assure no further threatening force changes on the Eastern side through agreements affecting future deployments.

Since the 1950s, Poland has been in the forefront of denuclearization schemes, the first and best known of which, the Rapacki plan, called for the denuclearization of Poland, Czechoslovakia, and both German states. Although denuclearizing Germany is clearly in the Soviet interest, this scheme also served a Polish purpose in assuring that Poland would not come under nuclear attack. Moreover, there was both official and public resistance in Czechoslovakia and the German Democratic Republic (GDR) to the forward deployment of short-range Soviet systems in the wake of West German agreement to deploy GLCM and Pershing II launchers on West German soil. Resistance or not, these short-range Soviet systems were ultimately deployed. Yet because reluctant acquiescence is not enthusiasm, the East Bloc countries where deployment took place would presumably be happy to have some or all of these weapons out. One can also safely assume that the storage sites for nuclear weapons—obvious nuclear targets—are less than popular in the Warsaw Pact forward area.[13]

France is a special case. Having decided to starve its own conventional forces to modernize its nuclear deterrent, France presumably would not wish to reduce its nuclear forces, and only reluctantly would join any scheme to do so. Still, time, life, and fortune have ways of altering national perceptions, even French ones. One can even imagine ways to design arms control around France and its nuclear forces. For example, France could agree separately not to circumvent arrangements negotiated by other parties once these negotiations were far along.

Thus there is some coincidence of

general interest among virtually all potential participants in tactical nuclear arms control. Also, it seems hard to imagine that European neutrals (Sweden, Switzerland, Austria, Yugoslavia, and Finland) would object, given their interest in better East-West relations in Europe and the occasional interest in denuclearization expressed by neutrals in the CDE context. Yet a favorable, abstract attitude toward arms control seldom guarantees agreement to a specific tradeoff. When faced with actual reduction in national or allied assets (not just the prospect of adversary reductions) governments often settle for the appearance of progress rather than actual results.

Parity Regained? Another reason governments find it hard to contemplate actual reductions is the difficulty of finding clearly equal reduction residuals, that is, visible parity in the same units of account. Virtually all arms control arrangements seek a visible form of parity as an outcome, whether equal aggregates in strategic forces as in SALT, or common ceilings in manpower as in MBFR negotiations. The military significance of these residuals is less important than their presumed political effects. Officials and publics on both sides of the Atlantic believe that an unfavorable numerical imbalance of forces could somehow tempt an adversary to attack, or at least to try using its perceived and quantifiable superiority to influence the political behavior of the seemingly weaker side. In this view, enshrining an imbalance in an arms control agreement means codifying visible inferiority for future adversary exploitation.

For reducing tac-nucs, some arrangements based on an overall perception of equivalence, rather than system-by-system or category-by-category equality, may be necessary. This is because Western tac-nuc deployments tend to be constrained by Western disinclination to deploy more, and are relatively insensitive to the numbers of tactical systems the USSR deploys. Also, all tactical launchers whether aircraft, artillery, or SSM missiles are potentially useful for non-nuclear missions. Both sides would presumably want to retain the capabilities to deliver conventional munitions (or chemicals) with these same launchers. Given these factors, smaller numbers of SSMs on the Western side, and the better quality of Western delivery systems, NATO would not likely offer a one-for-one launcher trade.

Warheads, the other potential unit of arms control account, would pose verification problems, even if the USSR had anything like the 6,000-odd (current) U.S. warheads in Eastern Europe. On the Eastern side, most of the nuclear loads for the nuclear-capable aircraft, artillery, and multipurpose SSMs are still located on Soviet soil, although there are storage sites in Eastern Europe. Even if one were confident about the exact number of Soviet warheads stored in Eastern Europe, negotiating Soviet stored warheads to a level of parity with the West could require larger Western reductions while the major Soviet tactical stockpile on Soviet soil would remain unaffected, and presumably uninspected. Therefore, parity in warheads also seems an unlikely proposal.

Verification. Verifying tactical nuclear arms control is hard. Monitoring in this context means the timely ability to locate a satisfactory proportion of the potential elements of trade or limitation; verification represents the political acumen to judge whether such monitoring reveals enough. One hopes intelligence can monitor major tactical

nuclear weapons launchers (artillery, SSMs, aircraft) over time, and know the location of most warhead storage sites.

How confidently the West can monitor the content of nuclear storage sites is less clear. Yet both sides store nuclear weapons separately from other types of munitions. This is necessary for safety and to avoid mistakes in what is fired, dropped, or launched. For the same reason, nuclear warheads are moved according to standard procedures in which the troops moving them are trained. Retraining troops and relocating weapons take time and effort; destandardization of movement and storage, while perhaps useful for fooling intelligence, raises the risk of accidents or unintended use. Monitoring these procedures over time would presumably enhance confidence about when nuclear-capable units were reinforced with nuclear weapons in many, but not all, instances. Therefore, the separation of launchers from storage sites helps monitoring. In the case of forward-deployed, short-range launchers like artillery, this separation could theoretically be done by removing all storage sites from some defined forward area; also, colocation of planes and warheads could be discontinued.

Although the reliability of monitoring might decrease with distance from the forward area, monitoring by technical means alone would represent inadequate verification. Concerns about unidentified storage, changing storage, and transport practices to avoid monitoring would remain. None of these concerns could be put to rest easily even in a better political climate. Thus tac-nuc arms control probably provides the clearest case for justifying on-site inspection (OSI).

In the United States, as compliance problems relating to earlier, strategic arms control agreements figure more prominently in public debate, it has become more difficult for political leaders to defend arms control without tight verification assurances, which OSI is presumed to provide. In West Germany on the other hand, OSI is less popular because of the prospect of reciprocal application of any measures applied in Eastern Europe, and the fact that any measures agreed to would be applied on German soil, East and West.

Past Western plans for arms control in Europe, whether MBFR, CSCE, or CDE, often have sought warning enhancement through OSI. Even if some arms control-related OSI scheme does not produce precise understandings of opponent force compliance with agreed levels, it could produce better understanding of the opponent force, and thus enhance warning of attack.

Historically, the Soviets have resisted all types of detailed inspection, saying that inspection schemes are simply espionage and attempts by foreign observers to learn the structure, composition, abilities, and size of their forces and those of their Warsaw Pact allies. Yet at this point Gorbachev has stated his acceptance of on-site inspection, at least in principle. And, the Soviets have not resisted inspection in all cases. In the unsuccessful 1963 Comprehensive Test Ban talks, Khrushchev agreed to three inspections per year; in the preliminary phase of the renewed Comprehensive Test Ban talks in the Carter administration, the Soviets agreed to monitoring of tests by black boxes (adversary instrumentation). In the European context, they were willing, for a moment, to consider aerial inspections proposed by the West during the 1958 Surprise Attack Conference, they agreed to voluntary inspections of maneuvers in the CSCE (which may be refined further), and they seem ready

to agree to fixed observation posts in the MBFR "to monitor withdrawals." The Soviet formula justifying the limited kinds of inspection they agree to is usually expressed as the "method of verification should be proportional to the degree of disarmament."

Taken literally, this is nonsense; significant reductions at the strategic level (e.g., silo-based missiles), whether large or small, are easily monitored by technical means and require no intrusive inspection measures. On the other hand, the reluctance to reveal information that this formula masks is understandable, given the Soviet advantage of secrecy. Ceding it without getting something they want in exchange must seem disadvantageous to them.

The Soviets try to reveal as little hard data about their forces in negotiations as they possibly can. They also try to assure that whatever monitoring system is agreed to is minimal, and precisely confined to the formal obligations the USSR assumes. For this reason, the Soviets have historically resisted agreeing to measures that are designed to improve warning, or to dialogues, institutionalized or otherwise, which exchange information for the sake of building confidence. How much they reveal tends to be limited by the terms of their legal obligations.

Institutionalized dialogues may be useful, but freestanding ones seem non-negotiable. Historically an arms control agreement has been the price of dialogue with the USSR about Soviet forces. The SALT I Standing Consultative Commission (SCC) is the best example.

Negotiating Modalities. How would one negotiate reductions or limitations on tactical nuclear weapons? It would be very hard to avoid a multilateral forum. Unlike SALT, START, and INF, which involve launchers and warheads that belong only to the United States and the USSR, allies on both sides own many of the tac-nuc launchers. Even if discussions were confined to warheads, NATO allies would presumably want active and continuous oversight over decisions affecting the common defense, their own forces' structure, alliance nuclear strategy, and allies' future expenditures. Although the Warsaw Pact partners could not impose their preferences on the USSR, it would be very hard to exclude them if NATO partners were invited to participate. European neutrals may want a voice too. It may therefore be necessary to create some new forum.

The advantage of using an existing forum lies in saving the time (sometimes years) required to negotiate and establish a new forum and its procedures. The advantages of using the MBFR forum are that participants on both sides include all those (minus France) who own the launchers, warheads, and land on which they are deployed. In that form, the allies have learned the procedures for negotiating without France, which has never hidden its distaste for MBFR, while keeping French sensitivities and interests in mind.

A nuclear component would give MBFR negotiations a significance and topicality that it has not enjoyed for almost a decade. The addition of a nuclear element could also help with one of the principle points of East-West contention, the equipment issue. East Bloc participants have always insisted that withdrawing or reducing forces also means withdrawing or reducing equipment, something the West resists doing because it takes so long for U.S. forces to return to Europe, and because reducing equipment implies the destruction of the

equipment of FRG and Benelux forces. However, given the small size of the initial manpower reductions now proposed, an arrangement limiting or reducing nuclear forces could be enough to satisfy the East on the equipment point for the initial phase of reductions, if the other parts of a first phase reduction scheme were agreed upon.

The Vienna MBFR negotiations had a nuclear component between 1975 and 1979. To induce the USSR to withdraw a tank army, the West offered to withdraw 54 nuclear capable F-4 aircraft, 36 Pershing IA launchers, and 1,000 warheads. The West withdrew this offer in December 1979, and removed 1,000 warheads unilaterally shortly thereafter. Not only had the East failed to take up the offer, but the value of the pieces had eroded as the warheads got older and the launchers and aircraft became obsolescent. Furthermore, a trade of nuclear systems against tanks became less attractive as the Soviet tactical nuclear capability in the forward area began to equal the Western one. Some other tradeoffs involving nuclear weapons on both sides seem a better bet for the future.

Another existing forum, the Conference on Disarmament in Europe (CDE) is ideal from a geographic point of view, in that the zone of application extends from the Atlantic to the Urals and would thus encompass all potential or deployed systems of tactical range. Furthermore, if CDE succeeds in refining confidence building measures for conventional forces, such as prior notification of out-of-garrison movements, it might be possible to elaborate analogous measures in the nuclear realm. Solemn agreements by the neutral Europeans not to acquire nuclear weapons or allow their deployment on their soil might increase the circumscription of some nuclear-free zone composed of Balkan or Nordic members. In fact, nuclear weapon free zones for the Balkans, northern Europe, central Europe, and the Mediterranean have been put forward.

So far, it seems unlikely that the Western members would be willing to adjust their most dangerous military assets in a forum subject to the approval of small states like Malta. That may change with time. For example, it may be possible that improvements in remote technical monitoring would permit the design of constraints on the movements of aircraft or the deployment of nuclear weapons in ways that could be accomplished without unacceptably intrusive on-site inspection, although that would require rewording of the CDE mandate, which presently permits only measures relating to conventional forces.

Any INF agreement will contain non-circumvention provisions, and therefore may cover and even constrain some elements of the tactical nuclear force on both sides. Because of the circumvention potential of the 900 kilometer range Soviet SS-22, and the 500 kilometer range SS-23, the United States in February 1982 suggested that new missiles with more than 900 kilometer range be banned, and that missiles with ranges of and between SS-22 and -23 be limited to the numbers deployed as of January 1, 1982. The Soviets have agreed that short-range systems could be addressed in a separate protocol, once the central issues of the negotiations have been resolved. Thus it appears that although some shorter-range systems may be constrained or reduced by INF, no existing system will be eliminated.[14] Even the most favorable circumstances (Soviet willingness to limit SS-22s and -23s to the numbers deployed on January 1, 1982) would

still leave enough of these systems deployed to warrant further limitations, especially because modernization would be permitted.

The nature of any limitations depends ultimately on whether the Soviets would ask for reciprocal tradeoffs, and what the West would be willing to give. It is not clear that the obvious candidate, trading away the remaining Pershing 1A launchers in allied hands, would be either acceptable to the USSR or to the losing allies. On the other hand, it is possible that the USSR would agree to unilateral reductions in the event of some trades involving removal of all U.S. INF from Europe. In that case, the USSR might withdraw those launchers deployed forward in response to initial U.S. INF deployments.

The simplest negotiating system is mutual example. Each side pulls something out, or ceases some form of behavior, or fails to deploy something in the hope or expectation that the other will follow suit. This is the softest form of arms control. Except in the case of nondeployment, mutual example imposes no obligations about the nature and size of the residual force. In a sense, reciprocal force improvement and modernization are the obverse of this process.

As a reduction or stabilization technique, mutual example has a mixed history. In the early 1960s, the USSR and the United States pulled conventional forces out of Europe at approximately the same time. There are reports that these reductions reflected an agreement between Secretary of State Dean Rusk and Soviet Foreign Minister Andrei Gromyko, reached before deployment of U.S. forces in Vietnam. Both sides subsequently increased their troop numbers in the forward area, the USSR in the form of five divisions which remained after the invasion of Czechoslovakia.

The other well known example is President Carter's holding back deployment of the enhanced radiation warhead in 1979, pending some unspecified equivalent Soviet move. The Soviets offered nothing (except not deploying enhanced radiation weapon [neutron] bombs themselves), certain that the United States' European allies were reluctant to allow deployment of this weapon. This limited experience suggests that mutual example is more effective if there is some common understanding as to what is to be withdrawn and when, but that mutual example arrangements do not establish significant limitations for long.

Possible Arms Control Arrangements. The nature and composition of the tactical nuclear arsenals in Europe suggest no neat, simple trades. There is no obvious way to establish equal force residuals after significant cuts in launchers and warheads. One side or both would want to retain the nonnuclear capabilities of the launchers, or the launcher's location makes them hard to count. What, for example, is the reduction zone for aircraft? Precise numbers of warheads are unknown. Yet arms control arrangements are possible if both sides are willing to take equivalent risks for equivalent benefits.

Arms control arrangements that seem worth thinking through fall into several categories which often need to be combined in order to achieve an equitable effect for both sides. These include partial denuclearizations, nuclear free strips, and follow-on deployment arrangements.

Partial denuclearizations means both sides remove the same thing. For example, the West could propose that

each side remove (otherwise unspecified) 1,000 nuclear warheads, or all nuclear gravity bombs on both sides, or remove all nuclear roles for aircraft.

Removal of 1,000 more Western nuclear warheads could (by the time they are taken out) be characterized as a reduction to 3,000 weapons, half of a preexisting stockpile. The 50 percent cut would parallel the proposed reductions in the strategic realm. Challenging the Soviets to do the same, if they have large numbers deployed forward, has advantages for both sides, because the nuclear loads available for the forward systems would decrease.

In any case, the residual 3,000 Western warheads should be adequate for covering high value targets such as main operating bases, choke points, tactical ballistic missiles, maneuver units and supporting artillery battalions, and logistic support. It is hard to believe that all these targets require nuclear preemption, if one assumes a need to preempt time-urgent targets early, no Western interest in initiating a nuclear exchange until absolutely necessary, and some delay from the NATO political consultative process preceding nuclear release. These factors suggest initial preemption of most of these targets by non-nuclear means. Finally, it is hard to believe that any significant shortfalls in target coverage cannot be made up from submarine-launched weapons, either SLBM, or Tomahawk, or other systems outside Europe.

If, as some suspect, the USSR has large numbers of warheads deployed forward, then it may be inclined to follow suit, and reduce by 1,000. If not, NATO could withdraw some smaller number, in exchange for an effective freeze on the Soviet warhead residual assured through OSI.

There are advantages for both sides in this scheme, such as the decrease in the number of potential nuclear detonations, momentum for the downward trend in small nuclear weapon deployments in the forward area (with the implicit decline in the likelihood of early first use), and most important, a freeze in the number of forward deployed warheads. The latter comes from a necessary feature of this arrangement—on-site inspection of the storage site—which represents an Eastern concession of weight.

OSI would be confined to the perimeters of the storage sites; inspection of interiors and warhead counting are probably too much for either side to tolerate. The purpose of this arrangement is better warning. This comes from knowing about forward movement of warheads (available from observing the rate of loading or unloading at a forward storage site). Continuing access to the perimeter of the site would be necessary. There should also be instrumentation to detect radiation. Gorbachev claims he is willing to accept OSI. Presumably he would be more willing to accept OSI in the forward area, away from the Soviet frontier. The costs to the USSR are the revelation of its storage sites in Eastern Europe and the acceptance of continuing inspection of their periphery. The advantage for the USSR, aside from freezing Western warhead numbers, is the same as for the West—better warning.

Past difficulties about Soviet compliance with arms control agreements suggest valid concerns about whether the Soviets would notify all site locations. Nevertheless, the USSR would have greater difficulty hiding remaining storage sites once others had been revealed, if indeed it wished to risk the political embarrassment of exposure. And an inspection arrangement

should be supplemented by an institutionalized dialogue on the SCC model, one which would allow challenge of ambiguous events and require adequate response. Thus this inspection scheme provides warning enhancement in any event.

Another form of partial denuclearization is the removal of some category of launcher from a nuclear role. Aircraft are an obvious first choice. In Europe NATO allies face an air defense environment so dense that reliable delivery of nuclear bombs on fixed target areas is increasingly painful to contemplate. The development of SSMs and non-nuclear stand-off missiles (which can be fired from aircraft inside one's own territory), precision-guided munitions, fuel-air explosives, and sea-launched cruise missiles (SLCMs), suggest that coverage of time-urgent targets is not dependent on aerial delivery of nuclear weapons.

To be effective and verifiable, aircraft denuclearization would have to be worldwide, and arranged by aircraft type and model. Over the long run, this would be advantageous for both sides, especially the West, because generation-by-generation cost and sophistication have driven the total number of aircraft down. Therefore, releasing hundreds of tactical aircraft from nuclear roles represents a significant increase in conventional combat power. The Soviets claim interest in a denuclearized world and have always agitated for denuclearization of nuclear capable aircraft. Presumably they will want that.

Verifying a worldwide denuclearization of attack aircraft is presumably possible in the sense that both sides would know from the deactivation of storage sites, the end of training in nuclear roles, and other indicators that neither side was faced with the immediate prospect of a nuclear attack from shorter-range aircraft. Actually knowing that nuclear loads were not stored somewhere outside an inspected zone may be impossible.

Denuclearizing the presently deployed tactical aircraft may be too much for air forces to contemplate; agreeing to denuclearize the next generation of attack aircraft may be easier. Both sides could agree, for example, that particular follow-on types of aircraft now deployed would not have nuclear delivery missions.

A narrower approach would involve the removal of some warhead type—such as gravity bombs—from the inventory of both sides. Because it is now more dangerous for aircraft to penetrate hostile airspace over desirable targets, dropping nuclear bombs makes much less sense. Airborne missiles, whether nuclear or conventional, are better. Because they are more expensive and more reliable than iron bombs, there would also be fewer of them. Removing the iron bombs from the inventory could reduce the number of storage sites on both sides. It would also save personnel and a significant amount of fissionable material. If target coverage by conventional standoff systems and other non-nuclear systems in theater is feasible, then both sides could consider local, partial, denuclearization by ending colocation of aircraft and nuclear storage altogether.

OSI of the same sort as required for the warhead withdrawal or freeze arrangement mentioned above would be required on any remaining nuclear storage sites in the forward area, and to assure that closed sites remained so.

The other obvious candidate for removal is nuclear artillery rounds. Artillery has always posed the question of early nuclear release, the idea that nuclear shells would need to be fired

before the guns were overrun. Because the nuclear role is deeply integrated within artillery units, there have always been doubts—whether warranted or not—about effective control of release. To the extent that OSI of storage sites is acceptable as a quid pro quo for the removal of iron bombs, it could be acceptable to the Soviets as a way to assure that nuclear artillery shells are not moving into the forward areas.

Now that the Warsaw Pact seemingly matches NATO in the number of nuclear-capable artillery tubes, initial NATO use confined to artillery fire is arguably less likely. Yet as long as nuclear-capable guns in combination with SSMs continue to induce the Warsaw Pact forces to spread out in the attack, having some nuclear artillery still seems more important for the defender than for the attacker.

Denuclearizing the artillery may make sense for both sides as part of a general denuclearization of an entire, narrow area. This was the logic of the 1981 Palme proposal that suggested a denuclearized belt of 150 kilometers on both sides of the line of demarcation dividing the two German states. Moving nuclear weapons back suggested less likely early use of nuclear weapons, fewer nuclear explosions, and meaningful arms control with the attendant political effects. NATO regarded the idea as an assault on the cherished ambiguity of its nuclear doctrine, and as a covert move in the direction of no first use. Unable to let well enough alone, the USSR treated the idea as a chance to denuclearize Germany by asking for a 300 kilometer denuclearized belt on both sides of the line of demarcation between the two parts of Germany.

Nevertheless, some modified version of this idea bears further examination. The center region, sometimes called the MBFR area (the Benelux countries, and the FRG, versus the GDR, Poland, and Czechoslovakia), has twice the depth on the Eastern side as on the West. Thus, a 100–150 kilometer denuclearized belt on the Western side could be matched by one twice its width on the Eastern side. For this purpose, denuclearization means nonstorage of nuclear warheads which implies closing all storage sites in the area under inspection, and creating a verification regime which would prevent warheads being brought forward for storage.

This arrangement would encompass most of the storage on the Western side and most of the known Eastern storage sites. As long as other, longer-range launchers continued to assure target coverage and to inhibit massing of Soviet armor, NATO would benefit as well as the Warsaw Pact. The gain for NATO is the denuclearization of the shortest range Soviet systems: in effect artillery, SS-21 and the aircraft located in the GDR. NATO would lose the protective nuclear fire of the LANCE systems' forward-based, forward-positioned artillery tubes, and forward-based QRA aircraft. It would gain conventional strength from denuclearization of multipurpose systems. The likelihood of early use—lest they be overrun—would have been reduced. The Warsaw Pact could have lost the ability to retaliate in kind early, at the lowest levels.

Both sides could agree not to deploy follow-on generations of tactical nuclear launchers, whether SSM, artillery, or aircraft. Over a long time, such a process would in theory denuclearize the forward area altogether—that is, if both sides believed that the deployment of intermediate-range systems and the continued existence of their respective nuclear launchers outside of central, northern, and southern Eu-

rope were enough. Nevertheless, both sides could collude on intermittent denuclearization, one component at a time, beginning with attack aircraft.

Negotiating this arrangement would require explaining that one side would denuclearize a particular follow-on system, would want a corresponding one denuclearized on the opposing side, and why the allegedly corresponding system was equivalent. Negotiating such arrangements does not require doctrinal agreement, only agreement on the tradeoffs. For example, the United States could announce that the F-16 follow-on would not be a nuclear-capable aircraft, provided that the next specified generation of Soviet attack aircraft was non-nuclear. The allied consortium planning the Tornado follow-on could also plan to denuclearize.

If this works, the artillery could be next. Given arms control deadlocks at the strategic level and some common interest in arms control progress among all potential participants, a scheme like this one may seem more interesting were INF negotiations to founder. Even if they do not, cutting tac-nuc capabilities in tandem seems like a better way to maintain stability than one-sided cuts.

In conclusion, if modernized, a smaller NATO tac-nuc arsenal would still complicate an attackers' problems. Modernizing means longer-range multipurpose tactical missiles, no more nuclear bombs, and partial denuclearization of the artillery, which in combination means a smaller stockpile. Modernization does not mean debating a new NATO strategy as a precursor or alternative. Rather such a force could by its structure and disposition convince informed NATO publics that early nuclear release was less likely. Yet a modernized tac-nuc force is no substitute for the necessary, parallel conventional force improvements. Neither is tac-nuc arms control a substitute. It can, at best, stabilize the tac-nuc element of the balance by reducing some fears about early use, increasing warning, and influencing the nature of follow-on systems. Warning enhancement and greater confidence about later use depends on access to the periphery of nuclear storage sites and an end to colocation of launchers and warheads, rather than on negotiated residuals.

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FIRST CLASS

(NEWSPAPER — EXPEDITE)

Entering the Postnuclear Age

By Edward N. Luttwak

Long before Ronald Reagan and Mikhail Gorbachev started talking about abolishing nuclear weapons, the trend moving us step by step toward a "postnuclear era" was clear and relentless. To be sure, there are more nuclear weapons around than ever before. But the *effect* of nuclear weapons on the military balance has continued to diminish.

During the first years of the nuclear age, a few hundred atomic bombs of 20 kilotons or so were considered quite sufficient to deter a Soviet invasion of Western Europe, against which there was no other protection worth mentioning. Even the Soviet Union, after it had developed its own atomic bombs, did not produce a great number of them: for both sides, the revolutionary novelty of the new weapons, the *nature* of the destruction they could inflict, displaced the usual accounting of military power. Today, by contrast, the nuclear weapons of each side run in the thousands. Indeed, to achieve the same goal of dissuading a Soviet invasion of Europe, the addition of entire categories of "battlefield" and "tactical" nuclear weapons was considered necessary during the mid-1950's: bombs for fighter bombers, artillery shells, rocket warheads and demolition charges. Thus, many more weapons of more varied form were needed by the end of the 1950's to do exactly what a handful of atomic bombs could do at the start of the decade.

For a while, the awesome destructive power of hydrogen bombs restored the special status of nuclear weapons, especially when they appeared as warheads for unstoppable intercontinental ballistic missiles. The Eisenhower Administration would later be criticized for wanting to build only a few dozen of them, and the Soviet Union, which had been the first to develop them, was initially content with a mere handful: once again it was the *nature* of the new weapons that was considered important, not their numbers.

But the process of decline was soon under way again. Western Europe was still in need of protection against the Soviet Army, which the United States and its allies were still unable to match. At first, the Kennedy-era remedy was to increase the number of intercontinental nuclear weapons. As always before, the Soviet Union eagerly competed, and indeed continued to compete even after the United States deliberately slowed down after the mid-1960's.

The results of this story are well known: to achieve the same original purposes of deterrence, the nuclear weapons of the "strategic" category now exceed 10,000 on each side. Intermediate-range weapons — including cruise missiles and Pershing 2's in the West, and the Soviet SS-20's (and SS-22's) — have been added as well. The phenomenon is familiar from economics: When a currency keeps being devalued, it takes more and more of it to buy the same goods.

It is usually argued that this devaluation has come about because the nuclear balance has shifted in favor of the Soviet Union. That has certainly happened, and it has not helped. But during the 1950's, when the United States and its allies relied on nuclear deterrence much more than at any other time before or since, the Soviet Union could already attack every major American city with its own thermonuclear weapons. True, the United States had more of them; but it was the Soviet Union that was the first to acquire unstoppable ballistic missiles.

Actually, the decisive change has been one of mentality — one that has little to do with the balance of nuclear forces. What sustained the credibility of nuclear deterrence was, above all, the evident moral fervor of a great many Americans. It was the willingness manifested by American public opinion to use nuclear weapons rather than accept a further advance of Communism. As with other strong emotions, it could not be sustained forever. It is hard to say how much an increased sophistication about the consequences of nuclear war, about the varieties of Communism, and, above all, about the Soviet Union itself, which is no longer generally viewed as a dynamic expanding power, has contributed to this decline. But of its results there can be no doubt. Just over 30 years ago, an American President could publicly declare that the United States would use nuclear weapons in Korea rather than send more combat troops, and receive much more applause than criticism from the public. Now, by contrast, it is hardly conceivable that the United States would employ nuclear weapons in Korea.

Certainly, Western Europe is not as remote from the concerns of most Americans as Korea. But it is clear that the decline in moral fervor is also overtaking nuclear commitments made on Europe's behalf. Indeed, one reason for the original European request for the Pershing and cruise missiles was precisely to resist this change in mentality and to preserve the credibility of the link between American nuclear weapons in Europe and those in the United States. Public attitudes, ill-defined as they are, are the true determinants of the limits of policy. Hence, we have seen the spectacle of President Carter coming into office and announcing his intention to abolish nuclear weapons, followed by President Reagan, whose starting point was precisely the opposite, ending up by virtually echoing President Carter's call. The spirit of the times has prevailed over individual belief.

Nothing measures the decline of nuclear weapons more accurately than the increase in the nonnuclear forces that the North Atlantic Treaty Organization keeps so reluctantly for the defense of its "Central Front" in Germany. During 1946-1949, there were only two, under-strength American divisions; 50,000 British troops, and small Belgian, Dutch and French contingents — even though the cold war was at its peak. By the 1960's, with West Germany rearmed, Central Front forces had increased substantially, to 24 divisions. Nowadays, a vastly increased effort has made it possible, upon mobilization, for NATO to field forces that are much larger, better-equipped and better-prepared than ever before.

Still, the imbalance in nonnuclear strength persists. The Soviet Union may not amount to much as a producer of ladies' fashions or computers, but it remains the world's leading producer of armored and mechanized divisions. It is true that the Soviet Army has many defects, so that optimistic accounts depict an army whose equipment is not as good as the latest in NATO; whose ranks include many raw recruits and a great mass of older reservists upon mobilization, as well as many non-Russians who might not fight with enthusiasm or at all; whose officers are rigidly unimaginative and much given to strong drink.

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SUPERCONDUCTOR RECORD SET IN THE FEDERAL REPUBLIC

The Nuclear Research Center in Karlsruhe (Baden-Württemberg) has set a new record in the worldwide hunt for superconductors which operate at the highest possible temperature, the center announced Wednesday (March 25). According to a spokesman, the beginning of the process of superconduction--the conducting of electricity without loss of energy--was measured by the center for the first time at a temperature of 125 Kelvin (minus 148 degrees Celsius) using an alloy of yttrium, barium and copper oxide. The previous record was 92 Kelvin (minus 181 Celsius). The higher temperature opens up new possibilities over the long term for the application of superconductors. Superconduction has been achieved at increasingly high temperatures since the end of 1986. For many years before that the upper temperature limit for this physical phenomenon was 23 Kelvin (minus 250 degrees Celsius), which is 23 degrees above absolute zero (minus 273.15 degrees Celsius).

NUCLEAR WEAPONS...CONTINUED

All that may be true, but Russians even less well-equipped, more poorly trained and even more drunken defeated many more Germans in World II than the Americans or British ever fought. Even if all that is high-tech about the Soviet Army turned out to be inferior, its 200 tank and mechanized divisions and masses of artillery could still smash NATO's Central Front, because more than 40 years after 1945 there is still no great army to defend it.

Our European allies know that it is very easy to underestimate the Soviet Army. Accordingly, they insist that nuclear deterrence remains essential. But it has taken a huge increase in the number and power of nuclear weapons to maintain the same level of deterrence, and, even if it was reasonable to multiply the currency up till now, that remedy can serve us no longer. That is the real meaning of the latest talk of abolition: nuclear weapons may not be reduced, let alone abolished, but there is no longer a valid incentive to add to their numbers. Plainly, we are entering the "postnuclear" age, in which the nonnuclear invasion potential of the Soviet Union will have to be matched by nonnuclear defenses of comparable strength.

Those who applaud the decline of nuclear weapons, as well as those who recognize that they have given us 40 years of peace — and a rewarding great power role for the United States without need of a great army — must confront the implications of that decline. The choice successfully avoided in 1945 and during the decades that followed cannot be avoided much longer: Washington must either reorganize its military strength for the postnuclear age, by increasing its forces for defense of the Continent, or it must give up its great power role in Europe.

Edward N. Luttwak is the author of, among other books, "Strategy: The Logic of War and Peace," which will be published next month.

CONTINUED NEXT PAGE

TEACHING ABOUT NUCLEAR WAR

When political advocacy becomes classroom indoctrination

BY LINDA CHAVEZ

THE STATED aim of *Choices: A Unit on Conflict and Nuclear War*, an instructional guide for junior high school students prepared by the Union of Concerned Scientists in conjunction with the National Education Association and its affiliate Massachusetts Teachers Association, is to "help equip students with the skills and knowledge to understand what choices can be made to ensure a peaceful and secure future for the United States and the world" (p. 7). Furthermore say the authors, "The unit is not intended to advance specific political positions" (p. 7). The goal is surely a worthy one and the political disclaimers reassuring. The project was tested in thirty-four states by forty-seven teachers and two thousand students. Revisions were made after the initial field test and the unit is now published and available to the NEA's 1.7 million teacher members and to anyone else who wishes to purchase it. So why have so many alarms been sounded since the publication of *Choices* from such diverse quarters as education writer Gene Maeroff at *The New York Times* and the editors of the *Washington Post* to *Human Events*, the conservative Washington weekly newspaper?

The *Post* said that the guide is "not teaching in any normally accepted—or for that matter, acceptable—sense. It is political indoctrination." Strong words for a newspaper whose editorial policies are not sharply antithetical to the views of the authors of *Choices*.

Indoctrination is teaching people to accept a system of thought uncritically. Indoctrination does not necessarily imply that what is being taught is wrong or false or harmful. The question becomes, then, are the *Washington Post* editors and other critics of the NEA/UCS study guide right? Does the guide teach children, specifically twelve-, thirteen- and fourteen-year-olds, to accept uncritically one point of view in relation to conflict and nuclear war, or is it a well-balanced treatment allowing students, as the title implies, to understand what choices are available to policymakers in the current nuclear arms debate?

ILLUSTRATED BY GUY SCHUM

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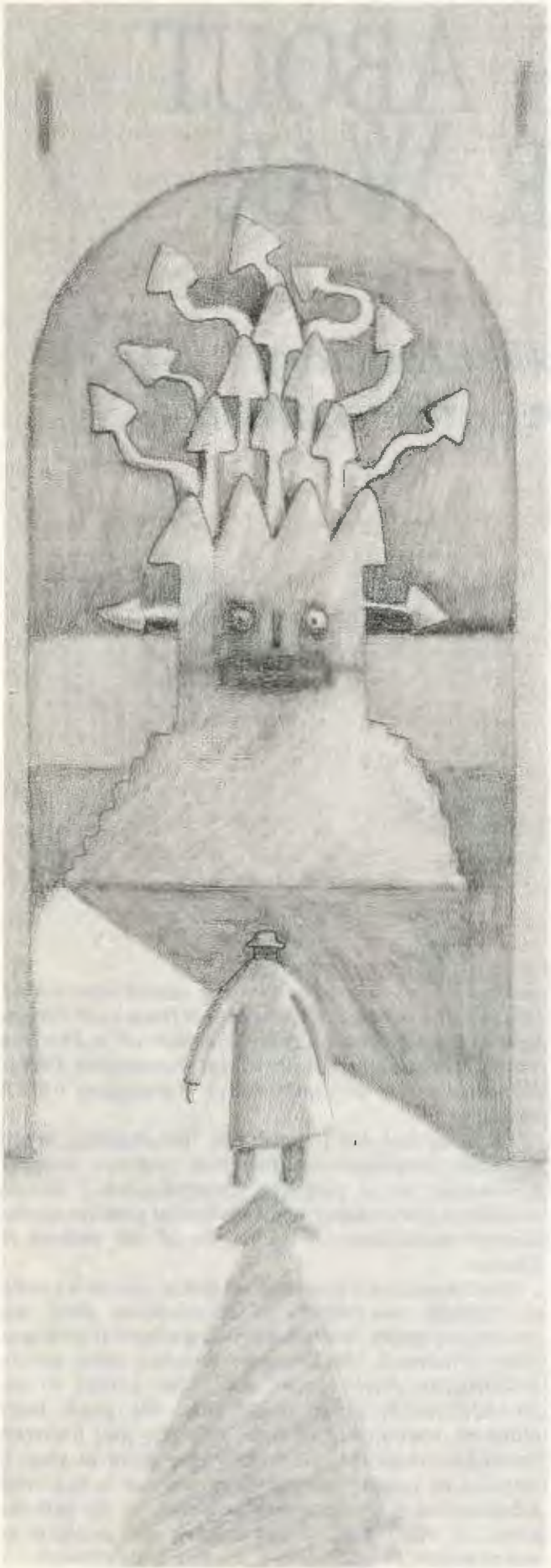

creatures on the stand, telling lies about themselves: did they now believe what they were saying, or did they keep one part of their minds clear and in touch with the truth, or were they now too confused or indifferent to know the difference between truth and untruth? What had happened to these men, as total human beings? These questions led in turn to others: Why did the regime feel it vital to have these men confess publicly? Why did it not merely murder them, secretly or openly, slowly or swiftly, as it was doing with hundreds of others? Did Stalin, in his paranoia, believe the lies he was forcing his opponents to confess to, thus making untruth into truth? Or was he inducing the confession of what he knew to be lies, as a display of consummate power?

So the Spanish war provided Orwell with a theme that was to inspirit his writing for the rest of his life: the political lie—its origins, its vicissitudes, its functions, its aims, its effects. Some of his most powerful essays examine its consequences for thinking and writing: the famous "Politics and the English Language" and "The Prevention of Literature." In "Writers and Leviathan," one of the last full-scale essays he wrote—on the relation of politics and writing—one finds, in a seven-page article, fourteen separate references to falsehood or self-deception. Even in his minor writing, the casual newspaper columns, we find him contemplating the lie and its effects on the mind. In one of these brief pieces, he offers some examples of what was later to be called "doublethink"—as he says, "the power of holding simultaneously two beliefs which cancel out. Closely allied to it is the power of ignoring facts which are obvious and unalterable, and which will have to be faced sooner or later."

Orwell is obsessed by the lie, and I do not use the term pejoratively, since the obsession is rational: Everywhere he looks, he finds that politics, and especially the high-minded politics of the intellectual, consists of people being lied to, and lying to others, and lying to themselves. As you read through the four magnificent volumes of his essays, journalism, and letters, you watch this calm, sardonic man overcome by exasperation—and perhaps some despair and perhaps some smoldering rage—as he witnesses the triumph of falsehood in world politics. The obsession recedes only in the very last year of his life, when he was writing *1984*, and that we will imagine was absorbing all he had left to say on those questions.

THROUGH HIS preoccupation with the lie, Orwell was led in unwitting prescience to issues that were about to overtake psychology and psychiatry—the idea of the self, and its division into true and false sides. To deceive oneself, or to allow oneself to be deceived, without inner protest, is to divide oneself. In dealing with a divided self, as he does in *1984*, Orwell was looking ahead to psychologies not yet written. He was also—again I suspect unwittingly—looking back to the birth of modern psychology, in the latter part of the nineteenth century, when such writers as William James and Pierre Janet were trying to fashion a theory of the

(Continued on page 40)

THERE ARE at least two sides to any debate; but not all debates concern ends or results, some concern the means to achieve agreed-upon ends. The present nuclear arms debate is not about whether peace is preferable to nuclear war. No constituency has yet announced itself in favor of nuclear war. What honest and well-intentioned people do debate is how best to protect and ensure peace.

One view in the present debate holds that nuclear weapons themselves pose the greatest threat to peace. Those persons who adhere to this view see the misunderstanding or escalating hostility between conflicting parties as the most likely causes of nuclear war, and the risk of nuclear war increasing almost proportionally to the growth in the nuclear arsenal. Concrete issues that divide nations, specifically the United States and the Soviet Union, play an insignificant role in this interpretation. Who is right or wrong is irrelevant; what is important is that both sides are suspicious and mistrustful of each other and that both sides have the capacity to destroy one another. If one accepts this point of view, the clearest path to peace is to pursue policies that increase trust and cooperation among nations. Such policies can even be unilateral, with one side giving up a major benefit by making concessions in order to gain the confidence of the other side.

NOT EVERYONE who earnestly desires peace, however, believes that it can be maintained by such simple measures. On the other side of the nuclear arms debate are those who believe that the United States can best avoid war by deterring aggression with a strong defense. Implicit in this view is the belief that the United States and the Soviet Union have different aims in the world, and that the conflict between the two is inescapable, at least in the short run. A key to such strategies is to remain alert, cautious, and strong. In this view peace is served best not by the illusion that conflict can be exorcised but by concrete strategies for keeping the conflict on a nonviolent level.

Those persons who accept this view claim that history supports their position, particularly the history of World War II and its aftermath. The great lesson of that war is that appeasement cannot prevent war, especially in the face of a powerful aggressor. When peace-loving countries have the power to deter aggressive ones the risks of war are reduced rather than enhanced. According to this view, unilateral moves to reduce nuclear weapons would lead to a provocative imbalance that would put peace in grave jeopardy.

U.S. defense policy since the second world war has been based on these premises. Every president of the United States since the advent of the nuclear age has accepted this general point of view and has formulated his defense policies accordingly. Any attempt to teach students about the choices available to reduce the threat of nuclear war in a fair and representative way would necessarily incorporate this viewpoint as the one that has dominated U.S. policy for more than three decades. Without a serious presentation of these views, no debate is possible and choices are precluded.

Despite its disclaimers not "to advance specific political positions," the NEA/UCS study guide is a carefully crafted training manual to promote nuclear disarmament. Children learn in the first chapter "that their participation with others can help prevent nuclear war" (p. 8). Using a story called "The Hundredth Monkey" children learn that "increasing numbers of people learning about nuclear war (or any other topic) will one day reach a critical number. At this point, a definite change may occur in society's awareness of nuclear issues. Since we can never calculate the critical number, one individual joining with others really can make a difference" (p. 13). The NEA and UCS, however, have very definite ideas about *what* children need to learn about nuclear war and what they can do to make that critical difference.

The study guide gives extensive coverage to descriptions of nuclear weapons, the effects of dropping nuclear bombs on humans, the extent and range of damage to property and life forms from nuclear weapons, and the size of the nuclear arsenal. Children read descriptions from the survivors of Hiroshima: "Some people who were near the center of the explosion literally evaporated and only their shadows remained; others were turned to charred corpses. Those who survived were badly burned....The burns on their hands made their skin hang down. Their hands looked like those of ghosts" (p. 16). Lest the seventh, eighth and ninth-grade students think that such tragedy could not strike them, they are given maps or shown "an overhead projection of their city (or a nearby city) with concentric circles marking the zones of the effects of a nuclear explosion....Within a ten-mile radius, people would be killed by firestorms (fires caused by the blast's great heat) or by asphyxiation (suffocation) as the fires consume oxygen. Lethal radiation would spread throughout the region and would contaminate areas up to 100 miles from the blast" (p. 34). A worksheet called "Some Things Never Seem to End" informs students that following exposure to radiation, "People generally lose their appetite and hair, are constantly nauseated, and eventually die" (p. 39). A handout sheet on radiation depicting a pastoral scene of a mountain lake with fish leaping from the water and a nearby cow grazing next to a cabbage field instructs students to mark those things in the picture that would be affected by radiation after a nuclear blast and those things we depend on for food. Students are then asked to "discuss how you could be affected by the radiation that entered that item" (p. 40).

NOW THAT the children have been instructed in the effects of nuclear war, the NEA/UCS study guide proposes to teach what the likely causes of war will be. The guide lists the "Reasons for War" (p. 27) as territory, resources, political and religious beliefs, and economic pressures—a somewhat deficient enumeration, omitting among the chief causes either the quest for power or the defense of population. *Choices* devotes scant space to any discussion of even its abbreviated listing of the causes of war, however, and concentrates instead on the capacity—primarily of the United States—to wage war. Presumably, the greater the capacity, the likelier the temptation to engage in war.

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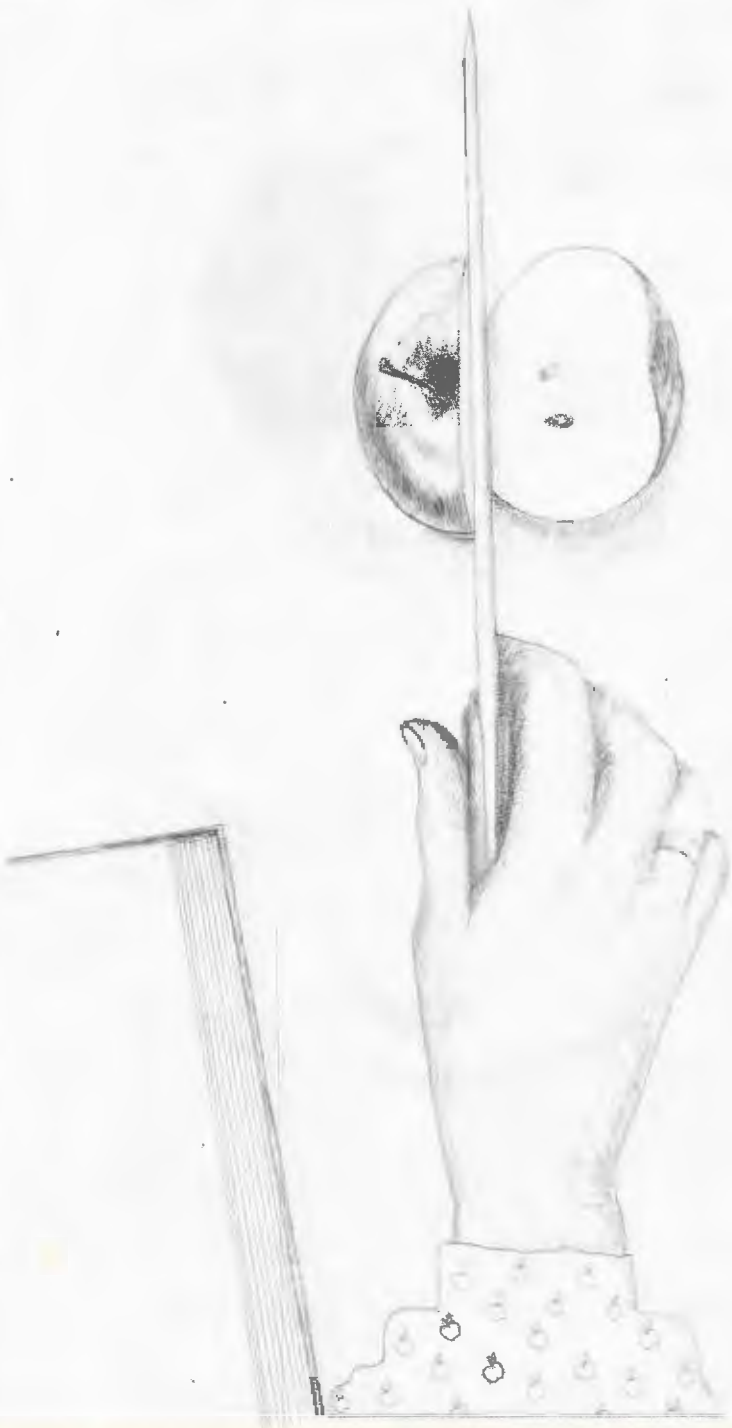

Choices assumes a nuclear arms race between the United States and the Soviet Union that has escalated through a series of actions and reactions on the part of both countries. In a chart entitled "Action/Reaction in the Nuclear Competition," the authors state that "the dynamics of the nuclear arms race ensure that development of a new weapon system by one power will in a relatively brief period be followed by a comparable achievement by the other" (p. 44). The chart itself makes clear that the United States spurs most of the reaction. Of the twelve technological "firsts" listed, the USSR has achieved only three. The chart qualifies the three Soviet arms breakthroughs, however, noting that intercontinental ballistic missiles were produced by the USSR in 1957 "following intensive development *by both nuclear powers"* [emphasis added], that the "USSR initiated a space race which quickly *took on military functions,*" and that anti-ballistic missile systems initiated by the Soviets in 1968—four years ahead of the U.S.—were "generally *judged militarily ineffective*" (p. 44). No such qualifiers describe U.S. achievements initiated by the atomic bomb in 1945: "The nuclear age began with the explosion of a U.S. A-bomb of 12.5 kilotons (equivalent to 12,500 tons of TNT) over Hiroshima, Japan. The single bomb, which destroyed the city, introduced to the world a concentrated explosive force of unprecedented power" (p. 44).

The study guide makes no mention of the controversy surrounding nuclear arms race theories, which are not universally accepted. Missing is any political context within which to examine the development of nuclear weapons. Instead students are asked to graph the increase in the numbers of strategic weapons possessed by the U.S. and the USSR from 1945 to 1990 and to superimpose the dates of the technological breakthroughs described in the action/reaction chart. The worksheet on which students graph this information is called "Up, Up, and Away!" (pp. 47-48).

The authors do suggest that "the nuclear arms escalation cycle has taken place against a background of worldwide political change" and instruct teachers to "provide students with a *partial* [emphasis added] or full version of the following table listing some of the key political events since 1945" (p. 45). The "Political Events Time Line" that follows is an attenuated list that notes a "Soviet-backed coup" which "results in Communist government in Czechoslovakia," but neglects to mention the post-war Soviet occupation of the rest of Eastern Europe—Poland, Hungary, Romania, Bulgaria, and parts of Germany—which led to the establishment of Communist governments in those countries. The omission does much to obscure an examination of the Soviet Union's role in the world or of the nature of the conflict between the United States and the Soviet Union. Other significant deficiencies include the failure to mention any Soviet or other non-U.S. involvement in the Vietnam War, or to make any reference to the Middle East, a major arena of East-West conflict.

Choices provides so little information about the Soviet Union that students might be led to conclude that the United States is engaged in a shadow-boxing match in which we have no one to fear but ourselves.

While students are asked to calculate "how many times stronger than the Hiroshima bomb is the MX" and how many Hiroshima bombs would 100 MX missiles be (p. 38), the guide fails to explain that the U.S. has *no* MX missiles yet. The largest missile in the world today is the Soviet SS 18, of which more than 308 are already deployed, aimed at the U.S. Since the guide gives no information, students cannot calculate that the SS 18 is much larger than our largest current weapon and is nearly eight times larger than the proposed MX. (Based on warhead megatonage, International Institute for Strategic Studies.)

What few facts are given about the Soviet Union evoke an almost benign image. Students learn in a 173-word "fact sheet" on the USSR that the Soviet Union possesses a harsh climate, borders some unfriendly countries, has had as many as one million Chinese troops on its border, lost 31 million people in wars in this century, and has a 2,000 nuclear warhead disadvantage compared to the U.S. (p. 64), this latter bit of information a hotly disputed item. With the exception of the chronological information provided in the Action/Reaction chart and the Political Events Time Line, the study guide fails to give any other information about the Soviet Union. The guide makes no references to the Soviet political system, leaving the junior high students who take this course not the faintest clue as to how Soviet nuclear policy is determined or can be changed. By implication, the guide presupposes that Soviet and U.S. policy are equally affected by public opinion and pressure. One homework exercise calls for students to "write a one-page letter to the U.S. or Soviet government expressing his/her concerns about nuclear war" (p. 46), and for teachers to find out how these letters can be forwarded to the "respective governments," where they will presumably receive equal consideration. Says the guide, "If students wrote to the Soviet government, ask: If a Soviet youth your age were writing you a letter, what do you think she or he would say?" (p. 54). Nothing in the guide hints that Soviet citizens do not have the same freedom to express their views as Americans do.

With only the material presented in *Choices* on which to base a judgment, students might suppose that U.S. policy is the prime determinant of Soviet policy. The guide encourages this interpretation by depicting Soviet nuclear developments as reactions to American ones and by neglecting to treat the Soviet political system at all in its pages. The word communism appears twice in the guide, but neither reference makes explicit its link to the Soviet Union or defines what the term means (p. 55).

WHILE STUDENTS learn very little about the Soviet Union and its role in the nuclear debate, what they learn about the United States from the study guide is no less misleading. One of the most blatant examples of misinformation about the U.S. government in the guide concerns defense spending and the federal budget. A worksheet called "The Proposed 1987 National Budget" (p. 59) claims that nearly half (9/20ths) of the "national" budget (based on actual FY 1983 federal budget figures) goes to defense, a gross

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misstatement of fact. The actual percentage of the federal budget spent on defense is about 29 percent (Congressional Budget Office, U.S. House of Representatives). The worksheet goes further to distort reality by listing among the categories competing with defense in a share of the federal budget: education, primarily a state and local fiscal concern; food and nutrition, a private fiscal responsibility for all but the poor who qualify for federal, state, and local assistance; job training, primarily conducted by the private sector; transportation (assuming that *public* transportation is intended), still primarily a state and locally funded program; and housing, again a private fiscal responsibility for all but the poor. Nowhere does the guide distinguish between federal, state, and local taxes or provision of services. Rather, the guide disingenuously leads students to believe that nearly one in every two tax dollars will be spent on weapons. Once again, the guide fails to provide comparable figures for the Soviet Union.

When *Choices* was initially drafted, critics charged that the materials did not include any consideration of the view that peace might best be maintained through a strong defense. In response to that criticism, the final version of the study guide lists among the "National Security Options" (p. 67): "Peace through strength. Our country tries to convince another not to attack, threatening to do massive damage if it is attacked. Many supporters of 'peace through strength' say the U.S. needs more weapons before it can choose the option." Leaving aside the problem that this is a somewhat simplistic definition of that policy, the major difficulty is that it is the only option of six to balance what are mostly disarmament proposals ranging from unilateral disarmament to a bilateral freeze. Despite the title of the worksheet—National Security Options—the first sentence of the worksheet belies a fair presentation of national security: "Below are six possible actions that the United States and the Soviet Union could take in order ***to limit or continue the arms race***" [emphasis added]. Clearly, five options limit the "arms race" and one—"peace through strength"—explicitly ("the U.S. needs more weapons") fosters the so-called arms race.

Not all of *Choices'* tactics are so blatantly pro-disarmament. Some take the form of games in which neither nuclear arms nor defense appears at issue. These games, however, are in some ways the most disturbing element of the guide because their goals are surreptitious. One game involves the use of five rectangles, each cut up into three pieces that will fit together to form a rectangle only with those pieces from the original rectangle. When the pieces are mixed and then distributed to the students in groups of five, each group's task is to form five rectangles. However, two rules apply, "Each group must work in silence, and no person can gesture to another to get or take a piece. Each person ***can only offer*** a piece to another" (p. 61) [emphasis added]. The purpose of the game, say the authors, is to explore "winning through cooperation and communication" (p. 60). But silence constitutes communication in the game and giving away what is in your possession constitutes the only way to cooperate. Applied to the nuclear arms debate, the logic of this game surely would dictate that the United States should give up its weapons without even being asked and that the Soviets would reciprocate. Put into terms of the "National Security Options" of the lesson plan, this strategy might best be defined as unilateral disarmament: "This involves one country announcing that it will reduce arms regardless of what the other does" (p. 67).

Choices ends with quotations from former President Dwight D. Eisenhower, whom the guide tries to portray as the military man turned pacifist. The image of President Eisenhower as a pacifist general will appear false to anyone old enough to remember much of the man or his presidency during the height of the Cold War, but few of the twelve-, thirteen- or fourteen-year-old students at whom the guide is aimed can be expected to remember back that far.

History is not the aim of *Choices*. Its purpose is far more didactic, as one of the final assignments hints: "Have students list ways their feelings or ideas changed during this unit" (p. 83). The guide then encourages the students to proselytize, "The following are suggested student activities....Teach younger children within the school topics learned in this unit"; and to agitate, "Find out the role the military plays in the community. Are weapons produced at a local plant (see the map which follows)? Is research and development in progress at a local university? Are weapons stored at a nearby base? Write an article containing these facts for the local newspaper" (p. 83).

CERTAINLY THE NEA and the UCS have the right to promote nuclear disarmament. They have the right to produce materials that encourage that nuclear disarmament become the policy of this nation. They have the right to try to persuade their own members of this point of view. What they do not have the right to do is to manipulate school children through fear, distortion, and falsehood. If the NEA and the UCS had honestly written and promoted their study guide as a primer on nuclear disarmament whose purpose was to persuade adolescents that this was the only path to peace, critics might have said that this was wrong-headed. They most certainly would have demanded that students be given materials that presented alternative perspectives on the issue. But decisions on what to teach could then have been made openly. Parents and school boards could then have determined whether they wished a curriculum guide that advocated a particular position on nuclear arms to be taught in the schools, and teachers could have known when they ordered the guide that they were purchasing propaganda. Instead, well-meaning teachers and school administrators, most of whom have little access to information that would allow them to dispute the opinions that pose as fact in *Choices*, must rely on good faith that an organization that represents educators would not calculatingly deceive them about its aims or methods.

In the final analysis, the NEA and the UCS by publishing this study guide make some very revealing choices themselves about teachers as well as students. They choose to dissemble rather than persuade; they choose to indoctrinate rather than educate. □