QUARTERLY PROGRESS REPORT

September 1985

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| Contract Number: | MDA903-84-C-0325/P3 |
| Contract Expiration Date: | 15 June 1986 |
| Short Title of Contract: | Integrated Long-Term Defense Strategy |
| Name of Contractor: | Pan Heuristics<br>R & D Associates<br>4640 Admiralty Way<br>Marina del Rey, CA 90295 |
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#81

CONTENTS

Progress Report for the Period April 7, 1985 - July 6, 1985

ATTACHMENT 1: Wohlstetter note, "Uncertainties, Suicidal Choices, MAD and Nuclear Winter."

ATTACHMENT 2: Wohlstetter memo to Iklé/Marshall, "Suggested Additions to the Outline on Strategic and Theater Nuclear Forces."

ATTACHMENT 3: Wohlstetter note, "Western Preferred Huge Soviet and US Attacks."

ATTACHMENT 4: Wohlstetter note, "Intercontinental LNOs Avoiding Silos in US Z1."

ATTACHMENT 5: Wohlstetter paper, "Beyond the Strategy of the Worst."

ATTACHMENT 6: Wohlstetter/Chow article, "Arms Control That Could Work."

ATTACHMENT 7: Hoffman article, "The SDI in U.S. Nuclear Strategy."

ATTACHMENT 8: Hoffman memo, "Questions and Answers Concerning SDI."

ATTACHMENT 9: Kozemchak briefing, "What Price SDI?"

ATTACHMENT 10: EAI Agenda

ATTACHMENT 11: Agmon paper, "Finding Fault Lines in the Warsaw Pact."

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Contract No. MDA903-84-C-0325
For the Period April 7, 1985 - July 6, 1985

TASK 1: REGIONAL ANALYSES

(a) Role of Intelligence in Terror

There was very little activity on this task during the period. Roberta Wohlstetter and David Blair spent some time on the uses of deception in this connection, in particular what lessons the Nicaraguans learned from the Cuban experience.

TASK 2: US NUCLEAR STRATEGY FOR THE NEXT 20 YEARS

Albert Wohlstetter continued to work on the same themes discussed in the last report: discriminating nuclear and non-nuclear offense and non-nuclear active defense; alternative policies for US force employment and force structure and their relation to NATO force structure and planning; the impact of new military technologies on NATO-US relations; and the implications of the uncertainties associated with nuclear winter for US defense policy. (Attachment 1)

In connection with his research, Albert Wohlstetter met with Dr. Fred Ikle', Richard Perle, Rich Wagner, and Andrew Marshall in Washington (Attachment 2); and with Admiral William Crowe (CJCS) at CINCPAC, as well as in Los Angeles. (Attachment 3)

Also during this period, Professor Wohlstetter was in communication by phone with a number of Americans and Europeans concerned with SDI in preparation for a meeting on SDI at Ditchley Park in England. (Attachment 4)

His views on present alternatives for the French to move from a strategy of suicidal attacks on Soviet population centers toward a

policy of selective military response are embodied in the "Beyond the Strategy of the Worst." (Attachment 5)

He also continued to work with Brian Chow on arms agreements in space. (Attachment 6 and subsequent discussion below.)

Fred Hoffman's principal activity during this period was related to the role of strategic defense in US nuclear strategy during the next 20 years (Task 2). This continued and extended work undertaken in the previous period, which was reflected in a statement on SDI policy issues submitted to the Senate Armed Services Committee in March (previously reported). He also participated in planning for the Summer Study program, sponsored by USD/P, at RDA.

Also during the period, Mr. Hoffman had several meetings with Dr. Ikle' and the staff of USD/P to discuss matters of nuclear strategy. He presented the results of Pan Heuristics' work in a variety of fora. At the request of the editors of International Security, Mr. Hoffman prepared a version of his SASC March 9 statement for publication in the journal (Attachment 7). Dr. Kenneth Adelman invited Mr. Hoffman to lead a session of the ACDA/Aspen Media Seminar on SDI. Mr. Hoffman prepared a presentation and participated in the seminar of April 10 and 11. On April 18, Mr. Hoffman, together with Albert Wohlstetter, met with Mr. Perle and USD/DRE-designate, Dr. Donald Hicks to discuss Pan Heuristics' work under the program. Dr. Hicks subsequently asked Mr. Hoffman to prepare a series of questions and answers on issues relevant to SDI for Dr. Hicks' use in familiarizing himself with these issues (Attachment 8). On May 9, at Senator Nunn's request, Mr. Hoffman met with the national security group of the Senate Democratic Caucus to make a presentation on SDI policy

issues. Mr. Hoffman prepared a memorandum for Dr. Ikle' on this meeting.

At the request of the editors of Europa Archiv, a prestigious publication in the Federal Republic of Germany, Mr. Hoffman plans to prepare a short article for publication in that journal, drawing on and applying published work by Albert Wohlstetter to assess the implications of correcting prevalent and implausible assumptions about Soviet objectives and behavior for the SDI and other issues of nuclear strategy.

During this period, Henry Rowen consulted with Andrew Marshall, Director, OSD/Net Assessment, on work related to the Nuclear Strategy Development Group.

In last year's Report to the Congress on ASAT Arms Control, the Administration made it clear that the "United States has been studying a range of possible options for space arms control with a view to possible negotiations with the Soviet Union and other nations." In a Wall Street Journal piece "Arms Control That Could Work" (Attachment 6), Albert Wohlstetter and Brian Chow argued that the United States should discuss an agreement on self-defense zones in space with the Soviets. Not only would such an agreement not harm us, it would facilitate unilateral US defense measures against surprise attacks on our satellites. In his July trip to Washington, Chow (accompanied by Paul Kozemchak) separately briefed Ambassador Nitze, Henry Cooper (Assistant Director of the Strategic Programs Bureau at ACDA), Senator Dan Quayle, Bruce Weinrod (Director of Defense Studies at the Heritage Foundation) and their aides and associates. Ambassador Nitze arranged for Chow to discuss the proposal with other people in the State Department and ACDA. Wohlstetter has also talked to some of the same individuals on the subject. Kozemchak met and

briefed LTG Abrahamson's Personal Assistant, Major Pete Worden, on the subject and reviewed SDIO's related work on the subject of defenses against space mines. The reactions to date have been surprisingly favorable. Since the briefings, Wohlstetter and Chow have been drafting answers to the questions raised.

In response to remarks by Ambassador Nitze, Kozemchak explained the differences in "cost-effectiveness at the margin" when viewed from the attacker's point of view and his confidence in his war plans, as opposed to the traditional defender's point of view (Attachment 25, OSD Quarterly Progress Report, June 1985). Subsequently, Mr. Nitze asked Kozemchak to prepare a short paper and illustrative calculations on the subject.

In response to V. Karpov's May 29 opening remarks at the Geneva negotiations and Soviet Chief of Staff General Akhromeyev's Pravda June 4 article, Paul Kozemchak did some preliminary calculations on what the Soviets should mean by "radical reductions" in their inventory of ballistic missile warheads in exchange for a ban on space-based defenses. Akhromeyev's figure of 25 percent or more is low by at least a factor of 3. (Attachment 9) This work will be extended by considering more complicated pricing models which explicitly relate the change in the Soviets' confidence in their war plans to the expected effectiveness of US strategic defenses.

One of the most prominent criticisms of the Strategic Defense Initiative holds that ballistic missile defenses that provide less-than-perfect protection will be "destabilizing." This assertion is based on a model in which a first-strike against the adversary's missile silos is followed by a retaliatory strike against the attacker's cities. Adherents of mutual

assured destruction (MAD) argue that each side's capability to retaliate against cities will be sufficient to deter any initial attack. A ballistic missile defense that can degrade or block this retaliatory strike is therefore considered to be dangerously destabilizing, no matter what effect it may have on an attacker's confidence in meeting his first-strike objectives.

This analysis has received prominent political support. For example, Senator Edward Kennedy wrote:

> In light of our inability to produce a foolproof defense system, the Soviets can only conclude that a US decision to go forward with such a system is actually intended to defend against a retaliatory strike by the Soviet Union after a first strike by the United States...That strategic defense makes sense only as a measure for achieving a first-strike capability against the Soviet Union is one of the most destabilitizing, dangerous aspects of the entire undertaking. (Arms Control Today, July/August 1984)

The problem with this MAD analysis is that it completely ignores the vulnerability of NATO's general purpose forces (to say nothing of the CONUS targets necessary to support NATO reinforcement) to a surprise ballistic missile attack. It is this NATO vulnerability, not our attempts to remedy it, which creates dangerous incentives for a Soviet attack, especially one narrowly confined to these targets and designed to minimize unintended collateral damage. Suicidal threats by NATO to retaliate against Soviet cities cannot deter such attacks. However, a BMD system, even one much too small too protect 100 percent of NATO's cities, can greatly reduce this destabilizing NATO vulnerability.

David Blair and Brian Chow have developed a mathematical analysis of the usefulness of various kinds of BMD systems in deterring a Soviet ballistic missile attack on NATO forces in Europe. They are also in the

process of studying the dispersal capabilities of NATO versus Warsaw Pact forces to avoid ballistic missile attack.

Greg Jones and Zivia Wurtele's main efforts during this period related to Task 2B. Their work centered on attempting to estimate the urban smoke produced by various nuclear attacks. Their basic idea is to correlate population or population density to urban fuel loadings. With such loadings and a given nuclear attack, the amount of smoke produced that is relevant to the nuclear winter phenomena can be calculated. They have obtained DNA's unclassified US data base in computer readable form to provide US targets for potential Soviet strikes. They have also obtained from the US Census Bureau an unclassified computer readable tape which contains fine-grained population data. Several preliminary runs using sample US targets have been performed. This work is continuing.

In the next period, Jones and Wurtele hope to obtain classified target and population data on the Soviet Union to estimate the amount of smoke from US strikes on the Soviet Union. They also hope to be able to estimate the collateral population fatalities from these strikes as well as the urban smoke production.

During the upcoming period, 7 July-6 October, Mr. Hoffman plans to continue Pan's concentration on Task 2 during this period and, in addition, together with Albert Wohlstetter, Richard Brody, Greg Jones and Paul Kozemchak, specifically to increase the level of effort on Task 2E. We plan to initiate assessments of Soviet future capabilities to attack alternative future configurations of US C3I systems, assuming the Soviets wish to restrict the level and extent of resulting collateral damage. To that end, most of Richard Brody's work on the future of nuclear strategy

during the period has consisted of basic research and project definition on the problems of maintaining control through an extended conflict. Obviously, maintaining control is likely to be a necessary condition for either side to continue to have the ability to launch attacks which are both militarily effective and give the other side a stake in continuing prudence by minimizing collateral damage. A special issue here is the incentive of both sides to direct their attacks (or to avoid attacking) the other side's nuclear C3 system. Alternatively, a mix of active and passive defenses could significantly increase the survivability of C3. This has implications for exploiting early technological alternatives coming out of the SDI program.

In addition, Mr. Brody continued direct support to Ron Stivers on matters of employment policy for strategic nuclear forces and with Col. Fred Celec on the problems of theater nuclear force survivability and control.

TASK 3: AMBIGUOUS WARNING

Richard Brody arranged to meet Malcolm Makintosh and other individuals in the British Government dealing with the problems of intelligence and warning to discuss alternate approaches to ambiguous warning. (The meeting took place on 19 July and will be discussed in greater detail in the next progress report.)

TASK 4: NEUTRALITY INDUCING STRATEGIES

Most of PAN's work during this period has been in preparation for the September meeting of the European American Workshop to be held at St. Jean Cap Ferrat from September 15-18. (Attachment 10 for a tentative agenda and

participant list.) The final version of Albert Wohlstetter's paper will be available at the time of the next Progress Report. Its tentative title is "Dissent in the Soviet Empire: Strategic Implications."

Henry Rowen continued his work on inducing Eastern European neutrality in wartime.

Marcy Agmon continued her research on the current policy implications of World War II resistance activities. Her paper "Finding Fault Lines in the Warsaw Pact: Old and New Strategies for the West" is appended (Attachment 11). Her other work in progress includes an examination of how resistance operations were used effectively during World War II to limit collateral damage by attacking targets that would otherwise have been hit by inaccurate bombing.

Attachment 1

AW: April 15, 1985

Uncertainties, Suicidal Choices, MAD and Nuclear Winter
(For Use Possibly in Part IV of Foreign Affairs)

The many uncertainties that shroud nuclear winter come in several distinct kinds. The first has to do with whether, when and how an attacker, such as a Soviet planner, might choose to use nuclear weapons and how many and what types of weapons he would use. He might choose to attack in the summer when dense concentrations of fuel are dry and most easily ignited and when his own crops, like others in the Northern Hemisphere are in their growing season and therefore likely most drastically to be affected. He may include in his initial attack targets like steel mills that have no time urgency since they could not affect the course of a war for many months or years, and do this even though their rapid initial destruction along with the time urgent targets would magnify the likelihood that separate fires would join in a firestorm and that smoke would be generated and clouds formed in an interval of time short enough to make them spread more widely and more uniformly. He may attack cities and other targets with high densities of fuel outside cities, such as oil refineries, and he may explode high yield weapons at altitudes that would maximize the thermal pulse over combustible areas and so send smoke in huge quantities into the atmosphere. And he may use multi-megaton weapons at or near the surface of the earth in ways that would maximize the chance of sending sub-micron dust in

large quantities into the stratosphere.

On the other hand, he might use nuclear weapons to accomplish some military purpose in the course of a war but do it in a way that would take account of the fact that much destruction extraneous to that purpose could cause a nuclear winter that would make that military purpose idle. And he could try to avoid these self-defeating effects. If he is involved, for example, in a conventional war on the critical Northern or Southeastern flanks of NATO, or in the Persian Gulf and has suffered unexpected reverses, he may use nuclear weapons against selected targets whose destruction or paralysis could turn the tide of battle. He could do this perhaps by destroying or putting out of action for the duration of the battle or the war, most of the aircraft and maintenance facilities on main operating bases, munition stockpiles, defense radar and communications and the like; and he could block reinforcements from inside or from outside the theater, and so on. Moreover he could try to do this in a way that would least interfere with the movements of his own military forces and his other military efforts, and would also confine the generation of smoke or dust to levels well below the twilight zone for severe global effects that would do enormous long term damage to himself. Many of the precautionary measures taken to prevent harm locally to his military effort would also be useful in staying below the zone of uncertainty for global effects.

A second sort of uncertainty concerns how the victim of an attack, such as NATO, might respond. If a Soviet attacker had

used nuclear weapons with effects largely confined to military targets in some local theater of war of great interest to both NATO and the Warsaw Pact, in the course say of an ongoing conflict in the Persian Gulf, and if NATO had prepared no way of responding without immediately, or soon after, devastating cities and generating enough smoke and dust to cause a nuclear winter, it might not respond at all. Or it might respond massively and in a way deliberately to assure mutual destruction, and incidentally the ruin of the hemisphere. Or it might, like the Soviet attacker, restrict itself to measures that stop key military operations on the opposing side but kept things from getting out of hand and destroying the planet. If the Soviets had launched an attack generating smoke and dust enough to have a substantial probability of bringing on severe global effects, NATO might respond by generating still more smoke and dust and increasing the likelihood of even severer effects and the dangers to the species. Or it might choose a form of response that would serve a military purpose but did not substantially further increase the probability of a ruin that would encompass the West as well as the East. Here too, boomerang effects are likely to influence choice.

A third type of uncertainty has to do not with choice but with matters of fact that are presently deplorably neglected but which should yield to further empirical study such as the density of fuel at various locations and related issues as to how the fuel would burn and generate various kinds of smoke and soot in varied circumstances. All these first three sorts of uncertain-

ty, those that involve the choices of the two sides and those that have to do with the local concentrations of fuel of various sorts, have to do with the amount of smoke and submicron dust which would be generated and lofted into the atmosphere and stratosphere during a nuclear conflict.

A fourth sort of uncertainty - one which will be under investigation for many years, is more complex than this third category. It has to do with how the smoke and dust are likely to be transported vertically and horizontally in the atmosphere and stratosphere and how the formation of clouds will be modified by oceans and the precipitation of rain, how much solar radiation would get through the clouds and how much infrared radiation will escape and the resulting light and heat at the earth's surface. The first generation models of the atmosphere after a nuclear war were designed by scientists who are experts about planetary atmospheres. They were more appropriate, as Jonathan Katz, one of the authors of NAS 85 remarked, for the study of a nuclear war on a desert planet like Mars than on the earth, most of whose surface is ocean.

Finally, there are the biological effects of possible patterns of change in temperature and light at the earth's surface. In some ways, though biologists and physicians have been among the most prominent prophets of a global nuclear winter, biological effects have been the least systematically investigated. And they have tended, for one thing, to be focussed only on cases more extreme than even the massive baseline cases looked at by Ambio, TTAPS and NAS 85.

Of these five types of uncertainty, the first and second - those that involve choice - have been least satisfactorily addressed. Yet they are of immense importance and it is clear they can dominate the rest. NAS 85, for example, in its baseline case estimated there would be less than one-fourth the submicron dust lofted into the stratosphere by the 2400 surface bursts at military targets (out of their 25,000 explosions) with a total yield of 1500 megatons than TTAPS' 2850 megatons in surface bursts. On the other hand, NAS 85 did an excursion from its baseline adding 100 twenty mt bombs and these lofted more than three times as much dust as the fifteen million tons produced by the other 2400 weapons, which varied in yield between one-half to one and one-half megatons. What size weapon adversaries choose to use makes quite a difference. And alternatives that can reduce dust even more dramatically have not been much explored. These first two sorts of uncertainties differ greatly from the others precisely in that they are a matter of choice. They are choices - partly independent and partly interlocking - made by the antagonists.

The nuclear winter theorists tend to treat these uncertainties as if they were simply matters of chance uninfluenced by choice, like the collision of an asteroid with the earth which, on the conjecture of Luis Alvarez, lofted enough dust to extinguish a large fraction of the species on earth some 65 million years ago; or the impact of a comet, which on the conjecture of Richard Muller, raise devastating quantities of dust periodically every 36 million years. Nuclear winter theorists

treat antagonists as rather like asteroids and comets, or, at least so far as the application of intelligence is concerned, like the dinosaur that may have become extinct as the result of such collisions. They presume explicitly, at any rate, that the antagonists will make their choice of targets, methods of attack and timing without any intelligent consideration as to the likely implications of such choices for their own destruction by a nuclear winter. The NAS 85, for example, assumed that if military or economic targets were located in urban areas neither side would refrain from attacking them in spite of the dangers of igniting their dense concentrations of fuel. And, in fact, their baseline case involved explosions over 1,000 cities in proportion to their population - attacks in which each side's explosions are well designed to contribute to its own destruction.

Attacks on population, or attacks which ignore collateral harm to population, of course have had many advocates in the Western establishment. And even more members of the establishment consider that any use of nuclear weapons will end in the devastation of cities on both sides even if we were to try to avoid that. Nuclear winter theorists cite as justification for their assumptions not only statements by some Western strategists but by a good many former high officials - Defense Secretaries, Chairmen of the JCS, and Deputy Directors of the Joint Strategic Targeting and Planning Staff. What is novel in nuclear winter theory, what makes it capable of exhibiting with particular clarity the incoherence and implausibility of much establishment doctrine, is that it assumes that each side will use weapons to

bring about its own destruction not merely as part of a process of mutual "escalation", but directly with its own weapons. The rebound of one's own weapons eliminates the middle man in self-deterrence. Even if nuclear winter should ultimately turn out to be a less substantial danger, it will therefore have been an illuminating confusion. It carries one step further the assumption widespread in Western elites that in a nuclear conflict neither side would choose to keep the destruction done by its own weapons within bounds short of self destruction.

Nuclear winter theorists make clearer some of the absurdities in the Western view of Soviet behavior. Even apart from nuclear winter, one need not suppose, as some members of our foreign policy establishment assume, that only "gallantry" or some courtly interest in Western welfare would lead the Soviets to place any limits on their use of nuclear weapons. The Soviets have always had strong reasons of self interest not only to be wary about using nuclear weapons at all, but to try, if they should feel the risks of using them in the course of a war are less than the risks of not using them, not to let the risks get completely out of hand. The absurd thing to suppose is that the Soviets would totally disregard the risk of disaster to themselves. Yet that may be a canonical assumption about Soviet attacks. In these scenarios the Soviets always seem to head massively for the most massive concentration of allied power, "Gallant fellows these soldiers," Admiral de Robeck said during the Gallipoli landing, "they always go for the thickest part of the fence."

It is one thing, however, to say that political and military leaders sometimes mindlessly head for the most suicidal course. It is quite another thing to suppose that one's adversary will always either do nothing or mindlessly attack in a way that will do himself the most harm. And still another thing to recommend mindlessly suicidal behavior on our side, and to avoid preparing to accomplish our goals without killing ourselves. Basil Liddell-Hart, who liked to quote de Robeck on the landing at Gallipoli, said that:

> The common assumption that atomic power has cancelled out strategy is ill-founded and misleading. By carrying destructiveness to a 'suicidal' extreme, atomic power is stimulating and accelerating a reversion to the indirect methods that are the essence of strategy -- since they endow warfare with intelligent properties that raise it about the brute application of force. (Strategy, p. xix, 2nd ed., Praeger, New York, 1967)

Liddell-Hart was right about the need for intelligence, even if he overestimated the rate at which the West would "revert" to it. When strategists rely on mutual assured destruction, they assume intelligence has no influence whatsoever.

Attachment 2

April 18, 11985

AW to F. C. Ikle and A.W. Marshall:

Suggested additions to the outline on strategic and theater nuclear forces:

The following memo suggests some additional formulations at the places in Andy's outline where he has put my initials. And a few in addtion where I think they might be helpful.

1) Under "grand strategy" at the bullet "Failure assessed by late 70s":

> By the late 1970s it was clear that the grand strategy of the years since the Cuban Missile Crisis had failed. We had shifted to stressing the negotiation of agreements with the Russians to regulate the arms competition on the theory that the Soviets, like ourselves, were now ready to accept the military balance as it was at the time of the Crisis, but at lower levels of spending on both sides. In fact, this period began with the Cuban Missile Crisis when we had frustrated the Soviet attempt to introduce IRBMs, MRBMS and fighter bombers in Cuba as a quick and covert way of changing the balance of forces on the two sides able to reach the homelands of the other. We had a clear advantage in such forces-- which we regarded as essential to compensate for our disadvantage in the European theater for defending US and Allied interests. We said we would maintain the advantage. However, by the end of the period the Soviets had more than wiped out the advantage in forces able to reach the other's homeland and had further improved their advantage in the European and other local theaters. Moreover, they had made great relative improvements in the quality of their equipment.
>
> Though the failure of the post-Missile Crisis strategy was clear enough to generate widespread public support for an increased effort in national defense, the nature and extent of the failure is still not clear in the

public debate. In particular, it is not understood that the kind of arms regulation that was sought during this period played a key role in the worsening of the balance. For several reasons:

a) This sort of arms control was premised on the Mutual Assured Destruction Doctrine which made any apparent US advantage of little importance and any Soviet advantage supposedly harmless.

b) MAD therefore predisposed the US not to react to Soviet unilateral advances and this encouraged Soviet quantitative and qualitative improvements by making them more effective and/or less costly.

c) MAD and MAD-based arms control has a specific bias against innovation. It presumes without question that qualitative improvements, say in nuclear warheads, are bad and their inhibition by an agreement such as a Comprehensive Test Ban, good even though improved warheads can be made safer against accidents as with the use of insensitive explosives, or more secure against unauthorized use as with the exploitation of micro-electronics of increasingly sophisticated Permissive Action Links or more confined in the unintended damage they might do to the local or global environment as in the case of deep Earth Penetrating Weapons. US bias against innovation encouraged the Russians to outdo us in the number of new systems they introduced.

In short, while the sort of arms control we were seeking was premised on the notion that the US and the SU would together stop an arms race, we stopped while we encouraged the Russians to go forward.

2) The following is relevant for the passages marked on page two under "Strategic and theater nuclear forces play many roles", and also the passage marked on page three under "Continue extended deterrence":

The main purpose of our nuclear forces, both those based in the theater and under the control of theater commanders and those based outside the theater, is to deter Soviet nuclear and chemical attack on our allies, on American forces, or on the United States. They are also a deterrent to the use of overwhelming conventional force. Moreover, while deterrence of attack on the United States directly is obviously fundamental, deterring attack on allies is not something added to the initial purpose of our nuclear forces, as the term "extended deterrence" suggests. The initial purpose of

our nuclear forces, which were then only strategic forces, was the deterrence or defense of our allies.

The distinction between strategic and theater nuclear forces is in good part arbitrary. It was related especially to the characteristic limitations of each sort of force at the time they came into being. Though now the distinction is enshrined in the organization of the bureaucracy, it is important to recognize that the difference in performance characteristics in many essentials is erroding. Long-range strategic forces are gaining in accuracy and therefore are more easily used for limited goals-- among the most important, support of the theater battle. And the direction of technology is also making theater forces both more subject to long-range nuclear and nonnuclear attack and more capable of carrying out long-range strikes which stay a safer distance away from enemy attack and are yet capable of penetrating very deeply to the source and support of such attacks. In the case of both intercontinental and theater forces, midcourse and terminal guidance will increasingly confer on these forces the possibility of movement and hence reduced vulnerability without loss of accuracy and effectiveness.

The deterrence role has several major implications. First, and most familiar, it puts a premium on the ability to survive plausible attacks. Second, and too little emphasized during the years in which MAD doctrine dominated Western strategic thought, it means having a credibly non-suicidal response if we do survive an attack. And third, it means having the ability to sustain our deterrent force during a crisis or during an extended non-nuclear conflict so that we are never in a position of having to "use it or lose it". The second and third points are related. If "using it" means taking a suicidal course, "losing it" will seem the better alternative. We want to avoid the choice between suicide and surrender that has haunted our presidents since the 1950s.

Maintaining a deterrence force that will be credible to ourselves and our allies, as well as to our enemies, means having options which we could sensibly implement if deterrence should fail. Our nuclear forces must protect our allies in situations where the US itself is not directly threatened. To be credible in such circumstances they must provide options that are militarily effective while minimizing collateral damage. This is plain when we have to use nuclear weapons on Allied territory. But we must expect at least an equal Soviet nuclear response to any US nuclear attack on Soviet territory. We have therefore a self-interest in avoiding

unnecessary damage in the Warsaw Pact too. In addition, of course, we have a moral imperative to avoid killing innocents where possible.

Our nuclear forces also have a key role in deterring a major Soviet conventional attack on NATO. They can do this principally through forcing the Soviets to act under the shadow of our nuclear force, that is, to deploy their conventional forces as if they were "nuclear scared" and so compelled to move major headquarters and mobile missiles frequently and compelled to avoid concentrating force. The possibility that the Soviets may raise the ante to the nuclear level will force NATO to operate in a similarly "nuclear scared" way. The possibility that NATO may use nuclear weapons first if they are losing conventionally and the Soviets are vulnerable to nuclear attack, introduces large uncertainties in their calculations and constrains the operation of their conventional forces.

But any use of NATO forces first depends not only on NATO's conventional inadequacies and Soviet vulnerabilities to nuclear attack, but on the possibility of NATO using nuclear forces in a way that will be both militarily effective and restrained in terms of the collateral harm NATO's forces would do, and in turn invite. The promise of first use can fade to an obvious bluff. The Soviets' improved capability for enduring during a conventional and nuclear war and for keeping their forces both alive and under control and capable of administering precise, discriminate strikes, only emphasizes the need for effective and discriminate NATO counterstrikes. Some European strategists, like Pierre Gallois, who were pioneer advocates of threats to strike Soviet cities in response to Soviet attack, now recognize that an improved Soviet capability for selective attack makes such counter-city threats incredible.

Finally, the growth of a selective nuclear capability on both sides will sharply constrain the ability of nuclear weapons to make up for conventional weakness. At the same time, the possibilities of sharp improvements in conventional forces will make it less necessary.

3) Suggestions for an addition to the passage on Recommendations:

a) Procurement and plans for strategic and theater nuclear forces should recognize the diminishing utility of forces that are not credibly usable. They should emphasize

improving our ability to use forces flexibly, effectively, and discriminately. The dual-criterion requiring both military effectiveness and discriminateness is primary.

b) Take the measures necessary for our military force and its Command, Control, Communications, and Intelligence to last during a crisis or extended non-nuclear war or nuclear war fought selectively. This is essential if we are to escape pressures for suicidal escalation or surrender.

c) Drive home to the public and especially to our allies that nuclear weapons are no substitute for thinking. Nor a replacement for a serious allied effort to improve conventional forces.

d) Stress that new technologies can be stabilizing and that freezing our technology is destabilizing since it stops improvements in safety, security, and discriminateness. Stress also that it prevents improvements in effectiveness at a given budget and therefore is costly.

e) Look for arms agreements that will assist us in developing safer, more secure, and more discriminately effective forces; and avoid future nuclear arms agreements that defeat their nominal purpose by stimulating the Soviets to gain a relative advantage or by reducing the credibility of our response by making it more suicidal. The bad agreements also prevent the reduction in our dependency on nuclear weapons by prohibiting or sharply constraining nuclear systems which are capable also of use with conventional warheads. Many proposed nuclear arms agreements do more collateral damage to NATO's conventional capability than they constrain nuclear capabilities since the requirements for effective conventional weapons in weight and precision are generally more arduous than for nuclear systems.

f) Don't separate rigidly the targets appropriate for theater nuclear systems and for deep-strike conventional systems. None of these can adquately replace the others. In particular, improved conventional systems, both for offense and defense, will reduce the occasions when we will have to use nuclear weapons, but they are unlikely to eliminate them.

# Western Preferred Huge Soviet and US Attacks

4/21/85

Attacks can be so huge they defeat their military purpose. One can have too much of a good thing. It may seem offhand that if a modest number of bombs directed at targets that urgently need to be eliminated or neutralized can do the trick, a great many more bombs directed at those targets and at additional targets will do the job even better. In fact, throughout the history of strategic forces, that assumption has always been questionable for our side; and the huge Soviet attacks we have assumed have often been self-defeating and mistakenly reassuring: a smaller Soviet attack could accomplish its purpose.

In the 1950s, for example, decision makers were misled about our ability to retaliate because they saw the results only of very large hypothetical Soviet attacks directed, for the most part, at population centers and industrial targets and, incidentally, at SAC bases. Such attacks gave SAC many hours of warning and it appeared that a substantial number of SAC bombers might get off to retaliate. However, as the Base Study and R 290 and demonstrated, smaller attacks designed to prevent SAC from taking off from bases in the continental US or to use overseas bases would have given SAC little useable warning; and SAC then was even less prepared to <u>use</u> warning effectively than our leaders recognized. That state of affairs was established in the extensive briefings and Air Force reviews of the Base study and of R-290 brought about a change in the state

of affairs. However, for a variety of reasons, the strategic literature continues to center on huge Soviet attacks even where they are, for varying reasons, self-defeating.

The canonical Soviet attacks direct large numbers of high yield weapons at targets in ways that do not affect the military outcome of an ongoing war.

1. These include targets like steel and other war-supporting industrial facilities that cannot affect the on-going war for many months or even a year or so.

2. Some of the targets that have been assumed to be attacked in the first wave are really relevant only for WWIV. These are the ones that are designed to hinder recovery after WWIII.

3. A large class of targets whose destruction might directly affect an ongoing conflict are so protected or can be so protected by concealment, mobility and hardness that they do not reward attack. Their destructin affects the environment permanently.

4. Sometimes a large class of potential targets, any of which might have <u>some</u> relevance to an on-going war, is greatly redundant. Only a small subset may need to be destroyed to have an effect.

Our own national target base grew with our stockpile. We were rich and, like the Arabs who suffer from the oil curse, we suffered, so far as thought was concerned from owning a large fund of high yield weapons. As our stockpile grew, we thought less about what destroying any of the targets meant for affecting a war. In fact, the larger the target set,

the less analysis seemed necessary for establishing any particular military effect and the more the picture of the war became one of pure chaos with no sequel. Targeteers tended to think of destroying targets because they were there. The public discussion of the TDI at any rate carries that flavor. Journalistic accounts of the SIOP talk of 40,000 targets. They assume the TDI is simply an inventory of possible targets out of which a modest subset might be selected, but include the targets at least for the major options.

Journalists picture our RISOP as a mirror image of such a SIOP. Huge and indiscriminate, it encompasses targets with no time urgency. In fact, the RISOP helps justify the SIOP. In particular, it seems to justify only the mammoth major option. There seems little point in preparing a small selected response to an enormous indiscriminate Soviet attack. Those who want to justify only a massive response, like those who think we should not respond at all, prefer to contemplate only a massive Soviet attack. Such a RISOP is therefore a Western preferred Soviet strategy.

Now nuclear winter offers a new and compelling motive for wanting to believe that the Soviets can and would only launch a huge attack even though it would be directed at all sorts of targets that have no relevance for the military purpose they might have in initiating a war. Such an attack would do not only enormous collateral damage locally, it might cause global damage directly affecting the Soviet Union. Nuclear winter theorists (and some earlier advocates of MAD) find it confirms their wish to believe the Soviets will never attack.

INTERCONTINENTAL LNOs AVOIDING SILOS IN US Z1

Rev. 4/21/85

1. An SU attack on a small sub-set of Army, Navy and Air Force bases in the U.S. could decisively change the correlation of forces in a war of combined arms in Europe. It could prevent the US from reinforcing west Europe's ground and air forces in any substantial way.

2. Moreover, such an attack could have this decisive military effect without producing any substantial global climatic change and with only a modest amount of unintended collateral harm locally.

3. This is so because the number of targets the Soviets need to destroy in order to effect a change in the "correlation of forces" in such a way is small--less than 50 points; all of these points can be destroyed without using high yield weapons or ground bursts since they are quite soft; and none is near large population centers or other high concentrations of fuel.

4. Besides strategic bomber and missiles bases, there are several thousand Army, Navy and Air Force bases in the Continental US that bear some possible connection to the conduct of "conventional war" of combined arms. But only a few of these can affect the war in the first month, a period that is critical for the reinforcement of Europe. The Military Airlift Command bases, the bases with tactical aircraft, and the bases

with Army or Marine ground force divisions that could be transported by air can affect the ground war in the first 30 days. They make up fewer than 50 targets. A substantial destruction of them would mean a fatal disruption for our scheduled reinforcement of Europe. A limited nuclear attack on them would have a decisive effect and would be easily distinguished from an all-out attack. In fact, the difference could be announced on the hotline.

5. Would the Soviets in prudence need also to attack silos in the US? Would attacking the silos in addition make things worse for them or better? A. If the US were prepared to make a suicidal response or none at all, no response would be likely, since US society would be essentially intact after a Soviet limited attack directed only at our means for reinforcing Europe. And an unrestrained US response would make a Soviet response against US cities likely (more likely, at any rate, than would a US restrained response which by hypothesis, we would not have prepared.)

B. A Soviet attack on silos in the US would not prevent our responding with SLBMs and it might make a US SLBM retaliation more likely than if silos had not been attacked and the Soviets had only directed their efforts at destroying our ability to reinforce Europe.

C. This would be especially true if the Soviet attack on ICBMs had been an indiscriminate one and they had done a great deal of collateral damage in any case. Even more if the attack on silos were part of a

general attack on industry and population centers.

6. In short, US nuclear response, all out, would be less likely if it were in response to a very small LNO against soft facilities critical for the reinforcement in Europe than if it were in response to an attack against targets numbered in thousands even if the targets were only ICBMs and SAC bases. And even more if the Soviet attack included population centers. And a Soviet LNO against a small set of bases critical for reinforcing Europe seems more plausible, or at least more in their interest, than a large attack numbered in many thousands of warheads which could not prevent our retaliation and might provoke it.

Draft: July 3, 1985

# BEYOND THE STRATEGY OF THE WORST

Albert Wohlstetter

France like the United States and the rest of NATO continues to cling to a strategy of bringing on the worst possible outcome in the event of a Soviet attack on Europe. But political and economic forces as well as technical changes move policy in the opposite direction. The Soviets will be able to endanger the autonomy of the West without committing suicide. The West will need less than suicidal responses to protect its autonomy. The policy of the worst may be once more the worst of policies.

The continuing revolution in microelectronics is drastically altering the technologies of offense and defense that will be available both to the Soviets and to the West. Large improvements in sensing, data processing and control make more feasible than ever the effective use of small nuclear weapons with confined effects; or non-nuclear weapons, to accomplish missions previously achievable only with large yield nuclear weapons or with huge, indiscriminate non-nuclear raids like the ones that destroyed Hamburg, Dresden and Tokyo. Moreover, essentially the same information technologies will make available an active defense that uses precise non-nuclear means to intercept substantial numbers of enemy nuclear warheads on their way to military targets located near cities -- and so to form an important part of the defense of key military forces. It will offer also a useful protection of population from collateral

damage. The instruments for maintaining control are also becoming both more effective and easier to protect because small packages of less expensive but reliable sensors and powerful data processors and communications can be easily multiplied and moved or otherwise made less vulnerable to attack.

The NATO countries (as Francois de Rose suggests), in accordance with their long tradition of innovation in science and technology and the agility native to an open society, can exploit the opportunities that these developments present. The Soviet Union with a culture much less congenial to innovation, is, in any case, doing everything it can to exploit them -- and not in interests of the West. These technological developments will reinforce the Soviet capacity to conduct a strategy of selective attack, for example, against the Federal Republic of Germany and the Low Countries, or against a weakly armed, but critical, flank of NATO, or in an area like the Persian Gulf on which France and the other major members of NATO have come critically to depend. Such a strategy of attack could leave the civil society of France and the other key powers of NATO essentially untouched and leave Western leaders with a maximum stake in exercising prudence. It is the most controllable and least risky strategy for the Soviets -- especially if NATO has no appropriate response. The threat of such a Soviet attack or its actual execution could endanger the autonomy of all those members of the NATO alliance who are not directly attacked.

Yet France and the United States and the other members of NATO have been obsessed with a policy of last resort. NATO has

been preoccupied with extreme contingencies and Soviet attacks so enormous and so unselectively destructive that the suicide of the West in response would be redundant. Its strategy has drifted increasingly towards dependence on an apocalyptic threat to initiate an indiscriminate and suicidal attack which it does not expect to be able to control. Worse, much of Alliance policy on research, development and deployment has deliberately avoided making NATO capable of exercising discrimination and control. And NATO's strategy for negotiating and construing bilateral agreements with the Soviets is based on the same premise. It also has been designed in the hope that any use of nuclear weapons would result in the indiscriminate destruction of the Soviets as well as the West. But it has succeeded only in hampering improvements in NATO's own ability to control destruction.

A few illustrations, some familiar and some less familiar.

(1) The Carter Administration cancelled the program to deploy neutron weapons in Europe, even though European NATO had agreed reluctantly to accept them and despite the fact that they would have reduced the blast effects and hence the collateral damage done by NATO to its own civil society in stopping a massive Soviet armored invasion.

(2) High level figures on both sides of the Atlantic agreed to cancellation in 1979 of earth penetrating warheads for the Pershing II even though such warheads had gone through full scale engineering and development and would have made it more feasible to destroy hard and semi-hard fixed military targets with substantially confined effects.

(3) AIRS, the advanced inertial guidance system used in the ICBMs the U.S. is presently planning to deploy, was delayed in its development by the opposition of supporters of Mutual Assured Destruction (MAD) policy in the American Senate even though, and indeed because, it greatly improved the precision of inertial systems and so made them capable of destroying military targets with smaller collateral effects.

(4) More important, these supporters of MAD succeeded in actually stopping a half dozen programs for research and development on terminally guided ballistic missiles even though such guidance can make feasible the effective destruction of very hard military targets with warheads of very low yields and confined collateral effects, and even though such ICBMs could be much smaller, cheaper and more easily moved and otherwise protected than any now programmed (such as the Midgetman) using only inertial guidance.

(5) The Mutual Assured Destruction dogma reinforced the inertia characteristic of large organizations in slowing the development of long-range cruise missiles with accuracies extreme enough to permit the use of non-nuclear warheads to destroy a variety of quite hard military targets.

(6) Arms agreements have had similar effects. The SALT I offense agreement and ABM Treaty -- which are most frequently referred to as the "jewels in the crown" of arms control by heads of state and the mass media -- were also based on the perverse dogma that the superpowers should have weapons capable only of destroying population, and none that could destroy the other

side's weapons on the ground or on their way to target. The ABM Treaty severely restricted not only the defense of cities but even -- contrary to the dogma -- the defense of the offense ICBM silos and national command and control. Moreover, the SALT I ABM Treaty tried to proscribe the future development of improved small, mobile sensors and mobile interceptors and any new means which would have offered an increasingly effective protection of ICBM silos, command centers and other key military forces. The SALT I Offense Agreement professed to replace such active defense of U.S. ICBM silos by committing the Soviets not to deploy any additional missiles with warheads capable of destroying our ICBM silos. This was supposed to be accomplished by prohibiting any increase in the number of silos for "heavy missiles". But the Soviets squeezed many more warheads than our negotiators thought possible - though they had been warned - into both "heavy" and "light" missiles and drastically improved the precision of their warheads. As a result they ended up with nearly <u>six</u> times more warheads capable of destroying ICBM silos than our negotiators expected!

(7) Supporters of MAD have opposed any major effort by the United States to improve the protection of its wartime command and control on the ground that this would be a severe "provocation" to the Soviet Union.[1] Meanwhile, the Soviets have spent many tens of billions of dollars over many years to elaborate a formidably effective, mutually reinforcing network of measures for protecting political and military command and control that include deception, concealment, mobility in the air, on the ground and below ground, dispersal, deep underground

structures and active defense. They have designed their system to survive a nuclear war, not just in peacetime. Yet no one has said that their program is excessively provocative.

Let us be clear. The issue is not, as supporters of MAD pretend and as even some contributors to this debate in Commentaire suggest, between those on the one hand who predict that a large scale exchange of nuclear weapons could take place neatly, cleanly, and with perfect discrimination and control (a war "without a smudge" as Stanley Hoffmann calls it) and on the other hand those who claim that any significant use of nuclear weapons will lead almost inevitably to exhausting the stockpiles of all the powers and the end of civilization on both sides -- and possibly even the human species. There are some who hold the latter view if somewhat evasively[2]. I know of no one who holds the former view. I have said many times that no substantial conflict, nuclear or non-nuclear, is likely to be neat and perfectly controlled. That even if we could confine the destruction - which we cannot - to military targets, the slaughter of soldiers would be disaster enough. And that there will always be a very substantial chance that violence would climb disastrously beyond any expected bounds. Short of making such statements while attached to a polygraph-machine, I cannot imagine how I can persuade doubters.

The genuine issue lies between those who would try to improve both our ability to be effective against military targets and our ability to confine the destruction as much as possible to military targets rather than to civil society and to keep

destruction under gross control, and those who, while they profess merely to be predicting the loss of control, actually attempt to arrange it. Both sorts of strategy take deterrence as primary. One holds that the West can deter Soviet attack most effectively by improving our ability and our will actually to respond in a non-suicidal way if deterrence fails. The other view rests deterrence on assuring that if deterrence fails, any response we could make to an attack would lead uncontrollably to the apocalypse. It implies therefore that there should be no actual response - early or late - and proponents of this view sometimes make this explicit by calling their view "Deterrence Only". "Deterrence Only" means giving up if deterrence fails.

Raymond Aron's posthumous contribution to this debate is characteristically perceptive[3]. He saw that those who talk about the uncontrollability of nuclear war assume what they are trying to prove. I would add, that these dogmatists present no substantial evidence for what they predict about Soviet controls and, for the West, they advance a reckless prescription for policy under the guise of a description of the physical facts of nuclear war. Aron recognized also that dogmatists about the uncontrollable and suicidal character of nuclear weapons tend also to be the doctrinaires of capitulation.

The American Bishops (whose view Stanley Hoffmann asserts, is "the only possible view") present at least four views. They are both for and against threatening the destruction of populations and for and against our actual use of nuclear weapons if our threats do not deter Soviet attack. But they have been quite unambiguously opposed to any improvements in our ability to use

weapons precisely and discriminately and to keep destruction under control[4]. Stanley Hoffmann himself, after affirming the impossibility of limiting the use of nuclear weapons, nonetheless says "if the adversary uses nuclear weapons first, wisdom and morality require limitation". Then, swinging once more to the other side, he suggests that our inability to limit the disaster is a good thing, because it makes less likely that we would use nuclear weapons, and therefore contributes to deterrence. This confuses our ability to restrain destruction with our adversary's, who -- Hoffman explicitly and inconsistently recognizes -- might make a limited nuclear attack presenting us with a dilemma for decision. All such vacillations are only a symptom of a failure to face the genuine issue, whether to improve our ability to keep destruction under control, or to worsen it. Hoffmann, like other supporters of MAD, opposes such improvements. Like them, he justifies this perverse policy by referring vaguely to the supposed exponential "arms race" between the two superpowers stemming from their attempt (or anyone's attempt) to acquire a capability to destroy military targets rather than cities. He persists in clinging to this banal dogma long after its logical and empirical underpinnings have been removed[5].

While there are naturally many differences remaining, I think it fair to say that most of the contributors to the debate in Commentaire agree that the inadequacy of a suicidal strategy of last resort has become increasingly transparent as a way of deterring any assault short of one so huge and unselective as to

leave little or no stake in our exercising prudence. As for the moral dimension Pierre Hassner states very eloquently the main point, "Were-there but one chance in a thousand of doing so, it would be absurd from the point of view of deterrence credibility, and criminal from the point of view of human lives to spare, not to do it. As with the aim of peace according to Kant, it suffices that one cannot prove that all control, all selectivity, and all limitation are impossible for there to be a duty to try to foresee the means and perfect them.[6]" I would underline that we are under an obligation now, in time of peace, to improve the means of keeping destruction under control. Our obligations to try to contain the disaster do not begin when deterrence fails. Nor is there a contradiction between the dictates of morality and the dictates of prudence. The notion that NATO or any of the major powers in NATO would be likely to initiate a preventive nuclear war against the Warsaw Pact or the Soviet Union, if it could be done without committing suicide, is a fantasy treated solemnly in mathematical "models" of strategic stability and in the rhetoric of Western politicians under the unconscious influence of such models. It should not be taken seriously. NATO will have difficulty enough making the decision to respond to a selective nuclear attack or an overwhelming conventional assault, not to speak of actually initiating an attack that did not answer an actual invasion.

On the other hand, being able to launch only an uncontrollably destructive and self-destructive attack raises serious questions of prudence as well as morality. The phrase, "Dissuasion Pure" in the title of my critique in Commentaire

referred to the policy of threatening to use, but resolving never actually to use, nuclear weapons. It is the policy called by its proponents in the strategic debate "Deterrence Only". But it is an essential part of my critique that to keep dissuasion pure is to undermine its credibility and therefore its essence. "Dissuasion Pure" purifies a dissuasive force by removing any contaminating likelihood that it will actually be used. It refines dissuasion out of existence. More like "dehydrated water" than the real liquid. On the other hand devising appropriate responses to plausible Soviet attacks which themselves are designed to achieve some military purpose requires more concrete and detailed considerations: The kinds of contingencies in which the Soviets might be motivated to use nuclear weapons, what objectives they might hope to achieve, and with what confidence, what sorts of NATO offense and defense would be suited to deprive the Soviets of the necessary confidence in achieving their objectives, and so on. I examine such partly independent and partly interlocking Soviet and Western choices in greater detail elsewhere[7].

Even the most thoughtful French commentators on my "Critique de la Dissuasion Pure" describe my view as one of "optimistic voluntarism". This mouth-filling description carries with it vague associations with Sartre and Existentialism, but they mean it at least -- and quite possibly at most -- to distinguish my view from the one that dominates the French (and the British, and the American) debate on nuclear war - namely, that any use of nuclear weapons will lead uncontrollably to the launching of

essentially all of them and to the end of Europe if not the end of civilization and even the species.

I do believe that the Soviets might use nuclear weapons in a confined way to overcome decisively some unanticipated obstacle that had cropped up in the course of their conventional invasion of a territory critical to the West; and that Western leaders might defeat such an invasion without destroying Europe much less the world. It is a measure of the depth and breadth of pessimism in France (and among the elites in all the democracies) that so qualified an assertion, (one that only suggests that it is conceivable that our decisions in the course of a conflict could avoid total cataclysm and that we should try to do so) is labelled "optimism".

Nonetheless, the dominant French - and Western - pessimism is by no means as black as it may seem. Understood correctly, it shines almost as brightly as Candide's idea that this is the best of all possible worlds -- after all. For what it conceals is the belief - or an evidently urgent wish - that the Soviets could never initiate a significant use of nuclear weapons on a scale and in a way that would be less than totally disastrous to us (and possibly even to them). That is supposed to follow from the nature of nuclear weapons, a fact of physics rather than the result of some French or Western choice of policy.

This notion that the Soviets would only launch an attack on Europe calculated to destroy Europe rather than to take it over as an important prize (or that they would see mutual disaster implicit in their merest possible use of nuclear weapons) needs a little spelling out to make it plausible to the non-initiate. It

presupposes in the first place that the Soviets would have to use nuclear weapons in enormous quantities if they use them at all; and so indiscriminately that even if they were aiming at military targets they would destroy French civil society in the opening attack. Then, if the French nuclear force survived, French leaders might use it in retaliation in a kind of "dying sting" that killed Soviet civilians in proportionately smaller numbers but no less indiscriminately. By assumption such a French response would serve no purpose; but neither would it bring on any extra disaster to France since it would be a dying sting. So it seems not entirely implausible that French leaders would then perform this "acte gratuit". And understanding that, the Soviets would never start the whole process. Some words from the notebooks of F. H. Bradley, the British idealist philosopher, near the start of this century, make the appropriate changes in Voltaire: "This is the best of all possible worlds; and everything in it is a necessary evil."

But what if France and its civilization had survived a Soviet nuclear strike? The Soviets do not need to make that strike destroy everything in order to make a decisive difference in a conventional conflict. After all, their conventional forces today compare rather favorably with those of the West and specifically with those of the French. If their conventional forces ran into trouble they would not need to eliminate a great many targets with nuclear weapons to make up for an unexpected setback - or to forestall a suddenly anticipated disastrous conventional defeat. Nuclear weapons would contribute to their

victory, as economists say, "at the margin". They would form the increment making a decisive difference in the correlation of forces. Moreover, the individual weapons would not have to be indiscriminately destructive. West Europe has no very hard targets, no super hard silos, nor even super hard command centers. The Soviets have forces quite accurate enough to be effective against the few major airfields, missile sites, nuclear and non-nuclear munitions stocks and other facilities such as radar sites which could turn the tide of battle; and accurate enough to destroy these targets without destroying France.

Then what? A French response against Soviet cities would then invite the destruction of France rather than follow it. Much less plausible than a "dying sting". That explains the French (and British and American) reluctance to consider a Soviet attack which would leave the French (or the British or the United States) a very substantial stake in not responding. Horrors! The prospect that a Soviet attack might be less than totally horrible appears then itself to be horrible. But isn't there something sick about clinging to a hope that any attack -- if it comes -- would leave us with no choice?

Gen. Pierre-Marie Gallois observes that France started, when she had only a small number of weapons, by aiming its strategic force at cities. Now that France will have a very large number of nuclear weapons and can take advantage of the revolution in precision, and now that it is clear that the Soviets will increasingly be able to use nuclear weapons in a precise and selective way that can serve (rather than defeat) its military purpose in invading, Gen. Gallois believes that it would be wise

for France to change its initial policy and consider a precise and less suicidal response[7]. Here I believe he is quite right. He is also aware of the continuing advances in precision that will permit the use of conventional weapons for an increasing variety of strategic objectives deep within the homeland of an adversary, but I feel he may not take their strategic importance adequately into account. Both Marshal Ogarkov and Gen. Curtis LeMay (who is generally thought of as a proponent of massive strategic bombardment) have recognized recently the large mplications of the radical improvements in precision that will permit the precise delivery of conventional weapons at very extended ranges.[8] My observations on this point, like those of Ogarkov and LeMay, do not imply that non-nuclear weapons can completely replace nuclear weapons. (Gen. Gallois seems to misunderstand my views here.) However, as Gen. LeMay has observed, it can raise the threshold beyond which either side might feel it necessary to resort to nuclear force.

Nonetheless, Gen. Gallois deserves great credit for recognizing that, whatever the merits of a suicidal threat to destroy Soviet cities in a period when such a response had some plausibility as a "dying sting" in response to a huge Soviet attack that in any case destroyed French civil society, it would be absurd as a response to a precisely delivered attack on key French military forces that left French cities essentially intact. Soviet military planners have recognized the advantage of such attacks[10]. Soviet military forces are becoming increasingly capable of executing them.

The "dying sting", as Gen. Gallois has always understood, never had anything to recommend it as a response to an attack confined to the territory of an ally, even a vital ally. And France has had critically important (and growing) interests outside its own territorial boundaries. But the issue of the credibility and persuasiveness of threats of Mutual Assured Destruction have always been central. It has been a void at the very center of MAD doctrine and of NATO declaratory policy since shortly after the Cuban Missile Crisis.

In the last two or three years theorists of a nuclear winter have come up with a new physical phenomenon and a new analysis that appears to fill the void. They claim that any Soviet attack substantial enough to have a significant military effect would send so much smoke from burning cities into the troposphere and loft even higher into the stratosphere so much fine submicron dust from nuclear weapons exploding near the surface of underground targets that the heat and light from the sun would be blocked and temperatures would fall disastrously throughout the Northern hemisphere[11]. The direct rebound from the Soviet's own weapons would then endanger life in the Soviet Union even if NATO did not respond. In that case, NATO leaders would not have to face the terrible decision. No need for NATO to "sting". The Soviets would have stung themselves. If the scale of a Soviet first strike had to be large enough to cross the "threshold" of nuclear winter, they could in the words of Dr. Stephen Schneider of the National Center for Atmospheric Research "win for two weeks only, until the cloud of nuclear smoke or dust comes back over."[12]

But the newly discovered uncertain potential that huge nuclear attacks directed extensively at cities may have for causing a nuclear winter does not fill the void in MAD doctrine. Instead, it makes more clearly visible the preposterous assumptions about Soviet attacks and Western responses that are at the heart of the doctrine of Mutual Assured Destruction. A close examination of the "scenarios" that form the basis for nuclear winter calculations demonstrate this quite apart from all the uncertainties about the physical phenomena connected with nuclear winter such as the density of fuel in various locations, how much of it would burn and send particles of smoke and dust into the atmosphere, how the clouds of dust and smoke would be transported vertically and horizontally, etc., etc. Such scenarios invariably resolve uncertainties as to how the Soviets might use nuclear weapons and how we would and should respond by assuming that such decisions would be made without any regard for avoiding self-destruction. In fact, in these scenarios, the two sides appear to take part in an intricate collaboration to assure that their nuclear weapons will have little relevant military effect, but do enormous collateral damage to civil society both locally and globally. The nuclear winter scenarios carry this to a new extreme. In the international study of nuclear winter and other environmental consequences of nuclear war sponsored by the Royal Swedish Academy, the two superpowers are presumed to explode 15 nuclear weapons with a total yield of 10 megatons over each one of such cities as Hong Kong, Bombay, Calcutta, New Delhi, Madras, Dacca, Jakarta, Manilla and Sydney. That would

generate a great deal of smoke, but it is not clear what it is supposed to do to further the objectives of either side in a military campaign.

I have sometimes been offered as the prime example of the rational model of decision by theorists of bureaucratic politics. Nonetheless, I have always been very conscious that political and military leaders and most large bureaucratic organizations often act mindlessly. Indeed a good deal of my professional career has been motivated and justified by that fact. But theorists of bureaucracy tend not merely to describe the inertia of bureaucracy. They prescribe it. There is a kind of naive cynicism in supposing that we can do nothing to avoid self-destructive courses of action. And it is worse than naive to suppose that the Soviets, if they attacked, would never use nuclear weapons except in a way that would lead to their own destruction. As for the West, such an image of the consequences of any nuclear response to a Soviet nuclear attack leads more naturally to capitulation than to rash acts. Indeed bureacracies, though frequently irrational, are not always -- or often -- irrationally daring.

In any case, such lurid views of a nuclear exchange shape the course of much policy discussion in ways that are not widely understood. And the Soviets make their own contribution to Western debate by encouraging the notion that if they attack, they would destroy Western society even it they destroyed themselves. This has been illustrated in the discussion of the Strategic Defense Initiative. Hans Bethe, Richard Garwin, Carl Sagan and other members of the Union of Concerned Scientists

recently prophesied that if the United States were to attempt any "serious" protection of its cities, a "likely response" by the Soviet Union would be "to target its missiles so as to maximize damage to the U.S. population" even though that would "pose serious danger of triggering a climatic catastrophe (the nuclear winter phenomenon)."[13]

I have observed that if the Soviets were really so passionately dedicated to destroying harmless bystanders in the West rather than military obstacles which stood in the way of their expanding their control over Eurasia, they could evade our ballistic missile defense entirely by exploding their warheads over their own cities in large enough numbers to bring on a nuclear winter. And, as if to demonstrate to Western advocates of MAD that they cannot beat Soviet efforts to make protection against Soviet attacks seem hopeless, Izvestia recently printed a piece by Valentin Falin (former ambassador to West Germany) saying that the Soviets might very well counter our anti-ballistic missile defense in just that way: "No ABM options," Falin wrote ominously on December 14, 1984, "will change the fact that a precisely known quantity of nuclear devices detonated simultaneously on one's own territory would have irreversible global consequences (emphasis added)." If the members of the Politboro are so completely indifferent to their own fate and that of the nomenklatura, not to speak of the future of "communism", then no form of deterrence nor arms control are likely to be of any help to the West.

However, this preoccupation with the most catastropic sort

of attack is very widespread in the West. Some of the technologists who advocate President Reagan's Strategic Defense Initiative have focused on attacks no less preposterous than those posited by the opponents. They have considered Soviet attacks involving as many as 30,000 strategic ballistic missile warheads (many times the present total) all directed at cities in an all-out opening "bolt out of the blue" attack. And they have concentrated on the farfetched objective of intercepting all of the warheads in such an absurd attack.

Against the much more likely Soviet attacks in which they might use ballistic missiles to achieve a high confidence of destroying military obstacles (either in the United States or in Europe) to their invasion of Europe, a more modest ballistic missile defense could form an effective component of a robust NATO posture that included an offense capable of responding selectively against military targets in the Warsaw Pact, including the Soviet Union. Such a defense of Western military facilities (which are always redundant in a way that population is not) could deprive the Soviets of the confidence they may require that they could destroy a large enough proportion of the military obstacles that stand in their way. And so could help deter Soviet attack.

I agree entirely with Francois de Rose that Europeans and Americans should give much more attention to the prospect for a ballistic missile defense of Western Europe. The Soviets will have ballistic missiles capable of delivering conventional as well as nuclear warheads effectively. Ballistic missile attacks with non-nuclear warheads could be an important element of the

initial wave in a Soviet invasion of Western Europe. They could exploit the fact that key elements in NATO's conventional force posture for many political reasons are less effectively dispersed and protected than the Warsaw Pact forces. Even for getting a robust conventional posture in West Europe, we should consider urgently the early deployment of ballistic missile defense there. Such a defense is not proscribed by the ABM Treaty which is directed at restricting the defense against strategic ballistic missiles. The Soviets, moreover, are in the process of developing, testing and deploying such a defense. (Raymond Garthoff has said that the Soviets have already tested their SA-12 missile against their Scaleboard, an offense missile of roughly the same range as the Pershing I.)

Moreover, contrary to statements made by Jonathan Alford of the IISS, Lawrence Freedman of the University of London, and many other British supporters of MAD, the job of defending against ballistic missiles that threaten Western Europe, such as the SS-22, SS-23, and SS-20, is much easier than the job of defending the United States against ICBMs. This runs counter also to the common impression that because tactical ballistic missiles take less time to get from their launch point to target, they would be harder to intercept. However, such missiles reenter the atmosphere at much slower speeds than ICBMs. They spend a larger proportion of their time on trajectory in the atmosphere, in the boost phase as well as after reentry. There is more time available for intercepting them. They have more difficulty in deploying persuasive decoys for several reasons. Because these

missiles are launched from much closer by, even sensors on an airborne as distinct from a spaceborne platform should be able to track them from the boost phase on. In fact the Airborne Optical System, which would be a kind of successor to the AWACs Airborne Warning and Control Aircraft recently deployed in NATO, would be a particularly promising and early component of a layered preferential defense of theater targets.

For that very reason, we may expect that those who are recklessly committed to a strategy of the worst, are likely to oppose the Airborne Optical System in particular and ballistic missile defense in general, in the European theater. Political leaders, fearful of rocking the boat, are likely to do the same.

It is a symptom of the disease in the West that policy decisions critical for alliance defense are so largely shaped by the desire to quiet domestic dissent no matter how irrational, and to avoid potential disagreements among the allies even at the expense of surrendering critically needed measures for Alliance defense. Arms control, in particular, has become a means for "managing" (that is trying to appease) the utopian apocalyptic anti-nuclear movements. At the same time the apocalyptic image of war spread by proponents of agreements designed to assure mutual destruction only assures new waves of passionate opposition.

The defects of the strategy of the worst are most obvious in connection with the problem of defending the vital interests of France that extend beyond its territorial borders. For France, as for the United States and the other major members of NATO, threats to these interests are the most plausible critical

dangers to its autonomy. The U.S. strategic force was designed from the start to protect such interests. It therefore was directed from the first at retarding the Soviet advance into Europe, at destroying factories capable of supporting an ongoing Soviet combined arms attack on Europe and not simply at blunting Soviet attacks on the United States, and certainly not simply at destroying Soviet cities. Gen. Gallois is right that the French force from its beginning was directed at cities. That was not the case however for the U.S. strategic force. It is worth recalling the actual history, since it is now shrouded in myths.

NATO started with the idea that if the Soviet Union attacked Western Europe, the United States would respond against the Soviet Union with "strategic bombing promptly by all means possible with all types of weapons without exception".[14] That was central in the "Strategic Concept for the Integrated Defense of the North Atlantic Area" which was agreed to in between the signing of the NATO Treaty and its ratification. The phrase, "all types of weapons without exception", of course, was meant to include most plainly, nuclear weapons. The Military Committee dropped the explicit mention of the A-bomb, despite the desire of the Belgiums, Italians and Dutch to make it explicit, only because of the domestic political sensitivities of the Scandinavians.[15]

Nonetheless, all of NATO's founders had made it quite clear. They depended on the then new American technology of nuclear weapons as a principal way to deter or to respond to a Soviet attack on Western Europe. Specifically they were relying on the

American strategic offense nuclear force to compensate for the current preponderance of Soviet conventional military force and for an intrinsic geographical disadvantage - the fact that Western Europe was much further from its major ally than it was from its principal potential enemy.

Joe 1, the first Soviet nuclear explosion, also occurred in between the signing of the Treaty and its ratification and even before the Military Committee developed the NATO Strategic Concept. The prospect that the Soviets would develop a large stock of nuclear weapons of their own, as Dean Acheson noted even then, in 1949, made a continuing heavy reliance on nuclear weapons to deter a Soviet conventional invasion questionable[16]. But it only underlined the importance of an American nuclear guarantee embodied in the Treaty. Credible promises of a nuclear response would be needed from then on, to deter Soviet nuclear attack, at the least against any NATO country that had no nuclear weapons. As the Soviet stockpile grew, the United States and NATO made it evident that the Strategic Concept applied also to deterring or answering a Soviet nuclear attack on one or more of the sovereign countries in Western Europe.

Dean Acheson's thoughtful memorandum, dictated shortly before the ratification of the NATO Treaty, suggests both the long history of our dependence on nuclear weapons and the early recognition by the founders of NATO that a continued predominant "reliance upon the atomic defensive shield" was likely to "prevent progress toward the substitutes...". He asked "Is it true that within 5-10 years the U.S.S.R. may be expected to have a stockpile of atomic weapons of sufficient size effectively to

neutralize the present advantage which we possess and might this time be shortened if the U.S.S.R. developed a thermonuclear reaction? ... If this is so, would we be better off addressing ourselves now to finding substitutes for the defensive shield our atomic weapons are now giving our allies?" If not in 1949, then perhaps in 1985 we should think about how to supplement the atomic shield.

On the day after Acheson dictated his memorandum, the State Department's Atomic Energy Files record a conversation with Francois de Rose who was just about to begin his tour of duty as the Quai d'Orsay's expert on atomic energy matters[17]. Acheson and de Rose illustrate the long history both of our policy and of the sensible recognition by its founders of the need continually to adapt it to change. NATO's founders saw very early that, as Francois de Rose says, "to maintain the edifice" of the Western Alliance we would have "to replace some of the pillars and substitute new materials".

Several observations are in order. First, on the phrase, "extended deterrence", which unfortunately became common in the strategic debate about 25 years ago. It has always been misleading. The phrase suggests that the original purpose of the U.S. strategic force was to deter an attack on U.S. cities. And that the notion of extending its purpose to the defense of Europe was a later and quite doubtful stretching of the original idea. Not so. The Soviets are not likely to attack the United States in the hope of occypying it. They might attack American military forces in the United States or in Western Europe which stood in

the way of their invading Europe. (Just as the Japanese attacked the U.S. fleet in Pearl Harbor because it stood in the way of their expanding to the South.) The U.S. strategic force was intended from the outset to deter or defend against a Soviet invasion of Western Europe. It was intended to compensate for the Soviet advantage in the theater and the instability that advantage could mean. Discussions of stability among American strategists and European political elites in the last two decades or so - including most mathematical "models" of stability - are frequently trivial because they neglect this obvious fact. They contract or shrink the initial idea of deterrence to an artificial 2-person game between the superpowers.

Second, the NATO Strategic Concept, like the NATO Treaty, was intended to deter Soviet attack and thus prevent a war. However of in the event of a Soviet attack it was understood that SAC would actually use its nuclear weapons. There was no flim-flam about nuclear weapons serving only to deter nuclear war, never to fight it. "Deterrence Only" - the notion that the West should threaten the use of nuclear weapons, but never actually use them if the threat didn't work - received some official sanction as a declaratory policy in the United States rather recently - in the 1970s; and then with substantial confusion. It had already begun to dominate the views of political elites in Europe. But, when Robert McNamara, in the mid-1960s, introduced the idea of using threats of Mutual Assured Destruction, he also made clear that if deterrence failed the United States would use its strategic force not against cities but against Soviet military forces. He would actually use nuclear weapons. (He had

not yet come to "Deterrence Only".) But he would use them against military forces, not cities.

Moreover, Soviet strategic forces at that time were small in number and vulnerable and the U.S. counterattack against them could have been quite effective. (The small Soviet bomber force was unprotected and in a low state of readiness. Its few land-based Intercontinental Ballistic Missiles were unprotected by silos before 1965. Its missile launching submarines were mainly in port, and, when out of port, noisy and easily tracked, as has recently been revealed in connection with the Walker spy ring.)

But McNamara used the confused rhetoric of Mutual Assured Destruction. And rhetoric has its effect even on the rhetoricians. It is hard for our political leaders to keep single books straight. Double books may be impossible. The suicidal rhetoric of MAD encouraged American and other Western governments to strip themselves of defenses, and to neglect the powerful trends in the technologies of sensing, information and control which have increasingly made feasible both active defense and a selective and discriminating offense. Even more it encouraged Western leaders to ignore the significance of the fact that the Soviets were vastly increasing their power to make the West's unrestrained response to a Soviet selective attack an unthinkable disaster. At the same time the Soviets have been building a capability to execute attacks which might achieve important political military objectives and yet fall far short of causing the apocalypse. It would remain to us to bring on the apocalypse. Or surrender. Concentrating always on the worst

possible case of an attack that destroyed the civil society within the territorial bounds of each of the major countries in NATO, the West has tended to disarm itself for responding to the real dangers and especially those outside the immediate boundaries of the three nuclear powers.

The situation in NATO today in many respects resembles the one Colonel DeGaulle tried unsuccessfully to warn the French General Staff about before World War II. The strategy of France, the General noted in his memoirs, corresponded to the moral weakness of the Fourth Republic. It was dominated by the concept of defending the fixed and continuous frontier of France. By proclaiming the French intention to keep its armies at the frontier, it was egging its enemy on to act against the weak states who were isolated by that strategy: the Saar, the Rhineland, Austria, Czechoslovakia, the Baltic States, and Poland, and, in the end, even Belgium. If war came the strategy was to fight as little as possible. In a way it combined the worst of two strategies. It involved extending guarantees to weak states who were depending on France -- and on whom France ultimately depended -- and, at the same time France was following a course of action that indicated that the guarantees would not be fulfilled.

It is unfortunate that not only France and General DeGaulle, but the United States and the Alliance as a whole, have so far ignored the Colonel's advice.

Footnotes

[1] See, for example John Steinbruner, "Nuclear Decapitation," Foreign Policy, Winter 1981-82. Pg. 28.

[2] See Desmond Ball, "Can Nuclear War Be Controlled?", Adelphi Paper #169, London IISS, 1981.

[3] "Suicide, Capitulation ou Riposte Limitèe?", Commentaire, Paris, Spring 1984, p. 61.

[4] John Cardinal Krol, hearings before the Committee on Foreign Relations, U.S. Senate, 96th Congress, First Session, September 14, 1979; and "The Churches and Nuclear War: in Origl. 9, No. 15, September 27, 1979.

[5] I have dealt with the theory of an exponential strategic arms race and detailed its fatal empirical as well as logical flaws in a series of articles: "Is There a Strategic Arms Race?", Summer 1974; "Rivals But No Race", Fall 1974; and "Optimal Ways to Confuse Ourselves", Fall 1975 in Foreign Policy, "Racing Forwrd or Ambling Back?" Survey, London, Summer/Autumn 1976.

[6] Pierre Hassner, "Critique de la strategie pure", Commentaire, No. 24, Winter 1983-84, p. 63.

[7] "Between an Unfree World and None: Increasing Our Choices", Foreign Affairs, July 1985

[8] Pierre-Marie Gallois, "Eloge de la dissuasion dure", Commentaire, No. 24, pp. 43-46.

[9] For Ogarkov see interview in Krasnaya Zvesda, May 9, 1984; for General LeMay see Aviation Week and Space Technology, May 28, 1984, p. 11.

[10] Albert Wohlstetter, "Between an Unfree World and None: Increasing Our Choices", op cit; and Notra Trulock III, Soviet Perspectives on Limited Nuclear Warfare, May 1985, to be published by the European American Institute for Security Research, Marina del Rey, California.

[11] Carl Sagan, The Cold and The Dark, New York, W. W. Norton & Company, 1984, p. 37.

[12] Ibid, p. 106.

[13] Hans Bethe, Richard Garwin, Carl Sagan, et al, Space-Based Missile Defense, Cambridge: Union of Concerned Scientists, 1984, p. 81.

[14] Rand Reports R244S, Selection of Strategic Base Systems, March 1953, and R266, Selection and use of Strategic Air Bases by A. Wohlstetter, F. Hoffman, R. J. Lutz and H. S. Rowen (April 1954) June 1962, especially pp. 15-21, Santa Monica: Rand Corporation

[15] "Memorandum by the Secretary of State [Acheson]", Dec. 20, 1949, in Foreign Relations, 1949, Vol. I, Atomic Energy, p.612.

[16] "Memorandum of Conversation, by the Deputy Director of the Office of European Affairs (MacArthur)", Dec. 3, 1949, Foreign Relations, 1949, Volume IV, North Atlantic Treaty Organization, pp 356-7.

[17] "Memorandum by the Secretary of State", op cit, p.613.

[18] Ibid.

Attachment 6

WALL STREET JOURNAL 7/17/85

# Arms Control That Could Work

By Albert Wohlstetter
And Brian Chow

The House has voted for a fiscal 1986 moratorium on U.S. testing of anti-satellite weapons (ASATs) against objects in space unless the Soviets resume their testing. The Senate version permits such tests. This week a conference committee will try to resolve this differences. The pious intricacies of Capitol Hill suggest the issue is to avoid militarizing the untouched heavens. But the U.S. and U.S.S.R. will use and have used space for 25 years to further their rival political and military ends. Over 70% of Soviet satellites are purely for military purposes. Many of the rest are for both military and civilian uses. In fact, even the House measure aims to encourage an agreement with the Soviets that would protect the many satellites that supply reconnaissance, warning, communications, navigation and guidance, and other critical information for the defense of the two superpowers and their allies. Can an agreement do that?

Some agreement with the Soviet Union conceivably could help the U.S. protect the functioning of key military satellites. But it will take a fresh approach. The standard sort of ASAT ban that is supposed to be a way of defending satellites would very likely end by preventing the U.S. from protecting them. Then many (not all) proponents of the treaty would ignore its disastrous failure to accomplish its purpose of helping satellites survive. They would instead celebrate the survival of the treaty. If that seems cynical, it shouldn't. That's essentially the story of the offense and defense controls imposed by SALT I as a way of ensuring the second-strike capability of U.S. intercontinental ballistic missiles. These controls ended up ensuring that the U.S. could not defend Minuteman silos and that the Soviets would be able to eliminate them. (They deployed nearly six times as many silo-destroying warheads as U.S. negotiators expected.) Many proponents of the SALT I defense and offense restrictions celebrated SALT I as "the jewel in the crown" of arms control. Well, it's clear that the jewel was lost or stolen, if it was not paste in the first place.

## More Than One Potential Use

The problem is that almost every military system has more than one potential use, and every prohibited military function can be performed in more than one way—often by permitted military systems or even by systems in civilian use. Satellites can be anti-satellites. So can devices that defend satellites. So, with changes in their guidance logic, can ICBMs and submarine-launched ballistic missiles. (In fact, the Soviets use ICBMs to launch their current ASAT interceptors.) But everything that can be used against satellites, and you might end up with no strategic defense ballistic missiles. And no satellites. Yevgeny Velikhov, vice president of the U.S.S.R. Academy of Science, is disturbingly reassuring on this:

"If we can dock with a satellite, then clearly we can dock with an American satellite, but a bit carelessly, and then destroy it. But the idea of our proposal is that there is no problem in verifying whether or not a satellite has been destroyed."

Verifying that U.S. satellites have already been destroyed in a surprise attack might be no problem. And recording that fact could help future historians, if any. However, it would hardly enable the U.S. to prevent the surprise attack.

Even complaining to the usual sluggish Standing Consultative Commission about suspicious satellites hovering near the U.S.'s own, or U.S. threats to renounce an ASAT ban, would not prevent a Soviet surprise attack. In fact a complete ASAT ban would fatally hamper acts of self-defense. To prevent a surprise attack on American satellites, the U.S. will need to respond in time with a combination of passive and active measures: hardening, maneuver, decoys, replenishment and jamming or destruction of enemy ASATs. For, just as ships at sea are liable to sudden attack by other ships staying close to them in peacetime, so critical U.S. satellites will be vulnerable to a simultaneous raid by apparently benign satellites pre-positioned to act as "space mines." Space mines exploit the time delays inherent in defense.

We propose a space agreement to facilitate unilateral defense against surprise attack on satellites. It resembles (but only slightly) the existing U.S. and Soviet agreement on Prevention of Incidents on and Over the High Seas. Its basic idea is to specify a number of separate "Self-Defense Zones" for Western and Soviet satellites. Each side would have the right to inspect, expel or otherwise render harmless any invaders (should they exceed a safe number) moving through these zones.

*Each side would have the rights to inspect, expel or otherwise render harmless invading satellites (should they exceed a safe number) moving through these self-defense zones.*

Each could do so, of course, without harming any life, military or civilian. Unlike the agreement on Incidents at Sea that the Soviets violated during their search for the wreckage of KAL 007, this one would have automatic enforcement.

The Self-Defense Zones arranged for satellites would vary with their different orbits, since satellites differ in their orbital characteristics and some orbits are more densely populated than others. Here, we sketch only the agreement for the important geosynchronous orbits. The West has some 20 military and 20 civilian communication satellites in such orbits, and the Soviet Union a growing number. In the future, for an adversary to reach geosynchronous orbits (some 36,000 kilometers high) with hit-to-kill vehicles launched from the Earth's surface would be a slow business, taking over an hour. It would be especially hard for them to confidently manage a simultaneous raid on a sizable fraction of critical Western communication satellites. On the other hand, launching hit-to-kill vehicles (or other ASAT weapons) from satellites pre-positioned near the targeted satellites would leave almost no time for defense. But defense needs time. The West has yet to take this serious threat adequately into account.

Instead of attaching self-defense zones to satellites, advantage can be taken of the fact that geosynchronous satellites circuit the Earth roughly as it rotates and so appear almost stationary. Negotiators might designate, for example, 36 zones—bands 10 degrees wide and 7,400 kilometers across with 12 each for the West, the Warsaw Pact and neutral nations. Each zone would rotate with the Earth. Current and future satellites would enter the other side's zone at their peril. Satellites, once declared dead or uncontrollable, would be subject to the other side's disposal when they enter the other side's zones. Enforcing the agreement by defending one's satellites would not therefore involve abrogating it. Self-defense would be part of the agreement. The agreement would not replace unilateral defenses. (Nothing will.) Rather, it would facilitate defense.

The cost of this would be low compared with its potential advantage. Initially, each side would need only to reposition a small number of its satellites that now happen to be in the other side's zones. Afterward, a small number of satellites stationed near the zone boundaries would require only occasional orbital adjustments to avoid slow drifting into the other's zones. Moreover, up to two live satellites could be permitted in the other's geostationary zones at any given time. This would reduce the frequency of these orbital adjustments and allow satellite operations (such as initial placement and subsequent repositioning as well as inspection and collection of information about the other side's satellites) to be performed with few restrictions. At the same time, the small number of allowable transits would make simultaneous attacks much more difficult.

## Unique Opportunity

Important Western navigation satellites at near semi-geosynchronous altitudes between 19,000 and 21,100 kilometers are already separated from Soviet navigation satellites orbiting more than 500 kilometers below them. Each side now orbits six to twelve of these satellites. Each is likely to double these numbers in the next few years in order to keep several visible at any given time for use by ships, aircraft and other vehicles requiring extremely precise navigation and guidance. An agreement would formalize this separation for purposes of self-defense.

This is the kind of agreement the U.S. should be discussing with the Soviets. A government concerned about protecting its satellites would want to use such measures of self-defense in any case. Negotiating for such an agreement would make apparent the mutual adjustments in peacetime deployments that would facilitate self-defense. The U.S. could benefit whether the negotiation failed or succeeded. Preparing and negotiating an agreement that includes enforcement would also offer a unique opportunity to inform domestic and allied publics (and allied leaders) of the intrinsic troubles that plague democratic governments (including the Reagan administration) in the standard agreements. Candor about these matters is urgent and is more easily feasible in the context of the design of a serious agreement aimed at coping with such problems explicitly. When our leaders are less than candid on these matters, they trap themselves. Being "serious" about arms control should not mean being unserious about restraining Soviet behavior and energetic only about preventing a U.S. response. The ASAT ban, pushed by zealots for Mutual Assured Destruction, would paralyze the West, not the East. It would not verifiably prevent Soviet anti-satellite actions. It would prevent the U.S. from effectively defending its satellites.

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Attachment 7

# International Security

SUMMER 1985
VOL 10 NO 1 $5.00

ISSN 0162-2889

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Rhetoric and Realities in the Star Wars Debate — *James R. Schlesinger*

The SDI in U.S. Nuclear Strategy — *Fred S. Hoffman*

Do We Want the Missile Defenses We Can Build? — *Charles L. Glaser*

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Extending Deterrence with German Nuclear Weapons — *David Garnham*

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# The SDI in U.S. Nuclear Strategy

## Senate Testimony

*Fred S. Hoffman*

As we approach the second anniversary of President Reagan's speech announcing the SDI, it is useful to review the development of the issue. Critics and supporters alike now recognize that the central question concerns the kind of R&D program we should be conducting. Virtually no one on either side of the issue, here or among our allies, contests the need for research on the technologies that might contribute to a defense against ballistic missiles, and it is clear that the Administration does not propose an immediate decision on full-scale engineering development, let alone deployment of ballistic missile defenses.

Nevertheless, the issue continues to occupy a dominant place in discussions of national security issues and arms negotiations, far out of proportion to its immediate financial impact (significant as this is), to its immediate implications for existing agreements (current guidance limits the R&D to conformity with them), and to its near-term impact on the military balance. Reactions by the public and media in this country and among our allies, as well as the public response by Soviet leaders, suggest that the President's speech touched a nerve. Such extreme reactions to a program that has such modest immediate effect suggests that the President's initiative raises basic questions about some deep and essential troubles with the drift of NATO declaratory and operational strategy for the last 20 years, and about the direction in which we need to move during the next 20 years. The debate has only ostensibly been about the pros and cons of spending next year's funds on research and development. That the basic issues have been largely implicit is unfortunate. Entrenched Western opinion resists rethinking a declaratory strategy that has stressed a supposed virtue in U.S. vulnerability. And the Soviets have been campaigning furiously to aid a natural Western resistance to change. The Soviet campaign is also natural since in the 20-year

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This statement was made by Fred S. Hoffman before the Subcommittee on Strategic and Theater Nuclear Forces of the U.S. Senate Armed Services Committee on March 1, 1985. It is a result of collaboration with Albert Wohlstetter and other colleagues at Pan Heuristics. Fred Hoffman is solely responsible for the statement in its present form.

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*Fred Hoffman is Director of Pan Heuristics, a Los Angeles-based policy research group. He was director of the study group that prepared the report "Ballistic Missile Defenses and U.S. National Security" in October 1983 for the Future Security Strategy Study (generally known as the "Hoffman Report").*

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*International Security*, Summer 1985 (Vol. 10, No. 1) 0162-2889/85/013-12 $02.50/1

period in which the West has relied on threats of Mutual Assured Destruction, the Soviets have altered what they call the "correlation of forces" in their favor.

The orthodoxy reflected in the SALT process and in much of the public discussion of the SDI is that of Mutual Assured Destruction (MAD)—a doctrine that holds that the only proper role of nuclear weapons on both sides is to deter their use by the other side, and that they must perform this role through the threat of massive and indiscriminate attacks on cities, designed to inflict the maximum destruction on the adversary's civilian population. On this view, any use of nuclear weapons is and *should* be clearly suicidal. Anything that interferes in any measure with the other side's ability to inflict "assured destruction" is "destabilizing"—in crises it is supposed to induce preemptive attack and, in the long-term military competition, a "spiralling nuclear arms race" with unlimited increases in the potential for indiscriminate destruction on both sides. MAD was the Western, though not the Soviet, strategic foundation for the ABM Treaty and the SALT offense agreements. It is largely unconscious dogma dominating the media discussions of nuclear strategy, SDI, and arms agreements.

Some who advocate this policy like to think of it as not a policy, but a "fact." A supposedly unalterable fact of nature. There is a grain of truth and a mountain of confusion in this assertion. The grain is the unquestioned ability of nuclear weapons to inflict massive, indiscriminate, and possibly global destruction. The mountain is the conclusion that this is the way we *should* design and plan the use of nuclear forces, and even more important, the assumption that this is the way the Soviet Union *does* design and plan the use of its nuclear forces. The prescription for our own strategy and the assumption about Soviet strategy are not unalterable facts of nature but matters of policy choices in each country. The contrasting U.S. and Soviet choices brought about the relative worsening of the U.S. position.

This is not the place for a detailed critique of MAD, but a summary of its principal deficiencies is essential to assess the potential role for defenses in our strategy. A central point on which most critics and supporters of SDI agree is that the assessment of defenses depends critically on what you want them to do. And what we want them to do depends on our underlying strategy.

MAD as a strategy might have something to recommend it (not nearly enough in my view) if the tensions between the Soviet Union and the U.S. were restricted to the threat posed by nuclear weapons. Relations between

the United States and the Soviet Union have not been dominated by the possibility of border conflicts between the two countries or the fear of invasion by the other. Rather the post-World War II military competition arose from the desire of the Soviet Union to dominate the countries on the periphery of its Empire and the desire of the United States to preserve the independence of those countries. No nuclear strategy can long ignore the role of nuclear weapons in managing this underlying conflict of interests, nor can it ignore the asymmetry in the geostrategic situations of the two countries. The U.S. guarantees a coalition of independent countries against nuclear attack by the Soviet Union. We have also affirmed in NATO strategy that we would respond to overwhelming nonnuclear attack with whatever means proved to be necessary to defeat such an attack. Do we now mean to exclude a U.S. nuclear response in both these cases? What if the Soviets launch a nuclear attack, but one directed solely at our allies and which avoids any damage to the U.S.? How long can an explicitly suicidal nuclear response remain a credible threat in the eyes of our allies or the Soviet Union?

On the Soviet side, there is abundant evidence that they have never accepted MAD as a strategic basis for their military programs (in contrast to their rhetoric designed to influence Western opinion). They continue to maintain and improve, at massive cost, air defense forces, ballistic missile defenses, and protective measures for their leadership and elements of their bureaucracy intended to ensure the continuity of the Soviet state. Their military strategy has increasingly focused on qualitative improvements to their massive forces intended to give them the ability to win a quick and decisive military victory in Europe using their nonnuclear forces to attack our theater nuclear forces as well as our conventional forces while deterring the use of our nuclear forces based outside the theater. Deterring a suicidal use of nuclear force is not very difficult. They have steadily improved the flexibility of their own nuclear forces in what Lt. Gen. William Odom, a leading professional student of Soviet military thought, has called their "strategic architecture." They design that architecture for the pursuit of Soviet political goals as well as military operations.

They clearly wish to dominate on their periphery and to extend their influence over time. By creating conditions that weaken ties between the United States and other independent countries they serve both ends. They clearly prefer to use latent threats based on their military power, but have shown themselves willing to use force either directly or indirectly and in a degree suited to their political goals. They regard wars, especially long and

large wars, as posing great uncertainties for them. Because they cannot rule out the occurrence of such wars, they attempt to hedge against the uncertainties in their preparations. There is no reason to suppose that their plans for the use of nuclear weapons are inconsistent with their general approach to military planning.

From the Soviet point of view, Western public espousal of MAD is ideal. Western movement away from such a strategy based on indiscriminate and suicidal threats would increase the difficulty of Soviet political and strategic tasks. The consequences of Western reliance on threats to end civilization can clearly be seen in the increasing level of Western public anxiety about a nuclear cataclysm. While the incumbent governments among our allies have successfully resisted coercion, trends in public opinion and in the positions of opposition parties give us little reason for comfort. In the U.S. as well, public attitudes reflected in the freeze movement will make it increasingly difficult to compete with the Soviets in maintaining parity in nuclear offensive forces. The Soviet leaders have reason to believe that the West will flag in its efforts to make up for the ground it lost in the quantitative offense competition. Proponents of MAD have also impeded and delayed qualitative improvements in the name of "stability." Finally, a broad and increasing segment of the public is questioning the morality and prudence of threats of unlimited destruction as a basis for our strategy.

The specific relevance of MAD to the assessment of SDI is best illustrated in the assertion by critics of the hopelessness of the SDI's task. They observe that if even one percent of an attack by 10,000 warheads gets through the defenses, this means 100 nuclear weapons on cities and that for more likely levels of defense effectiveness, the ballistic missile defenses would be almost totally ineffective in protecting cities. They generally leave implicit the remarkable assumption that the Soviets would devote their entire (and in this example, presumably undamaged) missile force to attacks on cities, ignoring military targets in general and not even making any attempt to reduce our retaliatory blow by attacking our nuclear offensive forces. If the Soviet attack, for example, devoted ⅔ of their forces to attacking military targets, then only ⅓ of the warheads surviving a defense like a boost phase intercept system would be aimed at cities. In one particularly remarkable exercise of this sort, the authors concluded that defenses would cause the Soviets to concentrate their forces on our cities, *even if their attack were to result in nuclear winter.*

Such a bizarre assumption suggests the absence of serious thought about the objectives that might motivate Soviet leaders and military planners if

they ever seriously contemplated the use of nuclear weapons. Whatever we may think of the heirs of Karl Marx, the followers of Lenin, and the survivors of Stalin, nothing in their background suggests suicidal tendencies. Certainly, their strictest ideological precepts call for the preservation of Soviet power and control. Neglect of the actual motivation of our adversaries is particularly strange in a strategic doctrine that professes to be concerned with deterrence. Despite the fact that deterrence is in the mind of the deterred, those who espouse MAD rarely go beyond the assumption that the attacker's purpose is to strike preemptively before he is attacked.

MAD doctrine takes it as axiomatic that to deter such a Soviet attack we must threaten "assured destruction" of Soviet society. A consequence of this view is that only offensive forces can directly contribute to deterrence. Defensive forces can contribute only if they are useful in protecting our missile silos and the "assured destruction" capability of the missiles in them. Beyond this ancillary role in deterrence, MAD relegates defenses along with offensive counterforce capability and civil defenses to the role of "damage limiting" if deterrence fails. But since our damage-limiting capability diminishes Soviet assured destruction capability, eliciting unlimited Soviet efforts to restore their deterrent, MAD dismisses damage limiting (and with it defenses) as pointless and destabilizing.

To recapitulate, acceptance of MAD doctrine implies for SDI:

- Defenses must be essentially leakproof to be useful;
- Defenses can at best serve an ancillary role in deterring attack;
- Defenses that reduce civilian damage are inherently destabilizing.

Even a leakproof defense would not satisfy the last condition. Together these three conditions implied by MAD are an impenetrable barrier—a leakproof defense against SDI. Since I have indicated above reasons for rejecting MAD as a doctrine, I believe we should reexamine each of these in turn.

Most important, if defenses must be leakproof to be useful, then the odds of success for the SDI R&D program are much lower than if lesser levels of effectiveness can contribute to our security objectives. The record is replete with instances of faulty predictions about the impossibility of technological accomplishments by those with the highest scientific credentials, and we should view current predictions about the impossibility of effective ballistic missile defenses in the perspective of that record. Nevertheless, if everything in a complex and diverse R&D program must work well to derive any benefit, the odds of success will be low and the time required very long.

The critics compound the problem further by demanding that the SDI research program prove and guarantee at its outset that the defenses that might ultimately be developed and deployed will be able to deal with a wide variety of ingenious, but poorly specified and, in some cases, extremely farfetched countermeasures. Critics can produce countermeasures on paper far more easily than the Soviets could produce them in the field. In fact, the critics seldom specify such "Soviet " countermeasures in ways that seriously consider their costs to the Soviet Union in resources, in the sacrifice of other military potential, or the time that it would take for the Soviets to develop them and incorporate them into their forces. The countermeasures suggested frequently are mutually incompatible.

If, instead, we replace MAD with a view of deterrence based on a more realistic assessment of Soviet strategic objectives, we arrive at a radically different assessment of the effectiveness required for useful defenses and of the appropriate objectives of the SDI R&D program. The point of departure ought to be reflection on the motives that might induce Soviet leaders and military planners to contemplate actually using nuclear weapons. The test of deterrence would come if we and the Soviet Union found ourselves in a major confrontation or nonnuclear conflict.

In such circumstances, Soviet leaders might find themselves facing a set of alternatives all of which looked unpleasant or risky. If, for example, they lacked confidence in their ability to bring a nonnuclear conflict to a swift and favorable conclusion, they might consider ensuring the futility of opposing them by a militarily decisive use of nuclear weapons. A decisive nuclear attack in this sense might or might not have to be "massive," in the sense of "very large." Its primary motivation would be the destruction of a set of general purpose force targets sufficient to terminate nonnuclear resistance. If Soviet leaders decided that the gains warranted the risks, they would further have to decide whether to attack our nuclear forces or to rely on deterring their use in retaliation. The extent and weight of such an attack would be a matter the Soviet leaders would decide within the context of a particular contingency, based on their assessment of our probable responses.

The alternative risks they would face would be the prospect of nuclear retaliation to an early nuclear attack on one hand; on the other hand, those of gradual escalation of a nonnuclear conflict in scope and violence with the ultimate possibility of nuclear conflict in any case. In either case their primary concern would be to achieve military victory while minimizing the extent of damage to the Soviet Union and the risk of loss of Soviet political control.

Their targets would be selected to contribute to these goals. Wholesale and widespread attacks on civilians would not contribute but would only serve to ensure a similar response by the large nuclear forces remaining to us even after a relatively successful Soviet counterforce attack. And this does not even take account of the possibility that, should they launch a massive attack on cities, that might trigger nuclear winter, making our retaliation irrelevant.

The magnitude of collateral damage to Western civilians from a Soviet attack with military objectives would depend on the extent of Soviet attack objectives and the weight of attack required to achieve those objectives. Like us, they have been improving the accuracy of their weapons and reducing their explosive yield. As this trend continues, motivated by the desire for military effectiveness and flexibility in achieving strategic objectives, they will become increasingly capable of conducting effective attacks on military targets while limiting the damage to collocated civilians and while remaining below the threshold of uncertainty of global effects that would do serious harm to themselves. At present, a Soviet attack on a widespread set of general purpose force and nuclear targets would undoubtedly cause very great collateral damage but could be conducted so as to leave the bulk of Western civil society undamaged and to remain safely under the threshold for a major climatic change affecting the Soviet Union.

We should judge the utility of ballistic missile defenses in the light of their contribution to deterring such attacks and their ability to reduce the collateral damage from such attacks if they occur. The relevant question for the foreseeable future is not whether defenses should replace offensive weapons but whether we should rely exclusively on offensive weapons or whether a combination of militarily effective and discriminating offense and defenses will better meet our strategic requirements for deterrence and limiting damage.

This change in the criterion by which we judge defenses from the one imposed by MAD has profound consequences for the level of effectiveness required of defenses, for the treatment of uncertainty about defense effectiveness and for the terms of the competition between offense and defense. Instead of confining the assessment to the ability of *defense* to attain nearly leakproof effectiveness, a realistic consideration of the role of defense in deterrence recognizes that an *attacker* will want high confidence of achieving decisive results before deciding on so dangerous a course as the use of nuclear weapons against a nuclear-armed opponent. Analysis will show that defenses with far less than leakproof effectiveness can so raise the offensive force

requirements for attacks on military target systems that attacks on limited sets of critical targets will appear unattractive and full-scale attacks on military targets will require enormous increases in force levels and relative expense to achieve pre-defense levels of attack effectiveness and confidence in the results. Because of an attacker's desire for high confidence in a successful outcome, he must bear the burden of uncertainty about defense effectiveness and is likely to bias his assumptions toward overestimating it. This is particularly important for his willingness to rely on sophisticated countermeasures such as those liberally assumed by critics of the SDI.

In addition, the technical characteristics of the defenses that are contemplated in the SDI would pose particularly difficult problems for a Soviet attack planner. A particularly prevalent and misguided stereotype in current discussion contrasts "an impenetrable umbrella defense over cities" with a hard-point defense of silos as though these were the only choices. Reality offers more types of targets and defenses than are dreamt of in this "city-silo" world. The preceding discussion has attempted to show the importance of general purpose force targets in motivating a possible nuclear attack. With respect to the characteristics of future defenses, the technologies pursued under the SDI have the potential for a multi-layered defense that begins with boost phase intercept, continues in the exoatmospheric mid-course phase, and terminates with systems for intercept after reentry into the atmosphere. Each successive layer is more specific in terms of the target coverage it provides, but none is effectively so circumscribed that it is properly described as a point defense.

This means that defenses can simultaneously protect several military targets and can simultaneously protect military targets and collocated population. The problem this poses for the attacker is that he cannot, as he could against point defenses, economize in his use of force by predicting which defenses protect which targets and planning his attack precisely to exhaust the defense inventory (even assuming that he can afford to forgo attacks on some military targets). Moreover, to the extent that there is redundancy in military target systems (or in their possible unknown locations), and the defense can identify the targets of particular enemy warheads in the mid-course, or terminal, phase, the defense can defend targets "preferentially." To have an expectation of destroying the desired fraction of a preferentially defended target system in the absence of information about the defense allocation of its resources, the attacker would have to treat each target as

defended by a disproportionate share of the defense resources. This greatly enhances the competitive advantage of the defense.

Another implication of the foregoing discussion is that defenses do not come in neat packages labelled "protection of military targets" and "protection of civilians." Warheads aimed at military targets will, in general, kill many collocated civilians and defenses that protect against such attacks will reduce civilian casualties. Again, in contrast to the kind of nightmare attack assumed by MAD theorists, when we consider more realistic Soviet attacks, effective but far from leakproof defenses can protect many civilians against collateral damage. If, moreover, a Soviet attack planner knows that we will protect collocated military targets more heavily and he must choose between attacking similar targets some of which are collocated and others of which are isolated, he will opt for the isolated targets if he wishes to maximize his military effectiveness (the reverse of what is generally assumed by critics of defenses). When we understand that the problem of protecting civilians is primarily the problem of dealing with collateral damage, it becomes clear that we do not need leakproof defenses to achieve useful results. The more effective the defenses, the greater the protection, but there is no reason to expect a threshold of required effectiveness.

Another charge levied against defenses is that they are "destabilizing." The prospect of leakproof defenses is allegedly destabilizing because they present an adversary with a "use it or lose it" choice with respect to his nuclear offensive capability. Defenses with intermediate levels of effectiveness are also held to be destabilizing because they work much better if an adversary's force has previously been damaged in a counterforce strike, intensifying incentives for preemption in a crisis. The first charge hardly needs response. Leakproof defenses, if they ever become a reality, are unlikely to appear on short notice or all at once. The Soviets know that they can live under conditions of U.S. nuclear superiority without any serious fear of U.S. aggression because they have done so in the past. In fact, they survived for years under conditions of U.S. monopoly. They can also and are pursuing defense themselves, and undoubtedly will continue. The notion that they would have no choice for responding to U.S. defenses other than to launch a preventive war is not a serious one.

The crisis stability argument is also a weak one. The analysis generally advanced to support it is incomplete and inadequate to determine the strength of the alleged effect because it is unable to compare meaningfully

the importance of the difference between striking "first" and striking "second" with the difference between either and "not striking at all." Such analyses ignore, therefore, one of the most important elements of the theory of crisis stability contained in the original second-strike theory of deterrence. Moreover, since defenses would contribute to deterrence by denying achievement of Soviet attack objectives, it would at least be necessary to determine the *net* effect of strengthening deterrence with the effect of intensifying incentives to preempt and this the analysis cannot do. Finally, the argument focuses on the wrong culprit. The grain of relevance in the argument is its identification of the problems presented by vulnerable offensive forces. It then superimposes partially effective defenses on the vulnerable offensive forces and concludes that the defenses are destabilizing. But it would be a virtuoso feat to design SDI-type, multi-layered defenses that would not, willy-nilly, reduce the vulnerability of the offensive nuclear forces, and it would certainly be possible by proper design to reduce that vulnerability far enough to eliminate the so-called destabilizing effect while realizing the other benefits of defenses.

Turning next to the effect of introducing defenses on the long-term military competition, we once again encounter the charge that defenses are destabilizing. A common assertion is that the offense will always add force to overwhelm the defense with the net result of larger offensive forces and no effective protection. This stereotyped "law of action and reaction" that flourished in the 1960s and early 1970s was also supposed to imply that if we reduce defenses, the Soviets will inevitably reduce their offenses. It has no basis in theory, and it has been refuted by reality. The United States drastically cut its expenditures on strategic defense in the 1960s and 1970s while the Soviets tripled their expenditures on strategic offense. After we abandoned any active defense against ballistic missile attacks even on our silos, the Soviets deployed MIRVs for the first time and increased them at an accelerating rate. The action-reaction theory of the arms race led to some of our worst intelligence failures in the 1960s and early 1970s.

The effects of U.S. defenses on the incentives governing Soviet offensive forces are likely to depend on the terms of the competition as they are perceived by each side. The incremental increase in effort or force size by the offense required to offset an increment of effort or force in the defense (the "offense-defense leverage") is particularly important in determining the character of the long-term response by the offense to the introduction of defenses. The leverage in turn as suggested by the foregoing discussion is

extremely sensitive to the strategic criterion we adopt, the specific targets being protected, and the characteristics of the defenses. When we assess the role of defense within a strategic framework like the one outlined above and take account of the defense characteristics that could result from the technologies pursued under the SDI, the leverage is radically shifted in favor of the defense compared with the results suggested by evaluations within the MAD doctrine and under the misleading stereotype of defense characteristics prevalent in public discussion.

More fundamentally, ballistic missiles now offer an attack planner a degree of simplicity and predictability associated with no other weapon system. Planning a ballistic missile attack is much more like building a bridge than it is like fighting a war. The distinguishing characteristic of warfare, an active and unpredictable opponent, is missing. Introduction of defenses will change that radically and the change will reduce the strategic utility of ballistic missiles, now the keystone of U.S. and Soviet military forces. President Reagan called for defenses to make ballistic missiles "impotent and obsolete." Defenses of relatively moderate capability can make them obsolete to a military planner long before they are impotent in terms of their indiscriminate destructive potential.

If this point is reached or foreseen, the incentives governing negotiations over arms agreements will be fundamentally changed in a direction offering much more hope of agreement on substantial reductions in forces on both sides. Moreover, the growing problem of verification of limitations on nuclear offensive systems makes it increasingly difficult to foresee the possibility of agreeing to sizable reductions in the absence of defenses. One of the contributions of defenses can be to increase the ability to tolerate imprecision in the verifiability of arms limitations.

The point of view advanced here has major implications for the conduct of the SDI R&D program as well as for the criteria we should apply to evaluating its results when we approach the decision for full-scale engineering development and deployment. If we adopt the MAD view of the role and utility of defenses, and require essentially leakproof defenses or nothing, then we will conduct the SDI on what has been called the "long pole" approach. We will seek first to erect the "long pole in the tent," that is, we will devote our resources to working on those technical problems that are hardest, riskiest, and that will take longest, and we will delay working on those things that are closest to availability. The objective of this approach will be to produce a "fully effective" multi-layered system or nothing. Un-

fortunately such an approach increases the likelihood that we will in fact produce nothing, and it is certain that it delays the date of useful results into the distant future.

If instead, as argued here, we believe that defenses of moderate levels of capability can be useful, then we will conduct SDI in a fashion that seeks to identify what Secretary Weinberger has called "transitional" deployment options. These may be relatively near-term technological opportunities, perhaps based on single layers of defenses or on relatively early versions of technologies that can be the basis for later growth in system capability. Or if they are effective and cheap enough, they might serve for a limited lifetime against early versions of the Soviet threat while the SDI technology program continues to work on staying abreast of qualitative changes in the threat. Such an approach would incorporate a process for evaluating the transitional deployment options in terms of their effectiveness, their robustness against realistic countermeasures, their ability to survive direct attack on themselves, their cost, and their compatibility with our long-term strategic goals. Such an approach represents the best prospect for moving toward the vital goals enunciated by President Reagan two years ago.

Attachment 8

MEMORANDUM

5/19/85

TO: DR. HICKS

FROM: FRED HOFFMAN

SUBJECT: QUESTIONS AND ANSWERS CONCERNING SDI

As you requested, I have put together a list of questions you are likely to get on SDI and the short answers I would suggest you make.

1. Mr. Hicks, do you support the President's goals for SDI?

A: Yes.

2. Do you believe, as the President does, that it is technically feasible to achieve an impenetrable defense of population?

A: We are currently conducting research to determine what is feasible in the way of advanced ballistic missile defenses. There is no reliable way to predict the ultimate outcome of that research. I believe that there is a good prospect that the research will yield technological opportunities for defenses that can usefully protect population against plausible kinds of attacks. And I believe that it is quite likely to yield opportunities for a better deterrent posture than one that relies solely on matching Soviet offensive capabilities.

[Additional notes: The key here is that defenses of population need to be virtually leakproof only if we assume that the attacker devotes the bulk of his force to attacks on cities. More plausible kinds of attacks are those that have destruction of military targets (general purpose force targets and nuclear offensive force targets) as their primary purpose. The threat to population is that of damage in military attacks on targets colocated with population. Robust but far-from-leakproof defenses can substantially reduce collateral damage in such attacks.]

3. When you talk about defenses that can contribute to deterrence do you mean defenses of our missile silos that the President and his Science Advisor have rejected as a goal of SDI?

A: The President has rejected the goal of defenses that would be <u>restricted</u> to protecting missile silos; he has not rejected the goal of protecting our military forces together with our population. Defenses like those that may emerge from the SDI will protect both people and military targets since they will be able to intercept missiles aimed anywhere on U.S. (or Allied territory). If the Soviets ever considered a nuclear attack, their primary purpose would be the destruction with high confidence of a large fraction of Western military forces that would oppose Soviet aggression. The objectives of such an attack would be much

broader than the destruction of our ICBMs. By denying the Soviets the ability to achieve the objectives of their attack, defenses would deter them from attacking and would reduce the collateral damage to civilians from an attack if it occurred.

4. But do you think that it is feasible to make nuclear weapons "impotent and obsolete" as the President has said?

A: The achievement of the President's goal will depend on the long term success of the SDI research program. But it is clear that relatively moderate levels of success within the foreseeable future can vastly reduce the military utility of ballistic missiles and the nuclear weapons they carry. In the past, when weapons have lost their usefulness they have disappeared from military inventories whether or not they were "impotent". The crossbow is certainly not impotent, but it is obsolete and we do not see vast stocks of them in the world's armies. I believe that the SDI has a good prospect of making nuclear ballistic missiles obsolete long before they become impotent. And by so doing they would strengthen incentives for both sides to reduce their ballistic missile forces, unilaterally or by agreement.

5. What about aircraft and cruise missiles?

A: Same principles apply. [Running out of time: FSH]

6. Our allies feel that SDI will not help them and may worsen their situation. Do you agree?

A: Any likely deployment of SDI-based multi-layered BMD will also have considerable capability to intercept the intermediate and medium range missiles (except possibly for the shortest-range missiles, i.e. SS-21) that threaten our allies. As a matter of fact a defense against those missiles could be among the earliest of the deployment options offered by the SDI research program. The extent of the protection offered would depend on the design of such a deployment - a matter for consultation with our allies. But at the very least, such a deployment could offer an increasingly essential defense of critical military targets in theaters of operation against nuclear or nonnuclear attack.

7. Can't the offense always overwhelm the defense? Doesn't "cost-effectiveness at the margin" [Paul Nitze's criterion for SDI] always favor the offense and won't defense deployments therefore inevitably result in an increase in offensive forces?

A: "Cost-effectivenss" depends not only on technology and economics, but at least as importantly on the nature of the job to be done. That is to say, cost-effectiveness depends critically on <u>strategic</u> considerations. The assumption that the competition between offense and defense inevitably favors the offense is based on the notion that the primary Soviet objective would be the destruction of civilians. This would be pointless and suicidal from their point of view. Against more plausible attacks objectives, where they would seek high confidence of destroying a large

fraction of a military target system, the cost-effectiveness will favor robust but far-from-leakproof defenses. The more effective the defenses, the greater the disincentive to the Soviets to try to defeat them by proliferating offensive weapons.

# WHAT PRICE STRATEGIC DEFENSE ?

P. KOZEMCHAK

JUNE 1985

Attachment 9

# WHAT PRICE US/ALLIED DEFENSE?

"THE PRICE . . . MAY BE NOT ONLY THE SUBVERSION OF THE GENEVA TALKS BUT THE SCRAPPING OF EVERY PROSPECT FOR ANY END TO THE ARMS RACE."

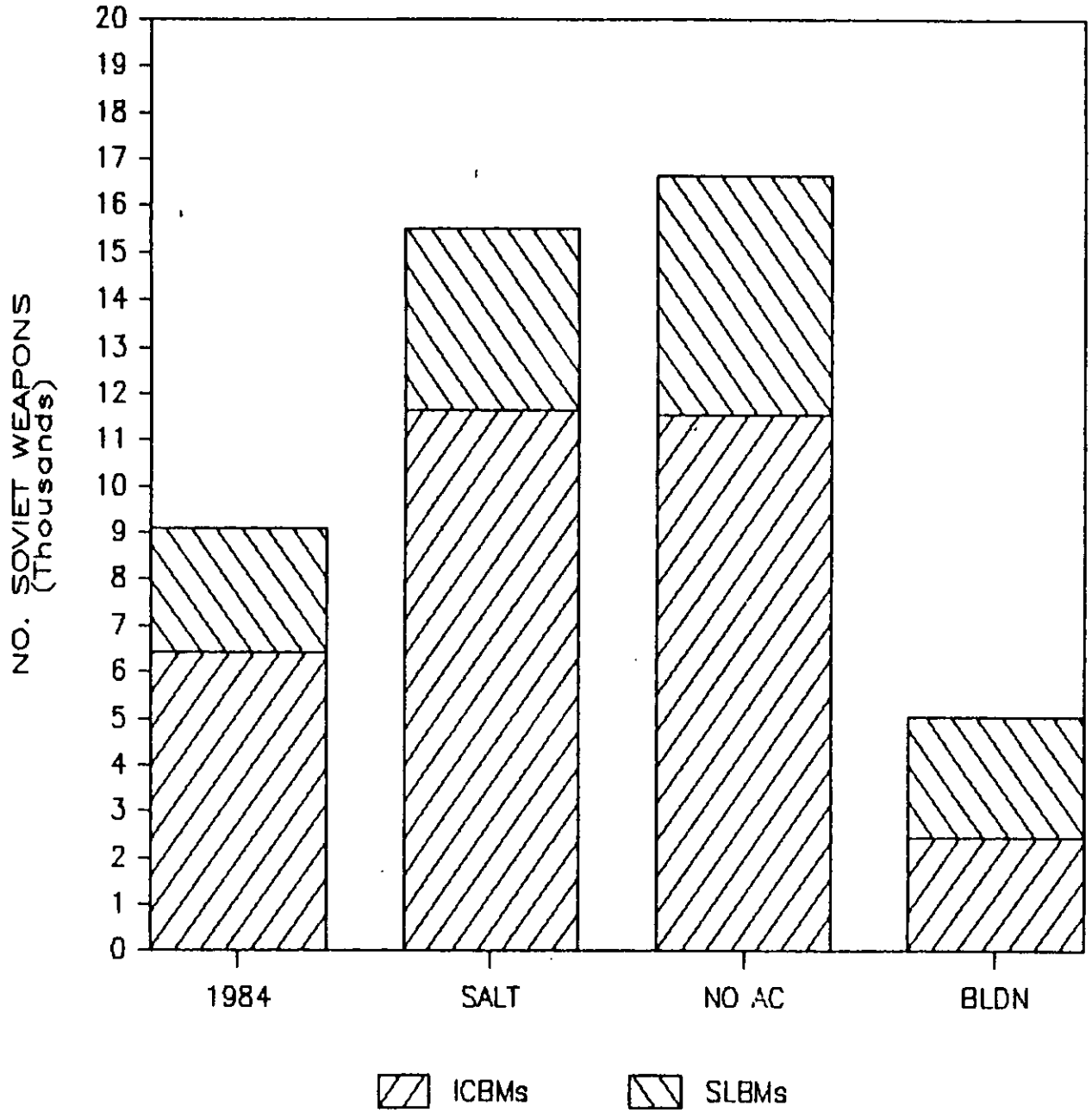
M. GORBACHEV, 29 MAY 1985

"RENUNCIATION OF THE DEVELOPMENT, INCLUDING RESEARCH, TESTING AND DEPLOYMENT, OF SPACE ARMS WOULD OPEN THE WAY TO RADICAL REDUCTIONS IN NUCLEAR ARMS."

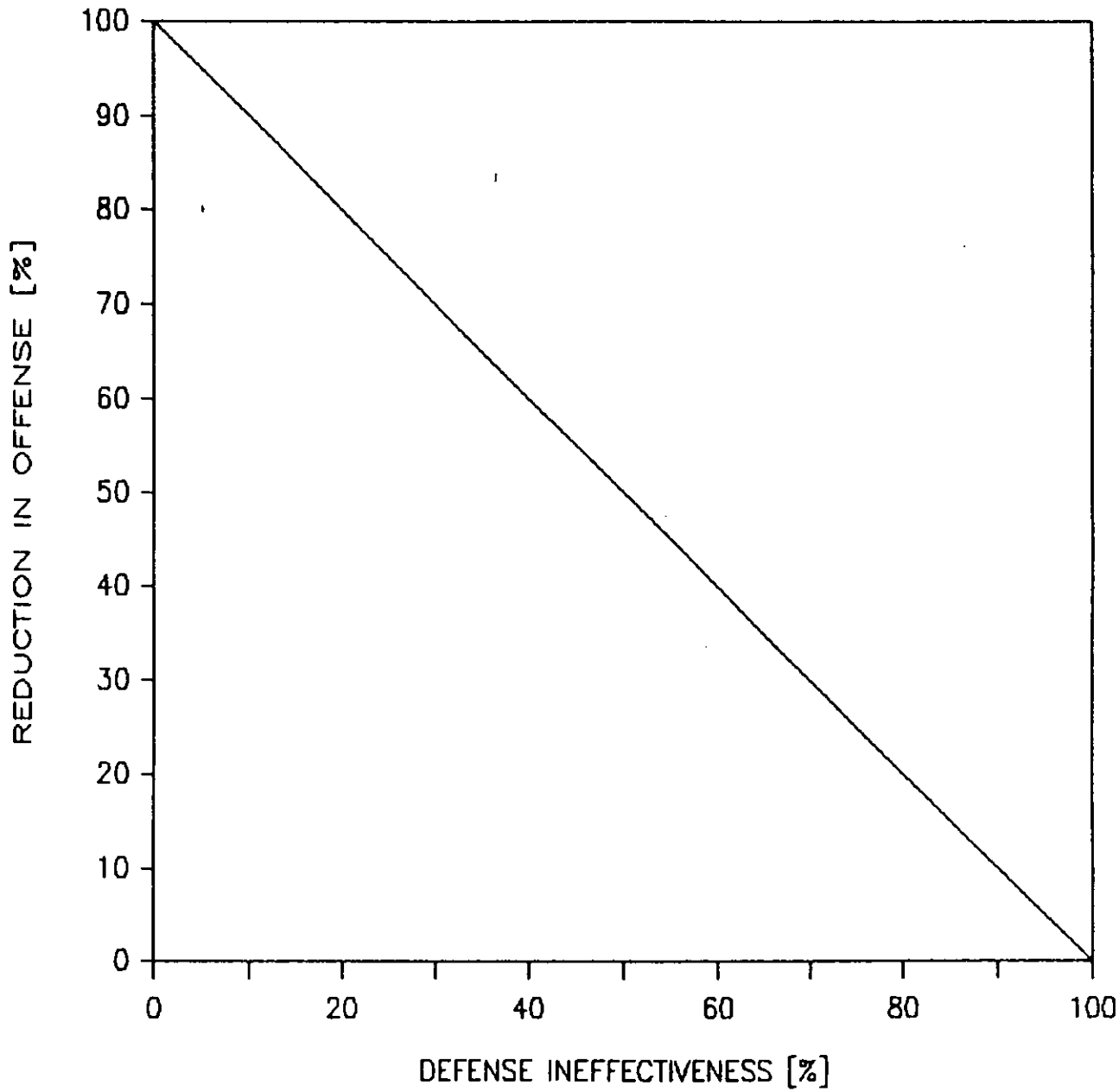
V. KARPOV, 29 MAY 1985

# IMPERFECT ARMS AGREEMENTS

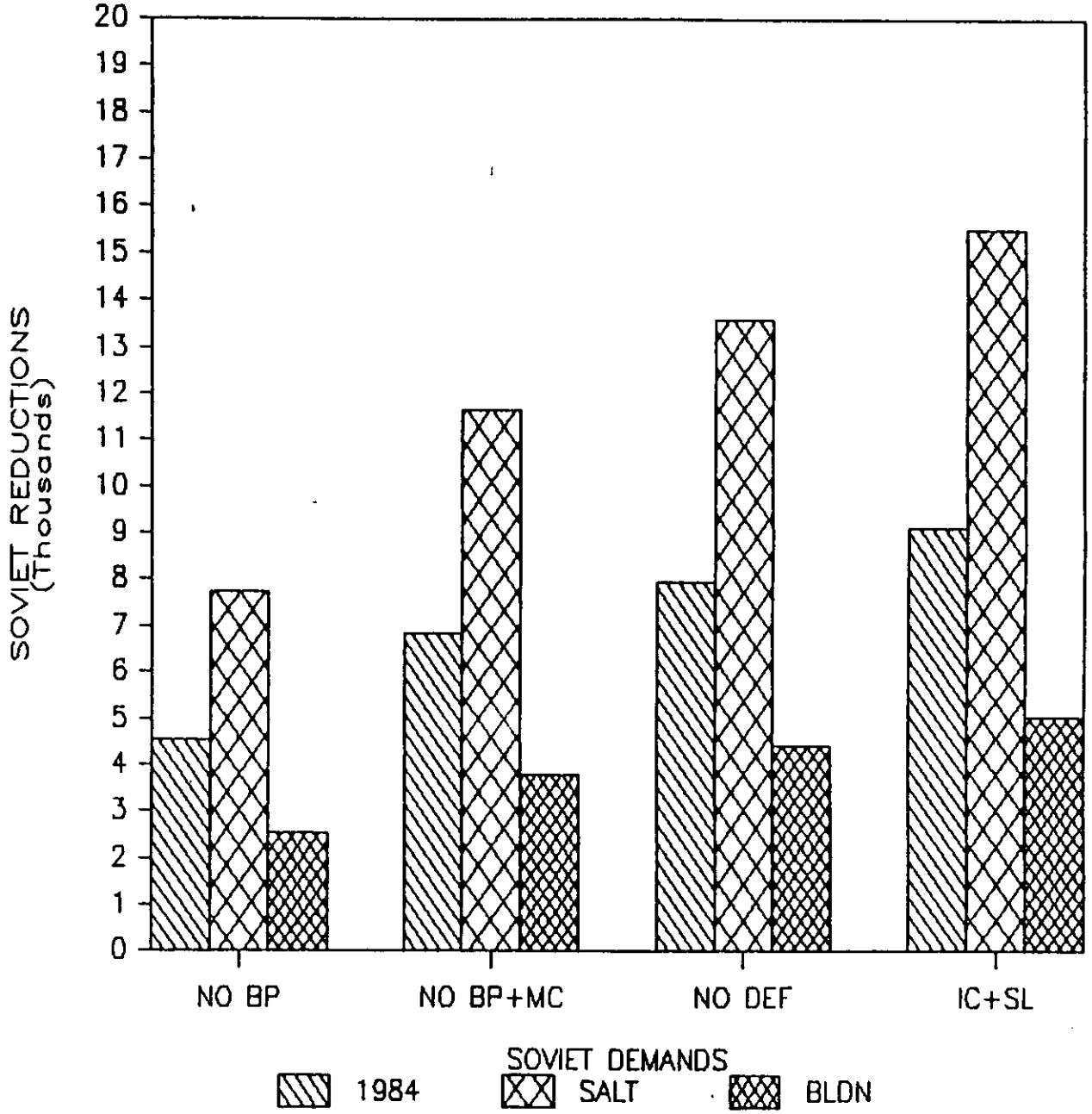
Soviet ICBMs and SLBMs – 1996



# THE PRICE OF DEFENSE

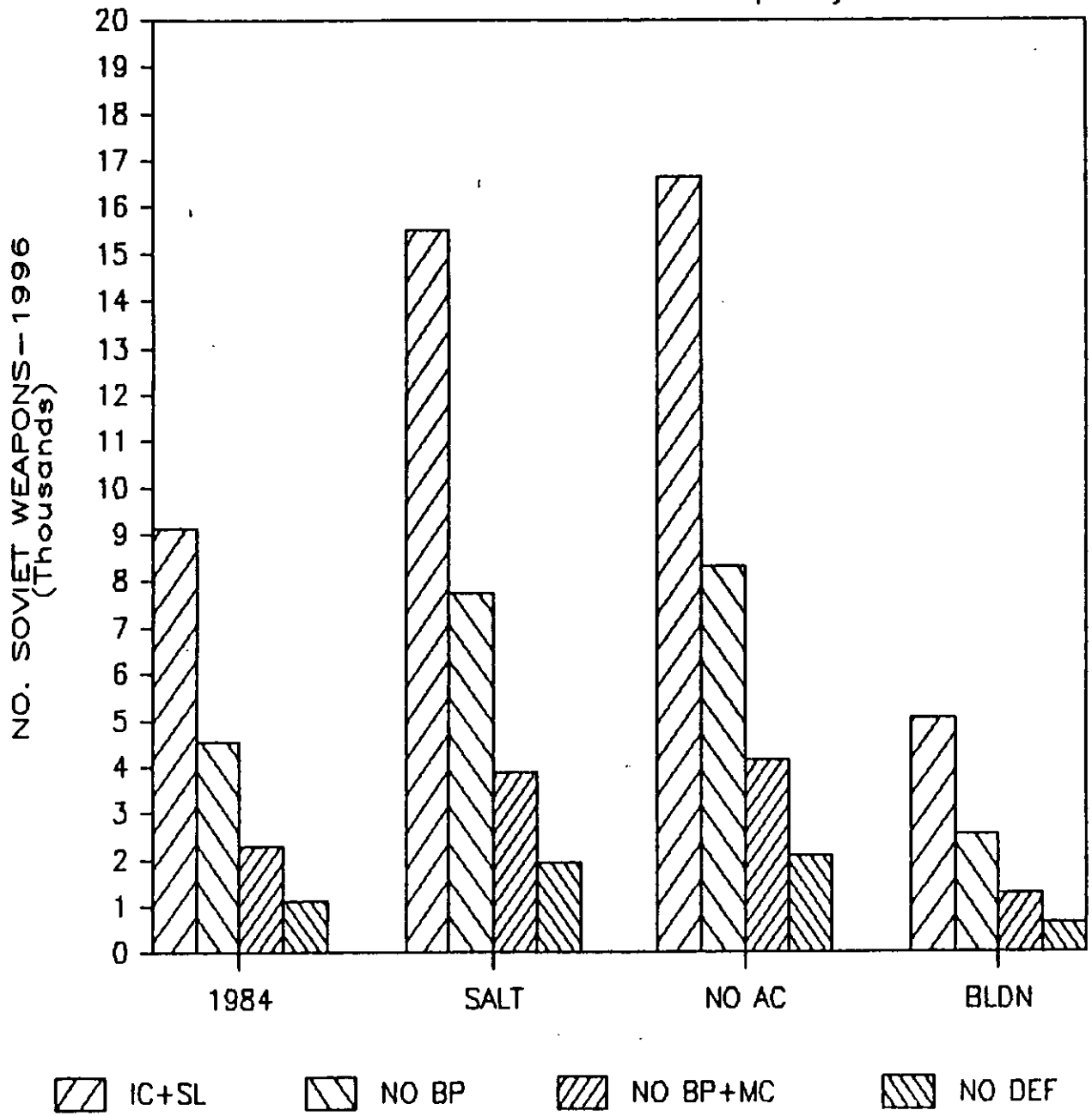


# WHAT ARE "RADICAL REDUCTIONS?"



# THE GRAND TRADEOFF

Defense Effectiveness = 50% per layer



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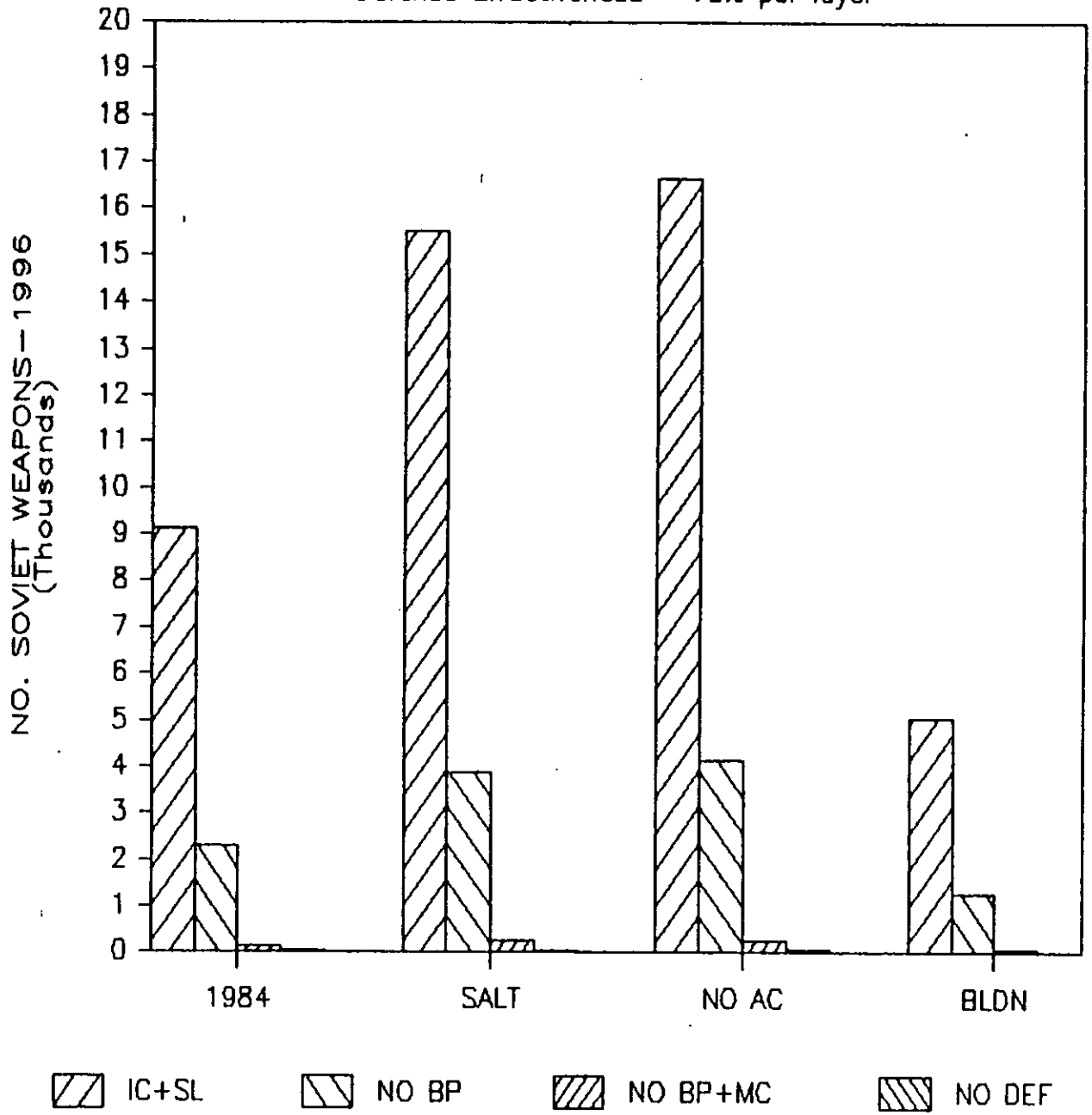
Defense Effectiveness = 75% per layer



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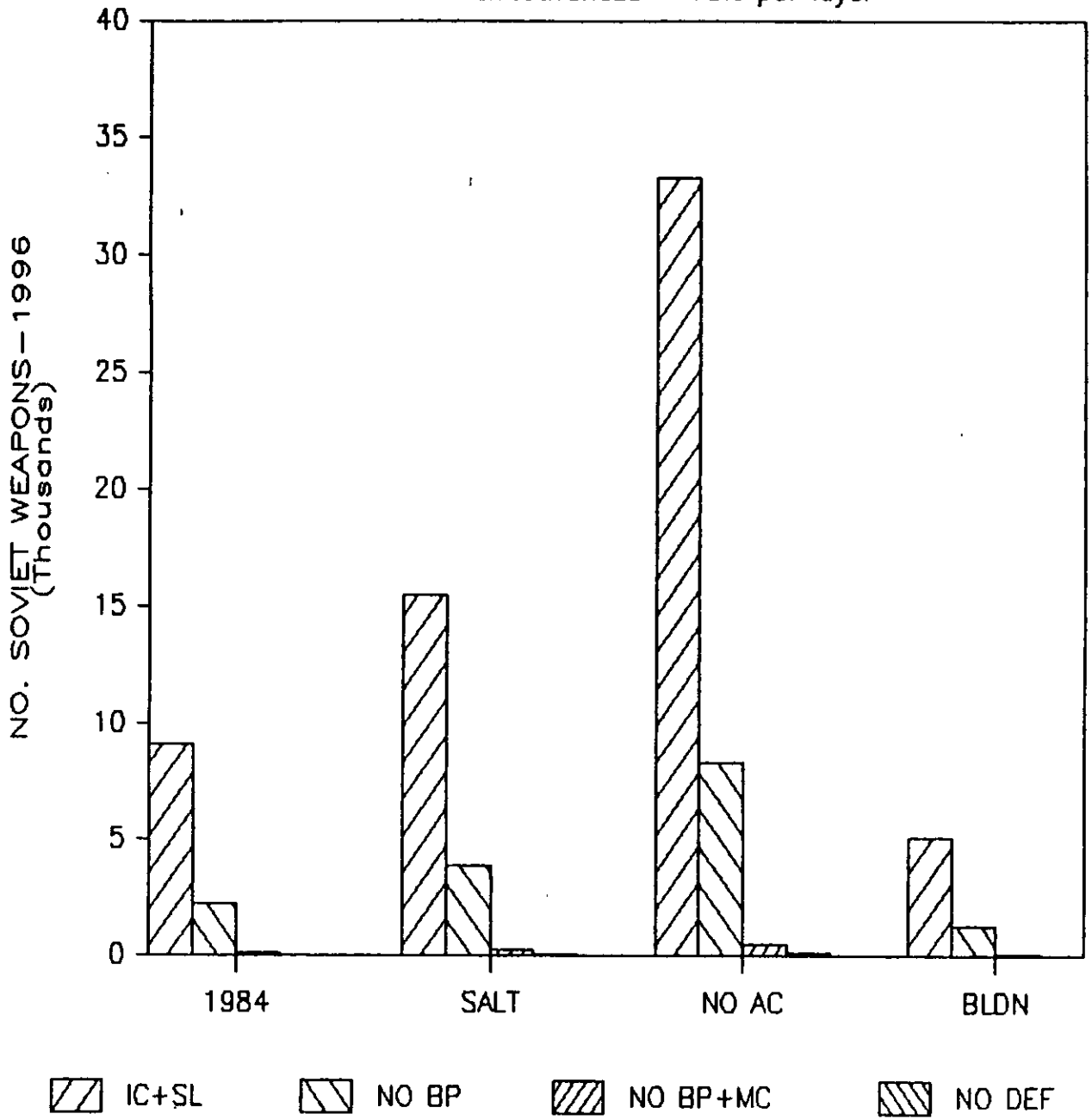
Defense Effectiveness = 75% per layer



Attachment 10

9 September 1985

## Agenda

Workshop on
FAULT LINES IN THE SOVIET EMPIRE:
IMPLICATIONS FOR WESTERN SECURITY II
St. Jean-Cap-Ferrat, France
16-18 September 1985

### DAY ONE, MONDAY, 16 SEPTEMBER

#### Afternoon Session

1. East Europe as an Inhibiting Factor for Soviet Policy: Prospects for the Next Decade

   Harry Gelman

   Background Paper: "Soviet Relations with the Northern Tier in East Europe," James F. Brown

   Comments: Pierre Hassner and Ross Johnson

2. Military Implications of Deviant Behavior by Non-Soviet Warsaw Pact Forces in Crisis and War

   Phillip Karber

   Comments: Ulrich Lehr

### DAY TWO, TUESDAY, 17 SEPTEMBER

#### Morning Session

3. Dissent in the Soviet Empire: Strategic Implications

   Albert Wohlstetter

#### Afternoon Session

4. Implications for NATO's Operational Strategy

   General Atkeson

   Comments: General Schlueter

DAY THREE, WEDNESDAY, 18 SEPTEMBER

Morning Session

6. Implications for Western Peacetime Policies of Taking Warsaw Pact Fault Lines Seriously

   Harry Rowen

   Comments: Malcolm Mackintosh

7. Soviet Perspectives on the Western Alliance: Implications for Crisis Behavior

   Robbin Laird

   Comments: Peter Stratmann

Afternoon Session

8. Western Policy Approaches to Eastern Europe

   Pierre Hassner

   Comments: Michel Duclos

Attachment 11

# Finding Fault Lines in the Warsaw Pact: Old and New Strategies for the West

Marcy Agmon

July 1985

## Introduction

In the event of a future East-West war, the Warsaw Pact could itself provide NATO with assets of considerable military value. Many Pact members may be less than eager to share the risks and burdens of a war of aggression initiated by the Soviet Union. Properly encouraged by the West, such sentiments could be channeled to acts of resistance to undermine Soviet objectives. To win such cooperation, NATO must be able to persuade the Soviet satellites that they stand to gain more and lose less by helping to thwart the Soviets than by throwing their full weight against NATO.

During World War II, "fault lines," or weaknesses, in the Axis and in German control over occupied populations were, in many instances, of considerable utility to the Allies. They attrited German forces by causing their diversion from important theaters, as well as their loss outright. Forces were delayed in reaching some critical battles, and others performed poorly. Fault lines may not have decided the outcome of the war. Nonetheless, they reduced considerably the cost of the Allied victory and may well have hastened it.

This study will review some military effects of these phenomena during World War II—their benefits to the Allies as well as some problems they generated—and the circumstances under which they were most numerous and effective.* The history is evocative of ways in which

*For a more detailed account of Germany's wartime experience with "fault lines," see Marcy Agmon, "Fault Lines in the Axis: Germany's World War II Experiences," Historical and Political Aspects of Wartime Encouragement of Fault Lines in the Warsaw Pact, Pan Heuristics, Marina del Rey, CA, March 1985.

fault lines in the Warsaw Pact could be of future benefit to NATO. We will discuss what NATO may need to be prepared to do in order to take full military advantage of them.

Diversion of Forces

Wartime attrition to forces can be exacted indirectly—that is, not only by means of direct assaults against them. A net reduction in the number of forces available for service in a critical theater will result if some must be diverted to handle problems elsewhere. Considerable German forces were attrited in this way when diverted for the purposes of satellite control, replacement of unreliable or defecting satellite troops, and countering resistance.

## Allied Loyalty is Suspect

German suspicion of the intentions of her allies led her to divert forces on various occasions to forestall betrayal or, if that failed, to minimize her consequent loss of territory and assets. More often than not, these forces were distracted from service in other important theaters. In November 1942, for instance, the Anglo-American landing in French Northwest Africa brought the defection of the Vichy leader, Admiral Darlan, to the side of the Allies. No longer trusting the Vichy government of France, Hitler occupied the "Unoccupied Zone" of France with forces which could have been used that month in the East when the Soviets opened their offensive at Stalingrad.*

*Kenneth Macksey, The Partisans of Europe in the Second World War (New York: Stein and Day, 1975), pp. 118-119.

The Germans diverted forces again early the following summer, this time to Italy. Italian demoralization after the defeat at Stalingrad and the Allied landing in Sicily aroused German fears that the Italians might defect, as indeed they did only a few months later. The Germans broke off their famous Kursk Offensive in the East in July and transferred several divisions to Italy. The Axis would never regain the initiative on the eastern front.*

In March 1944, German forces occupied Hungary for fear that war weariness and other factors might lead to its defection. The investment of forces required to hold on to Budapest at all costs had disastrous implications for the German effort to slow the momentum of the Russian offensive on the eastern front.** Added to this distraction, rumblings against the Germans began in Slovakia. More forces were used to occupy western Slovakia in August 1944, to put down a rebellion inspired by some senior army officers.***

Should the Soviets question the loyalty of one or more Pact members during wartime, they may be forced to dedicate a larger fraction of their forces to satellite control than had been originally allocated for that purpose. The benefit to NATO is clear--their subtraction from total Soviet assets available for combat against NATO.

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* See Albert Seaton, The Russo-German War 1941-1945 (London: Arthur Baker, Ltd., 1971), pp. 306-317.

** See Heinz Grederian, Panzer Leader (London: Michael Joseph Ltd., 1952), pp. 384-385, 393; and B.H. Liddell Hart, Other Side of the Hill (London: Cassell & Co., Ltd., 1948), pp. 93-94, 328.

***M.R.D. Foot, Resistance: An Analysis of European Resistance to Nazism 1940-1945 (London: Eyre Methuen Ltd., 1976), p. 208.

## Vacuums to be Filled

Like the Nazi Germans, the Soviets may be faced with the need to control a satellite whose loyalty is suspect. The allocation of additional troops may be required for performance of missions which can no longer be entrusted to a reticent or rebellious ally. Still more Pact forces might be drawn off to replace troops of a defecting Pact member in various roles and theaters.

Mussolini's worries about an Allied invasion of Italy led him to begin the withdrawal of Italian troops from the Balkans as early as June 1943, leaving the Germans no time to fill the resulting vacuum. German forces in the Balkans totaled only six divisions in 1942.* By the end of September 1943, when the Italians surrendered, they had more than doubled. And by the end of the year, they had more than tripled, totaling 20 divisions needed in the East to stop the Soviet drive through the Ukraine.** The Italian surrender also increased the strength and effectiveness of Tito's partisans in Yugoslavia. They increased in number, were in control of more territory and had seized considerable quantities of Italian military equipment before the Germans were able to increase their presence in the Balkans.

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* Werner Rings, Life With the Enemy (Garden City, N.Y.: Doubleday & Co., 1982), p. 272.

**Department of the Army, German Antiguerrilla Operations in the Balkans (1941-1944, Pamphlet No. 20-243, August 1954, p. 49, in Donald S. Detwiler, Charles B. Burdick, Jurgen Rohwen, eds., World War II German Military Studies, Volume 13 (New York: Garland Publishing, Inc., 1979). Both forces and equipment in these units were, for the most part, of secondary quality.

## Countering Resistance

Soviet forces could be drawn away from the front to counter resistance activities in occupied enemy territory. They may even be required to deal with resistance on Pact territory—perhaps in the Soviet Union itself.

Soviet partisan operations behind German lines constituted the largest single resistance effort of the Second World War. Still, their contribution was greatest when the Soviets had already gone over to the offensive. They contributed little of significance to the defense and, consequently, rarely diverted German troops from active front lines.* On the other hand, a group of 9,000 pro-Nazi Russian partisans was able to neutralize the Soviet partisans at a critical time—just when the Germans were logistically fully extended and preparing for their summer drive to Stalingrad and the Caucasus.** Much of the population cooperated with the Germans until the tide had clearly turned against them. Some non-Russian minorities continued to cooperate as late as 1944. The spontaneous support of the Soviet population could have been a considerable asset to the Germans. Instead, Nazi ideology, openly dictating and implementing the exploitation of the subhuman Eastern peoples, drove popular support to the Soviet partisans in many instances. A Soviet official captured by the Germans remarked:

> We have badly mistreated our people; in fact so bad that it was almost impossible to treat them worse. You Germans have managed

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* See Marcy Agmon, "Fault Lines," for a detailed examination of the role and effectiveness of the Soviet partisans.

**See Edgar M. Howell, The Soviet Partisan Movement 1941-1944 (Washington, D.C.: USGPO, 1956), p. 89; and Macksey, The Partisans of Europe, pp. 78-79.

> to do that. In the long term the people will choose between two tyrants the one who speaks their own language. Therefore, we will win the war.*

Major examples of effective anti-Nazi resistance on German soil are not known to this author.

Elsewhere, the Allies found that they could manipulate German expectations about Allied moves by activating cooperative resistance groups at critical times. That is, resistance groups were used to divert German forces by deceiving them as to Allied intentions. For instance, as the Allies prepared to invade Sicily, they encouraged a sudden outbreak of sabotage in the coastal areas of Greece. It was to appear that an Allied landing in southern Greece was imminent. The deception worked, and the Germans promptly sent the 1st Panzer Division to the south of Greece. Now needed in southern Italy, the Panzer Division was unable to leave Greece, locked in as a result of the successful sabotage by the resistance of a key stretch of the Greek transport system.

Similarly, a sudden barrage of sabotage in the Pas-de-Calais area by the French resistance was meant to draw attention from the true Allied landing area at Normandy. Here, too, the deception was successful. Even after the first landings at Normandy, the bulk of the German forces remained diverted in the Pas-de-Calais area.

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*Theodor Oberlander, bundnid oder Ausbeutung, June 22, 1943, p. 130, R6/70, Bundesarchiv, Roblenz, as quoted in Alex Alexiev, Soviet Nationalities in German Wartime Strategy, 1941-1945, R-2772-NA, (Santa Monica: Rand Corp., 1982), p. 17.

Denial or Loss of Assets

Resistance by Soviet satellites--by their governments, by their military forces, or by individual civilians--could diminish Soviet capabilities by the timely denial or destruction of critical assets. The benefits to the Allies of this sort of sabotage of German assets were at times considerable.

In early 1943, nine Norwegian saboteurs planted explosives at a Norwegian industrial plant under German control and destroyed almost a ton of heavy water essential for research on the development of the atomic bomb. A second team sunk a ferry carrying over 20,000 gallons of heavy water to Germany.* Some claim that German research was on the wrong track at that time. Another view holds that the sabotage "prevented them from doing the vital experiment which might have convinced them that the atomic bomb was possible."** This act of sabotage may well have decided the outcome of the war.

A more immediate and dramatic military loss was sustained by German forces in August 1944, when the Rumanian government declared it was at peace with the Allies. Rumanian troops cut off retreating German forces, and all twenty divisions of the German 6th Army were destroyed by advancing Soviet forces.***

Early in the war, the Germans were denied use of the merchant fleets of Norway, Denmark and Holland. When German forces occupied

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* Werner Rings, Life With the Enemy, p. 193.

** As told to R.V. Jones by a German expert. See M.R.D. Foot, Resistance, p. 282.

***See B.H. Liddell Hart, History of the Second World War (London: Cassell & Co., Ltd., 1970), p. 575; and Guderian, Panzer Leader, p. 367.

these countries, their fleets ran for Allied ports. Eight out of their nine million total tons of merchant shipping were thus lost by the Germans. Norway's tanker fleet alone carried forty percent of Britain's petroleum requirements until the US entered the war.*

Delay of Forces

Naturally, any delay in the arrival of enemy forces at a battle zone could be desirable. Some World War II resistance operations were timed and situated so as to hold up the movement of German forces or supplies to militarily critical theaters. Because of French resistance operations, for instance, two first-class German Panzer divisions took weeks to arrive at the Anglo-American landing site at Normandy. These deployments should have taken only a few days.**

In Greece, partisans helped to destroy a viaduct carrying the only rail link between southern Greece and the rest of Europe. In so doing, they interrupted a vital German supply line to Egypt just as the Allies were landing in North Africa.***

Late in the war, Norwegian resistance damaged vital rail lines, delaying the withdrawal of German forces from Finmark and their deployment for defense of the Ruhr.****

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* Rings, Life With the Enemy, p. 154.

** See M.R.D. Foot, SOE in France (London: Her Majesty's Stationery Office, 1966).

*** David Stafford, Britain and European Resistance, 1940-1945 (London: The Macmillan Press, Ltd., 1980), pp. 99-100.

**** Rings, Life With the Enemy, pp. 194-195, 267; and Foot, Resistance, p. 281.

Performance of Allies

Should a non-Soviet Warsaw Pact member fail to perform adequately during wartime, the result could be costly to the Soviet war effort. The Soviets should be keenly aware of the hazards of relying too heavily on the performance of an ally. They themselves exploited very effectively the low morale and fatigue of Germany's Rumanian and Italian allies during World War II. At Stalingrad, they chose to attack the weak Rumanian and Italian flanks, thrusting forward to encircle and defeat the more formidable German forces deployed at the center of the front. Weak both in depth and in morale, having for some time felt that they were fighting Russia's--not Rumania's--battles, the Rumanians collapsed and contributed to the loss of what may have been the war's most important battle.

The Soviets employed this strategy of attacking weak enemy flanks in other battles as well. As described by the Soviet author, V.A. Matsalenko,

> In the majority of operations, independent of the configuration of the frontline, that is to say independent of the disposition of forces with respect to the enemy, the main attacks were made against the enemy flanks in his weakest sectors and zones. For example, in the counterattack at Stalingrad, forces of the Southwest Front...made the main attack on the royal Rumanian forces which were far less combat capable in comparison to the German fascist troops. In the Yarsko-Kisinevskiy operation, the main attack of the Second Ukranian Front...came between the fortified regions Yassy, Tyrgu-Frumos against the Romanian forces, and the main attack of the Third Ukranian Armies. As a result, large forces of the fascists [sic] troops were encircled and destroyed.*

*V.A. Matsulenko, Operatsii i boyi no okruzheniye (Encirclement Operations and Battles), Moscow: Voyenizdat, 1983, p. 55.

Historical rivalries among members of the Warsaw Pact could also affect their inclination to cooperate with each other under the stressful conditions of war. The long-standing territorial feud between Hungary and Rumania, for example, caused considerable difficulties for the Germans, whose supply channel depended on the rail systems of the two countries. They vented their hostilities by creating problems during border transfers, and foot marches were generally faster than rail travel between Hungary and Bessarabia.*

Conditions for Effective Resistance

We have seen that resistance to Nazi Germany took a variety of forms, from individual acts of sabotage to major defections by alliance partners. But these acts did not, for the most part, begin at the outset of the war. Effective resistance was most evident rather late in the war when time and attrition had taken their toll on the morale of satellite troops, and the tide had already begun to turn in favor of the Allies. Battle fatigue and low morale sharply reduced the combat effectiveness of Rumanian forces and contributed to the Soviet victory at Stalingrad. That very major victory enhanced Italy's eagerness to end the war against the Soviets and, soon, they surrendered. Once Italy withdrew from the Axis, satellites such as Hungary, Rumania and Slovakia began to balk at German control, becoming more independent in the commitment of their forces to battle. And the neutrals put an end to their benevolent neutrality. Spain recalled her Blue Division, the

*Seaton, The Russo-German War, p. 470.

Portuguese allowed the Allies the use of the Azores, and Sweden refused the Germans overland facilities to Norway.*

Soviet partisan warfare also lagged in effectiveness until late in the war. Only then were their contributions more than random and anecdotal. One historian has observed that one could "subtract what few partisans there were in operation before Stalingrad and little difference would have been made to the outcome."** The partisans played little or no role in helping Soviet forces to defend against the German offensive. They helped mainly to chase the retreating Germans from Soviet territory.

Late in the war some resistance operations were guided by the Allies and coordinated to meet their needs in the field. These operations were often useful and effective. In 1943, Tito's Yugoslav partisans were assigned specific tasks by the Allied High Command and finally attained some military value to the Allies.*** Similarly, the Soviet partisans began to be of some use to the Soviets when their operations were included in the strategic planning of the Red Army. Finally, deception operations organized by the Allies and carried out by local resistance operations helped, well into the war, to distract attention from major Allied operations such as the landings in Italy and at Normandy.

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* Seaton, The Russo-German War, pp. 393, 394.
** Macksey, The Partisans of Europe, p. 255.
***Rings, Life With the Enemy, p. 273.

Implications for NATO Planning

Fault lines in the Warsaw Pact could be of use to NATO in a variety of ways. As illustrated above, forces available for combat against NATO could be diverted for satellite control or to counter resistance. Deception and sabotage could delay troop deployments and destroy assets. And steps could be taken to enhance and exploit the impact of fatigue and demoralization on battlefield performance.

As in most wars, there will be some individuals who will spontaneously take actions to resist or subvert Soviet efforts. Given the lessons of World War II, their contributions are likely to be random and anecdotal unless coordinated directly with NATO planners. If this potentially rich resource is to be available to the West, some conditions will have to be met by NATO:

First, some planning must be initiated during peacetime. (While viewed by some as politically provocative, the demonstrated readiness to take such steps may itself have offsetting beneficial deterrent effects. Such considerations will be examined further below.) If fault lines are to play a role in the initial stages of war, communication with potential players will be established early--at least in the pre-war crisis period. And the substance of that communication will be ready for transmission at that time. The effects of fault lines in the Axis during World War II began to show up only in 1943, some four years after the war began. Needless to say, in a war of shorter duration, earlier results would be essential.

Second, NATO must be prepared to offer credible and appropriate incentives to prospective resisters, on the national level as well as on the individual level, for the risks they incur to help defeat the Soviets. These risks will be considerable. If our declared war aim is to restore the status quo ante--that is, a return to the state of affairs prior to Soviet aggression—resisting Pact members can expect brutal Soviet reprisals with virtual certainty. A NATO policy of refusal to cross the border into enemy territory, even for the purpose of counterattack, can offer at best only the restoration of the status quo ante.*

Certainly, there were many World War II cases of individual heroics at great personal sacrifice. For the most part, however, individuals and statesmen chose paths least likely to threaten their well-being. again, it should be recalled that anti-German resistance began rather late in the war, when the Allies appeared likely to prevail. After the defection of Italy, for example, the Allies were rumored to be preparing to invade the Balkans. The Allies themselves did nothing to deny the rumor and exploited it as a diversion from actual plans to invade Normandy. But it was this expectation which led various German satellites such as Hungary, Bulgaria and Finland to begin sending them discrete peace-feelers. The Allies stalled, unprepared to discuss settlements with these countries because they had no real intent

*For a discussion of why this policy is unwise for other sound military reasons, see Albert Wohlstetter, "Dissent in the Soviet Empire: Strategic Implications," for presentation at the European-American Institute workshop on "Fault Lines in the Soviet Empire: Implications for Western Security," 16-18 September 1985, St.-Jean-Cap-Ferrat, France, pp. 13-15.

to invade them. In general, it can be said that no change of sides by an ally of Germany took place until invasion by the Allies was underway or appeared imminent. It is not unreasonable to assume that today's non-Soviet Warsaw Pact members, constituting some of the same countries, will behave in a similar fashion.

Third, while NATO seeks to exploit fissures in the Warsaw Pact, it must itself be alert to prevent conditions under which the Soviets could bring to bear their experience in locating and exploiting fissures in the enemy's alliance. Such a Soviet strategy may be adopted not only on a particular battlefield. It could express itself also as a limited attack against a poorly defended portion of NATO's territory where the commitment of some Alliance members is weaker than that of others. The northern and southern flanks are vulnerable to such a strategy. The Soviets will draw encouragement if issues relating to the defense of the flanks appear divisive.

The Soviets themselves will guard against Western efforts to exploit fault lines in the Warsaw Pact, given their World War II memories. As noted above, many current Soviet satellites were then the German satellites whose vulnerabilities were so effectively exploited by the Russians themselves. Soviet vigilance and sensitivity may make it difficult for the West to pursue such a strategy very effectively. On the other hand, that vigilance could also work to the benefit of NATO. Credible NATO efforts to exploit Pact fault lines could act to enhance Soviet apprehensions and to deter aggression of the sort that would require reliable performance on the part of her allies.

In sum, the historial record has shown that the successful exploitation of fault lines in an enemy's alliance can affect the outcome of war by hastening its conclusion and lowering its costs. Moreover, it can deter an aggressor by altering his assessment of the reliability of the assets available to them. For NATO to achieve these goals vis a vis the Warsaw Pact, it must show that it is capable of prevailing and that its victory could bring with it the desatellization of the Soviet bloc.

QUARTERLY PROGRESS REPORT

June 1985

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| Contract Number: | MDA903-84-C-0325 |
| Contract Expiration Date: | 1 July 1985 |
| Short Title of Contract: | Integrated Long-Term Defense Strategy |
| Name of Contractor: | Pan Heuristics<br>R & D Associates<br>4640 Admiralty Way<br>Marina del Rey, CA 90295 |
| Project Directors: | Albert Wohlstetter<br>Fred Hoffman |
| Phone Number: | (213) 822-1715 |

"The views, opinions, and findings contained in this report are those of the author(s) and should not be construed as an official Department of Defense position, policy, or decision, unless so designated by other official documentation."

CONTENTS

Progress Report for the Period January 6, 1985 - April 6, 1985 . . . . . 1

ATTACHMENT 1, Virts memo, "Armenian Terror Update"

ATTACHMENT 2, "Did the Soviet Deployment of MIRVs Follow an `Iron Law´ of Soviet Evasive Reaction to Action of Arms Agreement?"

ATTACHMENT 3, "NATO Counterattacks on the Ground Inside WTO--"

ATTACHMENT 4, "Virtual Redundancy Suffices for Preferential Active Defense"

ATTACHMENT 5, "Nuclear Winter Theorists Say Our Retaliation Would Be Suicidal, But Luckily, So Would His Attack"

ATTACHMENT 6, "With Nuclear Winter, the Attacker May Have to Fear the Defenses Success Less Than Its Catastrophic Failure"

ATTACHMENT 7, "US 1st Strike: SU Disinformation and US Media Confusion"

ATTACHMENT 8, "Soviet `Self-Deterrence,´ the SecDef NW Report and the Washington Post"

ATTACHMENT 9, "Have the Members of the Politboro Ever Really Worried About an Unprovoked US First Strike?"

ATTACHMENT 10, "Bohlen 1952 on Wartime Strains on Soviet Control of Its Satellites"

ATTACHMENT 11, "Special Evaluation for the NSC in 1953 Which Assumed Attacks so Large Against SAC, Cities, and Everything That They Didn´t Hurt SAC Much"

ATTACHMENT 12, "Carl Sagan on the Comforts of Total Ruin"

ATTACHMENT 13, "Sagan vs. Fermi on the Evils of Large City-Destroying Bombs in Contrast to Small Nuclear Weapons"

ATTACHMENT 14, Wohlstetter Memo on Impact of Star Wars on European Allies

ATTACHMENT 15, Agenda/participants at joint US-USSR meeting of the United Nations Association, New York

ATTACHMENT 16, Participants at seminar on SDI at the Heritage Foundation

ATTACHMENT 17, Hoffman's prepared statement for testimony on SDI

ATTACHMENT 18, Agenda/participants at a Colloquium in Bonn sponsored by the Planning Council of the Foreign Ministry of the Federal Republic of Germany

ATTACHMENT 19, Agenda/participants at conference at Versailles jointly sponsored by the Institute Français des Relations Internationales, RAND, the Stiftung Wissenschaft und Politik and the Royal Institute of International Affairs

ATTACHMENT 20, Participants at meeting in London of the House of Lords All Party Defense Group

ATTACHMENT 21, Hoffman memo to Iklé, "Status and Prospects for SDI"

ATTACHMENT 22, Hoffman, "Possible Soviet Negotiating Strategy at Geneva"

ATTACHMENT 23, Hoffman Letter to Ambassador Weiss

ATTACHMENT 24, R. Wohlstetter, "Warning and No Response"

ATTACHMENT 25, Kozemchak, "New Versus Old Ways to Look at Defenses"

QUARTERLY PROGRESS REPORT

Contract No. MDA903-84-C-0325
For the Period January 6, 1985 - April 6, 1985

TASK 1: REGIONAL ANALYSES

(a) Role of Intelligence in Terror

Nancy Virts brought up to date the activities of Armenian terrorists. Four rather significant changes have taken place. (1) On the right, a split within the Dashnak leadership has given birth to a new terrorist group, the Armenian Revolutionary Army (ARA), which replaces the earlier Justice Commandos of the Armenian Genocide (JCAG). (2) On the left, ASALA has split into two groups over the question of whether terrorism should be directed at non-Turks. The new branch of ASALA--ASALA RM, Armenian Secret Army for the Liberation of Armenia, Revolutionary Movement--believes that non-Turkish targets should not be hit. (3) Relations between ASALA groups and Dashnak groups have worsened, with reports that they have been bombing each other's supporters. (4) The Soviet Union appears to have taken a stand against Dashnak terrorism. (See Attachment 1.)

TASK 2: US NUCLEAR STRATEGY FOR THE NEXT 20 YEARS

Albert Wohlstetter has continued to work on the problems of discriminating offense and non-nuclear active defense, on alternative policies for force employment and force structure, and in this connection on nuclear winter and its implications for US defense policy. He sent a number of private communications to USD/Policy and ASD/ISP on these subjects. Some form the background for the Secretary of Defense's March 1st policy statement to Congress on nuclear winter and some are for research guidance at

Pan Heuristics. See Wohlstetter's Working Notes (Attachments 2-14):

"Did the Soviet Deployment of MIRVs Follow an 'Iron Law' of Soviet Evasive Reaction to Action of Arms Agreement?" January 2, 1985

"NATO Counterattacks on the Ground Inside WTO--" January 4, 1985

"Virtual Redundancy Suffices for Preferential Active Defense" January 21, 1985

"Nuclear Winter Theorists Say Our Retaliation Would Be Suicidal, But Luckily, So Would His Attack" January 25, 1985

"With Nuclear Winter, the Attacker May Have to Fear the Defenses Success Less Than Its Catastrophic Failure" January 25, 1985

"US 1st Strike: SU Disinformation and US Media Confusion" March 5, 1985

"Soviet 'Self-Deterrence,' the SecDef NW Report and the Washington Post" March 7, 1985

"Have the Members of the Politboro Ever Really Worried About an Unprovoked US First Strike?" March 8, 1985

"Bohlen 1952 on Wartime Strains on Soviet Control of Its Satellites" March 12, 1985

"Special Evaluation for the NSC in 1953 Which Assumed Attacks so Large Against SAC, Cities, and Everything That They Didn't Hurt SAC Much" March 12, 1985

"Carl Sagan on the Comforts of Total Ruin" March 13, 1985

"Sagan vs. Fermi on the Evils of Large City-Destroying Bombs in Contrast to Small Nuclear Weapons" March 14, 1985

Wohlstetter Memo on Impact of Star Wars on European Allies, April 1, 1985

Albert Wohlstetter took part in a meeting on Soviet and US Conventional Options led by John Hogan of Martin Marietta; in the Second National $C^3I$ Conference of the AIAA, February 5-7 in Monterey at the Naval War College (where Fred Hoffman spoke on "The Role of Defensive Systems: The Evolution of Deterrence" and Wohlstetter spoke on "Smart Technologies for Offense and Defense to Reduce Reliance on Nuclear Brute Force"); in a

meeting on The Soviet Cruise Missile Threat for the Chief of Naval Operations Executive Panel, February 11-13 in Washington, D.C.; and contributed to its Task Force's draft report and final report.

In connection with his research, Wohlstetter met with Dr. Iklé, Richard Perle, Richard Wagner, Robert McFarlane and his Deputy for Policy Donald Fortier; Kenneth Dam, Deputy Secretary of State; Ambassador Max Kampelman, Chief Negotiator at Geneva; Gregory Canavan of Los Alamos; General Abrahamson, General Merritt and General Odom.

Fred Hoffman's work during the period was primarily on issues related to the role of SDI in future nuclear strategy. He met with USD/P officials including Dr. Iklé and Mr. Perle on several occasions during the period, and with other DOD officials concerned with SDI, including General Abrahamson. He also gave a number of presentations and led seminar discussions on SDI. Details are given below.

Hoffman was one of the leadoff speakers at the joint US-USSR meeting of the United Nations Association held in New York on January 14-16, 1985. Mr. Hoffman presented a discussion of the strategic rationale for the SDI and its relation to possible arms agreements. (The agenda and participants for this meeting are at Attachment 15.)

On January 29, at the request of Douglas Graham (Senate Armed Services Committee staff), Hoffman gave a talk on SDI before an audience of approximately 30 members of Senate staffs. On January 31, he participated in an informal discussion of SDI with Senators Glenn, Quayle and Wilson at Senator Quayle's request. On February 7, he gave a talk and participated in a panel discussion at the meeting of the AIAA at Monterey, California. The panel was moderated by Mr. J. Woolsey and included Fr. B. Hehir,

Dr. W. Perry and Prof. Wohlstetter. On February 13, Hoffman led a seminar on SDI at the Heritage Foundation. (A participant list is at Attachment 16.)

At the request of the Senate Armed Services Committee (Subcommittee on Strategic and Theater Nuclear Forces), Hoffman appeared to testify on SDI on March 1. Senators participating were Senators Warner, Quayle, Thurmond, Wilson, Exon, Hart, Levin. A copy of Hoffman's prepared statement is enclosed (Attachment 17; copy previously provided to Dr. Iklé and scheduled to be reprinted in International Security and Europa Archiv).

Hoffman was a speaker at a Colloquium in Bonn sponsored by the Planning Council of the Foreign Ministry of the Federal Republic of Germany on March 20-21. The agenda and list of participants is enclosed (Attachment 18). On March 22-24, he was a speaker at a conference at Versailles jointly sponsored by the Institute Français des Relations Internationales, RAND, the Stiftung Wissenschaft und Politik and the Royal Institute of International Affairs. The agenda and participant list are enclosed (Attachment 19). At the invitation of Lord Chalfont, Hoffman addressed a meeting in London of the House of Lords All Party Defense Group on March 26. A list of participants is enclosed (Attachment 20). While in London, Hoffman also met with John Howe, Head of the Defense Arms Control Unit, U.K. MOD to continue discussions held at the Versailles Conference and with Gerald Frost to discuss European attitudes on SDI. At Lord Bessborough's request to continue the discussion at the House of Lords, Hoffman met with him at the English Embassy when both were in Washington on April 4.

In addition to talks and briefings on SDI, Hoffman also participated in meetings on related issues and others of concern to USD/P. He participated in a meeting with Mr. Perle and Dr. Atkins of DNA on the DOD report to Congress on the Nuclear Winter phenomenon. Hoffman and Wohlstetter met with General Abrahamson to discuss policy issues related to SDI on several occasions during the period: in January in General Abrahamson's office and at a luncheon, and on April 2 during a meeting of the Defense Policy Experts working group. On the latter occasion, Hoffman briefed the group on SDI issues and on European attitudes as reflected in the March meeting mentioned above.

On the basis of his research on the issues and the discussions in which he participated, Hoffman also provided Dr. Iklé with two short papers (Attachments 21 and 22), and he prepared a letter to Ambassador Weiss (Attachment 23) for use in connection with activities related to USD/P.

During this period, Henry Rowen consulted with Andrew Marshall, Director, OSD/Net Assessment, on work related to the Nuclear Strategy Development Group. At the request of Mr. Marshall, Paul Kozemchak briefed the following individuals and offices on the subject of "New Versus Old Ways to Look at Defenses":

February 22 - A. Marshall, Director, OSD/Net Assessment; J. Gardner, Deputy Director, SDIO; T. K. Jones, Deputy Under Secretary of Defense for Research and Engineering/Strategic and Theater Nuclear Forces

March 28 - Biannual Meeting of the OSD/NA and Bundeswehr Office of Studies and Analysis. (Briefing charts are at Attachment 25.)

At the request of Dr. Iklé, Kozemchak did some classified historical research on the effect the US air defense program had on the Soviet bomber program. He presented his results to Dr. Iklé at a February 14 meeting.

During the period he met with several members of USDRE to review the history and current status of US ballistic missile accuracy improvement and penaid programs. He also assisted in providing material for the SecDef's Report to Congress on nuclear winter. This included attending R. Perle's March 9 hearing before the Scheurer-Udall Committees and F. Iklé's March 27 presentation to the National Academy of Science's conference on the subject.

Kozemchak also briefed the following individuals and offices on the subject of "Imperfect Defenses and Imperfect Arms Agreements." The briefing charts were included in last quarter's Progress Report.

January 15 - Frank Miller/Bill Furniss, Director Strategic Forces Policy, OUSD(P)/ISP

January 16 - Col. Bill Brown (and staff), Head/Joint Force Allocation and Analysis Division Joint Chiefs of Staff (Joint Analysis Division)

January 17 - Major General J. Merritt, Director/Joint Staff/JCS, Rear Admiral D. Felt, Deputy Director for Force Development and Strategic Plans, J-5, Brigadier General H. Russell, Director/Joint Analysis Directorate. (Albert Wohlstetter and Fred Hoffman also attended.)

January 22 - J. Woolsey, Special Representative to US START Delegation

January 24 - COMO J.N. Darby, Deputy Director for Polito-Military Affairs, JCS, Brigadier General E. Lanzillo, Asst. Deputy Director for International Negotiations, JCS, Capt. D. Knepper, Head/Nuclear-Chemical Division, JCS.

February 5 - H. Cooper, Asst. Dir. for Strategic Programs, ACDA. Deputy Head of the US delegation on the Defense and Space Talks.

February 11 - LTG J. Abrahamson, Director/SDIO

Richard Brody completed a draft of a paper (now awaiting internal review) on limited nuclear options and limited ballistic missile defenses. It outlines the role of what Secretary of Defense Weinberger has called "transitional defenses" in handling less than all-out attacks designed to

accomplish specific military purposes. Defense against such attacks may obviously be facilitated by a relatively low number of incoming warheads to defend against. However, limited defenses against limited attacks may face special problems of enduring through an extended campaign and an associated extended series of nuclear strikes. In the more usually considered problem of a defense against an all-out strike, just because it is assumed the bulk of an opponent's force comes in a single blow, there is less emphasis on maintaining a capability to deal with follow-on strikes.

The paper also discusses implications for target selection and damage criteria of focusing on the limited nuclear attack threats and defense against them. This then suggests the desirability of reevaluating the potential effectiveness of Soviet ballistic missile defenses, both current and under development. Considered against a canonical US SIOP, these may seem of at most marginal importance. Considered as a threat to US capability to effectively launch more selective strikes, they may loom much larger and have much more immediate implications for arms control policy as well as our force posture and planning.

In addition, Brody continued informal consultation with relevant OSD officials on contingency considerations for our nuclear posture. These included meetings with Ron Stivers and Fred Celec as well as meetings with Richard Perle, and Gordon Negus of DIA.

Brian Chow and David Blair have been analyzing the arguments used against the Strategic Defense Initiative or other programs to defend against ballistic missile attack. They can be roughly paraphrased as follows:

(1) "SDI will not work."

(2) "It can be overwhelmed by the offense and would thus only succeed in encouraging an offensive arms race."

(3) "It would not survive an attack directed against the defenses."

(4) "It is destabilizing in the sense that a ballistic missile defense (BMD) would give one side (or both sides) a strong incentive to strike first if the BMD rendered the attacking side invulnerable to a ragged second strike."

(5) "It would prevent arms control."

(6) "It would mean abandoning the European allies."

These assertions are often ill-defined and based on wrong premises. For example, some assume that the only targets worth defending are cities. Thus, a system does "not work" if it would allow bombs in small numbers to get through to cities. And discussions of stability assume that the goal of BMD is to guarantee "assured survival" of the nation's cities. One should, on the other hand, argue that a major threat to the West and a likely catalyst for war is the Soviet capability to attack a wide range of Western military assets.

Questions about BMD should be formulated so as to elicit replies that would be useful for policymakers. For example: (1) What kinds of targets can be cost-effectively defended by BMD?; (2) Can the attacker cost-effectively build more or new reentry vehicles and missiles, or use penetration aids to prevent the defense from protecting these targets?; (3) Can he more cheaply defeat this defense by attacking the BMD directly?; (4) Are various sorts of attacks more likely when either or both sides has a particular BMD system?; (5) What are our arms control options with and without BMD?; (6) Are there important sets of targets in Europe

that are now vulnerable to ballistic missile attack but could be cost-effectively defended by a BMD?

They have designed a model for analyzing some of these issues. Both sides are assumed to employ optimal attacking and defending strategies. For example, the attacker will maximize the expected target kills by taking advantage of a particular BMD system's limited footprint, while the defender will minimize the kills by using "last move" for preferential defense. Confidence levels for achieving given military objectives are also estimated in the model.

Marcy Agmon has studied some recent developments relating to the military balance in the Gulf and the Eastern Mediterranean. The Soviets have enhanced their airlift capabilities vis-a-vis the Gulf. The new Foxhound, with its long radius, can more easily and more effectively escort transport aircraft to the Gulf from the Transcaucasus. The Condor jet transport will carry more and at greater speeds than did the AN-22 (albeit to a more limited range). One can speculate that the Soviets are less interested in extending their reach than in enhancing capabilities nearby.

Greek obstructionism has intensified disputes with Turkey over the Aegean and Cyprus and has called into question the goals of the Alliance and threatened the defensibility of the Eastern Mediterranean. The intensification of the disputes between Turkey and Greece has proven particularly divisive within the Alliance and has considerably increased pressures on Turkey. Disillusioned Turks are turning increasingly toward the Islamic East at precisely the time when Greece's unreliability has made Turkey's role in the Alliance--especially in defense of the Eastern Mediterranean--all the more important.

TASK 3: AMBIGUOUS WARNING

Roberta Wohlstetter has continued to work on the fourth category of warning and response problems developed previously at PAN: ambiguous signals of violations of treaties or agreements or "understandings" or implicit codes of tolerable behavior that might require a timely response. She gave a presentation on this subject to a conference of Senior Intelligence Officers at Homestead Air Force Base on April 2nd, drawing on the cases of the Berlin Blockade and the Berlin Wall for comparison of Soviet and American behavior then and now. (See Attachment 24, "Warning and No Response.")

Brody completed the final version of his paper "NATO Reinforcement and Ambiguous Warning." Changes principally reflected comments on the Final Draft provided by John Merrill as well as comments by Don Herr of the NATO section of ISP. The paper's introduction now includes some background on the meaning and use of the term "ambiguous warning" and why ambiguity is often an inherent problem of real world warning situations rather than something which more forthright intelligence analysts could resolve. As suggested by Mr. Herr, discussion was strengthened of the importance of having plans to mobilize for defense against Soviet invasions of NATO which, at least initially, are focused on a single region (such as the Southern Flank). Also at Mr. Herr's suggestion, the recommendations section was sharpened. In particular, the paper recommends direction of a Joint Staff study on measures that could be taken in support of a partial NATO mobilization--measures that would emphasize repeatability and sustainability of effect rather than speed.

TASK 4: NEUTRALITY INDUCING STRATEGIES

Albert Wohlstetter did some work on the status of the Afghan resistance and how to improve the kinds of weapons available and their flow to the resistance. In this connection, he met with Harry Gelman and Alex Alexiev of the Rand Corporation, with Charles Bernstein of the Northrop Corporation, and with Yuri Yarim-Agaev, a former Soviet scientist now at Stanford University.

Agmon is concluding her examination of "fault lines" in Germany's World War II Axis. Her report will include the following topics: (a) the way fault lines were exploited to result in the dispersion, loss, delay, or poor performance of enemy forces; (b) the circumstances under which resistance and exploitation of fault lines were most effective; (c) how NATO can make use of fault lines in the Warsaw Pact in a future conflict; (d) what NATO must be prepared to do to exploit Warsaw Pact fault lines.

TASK 5: COST-IMPOSING STRATEGIES

No activity.

To: Albert Wohlstetter
From: Nancy Virts
Subject: Armenian Terror Update

I. The Right Wing. Because of a split within the ARF (Dashnak) leadership the Justice Commandos of the Armenian Genocide (JCAG) has been replaced by a new (perhaps just of different name) terrorist group the Armenian Revolutionary Army (ARA).

A. In 1982 a prominent Lebanese Armenian Dashnak leader, Apo Ashjian disappeared under mysterious circumstance in Beirut. According to ASALA sources, Ashjian was a left wing member of the Dashnak and leader in the JCAG who was killed by the right wing of the same party. Ashjian reportedly told ASALA leaders before he was killed that he opposed a deal made by ARF leaders and the CIA according to which the JCAG would cease opperations in the US especially during the Olympics. ASALA claims those individuals responsible for Ashjian's murder, two top ARF leaders Sarkis Zeitlian and Hrair Maroukhian, created the ARA to replace the JCAG. (See Armenian Reporter, June 7, 1984 and September 13, 1984)

B. The following is a list of ARA operations to date;

1. July 14, 1983- Assassination of a Turkish Diplomat in Brussels.

2. July 22, 1983- Take over of Turkish Embassy in Lisbon Portugal. Five ARA members blew themselves up as a "sacrifice on the altar of freedom". The wife of the Turkish ambassador was also killed. His son and a Portugese policeman were injured.

3. June 21, 1984- Assassination of a Turkish diplomat in Vienna.

4. September 4, 1984- Car bombing in Istanbul.

5. March 12, 1985- Take over of Turkish Embasssy in Ottawa, Canada. One Canadian security guard killed.

C. There is little doubt that the ARF supports this group. ARF leadership went to great lengths to promote the "Lisbon 5" as martyrs to the cause of Armenian freedom. (See Armenian Weekly, August 20, 1983, p.1, September 17, 1983, p.3, October 22, 1983 for example)

II. The Left Wing. ASALA appears to have split into two groups over the question of whether terrorism should be directed at non-Turkish targets.

A. This split also began with assassination. On July 15 and 16, 1983 two top lieutenants of Hagop Hagopian also known as Mujahed, the founder of ASALA believed to have been killed in Lebanon in 1982, were assasinated in Bekaa Valley of Lebanon. The plot was masterminded by Monte Melkonian, a California born Armenian, reportedly hiding in Europe. Melkonian is the head of a new branch of ASALA which calls itself Armenian Secret Army for the Liberation of Armenian, Revolutionary Movement (ASALA RM) ASALA RM appears to composed mainly of the European members of

ASALA. The middle eastern members loyal to Mujahed remain in ASALA. Melkonian has written his own version of the history of ASALA which has been published in the Armenian Reporter. This history portrays Mujahed as despot, running ASALA in dicatatorial fashion primarily to satisfy his own ego. ASALA RM politics appear to be as leftward leaning as ASALA's. The major difference between the two appears to be ASALA RM conviction that non-Turkish targets should not be deliberately hit. Apparently the Melkonian group has the support of Ara Toranian of the Armenian National Movement in Paris. (See Armenian Reporter September 9, 1984, January 10,17,24 1985)

B. Although Melkonian's history of ASALA is obviously biased, it does support several conclusions we have already made about ASALA.
1. ASALA ties to the PLO. According to Melkonian, ASALA's founder Mujahed, joined Wadi Haddad's faction of the PFLP as a way out of his past, not as a result of a "conscientious political or partriotic decision". He began ASALA in 1974 as way to escape conflicts within the PLO. Although he had not been previously involved in Armenian politics Armenians were willing to join with him because they needed resources only available through his ties to the Palestinian resistence to carry out armed struggle.
2. ASALA competes with the JCAG. According to Melkonian between 1975 and 1980 ASALA actually carried out very few operations, almost all of which were the work of one man, Hagop Darakjian. However, Mujahed was able to claim responsibility for many actions actually done by the JCAG.
3. The importance of popular suport. Melkonian identfies two events which substantially increased ASALA's popularity and support, the imprisonment and subsequent release of Alek Yenikomshian and Suzy Mahseredjian in Switzerland in late 1980 and the take over of the Turkish consulate in Paris in late 1981. Melkonian writes about the first of these incidents "As a result of their imprisonment many new comrades began to adopt a lime sympathetic to ASALA. Comrades from the "New Armenian Resistence" in France joined ASALA's ranks while the comrades of "Azad Hay" in Canada and "Gaitzer" in Britain began to view ASALA in with greater sympathy."(Armenian Reporter Jan. 17, 1985 p.2) As a result of this increase in support ASALA began to publish its official organ "Armenia" and established a "permanent presence in a training camp". Melkonian does not identify whose training camp ASALA used. However, he does say that "it was greatly due to the training program in this camp that for the first time military cadres were prepared in ASALA"(Armenian Reporter Jan 17, 1985 p, 2).[note: Melkonian and Comrade Suzy evidently were close associates who joined ASALA at the same time. Perhaps we should nominate our own Glendale as the North American capital of terrorism] Melkonian writes about takeover of the Turkish consulate in Paris:" For the first time an act of Armenian armed propaganda had suceeded in creating a genuinely positive interest about the Armenian people and their plight within public opinion on an international level. Moreover, Armenians throughout the world began showing much more sympathy for the armed struggle, and solidarity with ASALA was expressed by Armenian elements that had previously been reluctant to accept what had frequently been portrayed as `terrorism'" (Armenian Reporter, Jan 24, 1985 p.4)

C. Although ASALA RM has not taken credit for any operations yet, the two

groups have been trading charges for some time. ASALA has evidently arranged for a Greek publication "Popular Struggle" to print names and photographs of members of ASALA RM in the hopes that they will be arrested in Europe.(Armenian Reporter September 9, 1984)

III. Relations between the Left and Right.

A. It seems clear that at least in Lebanon, Dashnak groups and ASALA have been bombing each others' supporters. There are also reports that Dashnak supporters have given police information leading to the arrest of ASALA members. (Armenian Reporter October 4, 1984,p.1)

B. Elsewhere the war of words between the groups seem to be escalating, but no actual incidents have been reported. However the rhetoric is reaching absurd levels. An example is the bomb scare against the Turkish Olympic team in LA this summer. After the incident was reported in the press, ASALA claimed credit for the action. However, later a LAPD officer James Pearson who discovered the bomb reportedly admitted planting the device.(LA Times Aug 15, 1984). Later the Armenian National Commitee sent a letter to the LAPD suggesting Pearson had links to the Turkish government.(California Courier Oct 11, 1984 p.6) Still later ASALA claimed again that they planted the bomb and Pearson was set up to take the fall by the FBI/CIA who did not want it known that ASALA was active in the US. (Armenian Reporter September 13, 1984)

IV. Relations with the Soviet Union.

The Soviet Union appears to have taken a stand against Armenian terrorism. Ten days after the Soviet Prime Minister Nikolay Tikhonov returned from an official visit to Turkey, the Communist party chairman in the Armenian SSR denounced "fanatic Armenians" and stated that his party would launch a campaign against them in a meeting of the Armenian Party Central Comittee. However only those fanatics who are members of Dashnak groups were denounced. Other articles in the Soviet press have also denounced the Dashnaks for their "hostile anti-Soviet campaign". No other terrorist groups were mentioned. Intersetingly enough around the same time (January 1985) ASALA issued a statement condemning the Dashnaks and claiming that "ASALA's relationship with the socialist bloc and with progressive counties will be strengthened in the next stage. Strenuous efforts will be made to make Armenia a principal and firm center for the liberation struggle."(FBIS WE January 24, 1985 p.T6-7 quoting Beirut AL-NAHAR in Arabic Jan 21 1985 p.12. See also FBIS WE January 22, 1985 p. T4 quoting Istanbul BULVAR in Turkish Jan 17, 1985 p.3) In spite of the long standing hostility betwen the Soviets and the Dashnaks, I am some what at lost to explain Soviet hardline against the ARF. As I noted in my previous paper "Dissent in Soviet Armenia" the Dashnaks have adopted a concilatory line towards the Soviets in recent years. The only possible explanations seems to be either a rather paranoid fear of dissent within Soviet Armenia or anger at Dashnak actions against ASALA or a desire to pacify the Turks by making strong statements against at least one Armenian group.

Rev: 3/1/85
Disk: #111

Did the Soviet deployment of MIRVs follow an "iron law" of Soviet evasive reaction to the action of arms agreements?

1. The answer is that the law of Soviet evasive reaction may not be made of iron or high strength steel, but it's a lot stronger than the plastic "law" of the arms race propounded by advocates of MAD. The Soviets were racing but not because we were racing, either qualitatively or quantitatively. We weren't. And the standard theory is no better at explaining U.S. behavior, for example in the deployment of MRVs or MIRVs.

The standard theory of arms races that underlies the arms negotiations of the last two decades has it that every time one side acts to introduce more or better arms an "iron law" assures that the other side will react to offset this action and this leads to further actions and reactions, leaving both sides worse off after spending huge sums of money that could have been devoted to the poor and other worthy causes. The theory usually sees innovations, especially in active defense, as driving "the race".

When they talk of an "unconstrained arms race" proponents of this arms doctrine seem to think of the measures of defense that we take on our own, unconstrained by arms agreements or by hopes for future arms agreements, as if they were also unconstrained by budgets and the need to spend resources for other goals, or almost anything else--it is "a spiralling race to oblivion". On the other hand, they think of the behavior of the two sides in a negotiation or under an agreement as in

essentials cooperative-- an abandonment by both sides of all low thoughts and schemes to gain a unilateral advantage. Their high-minded view of negotiations with an adversary shapes how they interpret the entire history of innovations such as MIRV. They generally represent MIRV, for example, as an unfortunate reaction by us to the ungrounded fear of a future Soviet ABM and the Soviet MIRVs as an inevitable consequence of our ABM plans and our MIRVs. Our seemingly innocent desire to get an active defense against the ballistic missile threat was the fons et origo malorum. History, however -- and the Soviets -- stubbornly resist the theory.

For one thing, the Soviets deployed their SS-17, 18, and 19 ICBM MIRVs, and all their naval MIRVs, long after the SALT I treaty on ABM, and after the United States had abandoned all evil thoughts of putting up a thin or thick shield of BMD for its cities or even for its missile silos. To take the case of the SLBM, the SS N 18 mod. 1 was deployed in 1978(?). The SSN 20 with 6-9 MIRVs was deployed in 1981. As for the MIRVed ICBMs, the SS 17 mod 3 with four warheads was fielded in 1979; the SS 18 mod 4 and SS 19 mod 3, (etc, etc, to be filled in Dec./Nov., 1984 perhaps use update by the Committee on the Present Danger).

These deployments of course also came after the SALT I offense constraints on the number of launchers on each side which were intended especially to constrain the number of "heavy" missile launchers and therefore, it was thought, the number of silo-destroying warheads. The Soviet deployments circumvented the SALT I restraints on launchers. More important, they made totally vacuous the constraints embodied in

the offense agreement on silo-destroying warheads. The Soviets evaded these restraint by improving the precision and therefore the effectiveness of their smaller warheads, and by developing cold launch techniques which enabled them to squeeze larger boosters and more throw weight and more warheads into a launcher. This enabled them to multiply by a factor of nearly six the number of warheads that could destroy an undefended Minuteman silo. The restriction in the number of our silos made Soviet MIRVs more effective at a given budget, less then of a drain on Soviet resources, and therefore, more attractive. In short, these Soviet MIRV deployments reacted not to our ABM but to the opportunities presented by the agreed offense restraints.

2. Soviet MIRV deployments were anticipated by the advocates of U.S. Safeguard. The opponents of Safeguard who proposed agreed constraints as a substitute for active defense deprecated the possibility of Soviet MIRVs. That's a sore point about the history which has been written mostly from the standpoint of those who backed agreements designed to leave us with a capability only for mutual destruction. They dominate journalists' views and also the partisan semi-official histories, such as Cold Dawn, End Game, and Deadly Gambits. After the Soviets fielded MIRVs, advocates of MAD deplored MIRVs on both sides. They spread the myth that the American ABM compelled the Soviets to field MIRV as a counter measure. They also suggest that the advocates of ABM had not anticipated this.

The truth has very little to do with this myth. The advocates of ABM who designed the Safeguard system or supported it made their calculations of Minuteman vulnerability with and without defense on the basis of their anticipation of Soviet attacks using MIRVs. They

explicitly expected silo defense to become increasingly capable of dealing with continuing improvements in offenses.

The advocates of arms agreement as a substitute for active defense, on the other hand, had a much more ambiguous record than they pretend on the subject of the American MIRV and a much worse record than the advocates of Safeguard on predicting Soviet MIRVs. With the exception of Alton Frye and Larry Smith, the aides to Senators Brooke and McIntyre respectively, those who campaigned against the ABM carefully avoided any campaign against the deployment of U.S. MIRVs on Poseidon and Minuteman III. They did not want to dilute their all-out war against the ABM. Moreover, they expressed the greatest skepticism about Soviet develop-ment of MIRVs. George Rathjens in testimony, for example, said that these would be much harder for the Soviets to develop than was assumed by those who claimed that an undefended Minuteman would be vulnerable to Soviet attack.

3. This sharp difference between those who would rely mainly on agreements to maintain deterrence through mutual assured destruction and those who would rely mainly on our own unilateral measures for protecting our retaliatory force by reducing Soviet incentives to attack did not start with the ABM debate of the late sixties and early seventies. It goes back to the beginnings of Minumum Deterrence theory as the basis for arms control at the end of the 1950s. In fact, at the first Daedalus Conference on Arms Control in 1960 at Harvard, Dr. Wiesner presented his model of stability under an arms agreement. It involved 200 ICBMs on each side sheltered in 300 psi silos and an assumed CEP of a half nautical mile. Wiesner advanced the view that

since each missile had a probability substantially less than one of reliably arriving in the target area and exploding close enough to the target to destroy it, such an arrangement would be quite stable, even if one side cheated. (The cheater, he said, would have to hide an infeasibly large number of missiles in order to destroy a very large fraction of the opposing missile silos.)

Some of the participants at the Daedalus conference had long been familiar with the situation in the 1950s which was in part responsible for the difficulty of getting a responsible second strike capability--namely that one obsolescent enemy bomber could destroy a great many advanced bombers on our side. (Some of our air bases had concentrated as many as 90 B47s and 30 KC 97 tanker aircraft.) Though MIRVs had not been developed in 1960, they pointed out that nothing would prevent an adversary's developing an ICBM or SLBM booster that could carry several warheads, each independently aimable at one of our silos. To those professionally concerned with the development and maintenance of a second strike capability, this had become obvious a couple of years earlier when the US space program launched a booster with a multiple payload. In short, by the end of the 1950s, it was plain to those involved in the unilateral development of our own second strike force that in the future we would have to be ready to cope with multiple independently aimed reentry vehicles and that an arms control agreement which tried to secure stability by constraining missile launchers would only provide an adversary with a strong incentive to develop such vehicles.

Henry Kissinger in his article, "Is an Agreement Possible on Arms?" (L.A. Times, 12-16, 1984) - at last - recognizes that the

assumptions on which arms agreements like SALT I were based proceeded from the state of the art at the end of the 1950s, and from the expectations and limited foresight of arms controllers at that time.

> Contemporary weapons technology has made traditional arms-control theory obsolescent. Developed in the late 1950s and early 1960s, this theory assumed stationary missiles and relatively inaccurate single warheads. Since it would take more than one attacking missile to destroy an offensive one, it was plausible to believe that if one could negotiate essential equality of strategic forces, the incentive for surprise attack would have been removed.
>
> Modern technology has overtaken this simple equation. Today launchers can carry 10 or more highly accurate warheads; some missiles are becoming mobile. Equality in numbers of launchers has become less and less relevant to strategic stability. Even reductions can prove meaningless or dangerous if they do not ameliorate the disproportion between warheads and launchers.

However, he thinks that this raises merely certain "technical" issues about the "factual content of verification" and about whether the margin of uncertainty in verification is "strategically significant".

His history, unfortunately, is inadequate and the trouble with the arms control theory he has operated under is more fundamental than he suggests. A more adequate history would show that the failure of arms controllers to anticipate developments was strongly influenced by a MAD bias. And the questions which he now suggests need resolution, suggest the same bias for evaluating "strategic significance". The simple view of strategic significance would regard any changes in adversary forces as "insignificant" as long as they left us still able to destroy enemy cities in a suicidal spasm. In short, it depends on the mutual assured destruction theory which got us into trouble in the first place.

Predictions about technology should be free of the bias that influenced arms controllers starting near the end of the 1950s. Though

Kissinger attended that Daedalus conference in 1960, he has forgotten that some of the decisive changes he refers to now were foreseen, not only in 1972 when Salt I was signed, but at the time of the Conference. They just were not foreseen in 1960 or in 1972 by the MAD arms controllers.

5. There are also many other indications that our MIRVs and even our MRVs were understood and intended by us quite early on to have an obvious application to improving effectiveness in destroying targets; they were not exclusively thought of as a "penetration aid". The problem Henry has in understanding this history is the same problem that arms controllers have with understanding the problem of arms control itself -- now and in the future: Military systems have more than one purpose and there is always more than one way of accomplishing a given purpose. Multiple reentry vehicles, whether aimed independently or not, help at least one warhead to penetrate active defenses. But it is also true that multiple lower yield reentry vehicles can have a larger destructive effect than a single large warhead. That may be true even if the multiple reentry vehicles are not aimed independently. The first Navy MRVs (check the date) and the MRVs on Minuteman II exploited $NY^{2/3}$. These MRVs split a large yield among several smaller warheads, and this enables them to avoid wasting energy by overhitting the center of a large soft area target. They spread the destructive energy more efficiently. In fact, both the Air Force and the Navy had an interest in the application of MRVs as well as MIRVs to improving the efficiency in the use of destructive energy. They were not exclusively interested in penetrating a possible

ballistic missile defense, but in destroying actual targets once their warheads arrived in the larger area.

These last comments on the history of MIRV and MRV supplement, and in part correct, some of the statements on that history in my previous note "Are the Media Penetrable?" (12/27/84)

Rev: 3/1/85
Disk: =109

NATO Counterattacks on the Ground inside WTO-- Comments on Huntington, Dean, and Wartime Dissidence in the WTO

Sam Huntington had another version of his proposal for conventional retaliation on the ground in Europe recently in International Security (Winter 1983/84 Vol. 8, No.3, pp. 32-56). Jonathan Dean, former U.S. Ambassador in charge of the MBFR negotiations in Vienna, responded in the following summer issue. Dean had proposed a much more tentative suggestion of the same sort in Foreign Policy for 1982 as one among several alternatives. He had proposed a "defense through mobile counterattack" as one of several "innovative approaches to conventional defense". (Others "innovations" were: making more extensive use of prepared defensive positions in the forward area, wider use of modern technology, PGMs to stop Soviet reinforcement, getting the French to say that they would support NATO forces if the Soviets attacked, organizing West Germany's ground force reserves into combat units corresponding to the 12 active West German divisions.) He suggested rather timidly that the present policy was "to stand firm and immobile under attack", and that this was hard to do even with a heavy numerical superiority.

Dean's intention was to make the present implausible NATO conventional defense less implausible. And specifically to do so in order to replace NATO's strategy of depending on the first use of nuclear weapons. Dean was following the Gang of Four in Foreign Affairs .

However, he cringed even as he made the proposal for "active consideration of defense through mobile attack." "Consideration" sounds mild enough-- even an active consideration. All he was suggesting was that this shouldn't stand in the way of studying the advantages and disadvantages of such a concept which he described as follows:

> Under this concept, NATO would hold its armored forces in reserve behind a screen of defensive forces. The screen would include the additional West German reserve divsions, as well as British, Belgian, Dutch, and U.S. units already in forward position. They would absorb the impact of a first Warsaw Pact attack. The mobile armored forces would then counterattack, carrying the conflict into enemy territory. The counterattack would have the limited objective of encircling and cutting off the attacking force from its reinforcements in order to bring about a negotiated end to the conflict. [emphasis mine]

The last sentence, which I have underlined, indicates just how nervous Dean was in making this daring suggestion. Dean hastens to make clear that the purpose of the counterattack was only to bring about negotiations on ending the war. There is no hint that the counter-attacking forces might offer some support to elements in the Warsaw Pact who might want to join the democracies, or at least declare themselves neutral from the conflict between NATO and the Soviet Union. Dean made clear he was not arguing for any particular alternative, only for doing something that would reduce reliance on "extended nuclear deterrence". (And in this article Dean interprets "extended deterrence" to mean what Mac Bundy means by it: nuclear deterrence of conventional attack on Europe. As I pointed out in my correspondence with Mac Bundy, this alters the original meaning of the phrase which had to do with nuclear deterrence of nuclear attack on an ally. It

illustrates the characteristic evasion of the problem of dealing with a Soviet LNO.)

In any case, Dean ends with some pieties about how arms control and specifically MBFR might reduce the chance of war through "misperception or miscalculation". In spite of all the modesty with which Dean put forth his suggestion that NATO might consider studying, as one of several alternatives, moving forward rather than standing still after an attack, he apparently was slapped down. He suggests in his answer to Huntington (ibid. p. 206) that he had learned after he had presented his modest proposal that "despite its logic, European governments will not carry it out." Interestingly, in both his article in Foreign Policy and in his answer to Huntington, Dean does mention the possibility that the Soviets have to worry about losing control of East Europe during a large conventional war. However, Dean mentions this only as a way of suggesting that we don't really have to worry much about a Soviet threat of conventional war. And therefore we don't have to do much to make up for reducing our reliance on nuclear deterrence of conventional attack. He doesn't suggest doing anything in the event of war to bring about a loss of political control by the Soviets. In fact, like the Gang of Four, he seems to want to exchange pledges of no first use without much reducing our reliance on the deterrent effects of our potential first use of nuclear weapons.

In International Security, even more than in his Foreign Policy piece, he has a useful description of the present NATO strategy of standing still under attack. He says, "NATO forces cannot go backward, but they cannot be seen to be poised to go forward either." Only this

time he thinks that the political constraints imposed by Germany's peculiar position cannot be relaxed in favor of "more resolute and militarily effective defense postures like that recommended by Professor Huntington." Interestingly, in his International Security answer to Huntington, he notes that Huntington's strategy would "put at risk Soviet control over Eastern Europe" as well as "threaten the forward momentum of the main lines of Soviet attack by pushing up into their lines of communication in East Germany". He admits that this may be "the best single low-cost improvement NATO could make in its defense posture". However, he believes that the strategy "would have adverse security consequences as well as political ones because, "a more militant NATO defense policy... could boost the morale and cohesion of Pact forces", it would beget more pressure by the Soviets on its allies, greater efforts to modernize, and make them even more fearful of Germans.

In short, Dean ignores, just as the Soviets would and do in their propaganda, and our timid allies would in their nervousness, the fact that Huntington is talking about counterattacking after the Soviets have invaded Germany. He also neglects the fact that the counterattack could be coupled with a political strategy not for acquiring territory but offering all the central European peoples the right to choose their rulers-- a policy not likely to increase the cohesion of the Warsaw Treaty Organization. He goes on to talk about the paranoid, nervous Bolshies who might let things get out of control in their panic and (as Huntington observes) he worries about the fact that a NATO capability to counterattack might be ambiguous, look like

an intention to invade East Germany and Czechloslovakia. It appears, however, that he is also willing to wring his hands and withstand the much more plausible ambiguity about Soviet intentions presented by the Soviet deployments in Central Europe. He believes that arms control can resolve that Soviet ambiguity favorably. It apparently doesn't occur to him that the Soviets might actually have expansionary ambitions -- at least contingent aggressive intentions that would be acted on provided the price were right.

Finally, he has a discussion given earlier on NATO's "layer cake deployment" of the national forces of many NATO countries forces which suggests to a less optimistic reader that the layer cake now is particularly weak: the layers run normal to the front, and the Soviets need not attack all simultaneously.

## Virtual Redundancy Suffices for Preferential Active Defense

We usually formulate the basic idea of preferential defense as one that depends on our having more vehicles or other facilities and forces which we are defending than we actually need for our military operations. This implies that an aggressor planning an opening attack would want to have a high confidence of destroying not only the redundant elements of our force but the essential ones as well. If defense can make its decision on which subset of points to defend and concentrate its efforts there and the offense cannot know which subset is being defended, then the offense has to plan its attack as if all its targets were equally protected by the concentrated defense.

A particular case which is especially advantageous to defense arises if the defense, in addition, can learn as the result of its tracking capabilities, which targets are actually being attacked. However, even without that knowledge, preferential defense can offer great leverage so long as the defense decides which subset of targets to defend, and the offense has to assign its vehicles to targets without knowing which targets are defended.

So much has been familiar for a long time in the ballistic missile defense community. The point of this note, however, is to make clear that preferential defense does not depend on actual redundancy so much as on virtual redundancy. If the defense can by deception or mobility multiply the number of locations at which essential elements of his force might be, then in effect -- from the standpoint of the attacker -- the targets are redundant. The attacker has to have a high

confidence of destroying a large enough fraction of them so as to leave less than the number of virtual points sufficient for the defender's military purposes. This is particularly clear if the defender's decision as to which points actually to defend is based on continuously updated information as to the position of the forces which he is defending. Such considerations apply not only to the defense of ICBMs by a combination of active and passive measures. They also can apply to the defense of the National Command Authority (NCA). They apply here even more initially: we can't multiply Presidents and Vice Presidents but we can, as the Soviets have, multiply the hidden locations at which they might be found. An NCA moving about within a large hardened area in which any of several small hardened areas can be isolated from the rest, can benefit greatly from preferential defense. We should probably burrow a tunnel under the White House leading out in several directions to strong points strung out along tunnels with many usable hard points and make clear that no one is talking about defending Washington and the Brave Senators and Congressmen who worry about whether their constituents will think them cowards. It would be nice, however, to have a protected and politically responsible command.

## Nuclear Winter Theorists Say Our Retaliation Would be Suicidal, but Luckily, So Would His Attack

Theorists of nuclear winter imply that Western response to a nuclear attack would itself cause nuclear winter. And therefore, that the West should not actually respond. This seems plainly to undermine the West's ability to deter nuclear attack-- which might seem bothersome. But not to worry, the Soviets, in initiating a nuclear attack, would bring on a nuclear winter, and so destroy themselves. Therefore, they will never attack. We can't deter their attack, but they can and will deter their attack. It all turns out for the best in this best of all possible worlds.

This is the key argument implicit and sometimes explicit in the surge of statements about nuclear winter since 1982. It is supposed also to justify calls for disarmament and, in particular, it would seem to justify, if not looked at too closely, a call for disarmament on our side, even if one can't get an enforceable disarmament on their side. After all, they won't actually use their nuclear forces, since they don't want to commit suicide. This latter point is a bit tenuous since at the very least we have to present them with lots of military targets near cities to make their attack large enough to cause nuclear winter. And, in any case, it may seem inconsistent with the assumption made by some proponents of MAD, who also are theorists of nuclear winter, that the Soviets would respond to any substantial defense of our cities by trying to kill as many civilians as possible, even if it triggered nuclear winter. (See Space Based Missile Defense, Union of Concerned

Scientists, p. 81.) Consistency, however, is not their hobgoblin.

The characteristic strategic assumption of the nuclear winter theorists is that the only sort of attack the Soviets would make would be so large and so focused on cities as to end civilization in the West, but also, fortunately for the West, in the East as well. Therefore, they are not likely to strike at all. This is sometimes spelled out a little more by saying that even if they attacked military targets, military targets in the West are so numerous and so closely co-located with cities, that <u>any</u> attack on military targets would destroy cities. And therefore, given the fact that burning cities might cause the global catastrophe of nuclear winter, it would automatically destroy life in the Soviet Union too. The nuclear winter phenomenon, as I suggested at West Point, is supposed to eliminate the middle man in deterrence. Each side threatens to annihilate itself. MAD enemies don't really need each other.

The problem in puncturing this balloon has nothing to do with any intrinsic plausibility it might have. To expose its absurdity does not take an awful lot of analysis and empirical examples. (The Soviets don't have to attack <u>all</u> military targets in the catalog of potential facilities or forces at risk in order to have a decisive effect on an ongoing campaign. A quite small attack on 50 or so main operating bases, major radars, and nuclear and non-nuclear munitions stocks in Europe could determine the outcome of an ongoing conventional war without coming anywhere near the threshhold of a possible nuclear winter. If our only possible response is to start a nuclear winter, the Soviets might find that response incredible and make such a small and clearly non-suicidal attack. That sort of Soviet attack is clearly

more plausible than a suicidal attack.) The problem arises from the fact that, with the rapid increase in megatons in U.S. stockpiles that occured in the mid-1950s, leading to a peak at the end of the decade; the targeting bureaucracy began to suffer from elephantiasis. And intelligence obligingly supplied equally elephantine Soviet attackers. Moreover, MAD doctrine penetrated the targeting bureaucracy-- as Admiral Noel Gayler illustrates. That means that nuclear winter theorists can easily find a retired military officer who will swear that the Soviets would not dream of launching an attack that doesn't involve the massive destruction of American cities even if they knew that it would bring about a nuclear winter. And a retired officer who will also swear that even though the United States has developed some limited nuclear options for responding to a nuclear attack, they themselves don't take these options very seriously. The recently retired Chairman of the JCS keeps repeating that any conflict in which nuclear weapons are used will almost surely be unlimited.

Fortunately these gentlemen are not in charge of deciding on how to respond, and American political leaders are no more likely to commit suicide than Soviet ones. However, since the Department of Defense has been remarkably silent about the bizarre "scenarios" put forth by nuclear winter theorists, it is worth quoting in some detail examples of the arguments now being made that say that any Soviet attack of military significance is likely to start a nuclear winter.

A) Sagan, at the Oct. 1983 Conference "World after Nuclear War":

See The Cold and the Dark, pp.33-37.

> Mr. Ralph Nader:...Assuming a successful first strike by Adversary A against Adversary B, at what level would a successful first strike, given your calculations, invite suicide for the aggressor?

> Dr. Sagan: We have an excellent chance that if Nation A attacks Nation B with an effective first strike, counterforce only, then Nation A has thereby committed suicide, even if Nation B has not lifted a finger to retaliate.

B) Thomas Powers', article in the Atlantic Monthly (November 1984) which is titled "Nuclear Winter and Nuclear Strategy", has as subtitle the statement,

"If the 'nuclear winter' theory is correct, an aggressor would destroy himself, even if there were no retalation"

Elsewhere in the body of the article, Powers does not clearly separate the question of whether the aggressor's first strike would destroy himself because it involves attacking the victim's cities from the question of whether the victim's retaliation would cause a nuclear winter. He says that some military men, including "a retired admiral" (obviously Noel Gayler),

> ...who was in charge of war planning for the Joint Chiefs of Staff (JCS) in the early 1970s-- look rueful, smile ironically, and give vague waves of the hand and shakes of the head when they respond to claims that a thousand large fires in a hundred major cities could mean big trouble worldwide. The targeting experts know we're planning to do worse than that to the Russians. But if you take the cities out of the war plan, there's no plan left...

Here Powers seems to be saying that our planned retaliation would destroy life on the planet. But he ends the paragraph by saying,

> if the smoke of burning cities is really a problem, then our current plans for fighting a nuclear war amount to literal suicide for the country that strikes first, even if there is no retaliation...

Which last is a bit confusing: the sentence is plainly talking about a first strike, (it says "even if there is no retaliation",) but on the other hand, refers to our current plans for fighting a nuclear war as amounting to literal suicide. It's hard to make head or tail out of

that, except on the assumption that our current plans for fighting a nuclear war mean striking first.

Powers, who has written a book about the SIOP, also reports that "if you take the cities out of the war plan, there's no plan left." And that, " if we finally admit that we can't fight a nuclear war without destroying ourselves-- really destroying ourselves-- then perhaps the time has come to quit preparing to fight one." And suggests that the White House and the Pentagon have been virtually silent about nuclear winter because those who know realize that the nuclear winter thesis is right and that "if valid, threatens to make nonsense of every notion the planners have managed to come up with, in forty years of trying to devise a sensible way to fight a nuclear war."

> "At the Livermore Lab, Michael May said recently that he wasn't sure whether the nuclear-winter thesis would stand up, but that he very much doubted the war planners would be wiling to leave cities out of the targeting line-up. "You can say, "Don't shoot at the cities-- that's fine," he said, "But are they [the Russians] going to leave all our airfields alone . . ."

Then Powers says "If those targets are attacked, the cities will burn. If those targets are spared, we have no theory of how to fight a nuclear war."

C) Proxmire, Sagan, Jim Schlesinger, and Carrier on Face the Nation, 16 December 1984 provide several examples.

1. Fred Graham (the moderator): "... one side could shoot its weapons and with no retaliation from the other side. The aggressor could be destroyed by a nuclear winter."

Dr. Sagan (sic): "The self deterring aspect of first strike is one of the many policy implications of a nuclear winter, ..."

2. Senator Proxmire: "...it is an illusion to argue that we can have a -- any kind of a nuclear war that wouldn't very likely escalate one side or the other -- probably the Soviet Union -- but one side or the other to hit cities. The losing side is going to do whatever they

have to do to try to prevail or prevent the other side from -- from prevailing, ..."

The Senator concluded that this meant "...that we should emphasize arms control ... to prevent any possibility of a nuclear war."

However neither he nor Sagan observed that arms control would have to eliminate over 99 and 44/100s percent of the world's arsenal of over 50,000 nuclear weapons, verifiably and enforcably, in order to prevent owners of the remaining bombs from starting a nuclear winter, if they insisted on striking cities. For Sagan in that program outdid himself in indicating how low the threshhold was. He said that "one percent of ... the 18,000 strategic weapons in the world ... is sufficient to produce nuclear winter. A single U.S. nuclear submarine is able to destroy 160 Soviet cities." None the less Sagan says that "we should have something closer to a minimum deterrent where no combination of misunderstood orders and computer failures and madness in high office could trigger nuclear winter." "Minimum deterrence" is code for aiming at cities - especially with submarines. If Sagan is right about attacks with 180 weapons on cities causing a nuclear winter, the minimum deterrent force is just the kind that will start a nuclear winter.

3. Jim Schlesinger started off a little better and then plunged into total confusion. He said that the Carrier Report is accurate but this didn't affect us because our policy was to avoid cities. (Leave aside the targeteers' hypocrisy that the nuclear winter theorists have seized on: attacking military targets in cities but burning the city too.) He said that nuclear winter will be a new constraint on Soviet policy because in the past they "have said repeatedly that they will have massive attacks." A short time later he forgot this statement, and said Star Wars raises the question as to "whether one's opponent

will simply increase his offensive forces to overwhelm any hypothetical defense, and thus you wind up with more detonations, ...".

4. Fred Graham asked about MX and Star Wars and whether we shouldn't stop them. Schlesinger said that MX was a hard target killer and therefore, he implied, wouldn't burn cities. (He thus ignored both Sagan's remark about co-location and the large yield of the MX warhead; and in general the difference between the ability to destroy a military target with a precise small warhead or with a large warhead causing a lot of collateral damage.)

5. Amid the other confusions, Carrier described the NAS baseline case involving the explosion of 25,000 nuclear weapons as illustrating that the NAS did not want to take an extreme. He apparently doesn't realize that to arrange for 25,000 weapons actually to explode would probably take more than the world's arsenal. Carrier and Fred Graham both referred to DOD silence about on the NAS report.

6. Finally, Schlesinger himself said "that both sides should be self-deterred, and the Soviets, in view of their announced strategy, will be deterred from attacking U.S. cities." Thus, Schlesinger seemed to agree with the notion that nuclear winter means that the Soviets will never initiate a strike since they will not want to start a nuclear winter.

C) The Union of Concerned Scientists, in its Space Based Missile Defense, 1984, has a passage that supposes that the Soviets would attack cities massively-- apparently as the opening attack of a nuclear war even if they knew it would trigger a nuclear winter; and moreover, that they would make such an attack if and because the United States had tried seriously to defend its cities against incoming ballistic

missiles. They say that "a likely response to a serious American attempt to protect cities" would be for the Soviet Union "to target its missiles to maximize damage to the U.S. population"; that they would need only five percent of their ballistic missile warheads to kill up to half of the U.S. urban population immediately and "moreover, enough nuclear explosions would occur even in this very optimistic case to pose a serious danger of triggering a climatic catastrophe (the "nuclear winter" phenomenon)."

Optimistic case? The Soviets must really feel rather passionate about the Strategic Defense Initiative if they are willing to end life in the Northern Hemisphere, including Soviet life, as a response to an American deployment of ballistic missile defense capable of offering "serious" protection to civilians. This bizarre assumption, however, is quite characteristic of the way that the possibility of a "nuclear winter" is being used to fortify MAD doctrine. In fact, it completes MAD's confusion.

D) TTAPS, and the NAS final report melt first and second strikes and the Soviet Union and the U.S. together into one collective, simultaneous conduct of "a major nuclear war". They talk sometimes as if they seriously considered the evolutions of some plausible contingencies in which one side, the aggressor, attacked and the other side responded to attack. They frequently refer to the various cases that they have examined as "scenarios" - which certainly sounds as if they were accounts of various possible sequences of events. However, they really only suppose that a very large number of nuclear explosions happen to occur over large numbers of the major cities of NATO and the

Warsaw Pact and possibly also in non-alligned countries: in some cases these responses over cities occur simultaneously with nuclear explosions uniformly distributed over non-urban land areas in the two alliances and/or outside them.

The Soviet Union and the United States apparently cooperate to destroy all these targets. No break down is given as to who did what to whom, much less in what sequence. Or why. In fact, it is highly doubtful that these simultaneous, or near simultaneous explosions, can be reconciled with any faintly plausible sequence of events. For example, in the NAS's baseline case, the Soviet Union, is said to assign two bombs of megaton yield to explode on or near the surface for each silo on the other side. For this purpose, each side would have to launch many more warheads to make sure that at least two exploded in the vicinity of the targeted silo, given standard assumptions about reliability, median inaccuracy, etc., etc. Each side follows this policy in order to have a very high probabilty of destroying the other's ICBM's. However, the tactic seems singularly unsuccessful, since the NAS assumes also that all of the other side's missiles are launched. No SS-18s, each with its ten warheads, is destroyed. No Minuteman III, or MX. Apparently neither side gets in a strike before the other; they are tied for first.

E) The British TV program on nuclear winter, "The Eighth Day" shown on WTBS on January 14, 1985, yields at least three interesting quotations:

1. Richard Turco: "In the US, for example, there are literally hundreds of military bases, logistics centers, communications centers, and so forth that could come under attack in a nuclear exchange. It happens that many of these targets are located near cities or in cities or urbanized areas and so it follows that in a full military attack or what is referred to as a counterforce attack of any magnitude where many, many targets are involved, that many urban areas would come under

collateral damage. By that I mean the area around the target is destroyed with the target because the strategic nuclear weapons have such power that they can literally destroy hundreds of square kilometers of area."

2. Narrator: "Another startling conclusion challenges the credibility of a massive surprise attack or preemptive strike by one side to destroy the other's weapons. It could be suicidal even if the other side did not fire back."

3. Stanley Thompson (American atmospheric scientist, National Center for Atmospheric Research): "The problem with this idea is that you might be able to destroy an enemy and you may be able to get away with it for a few days or even a few weeks. But the environmental effects would be so great, even of launching only a quarter of the world's strategic weapons, that the large-scale climatic effects would eventually come back to get the original attacker."

F) The New York Times, and many of the authors of these nuclear winter reports refer to a "major nuclear war" or "a nuclear conflict" as leaving no survivors, a global climatic disaster, possibly bringing about such a disaster without distinguishing various sequences of events:

i) in which one nation might use nuclear weapons suicidally and so massively as to bring about a nuclear winter, and so make it irrelevant as to whether or not the other side joins in the final conflagration.

Or, ii) the attacker uses nuclear weapons in a confined way and retaliation is so massive as to cause a nuclear winter.

Or, iii) the destruction of life in the Northern Hemisphere is a cooperative enterprise of both sides.

However, i and ii make almost as little sense as iii. That is to say, it is impossible to explain why an initial attack could be self-consciously undertaken by a non-suicidal government leadership when it would destroy that leadership and the country it was leading, along with the victims of its aggression. Similarly, it is impossible to

make plausible a serious decision by non-suicidal leaders to respond to a confined attack by bringing on a nuclear winter; nor how, therefore, one could deter such a confined attack.

The gist of what the nuclear winter people are trying to say is that any use of nuclear weapons would bring on the end of the world. Therefore no one would deliberately use nuclear weapons. Therefore there is nothing to worry about. A freeze or unilateral disarmament seem entirely appropriate.

The nuclear winter theory is based on bizarre scenarios involving deliberately suicidal attacks by both sides on the others' cities. While the White House and DOD have so far made no comment, the State Department has not been silent.

G) State Department cable to all diplomatic and consular posts suggesting questions and answers concerning nuclear winter to support the announcement of the National Academy of Science's Nuclear Winter Study:

Q. "Is the scenario used for the NAS report realistic? How does it differ from an expected nuclear exchange?"

A. "A nuclear exchange scenario is only important in that it provides for analytical purposes an assumed level of particulate matter for computer modeling of the atmosphere. Of more fundamental importance is to understand how particulate matter is generated and distributed through the atmosphere because it is precisely this connection that is not well understood at the present time. Therefore, given the present state of knowledge, the details of a nuclear attack scenario are not critical to the outcome of the NAS report nor any of the current studies."

There have been large cumlative changes in the Soviet threat to Western Europe, to the United States, and to areas outside of NATO on which Western Europe, the United States, and Japan, all depend

critically. More such changes are impending. Not the least important aspect of these changes is increased Soviet capability for an attack which is selective and discriminate, yet is capable of making a decisive difference in an ongoing conventional war. This new combination of effectiveness and the ability to discriminate will be most dramatically illustrated by the development of long range nonnuclear weapons, a few of which are able to do a military job previously open only to a nuclear weapon or to enormous numbers of conventional arms. However, it will make it possible to confine the damage done by nuclear weapons to substantially less than that we normally associate with them. None of this, of course, is likely to make a Soviet attack a painless thing for the West, or even the Soviets. But the essential point to understand is that such capabilities would reduce the risks presented to the Soviets in attacking the West, in particular if the West has no answer to such attacks which are similarly controlled and nonsuicidal.

The standard picture of the Soviet style in war suggests that the Soviets have no interest in selectivity or discrimination, only in the massive use of brute force-- the more force, and the more brutal, the better. There is no doubt whatsoever that the Soviets have always been concerned with getting a military force which is massive in the sense that it would be decisive in its miltary effect. However, it over simplifies matters to suppose that their interest in the actual use of weapons would consist only in piling up as much destruction as possible. Even before the possiblity of nuclear winter was conjured up, it was clear to the Soviets that you could have too much of a good thing when it came to increasing destruction.

Revised 1/25/85

## With Nuclear Winter, the Attacker May Have to Fear the Defenses Success Less Than Its Catastrophic Failure

Many of us have stressed for a long time that the planner of an aggression will, in general, want a high confidence of being able to destroy a decisive proportion of the defender's military forces which might otherwise stand in his way. The defense, therefore, does not have to be leakproof to deter attack or defeat the attack's purpose. Nuclear winter, however, and the possibility of boomerang effects from the attacker's own attack implies that the attacker has to worry about being too successful in penetrating and overwhelming the defenses. He has to worry not only about achieving adequate military effect, but also about causing too much collateral damage. He has especially to worry about collateral damage that devastates himself. In short, he has to take the dual criterion with the utmost seriousness: He must knock things down, but leave some things standing - especially the Politburo, his military force and Soviet society -not to say some life in the northern hemisphere. In short, the aggressor has to worry about both ends of the scale of uncertainty as to the outcome of his attack: failure to achieve his military effect, or a success in accomplishing it that spills over into his own destruction and universal ruin.

This suggests the need for a more sophisticated formulation in probabilistic terms of the strategy and objectives of both sides.

It also sheds a new and amusing light on one of the cliches of those who oppose active defense of any sort. They are used to remarking sententiously, in the context of claiming that the defense

has to work perfectly, that it has to work perfectly the first time it is put to the test in an actual war; but that they say is like expecting a telephone system to work perfectly the first time it is tried. In the ABM debate at the end of the 1960s as well as now, they talked of the possibility that the system will fail catastrophically.

This well worn argument has always been specious. Most important, the defenses do not have to work perfectly today any more than they did at the opening of the Battle of Britain in 1940. Moreover, not only defense systems but also offense systems have never been tested in a nuclear war, and there are many aspects of our offense in particular which have never been subjected to even a realistic trial. I tried unsuccessfully during the ABM debate sixteen years ago to call to the attention of critics that even the Minuteman silos they thought were quite adequate had never been tested in a wartime environment, nor even in a peacetime nuclear test; nor had the United States -- unlike the Soviets -- ever launched missile from operational silos, and so on.

However, the risk of boomerang effects on the global atmosphere brings a new dimension to the attacker's problem. He is going to have to reconsider whether catastrophic failure of the defense is really in his favor. That additional offense uncertainty (that the attack might not only fail to penetrate but alternatively might succeed too well) only adds to the deterrent value of an imperfect defense. This is true in particular if the attack is directed at military targets in or near cities.

US 1ST STRIKE: SU DISINFORMATION AND US MEDIA CONFUSION

Supporters of MAD hold that the Soviets fear greatly that the US might launch a nuclear attack on them, even if they had not attacked either us, or one of our major allies. As I observed in a Working Note of March 4th, such Soviet fears fit neither US nor SU past behavior. The Soviets, by violating agreements and taking over countries like Czechoslovakia, offered much provocation for the allied use of force backed by a nuclear threat during a period when the US had a monopoly on such threats. And they left their nuclear force extremely vulnerable to attack until 1966 while continuing to offer intermitent and serious provocations. During all of this time the US behaved with extreme caution because it wanted to avoid any war with the Soviet Union and, in particular, a nuclear war. To put it briefly, it is hard to understand why the Soviets should be worried about a US nuclear strike that was unprovoked by a Soviet attack today when the Soviets have a massive nuclear force, well protected, if as the record of their behavior shows they were quite unconcerned about the US use of nuclear weapons when they had no weapons of their own or were extremely vulnerable.

Nonetheless the Soviets talk all the time about the Pentagon's plans to deliver a surprise nuclear strike or to acquire the capability to deliver such a strike. They interpret almost any new program advanced by the Pentagon as being designed for a "first strike". They do this for programs that, on the most elementary sort of analysis current in the academy, are plainly directed at improving the US capability to strike second. Thus, during the beginning of the 1970s

when the US was preparing R & D on very long-range submarine launched ballistic missiles (then called "ULMS", later renamed Trident), Soviet disinformation agencies denounced these systems as transparently designed for a first strike. I pointed out at the time to a Soviet visitor (1) that the system would greatly increase the area in which the submarine could operate and thus reduce its vulnerability to open ocean search and destruction; (2) that in a first strike, submarines could be brought up close to an adversary both to reduce flight time and to increase accuracy and that it was only in a second strike that it was important to increase the uncertainty of the submarine's location and the difficulty an adversary would have in finding it; and (3) that the Soviets had already deployed, long before we would be able to anything similar, the SSN-8 which had a very extended range. (It had been tested at well over 4,200 nautical miles, according to Secretary Laird. The current estimate for the SSN-8 Mod 2 is 4914 nm.) I asked him whether the SSN-8 was a first strike weapon. His answer was that the Soviet Union was a socialist country.

Most recently Soviet disinformation has been attacking the Strategic Defense Initiative as indicating our baleful intent to launch a first strike. Some of their disinformation activity proceeds along the familiar line that the SDI would defend US population and therefore encourage the US to attack the Soviet Union since it would "somewhat reduce the damage to its territory". "Somewhat" is enough reduction to unleash the reckless planners in the Pentagon. Here the Soviet disinformation activity is no more absurd in its caricature of US decision makers, than is the standard Mutual Assured Destruction doctrine. It resembles the normal confusion, for example, in the American media.

However, some of the confusion in the American media on this subject goes beyond the norms established by MAD. And so does the Soviet disinformation activity. The editors of the New York Times not long ago, after having deplored the prospect of a defense of US population, drew back in horror at the indication that SDI might defend military forces. In the usual MAD way, they assumed that the military forces in question could be only silos (supporters of MAD live in a world consisting exclusively of US and SU silos and cities) exclusively. But they went beyond the bounds of the standard incoherence of MAD. They said that it was well established at the time of the earlier ABM debate in the late 1960s and settled in the ABM Treaty, that defending silos was destabilizing. Tom Brown, Deputy Assistant Secretary for Strategic Systems in P.A.&E. during the Carter Administration, wrote in pointing out that the Times was confused on the subject, that on the "classic" MAD analysis of stability, protecting strategic weapons was good and stabilizing - it was only protecting people that was supposed to be bad.

Now the Soviets have seized on the revelation that Pentagon specialists "are acknowledging with increasing openness that their entire space enterprise is conceived as a cover principally for U.S. strategic missile bases, that is to say, as a means of acquiring strategic superiority over the USSR and the ability to deliver a surprise nuclear strike."[1] Quite a relevation. The diabolic planners in the Pentagon are developing missiles capable of striking first by surprise after the Soviets have struck these missiles first.

Colonel Lavrov's article in KRASNAYA ZVEZDA has some choice words on the sinister implications for West Europe that follow from the fact

that the US intends ABM only for the continental United States. And a TASS article of 8 February, 1985 pushes this notion by saying that an ABM defense of Europe is, in any case, intrinsically impossible because of the short flight times of IRBMs and MRBMs.

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[1] Lavrov, Colonel V. in Moscow KRASNAYA ZVEZDA in Russian, 1 February 85 Morning Edition, extracted from the FBIS.

Soviet "Self-Deterrence", the SecDef Nuclear Winter Report and the Washington Post

The SecDef Nuclear Winter Report had many accurate and useful things to say. It missed the boat on one crucial thing, namely the way Soviet actual understanding of the uncertainties involved in "all-out" indiscriminate attacks is likely to affect their behavior. Though they clearly want us to believe that any use whatsoever of nuclear weapons by the West will bring on a global disaster, and will continue to say that, they also will want to use genuine information as distinct from disinformation about their uncertainties in shaping their attacks. The SecDef Report deals with Soviet disinformation activities but avoids drawing the obvious conclusions about their future operational strategy while these uncertainties persist. That evasion obviously has to do with the fact that a large part of our defense establishment focuses mainly on Soviet all-out attacks and places its greatest attention on our own "full-up" responses- and the sorts of large yield weapons such as the MX and the Trident II with its new warhead that may figure in such responses.

The Washington Post news story on the SecDef Report shows the defects of this evasion. The story, by Michael Weisskopf, as might be expected in the Post, has a strong bias ("Plugging President Reagan's 'Star Wars' space defense system, the report said . . ."). However, it reports accurately the nuclear winter theorist's main argument:

> It has been generally argued by the new theory's proponents that, if it were proven true, major shifts in civil defense policy and nuclear strategy could result.

> Most frequently mentioned is the idea that, if both sides suffer atmospheric chaos as a result of a nuclear attack, a first strike might be ruled out as self-defeating even for the aggressor.

Carl Sagan has repeated this main argument many times. Several participants in a recent "Face the Nation" program on CBS did the same. And Thomas Powers has elaborated it in The Atlantic in an extended form. Of course they have no basis whatsoever, in an examination of the likely circumstances in which the Soviets might use nuclear weapons, for claiming that any nuclear attack important in such circumstances would have to produce smoke or dust in the hundreds of millions of tons needed to make a nuclear winter at all likely. Not one of the nuclear winter studies has looked at limited nuclear attacks in the relevant sense of "limited".

It is critically important to reject both the notion that the main Soviet threat worth considering is an all-out, unrestrained nuclear attack, and the notion that there are no Soviet limited options which could be of decisive importance and yet stay well below the threshold of nuclear winter. To make that point involves coming to grips with parts of the military as well as the anti-military establishment. The SecDef Report doesn't do that. It therefore loses the opportunity to demolish the main argument of the nuclear winter theorists in support of MAD and MAD based arms control. And it at least defers the opportunity to clarify and drastically modify some of the established analyses of Soviet strategy.

Disk #110
Rev: 3/8/85

Have the Members of the Politboro Ever Really Worried About an Unprovoked US First Strike?

It has been a cornerstone of the doctrine of Mutual Assured Destruction that it is very important for the US and for "crisis stability" that the Soviets be able to deter us from striking them unless they had launched a nuclear attack at us. That is the sense of the word "mutual" in "Mutual Assured Destruction" or "Mutual Deterrence". The consequences of this cornerstone assumption include several obvious and, in fact, insuperable troubles with extending a US guarantee to allies against a Soviet attack directed solely at them. Moreover, it has led to deep problems in defining a posture with which the US could stably deter even an attack on itself.

It is conceivable that we can design forces that would deter the Soviet Union from attacking us, and at the same time the Soviets might design and deploy forces which deter us from attacking them except under some extreme circumstances. But, if we take it as <u>our</u> objective not only to deter the Soviets but also to deter ourselves, that is to make sure that we will never attack the Soviets except in extreme circumstances, we have to be awfully clear about those circumstances and the design if we are not to deprive ourselves of any deterrent at all. That is, we may deter ourselves from responding to a Soviet attack. That in fact is the way MAD tends to drive the design of our strategic forces. Supporters of MAD like Morton Halperin are concerned that on some future fatal day a clever briefer in SAC might exaggerate the effectiveness of our active defenses and that CINCSAC and

apparently the President would, in the resultant euphoria, launch a strike against the Soviet Union. He draws the conclusion that even active defenses that perform very ineffectively could lead to that fateful decision and therefore we should have no defenses at all.

To put it abstractly in terms of the second strike theory of deterrence and comparative risks, the MAD doctrinaires focus exclusively on one aspect of the second theory of stability, namely the difference between striking first and striking second. They ignore the even more important aspect of the theory that concerns comparative risks - the difference between the risk of striking and not striking. They are so eager to eliminate any advantage in striking first that they eliminate any defense whatsoever, and so make striking first and striking second equally suicidal. In short, because they fear that the US would strike first, without adequate provocation, they would make it incredible that we would strike at all - first, or second.

The assumption underlying MAD is that we are extremely dangerous and unable to control ourselves or to resist temptation to preventive war. Or, since this assumption is too outrageous to be accepted explicitly by our political class, those members of that class who accept MAD doctrine like to say that, even if it is not true that we would launch a nuclear attack on the Soviet Union just because we felt we had a reasonable chance of surviving a Soviet nuclear response against our cities with only serious but not fatal damage, nonetheless the Soviets fear that we would. In fact, it is only "natural" for them to fear it, supposedly - since Russia has been subject to attack so frequently in the past . . . since the US joined with the Western Allies in backing the counter revolution soon after the Soviet Union

was formed . . . since some of our leaders have made belligerent speeches not so long ago, since . . . The reasoning is farfetched but seldom questioned.

As a result, supporters of MAD dogma tend to worry about us more than they do about the Soviets. Characteristically they talk of the "balance of terror" as being quite stable ("not nearly so delicate as Albert Wohlstetter suggested", as Stanley Hoffman put it). But only when they are thinking of the possibility of Soviet attack. The Soviets, cautious fellows, would never be mad enough to risk total destruction even if there were only a small chance that we'd respond by destroying their cities. When the Western supporters of MAD think of us, they're not so sure. We apparently are remarkably careless about whether we live or die. Careless enough, at any rate, to scare the daylights out of the cautious members of the Politboro. Paradoxically, it seems we can scare these cautious chaps into throwing all caution to the winds and into launching a suicidal strike to avoid being killed.

Have the Soviets really lived in terror of the US launching a nuclear attack when neither we, nor our major allies, have themselves been subject to Soviet invasion or attack? Not if history has any relevance. Neither US nor Soviet behavior suggests that.

First, we had a nuclear monopoly for many years while the Soviets were changing the map of Europe, disappointing our hopes for postwar cooperation, and violating the sense of our wartime understandings with them in Berlin, in Hungary, in Bulgaria, in Czechoslovakia, and in Poland. We were in no danger of nuclear destruction by the Soviets since they had no nuclear weapons. We not only did not launch nuclear weapons, but we also did not initiate a conventional war supported by

the threat of nuclear weapons.

In 1948, for example, we did not risk knocking down a very flimsy barrier-- a wooden pole put up without previous warning across the highway from West to East Germany at Helmstedt and guarded by only two Soviet Mongolian soldiers. We feared it might start a sequence of events that would lead to our having to contemplate the use of nuclear weapons. Instead, when the Soviet, in defiance of our understanding with them, strengthened the barriers and blockaded Berlin, we instituted an airlift rather than use a modest amount of force backed up by a unilateral nuclear threat. We assumed the Soviets might enforce their violation of the four power understanding because they did not believe we'd use nuclear weapons if our conventional forces were overhwhelmed in Berlin.

Second, for many years after the Soviets obtained nuclear weapons they deployed them in a way that made quite clear they did not have any genuine fears that the Americans might launch an attack that would destroy their nuclear force. For their bomber force in the 1950s and, in the early 1960s not only their bomber force but their newly acquired submarine launched missile force and ICBM force were small, unprotected and deployed and operated in a way that left them quite open to destruction. Their submarine force was mainly in port, and their bombers were not on alert and ready to take off; they had no hard, or semi-hard silos for their ICBMs. Their first hard and semi-hard ICBM silos were operational in 1966. They might have been confused or unaware about the first strike/second strike distinction in the 1950s, since the initial US studies illustrating that distinction occurred in the early and mid-1950s and were classified. By the 1960s, however,

the distinction was notorious and had even begun to be caricatured. Yet, in 1965 they had 224 launchers, none of them hard or semi-hard, and about 78 of these were deployed on 26 sites with one bomb capable of easily destroying 3 missiles. If they were terrified, they had a very peculiar way of showing it. Quite uncharacteristic of the Bolshevik character.

I am attaching an unclassifed table on Soviet operational ICBM launchers derived and declassified during our days of studying the US predictions about the Soviet ICBM force compared to the actual force deployed. This table distinguishes soft, semi-hard and hard silos and wasn't used in our published work on the strategic arms race but is of interest in this connection.

Table 1

OPERATIONAL ICBM LAUNCHERS REALIZED

| Mid-Year | Soft | HARD: Triple Silo[1] | HARD: Small Single Silo | HARD: Large Single Silo | Total Hard (& Semi Hard) | TOTAL |
|---|---|---|---|---|---|---|
| 1963 | 76 | 15 | 0 | 0 | 0 | 91 |
| 1964 | 146 | 42-45 | 0 | 0 | 0 | 188-191 |
| 1965 | 146 | 78 | 0 | 0 | 0 | 224 |
| 1966 | 146 | 78 | 50 | 18 | 146 | 292 |
| 1967 | 144 | 78 | 270 | 78 | 426 | 570 |
| 1968 | 142 | 78 | 500 | 138 | 716 | 858 |
| 1969 | 142 | 78 | 640 | 168 | 886 | 1028 |
| 1970 | 134 | 75 | 850 | 228 | 1153 | 1287 |
| 1971 | 134 | 75 | 1010 | 276 | 1361 | 1495 |
| 1972 | 134 | 75 | 1030 | 288 | 1393 | 1527 |

[1] Three launchers per site. One aiming point per site.

[2] Plus test-site launchers and training launchers at SS-9, SS-11 and SS-13 complexes. In 1967 there were about 40 sites ready at Tyuratam and "several" at Plesetsk. In 1972 there were about 70 at test sites and one each at 6 SS-9, 12 SS-11 and one SS-13 complexes.

Note: The SS-11s in Southwestern USSR are included since they are "almost certainly capable of striking U.S. targets." There were 120 of these at the time of this statement (1972).

Disk 117
BOHLEN

BOHLEN 1952 ON WARTIME STRAINS ON SOVIET CONTROL OF ITS SATELLITES
(This note might be usable in AW piece for Arroyo Project)

Chip Bohlen, in a very interesting memo on the bases of Soviet action written as part of a reappraisal of NSC 68 etc., wrote:

> General war is clearly not something into which the Soviet rulers would enter lightly. One of the chief factors which they would obviously consider would be the relative strength of the enemy. But regardless of their estimate of this factor, they must regard any major war as highly dangerous to the regime. It would subject an overburdened economy and their control of the satellites to grievous strains. It would greatly increase the problem of defection. Most seriously of all it would alter to the detriment of the party the relationship between party and army; and control over the army is one of the principal cornerstones of the survival of the regime.

It says something about the reluctance of the political class in the West to exploit Soviet vulnerabilities even after a Soviet invasion of the West, that Bohlen should have been talking as early as March 1952 during a Democratic Party regime in much the same terms as we do today about the dangers the Soviets would face in maintaining control by the Party during a war. And there doesn't appear to have been much advance on how we might exploit such vulnerabilities in war time.

In a sidelight on the term "cold war" as opposed to detente shed by one of his conclusions, Bohlen accepts as probable that the Soviets would attack us if they felt they could deliver a decisive blow to the U.S. without serious risk. Short of that "Soviet action is more likely to be confined to the 'cold war' - i.e. a continuous hostility and a pushing and probing toward an exploitation of all Western weaknesses." That definition of "cold war" would seem to include Soviet behavior

during the various detentes. Yet we hesitate to probe Soviet political weaknesses during a "hot war".

Disk 117
NSC1953

Special Evaluation for the NSC in 1953 which Assumed Attacks So Large Against SAC, Cities, and Everything That They Didn't Hurt SAC Much

In the 1953 Rand Base Study (R244s and R266) and in the 1956 Protecting Our Power to Strike Back in the 1950s and 1960s (R290) we found that a quite small Soviet force could surprise and destroy our own strategic force. Since surprise was essential in order to find SAC on the ground, so was the design of the attack which had to be deliberately limited to the essentials for that most important and time-urgent purpose of any Soviet attacker. A principal reason that the vulnerability of SAC was not recognized by the powers that be had to do with the fact that official analyses focused on "the heaviest possible" Soviet attacks - ones directed not only at SAC but also, in combination, at "major population, industrial and control complexes in the continental United States," not to mention also "all possible types of attack including direct military, clandestine military, and sabotage, physical and non-physical." Such heavy all-purpose attacks were bound to give many hours of warning to the continental radar detection system.

The quoted phrases are taken from the May 1953 Report of the Special Evaluation Subcommittee of the National Security Council. That report (and subsequent annual reports that were made by what I recall was later entitled the "Net Evaluation Subcommittee" of the NSC) were not only Top Secret but extremely limited in their distribution. One might say that they were available only to those high officials who had no way of knowing that the results were a consequence of arbitrary and

self-serving assumptions about the warning available to SAC and the SAC responses that were realistically available; and implausible Soviet attacks which nominally included the destruction of SAC's ability to retaliate but were so designed as to be quite ineffective at catching SAC before it had been launched or at least dispersed. (In fact, the Reports were misleading as to what SAC could do even if it had that much warning. The members of the Gaither Committee finally learned that in 1957 when they were briefed on R290, the Rand study "Protecting Our Power to Strike Back etc." Robert Sprague, the co-chairman of the Gaither Committee and long term consultant to the NSC on defense, checked the Rand briefing on this point with great vigor.)

No member of the Rand team ever saw a report by the Net Evaluation Subcommittee for NSC. However one summer a few years after the Base Study, Fred Hoffman took part in the war games at Maxwell Air Force Base that provided the material for that year's report. And before Fred did, Bob Specht took part in an earlier game for an earlier report. Specht knew of the Base Study results and how sensitive SAC's survival was to surprise. When he told us the assumptions that went into the game, we all understood how misleading the results would be. Though the Air Force and the Department of Defense eventually accepted the results of the Base Study and of R290 and thereby implicitly recognized the critical defects of the NESC games, many of the small, privileged circle of high level officials who received the NESC reports continued to be misled. Bob Bowie, who was Director of the Policy Planning Staff in the mid-1950s and State liaison with the NSC, persisted in the belief that SAC was invulnerable long after he left the government and after he had heard an unclassified talk on the "Delicate Balance". I

knew the NESC reports had misled him, but could hardly tell him.

In any case the 1953 Report is now available in the recently published Documents on Foreign Relations of the United States: 1952 to 1954, Volume II, Part 1, pages 332ff. The Report has many interesting features but among the most interesting is the fact that it illustrates how the assumption of a huge Soviet attack has frequently and possibly invariably been self-serving. Not really a "worst case" as the myth goes, but an excessively optimistic one in comparison with smaller attacks well designed to accomplish their highest priority purposes.

There are some present analogies. Unrestrained, indiscriminate Soviet attacks are extremely improbable, and more evidently now because such attacks might cause a nuclear winter and thus directly kill the Soviets even without our response. The nuclear winter theorists depend on this to conclude that the Soviets are unlikely to initiate any nuclear attack. They too avoid considering purposive smaller attacks.

Totalr.uin, #117
3/13/85

## Carl Sagan on the Comforts of Total Ruin

> It seems to me even without the climatic catstrophe, nuclear war is to some degree unthinkable. But the fact now that the human species may be imperiled, that even a "small" nuclear war might have disastrous agricultural consequences, the fact that nations that are distant from the conflict, that have no party in the quarrel nevertheless would be devastated-- that is perhaps an additional increment in the motivation of world leaders to avoid nuclear war. If so, I'm glad about it.

Carl Sagan made that statement after citing the estimates of the World Health Organization that in their 10,000 megaton war:

> ...the number of people who would be killed directly, immediately by the blast, fire and prompt radiation of a nuclear war is 1.1 billion people. And they estimated that an additional 1.1 billion people would be so severely injured that they would die if there were no medical care available. And of course there wouldn't be any medical care available because almost all the doctors would be killed.

Two billion dead is more than enough for most of us. Two billion more in infact. But some of the theorists of nuclear winter are also enthusiasts for it. Apparently they feel that a world leader might not be deterred by the prospect of destroying nearly half the population of the earth through the local effects of nuclear explosions, but might be affected if he thought the other half would die later in a global nuclear winter. Nuclear winter then might furnish the needed "increment in motivation". Ann Ehrlich apparently is afraid that even the extinction of all life on earth might not be enough to give our

reckless leaders pause. After all, Carl Sagan in other contexts has frequently talked about the possibilty of finding life on a planet in some distant solar system. Dr. Ehrlich, therefore, has stressed that a nuclear winter "could render all but uninhabitable the only known habitable planet in the universe". And some (document or cut) have added that the chance of life elsewhere is not substantial enough for us to regard this as less than decisive. Apparently, some of the enthusiasts for nuclear winter feel that some world leaders might not be satisfied by anything less than disaster on a more than galactic scale.

Disk: #117
SAGVS.FER

Sagan Vs. Fermi on the Evils of Large City-Destroying Bombs in Contrast to Small Nuclear Weapons

Sagan uses as one of the epigraphs for his article in Foreign Affairs (Winter 1983-84, pp.257 ff.), a quotation from Fermi and Rabi's addendum to a 1949 General Advisory Committee report to the AEC on the "Super", or fusion weapon:

> The fact that no limits exist to the destructiveness of this weapon makes its very existence and the knowledge of its construction a danger to humanity... It is ... an evil thing.

The context of that quotation from Fermi and Rabi makes clear that their strictures applied to any weapon which has "only advantage when its energy release is from 100-1000 times greater than that of ordinary atomic bombs" and whose "area of destruction therefore would run from 150 to approximately 1000 square miles or more." They said that "necessarily such a weapon goes far beyond any military objective... but becomes a weapon which in practical effect is almost one of genocide... It is clear that the use of such a weapon cannot be justified on any ethical ground... It is necessarily an evil thing considered in any light."

Fermi and Rabi then rejected the Super because they thought it was intrinsically of enormous yield and so would indiscriminately destroy population centers. It appeared to differ qualitatively from the "ordinary" fission weapons which had much smaller yields and smaller areas of destruction. In fact, they joined with the other members of the General Advisory Committee in recommending an intensification of the AEC's efforts to make small weapons of new designs and in large

numbers for use against military targets.

In the end, as it happens, the significance of fusion did not lie in the huge 50 and 25 megaton devices that concerned the GAC. Neither its proponents nor its opponents anticipated at the time its principal use would be in making low and medium yield weapons smaller and of lighter weight. But the GAC's concern about huge indiscriminate city destroying weapons was an entirely reasonable one. In fact, this concern was shared by such supporters of the H-Bomb development, as Charles Hitch who recognized its military importance. The GAC underestimated the military importance of large yield weapons in an era when inaccuracies were very great and they guessed wrong about the yields of the fusion weapons that would ultimately be fielded. They were not wrong, however, in their concern about the collateral harm that would be done by very large bombs. Now that accuracies have already drastically improved, and are continuing to improve, it will be possible to use precise, low yield weapons to get both increased military effectiveness and reduced collateral damage. And especially now that the collateral damage may be global in scale, there should be little controversy about the urgency of continuing efforts to confine destruction to military targets.

Sagan, on the other hand, hardly has the right to cite the Fermi and Rabi 1949 statement in support of his own views. For he has been for the freeze on innovation and therefore in effect opposes programs for reducing the yields of nuclear weapons and for improving precision and discriminate delivery methods that permit the destruction of military targets with fewer weapons or weapons of lower yield. In

short, he opposes the important movement towards weapons that can destroy military targets with less collateral harm to bystanders.

His Foreign Affairs piece formulates a Mutual Assured Destruction and minimum deterrence position rather cryptically. He says:

> Something like a thousand warheads (or a few hundred megatons) is of the same order as the arsenals that were publicly announced in the 1950s and 1960s as an unmistakable strategic deterrent, and as sufficient to destroy either the United States or the Soviet Union "irrecoverably." Considerably smaller arsenals would, with present improvements in accuracy and reliability, probably suffice. Thus it is possible to contemplate a world in which the global strategic arsenals are below threshold, where mutual deterrence is in effect to discourage the use of those surviving warheads, and where, in the unhappy event that some warheads are detonated, there is little likelihood of the climatic catstrophe.

In this muddled passage Sagan begins with a sentence about a "publicly announced" number of warheads that were an adequate strategic deterrent. While a "public announcement" sounds like an official promulgation of truth, he is obviously only referring to the sentiments of a small group of analysts in the Academy and in contract research organizations who, beginning in 1958, espoused the use of threats to destroy cities and to avoid military targets-- Jerome Wiesner, George Rathjens, and others. Nothing could contrast more with the sentiments expressed by Fermi and Rabi in 1949 when they rejected a weapon that went beyond any military objective and whose only advantage appeared to them to be its use to destroy whole cities. It wasn't until the mid-1960s that McNamara espoused a capability for Mutual Assured Destruction as an implicit threat and a method for sizing the US Strategic Force. And even then McNamara did not adopt it in its minimum deterrent form. Nor did he eschew the objective of limiting damage to the US. Nor did he then abandon plans actually to use nuclear weapons

against military targets if deterrence failed.

Sagan's second sentence, oddly enough, appeals to future advances in precision and reliability: he says they would make it possible to reduce the arsenal further than had been contemplated in such public pronouncments, i.e. in the minimum deterrence doctrines that sprouted after Sputnik at the end of the 1950s. However, the significance of improvements in accuracy is that they permit the use of fewer, or small nuclear weapons to destroy small military targets. Not large cities. For the perverse purpose of destroying large cities -- which was rejected by Fermi, Oppenheimer, and others near the end of the 1940s, but seized on as the one essential threat at the end of the decade by some former members of the Manhattan Project -- huge, inaccurate weapons can serve quite adequately. Sagan, like many theorists of nuclear winter, clings to a declaratory strategy which relies on threats to destroy cities.

In the confused and biased news accounts describing the SECDEF's March 1985 report on nuclear winter and the reactions to it, reporters said that:

> ... proponents of the 'nuclear winter' scenario... were puzzled how defense planners could use the report to support the campaign for new nuclear weapons sytems.
>
> It would be far more prudent to make sure there were so few nuclear weapons that no misunderstanding or madman could trigger a nuclear winter,' said astronomer Carl Sagan.
> (The Washington Post, Michael Weisskopf, 3 March 1985.)

Carl Sagan was quoted as saying:

> ...it is sad that they can grasp the enormous dangers of nuclear war and somehow not realize that the answer is not to build more weapons.
> (Science, op cit "DoD Says 'Nuclear Winter' Bolsters Its Plans", 4/85, Vol. 227)

But the DoD report did not recommend more weapons. It pointed out that more accurate systems had already made possible the unilateral reduction by the United States of 30% in the total number of weapons as well as a factor of four reduction in the the yield of our stockpile. And it said that this reduction is continuing and that, moreover, it included as a prospect extremely accurate and highly effective non-nuclear systems (see page 11 of the SecDef report.) Moreover, aside from such unilateral reductions, it said that the United States had, and would, propose agreements for verifiable bilateral reductions. Sagan misrepresents the report.

The SecDef report omitted to mention that Soviet planners are unlikely to be suicidal and so may also use precision to reduce the possibility of global effects. Sagam himself ignores this. But the new systems the DoD report supported include non-nuclear offense and defense which 1) could replace some of our nuclear offense forces and 2) make possible the use of fewer or lower yield weapons. Since the nuclear winter effect depends not only the number and types of targets attacked, but on the number, average yield and total yield of the weapons used in the attack, there is no reason for puzzlement except for prejudice against innovation.

The Post stresses Sagan's prescription as one of reducing the number of weapons. The Science magazine account of his reaction and of other proponents of nuclear winter scenarios suggests that Sagan is thinking of yield: "Sagan's own prescription is to reduce the total yield of US and Soviet arsenals below a threshold at which 'nuclear winter' might be triggered." (Science, R. Jeffrey Smith, p. 1320 Vol

227, 4/85) Average yields have gone down in the US arsenal since the 1950s. And total yield was four times as high then. The SECDEF report says:

> ...over the past 20 years or so, this policy and other considerations have resulted in development of systems which are more discriminating. This, in turn, has led to reductions of some 30% of the total number of weapons and nearly a factor of four reduction in the total yield of our stockpile. This direction continues today, and the prospects for extremely accurate and highly effective non-nuclear systems are encouraging.
>
> (SECDEF report, "The Potential Effects of Nuclear War on the Climate" March 1985.)

Both the critics of the SECDEF report and the media seem not to have read that passage in the report.

April 1, 1985
AW Memo on Impact of Star Wars on European Allies
Tape.mem, Disk 119

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This morning's Washington Post, April 1, 1985, has a piece by Don Oberdorfer about the Allies fearing the political impact of Star Wars. The views he is talking about were expressed at the Atlantik-Bruecke (The Atlantic Bridge Conference which was put on by the American Council on Germany) in Texas with 120 prominent West Germans, and 80 Americans. It was the 13th biennial meeting. It was primarily of interest in the expressions of foreboding that the Allies vented. And it was mainly a clear revelation of the fact that they have not budged at all toward recognizing that it is the policy which they have backed of threatening a suicidally massive destruction which is incredible, and which undermines deterrence.

On the contrary, they complain that the Reagan Administration is causing the trouble when it says threats to destroy cities are immoral and incredible because they reinforce the views of the pacifist left. They do not face up to the fact that threats to end the world are unbelievable. In other words, our allies have progressively shed all clothes until they are naked of anything but the most transparent pretense that they would ever actually use nuclear weapons in response to an attack. They consider the child who says the emperor is naked rather than the emperor's lack of clothes as the problem. The article by Oberdorfer says,

> Reagan and some of his aides, in appeals for SDI, have raised doubts about the long-term viability of deterrence through the threat of retaliation-- sometimes called Mutual Assured Destruction-- and at times have suggested it is immoral.

> The degrading of deterrence is "one of the most difficult problems of the years to come" said a West German official. Noting that previously the West German peace movement, rather than the US ally , was attacking the morality of nuclear weaponry, the official added, "I think it is a mistake by the US to moralize the question."

The interesting thing about this quotation is that the West German official casually identifies deterrence with MAD. He never notices or considers for a moment that MAD may be a recent aberration, that deterrence for many years rested on a threat of a response which we always intended actually to make. And deterrence was not directed at cities, but was primarily directed at military forces and war supporting industry with weapons that did not totally obliterate the difference.

Second, this same West German official casually assumes that if one suggests that nuclear weaponry should not be directed at destroying population, and in fact at the mutual destruction of populations in the West and the East, one is attacking the morality of nuclear weaponry, rather than how the Europeans have come to think of applying nuclear weapons.

Two other articles, one by Flora Lewis in the New York Times, and another from the Post display the same confusion. (They also are attached.)

The problem of clarifying European views is complicated by the carelessness and imperfect clarity of the views of the Administration. It's absurd of course to identify deterrence with MAD. It is, for one thing, completely unhistorical. In any case, it identifies one very poor way of deterring with all possible ways. Reagan himself has from time to time lapsed recently into talking about our present policy, and talking about deterrence in general and any reliance on offense forces as being the policy of Mutual Assured Destruction. In this way, by

drawing an absolute distinction between strategic offense and strategic defense, the Administration confuses the issue and fortifies the fears of the Germans while also fortifying their own misguided views.

# AGENDA FOR THE JOINT MEETING OF THE SECURITY AND ARMS CONTROL PANEL US-SOVIET PARALLEL STUDIES PROGRAM

New York, NY
January 14-16, 1985

LEAD OFF SPEAKERS ARE AS INDICATED BELOW

I. Norms of Relations Between Nuclear Powers
(Walter Stoessel, Brent Scowcroft)

II. Preventing an Arms Race in Outer Space
(Steve Meyer, Fred Hoffman)

III. Further Strengthening of the Non-Proliferation Regime and Steps Towards a Comprehensive Test Ban
(Joe Nye, Bill Potter)

IV. Increasing the Effectiveness of the UN in the Consolidation of International Peace and Security
(Bill Vanden Heuvel, Linc Bloomfield)

## AMERICAN PARTICIPANTS

Joint Meeting Between UNA-USA and the Soviet UNA
on
Security and Arms Control Issues

Vista International Hotel
New York City
January 14-16, 1985

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Formerly, Deputy Secretary of State
and Ambassador to the USSR,
Poland, and the Federal Republic of Germany

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Diplomatic Correspondent
The Boston Globe

LINCOLN P. BLOOMFIELD
Professor of Political Science
Massachusetts Institute of
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Georgetown University Law Center

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Multilateral Project
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Administrative Assistant
Policy Studies

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Joint Meeting Between UNA-USA and the Soviet UNA
on
Security and Arms Control Issues

Vista International Hotel
New York City
January 14-16, 1985

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Director
Institute of Space Research
USSR Academy of Sciences

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United Nations Association
of the USSR

SERGEI I. KISLYAK
Second Secretary
Permanent Mission of the USSR
to the United Nations

VITALY I. KOBYSH
Chief of Section
International Information Department
Central Committee
Communist Party of the Soviet Union

STANISLAV N. KONDRASHOV
Political Observer
Izvestia

STANISLAV M. MENSHIKOV
Consultant
International Affairs Department
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YURI K. SHIYAN
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Committee on Disarmament
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Permanent Mission of the USSR
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GENNADY A. VORONTSOV
Vice President, UNA-USSR
Vice Rector
Diplomatic Academy of the USSR

### UNA-USSR STAFF

KARINA G. POGOSOVA
Senior Staff Member
United Nations Association of the USSR

FOR USE OF THE AMERICAN PANEL ONLY

Biographies of Soviet Participants
January 14-16, 1985 Joint Meeting with UNA-USA
on Arms Control and Security Issues

Chairman

ROALD ZINNUROVICH SAGDEYEV (Age 51) (phonetic: sahg-DAY-yef)

: Director, USSR Academy of Sciences, Space Research Institute, Moscow, since 1973

: internationally recognized plasma physicist

: research director, Venus-Halley's Comet (Vega) project

: proponent of international space cooperation

: member, Committee of Soviet Scientists in Defense of Peace and Against Nuclear War

: travels frequently to West

: last US visit May 1984 for private discussion on impact of US space weapons initiatives

: head of Soviet delegation to 25th Committee on Space Research meeting, Graz, Austria, June-July 1984

: full member of USSR Academy of Sciences since 1968

: holds Order of Lenin and Lenin Prize

: speaks English

: married, two children

Participants

SERGEY PETROVICH GRIBKOV (Age 51) (phonetic: greeb-KOV)

: current position, Secretary-General, Soviet UN Association

: staff member, Moscow News Weekly in the last 1950s; Secretary of the Soviet Peace Committee, 1969-73; attached to the UN Secretariat in New York, 1973-78; long involvement with the USSR United Nations Association

: graduate of the Moscow State Institute of International Relations

: speaks fluent English

: married

VITALY IVANOVICH KOBYSH (Age 56) (phonetic: KO-bish)

: Chief, US Sector, International Information Department, CPSU Central Committee, since 1979

: career journalist; has had tours abroad as a correspondent for Izvestiya in Latin America (Brazil, Venezuela, Trinidad), 1964-68 (expelled from Brazil in 1966 for "injurious" broadcasts); London, 1968-71; and New York, 1972-78

: has traveled to the United States several times since then, including a trip in 1980 to cover the Republic National Convention

: regular participant in "Studio 9," a Moscow television program on international affairs

: political observer on international affairs for Literaturnava Gazeta

: married

: speaks English

STANISLAV NIKOLAYEVICH KONDRASHOV (Age 55) (phonetic: kun-drah-SHOF)

: career journalist serving as Izvestiya political observer since 1976

: specialist in American politics

: two tours as press correspondent in US (New York 1961-68, Washington, 1971-76)

: began career with Izvestiya in 1951

: first post abroad was Cairo (1957-61)

: most recently in US in October 1984 to cover presidential campaign

: married, with at least three children

STANISLAV MIKHAYLOVICH MEN'SHIKOV (phonetic: MEN-shee-kuf)

: Senior Adviser, International Department, Central Committee, CPSU (since mid-1980); considered to be ranking staff official in the International Department

: has been described as an adviser on both foreign and economic affairs, and in radio and television appearances has discussed these issues, as well as disarmament and arms control.

: Economic Affairs Officer, UN Secretariat, 1974-1980

: Section Chief, Institute of Economics and Organization of Industrial Production in Novosibirsk, 1970-1974

: one of several Deputy Directors, IMEMO, 1964-1970

: served on editorial staff of the Journal New Times. 1957-1960

: graduated the Foreign Ministry's Institute of International Relations and then taught there for five years

: speaks fluent English

: father is Mikhail Menshikov, Ambassador to the US from 1958-1961

KARINA GEORGIYEVNA POGOSOVA (Age 38) (phonetic: puh-guh-SO-vah)

: has served as a translator/consultant for Soviet UN Association delegations visiting the US (1974,1976, 1982) and for a special UNGA session on disarmament (1982)

: also listed as a senior consultant of the Soviet Committee for the Defense of Peace

: speaks English

YURIY KONSTANTINOVICH SHIYAN (Age 40) (phonetic: she-YAN)

: senior advisor, USA Desk, Foreign Relations Administration, Academy of Sciences, since at least 1981

: serves as liaison for scientific exchanges between US National Academy of Sciences (NAS) and the Soviet Academy

: in January 1982 and May 1984 traveled to the United States as member of high-level Academy delegation to participate in discussions with NAS scientists on problems of international security and arms control

: speaks English

GENNADIY ANATOL'YEVICH VORONTSOV (Age 35) (phonetic: vah-runt-SAWV)

: prorector, Diplomatic Academy, Ministry of Foreign Affairs, since at least May 1982

: formerly, worked at Institute of World Economics and International Relations (IMEMO)

: has traveled extensively in the United States: here for three months in 1977 for scholarly research

: has attended many UN meetings dealing with disarmament, including SSOD II and several meetings with each of the UN Group of Experts on All Aspects of the Conventional Arms Race and Nuclear Free Zones

: specialities: Soviet internal politics and international affairs

: received a Candidate of Historical Sciences degree (equivalent to a Ph. D.) from Moscow State Institute of International Relations, 1972

: speaks English

VLADIMIR VIKTOROVICH SHUSTOV (Age 54) (phonetic: shoos-tof)

:Deputy Permanent Representative, Soviet Mission to the United Nations (one of five Deputy Permanent Representatives)

:disarmament specialist

:serves in UN First Committee (Political Affairs) and Fifth Committee (Administration and Budget) and on the Ad Hoc Committee on the Indian Ocean

:in 1981-82, he also served on the UN Disarmament Commission

:member of the Soviet delegation to the MBFR negotiations in Vienna, 1973-79, while at the same time a Counselor in the International Organization Department of the Soviet Ministry of Foreign Affairs

:during the 1960's, an advisor to most of the UN sessions of the Eighteen Nation Disarmament Commission; in 1971, on the Soviet delegation to the Conference of Committee on Disarmament

:1963-66, affiliated with IMEMO

:has written on disarmament and arms control questions, including a 1981 article on "Negotiations on the Mututal Reduction of Armed Forces in Central Europe."

:fluent English

:born, Leningrad

:married to Larissa Vladimirovich, no children

SERGEI IVANOVICH KISLYAK (Age 34) (phonetic: Kees lee yak)

:Second secretary at the Soviet Mission to the United Nations since August 1981

:atomic energy specialist

:has worked exclusively on disarmament matters at the UN

:from 1978-1981, third secretary in the International Organization Department of the Soviet Ministry of Foreign Affairs, with responsibility for nonproliferation (at the NPT Review Conference) and the UN Special Session on Disarmament(UNSSOD)

: 1980- member of the UN Committee on the Nuclear Capabilties of South Africa

:1981, on the Soviet delegation to the Preparatory Committee of the UNSSOD

:good English

:Ukranian; wife- Natalia, one daughter, age 10

Heritage Foundation
Guest List for Fred Hoffman Luncheon
Wednesday, February 13, 1985

Mark Albrecht - Office of Sen. Pete Wilson
Dr. Angelo Codevilla - Office of Sen. Wallop
X Dr. Henry Cooper - Deputy to Max Kampelman

James Frelk - Republican Study Committee

Jerry Gideon - Office of Rep. Dornan

Gen. Daniel Graham - High Frontier
Doug Graham - Senate Armed Services Committee
Brian Green - Policy Analyst, Heritage

James T. Hackett- Editor, National Security Record, Heritage

Manfred Hamm - Senior Policy Analyst, Heritage

Francis Hoeber - Hoeber Corp.

Diane Holman - Crosland-Holman Communications

Frank Hurley - Deputy Chief Scientist, NASA

Charles Kupperman - Exec. Director, GAC

Maj. Mel Lee - U.S. Air Force Fellow, Heritage

Chris Lay - Dep. Director, Congressional Relations, ACDA
Tod Leventhal - Voice of America
Fred Leykam - Washington Defense Group

Joe Mayer - Senate Select Committee on Intelligence

Marissa McGettigan - Office of Rep. Coleman

Mike Othworth - High Frontier

X Keith Payne - National Institute for Public Policy

Mark Schneider - Director of START Policy, OSD

Max Singer - Potomac Associates

Henry Sokolski - Office of Sen. Quayle

Jack Tierney - Special Assistant, MA, ACDA

Bruce Weinrod - Director, Foreign Policy and Defense Studies, Heritage

Michelle Van Cleave - Office of Rep. Jack Kemp

X - cancelled

# Statement of Fred S. Hoffman

Before the

Subcommittee on Strategic and Theater Nuclear Forces

of the

Senate Armed Services Committee

March 1, 1985

for the last 20 years, and about the direction in which we need to move during the next 20 years. The debate has only ostensibly been about the pros and cons of spending next year's funds on research and development. That the basic issues have been largely implicit is unfortunate. Entrenched Western opinion resists rethinking a declaratory strategy that has stressed a supposed virtue in US vulnerability. And the Soviets have been campaigning furiously to aid a natural Western resistance to change. The Soviet campaign is also natural since in the 20 year period in which the West has relied on threats of Mutual Assured Destruction, the Soviets have altered what they call the "correlation of forces" in their favor.

The orthodoxy reflected in the SALT process and in much of the public discussion of the SDI is that of Mutual Assured Destruction (MAD)--a doctrine that holds that the only proper role of nuclear weapons on both sides is to deter their use by the other side, and that they must perform this role through the threat of massive and indiscriminate attacks on cities, designed to inflict the maximum destruction on the adversary's civilian population. On this view, any use of nuclear weapons is and should be clearly suicidal. Anything that interferes in any measure with the other side's ability to inflict "assured destruction" is "destabilizing"--in crises it is supposed to induce preemptive attack and, in the long term military competition, a "spiralling nuclear arms race" with unlimited increases in the potential for indiscriminate destruction on both sides. MAD was the Western, though not the Soviet, strategic foundation for the ABM Treaty and the SALT offense agreements. It is largely unconscious dogma dominating the media discussions of nuclear strategy, SDI, and arms agreements.

Some who advocate this policy like to think of it as not a policy, but a "fact." A supposedly unalterable fact of nature. There is a grain of truth and a mountain of confusion in this assertion. The grain is the unquestioned ability of nuclear weapons to inflict massive, indiscriminate and possibly global destruction. The mountain is the conclusion that this is the way we should design and plan the use of nuclear forces, and even more important, the assumption that this is the way the Soviet Union does design and plan the use of its nuclear forces. The prescription for our own strategy and the assumption about Soviet strategy are not unalterable facts of nature but matters of policy choices in each country. The contrasting US and Soviet choices brought about the relative worsening of the US position.

This is not the place for a detailed critique of MAD, but a summary of its principal deficiencies is essential to assess the potential role for defenses in our strategy. A central point on which most critics and supporters of SDI agree is that the assessment of defenses depends critically on what you want them to do. And what we want them to do depends on our underlying strategy.

MAD as a strategy might have something to recommend it (not nearly enough in my view) if the tensions between the Soviet Union and the US were restricted to the threat posed by nuclear weapons. Relations between the United States and the Soviet Union have not been dominated by the possibility of border conflicts between the two countries or the fear of invasion by the other. Rather the post-World War II military competition arose from the desire of the Soviet Union to dominate the countries on the periphery of its Empire and the desire of the United States to preserve

the independence of those countries. No nuclear strategy can long ignore the role of nuclear weapons in managing this underlying conflict of interests, nor can it ignore the asymmetry in the geostrategic situations of the two countries. The US guarantees a coalition of independent countries against nuclear attack by the Soviet Union. We have also affirmed in NATO strategy that we would respond to overwhelming nonnuclear attack with whatever means proved to be necessary to defeat such an attack. Do we now mean to exclude a US nuclear response in both these cases? What if the Soviets launch a nuclear attack, but one directed solely at our allies and which avoids any damage to the US? How long can an explicitly suicidal nuclear response remain a credible threat in the eyes of our allies or the Soviet Union?

On the Soviet side, there is abundant evidence that they have never accepted MAD as a strategic basis for their military programs (in contrast to their rhetoric designed to influence Western opinion). They continue to maintain and improve, at massive cost, air defense forces, ballistic missile defenses and protective measures for their leadership and elements of their bureaucracy intended to ensure the continuity of the Soviet state. Their military strategy has increasingly focused on qualitative improvements to their massive forces intended to give them the ability to win a quick and decisive military victory in Europe using their nonnuclear forces to attack our theater nuclear force as well as our conventional force while deterring the use of our nuclear forces based outside the theater. Deterring a suicidal use of nuclear force is not very difficult. They have steadily improved the flexibility of their own nuclear forces in what Lt. Gen. William Odom, a leading professional student of Soviet

military thought, has called their "strategic architecture." They design that architecture for the pursuit of Soviet political goals as well as military operations.

They clearly wish to dominate on their periphery and to extend their influence over time. By creating conditions that weaken ties between the United States and other independent countries they serve both ends. They clearly prefer to use latent threats based on their military power, but have shown themselves willing to use force either directly or indirectly and in a degree suited to their political goals. They regard wars, especially long and large wars as posing great uncertainties for them. Because they cannot rule out the occurrence of such wars they attempt to hedge against the uncertainties in their preparations. There is no reason to suppose that their plans for the use of nuclear weapons are inconsistent with their general approach to military planning.

From the Soviet point of view, Western public espousal of MAD is ideal. Western movement away from such a strategy based on indiscriminate and suicidal threats would increase the difficulty of Soviet political and strategic tasks. The consequences of Western reliance on threats to end civilization can clearly be seen in the increasing level of Western public anxiety about a nuclear catacylsm. While the incumbent governments among our allies have successfully resisted coercion, trends in public opinion and in the positions of opposition parties give us little reason for comfort. In the US as well, public attitudes reflected in the freeze movement will make it increasingly difficult to compete with the Soviets in maintaining parity in nuclear offensive forces. The Soviet leaders have reason to believe that the West will flag in its efforts to make up

for the ground it lost in the quantative offense competition. Proponents of MAD have also impeded and delayed qualitative improvements in the name of "stability." Finally, a broad and increasing segment of the public is questioning the morality and prudence of threats of unlimited destruction as a basis for our strategy.

The specific relevance of MAD to the assessment of SDI is best illustrated in the assertion by critics of the hopelessness of the SDI's task. They observe that if even one percent of an attack by 10,000 warheads gets through the defenses, this means 100 nuclear weapons on cities and that for more likely levels of defense effectiveness, the ballistic missile defenses would be almost totally ineffective in protecting cities. They generally leave implicit the remarkable assumption that the Soviets would devote their entire (and in this example, presumably undamaged) missile force to attacks on cities, ignoring military targets in general and not even making any attempt to reduce our retaliatory blow by attacking our nuclear offensive forces. If the Soviet attack, for example, devoted 2/3 of their forces to attacking military targets then only 1/3 of the warheads surviving a defense like a boost phase intercept system would be aimed at cities. In one particularly remarkable exercise of this sort, the authors concluded that defenses would cause the Soviets to concentrate their forces on our cities, <u>even if their attack were to result in nuclear winter</u>.

Such a bizarre assumption suggests the absence of serious thought about the objectives that might motivate Soviet leaders and military planners if they ever seriously contemplated the use of nuclear weapons. Whatever we may think of the heirs of Karl Marx, the followers of Lenin

and the survivors of Stalin, nothing in their background suggests suicidal tendencies. Certainly, their strictest ideological precepts call for the preservation of Soviet power and control. Neglect of the actual motivation of our adversaries is particularly strange in a strategic doctrine that professes to be concerned with deterrence. Despite the fact that deterrence is in the mind of the deterred, those who espouse MAD rarely go beyond the assumption that the attacker's purpose is to strike preemptively before he is attacked.

MAD doctrine takes it as axiomatic that to deter such a Soviet attack we must threaten "assured destruction" of Soviet society. A consequence of this view is that only offensive forces can directly contribute to deterrence. Defensive forces can contribute only if they are useful in protecting our missile silos and the "assured destruction" capability of the missiles in them. Beyond this ancillary role in deterrence, MAD relegates defenses along with offensive counterforce capability and civil defenses to the role of "damage limiting" if deterrence fails. But since our damage limiting capability diminishes Soviet assured destruction capability, eliciting unlimited Soviet efforts to restore their deterrent, MAD dismisses damage limiting (and with it defenses) as pointless and destabilizing.

To recapitulate, acceptance of MAD doctrine implies for SDI:

- Defenses must be essentially leakproof to be useful;
- Defenses can at best serve an ancillary role in deterring attack;
- Defenses that reduce civilian damage are inherently destabilizing.

Even a leakproof defense would not satisfy the last condition. Together these three conditions implied by MAD are an impenetrable barrier--a leakproof defense against SDI. Since I have indicated above reasons for rejecting MAD as a doctrine, I believe we should reexamine each of these in turn.

Most important, if defenses must be leakproof to be useful, then the odds of success for the SDI R&D program are much lower than if lesser levels of effectiveness can contribute to our security objectives. The record is replete with instances of faulty predictions about the impossibility of technological accomplishments by those with the highest scientific credentials, and we should view current predictions about the impossibility of effective ballistic missile defenses in the perspective of that record. Nevertheless, if everything in a complex and diverse R&D program must work well to derive any benefit, the odds of success will be low and the time required very long.

The critics compound the problem further by demanding that the SDI research program prove and guarantee at its outset that the defenses that might ultimately be developed and deployed will be able to deal with a wide variety of ingenious, but poorly specified and, in some cases, extremely farfetched countermeasures. Critics can produce countermeasures on paper far more easily than the Soviets could produce them in the field. In fact, the critics seldom specify such "Soviet" countermeasures in ways that seriously consider their costs to the Soviet Union in resources, in the sacrifice of other military potential, or the time that it would take for the Soviets to develop them and incorporate them into their forces. The countermeasures suggested frequently are mutually incompatible.

If, instead, we replace MAD with a view of deterrence based on a more realistic assessment of Soviet strategic objectives, we arrive at a radically different assessment of the effectiveness required for useful defenses and of the appropriate objectives of the SDI R&D program. The point of departure ought to be reflection on the motives that might induce Soviet leaders and military planners to contemplate actually using nuclear weapons. The test of deterrence would come if we and the Soviet Union found ourselves in a major confrontation or nonnuclear conflict.

In such circumstances, Soviet leaders might find themselves facing a set of alternatives all of which looked unpleasant or risky. If, for example, they lacked confidence in their ability to bring a nonnuclear conflict to a swift and favorable conclusion, they might consider ensuring the futility of opposing them by a militarily decisive use of nuclear weapons. A decisive nuclear attack in this sense might or might not have to be "massive," in the sense of "very large." Its primary motivation would be the destruction of a set of general purpose force targets sufficient to terminate nonnuclear resistance. If Soviet leaders decided that the gains warranted the risks they would further have to decide whether to attack our nuclear forces or to rely on deterring their use in retaliation. The extent and weight of such an attack would be a matter the Soviet leaders would decide within the context of a particular contingency, based on their assessment of our probable responses.

The alternative risks they would face would be the prospect of nuclear retaliation to an early nuclear attack on one hand; on the other hand, those of gradual escalation of a nonnuclear conflict in scope and violence with the ultimate possibility of nuclear conflict in any case.

In either case their primary concern would be to achieve military victory while minimizing the extent of damage to the Soviet Union and the risk of loss of Soviet political control. Their targets would be selected to contribute to these goals. Wholesale and widespread attacks on civilians would not contribute but would only serve to insure a similar response by the large nuclear forces remaining to us even after a relatively successful Soviet counterforce attack. And this does not even take account of the possibility that, should they launch a massive attack on cities, that might trigger nuclear winter, making our retaliation irrelevant.

The magnitude of collateral damage to Western civilians from a Soviet attack with military objectives would depend on the extent of Soviet attack objectives and the weight of attack required to achieve those objectives. Like us, they have been improving the accuracy of their weapons and reducing their explosive yield. As this trend continues, motivated by the desire for military effectiveness and flexibility in achieving strategic objectives, they will become increasingly capable of conducting effective attacks on military targets while limiting the damage to collocated civilians and while remaining below the threshhold of uncertainty of global effects that would do serious harm to themselves. At present, a Soviet attack on a widespread set of general purpose force and nuclear targets would undoubtedly cause very great collateral damage but could be conducted so as to leave the bulk of Western civil society undamaged and to remain safely under the threshhold for a major climatic change affecting the Soviet Union.

We should judge the utility of ballistic missile defenses in the light of their contribution to deterring such attacks and their ability to

reduce the collateral damage from such attacks if they occur. The relevant question for the foreseeable future is not whether defenses should replace offensive weapons but whether we should rely exclusively on offensive weapons or whether a combination of militarily effective and discriminating offense and defenses will better meet our strategic requirements for deterrence and limiting damage.

This change in the criterion by which we judge defenses from the one imposed by MAD has profound consequences for the level of effectiveness required of defenses, for the treatment of uncertainty about defense effectiveness and for the terms of the competition between offense and defense. Instead of confining the assessment to the ability of defense to attain nearly leakproof effectiveness, a realistic consideration of the role of defense in deterrence recognizes that an attacker will want high confidence of achieving decisive results before deciding on so dangerous a course as the use of nuclear weapons against a nuclear-armed opponent. Analysis will show that defenses with far less than leakproof effectiveness can so raise the offensive force requirements for attacks on military target systems that attacks on limited sets of critical targets will appear unattractive and full-scale attacks on military targets will require enormous increases in force levels and relative expense to achieve pre-defense levels of attack effectiveness and confidence in the results. Because of an attacker's desire for high confidence in a successful outcome, he must bear the burden of uncertainty about defense effectiveness and is likely bias his assumptions toward overestimating it. This is particularly important for his willingness to rely on sophisticated countermeasures such as those liberally assumed by critics of the SDI.

In addition, the technical characteristics of the defenses that are contemplated in the SDI would pose particularly difficult problems for a Soviet attack planner. A particularly prevalent and misguided stereotype in current discussion contrasts "an impenetrable umbrella defense over cities" with a hard point defense of silos as though these were the only choices. Reality offers more types of targets and defenses than are dreamt of in this "city-silo" world. The preceding discussion has attempted to show the importance of general purpose force targets in motivating a possible nuclear attack. With respect to the characteristics of future defenses, the technologies pursued under the SDI have the potential for a multi-layered defense which begins with boost phase intercept, continues in the exo-atmospheric mid-course phase and terminates with systems for intercept after reentry into the atmosphere. Each sucessive layer is more specific in terms of the target coverage it provides, but none is effectively so circumscribed that it is properly described as a point defense.

This means that defenses can simultaneously protect several military targets and can simultaneously protect military targets and collocated population. The problem this poses for the attacker is that he cannot, as he could against point defenses, economize in his use of force by predicting which defenses protect which targets and planning his attack precisely to exhaust the defense inventory (even assuming that he can afford to forego attacks on some military targets). Moreover, to the extent that there is redundancy in military target systems (or in their possible unknown locations), and the defense can identify the targets of particular enemy warheads in midcourse, or terminal, phase (as it can), the defense

can defend targets "preferentially." The offense would have to treat all targets as equally defended by such a concentrated defense. This greatly enhances the competitive advantage of the defense.

Another implication of the foregoing discussion is that defenses do not come in neat packages labelled "protection of military targets" and "protection of civilians." Warheads aimed at military targets will, in general, kill many collocated civilians and defenses that protect against such attacks will reduce civilian casualties. Again, in contrast to the kind of nightmare attack assumed by MAD theorists, when we consider more realistic Soviet attacks, effective but far from leakproof defenses can protect many civilians against collateral damage. If, moreover, a Soviet attack planner knows that we will protect collocated military targets more heavily and he must choose between attacking similar targets some of which are collocated and others of which are isolated, he will opt for the isolated targets if he wishes to maximize his military effectiveness (the reverse of what is generally assumed by critics of defenses). When we understand that the problem of protecting civilians is primarily the problem of dealing with collateral damage, it becomes clear that we do not need leakproof defenses to achieve useful results. The more effective the defenses, the greater the protection, but there is no reason to expect a threshhold of required effectiveness.

Another charge levied against defenses is that they are "destabilizing." The prospect of leakproof defenses is allegedly destabilizing because they present an adversary with a "use it or lose it" choice with respect to his nuclear offensive capability. Defenses with intermediate levels of effectiveness are also held to be destabilizing because they

work much better if an adversary's force has previously been damaged in a counterforce strike, intensifying incentives for preemption in a crisis. The first charge hardly needs response. Leakproof defenses, if they ever become a reality, are unlikely to appear on short notice or all at once. The Soviets know that they can live under conditions of US nuclear superiority without any serious fear of US aggression because they have done so in the past. In fact, they survived for years under conditions of US monopoly. They can also and are pursuing defense themselves, and undoubtedly will continue. The notion that they would have no choice for responding to US defenses other than to launch a preventive war is not a serious one.

The crisis stability argument is also a weak one. The analysis generally advanced to support it is incomplete and inadequate to determine the strength of the alleged effect because it is unable to compare meaningfully the importance of the difference between striking "first" and striking "second" with the difference between either and "not striking at all." Such analyses ignore, therefore, one of the most important elements of the theory of crisis stability contained in the original second-strike theory of deterrence. Moreover, since defenses would contribute to deterrence by denying achievement of Soviet attack objectives, it would at least be necessary to determine the <u>net</u> effect of strengthening deterrence with the effect of intensifying incentives to preempt and this the analysis cannot do. Finally, the argument focuses on the wrong culprit. The grain of relevance in the argument is its identification of the problems presented by vulnerable offensive forces. It then superimposes partially effective defenses on the vulnerable offensive forces and

concludes that the defenses are destabilizing. But it would be a virtuoso feat to design SDI type, multi-layered defenses that would not, willy-nilly, reduce the vulnerability of the offensive nuclear forces, and it would certainly be possible by proper design to reduce that vulnerability far enough to eliminate the so-called destabilizing effect while realizing the other benefits of defenses.

Turning next to the effect of introducing defenses on the long-term military competition, we once again encounter the charge that defenses are destabilizing. A common assertion is that the offense will always add force to overwhelm the defense with the net result of larger offensive forces and no effective protection. This stereotyped "law of action and reaction" which flourished in the 1960s and early 1970s was also supposed to imply that if we reduce defenses, the Soviets will inevitably reduce their offenses. It has no basis in theory, and it has been refuted by reality. The United States drastically cut its expenditures on strategic defense in the 1960s and 1970s while the Soviets tripled their expenditures on strategic offense. After we abandoned any active defense against ballistic missile attacks even on our silos, the Soviets deployed MIRVs for the first time and increased them at an accelerating rate. The action-reaction theory of the arms race led to some of our worst intelligence failures in the 1960s and early 1970s.

The effects of US defenses on the incentives governing Soviet offensive forces are likely to depend on the terms of the competition as they are perceived by each side. The incremental increase in effort or force size by the offense required to offset an increment of effort or force in the defense (the "offense-defense leverage") is particularly important in

determining the character of the long-term response by the offense to the introduction of defenses. The leverage in turn as suggested by the foregoing discussion, is extremely sensitive to the strategic criterion we adopt, the specific targets being protected, and the characteristics of the defenses. When we assess the role of defenses within a strategic framework like the one outlined above and take account of the defense characteristics that could result from the technologies pursued under the SDI, the leverage is radically shifted in favor of the defense compared with the results suggested by evaluations within the MAD doctrine and under the misleading sterotype of defense characteristics prevalent in public discussion.

More fundamentally, ballistic missiles now offer an attack planner a degree of simplicity and predictability associated with no other weapon system. Planning a ballistic missile attack is much more like building a bridge than it is like fighting a war. The distinguishing characteristic of warfare, an active and unpredictable opponent, is missing. Introduction of defenses will change that radically and the change will reduce the strategic utility of ballistic missiles, now the keystone of US and Soviet military forces. President Reagan called for defenses to make ballistic missiles "impotent and obsolete." Defenses of relatively moderate capability can make them obsolete to a military planner long before they are impotent in terms of their indiscriminate destructive potential.

If this point is reached or foreseen, the incentives governing negotiations over arms agreements will be fundamentally changed in a direction offering much more hope of agreement on substantial reductions in forces on both sides. Moreover, the growing problems of verification of

limitations on nuclear offensive systems makes it increasingly difficult to foresee the possibility of agreeing to sizable reductions in the absence of defenses. One of the contributions of defenses can be to increase the ability to tolerate imprecision in the verifiability of arms limitations.

The point of view advanced here has major implications for the conduct of the SDI R&D program as well as for the criteria we should apply to evaluating its results when we approach the decision for full-scale engineering development and deployment. If we adopt the MAD view of the role and utility of defenses, and require essentially leakproof defenses or nothing then we will conduct the SDI on what has been called the "long pole" approach. We will seek first to erect the "long pole in the tent," that is, we will devote our resources to working on those technical problems that are hardest, riskiest and that will take longest and we will delay working on those things that are closest to availability. The objective of this approach will be to produce a "fully effective" multi-layered system or nothing. Unfortunately such an approach increases the likelihood that we will in fact produce nothing and it is certain that it delays the date of useful results into the distant future.

If instead, as argued here, we believe that defenses of moderate levels of capability can be useful then we will conduct SDI in a fashion that seeks to identify what Secretary Weinberger has called "transitional" deployment options. These may be relatively near term technological opportunities, perhaps based on single layers of defenses or on relatively early versions of technologies that can be the basis for later growth in system capability. Or if they are effective and cheap enough they might

serve for a limited lifetime against early versions of the Soviet threat while the SDI technology program continues to work on staying abreast of qualitative changes in the threat. Such an approach would incorporate a process for evaluating the transitional deployment options in terms of their effectiveness, their robustness against realistic countermeasures, their ability to survive direct attack on themselves, their cost and their compatibility with our long-term strategic goals. Such an approach represents the best prospect for moving toward the vital goals enunciated by President Reagan two years ago.

# C o l l o q u i u m

of the Policy Planning Staff of the
Federal Ministry for Foreign Affairs
March 21, 1985 (9.30 a.m. - 5.30 p.m.)
"La Redoute", Bonn - Bad Godesberg, Kurfürstenallee

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"The SDI Research Program and its Implications for Europe"

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I. Outline of the SDI Research Program
(Dr. Gerold Yonas, SDI-Organization)

II. Technological and Industrial Implications for Europe
(François Heisbourg, Thomson International)

III. Security Policy Implications for Europe
1. Defense Aspects
(Fred Hoffman, Pan Heuritics)
2. Arms Control Aspects
(Dr. Friedrich Ruth, Federal Ministry for Foreign Affairs)

IV. Soviet Perceptions and Options
(Dr. Fritz Ermath, National Intelligence Council)

V. European Interests and Options
(Dr. Hans Rühle, Federal Ministry of Defense)

Liste der Teilnehmer am Kolloquium des Planungsstabs des Auswärtigen Amts am 21. März 1985 in Bonn-Bad Godesberg

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"Das SDI-Forschungsprogramm und seine Implikationen für Europa"

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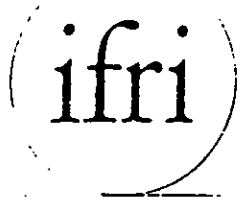
| | |
|---|---|
| Wolfgang Altenburg | General, Generalinspekteur der Bundeswehr |
| Hans-Peter Bazing | Stellvertretender Leiter des Planungsstabs, Auswärtiges Amt |
| Hans-Joachim Daerr | Vortragender Legationsrat, Planungsstab, Auswärtiges Amt |
| Günter Diehl | Präsident der Deutschen Gesellschaft für Auswärtige Politik, Staatssekretär a.D. |
| Dr. Fritz Ermath | National Intelligence Officer for USSR |
| Dr. Wolfgang Finke | Ministerialdirektor, Bundesministerium für Forschung und Technologie |
| Dr. Dietmar Frenzel | Ministerialrat, Bundesministerium für Forschung und Technologie |
| Frank Gaffney | Deputy Assistant Secretary for Nuclear Forces and Arms Control Policy, Department of Defense |
| not present Hans-Dietrich Genscher | Bundesminister des Auswärtigen |
| Prof. Dr. Wolf Häfele | Vorsitzender, Kernforschungsanlage Jülich GmbH |
| Dr. Helmut Hartbaum | Leiter des Fachbereichs Raumfahrt, ANT-Nachrichtentechnik GmbH |
| François Heisbourg | Vicepresident, Thomson International |
| Dr. Ing. Othmar Heise | Mitglied der Geschäftsführung der Messerschmidt-Bölkow-Blohm GmbH |
| Fred Hoffman | Director, Research Institute Pan Heuristics |
| Rolf Hüttel | Generalmajor, Bundesministerium der Verteidigung |
| Prof. Dr. Karl Kaiser | Direktor des Forschungsinstituts der Deutschen Gesellschaft für Auswärtige Politik |

| | |
|---|---|
| Dr.Andreas Meyer-Landrut | Staatssekretär, Auswärtiges Amt |
| Jürgen Möllemann | Staatsminister, Auswärtiges Amt |
| Uwe Nerlich | Mitglied der Institutsleitung, Stiftung Wissenschaft und Politik |
| Dr. Hans-F. von Ploetz | Leiter des Ministerbüros, Auswärtiges Amt |
| Prof. Dr. Klaus Ritter | Direktor der Stiftung Wissenschaft und Politik |
| Dr. Jürgen Ruhfus | Staatssekretär, Auswärtiges Amt |
| Dr. Hans Rühle | Leiter des Planungsstabs, Bundesministerium der Verteidigung |
| Dr. Friedrich Ruth | Botschafter, Beauftragter der Bundesregierung für Fragen der Abrüstung und Rüstungskontrolle |
| Dr. Hans Schauer | Ministerialdirigent, Auswärtiges Amt |
| Wilfried Scheffer | Oberst i.G., Bundeskanzleramt |
| Franz-Joseph Schulze | General a.D. |
| Dr. Konrad Seitz | Leiter des Planungsstabs, Auswärtiges Amt |
| Prof. Dr.Dr. Hans Staab | Präsident der Max-Planck-Gesellschaft zur Förderung der Wissenschaften |
| Dr. Immo Stabreit | Ministerialdirigent, Bundeskanzleramt |
| Dr. Jürgen Sudhoff | Stellvertretender Sprecher der Bundesregierung |
| Dr. Werner Ungerer | Ministerialdirektor, Auswärtiges Amt |
| Dr. Reinhard Veelken | Generalbevollmächtigter Direktor der Siemens AG |
| Dr. Gerold Yonas | Deputy Director and Chief Scientist, Strategic Defense Initiative Organization, Department of Defense |

Attachment 19



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EURO-AMERICAN SEMINAR ON

THE STRATEGIC DEFENSE INITIATIVE

AND ITS IMPACT ON EUROPEAN SECURITY

Jointly organized by IFRI, RAND, SWP and RIIA

Trianon Palace Hotel - Versailles
22-24 March, 1985

AGENDA

Friday March 22

| | | |
|---|---|---|
| 4 pm | : Participants assemble at the Trianon Palace Hotel | |
| 5 pm-8 pm | : SESSION I | |
| | WESTERN OBJECTIVES AND TECHNOLOGY OPTIONS | |
| | Chairman : Thierry de Montbrial | |
| | - US Administration overview | Gerald Yonas |
| | Respondents | Robert Alston<br>Hubert Fiegl |
| | - French official view | Hubert Vedrine |
| | - Industrial aspects : a European view | François Heisbourg |
| | Respondents | Karl-Heinz Beckurts<br>Gerald Yonas<br>Nigel Hughes |
| 8.30 pm | : DINNER | |

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6 rue Ferrus (F) 75683 PARIS Cedex 14 T. (33-1) 580 91 08 Télex 201 680 F

Saturday March 23

| | | |
|---|---|---|
| 9am-12.30pm | : SESSION II | |
| | SOVIET OUTLOOK AND PROGRAMS | |
| | Chairman : Uwe Nerlich | |
| | - Soviet political-military strategy towards strategic defense | Benjamin Lambeth |
| | Respondents | Pierre Morel<br>Sir John Aiken |
| 10.30am | : COFFEE BREAK | |
| | - Panel on Soviet capabilities : Present and prospects | Fred Hoffman<br>Albert Carnesale<br>Général de Barry<br>Henry Cooper |
| 12.30pm | : LUNCH | |
| 4pm-8pm | : SESSION III | |
| | POTENTIAL ROLE OF NATO DEFENSES | |
| | Chairman : James Thomson | |
| | - Potential for defending targets in the US (civilian and/or military) | Russell Shaver |
| | Respondents | Fred Hoffman<br>John Howe |
| | - Potential for theater defenses (protection of civilian and/or military targets) | Botho Engelen |
| | Respondents | Philippe Coste<br>Frank Gaffney |
| 8.30pm | : DINNER | |

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Sunday March 24

9am-1pm : SESSION IV

WESTERN STRATEGY, NATO AND SOVIET DEFENSES

Chairman : Pierre Lellouche

- Implications of defenses for Flexible Response — Uwe Nerlich

Respondents — James Thomson, Peter Stratmann

11am : COFFEE BREAK

- Implications for European deterrents

British assessment — John Roper

French assessment — Jean-François Bureau

Respondents — Hans Joachim Daerr, Russell Shaver

1pm : LUNCH

3pm-6pm : SESSION V

ALLIANCE POLICY OPTIONS : POLITICAL STRATEGY, DEFENSE POLICY AND ARMS CONTROL

Chairman : John Roper

- American view — Arnold Kanter

- European view — Pierre Lellouche

Respondents and Concluding Panel — Jim Thomson, Pauline Neville-Jones, Henry Cooper, Hubert Vedrine, Lothar Ruehl

6pm : End of seminar

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IFRI/RAND/SWP/CHATHAM HOUSE SDI CONFERENCE MARCH 22/24, 1985

## List of Participants

### FRANCE

| | |
|---|---|
| . Général de Barry | Secrétaire Général de la Défense Nationale |
| . Jean-François Bureau | Ministère de la Défense, Cabinet du Ministre |
| . Philippe Coste | Chef du Centre d'Analyse et de Prévision, Quai d'Orsay |
| . Jean-Michel Gaillard | Conseiller référendaire, Cour des Comptes |
| . François Heisbourg | Direction des Affaires Internationales, Thomson |
| . Jean Klein | IFRI |
| . Pierre Lellouche | IFRI |
| . Dominique Moïsi | IFRI |
| . Thierry de Montbrial | Directeur IFRI |
| . Pierre Morel | Directeur des Affaires Politiques, Quai d'Orsay |
| . Hubert Vedrine | Conseiller Diplomatique, Présidence de la République |

### FEDERAL REPUBLIC OF GERMANY

| | |
|---|---|
| . Karl-Heinz Beckurts | Siemens, AG |
| . Hans-Joachim Daerr | Planning Staff, Foreign Ministry |
| . Botho Engelin | Oberst i.G., Air Force Staff, Planning section |
| . Hubert Fiegl | SWP |
| . Uwe Nerlich | SWP |
| . Lothar Ruehl | State Secretary, MOD |
| . Peter Stratmann | SWP |

### GREAT BRITAIN

| | |
|---|---|
| . Sir John Aiken | Member of the Council of the RIIA |
| . Robert Alston | Head of Defence Department, FCO |
| . John Howe | Head of Defence Arms Control Unit, MOD |
| . Nigel Hughes | Deputy Chief Scientific Adviser |
| . Pauline Neville-Jones | Head of Planning Staff, FCO |
| . John Roper | RIIA |

UNITED STATES

| | |
|---|---|
| . Nanette Brown | RAND |
| . Albert Carnesale | Harvard |
| . Henry Cooper | Deputy US Negotiator for defense in space (Geneva) ; Assistant Director ACDA |
| . Frank Gaffney | Deputy Assistant Secretary of Defense, ISP |
| . Fred Hoffman | Pan Heuristics |
| . Arnold Kanter | RAND |
| . Benjamin Lambeth | RAND |
| . Russell Shaver | RAND |
| . James Thomson | RAND |
| . Gerald Yonas | SDIO |

Dr Fred Hoffman's address to the
House of Lords All Party Defence Group
26 March 1985

Amongst those present were:

* The Earl of Bessborough (Minister of State, Ministry of Technology 1970)
* Lord Beswick (Minister of State for Industry 1974-75)
  Earl Cathcart
  The Earl of Cork and Orrery
  Lord De Freyne
  Earl De La Warr (Member of the North Atlantic Assembly)
  Earl Fortescue
  Lord Gainford
  Lord Gisborough
* Lord Gladwyn (former Ambassador to France; Liberal Party Spokesman on Defence and Foreign and Commonwealth Affairs)
  Lord Glanusk
  Lord Hankey (former Ambassador to Sweden)
* Lord Home of The Hirsel (Secretary of State for Foreign & Commonwealth Affairs 1960-63; Prime Minister and First Lord of the Treasury 1963-64)
  Lord Ironside
  The Earl of Kimberley (UK Delegate to North Atlantic Assembly; Secretary House of Lords All Party Defence Group)
  Lord Margadale
  Lord Marley
* Lord Mayhew (Minister of Defence for the Royal Navy 1964-1966; Member of UK Delegation to NATO)
* Lord Molloy
  Lord Mulley (Minister of State Foreign Office 1967-69; Minister of Transport 1969-70 and 1974-75; Secretary of State for Education and Science 1975-76; Secretary of State for Defence 1976-79)
  Lord Newall (Member of Delegation to Council of Europe and Western European Union)
* The Earl of Onslow
* Lord Orr-Ewing
* Lord Reay (Member of European Parliament 1973-79; Member of Council of Europe and Western European Union)
* The Earl of Selkirk (former Paymaster-General and First Lord of the Admiralty)
  Lord Stewart of Fulham (Secretary of State for Foreign and Commonwealth Affairs 1968-70)
  Lord Vaux of Harrowden

* The Rt Hon Julian Amery MP (Minister for Foreign and Commonwealth Affairs 1972-74)
  The Hon Robert Boscawen MP
* Neville Trotter MP

* Asked questions.

February 18, 1985

TO: Dr. F. C. Ikle

FROM: F. S. Hoffman

SUBJECT: Status and Prospects for SDI

1. Recent discussions indicate to me that SDI faces an acute problem on the Hill in the coming weeks. The size of the requested budget increase for FY 1986 would be a lightning rod at any time, but especially in a year when the DOD budget will be under heavy attack. If, at the same time, both friends and adversaries see SDI as nothing but a research program for at least the next five years, large cuts are almost a certainty. And failure to obtain a substantial increase this year would undercut the program's credibility as a Presidential initiative.

2. As you know, I have urged that the SDI R&D program should emphasize the identification of transitional or evolutionary deployment options. Nevertheless, I believe that the presentation of such options must be preceded by an understanding of the relevant technologies, the definition of systems concepts, an assessment of their performance in the light of their missions, their resource requirements and an analysis of their policy implications. While I cannot judge the Administration's current state of preparedness to present substantive conclusions on transitional deployment options, I have the impression that the work has not yet gone far enough to establish a common set of views in this area among the OSD, the JCS and the SDIO. Ad hoc and inconsistent views exposed before the Congress would do far more harm than good.

3. In the absence of readiness to discuss specific program goals, it is essential to offer the Congress the outline of a continuing decision process to develop useful transitional options as early as possible. Such a process could reassure both those who now believe that all decisions are "on hold" until a 1990 decision about development of a "fully effective , multilayered system" and those who are concerned that pressure for early deployments will lead the program into a dead end. The description of the process should demonstrate that the the SDI R&D program objectives assign high priority to the development and identification of transitional deployment options consistent with the program's long term goals, that the SDIO will identify such opportunities as soon as technological progress suggests their availability, and that the OSD and the JCS will assess the policy, strategic aspects and resource implications of such options as soon as they can be identified.

4. Elements of the process might include the following:

a. A characterization of the SDIO pilot architecture study in terms relevant to the time-phased ordering of deployment options.

b. An SDIO assessment and report to SECDEF and the JCS, based on the first round efforts of the "horse race" contractors, service efforts, and internal SDIO analyses, making an initial assessment of technological opportunities for transitional options and their relation to longer term R&D efforts. (Before end CY 1985).

c. Subsequent assessments by the JCS and the OSD of the strategic utility, policy impacts and resource implications of the opportunities identified, to be reflected in FY 1987 presentations to the Congress.

d. An analogous outline of a process for repeating the cycle in subsequent years to underline the need to review and revise program objectives as the research program proceeds. To heighten the special status of the SDI as a Presidential initiative, the process might include explicit provision for continuing NSC review.

February 20, 1985

## POSSIBLE SOVIET NEGOTIATING STRATEGY AT GENEVA

Soviet aims at Geneva appear to be focussed on SDI. I assume that this is not merely a feint. Then the questions are: what do they hope to accomplish and why, and how do they plan to do it.

### SOVIET AIMS

SDI has been described by the Administration as a research program for some years to come. The Soviets cannot realistically hope to cut off research. They cannot get explicit support for this from the West Europeans as shown by Margaret Thatcher's recent remarks. Even SDI's opponents feel obliged to pay lip service to the inevitability of research on technologies for defense (the sentiment may be genuine among some of the physical scientists whose laboratories will find interesting tasks in the program). And deployment is now constrained by the ABM Treaty which has not so far been questioned by the Administration.

If SDI is a primary focus of Soviet concern at Geneva, it must be because they view it as more than a research program. I believe they do and that they may have in mind the goal of ensuring politically that it will become no more than an interminable and pointless research program. The direct means to this end would be a proposal for an ban on development of ASAT weapons which would serve two purposes. It would seal off a rationale, not now prohibited by the ABM Treaty, which could serve as a defense of demonstrations in the SDI program that are being challenged by those who wish to restrict U.S. activities under a broad interpretation of the ABM Treaty's provisions. Second, and perhaps even more important, it would put the Administration on record as abandoning any prospect of of development or deployment of exoatmospheric components of SDI since any system able to intercept ballistic missiles in space could also intercept satellites in orbit.

If they felt it necessary to make the proposal more palatable to the Administration, the Soviets could propose or accept an ASAT Treaty of limited duration, say until the year 1995 or 2000. Such a proposal might be viewed as consistent with the SDI by those in the Administration who believe that systems development and deployment decisions should be deferred in any case until we are ready to consider a "fully effective, multi-layered system against the fully responsive threat". And if they felt the need, they might make the package all but irresistable to many in this country and almost all among our Allies by throwing in some reductions in SS-18s and SS-20s, perhaps for an additional consideration

in terms of M-X, D-5, and Pershing II.

The essential point concerning SDI is that such an agreement would make it impossible to defend near term SDI budgets at anything like the level proposed by the Administration. With any development or deployment decision pushed so far into the future, why should the hard-pressed DOD budget be strained to such an extaordinary degree for a long, long-term research program? In turn, if the SDI budget remains close to the levels planned prior to March 23, 1983 for the second straight year, opponents will fairly note that the President's initiative is politically dead. And with it will die not only the President's technological initiative, but his explicit break with the declaratory policy of MAD, the principal near term effect of his speech.

January 18, 1985

Ambassador Seymour Weiss
8905 Transue Drive
Bethesda, Maryland 20034

Dear Sey,

The discussion that follows applies some ideas developed by Albert and Roberta Wohlstetter to the assessment of the issues that are central to the Geneva talks and to US negotiating strategy.

A major thrust of Soviet strategy on current arms negotiations, supported by some Americans who are enthusiasts for arms control and oppose SDI, is to conduct a pincer operation against SDI. One arm of the pincers is a broad construction of the the ABM Treaty limitations that would constrain our demonstrations of SDI technologies (and even our laboratory research if they can manage it). The second arm is a comprehensive ban against developing or acquiring weapons in space that would fortify the constraints on SDI R&D and would put the current Administration on record as agreeing to limitations that would prohibit deployment of substantial elements of SDI.

Any comprehensive ban on ASAT weapons coupled with a broad interpretation that prohibits activities or systems based on capability would have this effect because many elements of SDI will inevitably have a joint capability against ballistic missiles and satellites. Soviet behavior, in contrast to the standard they would like to impose on us, is based on a narrow interpretation of treaty limitations. Specifically, they argue, as in the case of the Krasnoyarsk radar, that the intent rather than the capability governs the legitimacy of the activity (e.g. space monitoring rather than BMD battle management). Both the broad implications for negotiating strategy and the specific implications for the future of SDI of accepting this double standard are critical issues.

We have some ideas about negotiating strategies and internal policies designed to deal with this problem.

Fred Hoffman

FSH:pc
cc: Albert Wohlstetter,

Attachment 24

# WARNING AND NO RESPONSE

April 2, 1985

Roberta Wohlstetter

Air Force Senior Intelligence Officers Conference

Homestead Air Force Base, Florida

Most of the time when we talk about problems of warning we think of surprise attack--Pearl Harbor, Barbarossa, the invasion of Afghanistan, the murderous assault on our embassy in Lebanon, and so on--disasters which are sudden and bloody. We quarrel about whether there was a failure of intelligence. Or a failure to use and respond to intelligence signals, which after the fact always look marvelously clear. However, we have other troubles. Some of them creep up on us inconspicuously. The change at any given time seems innocent enough. But the changes add up and can ultimately spell disaster. These are the slow Pearl Harbors. Here the problem is that after each small change even hindsight is not very clear. In fact, one can sometimes argue interminably even about the cumulative disaster.

For example, did our responses to the Berlin Wall represent a success? Khrushchev did not go further and conclude the separate peace with East Germany that he had been threatening. Nuclear war was avoided. Tension was reduced. Or was the Wall a failure for the Allies? A "needless capitulation," which replaced the Four Power arrangements with East German control over East Berlin? After each indecisive and bloodless engagement in a long sequence, we can easily declare a victory and go home, as Senator Aiken suggested we do from a bloodier conflict. Yet Intelligence did not foresee well in advance the division of the city of Berlin and our government did not respond in a way which would restore us to our prior position.

We face a similar untidy problem in connection with the violations of SALT I and II. Here there is plenty of warning but no immediate disaster and no response.

My colleagues and I several years ago did a study broad enough to include these less dramatic but important problems of warning and response. We divided signals that might require timely response into four categories: (1) warning in peacetime of possible attack; (2) signals during an ongoing war of escalation to higher levels of violence or of spreading to new combatants or new places; (3) warning of a sudden or slow change in the balance; and, (4) signals of violations of treaties or agreements or "understandings" or implicit codes of tolerable behavior. On the third category, we had a major failure of intelligence in the 1960s and early 1970s. We did not anticipate or even notice the slow but major change in the strategic balance--what the Soviets call the correlation of forces. Today, however, I want to address the related problems in the fourth category, the problem of violations.

Signals of violation are obviously a less sexy subject than signs that a surprise attack is on its way. Nevertheless, signals of violation, and specifically signs that the Soviets are violating SALT I and SALT II, have made the headlines as the substance of those agreements continued to erode. (You are all familiar with the President's recent reports to the Congress on Soviet non-compliance.) The headlines are likely to recur now that we are trying for new and more comprehensive agreements. Intelligence officers are expected to evaluate whether there has been a violation; whether there will be, and whether or not the supposed violation is important. Here intelligence has an important role to play in getting the attention of policymakers and prompting them to respond in a way which will stop the erosion or offset it.

I am painfully aware that intelligence officers are permitted only the most mild and indirect methods for suggesting responses to a decision-maker. But an attack is so obvious a disaster you can always hope that your reading of the signals will inspire some precautionary movements. Ambiguous violations of agreements are much more difficult to deal with, first, because the agreements themselves are ambiguous. We know when we have been attacked, but with violations we can always argue to ourselves that any specific act is not yet a violation. The Soviets generously will always help us to go down that road. Second, any individual violation is part of a lengthy process, a sequence of events, none of which is decisive. We can always argue about any individual act, that even if it is a violation, "technically" or literally, it doesn't in itself matter much. Moreover, in the strategic field prevailing dogmas about Mutual Assured Destruction, or MAD, and Minimum Deterrence make it even easier to argue that it doesn't matter. According to MAD, it makes no difference whether an adversary has several times as many missiles as we, so long as he cannot be sure that a few of our missiles will survive his attack and be launched against some of his cities. In short, on the MAD dogma there are no significant violations.

Even before the hardening of dogmas of Mutual Assured Destruction, if we look back in time, we can find this sort of argument in connection with a series of treaties involving the United States and other governments: for example, in defense of German violations of the Versailles Treaty, or East German violations of the Quadripartite Arrangements governing the division of Germany and of the city of Berlin, or Indian violations of their agreement on nuclear cooperation with the US government, etc. Take

the first example, the slow accumulation of violations by the Germans of the Versailles disarmament clauses in the early 1920s. These were clearly noted and reported by members of the Allied Control Commission, who were entrusted with on-the-ground inspection. But no government leader wanted to take any action. So long as Germany was judged to be incapable of waging war--"with no allies, no Navy, and practically no finance," then each violation in and of itself was considered militarily insignificant. One British foreign office report reviewing the year of 1921 does admit that there have been certain "difficulties with the German Government over the organization of the police. Hidden depots of arms have from time to time been discovered. The work of control has, upon occasion, been deliberately obstructed. The `Deutsche Werke´ are actually manufacturing material of potential military value. A German Army handbook recently appeared to contemplate the use of prohibited weapons and the eventual resurrection of a National Army." And so on. Nevertheless, as the British Ambassador to Berlin explained to his Foreign Secretary Earl Curzon, these instances were "in great part motivated by a genuine desire to guard against internal disorders and a not unnatural policy of defense against external dangers." The Germans were interested only in defense. No single violation was judged to be important enough to make it the occasion for a sanction or, even in some cases, a complaint.

There are always a multitude of reasons for turning a blind eye to infractions, but one essential that runs through many examples is the desire to keep an existing agreement intact, or to keep relations calm, if not actually pleasant, in order to write a new agreement. So the British persuaded the French not to raise objections; the Allied Control

Commission for supervising German disarmament was abolished and a much weaker form of monitoring substituted through the League of Nations. The three foreign ministers of Germany, France and England either ignored or suppressed the Commission's final report about Germany's non-compliance in order to pave the way for a new disarmament agreement. In fact, Briand and Stresemann, the French and German ministers respectively, shared the 1926 Nobel Peace Prize. Yet we know today that Streseman was a major figure in Germany's rearmament. Seven or eight years later with Hitler's accession to power, it was too late to do more than protest about German rearmament. No one suggested giving Hitler a peace prize. By then the changed balance was clearly connected with the prospect of a war, whose likelihood was all too palpable.

The most recent quarrel about "is it or is it not a violation?" concerns the Soviets' Krasnoyarsk Radar. The quarrel centered first on whether or not the construction of this radar violated the SALT I Treaty. Gerard C. Smith and Paul Warnke, former arms control negotiators, thought not. They implied that US accusations were simply paving the way for US violations. And they were not alone. Now, however, even among the original SALT negotiators, the consensus seems to be that this radar does constitute a violation. The Treaty requires that phased array radars of this sort should be deployed along the periphery of the Soviet Union and should be oriented outward so that they cannot be used to manage interceptors in a battle against the penetrating offense missiles of the other superpower. The Krasnoyarsk Radar is located deep inside Central Siberia, and its coverage extends over a large area in Siberia and Central Asia.

The quarrel, however, persists. It has shifted to the radar's military significance and here we find the familiar argument that "by itself" the violation is not important. Arnold Horelick, for example, a well known Sovietologist and a good friend, says "it is a technical violation, not tolerable in principle, and should be of great concern as a threat to the ABM Treaty. But it poses no strategic threat in and of itself and is probably at best only a marginal add-on to a break-out capability." Stephen Meyer, a Sovietologist at MIT, concurs that it is "clearly a treaty violation...but it's obviously not a sinister plot to sneak out [from] under the treaty."

And what do the Soviets say? They argue, of course, that the radar is strictly within the terms of the agreement. Krasnoyarsk has been designed simply to track objects in space, an innocent (or at least allowed) purpose. However, it is very poorly located to give the Soviets any significant additional capability for that innocent purpose. It does illustrate a point in this game of creep-out. Every military system can perform more than one function. If the Soviets field a system that performs a prohibited function, they and some of the tolerant dreamers on our side usually can cite a legitimate function it might perform (however badly or however well). On the other hand, when we field a system for a function that is permitted, not only the Soviets, but many of our chaps think we shouldn't because there is some conceivable illegitimate purpose to which we might extend the system. (For example, the ABM Treaty prohibits employing a defense against strategic missiles; it does not forbid deployment of a defense against the shorter range ballistic missiles in the theater. Nonetheless, many of those who have defended the Krasnoyarsk

radar oppose our deploying or testing defenses against tactical ballistic missiles--because they think we might extend our defense to one that works against ICBMs.)

The Soviets will always produce some justification for their actions, sometimes wildly implausible--as, for example, their statement that President Amin had invited them into Afghanistan in order to get rid of the CIA. Sometimes they also come closer to the truth. They do not expect us necessarily to believe their lies, in fact some of their more blatant ones show their contempt for us: Americans will believe almost anything--or at least tolerate the fiction. In the area of arms control, they have tried to appear more plausible, looking for loopholes in the agreements through which they can slip and still be within the letter, if not the spirit. And Americans have cooperated, since these violations are occurring in peacetime and no one can think of an easy means of enforcement. Military means won't do, and terminating the agreement seems to surrender hope. A superficial justification makes it possible for us to ignore the Soviet move; it accustoms us to a continually changing reality. What, after all, at this time could the current Soviet ballistic missile defense system do to stop our reentry vehicles?

The problem stems not only from ambivalence on the part of negotiators and decisionmakers, but also from the fact that ambiguities are inherent in most agreements. One of the worst set of agreements in US history concerns the relation between the Soviet Union and the United States with respect to the occupation of Germany after World War II. While the physical character of occupation zones was delimited rather exactly, questions of administrative rights and access from one zone to

another were often left vague, or not addressed in the original agreements. All negotiations on the Allied side proceeded on the assumption that Germany would always be one economic, political and cultural unit, even though occupied at first by three and then, with the addition of France, four different powers. It was also assumed that Berlin would be jointly occupied and administered under an Allied Control Council, and would remain the capital of the whole of Germany.

Russia was an ally fighting the Germans when the first agreements were being negotiated in the year prior to the close of the war. With the Americans it was partly trustful naivete, and a natural tendency to identify co-belligerents as allies or even friends; with the British it was partly a code of gentlemanly behavior, a sense of the limits of their waning power and the need to rely on the US, that permitted acquiescence to many of Stalin's demands. Stalin's demands were uncluttered by such complexities. Among our military the arrangements depended in part on collegial relations, like those between Marshal Zhukov and General Clay. The French, who came into the negotiations later, were concerned about the French. They were terrified of German resurgence. Germany, understandably, had few friends at that time and the American Joint Chiefs insisted that the lines dividing the zones in Germany should not be negotiated before the end of the war and that the dividing lines should be drawn where the Allied armies stopped. President Roosevelt, himself, preferred to postpone discussion of any post-war settlements until victory had been won.

As a consequence, on the subject of access to Berlin by the Western powers, there was nothing put in writing by the end of the war. General

Clay had Marshal Zhukov's word that there would, of course, be no problem. Yet Soviet restrictions on access to Berlin and between East and West Germany started immediately on conclusion of the war. For example, in response to Allied requests for access to Berlin via three rail lines, two highways, and two air lanes, Marshal Zhukov informed General Clay that he felt that one rail line, one highway and one air lane ought to be enough. Fortunately, the pilots who had to fly into Berlin, frequently under conditions of poor visibility, insisted on having three air lanes between Berlin and Hannover, Hamburg and Frankfurt simply for reasons of air safety. And General Clay, by asking for six lanes, managed to get an air corridor agreement for these three lanes put down in black and white in November of 1945. This was a safety provision, however, not a political move in a struggle for power.

Signals of the violations of an understanding usually start at an almost inaudible level. They are hard to hear against the noise of day-to-day tensions. In the case of the Berlin Blockade, the background noise was provided by a debate in Washington between those who still clung to President Roosevelt's hope that the US could work harmoniously with the Soviets and those who regarded Berlin as a purely military problem and believed that we should withdraw because Berlin could not be defended against the much larger Russian ground forces. In addition, those concerned about Germany's future were engaged in a debate about currency reform for the whole of Germany to stem the rising inflation. France and Russia were opposed to the Bizonia recommendation (Bizonia was the name then used for the two American and British zones) to issue a new currency and to cancel Germany's national debt.

For those on the spot in Berlin, like General Clay, Ambassador Murphy and their Intelligence officers, the Russians gave the US "plenty of warning about the Berlin blockade." Both Clay and Murphy had been urging a currency reform since mid-1946 but knew that they could expect trouble if they proceeded to institute it in Bizonia alone, and did so without Russian cooperation. The Russians, they feared, would take some counter-action. (They did not worry about French counteraction.) But the Russians in the Allied Control Council would not agree to the currency reform and walked out in March of 1948. Three months prior to their walkout they had begun to test the will of the Western powers to stay in Berlin. At first they were simply harassing actions, delays of transport, or boarding of military trains in an attempt to examine passengers, which was routinely refused by the Western commanders. The first signal of the blockade was very small indeed. The Russian military governor informed General Clay that the highway to Berlin would be closed for repairs until further notice, and he placed a wooden pole across the road at Helmstedt, the point where the highway from West Germany meets the Eastern border. Two Mongolian soldiers stood on guard. The Mayor of Berlin thought the Russians were bluffing and advised taking the pole down. Washington disagreed.

From this small beginning there came a mounting series of Soviet actions to delay and obstruct and finally cut off all rail, autobahn and canal traffic. At each point the Russians gave reasons which, taken alone looked not totally implausible. There were road repairs, "technical difficulties," and the Allies' creation of "economic disorders in the Soviet zone." When the Russians cut off the Berlin central electric

switch control station located in their sector, it was because of a "shortage of coal." Cumulatively, the explanations were hard to believe. At last, with a total blockade of all land and water routes, the United States was prepared to consider this a hostile act. Not that there had not been local protests by our representatives. A number of notes travelled between General Clay and the Russian Marshal. But no one wanted to use force. For in the background was the painful memory of the recent great war, and the almost universal assumption that any armed confrontation would escalate to "general hostilities" or as the Joint Chiefs put it, "global conflict." And that meant we would have to use our nuclear weapons. Obviously not the solution to a traffic problem.

In the beginning one could argue that cutting off one highway for road repairs was not a violation. But then how about an alternate route? We did bring up this question, but the Soviets had a ready answer. The Allies, they felt, were interested in an answer to this question alone, whereas they had other related questions which were important for them. It was impossible to provide alternate routes as long as the West was creating internal disorders in the Soviet zone through its currency reform.

General Clay decided in April of 1948 to test whether or not the Soviets were bluffing--he sent a military train to Berlin to test the order forbidding allied military trains to enter the Soviet sector unless first inspected by the Russians. The Russians simply shunted the train off the main line by electrical switching to a siding. There "it remained for a few days until it withdrew," General Clay confessed, "rather ignominiously." The train crew would have been able to turn the switch,

"provided there was no Russian interference." But General Clay assumed the Russians "meant business." As Dean Acheson put it, then the question would have been who would shoot first and what would have been the response to the shooting. In April, General Clay, Acheson thought wisely, did not attempt to find out. He tested no further.

The Berlin airlift was the solution, a defensive measure which had ample legitimate backing in the Air Corridor Agreement. I have the feeling on rereading some of the early texts that the existence of this agreement made the airlift response acceptable to many who originally would have preferred to withdraw. George Kennan, for example, refers to our "right" to use the air corridors, but suggests that we had no right to access by road, rail or barge. At any rate we had no written documents to prove our rights. We were not deterred by the prospect that the Russians might initiate an air attack on our planes. According to Dean Acheson, that would have "brought a devastating response." But the response that the US actually had in mind was not exactly devastating: it was outlined on October 1, by the Policy Planning Staff--in such an event, "the US should immediately demand an explanation from the Government of the USSR and should include in its communication a warning that the US may be forced to adopt defensive measures to protect US planes against such acts."

For the Russians the fact that the legitimacy of the airlift was based on written documents probably was not crucial. They expected it to fail. Fortunately the airlift--which conferred costs on us rather than the Russians--was not our only leverage.

At the beginning of the full blockade on June 24, 1948, Generals Clay and Robertson instituted a counter-blockade. West Berlin stopped all shipments into the Soviet zone. Next on July 8, the Western zones stopped deliveries of reparations to the Soviet Union, and then on September 13, the American and British zones suspended shipments to the Soviet zone of all goods which they produced. That imposed costs on the Soviets since the Soviet zone, now East Germany, depended for its manufactured goods on these shipments, and the Soviets began to feel the effects of the counter-blockade. The first hints of a change in the Soviet attitude began in January 1949--as usual, not directly, but through a newspaper man. Kingsbury-Smith, European General Manager of the Hearst International News Service, submitted four questions to Stalin: the fourth question was "would the USSR be willing to remove restrictions on traffic to Berlin if the US, Britain, and France agreed not to establish a separate Western state pending a Council of Foreign ministries meeting, to discuss the German problem as a whole?" Stalin answered that it would, upon acceptance by the allies of the condition stated in the question <u>and upon their removing their counter-restrictions against traffic to the Soviet zone</u> (my emphasis). This opening blossomed into negotiations between the two UN representatives, Philip Jessup and Jacob Malik, who began talking in March and arranged the termination of the blockade in May.

The airlift itself had, of course, been an amazing demonstration of ingenuity and high morale on the part of all participants and by January even the most skeptical observers had begun to feel confident that the West could wait out Soviet truculence. But we know that the Soviets are very hard to outwait. Is it possible that Stalin might have continued to

stall, if the counter-blockade had not begun to hurt him more than the blockade was hurting the Allies? Stopping traffic to the Soviet Zone, unlike the airlift, was not purely defensive, it was a counter-action matching the Soviet action and causing corresponding pain.

In the case of the Berlin Wall the background noise not only distorted the Intelligence picture, it made it very likely that the Allies would be caught by surprise. Khrushchev had been threatening for some time to make a separate peace treaty with East Germany and to make Berlin into a "free city." His latest blast on August 7th, on the occasion of the happy landing of the Soviet Cosmonaut Titov, referred to a Soviet superbomb that could reduce all of Germany to dust. He wanted to incorporate the city of Berlin into the East German state, and to paralyze the Allies with fear. The Ulbricht regime in East Germany was only too happy to cooperate in his various harassing actions. The Allies were prepared, therefore, for the sealing off of all Berlin from the West in a repeat of the 1948 situation. But <u>not</u> for what happened--the division of the city.

Great Britain and the United States had been careful as the harassment began to make sure that they would make no response which would amount to recognizing the Ulbricht regime. On February 3, six months before the Wall, for example, the Ulbricht government announced that the Allied military missions in Potsdam would now be accredited to the German Democratic Republic rather than to the Soviet Union and declared invalid the old passes issued by the Soviets which permitted access to the Soviet Zone. The missions had been established originally to facilitate communications among the four powers. The Soviets had similar outposts in Frankfurt, Bad Salzuflen, and Baden Baden. They had become by 1961 primarily

an agreed means for gathering mutual intelligence. We have been reminded recently of how dangerous and difficult the Soviets make this job for the West, by the recent murder of Major Nicholson. In 1961 Ulbricht's attempt to make his government the source of passes was not only a move for de facto recognition of East Germany by the West, but may have been also an attempt to further cut off Allied intelligence which might reveal their preparations for erecting the wall. To counter the move toward recognition, the United States objected immediately and threatened to close the Soviet mission. The French on February 25, restricted the Soviet mission in Baden Baden to its headquarters and the British followed suit two weeks later. Finally on March 14, the East German passes were withdrawn.

Harrassment, however, was primarily directed against East Berliners and those West Berliners who daily crossed over into the Eastern zone to work. Since 1945, East Germany had suffered a loss of over two million of its population to the West and the flow of refugees had been increasing enormously in the two months of June and July. Col. David Goodwin, who was head of G-2 in Berlin, was aware that the economy of the East would "not continue to be viable" at the current rate of exodus, particularly since the East was losing much of its younger working class. He and the other members of the Berlin Watch Committee, who had the task of watching especially for any sign of hostile military action, were expecting some action to reduce the refugee flow, but were puzzled about what that action would be and when it would occur. There were apparently three reports that said a wall might be erected to divide the city, but the Watch Committee judged them unreliable. The consensus was that a wall across the city was impracticable and the least likely option. The CIA station

chief said it would mean "political suicide" for Ulbricht; the closure would most probably be at the border between East Germany and East Berlin which would effectively eliminate the Berlin escape hatch without disturbing the four power status of the city.

Some now argue that Intelligence should have known about the closure because of the large amounts of barbed wire, cement and other materials that were brought in. But it was not so easy. Col. von Pawel, Chief of the American Mission in Potsdam, has pointed out that "the very large areas of the Zone restricted to us...by the Soviets denied us access to well over one-half the Zone...SSD tails were with us most of the time...when we thought they were not, we usually were wrong." In any case, even if discovered, all that material might have been seen as destined for use at the East German border rather than to divide the city. Col. von Pawel was one of the few who argued that the East Germans might put a wall through the middle of the city. He noted that if they sealed off the entire city East Germans and Westerners would continue commuting between West and East Berlin, and that if a wall dividing the city seemed the least likely option, "then," he said, "that is where I place my bet because we've never outguessed the Soviets before."

The majority opinion in the Intelligence community, however, fitted very well with Washington's predisposition, and also with London's and Paris's. On the night of August 12-13, when the first barbed wire was being put in place and the alarms were being sounded, most heads of State were on vacation. When they were assured that access to West Berlin was not affected for the allied powers, as they had feared, they decided not to respond. The note of protest prepared by the Western Commandants in

Berlin to the Soviet Commandant was not delivered until August 15, and the note from the United States to the Soviet Union not until August 17--already too late to take action to remove the Wall.

Our officers stationed in Berlin viewed the erected wall differently from those in Washington. They knew better how it dashed hopes of the East Berliners, and how this in turn made more likely the ultimate loss of both West and East Germany to the Soviets. The staff of Minister Alan Lightner, who represented the State Department in Berlin, clearly favored taking immediate countermeasures, even though nothing had been planned in advance for such a contingency. As one of his staff, Richard Boehm, wrote later,

> ... we did not share Washington's analysis of Soviet intentions. We thought they were testing us but were not willing to risk seeing that testing turn into anything really dangerous...I still think so... The Soviets proceeded very cautiously and piecemeal, or at least, one step at a time, as if to pull in their horns, which they almost invariably did on those rare occasions when Washington stood up, or when we in Berlin took actions on our own initiative.

The State Department at home was more timid. The refugee flow had embarrassed us as well as the Soviets. The refugee centers in the Western zones were not equipped to handle an exodus that was averaging 2,000 a week and had risen to close to 5,000 a week just before the closure. Some, therefore, greeted the Wall with relief, and described it as a victory for the US. It only showed, they said, how the Soviet economic and social management had failed. Instead of fearing the loss of all of Germany to the Soviets, the State Department shared the Soviets' fear of another East German uprising against Soviet control at least "at that time." The State Department summed up its position in a cable of July 22, 1961 to the US Mission in Berlin:

> Like Soviets US is faced with dilemma on East Germany. While we would like see unrest there cause Soviets to slacken pressure in

> Berlin, we would not like revolt at this time. Nor would US like see drastic measures taken halt refugee flow, particularly since this might only fan flames in East Germany.
>
> Soviet and GDR leaders seem to be creating enough difficulties for themselves in East Germany, without US taking a hand. We plan, therefore, do nothing at this time which would exacerbate situation.
>
> In event of German uprising, US course of action would be decided in light of circumstances at the time.

The Western Three and the West Germans had all discussed at length what sorts of economic countermeasures to take if Western access to West Berlin were denied. These ranged from a gradual tightening to a full embargo of East-West trade. Access to East Berlin was not considered "vital," though it was considered proper to protest diplomatically against the cutoff. The main reason for paralysis when it actually happened was again a fear of general hostilities, again predictions of escalation to nuclear conflict, and this time the United States no longer had a monopoly of nuclear power. The planning to increase conventional forces in Europe in order to become less dependent on nuclear power had just begun under former Secretary Acheson, but in August 1961 the relative strength of Soviet conventional forces was overwhelming.

American intelligence was clear that our acceptance of the Wall meant a victory, not a failure, for the Soviets. To quote from an INR note of August 18, 1961:

> By taking action under cover of publicity on the refugee movement, the bloc camouflages the vital element of its move--the change in status of East Berlin. This change is to be accomplished by a show of force which the Western Allies are expected to protest but also to learn to live with. The Soviet maneuver is thus well calculated to achieve two important Moscow aims: an end to the refugee flow and replacement of four-power responsibility by East German control over East Berlin. To the extent that the maneuver is not successfully challenged, it strengthens Moscow's hand vis-a-vis the West on the Berlin question.

To sum up, I won't go back to the inconspicuous start of the Soviet erosion of our position in Berlin with the fragile pole across the road near Helmstedt in 1948. Rather, my purpose is to make a few general observations about Soviet strategies for changing the world in their favor, slowly and patiently and at small risk.

Soviet strategy is designed to begin in a small way which they think we may not notice or may ignore. Moreover, though it may plainly be a violation of our understanding they may give it some color of legitimacy, a facade--even though a very transparent one. (They do this even in the case of a surprise attack. When they invaded Finland, it was advertised as a counterattack to an invasion by the aggressive Finns. When they invaded Afghanistan they wrote themselves a message from President Amin inviting the invasion in response to US intervention.) It is easier when they put up a barrier on the road leading from West Germany to Berlin through East Germany. The road was in need of repairs. Then there were "technical difficulties."

The second point to be observed is that the Soviets may not expect this cover of legitimacy to be believed. It is not so much intended to deceive us as to give us an opportunity to deceive ourselves or to save face.

Third, these small actions are both a probe to test our response and a means of training us. They begin to accustom us to a new reality. A reality for the future.

Fourth, if we don't respond the Soviets are likely to maintain the gains they have made, waiting to go further at some later date, or they may probe further without delay. If we do not respond, the situation will

not return to the previous norm. And the Soviets when the time is right push further. This situation is therefore not stable in the rigorous sense. As Nathan Leites, one of the most perceptive observers of the Soviets, has pointed out, the Soviets are themselves very conscious that some small adverse changes might start an avalanche unfavorable to themselves, but they don't mind starting avalanches--slow or fast--on our side of the hill.

Americans and other Westerners preoccupied with "crisis stability" in the recent fashionably muddled meaning are reluctant to respond to small provocations even in a small way. They don't want to stir up a supposedly paranoid Soviet bear. They like to reassure the bear that we are not aggressive, that there may be some misunderstanding. Some of my own good friends in the McNamara administration of the Defense Department gave credence to the theory of the psychologist Charles Osgood that the way to respond to Soviet advances is not in kind but to move back and to avoid provocations on our side to encourage the Soviets gradually to reciprocate. I'm afraid this hasn't worked.

Our own counter-strategy, first of all, must be to take these small changes seriously, even when they seem trivial. Some have been almost comic, like cutting off the legs of the chairs of the American delegates to the Korean armistice talks, so that the Americans were lower than the Koreans at the table. It is important to make proportionate countermoves, sometimes to offset the opponent's gains, or to induce him to withdraw. Here intelligence officers are expected to give perspective on whether the violation is a signal of continuing erosion or of one big breakout, and they are expected to predict how the Soviets will behave if

we undertake certain counter-moves. Our decisionmakers want to be told what all this means for the long run future. But they may not want to be disturbed.

The craft of intelligence is absolutely indispensable. But--like coal mining or skydiving--hazardous. All I can say is--lots of luck.

# NEW VERSUS OLD WAYS

# TO

# LOOK AT DEFENSES

P. KOZEMCHAK

Attachment 25

# OUTLINE

- DEFENSES AND DETERRENCE
- DEFENSES AND THE CORRELATION OF FORCES
- IMPERFECT ARMS AGREEMENTS

IS THE ONLY

'EFFECTIVE' DEFENSE

A PERFECT DEFENSE?

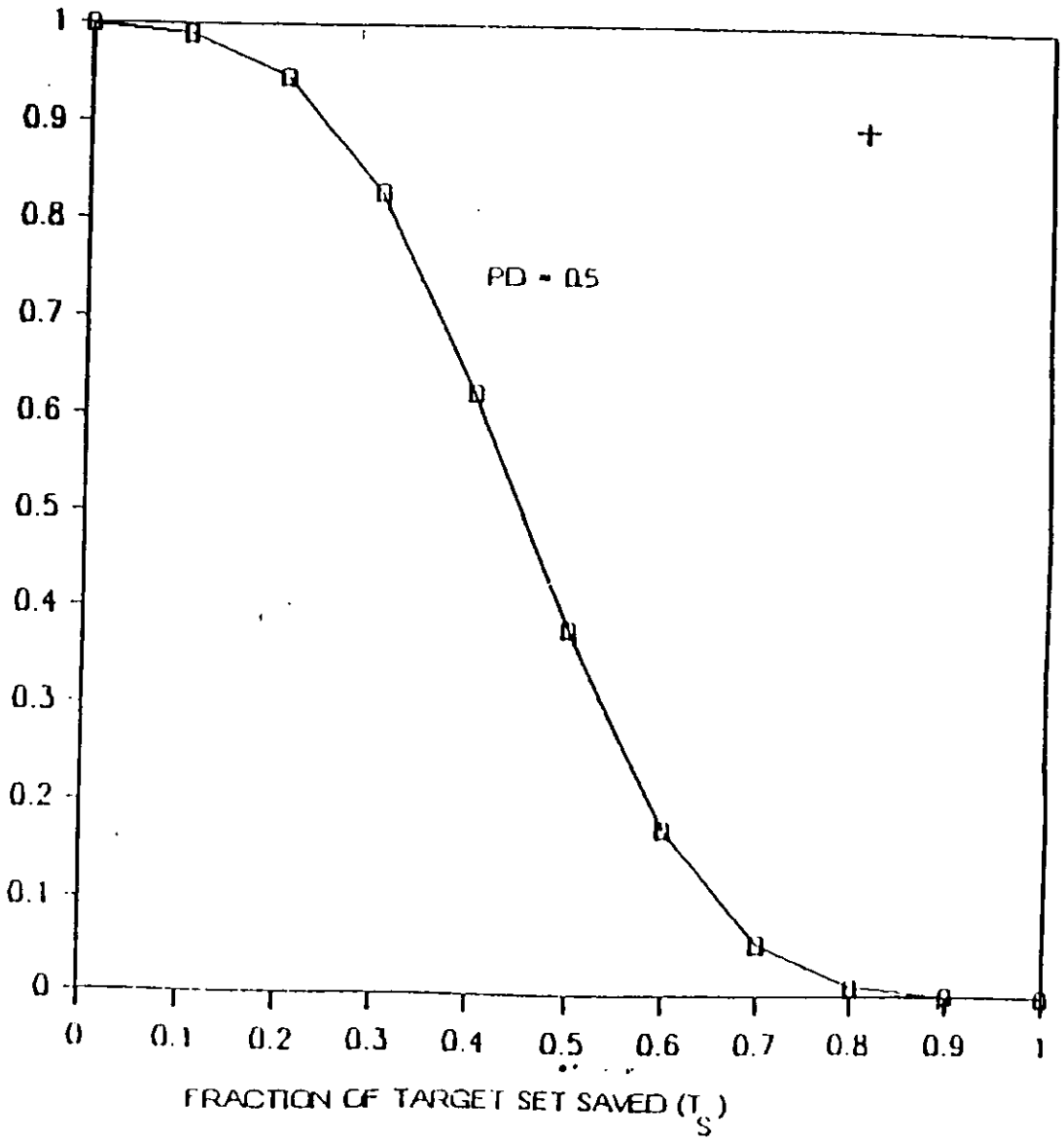
# "OLD" WAY

"WHAT IS AT ISSUE HERE IS WHETHER OUR FORCES SHOULD BE AUGMENTED BEYOND WHAT I AM RECOM-MENDING IN AN ATTEMPT TO ACHIEVE A CAPABILITY TO **START** A THERMONUCLEAR WAR IN WHICH THE RESULTING DAMAGE TO OURSELVES AND OUR ALLIES COULD BE CONSIDERED ACCEPTABLE ON SOME REASONABLE DEFINITION OF THE TERM."

SECRETARY OF DEFENSE McNAMARA
TO PRESIDENT KENNEDY
November 21, 1962

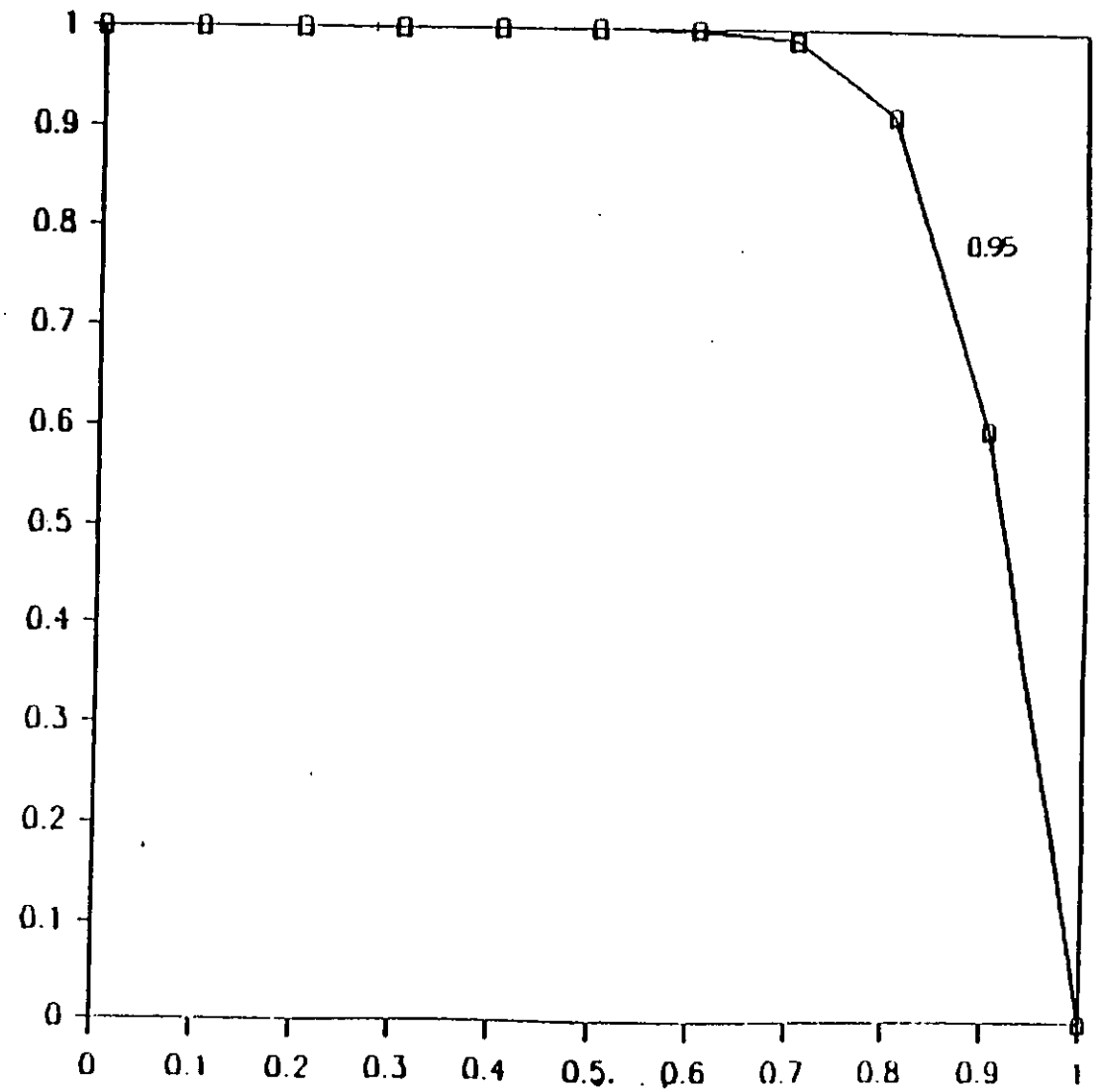
# WHAT IS AN 'EFFECTIVE' DEFENSE?

DEFENDER'S PERSPECTIVE




DEFENDER'S CONFIDENCE = PR ($T_S$ > T)

DEFENDER'S REQUIREMENT = PR ($T_S$ > 0.8) = 0.9


1
0.9
0.8
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0.1
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0.5
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0.8
0.9
1
0.95

# DEFENSES AND DETERRENCE

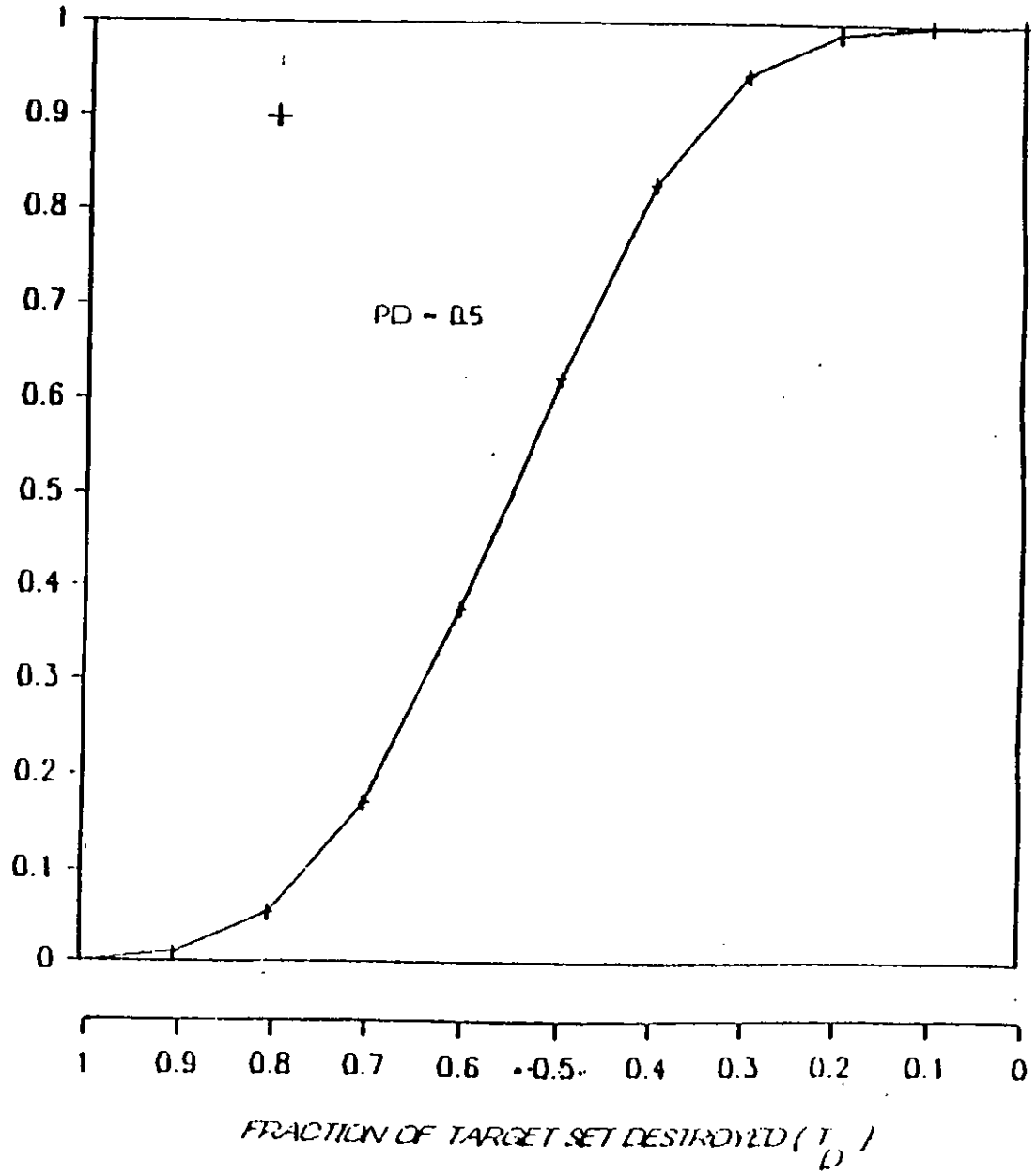
- U.S. DEFENSES = NO SOVIET CONFIDENCE IN WAR PLANS
- NO SOVIET CONFIDENCE = DETERRENCE

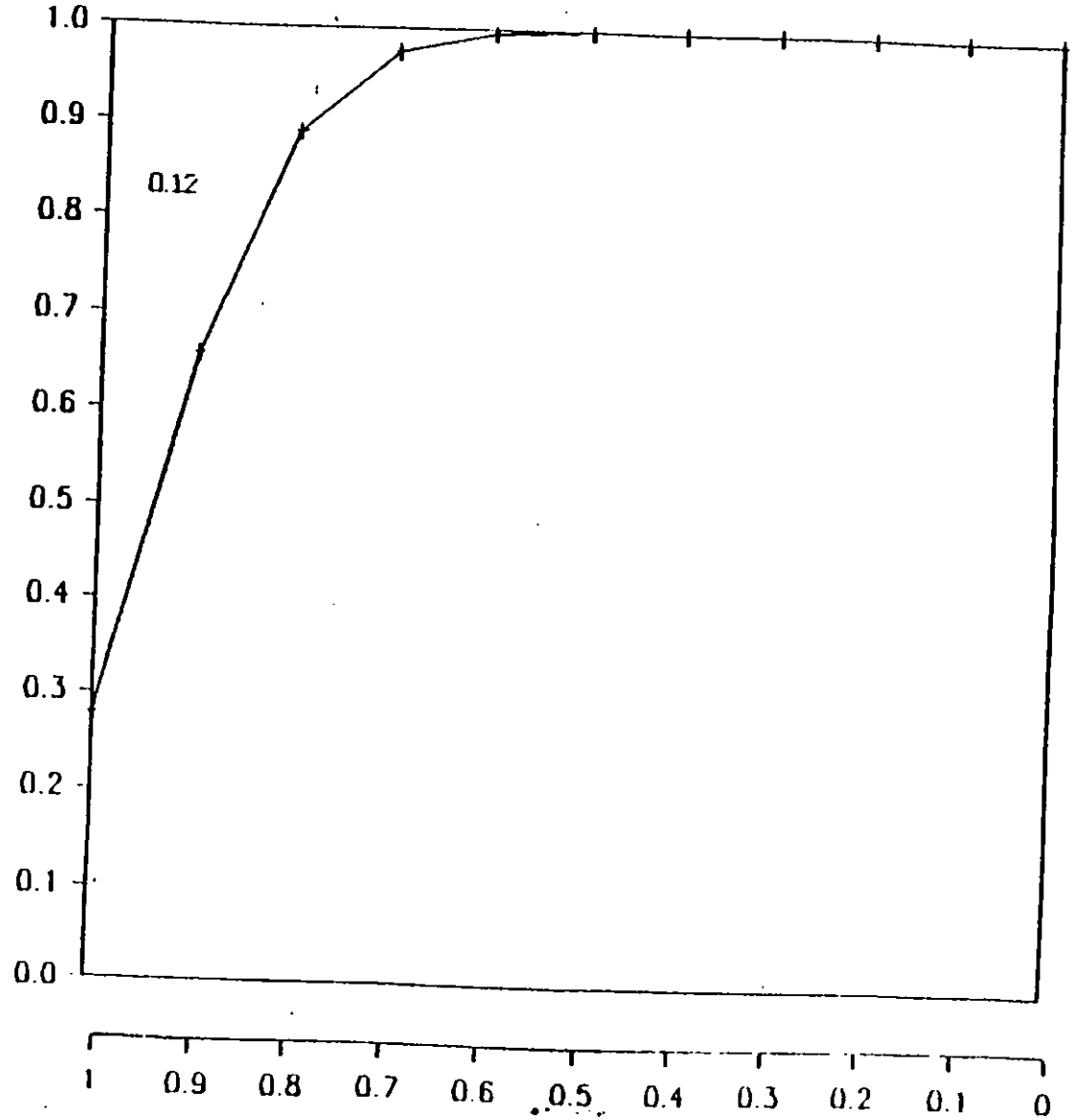
# WHAT IS AN 'EFFECTIVE' DEFENSE?

ATTACKER'S PERSPECTIVE

ATTACKER'S REQUIREMENT = $PR(T_D \geq 0.8) = 0.9$

ATTACKER'S CONFIDENCE = $PR(T_D \geq T)$

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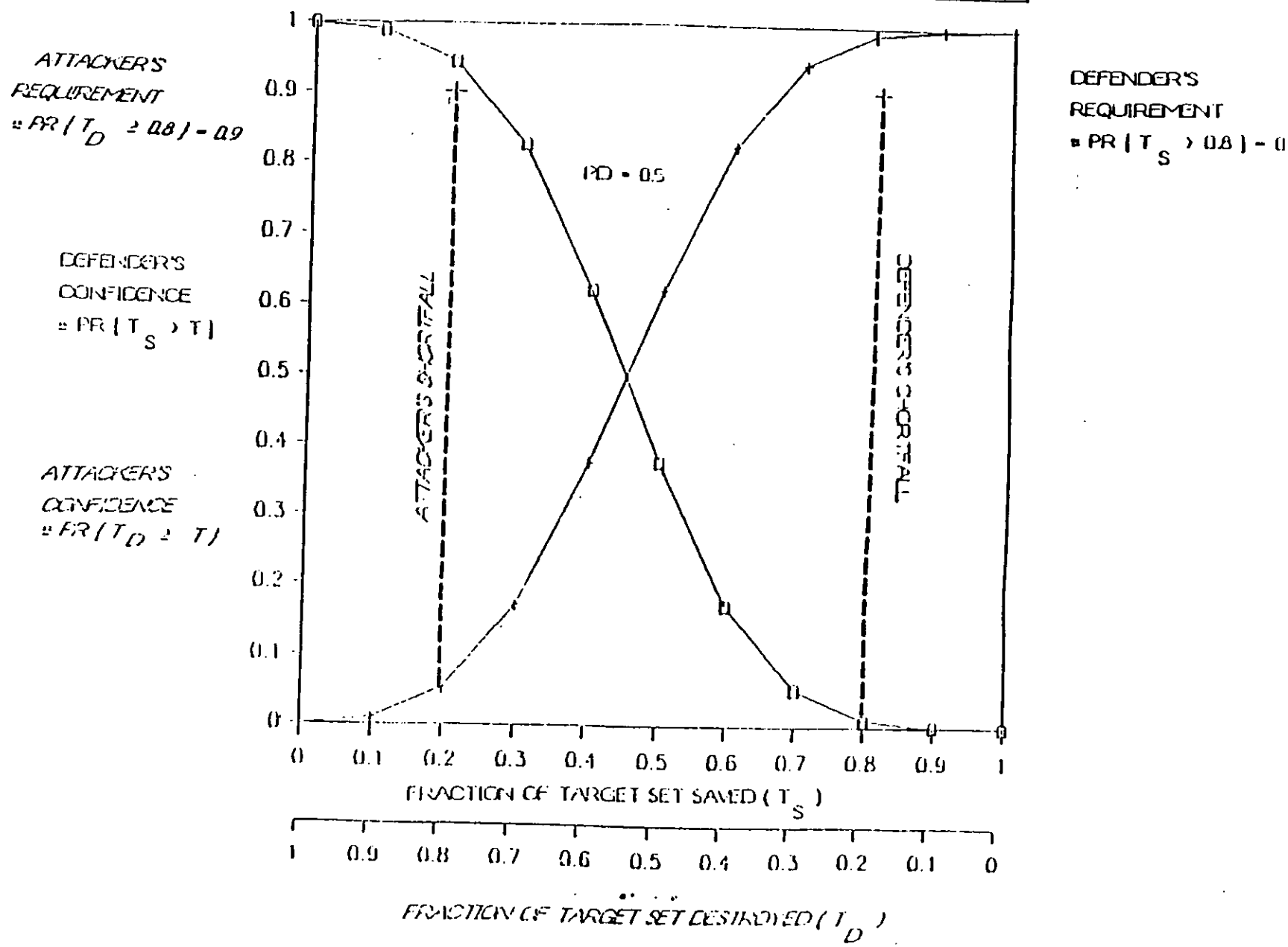
# WHAT IS AN 'EFFECTIVE' DEFENSE?



# LIMITING DAMAGE AND BINOMIAL PROBABILITIES

THE FACT THAT DEFENSE CAN EASILY BE OF SOME USE BUT IS VERY UNLIKELY TO BE SO PERFECT IN ITS EFFECT AS TO MAKE THE PARTY DEFENDED EXCESSIVELY AGGRESSIVE IS RELATED TO SOME RATHER BASIC ARITHMETIC OF OFFENSE AND DEFENSE IN THE NUCLEAR AGE. DEFENSE IS QUITE LIKELY TO BE USEFUL IF UNDERTAKEN INTELLIGENTLY. BUT ITS USE WILL BE LIMITED. THE REASON FOR THIS IS THAT AGAINST A NUCLEAR ATTACK THE BINOMIAL PROBABILITIES WORK TO MAKE THE LIMITING OF DAMAGE LESS THAN COMPLETE WITH A HIGH CONFIDENCE. ON THE OTHER HAND THEY WORK AGAINST THE OFFENSE, IF IT IS TRYING TO DO A NEARLY COMPLETE JOB. TO DEFEND ALL THE TARGETS ATTACKED WITH HIGH CONFIDENCE IS EXTREMELY HARD. TO DESTROY ALL OF A LARGE NUMBER OF DEFENDED TARGETS IS ALSO VERY HARD. IT IS NO LUCKY ACCIDENT THEN THAT REASONABLE CALCULATIONS SHOW THAT DEFENSE CAN BE USEFUL. BUT MUCH MORE LIMITED THAN THE DEFENSE ENTHUSIASTS USED TO CLAIM; AND SO, HARDLY LIKELY TO INDICATE THAT WE ARE RARING TO GET INTO A NUCLEAR WAR, OR IF WE TAKE CARE TO PROTECT OUR DETERRENT, TO PROVOKE AN ENEMY INTO INCURRING SEVERE DAMAGE TO HIMSELF, IN THE FEAR THAT SIMPLY BECAUSE WE CAN GET AWAY WITH 40 OR 50 MILLION CASUALTIES, WE MIGHT ATTACK HIM.

ALBERT WOHLSTETTER
2 NOVEMBER 1965

# THE EXPECTED–VALUE APPROACH TO WAR PLANS

SIOP DEVELOPMENT PROCESS

- SINGLE–VALUE, EXPECTED–OUTCOME
- HIGH ASSURANCE OF MISSION ACCOMPLISHMENT
  - = "PLAN MUST REMAIN AS STATIC AS POSSIBLE"
- MEAN VALUE OF OPERATIONAL TESTS BEST ESTIMATES FROM MODELS
- "QUESTIONABLE WHEN APPLIED IN A SCENARIO BOUNDED BY A LIMITED NUMBER OF EVENTS"

COL. RICHARD L. WALKER
.. STRATEGIC TARGET PLANNING,
1983

# EXPECTED DAMAGE

# VS.

# PROBABILITY OF SUCCESS

". . . IN CASES WHERE ACTIONS ARE NOT REPEATED ON A MULTIPLE BASIS AND ARE AIMED AT PERFORMANCE OF VITALLY IMPORTANT MISSIONS, IT IS INADEQUATE TO UTILIZE AVERAGE RESULTS FOR A COMPARATIVE EVALUATION OF VARIANTS. IT IS NECESSARY TO GUARANTEE MISSION EXECUTION. THEN, FOR EXAMPLE, IN CALCULATING THE REQUISITE COMPOSITION OF WEAPONS ONE SPECIFIES PROBABILITY OF OBTAINING RESULTS NOT BELOW A SPECIFIC LEVEL AND SELECTS THAT VARIANT OF WEAPON COMPOSITION (TYPE AND NUMBER) WHICH WILL ENSURE FULFILLMENT OF THIS CONDITION WITH MINIMUM OUTLAYS (OF COURSE IF SUCH A PROBLEM IS CONSIDERED IN PLANNING WEAPONS DEVELOPMENT). DETERMINATION OF GUARANTEED PROBABILITY OF MISSION EXECUTION IS ONE OF THE METHODS OF SUBSTANTIATING A DECISION WITH UNCERTAINTY. . ."

SOLNYSHKOV, P.44.

## PROBABILITY OF SUCCESS AND THE CORRELATION OF FORCES

FROM THE EXPERIENCE OF CONDUCTING MANEUVERS AND EXERCISES, WITH CONSIDERATION OF THE EXPERIENCE OF PAST WARS, THE DEPENDENCE OF THE PROBABILITY OF MISSION ACCOMPLISHMENT OF THE SIDES' CORRELATION OF FORCES CAN BE DEDUCED FOR VARIOUS CONDITIONS OF CONDUCTING COMBAT OPERATIONS.

IN THE GRAPHIC (FIGURE 25) $K_{DOP}$ IS THE MINIMALLY ATTAINABLE VALUE K IN WHICH THE PROBABILITY OF MISSION ACCOMPLISHMENT IS NO LESS THAN THE ASSIGNED, THAT IS $P_B \geq P_{DOP}$

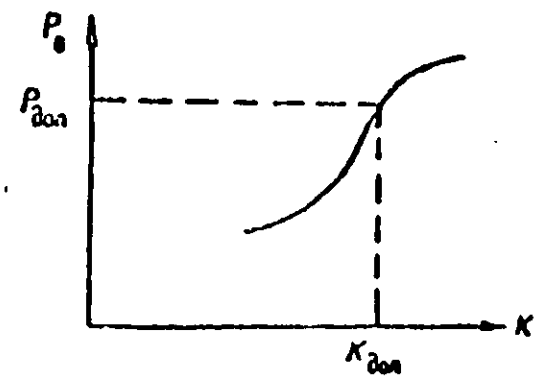



FIGURE 25. A GRAPHIC OF THE DEPENDENCE OF THE PROBABILITY OF MISSION ACCOMPLISHMENT ON THE SIDES' CORRELATION OF FORCES AND MEANS FOR VARIOUS CONDITIONS.

K. V. TARAKANOV, MATHEMATICS AND ARMED COMBAT, 1974, p. 367.

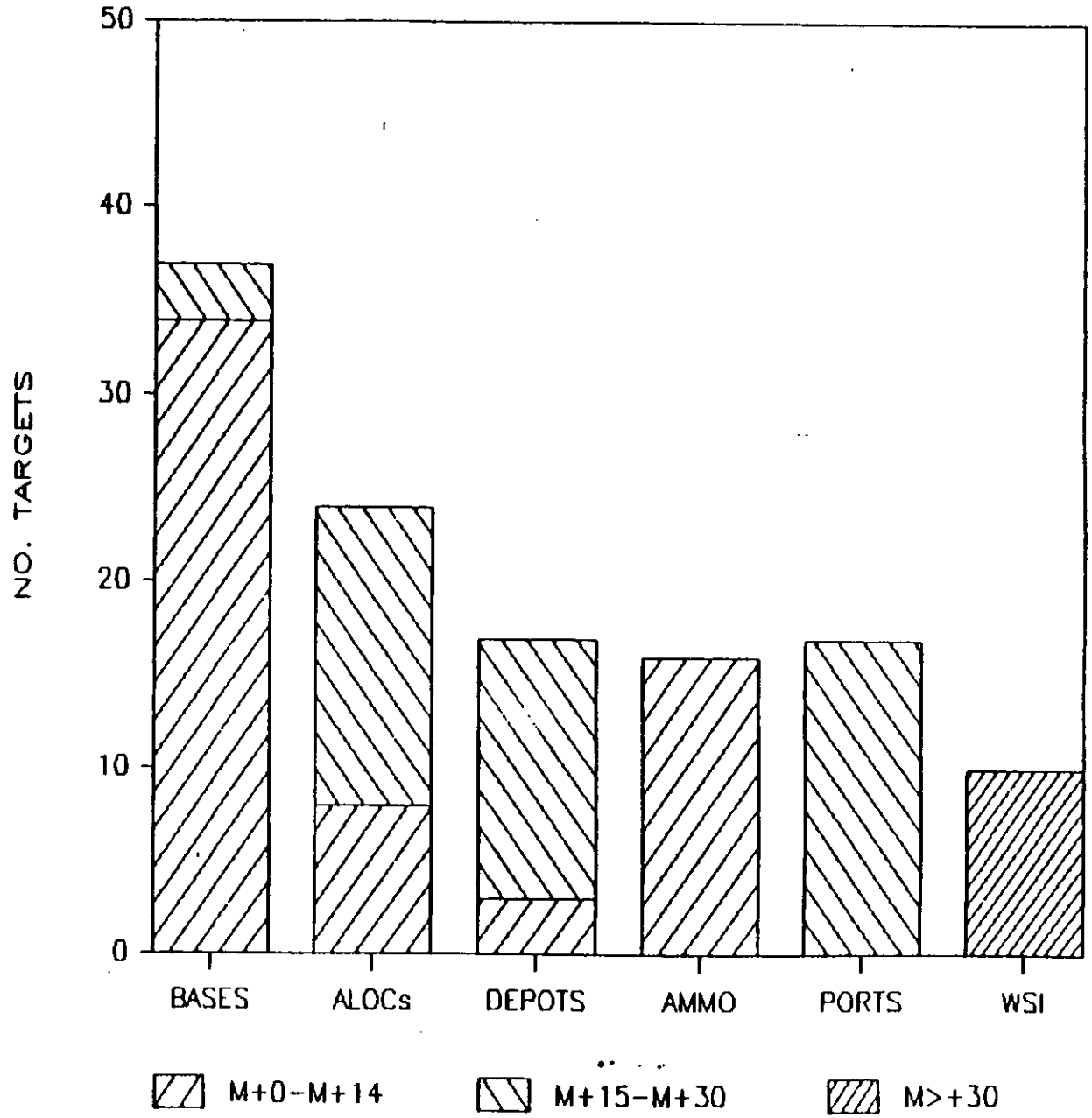
# NEXT STEPS:

# ASSESSMENT OF TARGETING STYLES

- HOW TARGETS SELECTED
  - DETERRENCE = MAD VS. OPPOSING POLITICAL/MILITARY POWER
  - "ACHILLES HEEL"/CRITICAL NODE VS. CONGRIEVE
- HOW TARGETS GROUPED
  - HOMOGENEOUS VS. INTERDEPENDENT SUBSETS
- HOW WEAPONS ASSIGNED/ALLOCATED
  - CROSS–TARGETING
- HOW OPTIONS GROUPED
- HOW RESULTS ASSESSED
  - PHYSICAL VS. MILITARY EFFECTS
  - COLLATERAL DAMAGE (LOCAL AND GLOBAL) VS. DUAL CRITERION
  - EXPECTED DAMAGE VS. CONFIDENCE IN OUTCOME

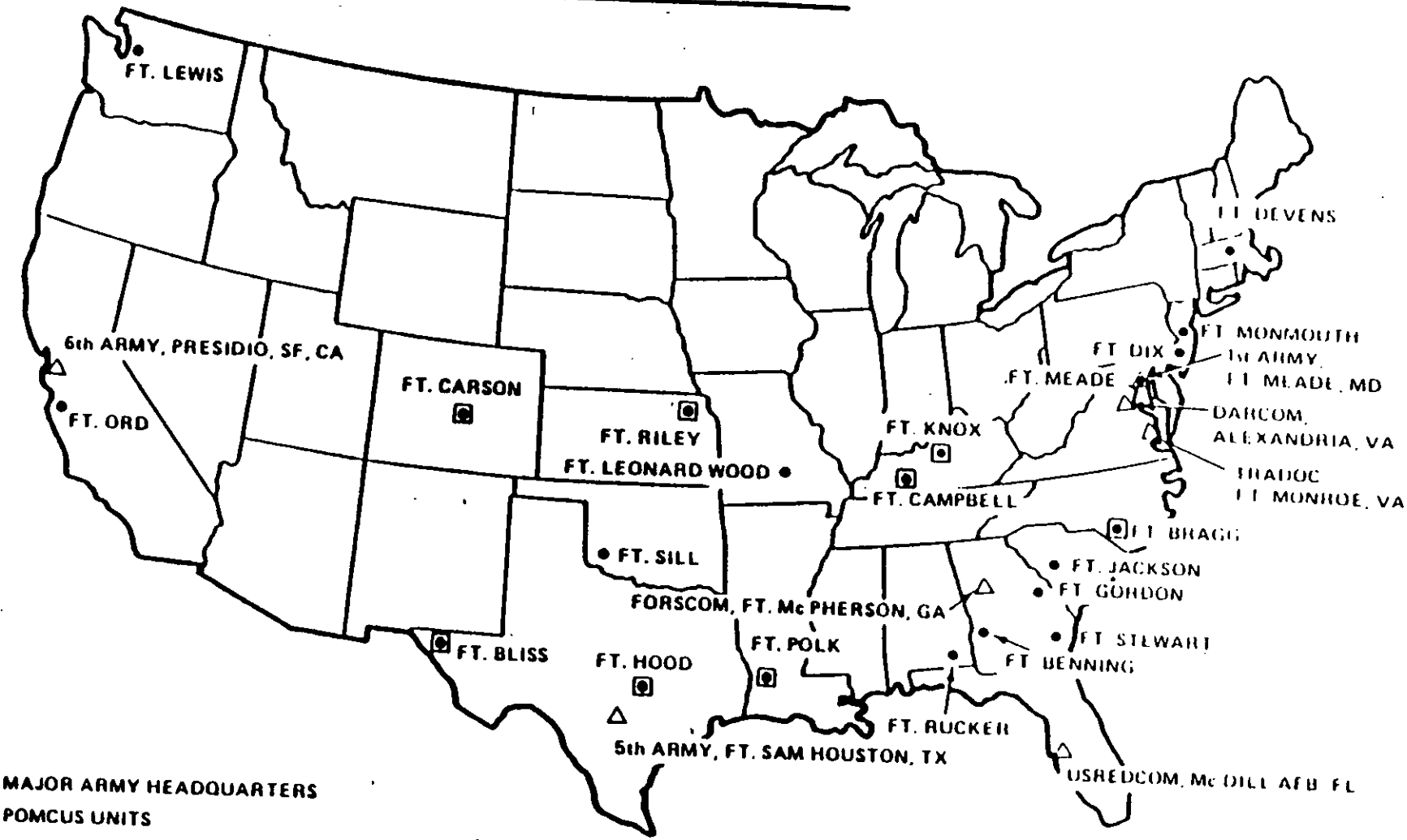
- IS THE DEFENSE OF THE U.S. VITAL TO THE DEFENSE OF NATO?
  - IS U.S. REINFORCEMENT ESSENTIAL TO NATO'S DEFENSE?
  - WILL THE SOVIETS TRY TO PREVENT U.S. REINFORCEMENT?
  - WHAT CONUS TARGETS ARE CRITICAL TO U.S. REINFORCEMENT?

# CONUS TARGET SETS CRITICAL TO NATO



UNCLASSIFIED

# ARMY ASSETS




UNCLASSIFIED

# SERIOUSNESS IN ARMS CONTROL

# AND

# BIG MISSILES

". . . WHAT DOES SERIOUSNESS IN ARMS CONTROL MEAN? . . .

ACCORDING TO [THE ADMINISTRATION'S CRITICS] SERIOUSNESS IS TO BE FOUND ON THE SIDE OF THE BIG GUNS — — OR, IN THIS CASE, THE BIG MISSILES.

DEMAND TOO MUCH RESTRAINT ON THE PART OF THE SOVIETS. . .

AND YOU ARE NOT SERIOUS.

HOLD OUT FOR AN AGREEMENT WORTHY OF OUR CHILDREN'S RESPECT (AND WITH SOME CHANCE OF PROTECTING THEIR SAFETY AND LIBERTY)

AND YOU ARE NOT SERIOUS.

SERIOUSNESS RESIDES WITH THOSE WHO DON'T WORRY TOO MUCH ABOUT THE TERMS OF AN AGREEMENT AS LONG AS SOMETHING GETS SIGNED . . . NOT OUR VIEW."

RICHARD PERLE
COMMITTEE FOR THE FREE WORLD
19 MARCH 1985

# IMPERFECT ARMS AGREEMENTS

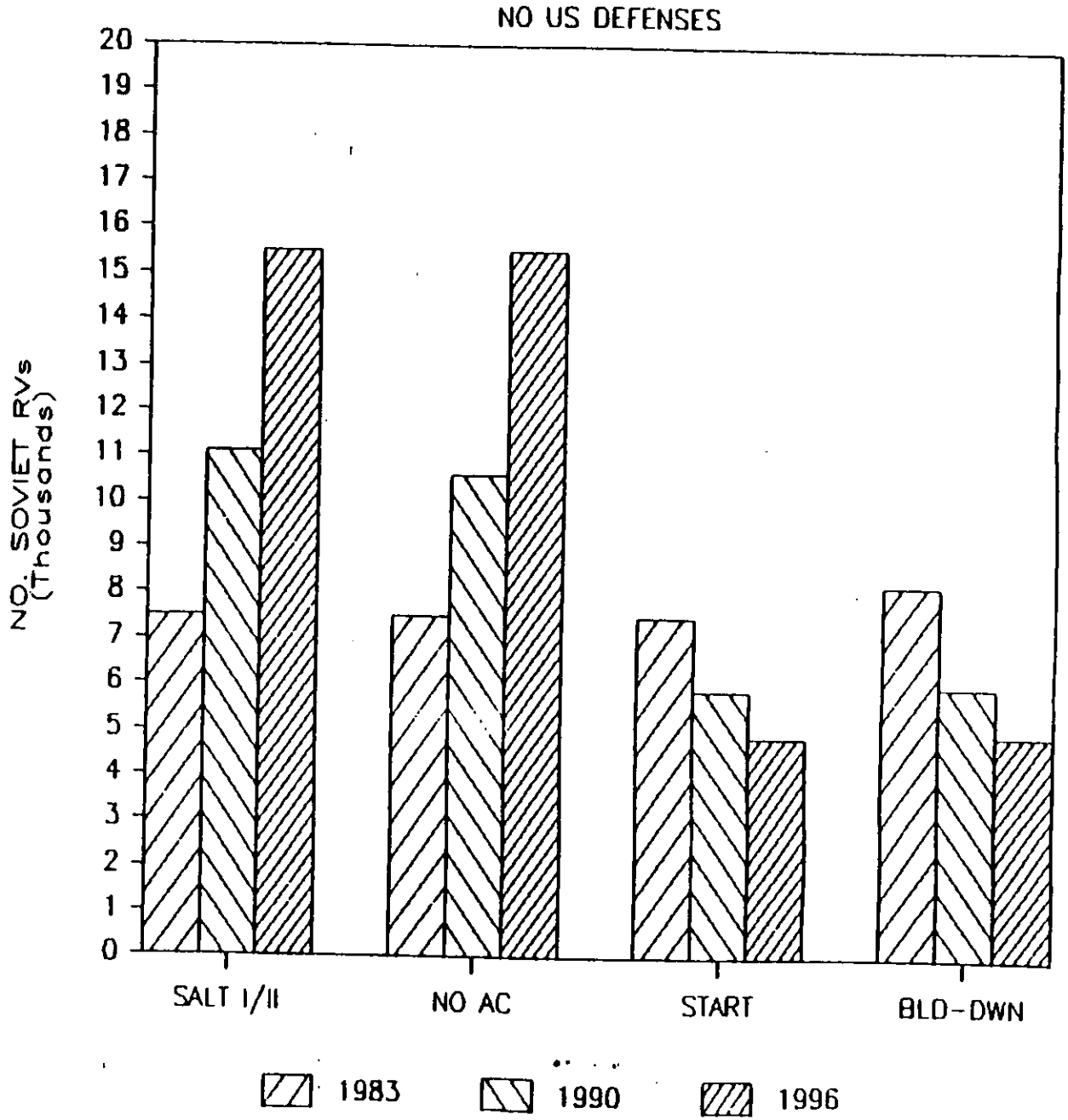
WHERE ARE WE SAFER:

IMPERFECT AGREEMENTS AND NO DEFENSES?

IMPERFECT DEFENSES AND NO AGREEMENTS?

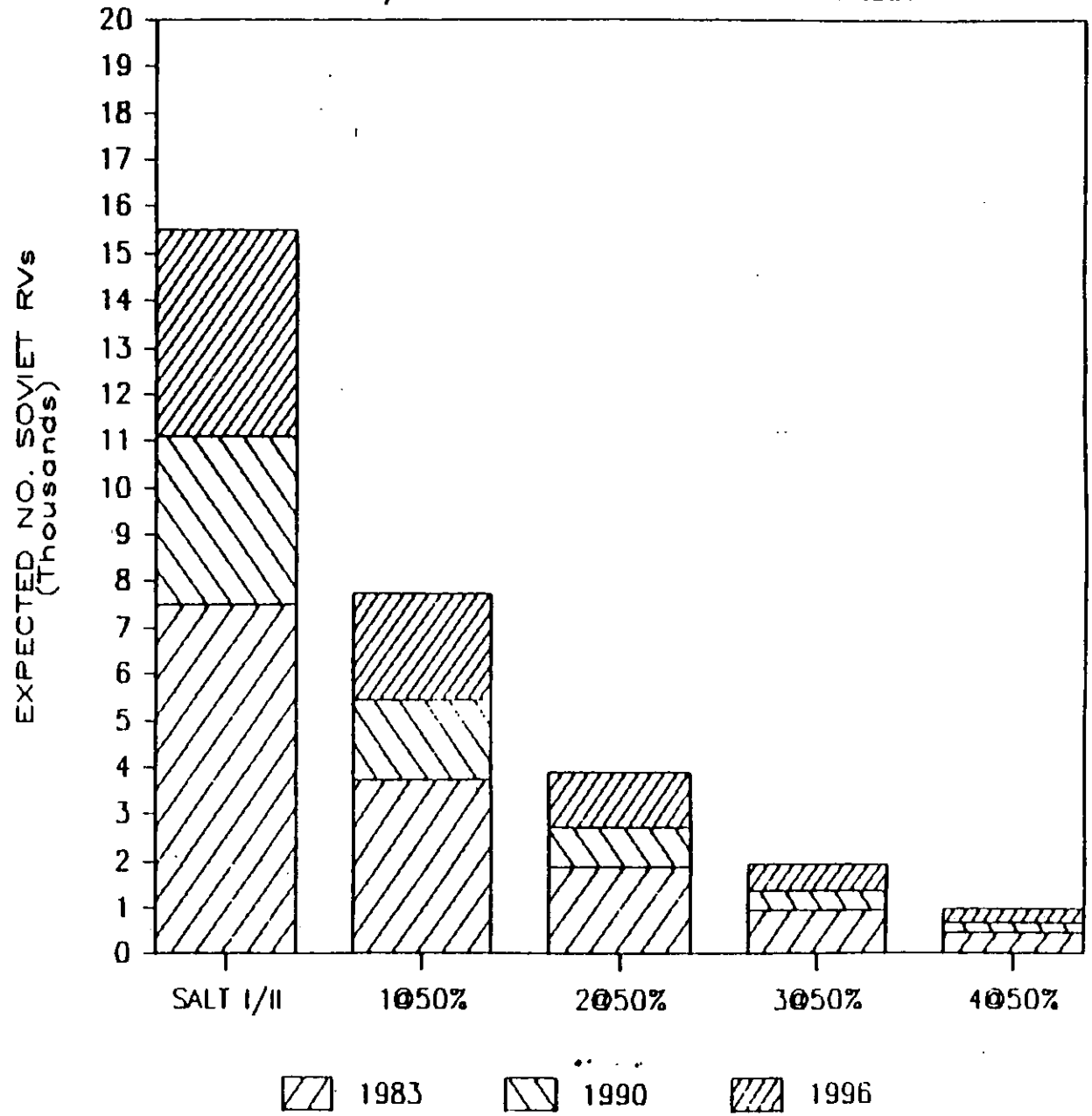
BOTH?

# PROJECTED SOVIET ICBMs AND SLBMs



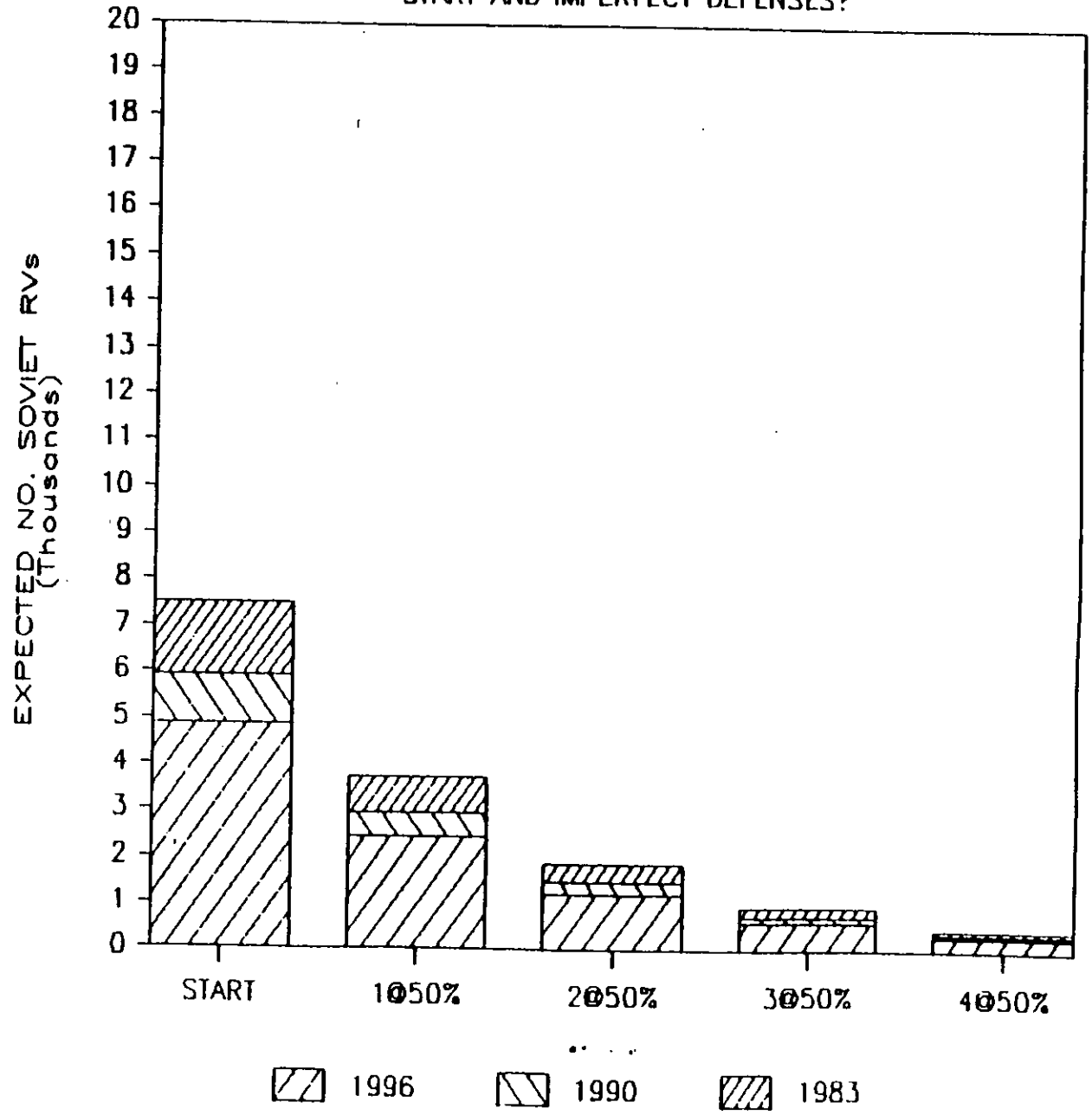
# ARE WE SAFER WITH ...

SALT/ABM TREATY OR IMPERFECT DEFENSES?



# ARE WE SAFER WITH ...

START AND IMPERFECT DEFENSES?



# SOVIET MEASURES OF EFFECTIVENESS

- AVERTED LOSSES = $\dfrac{\text{DAMAGE WITH DEFENSES}}{\text{DAMAGE WITHOUT DEFENSES}}$

$$K_{SP} = \frac{\sum_{i}^{m} n_i \cdot P_i \cdot (Q_i)^{2/3}}{\sum_{i}^{m} n_i \cdot (Q_i)^{2/3}}$$

$i$ = index of weapon types
$m$ = no. of weapon types
$n$ = no. of weapons type i
$Q_i$ = 'nuclear potential' = lethal area of weapon
$P_i$ = probability of anticipating/preempting

- COEFFICIENT OF STRIKE PREVENTION

# 'HOSTAGE UNTO FORTUNE'

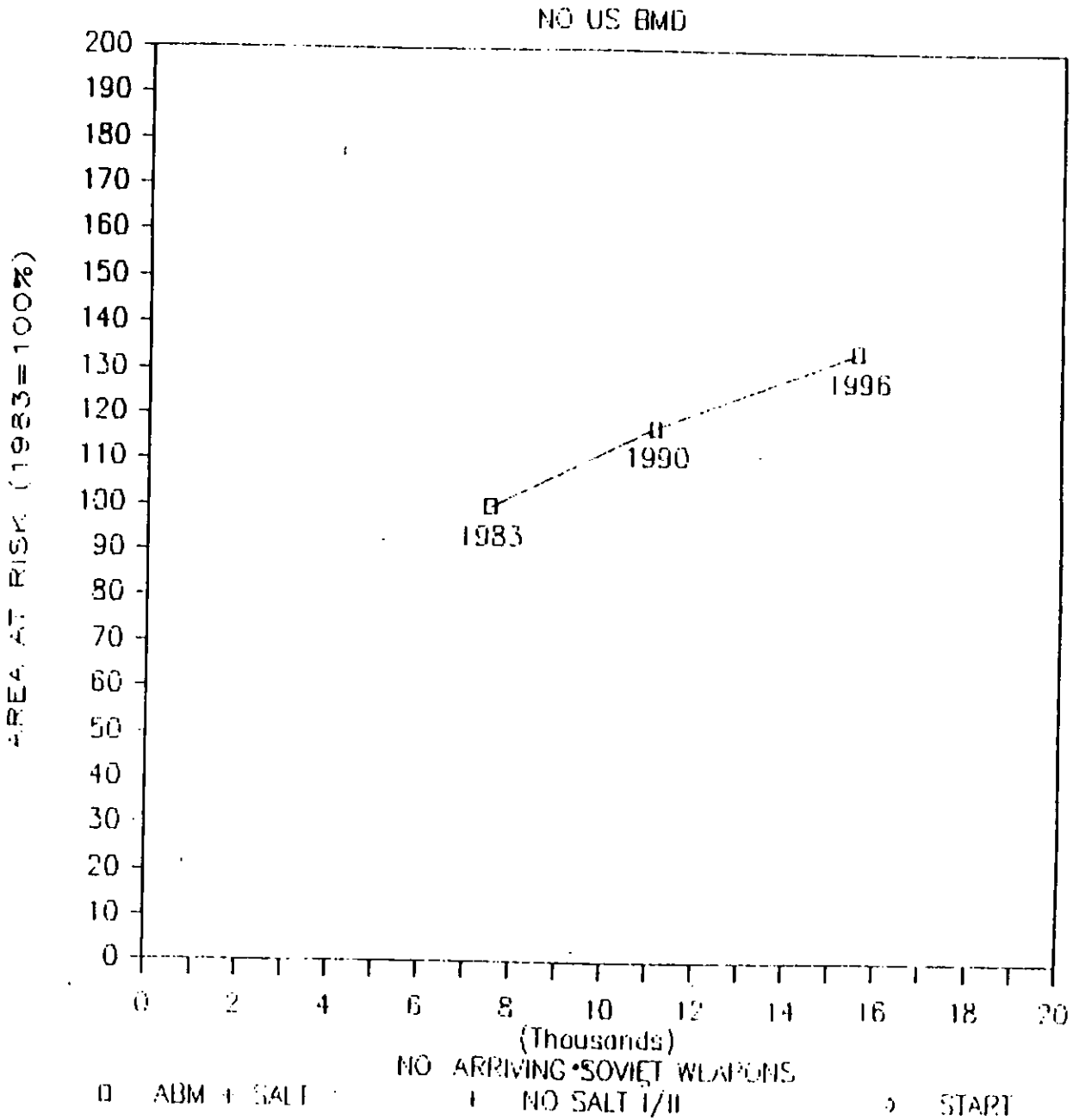
BUT BEFORE WE LEAVE THE FLYING BOMB, WE SHOULD REMARK ITS TECHNICAL EXCELLENCE AS A WEAPON. ITS SIMPLE CONSTRUCTION MADE IT CHEAP TO PRODUCE, AND IT WAS DESIGNED TO EXPLOIT THE EXTRAORDINARILY FAVOURABLE SITUATION IN WHICH THE GERMANS FOUND THEMSELVES, ABLE TO SHOOT AT SUCH A GREAT TARGET AS LONDON FROM AN ENTIRE $90^{0}$ ARC RUNNING FROM EAST TO SOUTH. THE BOMB WAS HARD TO SHOOT DOWN, AND IF WE HAD NOT HAD SO MUCH PRIOR WARNING OUR DEFENCES WOULD HAVE FARED POORLY. AS IT WAS, AN ANLYSIS OF THE ECONOMICS OF THE CAMPAIGN SHOWED A LARGE BALANCE IN THE GERMAN FAVOUR: THE COST OF OUR COUNTERMEASURES, ESPECIALLY IN BOMBING THE SITES, EXCEEDED THE ESTIMATED COST OF THE CAMPAIGN TO THE GERMANS. BUT THE FACT WAS THAT WE STARTED FROM A POTENTIALLY DISASTROUS POSITION GEOGRAPHICALLY, WITH LONDON A GREAT 'HOSTAGE UNTO FORTUNE' AT THE FOCUS AND MERCY OF THE GREAT FRENCH COASTAL ARC; AND THE BALANCE ON WHICH JUDGEMENT MUST BE PASSED IS NOT BETWEEN BRITISH AND GERMAN EXPENDITURE BUT BETWEEN OUR EXPENDITURE ON COUNTERMEASURES AND THE DAMAGE THAT WOULD HAVE ENSUED IN LIVES, MATERIAL AND MORALE IF THOSE COUNTERMEASURES HAD NOT BEEN UNDERTAKEN.

R. V. JONES
THE WIZARD WAR: BRITISH SCIENTIFIC INTELLIGENCE, 1939 - 1945

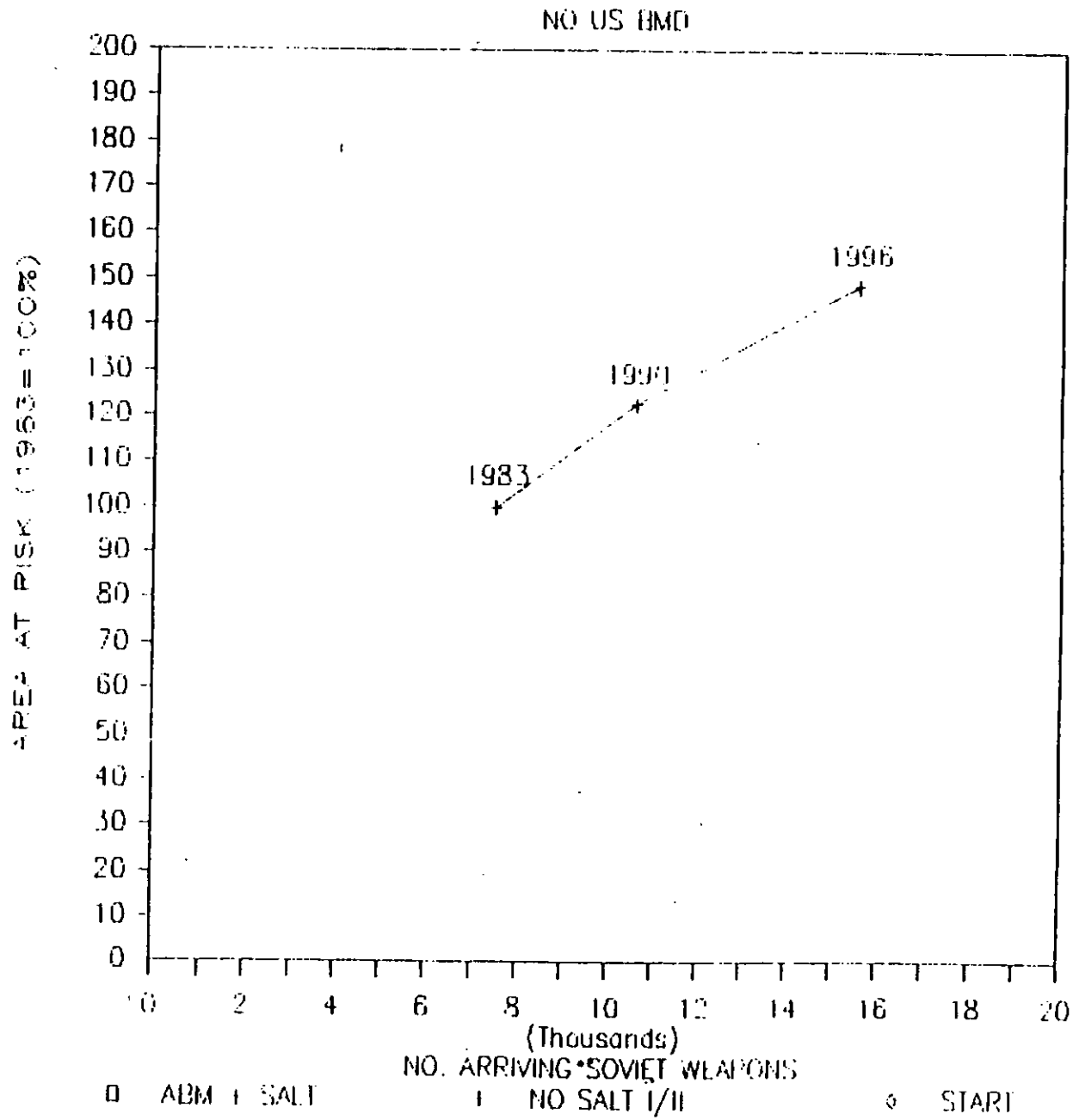
"THE MORE SUCCESSFUL ONE CAN BE IN GENEVA IN REDUCING OFFENSIVE NUCLEAR WEAPONS IN EAST AND WEST THE MORE SUPERFLUOUS IT COULD BE TO DEPLOY SPACE—BASED WEAPONS."

CHANCELLOR HELMUT KOHL
NYT , 3/28/85, P.43.

# ALTERNATIVE ARMS AGREEMENTS



# ALTERNATIVE ARMS AGREEMENTS



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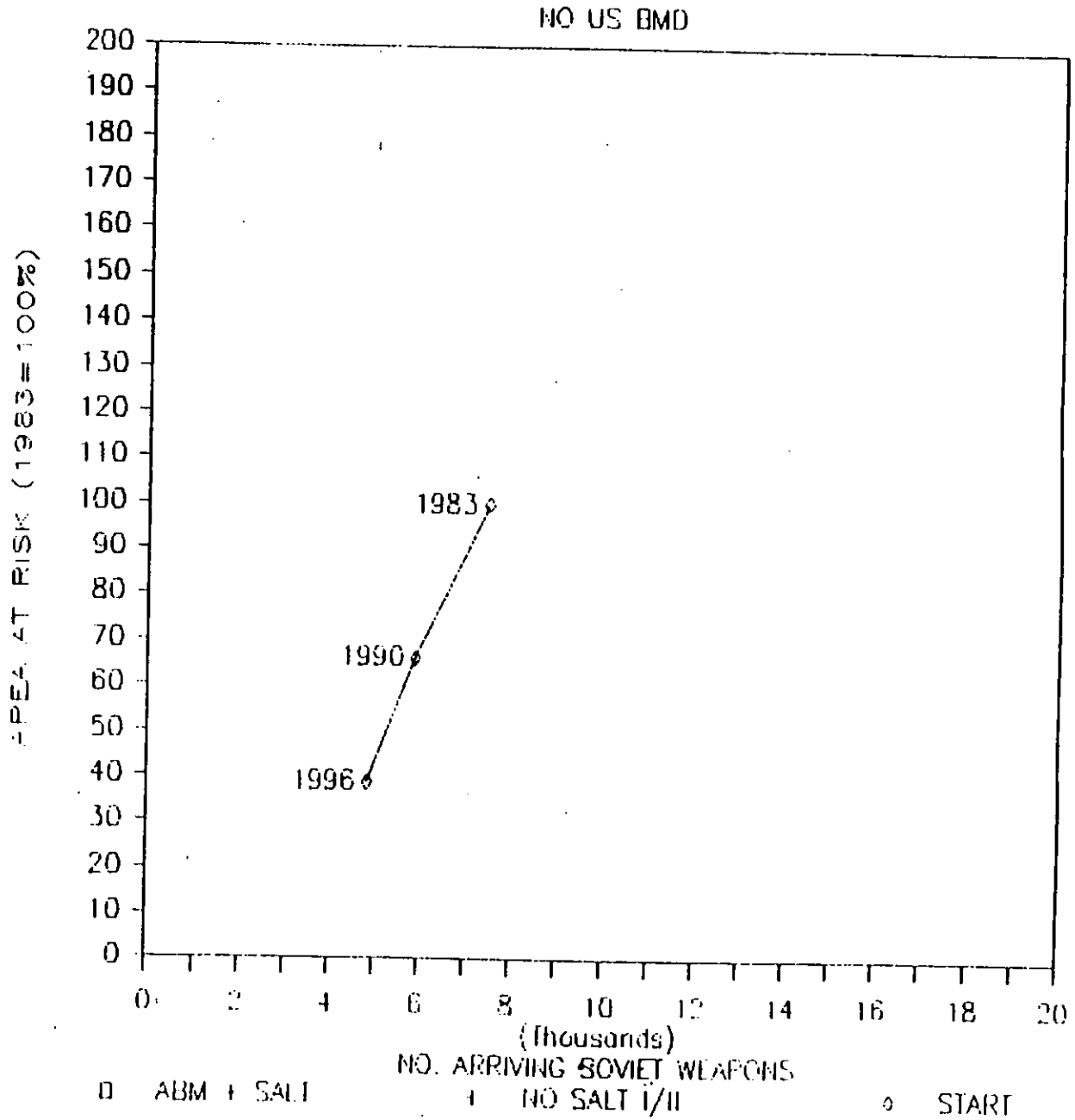

# ALTERNATIVE US BMD OPTIONS

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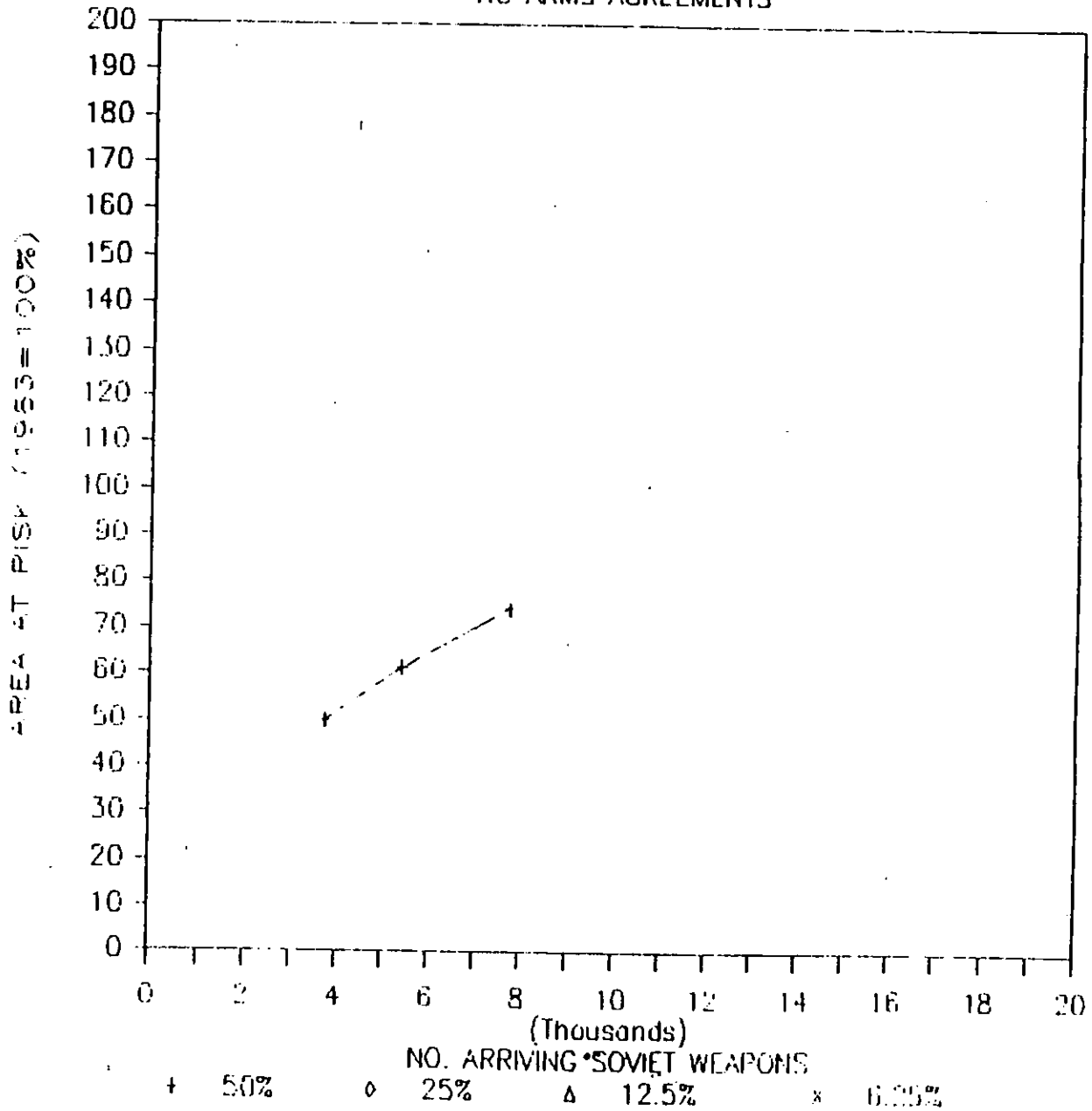

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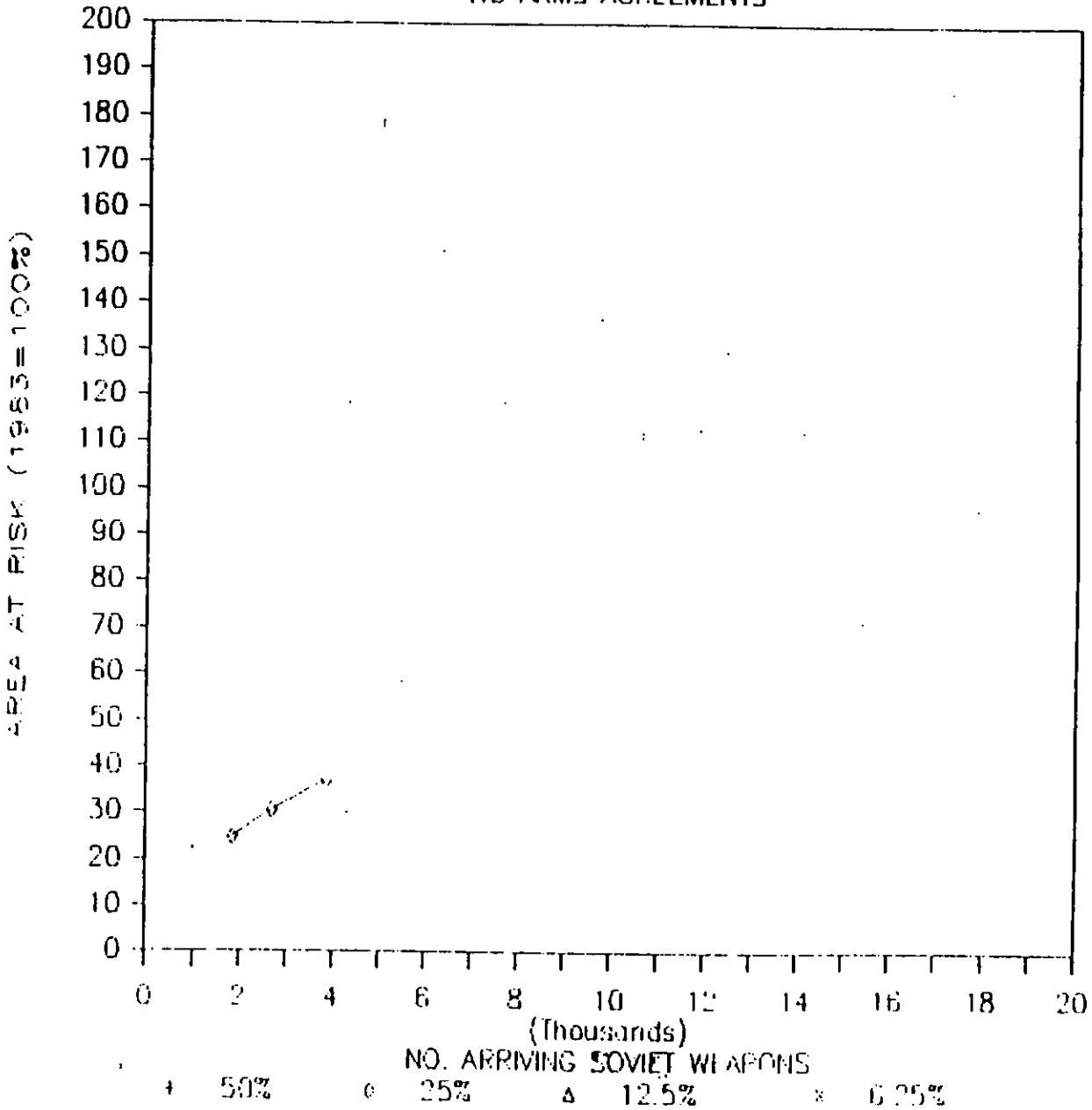

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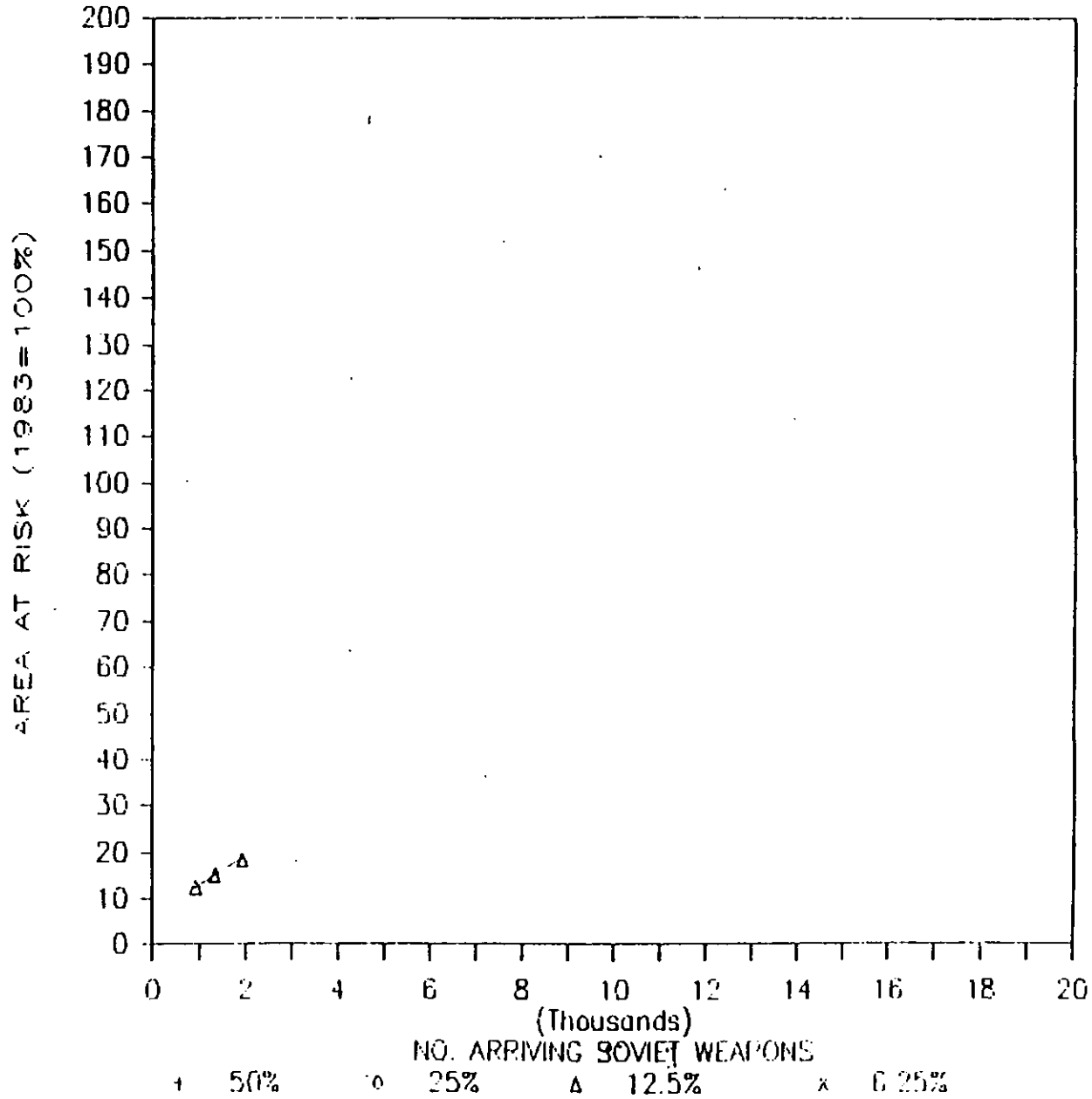

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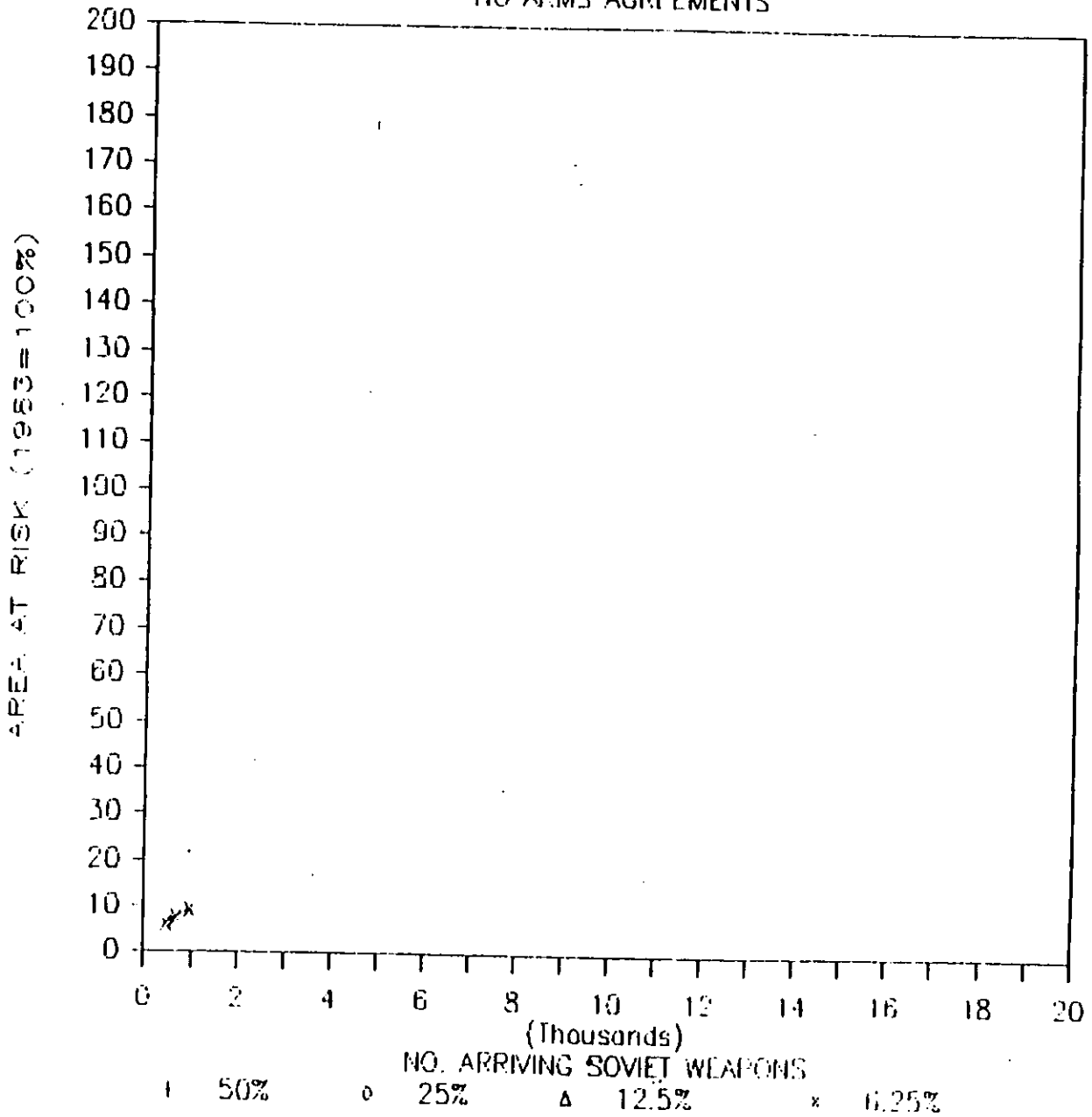

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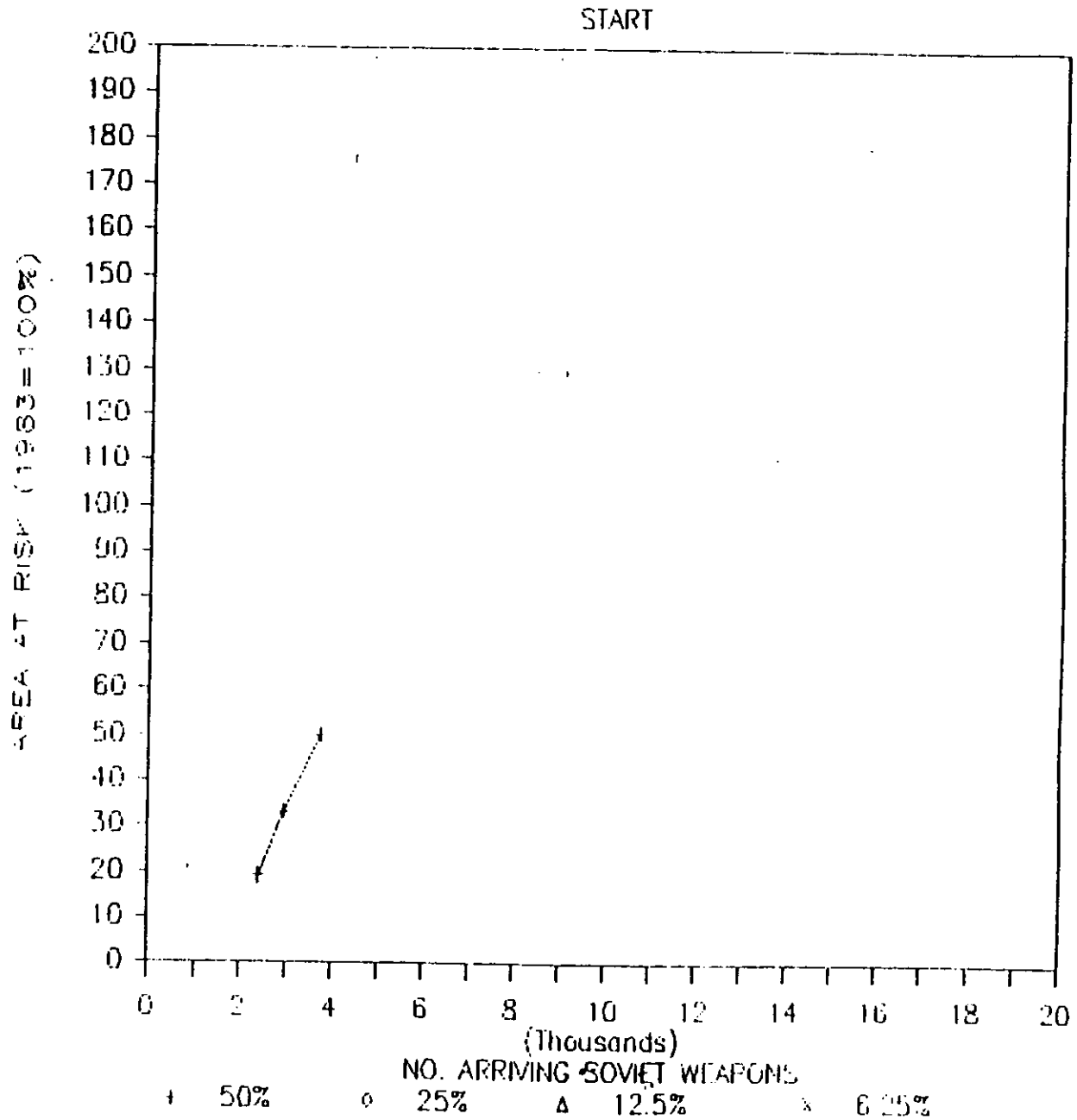

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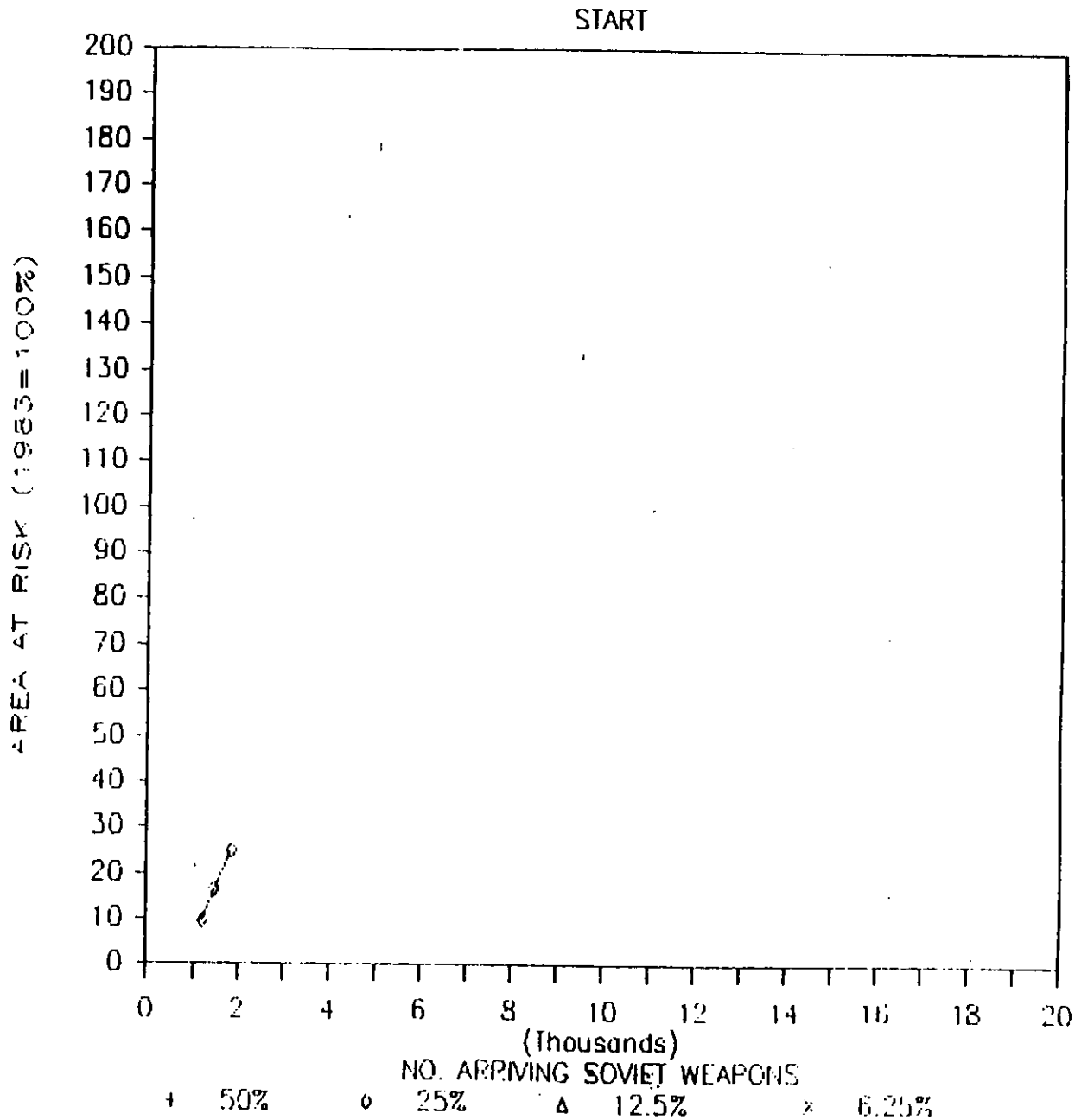

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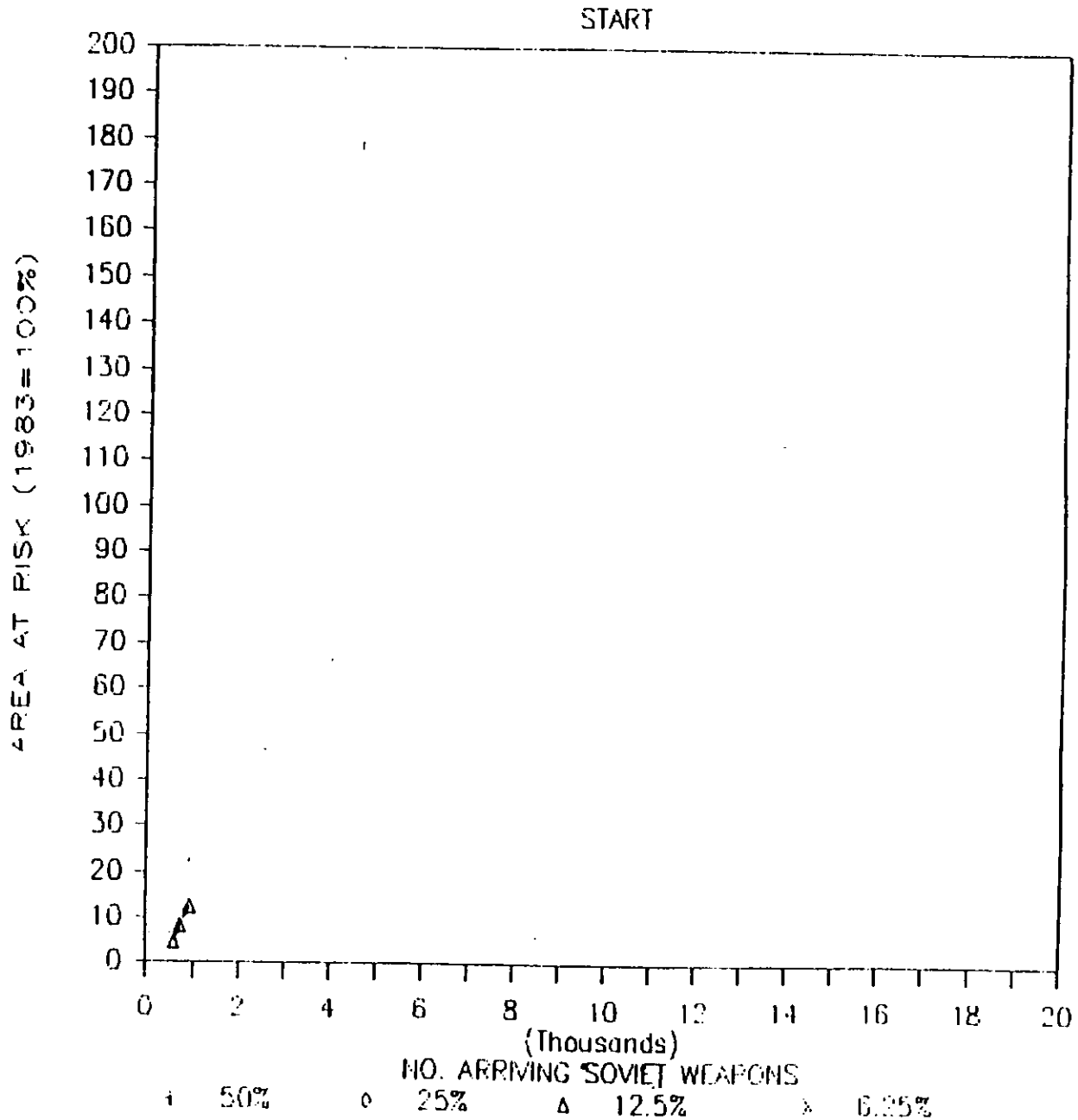

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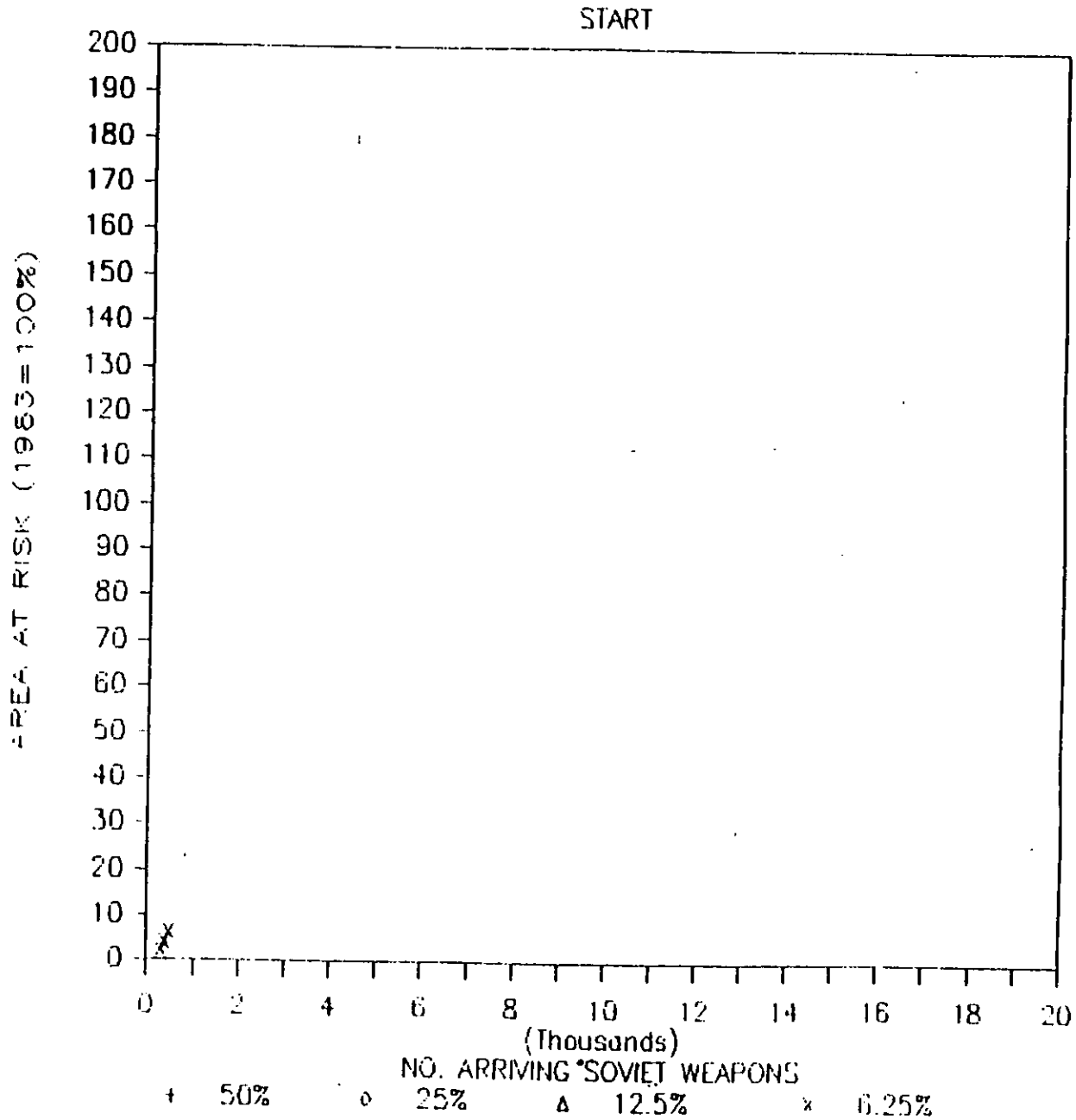
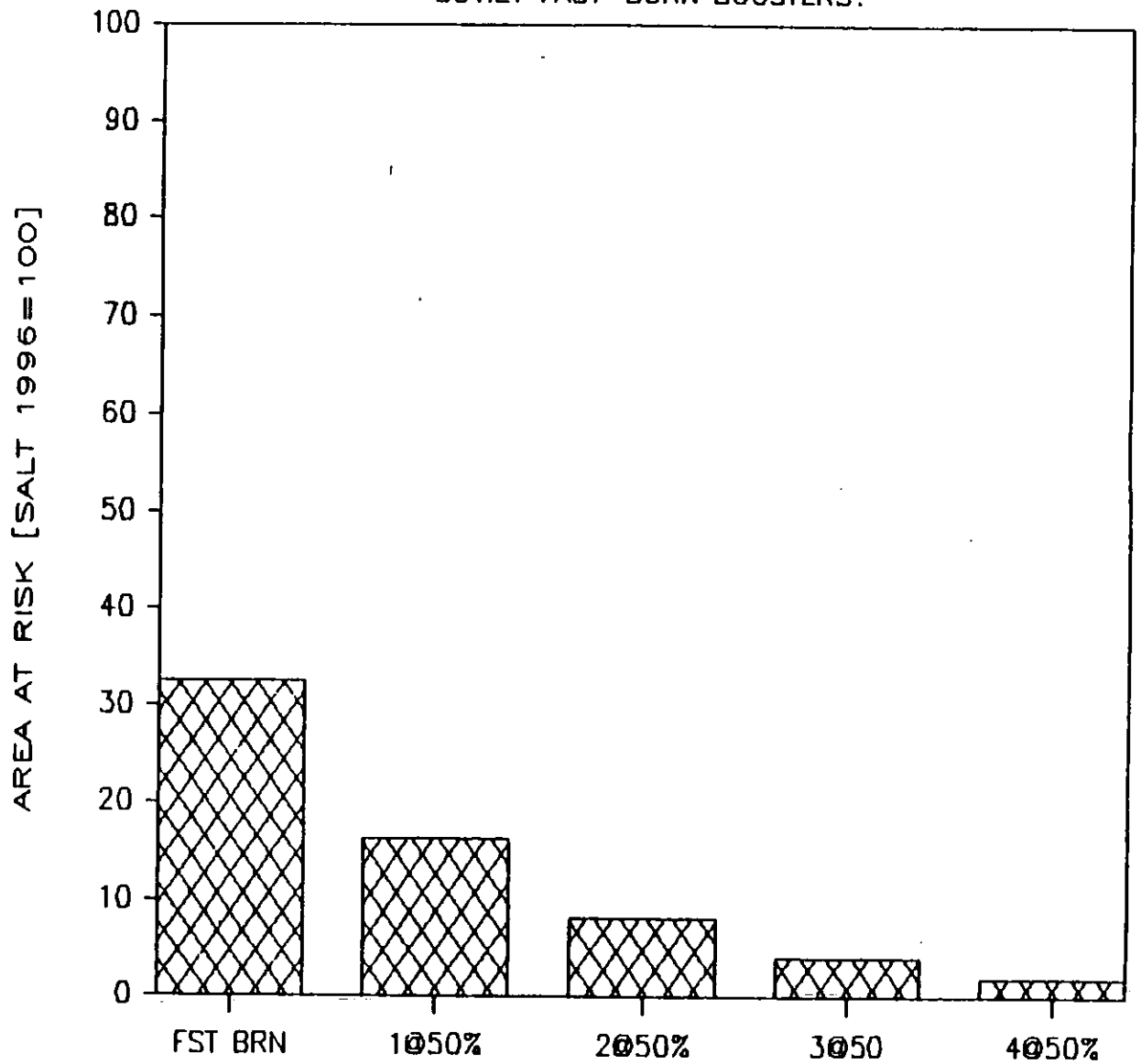


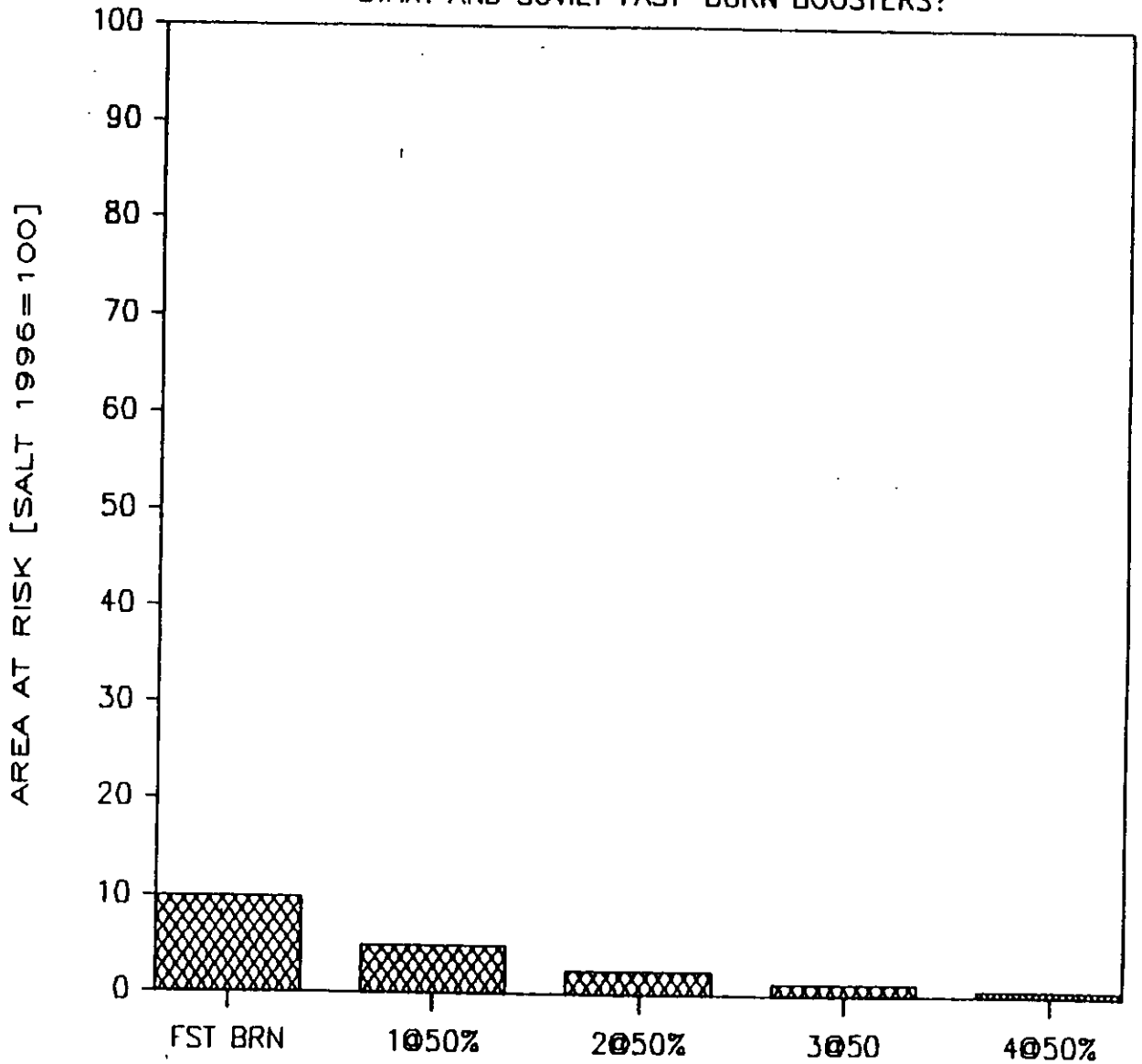
# ARE WE SAFER WITH ...

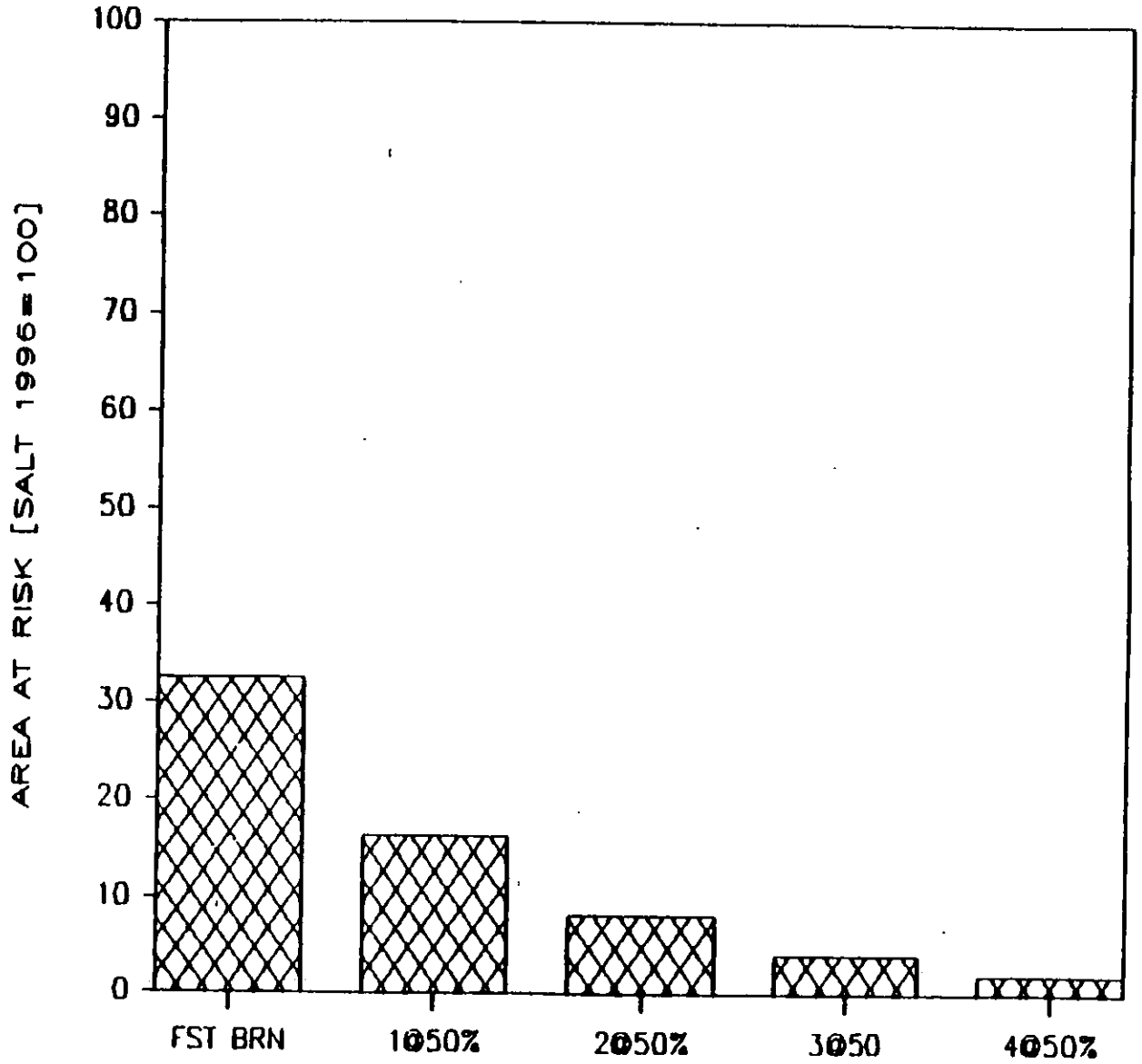
SOVIET FAST-BURN BOOSTERS?



# ARE WE SAFER WITH ...

START AND SOVIET FAST-BURN BOOSTERS?




AREA AT RISK [SALT 1996=100]
100
90
80
70
60
50
40
30
20
10
0
FST BRN
1050%
2050%
3050
4050%

- PRESIDENT REAGAN'S CHALLENGE TO THE CONVENTIONAL WISDOM

  - "THE HISTORICALLY AMAZING THEORY THAT VULNERABILITY CONTRIBUTED TO PEACE AND INVULNERABILITY CONTRIBUTED TO THE RISKS OF WAR."

    HENRY KISSINGER
    ATLANTIC INSTITUTE, 1979.

  - "WHAT ALL THIS LEFT UNEXAMINED WAS THE VALIDITY OF THE REASONING THAT LED TO THE [ABM] TREATY IN THE FIRST PLACE, AND THIS SILENCE IS AN INTERESTING REFLECTION OF THE IMPACT OF CONVENTIONAL WISDOM."

    HENRY KISSINGER, 1982.

  - "HOW WILL WE MEASURE PROGRESS?"

    HENRY KISSINGER, 1984.

# SUMMARY

- DEFENSES NEED NOT BE PERFECT TO BE EFFECTIVE
- SOME IMPERFECT DEFENSES
  - SAFER THAN IMPERFECT ARMS AGREEMENTS
  - CAN DO WHAT AGREEMENTS CANNOT:
    - = NO CONFIDENCE IN SOVIET WAR PLANS
    - = NO RETURN ON SOVIET INVESTMENTS
  - NO CONFIDENCE + NO RETURN = NO WAR

# THE SOVIET BOMBER PROGRAM

— "THE COST OF CONSTANTLY UPDATING OUR BOMBER FORCE WAS IMMENSE . . . WE NEEDED TO HAVE SOME MEANS MORE RELIABLE THAN BOMBERS OR DELIVERING OUR BOMBS TO THEIR TARGETS."

N. KHRUSHCHEV, 1974.

— "LONG–RANGE BOMBERS . . . HAVE BECOME ESPECIALLY VULNERABLE . . . WILL OFTEN BE FORCED TO BE IN AN AIR DEFENSE ZONE FOR EXTENDED PERIODS OF TIME, WHICH SERIOUSLY COMPLICATES THEIR CARRYING OUT COMBAT OPERATIONS.

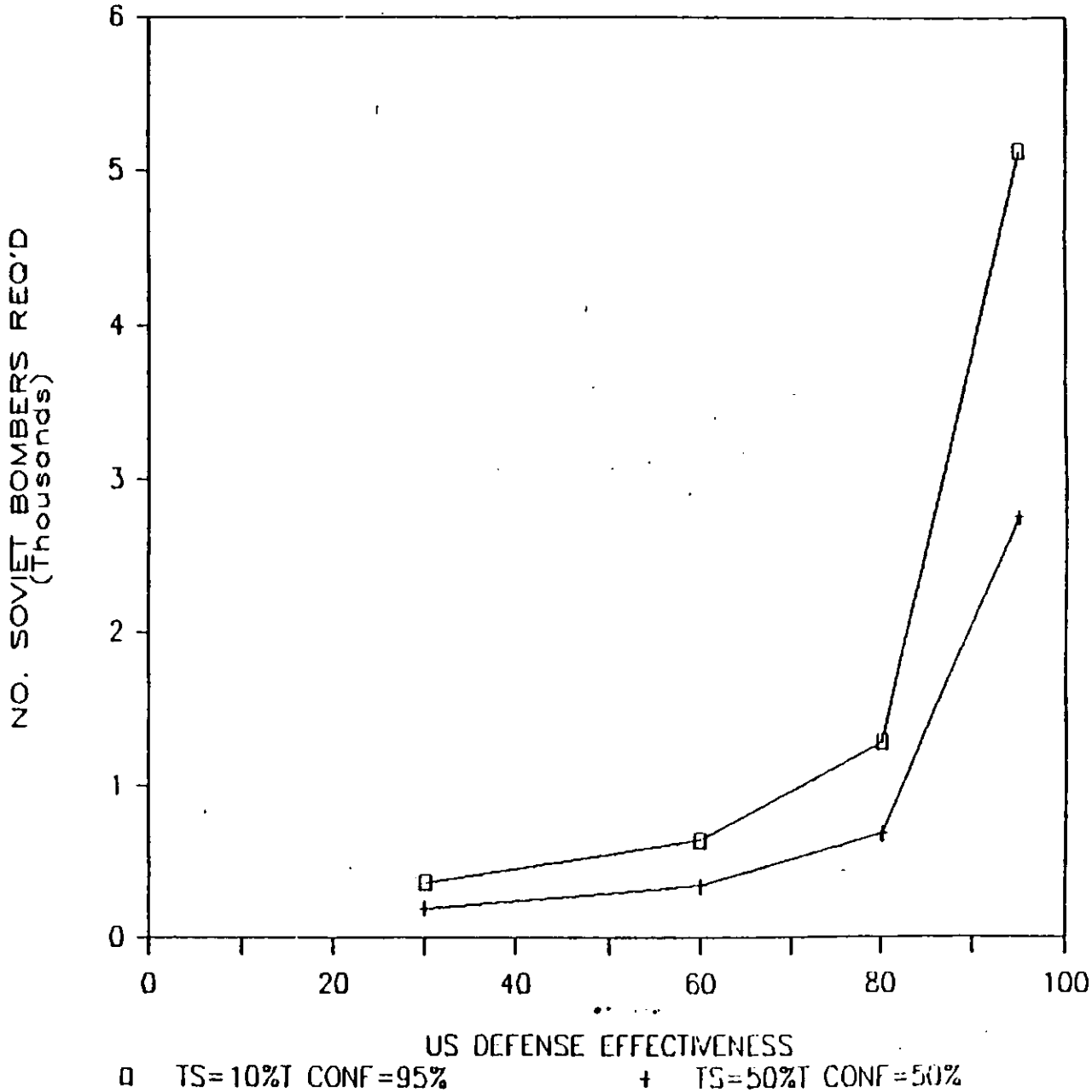
CONSEQUENTLY, THE MISSIONS OF DESTRUCTION OF TARGETS DEEP IN THE ENEMY'S TERRITORY WILL BE EXECUTED MORE RELIABLY BY THE STRATEGIC ROCKET TROOPS . . .

THE STRATEGIC BOMBER AIRCRAFT CANNOT REGAIN ITS LOST IMPORTANCE."

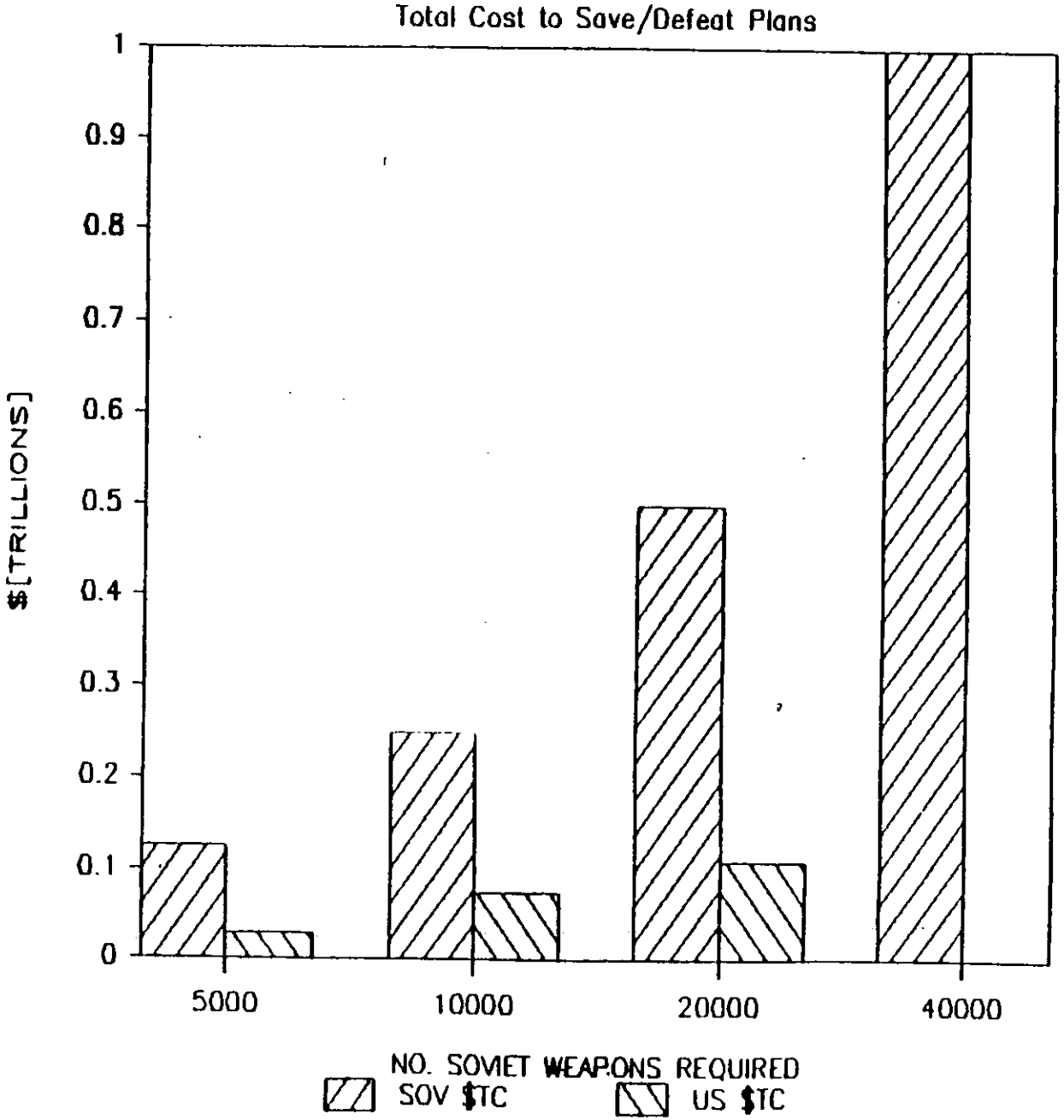
MARSHAL V.D. SOKOLOVSKIY, 1975

# SOVIET BOMBERS vs US DEFENSES '55-60

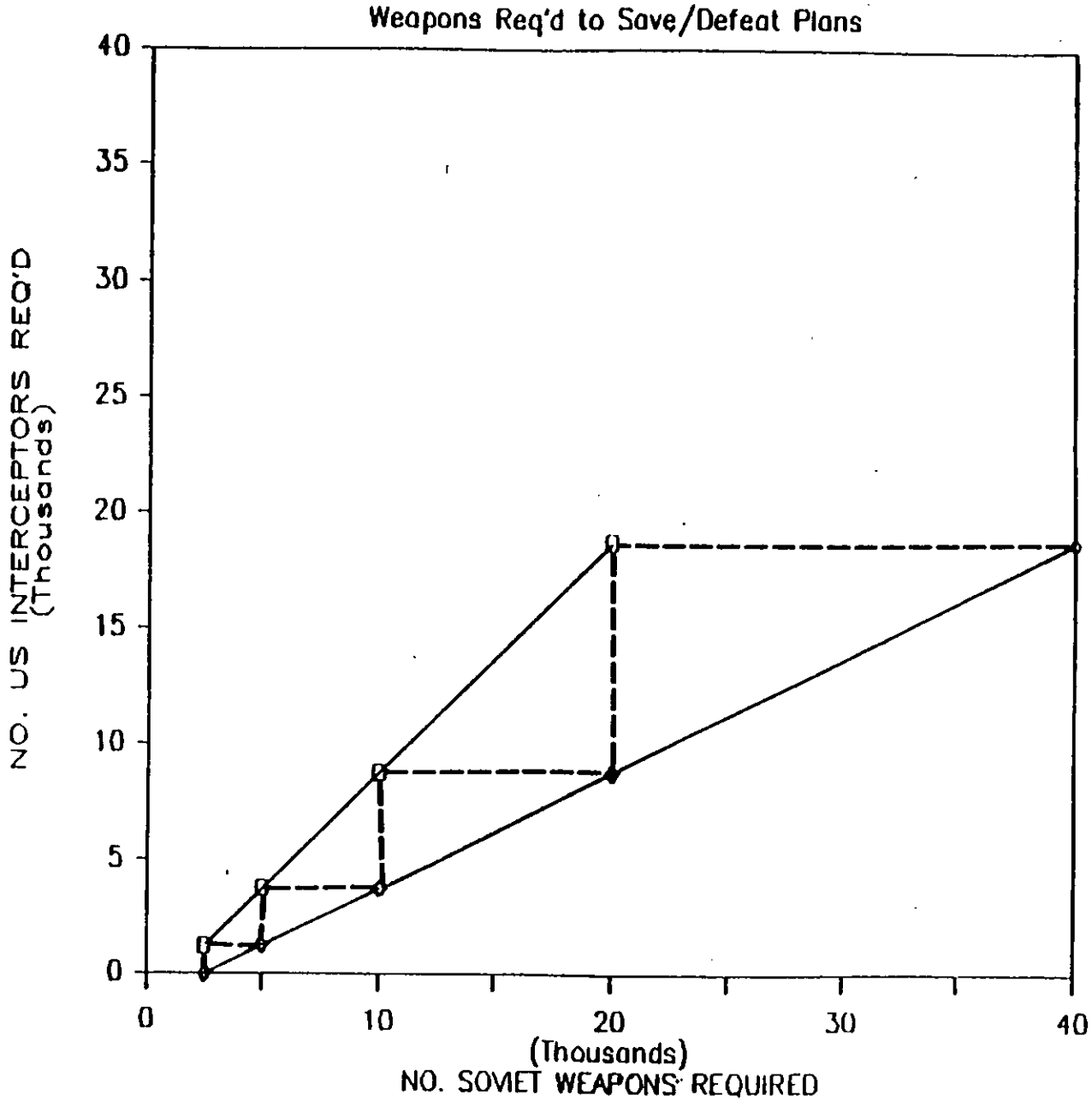
"We needed more reliable means."



# CAN STAVKA BUY BACK ITS CONFIDENCE?

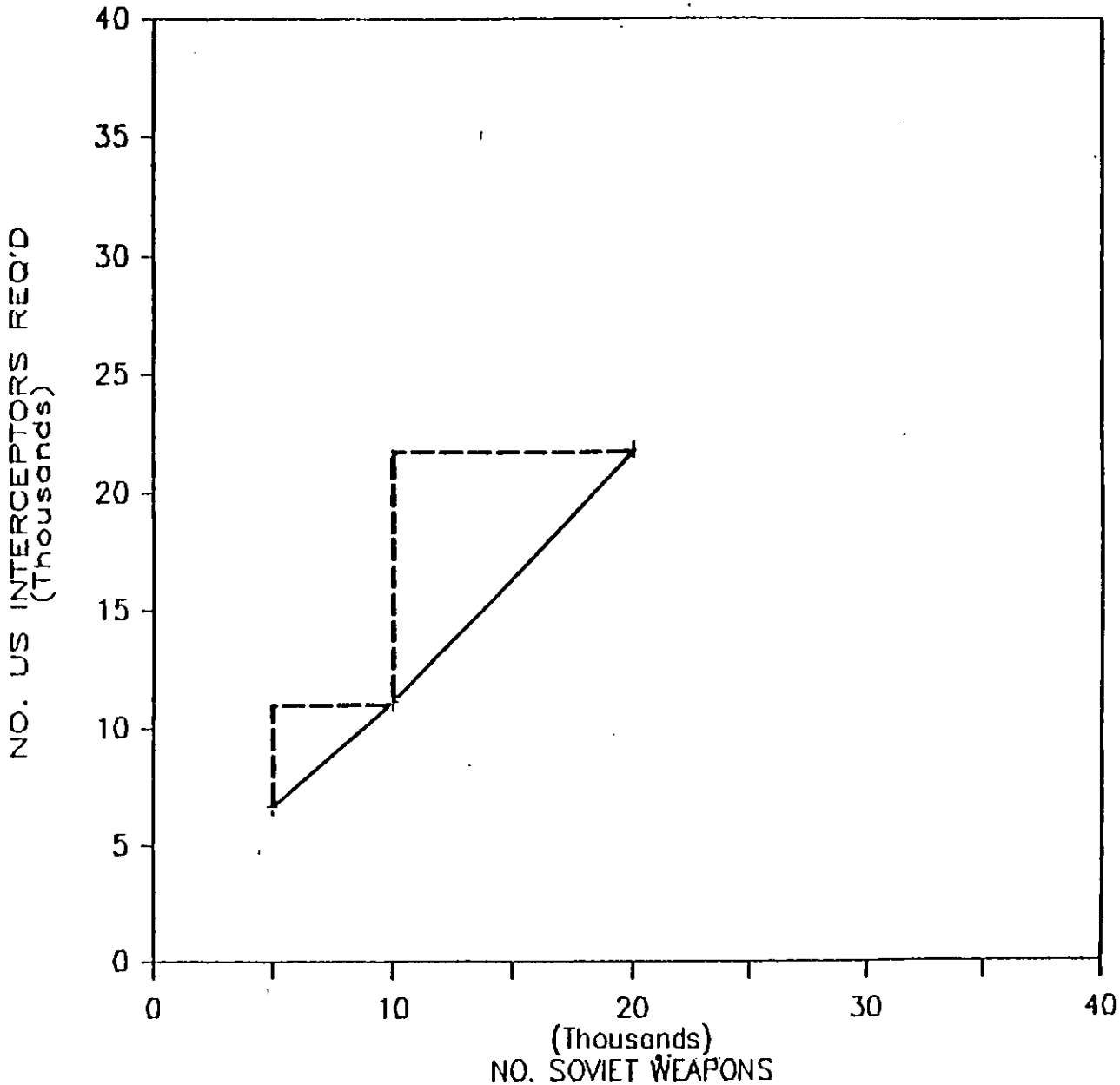


# SOVIET WAR PLANS vs US SDI



# US DEFENSE "REQUIREMENTS"

Traditional US View



# DEFENSES AND LEVERAGE

- WHOSE MARGIN? DEFENDER OR ATTACKER?
- CAN THE SOVIETS BUY BACK CONFIDENCE IN THEIR WAR PLANS?

# NEW WAY

- REQUIREMENTS FOR AN EFFECTIVE DEFENSE
  - "AT A MINIMUM, BE ABLE TO DESTROY A SUFFICIENT PORTION OF AN AGGRESSOR'S ATTACKING FORCES TO DENY HIM CONFIDENCE IN THE OUTCOME OF AN ATTACK OR DENY AN AGGRESSOR THE ABILITY TO DESTROY A MILITARILY SIGNIFICANT PORTION OF THE TARGET BASE HE WISHES TO ATTACK."
  - "ANY EFFECTIVE DEFENSIVE SYSTEM MUST, OF COURSE, BE SURVIVABLE AND COST–EFFECTIVE."
  - "THE DEFENSIVE SYSTEM MUST BE ABLE TO MAINTAIN ITS EFFECTIVENESS AGAINST THE OFFENSE AT LESS COST THAN IT WOULD TAKE TO DEVELOP OFFENSIVE COUNTERMEASURES AN PROLIFERATE THE BALLISTIC MISSILES NECESSARY TO OVERCOME IT."

THE PRESIDENT'S STRATEGIC DEFENSE INITIATIVE, JANUARY 1985.

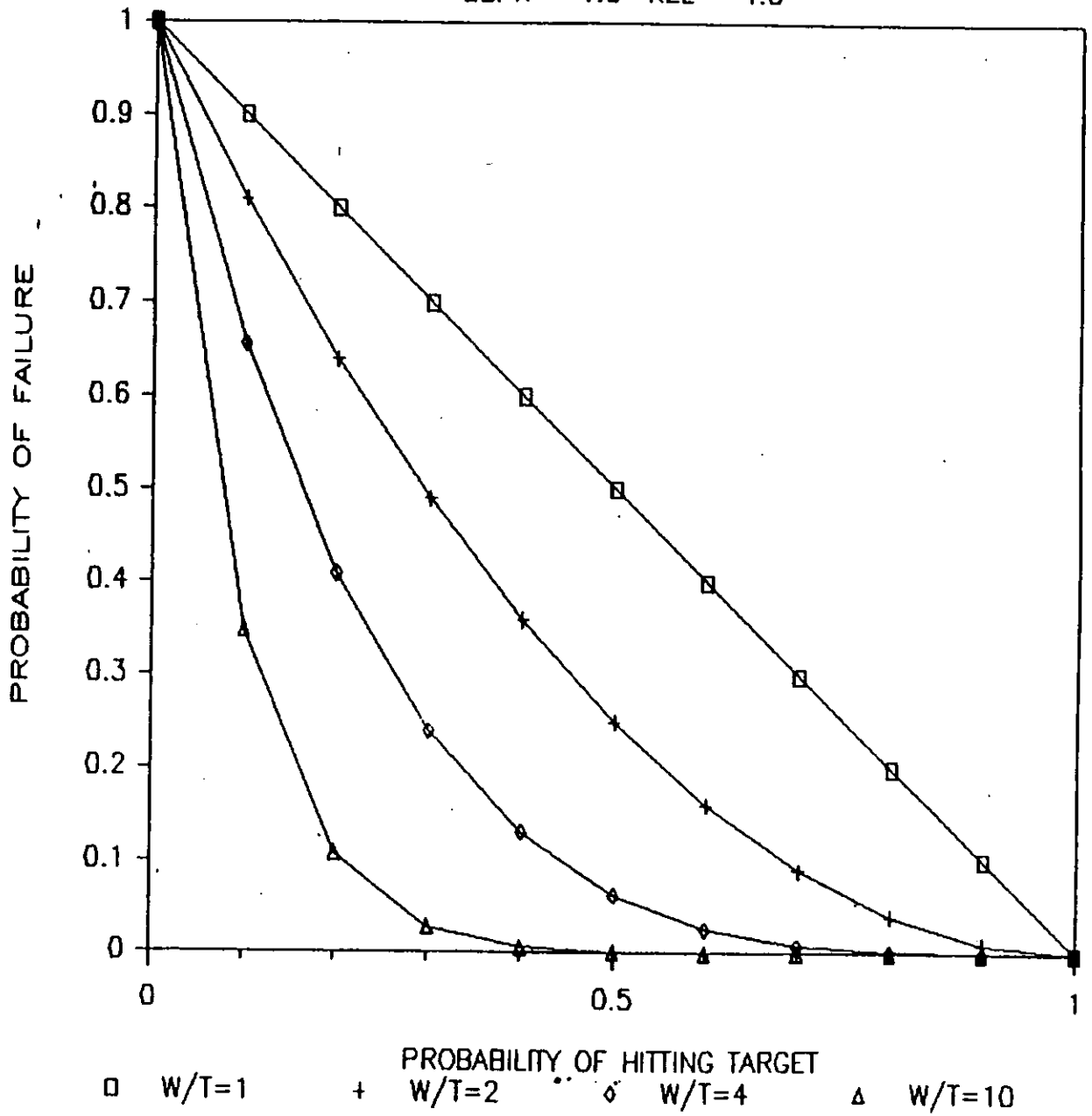
# 10,000 WEAPONS VS. 1 TARGET?

— "LET US CONSIDER THE CASE OF A THREE—"LAYER" SBAMS (SPACE—BASED ANTI—MISSILE SYSTEM), WITH THE OPERATIONAL RELIABILITY OF EACH OF THEM EQUAL TO 90 PER CENT. IN THE LAUNCH OF 1,000 ICBM 100 MISSILES PASS THE FIRST LAYER INTACT (LET US ASSUME THAT EACH CARRIES 10 WARHEADS). SO EVEN AFTER PASSING THE TWO SUBSEQUENT LAYERS AT LEAST 10 WARHEADS WILL BE ABLE TO CLOSE IN ON THE TARGET."

COMMITTEE OF SOVIET SCIENTISTS, 1984

# MISSION REQUIREMENTS AND RISK

SSPK = 1.0 REL = 1.0



PH84-5-0210-85B

# Unclassified Executive Summary of Force Requirements in Countering a Soviet Invasion of Iran

Brian G. Chow

July 1984


| | |
|---|---|
| Contract Number: | MDA903-83-C-0210 |
| Contract Expiration Date: | 31 May 1984 |
| Short Title of Contract: | Integrated Long-Term Defense Strategy |
| Name of Contractor: | Pan Heuristics<br>A Division of R & D Associates<br>4640 Admiralty Way<br>Marina del Rey, CA 90292 |
| Project Directors: | Albert Wohlstetter<br>Fred Hoffman |
| Phone Number: | (213) 822-1715 |


The views, opinions, and findings contained in this report are those of the author(s) and should not be construed as an official Department of Defense position, policy, or decision, unless so designated by other official documentation.

## Executive Summary

The most dangerous threat in the unstable Persian Gulf region comes from the Soviets. They have always had strong interests there beyond its oil: its access to the warm water and its location in the defense of their southern border. In spite of demand and supply responses to higher oil prices in recent years, the West as a whole will continue to depend on Gulf oil for a long time. Our vulnerability remains real and direct benefits to the Soviets are potentially quite high. The revenues from Gulf oil exports were about $100 billion even at the depressed 1983 level. Furthermore, they are projected to increase to $300-500 billion per year in the 1990s.* Soviet control of the oil and its revenues would alter completely the Western Alliance as we know it. They could allocate supplies and threaten disruptions with a design to tear the Alliance apart by exploiting differences in members' dependence and vulnerability.

The West is currently ill-prepared for a military response to this threat. Yet, such a readiness could do the most to deter and counter it. In general, our major allies have shown great reluctance in contributing directly to the conventional defense of the Gulf. Some policymakers in the United States, as well as in allied countries, feel that the West simply cannot do enough, short of World War III, to counter a Soviet invasion in the Gulf, and argue wishfully that the Soviet fear that we might somehow start World War III would be sufficient to deter them. However, as the Western view of nuclear weapons is becoming apocalyptic, the possibility that we would do so has become increasingly incredible.

*Private communication with John Weyant, Stanford University, June 1984.

This study shows that the West, with considered and feasible efforts, can make the price of Soviet attempts to control the Gulf's oil inordinately high and the attainment of their military goal greatly uncertain.

Scope of Study and Approach

This report deals with force requirements in countering a Soviet conventional invasion of Iran for the control of Tehran and the Khuzistan province, Iran's oil-producing region. Our study of these requirements can be broadly broken into two areas: air interdiction and naval support. The emphasis is on the identification of policy and military measures that would improve the West's capability in either or both areas in defending the Gulf against a Soviet invasion. Moreover, the recommended measures, if implemented jointly, would reduce substantially the overall force requirements. The years 1989 and 1994 are used as times of reference.

The analysis begins with a specification of contingency and forces of both sides deployable in the conflict. Requirements of interdiction from the air, which are critical in the defense of Iranian oil, are estimated first. We expect air interdiction to be particularly effective in Iran because of its rough terrain and lack of redundancy in its road network.

Our interdiction missions are designed to fulfill the following objectives: (i) chokepoint attacks to slow Soviet force advance and logistics support in order to allow US force buildup at the Gulf; (ii) force attrition to keep Soviet forces which are in contact with ours at or below a level that we can handle; and (iii) airfield attacks, preferably both in the Soviet Union immediately north of Iran and in Iran, to degrade their air power which, otherwise, would cause severe attrition on

our bombers attempting to carry out interdiction missions and on our forces landing at the Gulf.

The aircraft and cruise missile requirements to carry out these interdiction missions are estimated under sixteen cases. These cases result from the combinatorial yes/no possibilities of the availability of air bases in eastern Turkey, the use of cruise missile ships in the Mediterranean, the promptness of response of a US carrier task group, and the attack of Soviet mobile forces, in addition to fixed chokepoints, along their route of advance during the initial 10 or 20 days of the conflict. In regard to this last possibility, the Rapid Deployment Force would have, at least, a better margin of safety if attrition of Soviet vehicles began early on. However, since we have assigned top priority to the more time-urgent chokepoint interdiction, there are situations where the remaining assets are insufficient or inefficient against moving targets during the early phase. In such cases, we are forced to postpone these air attacks on vehicles.

Next, we study three issues which are pertinent to naval force requirements in supporting our operations in the Iran contingency, as well as other contingencies and theaters. Recall that land-based aircraft and cruise missile ships are to be used for air interdiction missions. However, carrier task groups and other naval units are required for initiating air cover at the Gulf and controlling the sea lines of communication (SLOCs).

The first issue deals with the damage to a US task group by surprise Soviet attacks versus anticipated Soviet attacks. If analysis shows that the damage by a surprise attack would be severe, the Navy would have to

allocate additional assets to defend the task group continuously, even prior to D-day, as long as it is under the Soviet threat. The second issue deals with our task group's prepositioning tactics during crisis with the Soviet Union in one of its nearby countries. Should we station the task group a good distance from the crisis area to reduce threats to the task group, or near it to gain promptness in response when the conflict actually breaks out? The third issue deals with the effectiveness of ground attacks in degrading Soviet Naval Aviation (SNA) operations. This last issue is analyzed from a Soviet perspective, while our previous analyses emphasize a US perspective.

Finally, we review and identify areas where cooperation from our allies would be feasible politically and most useful militarily in the defense of the Gulf.

Recommendations

Our recommendations, each followed by key rationale(s) and findings, are given below.

(i) Plan to employ cruise missile ships in the Mediterranean Sea for the interdiction of heavily-defended fixed targets such as chokepoints in northwestern Iran and airfields in Soviet territories directly north of Iran. Five well-protected destroyers, with 50 launchers each for land-attack missiles and with an at-sea reload capability as fast as once a day, are very effective in performing these tasks.

(ii) Concentrate on persuading our NATO allies to provide the badly needed assistance in logistics support, protection of sea lines of communication and defense of the land- and sea-bases in Turkey and the

Mediterranean for US power projection. We do not recommend at this time vigorously seeking major allied participation in combat outside the formal NATO treaty area (such as sending in ground troops) because of the difficulties in obtaining political acceptance for such a role. One exception is the encouragement of French and British naval forces in the Indian Ocean to join our own for sea control.

The Alliance must have the will and jointly develop the capability to defend Turkey against Soviet air attacks or invasion. Turkey must be assured that it will be defended successfully by its NATO allies against Soviet aggression, if it is to permit the use of its bases in contingencies involving the Soviet Union which occur outside the formal NATO treaty area.

Also, air interdiction from eastern Turkish bases and the Mediterranean Sea, and its supporting operations and defense, should be incorporated into planning and exercises in which the US and her allies, particularly Turkey, are participating.

(iii) In view of the termination of the program on medium-range air-to-surface missile (MRASM), accelerate the development of a new conventional air-launched cruise missile and retrofit some B-52s as carriers for these missiles. These bombers can launch a large number of missiles daily on target from positions outside the enemy's area and terminal air defense. It would also diversify our conventional land-attack capability against heavily-defended fixed targets from sea to air.

To the extent possible, but without an appreciable delay of their deployment, incorporate into these air- and sea-launched missiles improved

guidance, munitions and survivability.

(iv) In the current debate on maritime strategies, the intimate connection between power projection against the Soviet Union and sea control is not given its due emphasis. Because of the growing range and performance of SNA bombers, it is a false dichotomy to separate our capability to make counterattacks on bases in the Soviet Union from our capability to protect the sea lanes to our allies and friends in such regions as the Gulf, the Mediterranean, the North Atlantic and the northwestern Pacific. In practice, it is becoming increasingly difficult to defend our naval forces in performing sea control missions without counter-attacking the SNA bombers and their operations in the Soviet sanctuary.

In addition to sea control, many of the naval strategists who are against big carriers, Aegis cruisers and other high-performance platforms and systems visualize the role of carrier task groups only in over-restricted Third World contingencies where threats to our naval forces are weak. They tend to think of those contingencies in which we do not have to face the growing SNA threat because the Soviet Union is either not involved or far away. It would be grossly inadequate to only have a capability against future Vietnams and future Falklands. Our naval forces must be equipped to perform sea control and other missions under Soviet threat at the periphery of the Eurasian land mass where many of our allies and friends are located. Therefore, it is important to emphasize the critical role of carrier operations in contingencies where the United States and the Soviet Union are militarily involved in a third country near the Soviet Union.

Instead of diverting resources from the carrier task groups, as recommended by these strategists, we need to strengthen their defense capability by including bases for SNA operations as an additional zone in our fleet's antiair warfare (AAW) defense in depth. Carrier task groups that can remain viable under Soviet threats are essential in maintaining lines to our allies, not an alternative to it. The Navy needs to develop an attack-at-source capability against SNA by equipping its ships (and particularly its submarines) with land-attack conventional cruise missiles of much longer range. This means that the likely near-term range would have to be substantially increased, say, to 2,000 nmi.

Attacking SNA at its sources will become even more critical when the Soviets increase the range of their air-launched antiship missiles by a factor of two or more, which will enable their bombers to stay outside the threat of all our other zones of AAW defense. A strategy solely based on the interception of missiles is bound to lose, if the bombers that launch them are not attacked and can engage in an unopposed shuttle operation. This applies to the defense of naval forces against SNA threat, whether they are performing power projection on a third country's soil or sea control missions.

On the other hand, we found that seven submarines each with 60 conventional land-attack cruise missiles can substantially enhance a carrier task group's survivability and power projection capability in a cost-effective manner by attacking ASM checkout, assembly, and storage facilities and/or SNA bombers on the ground. In fact, we have even identified some cases where cruise missile submarines would make a difference in whether or not a task group can survive to perform its missions in our contingency.

(v) This study includes an initial analysis on where US naval forces should be positioned during a crisis and before the actual outbreak of a conflict involving the Soviet Union in one of its nearby countries. Because of the importance of such a naval policy, its analysis should be expanded. It would involve the tradeoff of reduction in threat and reduction in response time, as explained earlier. It should be elaborated in terms of crisis location, threat level and reference time.

As SNA extends its reach by replacing Badgers with Backfires, and even longer-range bombers later, the tactic of threat avoidance prior to D-day or, worse yet, at all times would make our naval forces incapable of performing a growing number of operations. If we allow task groups to enter an SNA threat area prior to D-day, we would have either to allocate additional assets to defend constantly against surprise attack or to hope that the surprise attack would cause little damage. The latter is unrealistic. We studied the situation for the balance of the 1980s and found that a surprise attack would cause severe damage. From the Soviet perspective, a surprise attack would substantially reduce the Soviet entry price, as measured by the number of SNA bombers killed, of putting two of the three carriers in a task group out-of-action. Moreover, the number of carrier-based aircraft required for surveillance in fleet air defense to achieve constant readiness against a surprise attack is only a small percentage more than that required by a tactic of staying out of SNA range until after D-day. This additional requirement seems reasonable considering the gain in critical time for response. Further consideration should include the Soviet surface and subsurface threats.

Cruise Missile Ships and Allied Cooperation

We now elaborate more on the rationale for recommending the operation of cruise missile ships from the Mediterranean instead of the Arabian Sea, because the choice might seem counter-intuitive in a Gulf contingency. First, cruise missiles can be launched from some of these ships within 24 hours after D-day without presuming costly prior-to-D-day response to ambiguous warning of Soviet mobilization, because they can come from normal operating areas of the Sixth Fleet already in the Mediterranean and where they already are explicitly covered by the NATO treaty. Second, since the SLOCs in the Mediterranean are critical to countries of southern Europe, the West needs to establish a protective capability there anyway, regardless of the deployment of cruise missile ships or the Persian Gulf mission. The stationing of these ships there can take advantage of the already required protection of a treaty-covered area. Third, the eastern Mediterranean is substantially closer to targets near the origins of a Soviet Gulf invasion, namely those in the Transcaucasus and along the critical invasion routes in northwestern Iran. This is particularly important given the range constraints of likely near-term conventional cruise missiles. Ideally, we would prefer to launch them from ships further west in the Mediterranean where the Soviet air threat is correspondingly less severe and easier to protect against. This is one reason we recommend a substantial increase in follow-on conventional cruise missile range and payload capability. During the interim, our allies and friends should coordinate their resources to protect these ships in the eastern Mediterranean. It particularly requires a strengthened air

defense composed of both surveillance and intercept aircraft based in Turkey, Greece, Israel, and British bases in Cyprus.

Air Interdiction Requirements

In addition to air interdiction requirements, we have also made estimates of (i) damages of surprise versus anticipated Soviet attacks on our task group, (ii) the additional carrier-based air surveillance requirements in maintaining our task group in defense readiness for a longer period of time against surprise attack, and (iii) SNA bomber requirements to inflict a given level of damage to our task group with and without our ground-attacks to degrade their operations. These estimates have already been summarized in the findings pertinent to recommendations (iv) and (v). Here, we will concentrate on the quantitative results of air interdiction requirements.

To isolate the contribution to air interdiction from each individual measure under various situations, we make eight pair-wise comparisons out of the sixteen cases. In each pair, the two cases only differ in the availability of the measure in question.

First, availability of cruise missile ships could provide the largest reduction in the cost of weapons consumed and platforms attrited in air interdiction. The cost drops significantly in 1989 and by a smaller but still significant amount in 1994. We have assumed that the effectiveness of cruise missiles and other interdiction weapons against fixed and/or moving targets will be significantly improved and the overall interdiction requirements substantially reduced by 1994. The smaller cost reduction in 1994 reflects that the pursuit of recommended weapon improvements would

reduce but not eliminate the reliance on cruise missiles. Perhaps even more important than the overall reduction in interdiction cost is the decrease in aircraft requirements for attack, escort and defense suppression by a large percentage in 1989 and a small but still sizable amount in 1994. Without the availability of any of the three measures, Turkish bases, CM ships and prompt carrier arrival, the number of aircraft required for air interdiction would be very large in 1989 and extremely difficult to meet because we cannot expect aircraft deployable to the theater to be anywhere near as large.

Also, there would be a corresponding reduction in logistics support which often turns out to be the binding constraint for a conflict far from home. Of course, the use of CM ships would increase the cruise missile resupply requirement substantially. But, the increase in logistics support for those additional missiles should be much more than compensated for by the decrease in support for the aircraft. We consider the reduction in logistics support to be an important contribution of the recommended measures.

Second, the availability of Turkish bases for US air operations lowers the air interdiction cost by a sizable amount in both 1989 and 1994. The reduction is caused by the proximity of eastern Turkish bases to targets in northwestern Iran, allowing more efficient use of aircraft based there than those based at the Gulf. These estimates assume that attacks on Soviet vehicles, instead of fixed targets, can be safely postponed until US fighter/bombers can conduct these attack missions from bases at the Gulf. Otherwise, Turkish bases are essential for vehicle attacks during the initial 10 to 20 days.

In addition to air interdiction missions for slowing down ground force advance, attriting their vehicles, and degrading their air power, as quantified here, tactical aircraft from Turkish air bases would serve a critical role in blocking a Soviet attempt to seize critical points on the Gulf from the beginning with deep airborne deployments. They used such tactics against Czechoslovakia in 1968 and Afghanistan in 1979 to preemptively grab key enroute and forward positions. While Soviet air transports would be highly vulnerable if opposed in such an operation, we have few places besides Turkey from which such opposition could be effectively mounted. On the other hand, if we let them deploy airborne troops to the Gulf first, our landing would then face heavy opposition and would be much more difficult, if not impossible.

Third, a key contribution of a carrier task group is the initiation of an air cover over the Gulf. Before local air superiority is achieved, it is doubtful that any sizable amount of assets could be airlifted into the area because of vulnerability to Soviet bombing on the ground and interception in the air. Prompt arrival of the task group at the scene would allow an early commencement of substantial airlifts into the Gulf and, thus, more assets and forces would be in place over our assumed 60-day buildup period. The more US forces defending the Gulf, the more Soviet forces could be handled in direct combat. This provides a better margin of error as to the amount of their enroute forces that must be attrited. A prompt arrival leads to a decrease in the cost of necessary interdiction by an appreciable amount in both 1989 and 1994. This reduction in cost and requirements means that, if the same interdiction efforts

were maintained instead, US forces would face less Soviet forces in direct combat. Earlier arrival of US forces also allows for greater confidence that our initial forces can seize a secure landing for follow-on deployments. Thus, the contribution of a prompt arrival might be larger than our estimation here, reinforcing our recommendation.

Finally, deploying cruise missile ships in the eastern Mediterranean, using airbases in eastern Turkey and speeding carrier arrival, all contribute to our capability to defend the Gulf, independent of the availability of the other two measures. This is an attractive feature from the perspective of risk diversification. More importantly, their joint implementation would drop the interdiction cost very substantially in 1989 and 1994. The aircraft requirements are lowered also by a large amount. The corresponding reduction in logistics support for aircraft would far outweigh the increased support resulting from additional cruise missiles deployed.

In sum, the three measures can produce substantial reduction in overall cost and requirements for air interdiction, which is a critical component of our defense strategy against a Soviet invasion of Iran.

PH-85-01-0325-87B
Volume I-A

# Armenian Terror as a Special Case of International Terror

Albert Wohlstetter and Nancy Virts

and

# Dissent in Soviet Armenia

Nancy Virts

January 1985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| Contract Number: | MDA903-84-C-0325 |
| Contract Expiration Date: | 1 July 1985; $885,782 |
| Short Title of Contract: | Integrated Long-Term Defense Strategy |
| Name of Contractor: | Pan Heuristics<br>R & D Associates<br>4640 Admiralty Way<br>Marina del Rey, CA 90295 |
| Project Directors: | Albert Wohlstetter<br>Fred S. Hoffman |
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# PREFACE

TASK ONE, Contract MDA903-84-C-0325:

Assess the Role of Intelligence in Terror and in Countering Terror by Non-Terrorist Means.

Paul Johnson in a statement made at the Jonathan Institute's second conference on international terrorism underlined the need for governments to know their enemy, that is, to collect information about "movements, routes, identities, weapon stocks, methods, plans, codes, safe houses, and bases of all terrorists everywhere." He might also have added the need to understand the ideologies and sources of finance. These can be of great help in refining our intelligence. In the first case study presented here (Vol. I-A), "Armenian Terror as a Special Case of International Terror," by Albert Wohlstetter and Nancy Virts, for example, we have a view of a terrorist group fueled by Marxist ideology which openly asserts its connection with the Soviet Union and openly espouses territorial ambitions: the annexation of Eastern Turkey to Soviet Armenia. The Secret Army for the Liberation of Armenia (ASALA) is a surrogate for the Soviet Union which is unique in boldly announcing the association. Nancy Virts looks in an additional paper, "Dissent in Soviet Armenia," at Armenians inside Soviet Armenia (Vol. I-A).

The second case study on Latin American by David Blair (Vol.I-B) points to the fact that international terror, whether or not sponsored by the Soviet Union, will more likely be aimed at democratic governments which are much more vulnerable than dictatorships. It also considers the drug traffic which has been financing Colombian and Peruvian guerillas and which serves to disrupt the target countries and increases the dependency of peasants or farmers who grow the crops. Drug trafficking also is a major source of funds for Armenian terrorists in Europe. An investigation of illicit arms and drug trafficking in Bulgaria and Turkey, as we now know, helped Italian Intelligence to trace the origins of the most famous terrorist attack of this decade: the attempted assassination of the Pope.

In countering terror by non-terrorist means, the most successful methods so far have been the use of metal detectors and X-rays for passengers boarding planes in order to discourage hijacking. These of course have been in use for some years. But prevention is beginning to take on a renewed interest in the United States. In California, for example, several attempted assassinations and bombings by ASALA have been prevented by the use of telephone taps on the residences of known suspects, and the same has been true in England. The Armenian language is not well known in the West and had functioned earlier as a code, but with the movement becoming international and a younger generation entering the ranks, ASALA members have had to use English or other more familiar languages.

However, once the terrorist attack has occurred, it is important to try to reduce the political impact which the terrorists want and have learned to expect from a sympathetic Western press. It is unfortunately true that while many deplore the terrorist's use of violence in general and in the abstract, there is often one particular group which arouses their sympathy--whether for racial, ethnic or ideological reasons--and which they then believe to be "freedom fighters." But there is no such person as a "good" terrorist. As Paul Johnson has put it, much better than we can, "terrorism must be fought with the same absolutist rigour with which the civilized powers once fought piracy and the international slave trade. There were no `good' pirates. There were no `good' slavers. There can be no `good' gunmen."

It is also true that there is no "good" way to exact vengence once the terrorist act has occured. A reprisal that kills innocent bystanders is not only immoral; it is usually ineffective because public attention in the West will shift from the original terrorist act to the terror of the Western response. But there is hope for discriminate reprisal in the advent of more precise advanced weapons, which with better intelligence would permit the elimination of the terrorists or their headquarters with minimal damage to innocent civilians. The PLO, for example, had a habit of placing their artillery next to hospitals or department stores, or foreign embassies. The new weapons will make it possible from a distance to destroy the artillery with much reduced risk and unwanted collateral destruction.

## SUMMARY

The major conclusion of our work on Armenian terrorism is that any government response to terrorism if it is to be effective, must both physically stop terrorists from carrying out attacks and minimize the political impact they desire. To do this, governments must have a sophisticated and discriminate understanding of the objectives and methods used by terrorist groups. Intelligence information is important in achieving both these goals. In the paper, "Armenian Terror as a Special Case of International Terror," Wohlstetter and Virts point out that the response of Western governments to acts of terrorism committed by Armenians against Turks in their countries have often done more to further the terrorists' goals than the acts themselves because these governments are unaware of what these goals actually are and the extent to which they further Soviet interests. The fact that the Soviet government has begun recently to support Armenian grievances against Turkey, while at the same time persecuting Armenian nationalists within the Soviet Union (as discussed in "Dissent in Soviet Armenia") makes the intent of Soviet interest in the Armenian cause quite clear. Wohlstetter and Virts also stress the importance to democratic governments of responding discriminately to terrorism. Historically, terrorists have had great sucesss in focusing attention away from the brutal nature of their own attacks by provoking governments into responding indiscriminately to their attacks. While such a response may be understandable when terrorist attacks are savage, the deliberate or grossly careless destruction of civilians is never justified and for a democracy almost never prudent. Precise intelligence and discriminate weapons are needed to respond to terrorism precisely enough to be effective.

# Armenian Terror as a Special Case of International Terror

Albert Wohlstetter and Nancy Virts

While the use of terror to achieve political goals is not new, the importance of terrorism as a mode of armed conflict has increased dramatically in the past decade. During this period, all the major chronologies of terrorism show an upward trend in the number of incidents of international terrorism recorded. According to the chronology prepared by the Rand Corporation, in 1981-82 the number of incidents increased 100 percent over the previous two-year period.[1] Not only has the number of terrorist incidents increased, but the range of targets hit by terrorists has also expanded. Terrorists in recent years have attacked everything from politically symbolic targets, like embassies and diplomats, to innocent tourists in airports and train stations in all corners of the world.

I.

Several factors make the recent rise in terrorism particularly disturbing. One is the increasing technical sophistication and destructive power of the terrorists. In the October 1983 bombing of Marine headquarters in Beirut, terrorists used a bomb employing a "gas enhanced technique," which greatly increased its destructive power. According to the FBI Forensic Laboratory, the bomb, whose yield was estimated as equivalent to over 12,000 pounds of TNT, was the largest conventional bomb planted by terrorists within the knowledge of the explosives experts community. (The largest blockbusters designed by the British to be delivered by manned bombers release 5 or 10 tons of energy.) According to FBI reports, this gas boosting technique is relatively simple to employ.[2] If the gas-enhancement process should spread to other terrorist groups, the increase in their destructive power could have serious consequences.

Another factor which makes modern terrorist incidents even more disturbing is the success achieved by terrorists in exploiting the media of modern communication to achieve their political goals, to arouse sympathy for their cause and to discredit the governments they are attempting to destabilize. In fact, they have frequently focused the spotlight of public attention on the government's response to terrorism and away from the terrorists' acts themselves. In this way, a government response that effectively halts a terrorist activity may nonetheless serve the terrorist's purpose. Even research men with well-established and deserved credentials have had grudgingly to admit that terrorism has not only been successful but perhaps even essential for the terrorist's success. Two quotations illustrate this:

> Without endorsing terrorism one must wonder what success [the PLO] could have won had they operated within the established bounds of conventional warfare and polite diplomacy.[3]

In short, it may have been necessary for the PLO to use terror to achieve its ends.

Another author suggests that the Kurds failed because they <u>didn't</u> use terrorism.

> If the Kurdish leaders had resorted to terrorism on the scale exemplified by the spectacular Palestinian operations they would probably have won more international publicity and recognition--and even the chance to present their case to the United Nations.[4]

There is a third disturbing factor in the recent rise in terrorism: it is the increasingly obvious fact that some governments are using terrorists or assisting spontaneously-generated terrorism outside their borders not simply as a way of suppressing potential dissidence within their own domestic borders (as Stalin used "Jackson" to murder Trotsky, as

the Bulgarians recently silenced the dissident literary figure Markov whose broadcasts over Radio Free Europe had a very wide audience inside Bulgaria; and as Khadaffi continues to murder dissident Libyans abroad). They use terror as a way of making it extremely hard for other governments to govern and as a way of increasing their own influence and expanding their control.

If we are to respond effectively and appropriately to terrorism, we need a more discriminate and sophisticated understanding of both the objectives and the methods of terrorist groups today. It will further this purpose to analyze the wave of violence by some Armenian groups beginning in the mid-1970s. Armenian terror has some special and particularly interesting characteristics. It is also an excellent illustration of some of the main traits of international terror. A close analysis of Armenian terror should then be most useful.

## II.

The most striking thing about Armenian terror is its sudden appearance in 1975 as a nominal response to a disaster occuring 60 years earlier, during World War I.[5] It is at least odd that so many years after the alleged massacre of Armenians in the terminal phase of the decaying Ottoman Empire, a sudden eruption of terror should be directed indiscriminately at the diplomats representing the Turkish Republic and their wives, children, chauffeurs, and almost anyone else nearby. Nothing like it comes to mind. No Philippine terrorist, descended from a father brutalized by the Japanese invaders more recently in World War II, has set out to destroy the diplomats of modern Japan; and no Israeli or Jewish terrorist group has systematically targeted diplomats of Bonn even though

the Holocaust was much more recent and was quite unambiguous in its genocidal purpose.[6]

The second most striking characteristic of the eruption of Armenian terror was not only its sudden appearance but its extraordinary efficiency, organization and scope. That an organization capable of operating in the eastern as well as the western hemisphere and in the southern as well as northern hemisphere in quick succession and sometimes almost simultaneously should spring into being full-blown is remarkable to say the least. It was also able to carry on operations with extraordinary secrecy--in New York, Los Angeles, Santa Barbara, Madrid, Sydney, Paris, etc. It took several years and the accidental explosion of a bomb in a Swiss hotel before any member of the Armenian Secret Army for the Liberation of Armenia (ASALA) was clearly identified. The leadership remained obscure even longer. The headquarters, while generally presumed to be in Beirut, was not known, and even the magazine Armenia, the house organ of ASALA listed no address and was supplied for distribution at the hotels of Beirut without any formal supplier. In the view of some Western government officials responsible for countering terrorism, ASALA has been the most efficient of all current terrorist groups. In brief, however sudden its start, the recent wave of Armenian terror had nothing amateurish about it. It had all the earmarks of highly professional advice and support.

A third notable characteristic was its ability to survive and come back even after sharp reverses. The Israeli invasion of Lebanon in 1982 did find and destroy the ASALA headquarters. This, however, did not prevent ASALA from responding to hopeful Turkish statements that "the backbone of the Armenian terrorists has been broken. They will never

reorganize."[7] They have not only reorganized, but launched one of their most destructive raids, this time inside Turkey itself at the Esenboga Airport serving Ankara. The raid killed nine people, more or less at random, and wounded many more. ASALA then warned Canada and other countries where Armenian terrorists were imprisoned that they would be subject to terrorist reprisal. Less than three weeks later the Justice Commandos of the Armenian Genocide (JCAG) fulfilled the threat. They assassinated the Turkish military attache in Ottawa. (The curious symbiosis between ASALA and JCAG combines both cooperation and competition. It will merit further comment.)

Fourth, the Armenian terrorists have not only assassinated some 41 Turkish diplomats and members of their families at widely separated parts of the world. They have directed their efforts at bombing the offices of the Turkish airlines in several cities. And they have also threatened the airlines and other agencies of foreign governments other than Turkey. The Armenian terrorists have done this in order to coerce them into going easy on Armenians imprisoned for the murder of Turks or for other crimes committed on their territory. Moreover, they have been quite successful in coercing some of these governments.

Armenian terrorists have carried out their attacks under several names. The two major organizations are ASALA and JCAG. Their precise relationship is not easily defined. It is usual to identify ASALA as Marxist and JCAG, which is associated in general with the century old Dashnak, as "conservative." However, in the terrorist's world of shadows and mirrors, competition for the same goal frequently turns out to be a form of cooperation and indeed a nominal separation may be a substantial

identity. ASALA's house organ is full of sectarian attacks on JCAG and Dashnak as bourgeois and quite incapable of understanding dialectical materialism. On the other hand, Armenia also contains articles complaining that JCAG is imitating ASALA's methods exactly--it is a copycat, infringing on ASALA's patents, so to speak.[8]

And, sometimes, when ASALA is listing terrorist operations it has carried out successfully, it will include some that were performed under the name of the Justice Commandos. What this should suggest to the reader is that the distinction between ASALA and JCAG is not a very important one so far as the operational implications of their work is concerned. Nor is it worth spending a great deal of time on, as journalists and even some foreign ministries and intelligence agencies seem prone to do in trying to determine precisely what are the relations between these terrorist organizations and the Soviet Union. The most important observation in that connection is that their goals and actions, whether by serendipity or Soviet design, serve the aims of the Soviet Union.

The fifth and perhaps most striking aspect of the wave of Armenian terror begining in 1975 is that it may be the only major terrorist movement which explicitly aims at detaching a piece of territory from an existing state and attaching it to the Soviet Union--and a most strategic piece of real estate at that. Soviet, as well as Czarist Russian designs on Turkey have been long standing. The most familiar to the general public have concerned the Turkish Straits, the Bosphorus and the Dardanelles. Napoleon, in fact, said he was willing, "to abandon mastery over half the world rather than yield to Russia those narrow straits."[9] The Straits, of course, remain vital.

However, the Soviets, like the Czarist Russians have also had major aspirations in Eastern Turkey which is strategically closely connected with and even critical for the defense of the Persian Gulf.[10] Moreover, the strategic importance of the six eastern provinces of Turkey claimed by ASALA and JCAG has grown enormously since the Soviets secured the agreement of the Axis powers about Soviet aspirations in that direction. The upper Persian Gulf contains 90 percent of all the oil in the Gulf, and oil is no longer important exclusively as a wartime material as it was in the 1940s for all but the United States. Gulf oil is now vital for the peacetime economies of western Europe and Japan. Anyone who was unclear about the great increase in dependency on this area of the world during the 1960s could have been under no illusions by 1975 when ASALA got underway. The oil crisis in 1973 made it crystal clear. ASALA at any rate is explicit that Turkey is "the most important base of the mideast."[11]

It is clear from ASALA documents that its goals are hardly describable as simple nationalism or independence. When it talks of "liberation" it means liberation from Turkey. It does not exclude, in fact it entails, subordination to the Soviet Union. For example, an issue of Armenia explains: "Our forces never strike against S.S.R. of Armenia, which is already liberated." In short, "independence" or "liberty" are understood as quite compatible with being part of the Soviet Union. In fact, the article goes on to say, "we are fighting for one united and socialist Armenia, so there must be a unity with the S.S.R. of Armenia," which should be clear enough almost to persuade our media who are always looking for a "smoking gun."[12] Of course it's rather hard lines for an Armenian

unprovoked murder of innocents 60--or now nearly 70--years earlier is that even if the Armenian terrorist's version of the history of 1915 were correct and complete, it could under no circumstances justify the killing of Foreign Service officers, their wives and children, none of whom had any political or moral responsibility in 1915, and few if any of whom were even born at that date. It should also be plainly said that any deliberate or negligent destruction of innocents by Ottoman Turks or Kurds or present-day Republican Turks could not and cannot be justified as a response to similar acts of terrorism aimed at Turks. As justification for the assassination of innocents, distant or even recent history is simply irrelevant.

There is a long tradition in the West which stresses the need to discriminate combatants from innocents even in time of war and to impose restraints on the defense of values to ensure that the process of defense does not destroy the values being defended. This long tradition is by no means the only one in the West. Christianity, for example, has had a tradition of holy war or crusades as well as that of just war, but it is the just war tradition which has been the mainstream for a long time.[16]

If we understand the writings of Professor Halil Inalcik,[17] the excellent historian of the Ottoman Empire who is the University Professor of History at the University of Chicago, the Ottomans, at the height of their power, also had a tradition of restraint on the use of such power. For example, they held the tenets of the Shria, specifically against the killing of women and children and even spared combatants if they came over to the Ottoman side. The massacres of the 19th and early 20th century

involved bloody excesses by Christian nationalists as well as by the Ottoman rulers.

There is no question that traditions of restraint have frequently been honored in the breach. Nonetheless they are of lasting value.

Moreover, they have relevance of a pragmatic or prudential sort for understanding as well as dealing with the phenomenon of terrorism. Terrorists paradoxically breach these rules flagrantly and yet depend on them in an essential way for arousing the sympathy of domestic and foreign publics and provoking horror at the use by governments of terror in response to their terror.

III.

While no history can justify the murder of innocents, one very revealing piece of history has to do with Armenian terror in the late 19th century. It illuminates the goals of the Armenian terrorists today and also illustrates in a fundamental way the persistent characteristics of terrorism and the enduring effects of answering terrorist acts with terrorist means.

Though there is some controversy surrounding the events of this period, the evidence is clear that some Armenian revolutionaries were engaging in terrorist acts deliberately to provoke the Turks into responding with counter-terror. The hope of these terrorists was that the publicity surrounding the Turkish response would cause the Western powers (and in particular, Czarist Russia as the protector of Eastern Christianity) to intervene and establish an independent Armenian state. According to one American missionary, Cyrus Hamlin, an Armenian revolutionary told him the strategy of one group, the Hunchaks was to:

> ...watch their opportunity to kill Turks and Kurds, set fire to their villages, and then make their escape into mountains. The enraged Moslems will then rise and fall upon defenseless Armenians and slaughter them with such barbarities that Russia will enter, in the name of humanity and Christian civilization and take possession.[18]

Correspondence between American officials in Turkey and the Secretary of State contain a number of reports of American missionaries in fear of being assassinated by revolutionaries "who hope thus to bring odium on the Turks"[19] and of the activities of Armenian revolutionaries whose real purpose was reported to be "to lead the ignorant throng into the commission of such acts as will bring about a massacre of Christians..."[20] These were evidently more than just scattered incidents. In 1895, the American minister in Turkey expressed the following opinion in a report to the Secretary of State:

> Permanent security and order in the Ottoman Empire are made impossible by the rancor of race and religious hatred; now more bitter than ever, but above all by the schemes of the Armenian anarchists, who will never rest while certain of the sympathy of the Christian world.[21]

These accounts and those appearing in the British Blue Books add support to the conclusion of William Langer, a noted Harvard diplomatic historian, that "Europeans in Turkey were agreed that the immediate aim of the [Armenian] agitators was to incite disorders, bring about inhuman reprisals, and so provoke the intervention of the powers."[22]

However, to accept the evidence that some Armenian revolutionaries were deliberately provoking the Turks to take revenge on Armenians does not imply that all responses of the Ottoman government to Armenian terrorist activity or the responses they tolerated by the Kurds were either justified or prudent. The same correspondence of American

officials in Turkey from 1895-96, which reports and condemns the activities of Armenian terrorists, also reports some bloody reprisals by Ottoman officials and Kurds.[23] Christian missionary reports of Muslims responding to terror by Armenians cannot all be attributed to the sympathy of Christian missionaries with Armenian Christianity. If the reports of the various American consuls are at all representative, many American missionaries themselves were in fear of their lives at the hands of Armenian revolutionaries. The following response of the Ottoman government to the American Secretary of State is not any more justified than the present Armenian claims that their current campaign of terror can be justified by Turkish attacks on Armenians from 1880 to 1915: "If the repression is severe this is because the insubordination is organized in a cruel manner."[24] In either case, the issue involved does not turn on the truth or falsity of either Turkish claims that Armenians deliberately attempted to provoke Turkish reprisals or Armenian claims that Turks deliberately massacred Armenians. There can be no justification for deliberate attacks on civilians.

In addition, by reacting to Armenian terror in ways that were perceived by the Western powers as counter-terror, the Ottoman officials reacted precisely in the way the revolutionaries desired. Although the adverse Western publicity surrounding Turkish actions against Armenian revolutionaries did not result in the establishment of an independent state, it did have a strong effect on Turkey's relationship with the West, which is still being felt today.

IV.

From 1975 to November of 1979, ASALA operations were limited to assassinations of Turkish diplomats and bombings which seemed to have been carried out in a way to destroy facilities rather than killing civilians. Since that time ASALA began operations against Western targets. Attacks have been launched against targets in Western countries whose policies or actions are unacceptable to ASALA. In particular, ASALA has targeted any country that jails or attempts to prosecute its members. In 1980, after two Armenian terrorists were jailed in Geneva, ASALA began a bombing campaign against Swiss interests under the name of the October 3rd Movement. The campaigns lasted until the two ASALA members finally received 18 months suspended sentences and were prohibited from entering Switzerland for fifteen years. During the period from August 10, 1980 through December 12, 1981, the June 1982 issue of ASALA's publication, Armenia, credited the October 3rd Movement with 21 bombings, including bombings of Swiss Air offices in Beirut, London, Rome, and Milan. After another ASALA member was apprehended in the act of assassinating a Turkish diplomat in Geneva in June of 1981, ASALA launched a similar campaign under the name of the June 9th Organization. Between the time of the arrest and trial, this organization claimed responsibility for 15 bombings in places as diverse as Los Angeles, Geneva, Tehran, and Madrid. Institutions in France have also come under ASALA attacks because of the treatment of ASALA members imprisoned as a result of several previous incidents. Communiques published in the June 1982 issue of Armenia make it clear that these attacks were not simply revenge, but part of ASALA's strategy to force Western countries to legitimize ASALA's terrorist activities by

recognizing its members as political prisoners. After France granted four ASALA members political prisoner status, Armenia gloated:

> The victory had been won. As political prisoners the four would go before a French court as the defenders of the rights of the Armenian people. The tables would be turned; the four would not be the object of accusation for the French Justice. It would be the Turkish government that would take the seat of the accused.[25]

While ASALA continues to engage in these types of operations, currently there are indications that future operations may involve larger numbers of civilian casualties. On August 7, 1982 a three-man suicide squad went on a rampage at the Ankara airport that left nine dead and a large number wounded. On July 15, 1983, a bomb attack at the Turkish airlines counter in Orly Airport in Paris left eight dead and 55 wounded. According to a number of reports, ASALA is now divided into an American-European wing, which wants to restrict its attacks to Turkish targets, and a Middle Eastern wing, which favors indiscriminate terrorism.[26]

Both the statements made by ASALA and the type of operations in which they have engaged indicate that its primary goal is not an independent Armenia, but that eastern Turkey be removed from Western influence. Another indication of the importance ASALA places on the separation of eastern Turkey from the West is its willingness to cooperate with radical Kurdish groups, traditional enemies of the Armenian people, who share the same goals.[27]

While freeing Turkish Armenia from Turkey and attaching it to the Soviet Union is one obvious way of removing Western influence from Turkey, a less-obvious way of limiting Western influence in this area would be to disrupt Turkey's relationship with its NATO allies. ASALA's operations seem designed to achieve this result. Almost all attacks have taken place

outside Turkey in Western countries, and ASALA seems to have gone to great lengths to coerce those countries who have apprehended its members into treating them leniently and/or as political prisoners. Unfortunately, it has been successful too often. When Turkey perceives fellow NATO countries reacting with indifference and in some cases, even sympathy towards terrorists accused of attacking Turkish interests, the relationship between Turkey and these countries is inevitably strained. It is no coincidence that a news clip from the Herald Tribune describing the deterioration of Turkish-French relations after the June 1981 slaying of two Turkish diplomats in Paris was xeroxed in the Fall 1981 issue of Armenia.[28]

The point of the preceding discussion is not that Armenian terrorists should be dealt with severely because they oppose Western interests. Terrorists should be dealt with severely because they attack innocent civilians, not because of their cause. However, unless their aims are well understood, it is impossible to respond in ways that minimize the political impact the terrorist desires. Theoretically at least, it is always possible to frustrate a terrorist by not responding as he would like. An appropriate response to terror is one that does more than stop the terrorist. It also must deny him the political impact he desires. In the case of Armenian terrorism, because many Western countries have discounted the importance of ASALA's Marxist-oriented goals, they have responded in ways that further the terrorist's goals and have not recognized the potential impact of their activities.

France's experience with Armenian terrorists is an illustration of this point. It was widely reported that after ASALA seized the Turkish

consulate in Paris in September 1981, a truce was arranged between ASALA and the Mitterrand government. ASALA would not hit targets on French soil, and the French would allow ASALA agents to cross its terrority. Although the French government denied these reports, captured Armenian terrorists until very recently have been treated leniently in France with light sentences and political prisoner status. The result of this policy has been 33 attacks by Armenian terrorists on French soil since 1981, more than any other country, culminating with the bomb attack at Orly Airport. After the Orly attack, France appears to have reversed this approach.[29] Given ASALA's goals, this series of events should not be surprising. Any attack ASALA makes on a Turkish target on the soil of a NATO country, which Turkey perceives to be in sympathy with the terrorists, is much more effective in disrupting the NATO alliance than one made in a country actively pursuing and prosecuting terrorists.

Given the compatibility of ASALA's goals and the likely results of their actions with those of the Soviet Union, it is inevitable that questions about the exact extent of Soviet support for the movement should come up. While this is certainly an interesting question, it is important to keep in mind that the source of danger from Armenian terrorist activities is the consistency of their probable results with Soviet interests, not the extent to which Moscow is pulling the strings. The operations of the JCAG, who seemed to be motivated entirely from nationalism, have the same potential to further Moscow's interest by disrupting Turkey's relationship with the West as those of ASALA--a point which ASALA appears to recognize since it included operations of the JCAG in a list of revolutionary operations.[30] No one but the USSR will gain if Turkey's

relationship with its NATO allies is disrupted and/or its eastern half is annexed to the Soviet Union.

Unfortunately this point seems to be lost on the West in its quest to find undeniable proof of Soviet involvement in any terrorist movement before even considering the possibility that it promotes Soviet influence. Typical of this type of reasoning is a recent article in the Wall Street Journal, (a journal whose editorial page has generally exhibited a clear and sophisticated understanding of the strategic importance of Turkey and the inexcusable conduct of Armenian terrorists). The author of this particular article outlines the strong circumstantial case for Soviet involvement with ASALA. He notes ASALA's ties with the PLO and other Marxist-Leninist groups attacking the Turkish government, like the Kurdish Workers Party and its stated goal of annexing Armenia to the Soviet Union. He also mentions Soviet interests in destabilizing Turkey, the only strong pro-Western country on its border. However, the conclusion of the article is, while ASALA "remains a prime suspect for the charge of KGB manipulation of international,...in this area.... You will never find the smoking gun." There are two things wrong with this conclusion. One is its implication that the major issue at stake is to find the "smoking gun."[31] As was pointed out above, the major danger comes from the compatibility between Soviet interests and the probable results of Armenian terrorism. The other is the amount of evidence it implies is needed to prove the existence of a "smoking gun" to the West when Soviet terrorist activities are concerned.

This is not a new problem. In general, the West goes to great lengths to reassure the Soviet Union that it has no designs on Soviet

territory while ignoring evidence of Soviet involvement in destabilizing pro-Western regimes. A recent article in the Los Angeles Times castigated the Reagan administration for reawakening Russian "deep-seated" fears of the West.[32] However, the United States generally bends over backwards to put Soviet fears to rest. The following account by Joseph Sobran illustrates the extent to which this has gone on in the past.

> In 1963 the President of the United States was murdered by a Communist. From that day on, the American opinion establishment has shrunk from describing the event as I have just done: "Lone gunman" is the preferred term, encouraging us as it does to interpret Lee Harvey Oswald's act as random, unrelated either to his ideology or to any possible ties he might have had with the USSR and Cuba.
>
> The Soviets, even if they had nothing to do with Oswald's decision to kill Kennedy, must have been astonished. Here was a golden opportunity for anti-Communist propaganda, not to mention the dread "new era of McCarthyism" the Left is forever predicting. Yet nothing of the kind happened. Liberalism played down Oswald's Communism with unanimous resolution. Imagine the extrapolations that would have been made had Oswald been a card-carrying Republican. After all, John Kennedy himself had warned that anti-Communism (as embodied in the John Birch Society) might be a greater danger to this nation than Communism. When the Soviets killed the head of the Birch Society last year, liberals were quick to make the least of it.[33]

Even without the smoking gun, the arguments against Soviet involvement with Armenian terrorists are substantially less-convincing than the evidence that the Soviets are involved. According to the Wall Street Journal article cited above, claims that the fact that ASALA has openly asked the Soviets for assistance is proof that the Soviets are not involved since they prefer indirect contacts. One can imagine the uproar if some right-wing terrorist group asked the CIA for assistance. However, when the Soviets are involved, the press seems to require a direct statement from the KGB, which would still not be believed since it would be too direct.

Portugal, Australia, Austria, Lebanon, and Iran. They have rarely struck within Turkey itself. When terrorism is directed at the citizens of one country outside its own border, any appropriate response involves the cooperation of all countries involved. Such cooperation is difficult to achieve when those countries involved have different perceptions of what terrorism is. Unfortunately so many types of action have been labeled terrorism at one time or another that the term has lost any objective meaning in the minds of many. It is necessary to discuss the nature of terrorism at a fundamental level to make any attempt at a solution to this problem.

The most basic characteristic of terrorism is that it is aimed almost exclusively at civilians, i.e., those who would be identified as non-combatants in any type of conventional war. Armenian terrorists have never hit a military target. Instead they attack Turkish diplomats and embassies, harass college professors who disagree with them, and set bombs in airports among other things. According to one Armenian publication:

> The victim killed by the bullets of an Armenian has no meaning as an individual for the Armenians. He is the official representative of the Turkish Government and consequently, through him, the government that sponsors him is the one being attacked.[39]

This statement exhibits a blatant disregard for the rights of the individual, which is typical of the terrorist mind set. More than 90 percent of the incidents recorded in the Rand chronology of international terrorism were directed at civilians.[40]

Terrorist groups direct their attacks on civilians in a number of different ways. If appropriate responses to terrorism are to be developed, each sort must be understood. Direct attack on civilians is

the crudest, most obvious terrorist tactic. Direct attacks take two forms: attacks against selected, usually politically symbolic, targets and indiscriminate attacks usually causing a large number of deaths or casualties. In the Armenian case, most attacks have been selective, primarily aimed at representatives of the Turkish government. However, there have been two airport bombings by Armenian terrorists which left a large number of civilians with no connection to the Turkish government dead. It is clear that some groups deliberately choose targets to maximize civilian casualties. According to a document captured by Israel during the invasion of Lebanon, the PLO consciously used this strategy against Israeli targets.

The document contains the following guidelines for PLO terrorist activities inside Israel:

> The blow must be directed at the enemy's weak point. His greatest weakness is his small population, any installation which is designated as a target must meet the criterion of importance to the civilian population. Blows directed at secondary or isolated targets, whose impact passes unnoticed, are of no use. Attacks can be made to multiply their impact. For instance, attacking a tourist installation during the height of the tourist season is much more useful than dealing the same blow at another time... Density of population in the streets and market places of cities tends to increase on special occasions like holidays and vacations. One ought to bear this in mind in order to better select the place of action and improve the impact of the blow.[41]

As reprehensible as these attacks are, the more subtle and therefore more dangerous strategy terrorists use against civilians is the use of terror to provoke government counter-terror against an innocent civilian population. The aim of this is to stir up resentment against the existing government and/or to gain international sympathy for the terrorists'

cause. A number of terrorist groups have used this strategy with favorable results.

When a government responds to terrorist attacks with its own terror, it is almost always playing into the terrorist's hands. Such a response may be understandable when terrorist attacks are savage, especially when the terrorists hide themselves among civilians. Nonetheless, the deliberate or grossly careless destruction of bystanders is never justified and for a democracy almost never prudent. Even if the terrorists are stopped temporarily by government terror, the eventual impact of a government strategy that appears to target innocent civilians almost always favors the terrorists. For example, in Algeria in the 1950s, the Algerian terrorist organization, the FLN, succeeded in provoking the French into savage reprisals against non-Europeans that lost them the support of the Muslim population of Algeria and the rest of the world. What began as a terrorist campaign became a "competition in terror," which eventually ended French control of Algeria.[42]

This historical incident is particularly relevant to the question of how the Turkish government can most effectively respond to the current Armenian terrorist movement. A government response to terrorists, which itself is seen as terroristic, is dangerous because it tends to blur the legitimacy of government acts. Consider the following comment by a widely respected authority on terrorism concerning a recent Turkish statement on Armenian terrorists:

> A number of states have also directly adopted terrorist tactics themselves, sending teams of assassins to silence foreign foes or domestic opponents living abroad,.... Libya openly avowed its campaign directed against Libyan 'traitors living abroad' and was accused of sending teams to kill American diplomats in Europe. The Spanish have been accused

> of operating a `parallel police force´ in France dedicated to killing leaders of the Basque separatist movement...,Outraged by continuing Armenia terrorist attacks against Turkish diplomats, Turkish officials have recently warned that there would be no sanctuary for the Armenian gunmen, implying direct extraterritorial action. (stress added) [43]

The statement evidently refers to statements and reports made after the attack on the Esenboga Airport in Ankara on August 7 which was followed by the assassination of a Turkish military attaché in Canada less than three weeks later. The strongest of these was a report appearing in Gunaydin that "striking teams" had been "ordered into action" against Armenian terrorists.[44] Around the same time, General Kenan Evren stated:

> The Turkish Government is determined to take all the necessary measures to put an end to these murders which have assumed the nature of a war against the Turkish Republic....In this struggle, it has become essential for our state to use its power in the necessary places at the necessary times. [45]

It is, of course, quite unfair to put an entirely verbal response suggesting that the Turks might retaliate against terrorists who have killed Turkish diplomats and destroyed Turkish targets all over the world in the same category as terror carried out by the Libyan government against former citizens who have done nothing but disagree with the current government. However, this is precisely the point. The Western press and sober Western researchers apply much stricter standards to Israelis responding to attacks by the PFLP, or Americans using artillery to respond to Shiite terrorist attacks or to Turks responding finally after long restraint to Armenian terror than they do to the terrorists themselves.

The following statement from a Los Angeles Times editorial further illustrates this point. It appeared after one, and possibly two Palestinian hijackers of an Israeli bus and its passengers in April 1984

were captured and killed. These terrorists' Gaza homes were also destroyed:

> As an American Jew, I am emotionally tortured by the reaction--rather, the non-reaction--to what happened after our Palestinian teenagers hijacked an Israeli bus two weeks ago. I don't know which to condemn more vigorously: Israeli brutality or American Jewish complicity by silence.[46]

In this rush to condemn brutality by the Israeli government, there is no mention of the many Palestinian terrorist attacks which have occurred during this same period: the February 28 Jerusalem clothing store grenade explosion which injured 21 people; the March 7 explosion on an Israeli bus which killed three and wounded nine; and another Jerusalem bus attack which wounded 48 on April 7.

Above all it is important for governments to learn to respond to terror with precise and discriminate non-terroristic means. The preceding discussion argues that governments should not respond to terror with terror both because such a response is almost always ineffective and because it is morally wrong. The ability of terrorist groups to use government action against them is a fact of history. However, the premise that terrorism should be condemned, not because of the causes for which it is committed, but because of the nature of the terrorist act itself (i.e., the fact that it is almost always directed at innocent civilians) requires further comment.

If we were to justify terrorism because it serves a supposedly legitimate cause, the implications are disturbing. For one thing, international action to combat terrorism would be hard to come by: nations differ radically in their assessments of what constitutes a legitimate end. (Even NATO allies differ as to the legitimacy of various third world

liberation movements.) The oft-repeated phrase that "one man's terrorist is another's freedom fighter" would be the only possible conclusion to any discussion of terrorism. The deliberations of the 1973 UN Ad Hoc committee on terrorism are a graphic illustration of this problem. The committee not only failed to come up with any concrete recommendations to fight terrorism, but they could not even agree on a definition of the terms.[47] As ASALA's attempt to coerce Western governments into recognizing captive members as political prisoners clearly indicates, terrorists themselves prefer this point of view. If it is adopted, they can turn any trial into a political extravaganza rather than a judicial proceeding, and gain favorable press reports of their activities from politically sympathetic journalists.

To take the position that terrorism cannot be justified because it may be motivated by some higher end does not whitewash all Western declaratory or operational military strategies because they are nominally directed at establishing or maintaining peace. To take one example, the most compelling argument against the nuclear doctrine that has been dominant in the West for the last 20 years has to do with the fact that it would deliberately target nuclear weapons against innocent bystanders, and in fact goes to the limit of such a threat by claiming to assure the destruction of civil society on both sides. Such a doctrine is not simply wrong; it is incredible and hence undermines the deterrent it is supposed to assure.

Nor is it true that it is essential to target civilians in guerilla war anymore than in a conventional war. For a democracy in particular, terrorism is often counterproductive regardless of the sort of conflict in

which it is used. It is not only deliberate terror that may be counter-productive, but also the unintended destruction of bystanders through careless or excessively risky strategies. Paul Johnson has pointed out that the defense force of the Jewish Defense Agency, the Haganah, which respected the rights of noncombatants and took reasonable care to discriminate the military targets they were attacking from noncombatants did more for the establishment of Israel than the Irgun. There is naturally controversy about Irgun, but at the least it can be said to have adopted tactics which risked the lives of bystanders much more extensively than did Haganah. Irgun blew up Jerusalem's main hotel, the King David in 1946. In the process it not only destroyed the part of it that contained British military, who might have been identified as enemy combatants, and secret records which Irgun believed were an essential weapon against them. It killed, besides 28 British and 41 Arabs, 17 Jews and five others. Apparently Irgun intended to give warning so that the hotel could be evacuated and only the secret records destroyed. But a warning much in advance risked losing the military objective and a short warning risked the destruction of innocent bystanders. The warning reached the phone operator two minutes before the bomb went off.

In reaction to Irgun, British troops evacuating Palestine conspired to turn over supplies to the Arabs. According to Johnson, Irgun's activities not only inspired the PLO to use terror but also contributed to the Arab exodus from Palestine.[48]

Similarly there are many other such intermediate cases of Western action which were even more clearly not deliberately terrorist, but which used tactics involving excessive risks of the destruction of innocents,

and even unintended destruction in the course of a legitimate attack on terrorists can backfire. With the help of the media, terrorists can use the unintended destruction to shift attention from their terror to the attempt to counter it, and to bring condemnation on the counter. General Sharon plainly was not a terrorist in the sense of either the PLO and PFLP or in the sense that applies correctly to the Christian Phalangists that slaughtered women and children in Chatila. But an Israeli investigating commission did condemn him for not exercising adequate care to avoid that slaughter. Moreover, this is an acute problem for all democracies in attempting to counter terror, and to maintain domestic as well as international support. The American artillery barrages that attempted to answer Shiite terrorists provided splendid photographs for the television cameras of destroyed villages.

In the loose parlance of the media, covert operations by Western powers are automatically not only suspect, but sometimes assumed to be necessarily "terrorist." In fact, a precisely-informed covert operation directed carefully at the terrorists themselves may be much more discriminate than an artillery barrage aimed at an area where the terrorists have located some of their own means of destruction and deliberately embedded them in the civilian population, perhaps near a hospital or a school or a neutral embassy. Moreover, the fact that the operation is covert does not make it inappropriate for a democracy in a world of danger, when nearly all nations operate covertly and there is no enforceable international law preventing the hostile operations of terrorists. Democracies need discriminate weapons and methods and precise intelligence in guerilla war, conventional war and nuclear war.

The experience of US authorities in countering Armenian terrorists indicates terror can be successfully combatted using non-terrorist means. Using extensive surveillance procedures, Los Angeles police thwarted a bomb attack planned by ASALA on the Air Canada terminal in 1982. Also in 1982, five Armenians were arrested on charges of conspiring to blow up the office of the honorary Turkish Consul in Philadelphia. One of these five was charged with transporting firearms found in a suitcase at Boston's Logan Airport. At least one terrorist responsible for the 1982 assassination of Kemal Arikan, the Los Angeles Turkish Consul General, was successfully apprehended and prosecuted, and was sentenced to life in prison in 1984. Since 1982 there has been no Armenian terrorist activity reported in the United States.

This discussion is obviously relevant for the Turkish Republic in its necessary work of trying to get the cooperation of its allies and neutral powers in responding to Armenian terrorists. As we have said, the Turks have exhibited admirable restraint in avoiding terrorist acts of their own against Armenians. But public discussion remains bogged down in reference to what happened in 1915. The notion that selective violence against Turkish civilians can be justified because of something that happened in 1915, is unfortunately well-established in some Armenian circles. For example, the publisher of a weekly Armenian newspaper in Los Angeles was quoted in the Los Angeles Times after the Orly bombing which killed and injured a large number of non-Turks.

> I think most Armenians will condemn the bombing at the airport. That's too much. That's innocent people being killed.

The implication is that Turkish diplomats are not "innocent people" and are acceptable targets. The Economist reported that at a meeting held in

Lausanne in 1983 to attempt to establish a worldwide Armenian congress, while the Orly bomb attack was condemned, there also was talk about the merits of "selective terrorism." The Economist conclusion was:

> The question...is whether the new political wing of the Armenian Movement will be able to control the terrorists, or will be controlled by them. The lukewarm condemnations of terrorism heard in Lausanne this week are not an encouraging sign.[49]

When Western countries treat Armenian terrorists as political prisoners, they imply the same thing--that violence against today's Turks can be justified by an event which occurred over sixty years ago. This was made particularly obvious in the 1984 French trial of four Armenians accused of occupying the Turkish consulate in Paris, killing a Turkish security officer and the Consul General, and holding 56 people hostage for 16 hours. During the trial the judge allowed defense attorneys to read letters from an Armenian singer and an Armenian film producer about the 1915 Armenian massacres. If the judgment is that terrorism, because it attacks innocent civilians, is never justified regardless of the cause, it is easily seen that discussions of 1915 are not relevant to responding to current Armenian terrorists. And, the statement of the defense attorney for four Armenian terrorists to a Paris court that:

> Those who ask you to condemn terrorism are in fact asking you to say that the genocide never existed.[50]

must be recognized for the moral absurdity that it is. Terrorism is morally unacceptable regardless of the cause for which it is committed, because it is an assault on basic human rights.

It is possible to make a number of recommendations concerning appropriate responses to terrorism based on the previous discussion. If a

response to terrorism is effective, it must not only physically stop terrorist activity, but it also must frustrate the terrorists' political goals. In the cases of the Armenian terrorist movement, all the countries involved must realize the potential impact of the Armenian campaign against Turkey. What's at stake has already gone beyond the issue of what happened in 1915. If left unchecked, the campaign of terror against Turkey has a potential to disrupt Turkey's relationship with its NATO allies and eventually lead to the removal of the eastern half of Turkey from Western influence. Any effective response must be formulated to frustrate this goal. This criterion rules out both a Turkish response, which could be perceived as terror against Armenians and a Western response that appears to legitimize Armenian violence against Turks. Responses of this type can only be counted on to further the interests of both ASALA and the Soviet Union by disrupting the NATO Alliance and destabilizing Turkey. In order for effective responses to terrorism to become the norm, it must be widely accepted that terrorism be condemned because it is an attack on civilians, not because of the cause for which it is committed. In the absence of agreement on this issue, terrorists will continue to be able to use the news media to gain support for their particular issues.

## Notes

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# Dissent in Soviet Armenia

Nancy Virts

While Armenians in the diaspora continue to loudly protest alleged violations of the rights of Armenians living in Turkey and of Armenians on trial in the West for acts of terrorism, they largely ignore the fate of Armenians living in the Socialist Soviet Republic of Armenia now in prison both for their participation in the human rights movement and for advocating an independent Armenia. It is more than a little ironic that Western Armenians who cannot say enough in behalf of those striving to create an independent Armenia out of land now a part of Turkey, even when the result is violent, are virtually silent when Armenians in the Soviet Union are imprisoned because they advocate independence for that part of historic Armenia now under Soviet domination. This ironic situation has become even more ironic recently because the Soviets have begun to openly support the Armenian claims against Turkey, at the same time they imprison Armenian nationalists in the Soviet Union.

Dissent in Soviet Armenia

Armenians are in prison in the Soviet Union both for their participation in the human rights movement and for advocating independence for Soviet Armenia. In April of 1977, a Helsinki Accords Monitoring Group was established in Soviet Armenia. Later that year the group released two statements calling for the preservation of Armenian as the official language of the Republic, the release of all political prisoners, and specifically protesting the imprisonment of Armenian dissidents and the unwarranted psychiatric treatment of political prisoners. Soviet authori-

ties arrested the signers of these statements, including the three leaders of the group, almost immediately.[1] They received prison sentences ranging from one to five years followed by internal exile. This was not an isolated act of persecution. In 1983 a Soviet Armenian literary scholar was sentenced to 10 years in prison and internal exile for compiling an underground journal on human rights and giving a graveside speech at the burial of a dissident Russian poet.[2]

Not only are Soviet Armenians in prison for protesting human rights violations, but also for advocating the creation of an independent Armenian state. In 1963, Soviet Armenians formed the "Union of Young Armenians" which became the "National Unity Party" (NUP) in 1966. The aim of this organization was to establish an independent Armenia composed of Soviet Armenia and Armenian lands occupied by Turkey. Leaders of the NUP called for a UN-supervised national referendum to allow Armenians to choose between the current communist regime and an independent homeland. Their claim was based on Article 72 of the Soviet constitution which states "each Union Republic of the USSR has the right to freely secede from the USSR." Between 1965 and 1974 over 80 Armenians were arrested, tried and imprisoned. Most were charged with "anti-Soviet agitation and propaganda." In addition to signers of the public appeals of the Helsinki monitoring group who were arrested between 1977 and 1979, a number of Armenian nationalists were arrested, tried and sentenced between 1980 and 1981. According to some estimates a total of as many as 200 Armenian Nationalists, including all the leaders and members of the NUP, have been arrested by Soviet authorities. Nationalists have received harsh sentences of up to 12 years in prison and internal exile for such crimes

as writing nationalistic poetry and essays on national minorities.[3]

The only incident of violence by an Armenian group in the Soviet Union ocurred on January 8, 1977 when a bomb planted in a Moscow subway train exploded killing up to thirty people. Soviet officials eventually arrested five Armenians in connection with the bombing. Two of the five were apprehended while attempting to plant another bomb at the Kursk Railway Terminal in Moscow. One of those arrested was Stephan Zatikian, a known member of the NUP. He and two associates were found guilty of the bombing and were executed in January 1979.[4]

Response of the Armenian Commmunity Outside of the Soviet Union

Soviet Armenian dissidents get little open support from Armenians in the West. While both members of Armenian terrorist groups and members of the traditional Armenian community are aware of the situation in the Soviet Union, as a group neither has spoken up strongly against it. ASALA's apparent comment on the execution of Zatikian and his associates, "we protest the execution of Armenian patriots in the USSR who don't oppose the Soviet State," leaves their position unclear. It seems unlikely that ASALA actually meant to protest the execution of a member of a party advocating the liberation of a piece of territory ASALA considers already "liberated." A little known Armenian group did bomb the Soviet Information Office in Paris in February of 1980 "in memory of the three Armenian patriots shot in Moscow on January 3, 1979." Although this group, the New Armenian Resistance (NAR), has not been heard from since October 1980, there was some evidence of cooperation between them and ASALA. However, there is no evidence that Moscow's execution of Armenian terrorists has made any impact on ASALA's support of the Soviet Union.

Given ASALA's commitment to Marxist-Leninism this is not surprising.[5] However, none of the "non-Marxist" Armenian terrorist groups have ever hit a Soviet target or made an anti-Soviet statement.

Even the reaction of the Armenian community in the diaspora to human rights violations in Soviet Armenia has been lukewarm at best. While Armenian newspapers are filled with articles describing the trials of Armenians accused of terrorist actions against Turkish interests in great detail and urging their readership to contribute to defense funds set up in behalf of the accused, discussion of the trials of Soviet Armenians is limited. And the tone of what discussion there is restrained. When two Armenians in Yugoslavia were tried and convicted of assassinating a Turkish diplomat in Belgrade, articles in the Armenian Weekly strongly denounced violations of their rights which allegedly took place during their trial.[6] The same paper published scores of articles eulogizing as martyrs to the Armenian cause, the five Armenian terrorists who blew up themselves, the wife of a Turkish official and a Portugese policeman while attempting to take over the Turkish embassy in Lisbon during the summer of 1983.[7] However, on the recent release from prison of Soviet Armenian Paruym Hairikian, founder of the NUP, after almost 15 years of imprisonment, Armenian Weekly's only comment was that his release was "long overdue."[8]

The following conclusion of one of the few articles in the Armenian press on the fate of Armenian dissidents in the Soviet Union is well-justified, if somewhat weak:

> The Armenian media in the diaspora does not provide adequate coverage on the arrests, trials and prison conditions of these

> dissidents. In our enthusiasm and pride in the remarkable achievements of Soviet Armenia, we need not ignore the sad fact that there are scores of young Armenians who are languishing in Soviet jails for committing no crime other than writing an essay on human rights or a patriotic poem. The most elemental civil rights of these people continues to be violated without a word of protest from the West.[9]

The last statement is not entirely correct. Amnesty International has adopted many Soviet Armenian dissidents as prisoners of conscience. Six economists from Princeton protested the imprisonment of Eduard Arutyunyan, an economist, who was one of the leaders of the Armenian Helsinki Monitoring Group, in a letter to the New York Times.[10] However, there is no organized campaign within the Armenian community to aid these dissidents. It seems ironic that diaspora Armenians should concentrate so much energy on coercing Turkey into admitting the existence of an alleged violation of human rights over sixty years in the past while almost ignoring violations of the rights of Armenians taking place in the Soviet Union today.

Many Armenians are inclined to view the Soviet Union in a charitable light because they perceive that Armenians have suffered far less at the hands of the Russians than the Turks. However, what Armenians in the diaspora either fail to perceive or choose to ignore is that the Soviet Union, like its predecessor the Russian Empire, supports Armenian nationalism only to the extent it furthers Soviet interests, no further. Soviet Armenian dissidents are under no such illusion. After her release from prison, one dissident who was convicted of "hooliganism" on the grounds that she "talked loudly" during the trial of another dissident, wrote a personal letter to the Soviet president seeking permission to emigrate. In the letter she wrote:

> Even ones native land can be hateful when tyranny and callousness prevail...to carry out this difficult task I will stop at nothing

since henceforth my living in the USSR is deprived of all meaning. Another group of dissidents on the last day of their trial asked a Soviet judge to send a telegram to Ronald Reagan "expressing the hope that he will remain faithful to his promises."[11] The supression of Armenian nationalism within the Soviet Union should make it clear that Soviet interests do not include an independent Armenia either in the present SSR of Armenia or in historic Armenia now a part of Turkey.

That this realization has been lost on many diaspora Armenians is even more amazing in light of the fact that Soviet Armenian officials have harshly criticized the Armenian Revolutionary Federation (ARF or Dashnak Party), the major Armenian Political Party in the diaspora, for its "counter-revolutionary nationalistic ideology." In an address reproduced in the official organ of Soviet Armenia, on July 15, 1983, the Secretary General of the Armenian Republic stated:

> We should improve our relations with the Armenian Diaspora, embarking actively on projects which will expand and strengthen our activities with progressive organizations, which support the pacifist policy of the Soviet Union and actively contribute to its propaganda. We appreciate the attitude of these organizations but we should not forget the fact that the Armenian Diaspora is not a homogeneous entity. There are organizations which are hostile to us and are agents of imperialism. The ARF comes on that front.

It has been suggested in ARF publication that this recent criticism was the result of increased nationalism amoung young Soviet Armenians. It certainly was not prompted by an outpouring of support for imprisoned Soviet Armenian dissidents from ARF supporters in the West.[12]

In spite of the Soviet Union's suppression of Armenian nationalists within its borders, even Armenian organizations who in the past were strongly anti-communist have adopted a concilatory attitude towards the Soviet Union. The article describing the plight of the dissidents men-

tioned above, labeled these incidents as "desperate and self-incriminating" moves resulting from frustration. Quite a far cry from the praise accorded to those engaged in terrorism against Turkey. The article, which goes on to suggest that Armenians join with Amnesty International groups in a letter writing campaign to free the prisoners, is careful to say "What is advocated here is not the drumming up of anti-Soviet or even anti-communist hysteria."[13] Another article in Armenian Weekly, a publication with ties to the ARF, printed without comment Amnesty International's suggestion that letters written on behalf of Soviet Armenian dissidents not stress the issue of Armenian independence. All of this seems to be rather timid talk from "agents of imperialism."[14]

Pointing out what should be a rather obvious point, that the Soviet Union does not now (and never has) perceived an independent Armenia on its border as consistent with its own interests, does not imply that the Soviets have no interests in supporting Armenian terrorism or Armenian claims against Turkey. Although relations between Turkey and the Soviet Union are friendly on a superficial level, there is ample evidence that the Soviets provided the resources which made possible the large scale campaign of domestic terror within Turkey ended by the 1980 coup. Armenian terrorism is an attempt to destabilize Turkey by disrupting its foreign relations. The Soviets clearly view the destabilization of Turkey as within their interests, even if they are unwilling to tolerate an independent Armenia on their border.

In spite of their persecution of Armenian nationalists within the SSR of Armenia, recently the Soviet Union has been supporting the Armenian cause more openly. In an interview reported in the Christian Science

Moniter on December 28, 1982, an Armenian Foreign Affairs officer commented on the Armenian terrorist campaign against Turkey that "These actions are both wrong and ineffective, but we can understand the frustrations and conditions which motivate them." In the past, Soviet officials have avoided the issue or condemned terrorism strongly.[15] Soviet support of peacefully-expressed Armenian grievances also appears to be on the rise. When a new Armenian monument was dedicated in Paris in April 1984, the head of the Echmiadzin Church in the Soviet Armenian Republic attended the ceremony. Turkish officials felt compelled to protest the ceremony to France and express their regret and indignation to the Soviet Union over the presence of the Soviet clergyman at the ceremony.[16] In October of 1984 the Prime Minister of Soviet Armenia told a group of visiting foreign ambassadors and diplomatic representatives that in 1915 the Turkish government deliberately caused the death of close to 2 million Armenians.[17] In the past, Soviet Armenian officials have been silent on questions pertaining to the genocide. Also in 1984 the Novosti Press Agency in Moscow distributed a book review by a prominent Soviet Armenian scholar which accused the Turks of persecuting modern Armenian residents of Turkey to the point of endangering their survival. This article was published in a prominent Armenian publication in the United States with the comment that the article was "indicative of the new importance officially given to the Turkish-Armenian issue" by the Soviet government.[18]

No doubt many Armenians welcome these Soviet statements of support with the same enthusiasm as they welcomed the passage of the House of Representatives' resolution recognizing the Armenian genocide. In the past, organizations as diverse as ASALA and the official newspaper of the

ARF in Lebanon have called on the Soviet Union to support the Armenian cause openly.[19] However, many Armenians and their western supporters, in their apparent eagerness for revenge against Turkey, seem all too willing to overlook the contradiction between the Soviet Union's support of Armenian nationalism when it threatens the stability of Turkey and its relations with NATO, and Soviet suppression of the same sentiment when it is expressed in the Soviet Union.

The Soviets have made it quite clear that their one motive for supporting the Armenian cause is to threaten the stability of Turkey. The fact that they have recently increased their support of the "Armenian cause" is just one more indication of the potential this issue has for destabilizing Turkey. Armenian nationalists in the West and their supporters should think carefully about the consequences of a destabilized Turkey removed from Western influences both for Western security and for Armenian nationalism. The result is much more likely to be Soviet domination than an independent Armenian state which would be disasterous to both.

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PH-85-01-0325-87C
Volume I-B

# Latin American Terrorism: A Deniable (and Profitable), Deep-Strike Weapon

David Blair

January 1985


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|---|---|
| Contract Number: | MDA903-84-C-0325 |
| Contract Expiration Date: | 1 July 1985; $885,782 |
| Short Title of Contract: | Integrated Long-Term Defense Strategy |
| Name of Contractor: | Pan Heuristics<br>R & D Associates<br>4640 Admiralty Way<br>Marina del Rey, CA 90295 |
| Project Directors: | Albert Wohlstetter<br>Fred S. Hoffman |
| Phone Number: | (213) 822-1715 |


"The views, opinions, and findings contained in this report are those of the author(s) and should not be construed as an official Department of Defense position, policy, or decision, unless so designated by other official documentation."

## I: A Chance for Democracy in Latin America

Now is the crucial time for Latin America. The recent phenomenal rise of democratic governments there offers the region an unprecedented opportunity for political stability and progress. The list of new democracies is very long. Colombia, Ecuador, Peru, Bolivia, the Dominican Republic, Argentina, Uruguay, Panama, Honduras, El Salvador, and possibly soon Guatemala and Brazil have established or are establishing new legitimate, democratic governments. The spread of democracies in Latin America (and Spain and Portugal) in the last five years or so has the potential of being the start of a historically unique and beneficial political change.

But this promise is marred by the growth of Cuban military power in the Caribbean, by the consolidation of the Sandinista dictatorship in Nicaragua (contrary to the initial hopes that that revolution would turn out to be democratic), and by the increase in terrorism against the target countries that are just becoming democratic.

There are two models of terrorism and guerrilla warfare predominant in the West. The "hearts and minds" thesis sees terrorists as youths provoked by the awful conditions of their homeland. This model would predict that a terrorist or guerrilla-led revolution will arise spontaneously against the worst dictatorships in the most impoverished countries. Recent history shows that this is an incorrect model for Latin America. The key to establishing a successful guerrilla force is the training, organization, arms and funding now being provided by the Cubans and Soviets to their surrogates in the target countries.

Most telling in this regard is the fact that terrorism arises primarily against nations attempting to move toward democracy. The

prototype for this terror campaign against a young, democratic government is the war against Venezuela from 1962 to 1967. Despite overwhelming public support for the elected Betancourt government, the guerrillas, with documented Cuban assistance were able to seriously disrupt Venezuela for over five years.[1] The chief lesson here is that guerrillas can survive for a long time even without substantial public support. So the existence of the guerrillas is no evidence that there is a large constituency for their goals. Nevertheless, many US public opinion-makers consistently recommend the policy, resulting from the Vietnam syndrome, of hastily abandoning pro-Western governments that come under guerrilla attack. The usual justification is that the US will thereby claim the "moral high ground."

Many in the West repeated Communist claims that Venezuela was not a "true" democracy--didn't the mere fact that the guerrillas survived prove that? [2] The guerrillas also sought to provoke human rights violations by the government so it would lose further Western public support. Today we frequently hear the same sort of claims about Honduras, El Salvador, and even Costa Rica.

The guerrilla war in El Salvador gained strength only <u>after</u> the 1979 coup that promised democratic reforms. We have strong evidence of Nicaraguan attempts to establish terrorist groups in democratic Honduras and Costa Rica.[3] The Cubans have supplied arms to a guerrilla group in Jamaica.[4] And the vicious Sendero Luminoso began its attack on Peru only after the military dictatorship was replaced by an elected government. Even the French overseas departments in the Caribbean have recently been so strongly attacked that the French banned one of the terrorist front organizations.[5]

Of course, this is sound strategy for the Communists. Democracies are more vulnerable to terrorism in the short-run because they must show at least some respect for human rights. But democracies are also the greatest long-run threat to the Communist goal of conquering Latin America. Communist victory depends on making conditions in Latin America so bad that all hope of reform or improvement depends on getting rid of the old regime. Like Soviet nuclear terror, Latin American terror is designed to convince the people of the democracies that they have only two choices--red or dead. Thus the guerrillas try to destroy the economic infrastructure of the democracies and to use atrocities to provoke a right-wing reaction that would replace the democracy with a dictatorship that would be more vulnerable in the long-run.

If the current young democracies can be consolidated in Latin America, Communism may lose its chance there for the foreseeable future. But if they are forced to cower before Cuban-sponsored terrorist threats and are unable to obtain adequate US support, this unique historical opportunity may be lost.

## II. Deniability: Remember the Maine?

To maintain the "hearts and minds" thesis among Western public opinion, the Cubans and Soviets must maintain the deniability, or at least the pretense of deniability, of their support for terrorist and guerrilla groups in democratic countries.

These denials do not have to be very strong or very plausible. They are welcomed by Western publics and governments alike because otherwise something might have to be done to stop these Soviet attacks on Western allies. Thus although we have abundant proof of Cuban involvement with

all manner of Latin American guerrillas and dope dealers, Western politicians still proclaim that the evidence is not adequate. This is the same as the reaction to reports of Soviet treaty violations and of the Soviet use of chemical and biological weapons in Afganistan and Laos.

The nations under attack face a serious dilemma about whether they should stand up to Castro or try to appease him. For example, Colombia broke off diplomatic relations with Cuba in 1981 after an M-19 column, trained in Cuba, made a landing on Colombia's Pacific coast in order to invade the country from the South.[6] Later, Castro publicly declared that in reprisal for "Colombia's presenting its candidacy against Cuba for a post at the United Nations," he had trained these guerrillas.[7] Yet, the Colombian government is still so insecure that it believes it may be necessary to try to gain Castro's goodwill in the hope that he will leave Colombia alone. In January 1984 there was a semi-public dispute between the Colombian Army Commander-in-Chief and the Foreign Minister. The Army commander stated that "it is morally impossible to have relations with Cuba...we cannot have relations with a government headed by a communist dictator who trains people to invade our country."[8] Weeks later the Foreign Minister said that the two countries had had "cordial contacts" although he denied that they were negotiating a resumption of diplomatic relations.[9] Such hesitant, frightened governments need confidence in US support if they are to stand firm.

To reiterate, the problem is not establishing Soviet and Cuban complicity in terrorism and guerrilla war in Latin America (or elsewhere). There is ample evidence of this. The problem is deciding what to do after that complicity is acknowledged. In the Spanish-American War, the United

States seized on the opportunity of the sinking of the Maine to declare war even though there was little or no evidence of Spanish complicity. Now we seize on weak Soviet and Cuban denials to avoid facing the fact that our Latin American allies are being assaulted by a deep-strike Soviet weapon just as surely as if the Soviets were shooting missiles at them.

The United States is at a strong disadvantage in supporting guerrilla groups because we cannot deny our involvement. But, more importantly, we have proved an unreliable ally for any guerrillas. The best example of this is our loud debate about the "covert" war in Nicaragua and our apparent abandonment of the "contras." Our allies are at a further disadvantage because they cannot use terror techniques in the same way the Communists do and they cannot raise money through criminal activities.

## III. Narcoterrorism

Mounting evidence shows that the Cubans, Nicaraguans, and Communist guerrilla groups in Colombia and Peru are heavily involved in producing and transporting drugs to the United States. This section argues that this is a very advantageous policy for the Cubans and the Communist guerrillas. Then the available public evidence of their involvement is assembled. Much work remains to be done in this area, but this evidence (mostly from newspaper accounts) does provide a convincing case and points out areas for further intelligence research that could lead to much fuller documentation of guerrilla and terrorist actions.

Narcoterrorism is only one example of the criminal methods that Communist governments and terrorist and guerrilla groups use to raise funds. Kidnappings by the Salvadoran FMLN guerrillas throughout the 1970s

funded both Salvadoran and Nicaraguan guerrillas. And the Bulgarian[10] government and Armenian[11] terrorists traffic in both illicit drugs and weapons.

This participation in organized crime creates many mutually reinforcing advantages for the Communists.

(a) They receive very substantial amounts of money--all hard currency--from the drug trade. For example, Mario Estevez, a defector from the Cuban Intelligence Service (DGI) testified that he earned a profit of 7 million dollars for the Cuban government during his three years as a dope dealer in the United States and he estimates that the DGI has 400 similar agents whose major assignment is distributing drugs in the United States. New York Senator Alfonse D'Amato calculated from this testimony that the Cubans have made $2.8 billion solely from these 400 drug-dealing agents introduced into the United States during the Mariel boatlift.[12] This is only a very rough guess that leaves out the revenues Cuba receives from the tolls it charges drug ships for assistance and protection and from marijuana actually grown in Cuba itself. It also ignores the direct revenues that the Colombian and Peruvian guerrillas obtain from producing the drugs and from "taxing" drug-growing farmers.

Even if this estimate is high by an order of magnitude (that is, even if, against the evidence, Communist drug revenues are calculated in the hundreds of millions rather than the billions of dollars) this is still a very large amount of money and can support large guerrilla groups for a very long time. For comparison, the much-touted Soviet subsidy to Cuba amounts to about $3 billion per year[13] and total Cuban GNP is about $14 billion per year.[14] The Reagan Administration is currently requesting $28

million to aid the pro-Western Contras in Nicaragua and total US aid to El Salvador has never exceeded $150 million.

(b) Deniability of Cuban and Soviet involvement with Latin American guerrilla groups is easier to maintain if these organizations can support themselves through criminal activity. Thus the Colombian FARC and M-19 and the Peruvian Sendero Luminoso can retain at least the pretense that they are indigenous movements independent of the Soviets and Cubans.

The Castro government uses drug dealings to conceal some of the support it provides to M-19. One prominent example of this revealed in public testimony before the US Congress is the case of Jaime Guillot Lara, a Colombian drug-dealer with close ties to the Cubans. He reportedly purchased AR-15 rifles for the use of the M-19 with dollars gained by the narcotics deals of the Cubans.[15] It is important that the guerrillas use American rather than Soviet-made rifles so they can maintain their claims to be indigenous.

(c) The drugs and kidnappings disrupt the societies of the countries under terrorist attack. The Communist hope of victory depends on so destroying the economy and social structure of the target countries that all chance for democratic reform appears impossible. Criminal activity contributes to the destruction already caused by terrorist acts. Drug profits have been used to corrupt some government officials and the legal systems of Colombia, Peru, Bolivia, and Panama.

(d) Citizens who otherwise would not be sympathetic to the political goals of the Communists can be tied to them for financial reasons. Peruvian and Colombian peasants can make much more money from raising marijuana and cocaine than from legal food crops plus these drugs are easy

to grow and can survive harsh conditions. Thus many peasants may welcome a guerrilla force that will protect them against government attempts to eliminate the drug trade. For example, the Sendero Luminoso was able to move into the Amazon region of Peru around Tingo Maria, far from its traditional Andean guerrilla zone around Ayacucho, when the Peruvian government and the US Drug Enforcement Agency began a campaign to eliminate the drug growing in that region.[16]

(e) The Cubans are able to use the drug trade to maintain control over the guerrilla forces. Apparently the Cubans control the last step of the pipeline to the United States and could cut off the guerrillas' market access. Drug trafficking also ties the various guerrilla groups together.

(f) The Communists welcome the problems drugs cause for American society. Some testimony from Cuban defectors indicates that this is Fidel Castro's prime, personal purpose in encouraging the drug traffic.[17]

The Evidence. Two recent criminal cases presented by the US Drug Enforcement Agency to American grand juries have made a great deal of evidence about Communist involvement in the drug trade available to the public. Combined with official statements by the Colombian and Peruvian governments and with press reports, it is now possible to piece together a good view of the interconnections between Cuba, Nicaraugua, the Colombian and Peruvian guerrillas, and the drug dealers who work for all of them.

A Colombian drug trader named Jaime Guillot Lara was arrested in Mexico on November 25, 1981 and held for almost a year. Despite extradition requests from the United States and Colombia, he eventually was freed by the Mexicans and fled.[18] What makes his case significant is that he is a close friend of Jaime Bateman (leader of the Colombian M-19 Communist

guerrilla group). Fidel Castro, in an interview with Colombian journalists, described Guillot as "a good friend of Cuba."[19] Reportedly, Guillot met with Raul Castro and Daniel Ortega in October 1981 in Managua where Castro promised that Guillot would be made President of Colombia after the Communist victory there. Just before his arrest in Mexico City, Cuban Intelligence warned Guillot that he should seek asylum in the Nicaraguan embassy where he would be protected. Unfortunately for him, he failed to take this advice.[20]

According to US DEA testimony, Guillot is reponsible for smuggling 2.5 million pounds of marijuana, 25 million methaqualone tablets, and 80 pounds of cocaine into the United States from 1976 to 1981. In 1979-80, he made a deal with the Cubans to pay them $10 per pound of marijuana to protect his smuggling ships and also to use his ships to deliver arms to the M-19.[21] The US State Department has evidence that he delivered $700,000 worth of Cuban arms to the M-19.[22] Apparently, Guillot panicked while in prison, tried to kill himself, and spoke more than he should have.[23] He admitted that future arms shipments were to be sent to guerrillas trying to overthrow the democracy in Bolivia.[24]

The second major indictment of a Communist official involved in the drug trade was of Frederico Vaughan, an aide to Nicaraguan Interior Minister Tomas Borge. The CIA says it also has information directly linking Borge and Sandinista Defense Minister Humberto Ortega to the drug ring.[25] According to an affadavit filed before the Miami federal court in July 1984, Colombian drug smugglers flew 1500 pounds of cocaine from Colombia to Managua, Nicaragua on June 3, 1984 where it was offloaded by Vaughan and Sandinista soldiers for shipment to the United States. After

this cocaine was flown to Miami, the Nicaraguans were paid $1.5 million for their services. Vaughan told an agent of the US DEA that a new cocaine processing laboratory was ready for use in Nicaragua.[26]

Cuba and Nicaragua serve as trans-shipment points for the drug traffic, but the primary sources are Colombia, Peru, and Bolivia. Particularly in Colombia and Peru, Communist guerrillas either directly produce the drugs or levy "taxes" on and provide protection for growers and dealers.

The Narc-FARC Connection. Besides the M-19, FARC (the other major Colombian guerrilla group) is also involved in the drug trade. In October of 1983, the Colombian and Venezuelan armies staged a joint attack against training camps of the Colombian guerrillas and the Venezuelan "Red Flag." They discovered documents showing that: (1) the Soviet Union directly supplied Colombian leftist groups with funds; and (2) FARC is imposing heavy taxes on drug growers and dealers.[27] The armies also found evidence that many captured Colombians and Venezuelans had been held for ransom at these camps.[28] To counter the international connection between the guerrillas, five South American countries (Venezuela, Brazil, Ecuador, Colombia, and Peru) formed a joint commission to coordinate their efforts against the drug traffic.[29]

After its election in 1982, the Betancur government of Colombia was at first hesitant to cooperate with the United States in the campaign against the drug traffic. Many Colombians considered this to be entirely an American problem and Betancur was afraid of incurring the ire of the drug growers and dealers who were very quickly becoming wealthy. This attitude changed abruptly in May 1984 after the murder by drug

traffickers of Colombian Justice Minister Rodrigo Lara Bonilla.[30] Now the Colombian government and army are vigorously prosecuting the anti-drug campaign and, contrary to previous practice, are extraditing drug dealers to the United States. This change in policy seems to have been provoked by the realization that Colombia was suffering the evil effects of drugs because many of its citizens were becoming addicted. And the guerrillas and other drug dealers were usurping the functions of government because the vast funds from drugs could be used to corrupt government officials and to purchase better arms than those used by the Colombian army.

The Sendero Luminoso. The exceptionally murderous Sendero Luminoso guerrillas are often portrayed as being entirely indigenous with no connections to Soviet-supported guerrilla groups. However, there is some evidence that there are ties--particularly in the drug trade. For example, the Shining Path has staged attacks inside Colombia[31] and the Colombian police believe it provides financial support to the Colombian EPL and other guerrilla groups.[32] The Peruvian police believe that the M-19 and the Chilean MIR have carried out urban terrorism in Lima as a favor to the Sendero.[33]

In a speech to the Peruvian Congress, Prime Minister Sandro Mariategui said:

> Drug traffickers are now involved in the criminal actions carried out by terrorists. Terrorists and drug traffickers are like two lethal pincers trying to inflict mortal injuries on democracy. With illegally obtained money, drug traffickers encourage news media to make subversive propaganda, supply weapons to insurgents, promote agitation through their corrupting force and commit the most horrifying crimes.[34]

In the "Pronto" anti-drug military campaign carried out in the Tingo Maria area in May 1984, the Peruvians found abundant evidence that the

guerrillas were in control of much of the drug smuggling in that area.[35] The United States began a coca eradication program in the area, but the Sendero defeated it by murdering 15 employees of the program on a single night in December 1984.[36] The Peruvian government's problem is complicated by the fact that increased efforts against the drug trade lead many peasant coca growers to protest and turn to the guerrillas for protection.[37]

Further intelligence study of the routes the Sendero use to ship its cocaine to the United States might lead to better documentation of Sendero connections with the more orthodox guerrillas and the Cubans.

Like the other guerrillas, one of the main goals of the Sendero Luminoso is to weaken the Peruvian economy and, thus, the Peruvian democracy. Therefore, they often attack tourist sites and hotels to try to scare away an important source of hard currency.[38] Another very common technique that is very effective in disrupting Peruvian democracy is the Sendero's frequent murders of village mayors.[39] This tactic was directly borrowed from the Viet Cong's effective strategy of murdering good South Vietnamese local administrators.

## IV. Western Anti-Guerrilla Strategy

This paper has discussed the techniques the Latin American guerrillas are using to try to disrupt the current moves toward democracy.

There have been four successful Communist takeovers in Latin America: Cuba, Nicaragua, Grenada and Suriname. In none of these did guerrilla forces fight their way to victory. Cuba and Nicaragua saw general uprisings by almost all sectors of society against a hated tyrant. There is no chance of such a general uprising against democratic governments. So the

democracies' position should be strong if they just do not panic and use repression to try to blunt the terrorist attack. The United States will have to assist the smaller countries in resisting lightning coups like the ones that brought the Communists to power in Grenada and Suriname.

Terrorism has long been used by states to attack other states. However, the nuclear standoff and the Western strategy of passive containment, by excluding other forms of warfare and by making a Western response against the sponsoring state most unlikely, have increased its importance.

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# Long Run Oil Market Implications of Soviet Control of Persian Gulf Oil

John P. Weyant

January 1985


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|---|---|
| Contract Number: | MDA903-84-C-0325 |
| Contract Expiration Date: | 1 July 1985; $885,782 |
| Short Title of Contract: | Integrated Long-Term Defense Strategy |
| Name of Contractor: | Pan Heuristics<br>R & D Associates<br>4640 Admiralty Way<br>Marina del Rey, CA 90295 |
| Project Directors: | Albert Wohlstetter<br>Fred Hoffman |
| Phone Number: | (213) 822-1715 |


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## Acknowledgments

I thank, without implicating, the following individuals for suggesting many of the ideas presented here: Brian Chow, Richard Brody, David Kline, Henry Rowen, Albert Wohlstetter and Zivia Wurtele.

## 1. INTRODUCTION

Many factors could affect the evolution of the world oil market over the next two decades. The present paper focuses primarily on one particular event that could have serious economic, political, and national security implications for the United States and its allies--the effective control of Persian Gulf oil production by the Soviet Union. Our goal here is not to speculate on how this might occur,[1] but rather to look systematically at what could be done with that control once achieved.

Other work by Pan Heuristics[2] has taken a comprehensive look at the general problems associated with sudden increases in oil prices, and the potential of various policy measures designed to help cope with them. Obviously, one strategy that the Soviets could pursue upon gaining effective control of Persian Gulf oil production would be to cut off the flow of that oil to the Western bloc. The initial world oil market effects of such a cutoff would be similar to those caused by any other event (revolution, war, embargo, etc.). Thus, the results of the Pan work on the short-run (one to three year) oil and economic market effects of oil supply disruptions apply directly to Soviet motivated cutoffs of the supply of oil from the Persian Gulf.

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[1] Those who do not believe that such an event is possible are referred to Albert Wohlstetter, "Protecting Persian Gulf Oil: U.S. and Alliance Military Policy," in Report on Persian Gulf Oil and Western Security, Pan Heuristics, Report PH80-11-LV7902-60C, to the U.S. Department of Energy, November 4, 1980.

[2] See, e.g., Z.S. Wurtele, "Crisis in the Persian Gulf: An Assessment of Emergency Programs for Reducing Western Vulnerabilities," in Persian Gulf Oil and Western Security, Pan Heuristics, Report PH82-9-70351-68D, for the U.S. Department of Energy, September 1982.

The focus here, however, is on longer-term Soviet strategies (for example, those that could be employed during the 1990s) for gaining and exploiting control of Persian Gulf oil. In addition, the analysis presented here is limited to direct oil market considerations: How much revenues could the Soviets gain from control of Gulf oil? How much more revenues could the Soviets derive from that control than the current producers? At what cost to the West? There is no attempt here to assess broader issues like what the Soviets might do with the revenues they could derive from Gulf oil or the extent to which they could use control of Gulf oil to weaken the bonds that tie the Allies together.[3] Only the direct longer-term oil market implications of Soviet control of Persian Gulf oil are considered.

To set the stage for an assessment of the potential world oil market implications of Soviet control of Persian Gulf oil production, the major determinants of oil market behavior are reviewed in Section 2. Then, in Section 3 a simple analytic framework is used to put the short- and long-run outlooks for world oil prices in perspective. In Section 4 that analysis is used as the starting point for an analysis of the potential world oil market effects of Soviet control of Persian Gulf oil. Conclusions are drawn from that analysis in Section 5.

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[3]For a lucid overview of these issues see Richard Brody, "The Implications of Soviet Control of Persian Gulf Oil," in Report on Persian Gulf Oil and Western Security, Pan Heuristics, Report PH80-11-LV7902-60C, Marina del Rey, California, November 4, 1980.

## 2. MAKING WORLD OIL PRICE PROJECTIONS

The last decade has shown oil price forecasting to be a very precarious occupation. The difficulties oil price forecasters have encountered would almost be humorous were not the effects of faulty prognostications so painful. The emergence of oil prices that are much higher relative to other prices than they were prior to 1973 and the severe adverse economic impacts of sudden unanticipated oil price increases have provided a brand new environment for strategic planning by governments and industries; it has become more important to reflect uncertainty about the future in the planning process and the payoff from efforts to obtain more accurate projections has increased.

Given the difficulty everyone has experienced in projecting oil price changes over the past decade, it is not surprising that no one has been able to argue very convincingly that their approach is best. At this point many groups and individuals are producing oil price projections and there is great diversity of opinion about what oil prices will be. The methodologies employed range from direct subjective assessment to the use of sophisticated mathematical techniques involving statistically estimated relationships between key underlying variables. Although the methods employed vary greatly in orientation, almost all of them implicitly or explicitly include some consideration of the forces that will determine the supply of oil and the demand for it in the future.

World oil demand in the future will be largely determined by four factors: (1) the continued response to past (both the 1973-74 and 1979) price increases; (2) the response to any additional price changes (up or

down) that may occur; (3) the rate of growth of the world's economies; and (4) changes in the prices of alternative energy sources.

Several key uncertainties will determine the supply of oil from the world outside communist areas. Economic considerations will be a major determinant of the level of oil production worldwide, but for several major Persian Gulf producers politics may prove to be just as important as economics.

For oil producers outside of the Persian Gulf, the rate of oil production will be determined primarily by economic and geological factors--the price of oil, the extent of the resource base, and the availability of investment capital. Higher prices and more resources will tend to result in higher oil production levels. Prices will be important not only in determining the rate of discovery of new oil reserves and their ultimate development and production, but also in determining the amount of production from existing reservoirs. Historically, only about 30% of the oil discovered has been recovered, but higher prices provide the incentive to employ more expensive "enhanced oil recovery" techniques to increase that recovery rate.

In projecting non-Persian Gulf oil supply over the next two decades, it is important to consider: (1) the depressing effect depletion has on oil production over time, (2) the effect of future oil prices--be they higher or lower than present prices--on the rate of discovery of the, as yet, undiscovered oil resources, and (3) the effect of future oil prices on the utilization of enhanced oil recovery techniques designed to increase the fraction of the discovered oil in place that is ultimately recovered.

Unlike other oil producing countries, most Persian Gulf producers have sufficient oil reserves, and internal and external political concerns to suspect that they may well be guided more by those considerations than by public investment economies alone. In addition, leaders in these nations understand full well that, despite the lack of complete cooperation of its members, OPEC has been able to exert tremendous market power in setting oil prices far above competitive levels. The Saudi leaders, in particular, understand that expanding production in a slack market is likely to erode that collective market power considerably. Saudi Arabia, Iran, Iraq and Kuwait have quite a bit of flexibility in setting oil production rates. Saudi Arabia currently has about 5 MMBD of unutilized oil production capacity. This extreme flexibility to swing production over a wide range puts Saudi Arabia in a unique position of power in the world oil market.[4]

The political uncertainty about oil production in Iran and Iraq is of an entirely different sort. The revolution in Iran and the subsequent war between the two neighboring states dropped Iranian oil production from 5.5 MMBD to 1.0 MMBD in Iran and from 3.0 MMBD to 1.0 MMBD in Iraq. Recently, Iran's output has recovered to 2 MMBD. When the war ends, the rate at which production from these two countries is subsequently increased is a major uncertainty surrounding the evolution of the world oil market during the 1980's. Since the leadership of Iraq has consistently espoused the goal of becoming a major oil producer, it is reasonable to presume that within a year or two of the cessation of hostilities, it could be producing 3 MMBD or more.

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[4] At present this flexibility is not very symmetric in that it would be far easier for the Saudis to increase production than to decrease it without upsetting its ambitious plans for industrial development.

Since the effect of the war was confounded with the effect of the ongoing revolution in Iran, the effect of the ending of the war on Iranian production is far less certain. A fundamentalist regime might decide to build oil production up very slowly, but 4 MMBD within a couple of years is probably technically feasible, with higher levels possible if costly investments in gas injection projects and the like are undertaken (investments that were planned by the Shah, but abandoned after the revolution).

Even if the war goes no further, the economies of both countries have been devastated to the extent that there would be a strong incentive to increase oil revenues rapidly to rebuild the domestic industrial base. For example, Iranian cash reserves were nearly depleted by the end of the first quarter of 1982, which motivated the Khomeini regime to reverse some of its earlier anti-oil proclamations.

Another swing producer with its own unique set of goals is Kuwait. This small, wealthy nation at the tip of the Persian Gulf has produced as much as 3 MMBD of oil as recently as 1979, but is now producing only about 900,000 barrels per day and has no desire to produce more. Its cash reserves are so large relative to the size of its population that its leadership contends it could go completely out of the oil business for a year or two without serious consequence. Although Kuwait might be expected to increase production during an oil supply interruption as was the case in 1979, there is no reason to suspect it would desire to add to the size of any oil glut during the 1980's.

Not all projections of the evolution of the world oil market explicitly take into account the several key oil supply and demand factors alluded to here. In addition, these factors are reflected in different

ways in the alternative analyses--the degree of aggregation of producing and consuming countries vary greatly, the behavioral relationships included in them are different, and there is a wide diversity of views about the values of key parameters. Consequently, it is not surprising that there are quite a wide range of views on the likely level of future oil prices. Figure 1 displays the range of oil price projections obtained in a recent poll of world oil market analyses compiled under the auspices of the International Institute for Applied Systems Analysis. The median projection shows an inflation adjusted oil price in 1990 that is 47 percent above the current price and an additional 34 percent price increase by the year 2000. Interestingly, although there are a wide range of projections, virtually all of them show increasing oil prices well before the turn of the century. Three well-known dissenting opinions on this score are voiced by Peter Odell of Erasmus University, S. Fred Singer of the University of Virginia, and William Brown of the Hudson Institute.[5] Each of these individuals makes assumptions on one or more key underlying determinants of the world oil price that are dramatically different from those made by other researchers. Odell assumes that there is about twice as much oil to be discovered as most other analysts and that production rates will not depend significantly on the geopolitical region within which the oil is found. Singer assumes a very large response of oil supply inside and outside of OPEC to higher oil prices. Finally, Brown assumes that the

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[5] See, for example, Odell, P.R., and K.E. Rosing, "The Future of Oil: A Re-Evaluation," Centre for International Energy Studies, Erasmus University, Rotterdam, June 1983; Singer, S.F., and S. Stamas, "An End to OPEC," Foreign Policy, No. 45, Winter 1981-82; and Brown, W.M., "Can OPEC Survive the Glut?" Fortune, November 30, 1981.

incremental decrease in oil demand in response to a once-for-all increase in its price will increase in each subsequent year over a long period of time. These assumptions are at variance with what most other analysts are currently assuming.

## 3. OIL PRICE PROJECTIONS IN PERSPECTIVE

Although it is not possible to resolve all the differences of opinion about the future course of world oil prices reflected in Figure 1, a simple analytic model can be used to show how such projections vary with changes in assumptions about the key underlying determinants of world oil market behavior. Such a model was developed previously[6] to help analyze the nature and likely duration of the "oil glut." An updated version of that model is employed here to: (1) illustrate how oil price projections vary with changes in key parameter assumptions, (2) to develop reasonable low and high price trajectories assuming no Soviet control of Persian Gulf oil production, and (3) to show how effective Soviet control of Gulf oil could alter this picture. Although the model is described more fully elsewhere,[7] it is summarized briefly here to set the stage for its application.

### World Oil Market Model Overview

The world oil model (as modified for the current study) consists of an OECD oil demand module, a demand module for the oil importing developing

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[6] See Weyant, J.P. and D.M. Kline, "Energy Crisis Meets Oil Glut: Where Do We Go From Here?", Pan Heuristics, Inc., Report PH82-9-70351-68D, September 1982.

[7] Weyant and Kline, op. cit.

countries, an oil supply module for the non-Persian Gulf oil producers outside of communist areas, and a simple market balancing module for the Persian Gulf producers.

OECD Demand Model. The OECD Oil Demand Model (1) takes the price of crude oil F.O.B. Persian Gulf and adds a set of markups to derive a price for fuel delivered to each sector in each of the seven largest oil consuming countries, (2) aggregates the price of the individual fuels available to each sector in each country to compose a sectoral price index for that country, (3) aggregates the price indexes for each sector to obtain a retail energy price index for that country, (4) applies aggregate price elasticities and long-run adjustment parameters for retail energy and exogenously specified economic growth rates to project the demand for aggregate retail energy in each country, (5) shares the aggregate energy demand by sector in a manner consistent with the price index composition for that country, (6) shares the aggregate energy demands for each sector in each country to each fuel in a manner consistent with the price index composition for that sector, (7) adds up the total oil demands for each sector across the seven countries, (8) scales the totals up (by about 15-20%) to reflect demands by the other OECD countries, and (9) adds up the sectoral totals to get total OECD oil demand.[8] The model also allows for some response of the price of the other fuels in response to an increase in the demand for them.

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[8] Electricity conversion losses, refinery losses, and marine bunkers are, of course, considered, but those details are omitted from this "thumb-nail" sketch.

The crude oil markups for each country-sector combination reflect transportation, refining and distribution costs, as well as any government taxes that might be imposed. Thus, there are sizable positive markups on gasoline in Japan and Western European countries reflecting their large gasoline taxes and negative markups in Canada reflecting the price controls and implicit oil import subsidies that have characterized the Canadian energy scene over the past decade.

The sectoral rules for aggregating fuel prices and sharing out fuel demands are based on econometric work by Pindyk. Rather than employ the sectoral own price elasticities for individual fuels from the Pindyk study, however, the sectoral price indices and fuel demands are, once again, aggregated so that a simple aggregate lagged-adjustment model can be used to project total retail energy demand in each country. In this simple aggregate approach aggregate energy demand depends on the aggregate energy price, as well as assumptions about the aggregate price elasticity of energy demand, the aggregate rate at which energy demand adjusts towards that long-run response and projected levels of economic output.[9] This approach allows for investigation of the effects of variations in assumed demand response parameters over the range of empirical estimates.

LDC Demand Module. The issues which bear on forecasting demand for oil in the LDC's have been the subject of considerable debate in the energy economics community. It appears that the available data and the state of the

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[9] This approach follows that developed by Hogan to put future U.S. energy demands in perspective. See William W. Hogan, "The Future Demand for Energy, Chapter 2 in Energy: The Next Twenty Years, Ford Foundation, Ballinger Publishing, Cambridge, MA, pp. 72-113. We thank Professor Hogan both for the work reported there and for his help and encouragement in constructing the model described here.

art in development economics permits only the roughest of estimates of future oil demand by these countries.

We have, therefore, used a simple, ad hoc model of LDC oil demand in the current study; one that permits the effects of a wide range of parameter values to be investigated. The major conclusions about the future of the world oil market described in this paper are not sensitive to these parameter variations; the highest estimates of LDC oil consumption over the next twenty years is still a relatively small share of WOCA (world outside communist areas) oil use.

Non-Persian Gulf Oil Supply Module. In the Non-Persian Gulf Oil Supply Model it is assumed that: (1) a constant fraction of the known recoverable oil resources are produced each year, (2) the fraction of the undiscovered oil-in-place that is discovered in a particular year depends on the price of oil in that year, (3) the optimal recovery factor for the already discovered oil resources (through conventional or enhanced recovery techniques) depends on the price of oil, but only a fraction of the adjustment to that level occurs each year. The constant production to reserves ratio assumption approximates industry practice over the past two decades, and the relationships between discovery rates and prices, and between optimal recovery factors and prices are derived from the results of the Energy Modeling Forum Study on U.S. oil and gas supply, but tempered by the aggregate performance of the oil industry over the past few years.

Persian Gulf Oil Supply. Persian Gulf oil supply is a residual in the model: it is computed as the difference between world oil demand, and

non-Persian Gulf supply, including stock releases. The model can be run in two modes. In the first world oil prices are fixed and a market balance computed, with Persian Gulf supplies as a residual. The second (and more commonly used) mode of operation of the model assumes target levels of production by the Persian Gulf producers and computes the prices required to yield a balanced world oil market with that level of demand for Persian Gulf production.

Reference Case Projection

To illustrate how the model works a reference case was developed. In this case, our best estimates of economic growth rates, energy demand price elasticities, the extent of the oil resource base outside of the Persian Gulf, and the rate of oil production by the Persian Gulf producers are used to drive the model. As stated previously, a great deal of uncertainty surrounds the estimation of each of these underlying determinants of oil market behavior. It is important to understand that this "Reference" Case is necessarily only a useful starting point for subsequent analysis and not a precise forecast of what will occur.

For the Reference Case projection we assume: (1) GNP growth in the OECD of 3% and of 5% in the developing countries; (2) a price elasticity of aggregate energy demand at the commercial level (i.e., as sold to consumers) of 1.0; (3) 1500 billion barrels of oil-in-place[10] yet to be discovered outside of the Persian Gulf and communist areas; and (4) a target

[10] At current prices and technology only about a third of this oil would be recovered. The model, however, explicitly includes the potential for higher recovery factors at higher prices. No non-price induced or so-called "autonomous" technological change is included in this model.

production rate by Persian Gulf oil producers of 17.5 million barrels of oil per day starting in 1990.

The price projections produced when these assumptions are input to the world oil model are shown in Figure 2. According to this projection, oil prices will decline at 6% per year (the assumed rate of inflation) for two years and then grow at an average annual rate of about 7.5% from then until the end of the century; oil prices in 2000 are, thus, about 80% higher than they were in 1980. Thus, although oil prices grow at 7.5% per year from 1986 until the year 2000, over the period from 1980 to 2000 the average annual growth rate of oil prices is barely 3% per annum.

## Sensitivity Analyses

Given the experience of the past eleven years, it would be foolhardy to base any serious analysis upon a single projection of world oil prices. The problems inherent in such an approach are apparent in the set of sensitivity analysis shown in Table 1. In this table the assumptions about each of the four key underlying determinants of world oil market behavior are varied over a range of plausible values and the resulting equilibrium oil prices computed. For example, if undiscovered oil in place outside the Persian Gulf and the centrally planned economies is 1000 billion barrels the price of oil is projected to increase to $55 per barrel in 1990 and $91 per barrel in 2000, while an assumption of 2000 billion barrels of oil in place yet to be discovered leads to a projected oil price of $29 per barrel in 1990 and $61 per barrel in 2000. The sensitivity of the resulting price projections to reasonable variations in some of the key inputs taken individually gives one a feel for the hopelessness of making forecasts to

three digit accuracy and sets the stage for consideration of the kind of multiple parameter variations that are more reflective of the level of uncertainty inherent in the real world.

## Plausible High and Low Price Projections

To get a feel for the range of potential oil price outcomes without developing a complete probability distribution of inputs to- and outputs from- the world oil model "low" and "high" price projections were developed. In the high price projection the key determinants are set at the extremes of the ranges of plausible values shown in Table 1 that maximize demand and minimize supply at any price. In the low price projection the opposite set of extreme assumptions are employed.[11] The high and low projection are shown in Figure 3. Interestingly, even the low price projection shows increasing oil prices during the 1990s (in fact, an oil price increase of almost 8% per year during the 1990s is observed). In addition, although the high price projection for the price of oil in the year 2000 is about double the low price one, that range is consistent with the fundamental uncertainties about the key determinants of oil market behavior.

Obviously even the stream of revenues (or even a small fraction of it) implied by the low price scenario (where Persian Gulf oil production is 22

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[11] It is important to understand that these assumptions provide cases with very low probabilities of occurrence: the probability of observing a price trajectory lower than the low prices are or higher than the higher prices for more than a year or two is extremely small. In fact, the assumptions were pushed to such extreme values here that another year or two of actual experience will cause one of the two extreme projections for the 1990s to be demonstrably implausible.

millions barrels per day during the 1990s by assumption) would be a tremendous prize for the Soviets and would pose a tremendous threat to the U.S. and its allies. The $300-$400 billion per year of Persian Gulf oil revenues in that scenario are more than 20 times the Soviet's present hard currency earnings and more than current Soviet defense expenditures. Because these two extreme projections span the range of plausible outcomes, they are used, in addition to the Reference Case, as the basis for an assessment of the Soviet threat.

## 4. IMPLICATIONS OF SOVIET CONTROL OF PERSIAN GULF OIL

The oil revenue stakes associated with Persian Gulf oil during the balance of the 1980s are significant, dropping under $100 billion only in the low prices scenario and even there only for a few years. As we enter the 1990s those stakes can be expected to increase to even greater levels (to $300-$500 billion per year or about 5% of OECD GNP) as by then virtually all remaining low cost oil reserves will be located in the Persian Gulf. The Persian Gulf oil revenues that would be available to the Soviets following a hypothetical takeover in 1990 are tabulated in Table 2. In this table, it is assumed that the Soviets follow the same oil production policies as the Gulf producers in the Reference, and in the low and high price cases developed previously. These numbers illustrate the nearly unprecedented size of the stakes associated with control of Persian Gulf oil. Obviously, upon gaining control of Gulf oil, though, the Soviets could do a better job of controlling (and perhaps even maximizing) the revenues derived from that oil than could the current set of producers.

One way to assess the incremental oil market threat of Soviet control of Gulf oil would be to compute the production strategy that results in the highest level of discounted revenues accruing to the Soviets prior to the complete depletion of Persian Gulf oil. While this would, undoubtedly, be a useful calculation, it is relatively complex, and does not reflect such real world concerns as trade balance objectives, hard currency earnings requirements, and East-West competition. In addition, such a strategy would require a longer planning horizon than is typical of most Soviet (or any other nation's) leaders. As a compromise between the full intertemporal optimization calculation, and simply assuming that the Soviets would do just what the Gulf producers would have done during the 1990s, the oil market implications of some simple stylized Soviet oil production strategies are considered. These rules are designed to illustrate the ability of the Soviets to control (and particularly to increase) Persian Gulf oil revenues more aggressively than the current producers.

## World Oil Price Effects

Two different types of Soviet strategies for Persian Gulf oil production are considered. In the first type of strategy the Soviets move to increase oil prices rapidly upon gaining control of production in 1990 by cutting production to a lower level than the Gulf producers would have set by 1995. Such a strategy would definitely increase oil revenues initially due to the limited potential to adjust oil demand to rapidly increasing prices that is possible in the short run. In the long run such a strategy could lead to lower revenues because of the reduction in volumes motivated by the higher prices. If the long-run price elasticity of the demand for

Persian Gulf oil is greater than 1.0 this decrease in revenues will be the long-run effect of a price increase. Oil price results for this type of strategy are compared with the no-Soviet price control cases in Figure 4, while the revenue implications are collected in Table 3. As anticipated, oil revenues tend to be higher in the short run and lower in the long run than in the no-Soviet price control cases. It does, however, take quite a high discount rate (approximately 50% under reference case assumptions) to produce discounted revenues during the 90s that are greater than those obtained in the no-Soviet price control case. For that reason, an alternative type of Soviet control strategy was considered.

In the second type of stylized strategy the Soviets hold oil prices constant in the short run to gain market share in world oil supply for Persian Gulf oil (thereby decreasing its long-run price elasticity) before increasing its price to boost revenues. Interestingly, such a strategy could lead to higher annual oil revenues during some periods when oil prices are higher than in the no-Soviet price control cases <u>and</u> during other periods when they are <u>lower</u>. Projected oil prices for this type of strategy are compared with those projected for the no-Soviet control cases in Figure 5. By design prices are lower than those in the no-Soviet price control cases from 1990 to 1995, but overtake them during the second half of the 1990s. The results of the application of all three pricing policies for the Reference Case assumptions are compared in Figure 6.

## Oil Revenue Effects

The oil revenue implications of the several Soviet oil production strategies described in the previous section are summarized in Table 3,

which includes calculations of discounted revenues over the 1990s for various rates of discount. As expected the Soviets would have considerable ability to increase the already considerable oil revenues they would gain by taking control of Persian Gulf oil production during the 1990s. In fact, by employing the market share strategy the Soviets could increase Reference Case oil revenues during the 1990s (discounted at 4 percent) by 20 percent or more relative to the no-Soviet control cases; in the Low Price Case the incremental effect could be even greater. The oil market share strategy is particularly effective in boosting Persian Gulf oil revenues because the quantity of oil exported is increased before prices are allowed to rise.

Effects on the Welfare of the West

There would be a number of substantial costs to the United States and its allies associated with Soviet control of Gulf oil: (1) at the very least their expenditures on Gulf oil would go to their most formidable adversaries than to a group of relatively neutral developing countries, (2) those expenditures might increase significantly relative to the no-Soviet price control case because of short- or long-run revenue optimizing by the Soviets, (3) some Western oil importers would be unable to buy oil at a higher price and would lose the difference between what they would have been willing to pay for it and the previous market price, and (4) depending on how rapidly oil prices were increased, there would be additional costs to Western economies associated with the additional inflation and unemployment that would produce.

Figure 7, where the quantity of oil imports is plotted as a function of its price, illustrates the costs included in categories (2) and (3). If there is a reduction in the supply of oil that increases its price from $P_R$ to $P_S$, the oil revenues that the oil exporters receive increase from $P_RAQO$ to $P_SBQ_SO$. On the other side of the oil market, the price increase imposes two types of costs on oil importers. Consumers who continue to buy oil after the price increase pay $P_SBCP_R$ more for it than before the cutback, while consumers who bought oil at $P_R$, but no longer choose to at $P_S$, incur a consumers' surplus loss equal to ABC. The consumers' surplus loss represents the amount in excess of its market price consumers would have been willing to pay for oil before the price increase because of its value to them in consumption or in production processes. Table 4 compares the oil revenue, wealth transfer, and consumers' surplus implications of the Soviet market share strategy with 30% per year price escalation after 1995 under Reference Case conditions. In this case not only do the Soviets gain one half to one trillion dollars in discounted revenues during the 1990s, but the oil importers lose up to an additional half trillion dollars in economic welfare. Furthermore, these effects are in addition to the 3 or 4 trillion dollars in discounted oil revenues the Soviets would gain during the 1990s by gaining control of Persian Gulf oil and simply pricing it as would have the Gulf producers.

## Potential Policy Responses

Obviously, the best possible policy response to a Soviet threat of this magnitude is prevention. And prevention in this case is a diplomatic and military challenge of mammouth proportions. There are, however, some

energy policies that could help make the political/military job a bit easier. The development of sizable strategic oil stockpiles and oil emergency contingency plans in the West can help blunt the adverse effects of sudden price increases motivated by Soviet political or economic objectives. Action in this direction should be aggressive now, including the development of plans to greatly accelerate contingency planning measures should Soviet control of Persian Gulf oil become a reality. In addition, measures to reduce the dependence of the West on Persian Gulf oil imports would reduce the revenues that could be obtained from a Soviet takeover.

What oil policies can be expected for the remainder of the 1980s? There are some encouraging trends, but chances are that much of the potential for decisive action will be lost. In the U.S. the Reagan Administration moved immediately to accelerate the decontrol of domestic oil prices and had recently been filling the U.S. Strategic Petroleum Reserve at a rate in excess of 300,000 barrels per day. Beyond these encouraging signs, though, there is doubt about what else will be accomplished. The Administration's move towards severely limiting government intervention in the marketplace promoted decontrol of crude oil prices and the intention to deregulate natural gas as well at the earliest feasible date. Measures such as these will help reduce the dependence of the U.S. on oil imports, and the vulnerability of the nation to oil supply interruptions. However, they are but a piece of what ought to be a comprehensive oil import policy.

The oil import market is one where government intervention is justified. Only national governments have the proper perspective to set socially optimal oil prices. Government intervention is required because

the social cost of oil imports exceeds their market price for two reasons. First, an increase in oil import demand levels leads to an increase in the price on all oil imported, not just on the newly created demand. Second, an increase in oil demand means greater vulnerability to oil supply interruptions; more demand means more supplies subject to interruption, and a higher price to pay on the remaining supplies during an oil supply shortfall. It is the responsibility of the government to adjust the price of oil imports to reflect their true social cost. Recent estimates put this differential at least $5 and perhaps as much as $15 per barrel.

Many policies can be used to adjust the price of oil to reflect its true cost, and the optimal mix of policies in a particular country will depend on what is economically sensible and politically acceptable there. For the U.S., an oil import tariff would presently appear to be a good option. A tariff would be easy to administer and it would attack the oil dependency and vulnerability problems directly. If it were phased in to offset any declines in the real price of imported oil it would also: (1) not be blatantly inflationary; (2) not lead to retaliation by the oil exporters; (3) maintain the incentives to conserve oil and to produce it domestically; and (4) generate additional revenues that could help balance the federal budget.

A potential reason for the current lack of serious planning for oil supply interruptions is a belief that there will be plenty of time to respond after the short fall actually occurs. Unfortunately, this strategy neglects the long lead times required to implement some of the most effective policies like oil stockpiling, and overestimates the ability of the existing institutions to respond quickly and positively in times of

crisis. It is here perhaps that the current U.S. administration is on shakiest ground. After swift and decisive initiatives to deregulate domestic crude oil prices and to fill the Strategic Petroleum Reserve at a much more rapid rate than in the past, it has refused to go any further in articulating its oil emergency program. The rationale for this position seems logical--it is important to maintain the capability to respond flexibly to a short fall depending on the nature of the problem and therefore inappropriate to specify exactly what might be done in advance. What this approach misses is that failure to generate new options, to subject them to public debate and to educate all responsible parties about the pros and cons of each helps insure that the response to future oil supply interruptions will be no better than those to past ones. It would be better to design the desired flexibility into the program rather than to call no program at all a flexible one.

## 5. CONCLUSIONS

The arguments and calculations described in this report lead inescapably to a number of fundamental conclusions:

(1) The stakes associated with effective control of Persian Gulf oil are already very high (on the order of $125 billion per year).

(2) As we enter the 1990s those stakes can be expected to increase to even greater levels (to $300-$500 billion per year) as by then virtually all remaining low cost oil reserves will be located in the Persian Gulf.

(3) If the Soviets gain control of Gulf oil during the 1990s, they will be able to earn more for it than could the current group of Persian Gulf producers (perhaps 25-40% more).

(4) Policies designed to reduce the world's level of oil imports and to prepare for oil supply interruptions appear to be useful complements to military and diplomatic efforts to protect Persian Gulf oil from Soviet control.

TABLE 1

Sensitivity of Reference Projection to One-at-a-Time Variations in Key Parameters

| Parameter | Reference Value | Range of Values | Range of Oil Price Projections ($1984 per Barrel) 1990 | 2000 |
|---|---|---|---|---|
| GNP growth (%) | 3% | 2%-4% | $39-$43 | $71-$79 |
| Price elasticity of demand | 1.0 | .8-1.2 | $34-$48 | $66-$85 |
| Undiscovered oil-in-place outside Persian Gulf and centrally planned economies (billions of barrels) | 1500 | 1000-2000 | $29-$55 | $61-$91 |
| Target level of Persian Gulf production (million barrels per day | 19.5 | 17-22 | $40-$43 | $72-$77 |
| | | Reference Projection | $41 | $74 |

Table 2

Persian Gulf Oil Revenues in Reference, Low and High Price Cases
(Billions of 1984 Dollars)

| Year | Reference Case | Low Price Case | High Price Case |
|---|---|---|---|
| 1985 | $120 | $ 42 | $238 |
| 1986 | $133 | $ 50 | $301 |
| 1987 | $182 | $ 60 | $367 |
| 1988 | $233 | $ 99 | $433 |
| 1989 | $261 | $144 | $496 |
| 1990 | $290 | $195 | $549 |
| 1991 | $339 | $328 | $594 |
| 1992 | $377 | $300 | $592 |
| 1994 | $388 | $280 | $348 |
| 1995 | $412 | $318 | $459 |
| 1996 | $436 | $355 | $562 |
| 1997 | $457 | $372 | $653 |
| 1998 | $480 | $390 | $723 |
| 1999 | $506 | $411 | $727 |
| 2000 | $534 | $434 | $730 |

1980 Persian Gulf Oil Revenues = Approximately $300 Billion

Table 3

Implications of Various Soviet Price Control Strategies on Persian Gulf Oil Revenues (Billions of 1984 Dollars)

| Year | Reference Case | Soviet Targets | | Soviet Market Share Rate of Price Escalation | | |
|---|---|---|---|---|---|---|
| | | 15mmbd | 10mmbd | 10% | 20% | 30% |
| 1991 | $339 | $345 | $358 | $307 | $307 | $307 |
| 1992 | $377 | $386 | $409 | $322 | $322 | $322 |
| 1993 | $380 | $418 | $439 | $343 | $343 | $343 |
| 1994 | $388 | $433 | $429 | $370 | $370 | $370 |
| 1995 | $412 | $422 | $352 | $403 | $403 | $403 |
| 1996 | $436 | $334 | $153 | $479 | $519 | $558 |
| 1997 | $457 | $277 | $ 3 | $558 | $646 | $716 |
| 1998 | $480 | $246 | 0 | $636 | $742 | $840 |
| 1999 | $506 | $240 | 0 | $713 | $819 | $857 |
| 2000 | $534 | $255 | 0 | $787 | $836 | $627 |
| Total for 1991-2000* | | | | | | |
| 0 discount rate | $4309 | $3356 | $2143 | $4919 | $5298 | $5349 |
| 4% discount rate | $3441 | $2772 | $1991 | $3847 | $4124 | $4175 |
| 8% discount rate | $2806 | $2331 | $1684 | $3073 | $3277 | $3325 |

*Discounted to 1990.

Table 3 (continued)

Implications of Various Soviet Price Control Strategies on Persian Gulf Oil Revenues (Billions of 1984 Dollars)

| Year | High Price Case | Soviet Targets 15mmbd | Soviet Targets 10mmbd | Soviet Market Share, Rate of Price Escalation 10% | 20% | 30% |
|---|---|---|---|---|---|---|
| 1991 | $594 | $548 | $566 | $520 | $520 | $520 |
| 1992 | $592 | $535 | $558 | $498 | $498 | $498 |
| 1993 | $404 | $523 | $533 | $496 | $496 | $496 |
| 1994 | $348 | $511 | $485 | $511 | $511 | $511 |
| 1995 | $459 | $498 | $408 | $541 | $541 | $541 |
| 1996 | $562 | $461 | $275 | $636 | $687 | $737 |
| 1997 | $653 | $456 | $192 | $725 | $806 | $883 |
| 1998 | $723 | $479 | $156 | $805 | $864 | $868 |
| 1999 | $727 | $527 | 160 | $870 | $807 | $492 |
| 2000 | $730 | $597 | 202 | $914 | $555 | $ 0 |
| Total for 1991-2000* | | | | | | |
| 0 discount rate | $5792 | $5135 | $3535 | $6519 | $6265 | $5545 |
| 4% discount rate | $4625 | $4167 | $3010 | $5153 | $5012 | $4515 |
| 8% discount rate | $3774 | $3451 | $2603 | $4164 | $4078 | $3774 |

*Discounted to 1990.

Table 3 (continued)

Implications of Various Soviet Price Control Strategies on Persian Gulf Oil Revenues (Billions of 1984 Dollars)

| Year | Low Price Case | Soviet Targets 15mmbd | Soviet Targets 10mmbd | Soviet Market Share Rate of Price Escalation 10% | 20% | 30% |
|---|---|---|---|---|---|---|
| 1991 | $328 | $262 | $272 | $214 | $214 | $214 |
| 1992 | $300 | $327 | $348 | $232 | $232 | $232 |
| 1993 | $285 | $386 | $412 | $251 | $251 | $251 |
| 1994 | $280 | $422 | $435 | $273 | $273 | $273 |
| 1995 | $318 | $406 | $360 | $297 | $297 | $297 |
| 1996 | $355 | $245 | $ 79 | $352 | $381 | $410 |
| 1997 | $372 | $119 | $ 0 | $410 | $473 | $540 |
| 1998 | $390 | $ 25 | $ 0 | $471 | $569 | $674 |
| 1999 | $411 | $ 0 | $ 0 | $534 | $664 | $787 |
| 2000 | $434 | $ 0 | $ 0 | $600 | $745 | $828 |
| Total for 1991-2000* | | | | | | |
| 0 discount rate | $3473 | $2192 | $1906 | $3636 | $4100 | $4509 |
| 4% discount rate | $2777 | $1894 | $1680 | $2835 | $3167 | $3457 |
| 8% discount rate | $2267 | $1653 | $1492 | $2259 | $2499 | $2714 |

*Discounted to 1990.

Table 4

Implications of Market Share Strategy by Soviets with 30% Price Escalation under Reference Conditions on Persian Gulf Oil Revenues and Oil Importer Welfare
(Billions of 1984 Dollars)

| Year | Change in Exporter Revenues | Costs to Importers: Wealth Transfer | Costs to Importers: Consumers' Surplus | Costs to Importers: Total |
|---|---|---|---|---|
| 1991 | -32 | -36 | -1 | -37 |
| 1992 | -55 | -76 | -4 | -80 |
| 1993 | -37 | -86 | -7 | -93 |
| 1994 | -18 | -96 | -13 | -109 |
| 1995 | -9 | -120 | -23 | -143 |
| 1996 | +122 | -57 | -13 | -70 |
| 1997 | +259 | +35 | +8 | +43 |
| 1998 | +360 | +160 | +25 | +185 |
| 1999 | +351 | +329 | +4 | +333 |
| 2000 | +93 | +320 | +118 | +438 |
| Total for 1991-2000* | | | | |
| 0 discount rate | +1034 | +373 | +94 | +467 |
| 4% discount rate | +734 | +184 | +56 | +240 |
| 8% discount rate | +519 | +65 | +22 | +87 |

*Discounted to 1990.

FIGURE 1

INTERNATIONAL PRICE OF CRUDE OIL

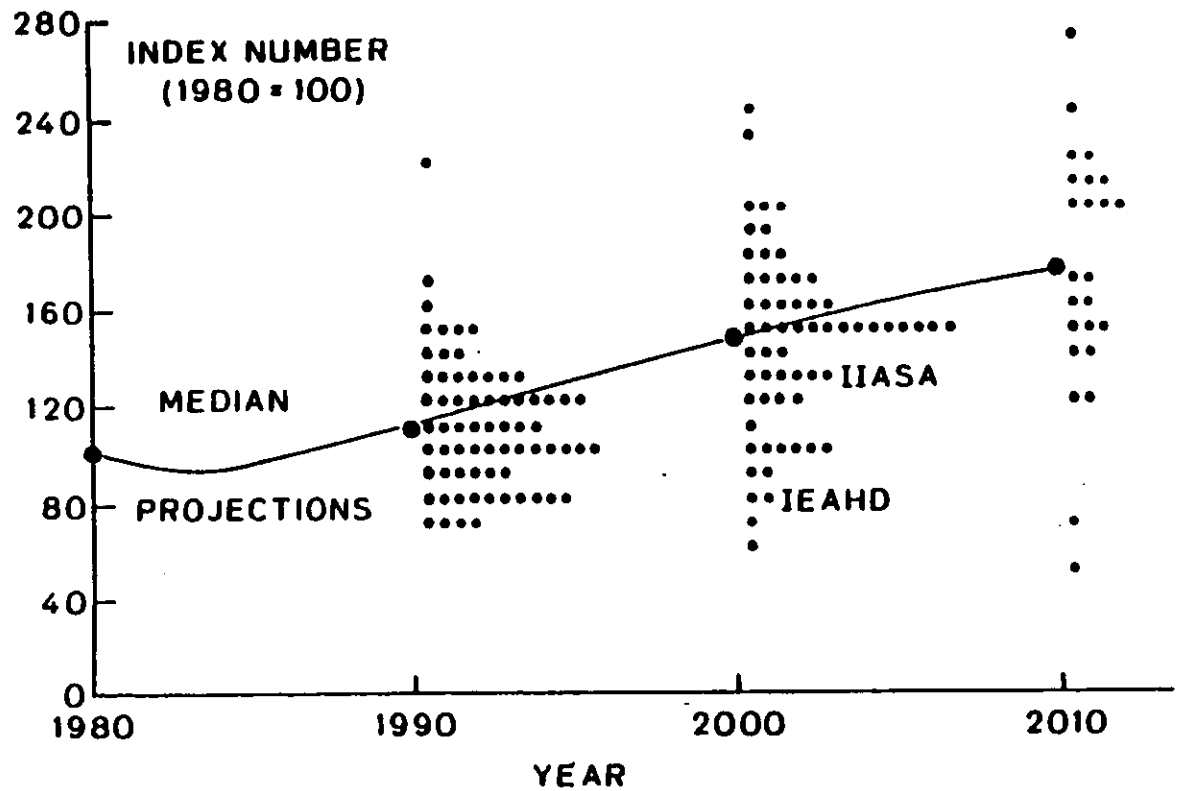


FIGURE 2
REFERENCE OIL PRICE PROJECTION

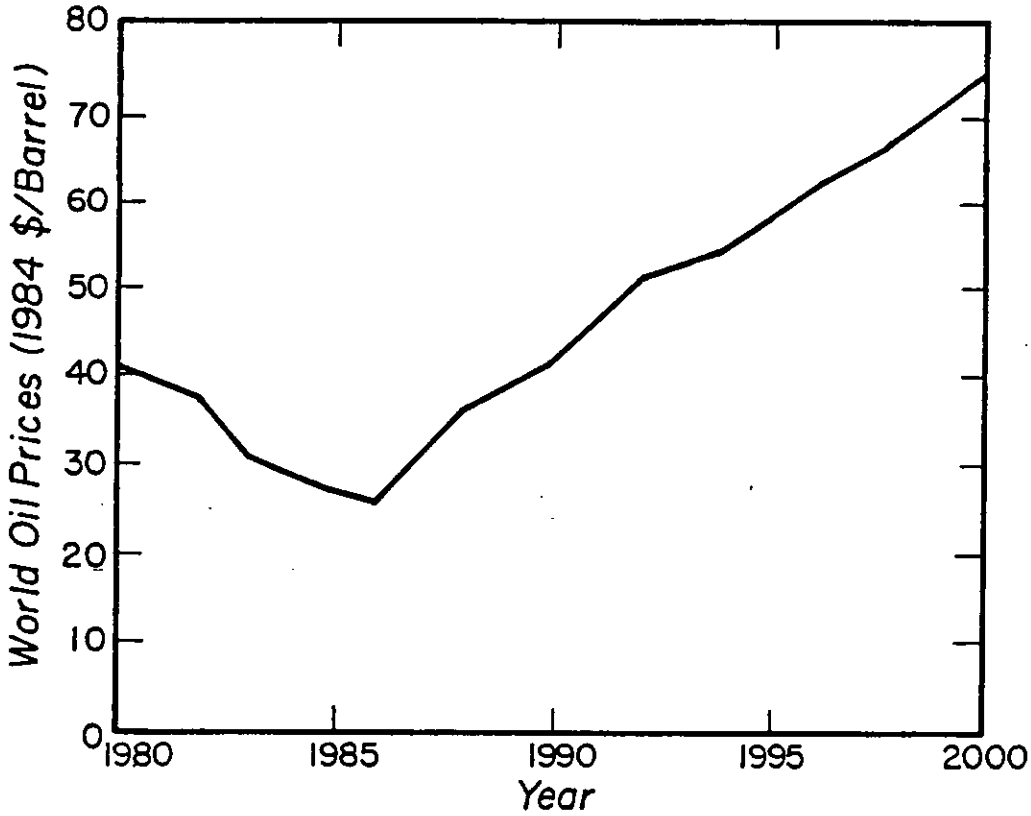


FIGURE 3
PLAUSIBLE HIGH AND LOW WORLD OIL PRICE PROJECTIONS

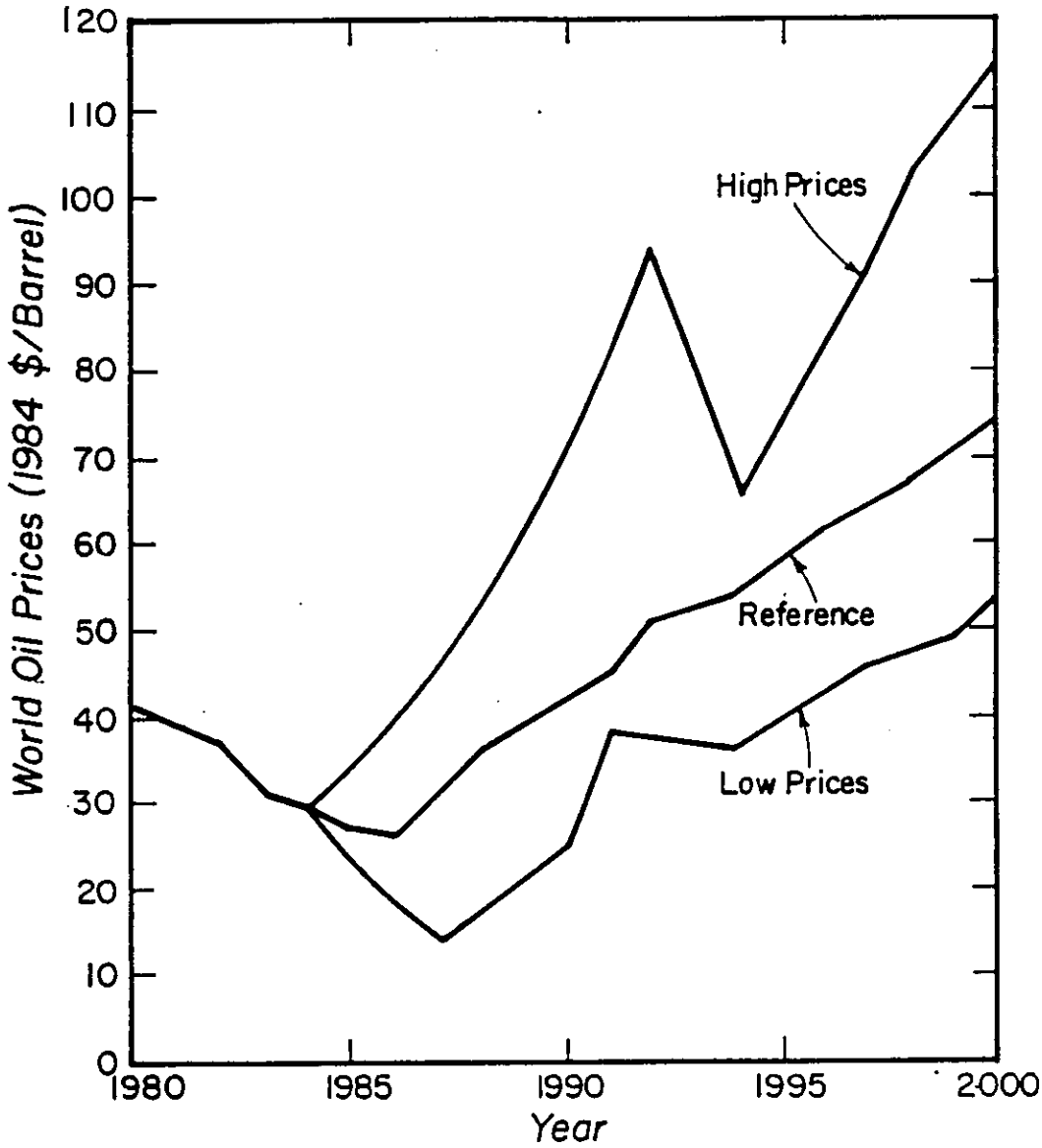


FIGURE 4
PRICE PROJECTIONS FOR SOVIET TARGET PRODUCTION STRATEGIES
UNDER REFERENCE PRICE CONDITIONS

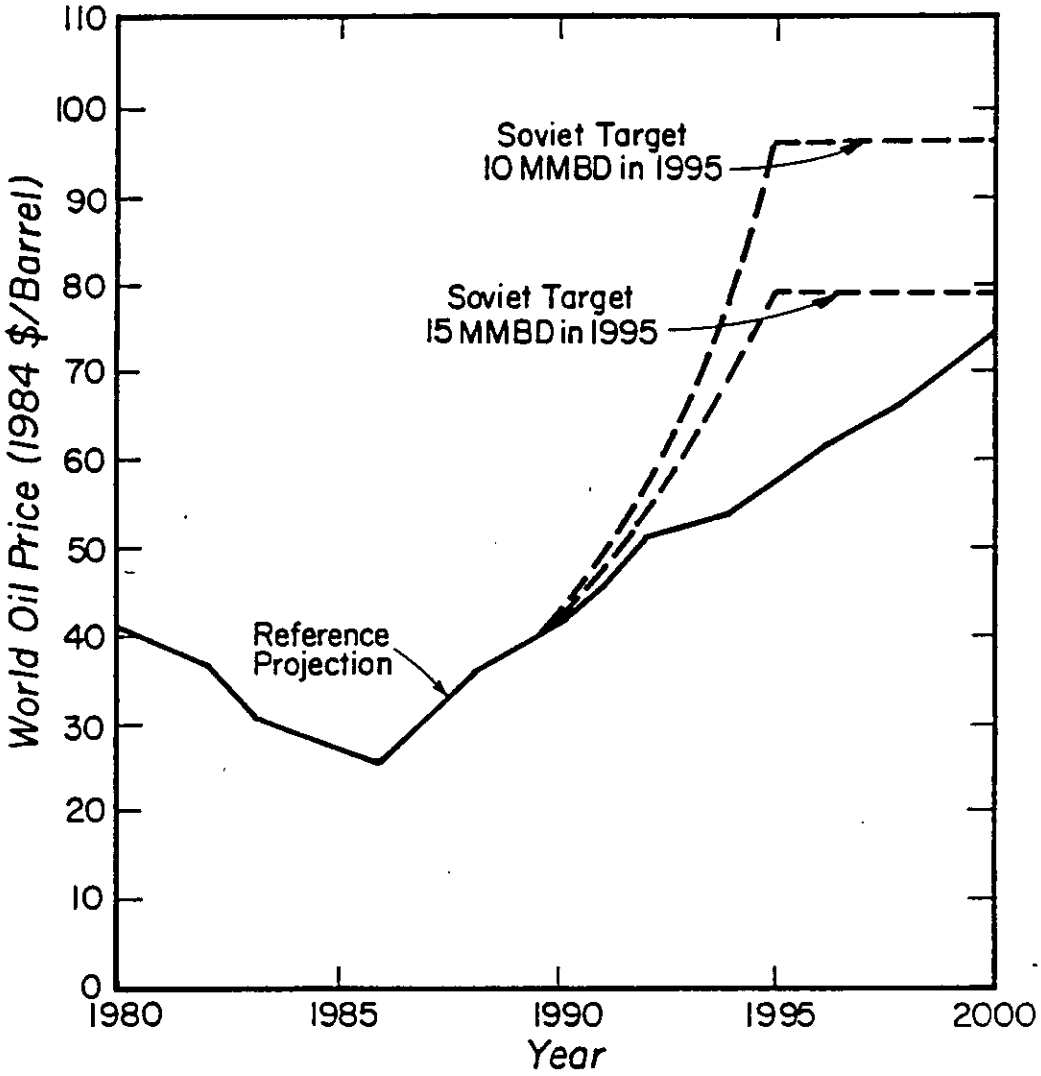


FIGURE 5

PRICE PROJECTIONS FOR SOVIET MARKET SHARE STRATEGIES

(%s are rates of price escalation post 1995)

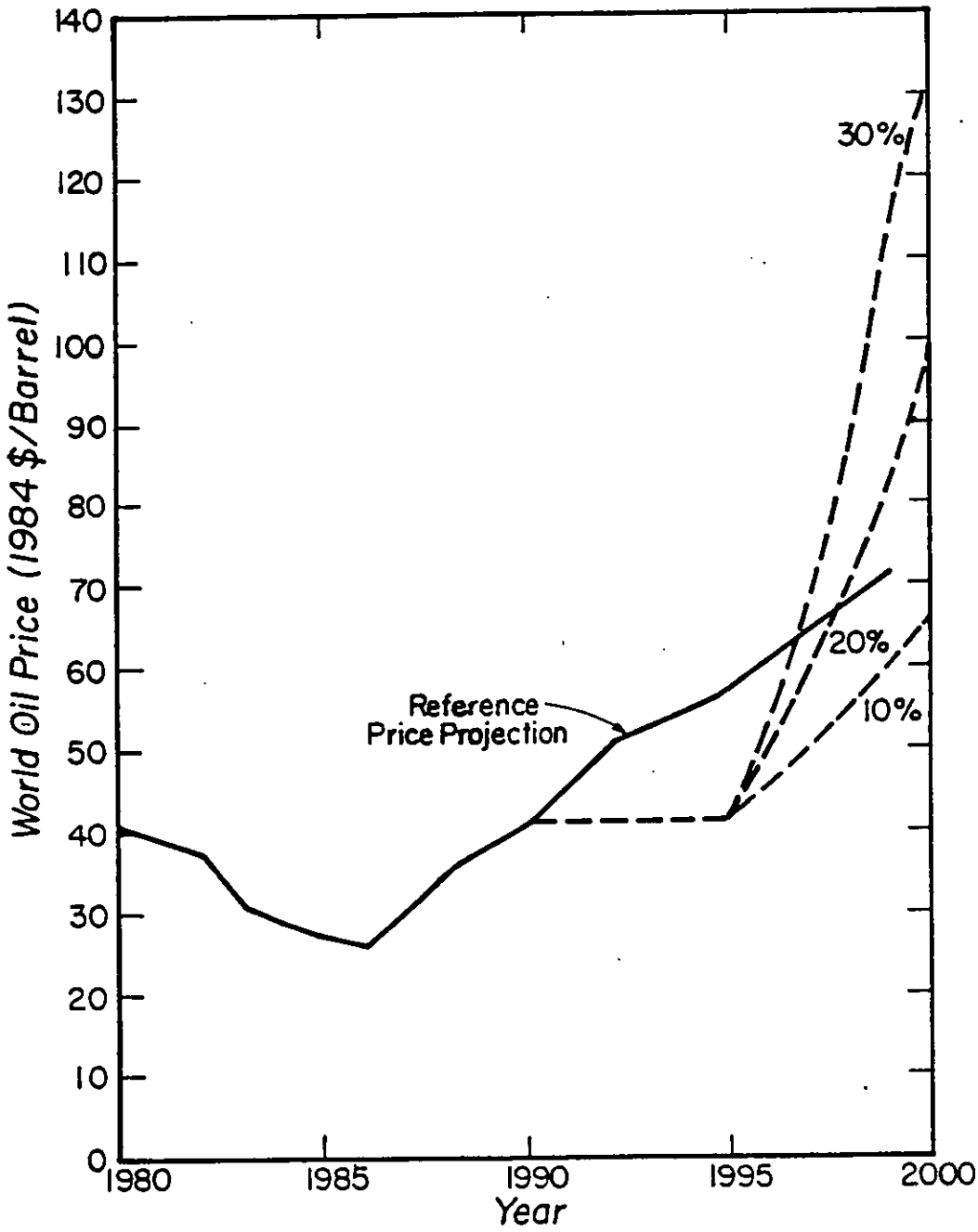


FIGURE 6
COMPARISON OF THREE SOVIET PRICING STRATEGIES
IN REFERENCE CONDITIONS

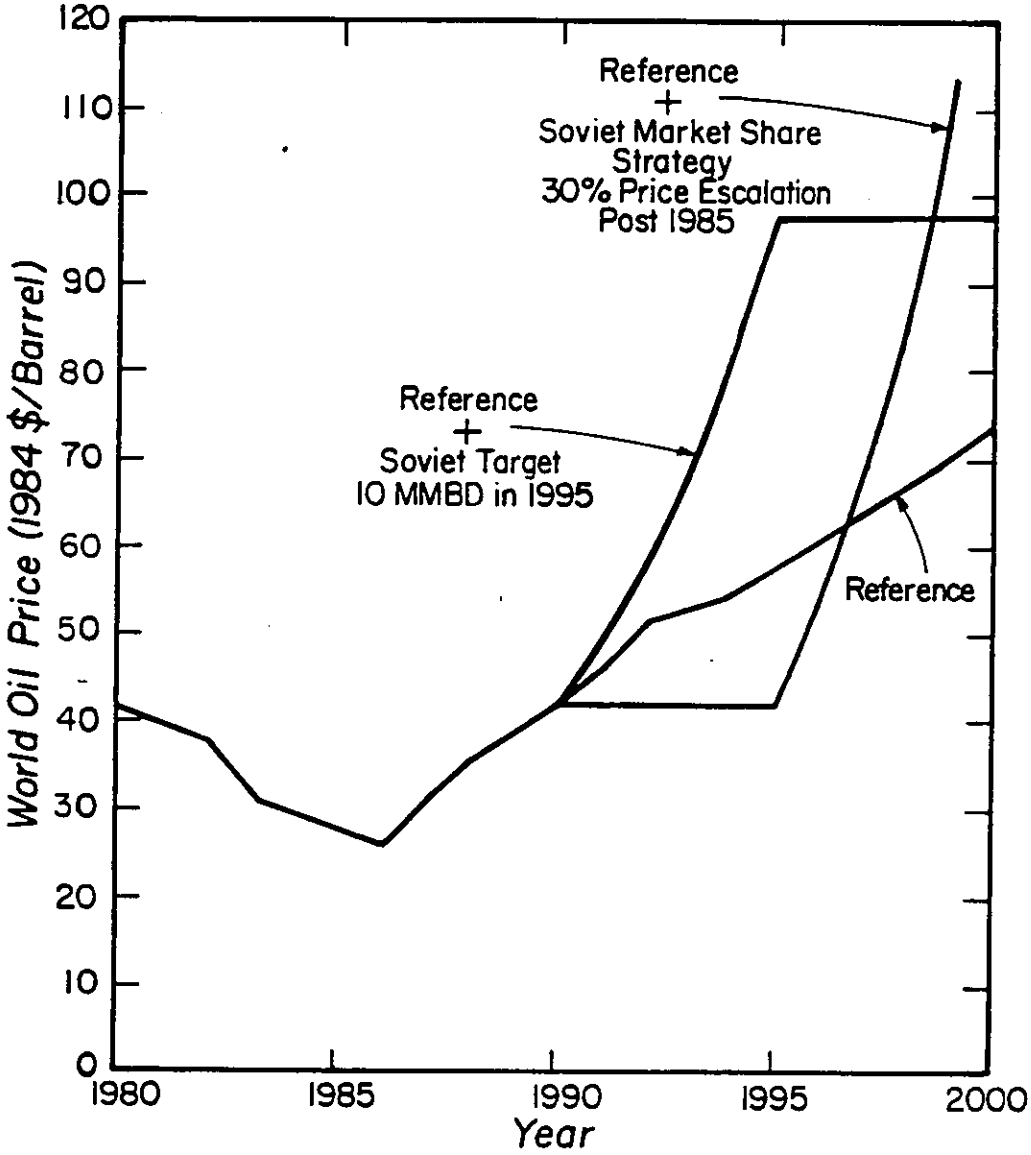
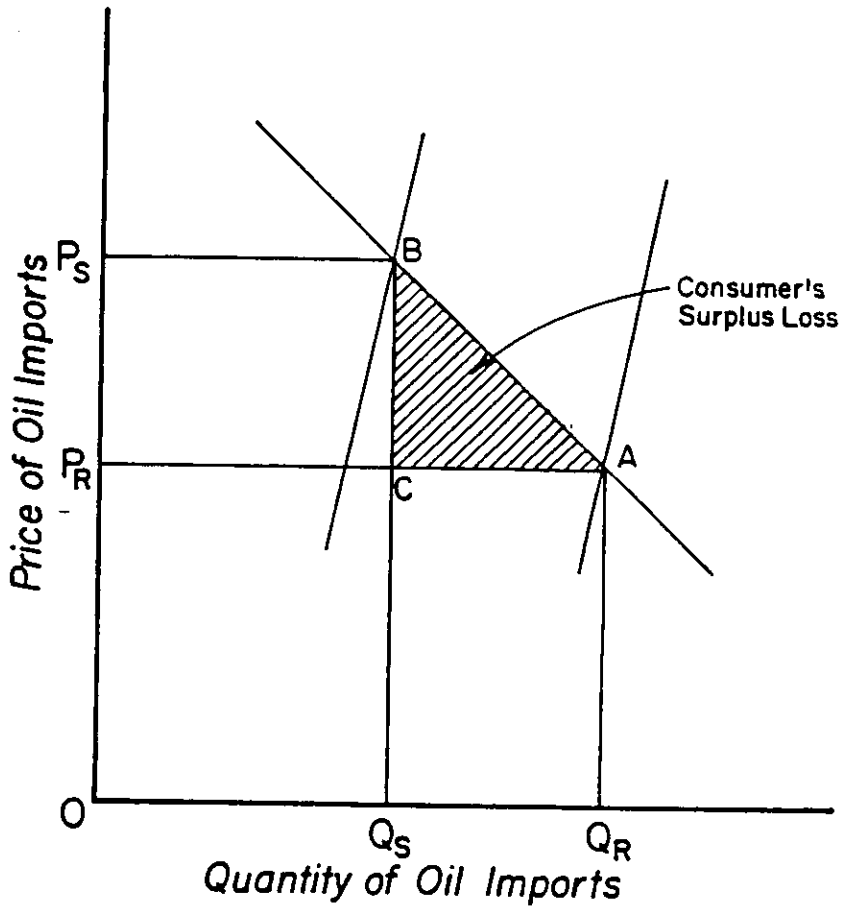


FIGURE 7

CONSUMERS' SURPLUS LOSS IN OIL IMPORTING COUNTRIES



DRAFT

# A Note on Implications of Imperfect Reliability and Bias for Fatalities and Target Destruction in Attacks on 18 USAFE Bases

| | |
|---|---|
| Contract Number: | MDA903-86-C-0319/P1 |
| Contract Expiration Date: | October 15, 1988 |
| Short Title of Contract: | Implications of US Alliance Strategies |
| Name of Contractor: | Pan Heuristics<br>R&D Associates<br>4640 Admiralty Way<br>Marina del Rey, CA 90295 |
| Project Directors: | Albert Wohlstetter<br>Fred S. Hoffman |

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# A Note on Implications of Imperfect Reliability and Bias for Fatalities and Target Destruction in Attacks on 18 USAFE Bases*

Zivia Wurtele & Douglas Yoon

* The results reported here are supplementary to the Task 2 report, The Military Effectiveness and Collateral Fatalities of Alternative Attacks Under the Dual Criterion. Gregory S. Jones and Zivia Wurtele, MDA903-86-C-0319, submitted to the Office of the Undersecretary of Defense for Policy on April 27, 1988.

SUMMARY

This paper supplements a recent Pan Heuristic study for OSD which assessed implications for collateral damage of alternative nuclear attacks on 18 USAFE bases. The study findings demonstrated that, if the designated ground zeros (DGZ) for the weapons are selected with sufficient care, the employment of low-yield weapons will significantly reduce civilian fatalities without compromising the military objective of destroying at least 80 percent of the aircraft on the bases, on average, and at least 70 percent on any given base. We investigated the sensitivity of results to two of the study's assumptions: that the weapons are perfectly reliable, and that the weapon aimpoints are precisely the DGZs of the study, i.e., that there is no bias. Though the Soviets may plan an attack within the framework of the dual criterion, clearly the Soviet DGZs will not be identical with those postulated in the study. Bias may also arise from other sources, e.g., atmospheric conditions and mapping errors. Our findings are as follows:

(1) If weapons are 80 percent reliable rather than perfect and the offense strategy is to compensate for this by launching two weapons instead of one at each DGZ, the military objective of the attacks will be achieved, but fatalities will increase--about 30 percent for higher yield weapons (1,000 KT, 100 KT, 30 KT and 10 KT) and about 10 percent for the two lowest yield weapons (5 KT and 1 KT).

(2) On the other hand, if the DGZs of the attacks are not those employed in the Pan Heuristics study, but deviate from them by 1,000 feet or 2,000 feet, the military mission will be achieved for higher yield

weapons, but will be degraded for the lower yields--significantly so with the greater bias. Thus, with the 2,000 foot bias, 59 percent of the target area, on average, is destroyed for the 5 KT yield weapon attacks and 36 percent for the 1 KT attacks. With the 1,000 foot bias, fatalities averaged over the directions increase negligibly or not at all over the no bias case, for all the weapon yields. With the 2,000 foot bias, however, the fatality increases are negligible for the weapon yield attacks of 30 KT or higher, but 6, 10 and 13 percent, respectively, for the 10 KT, 5 KT and 1 KT weapon yields.

A recent Pan Heuristics study* for OSD assessed implications for collateral damage of alternative nuclear attacks on 18 USAFE bases. The study findings demonstrated that, if the designated ground zeros (DGZs) for the weapons are selected with sufficient care, the employment of low-yields weapons will significantly reduce civilian fatalities without compromising the military objective of destroying at least 80 percent of the aircraft on the bases, on average, and at least 70 percent on any given base.

This paper relaxes two of the assumptions about weapons delivery that were made for the USAFE study: (1) that the weapons are perfectly reliable, i.e., that their ground zeros (GZs) are distributed in accordance with the CEP assumed, and (2) that the weapon aimpoints are precisely the DGZs of the study, i.e., that there is no bias. Our purpose is to investigate the sensitivity of results to some deviations from these assumptions.

The present paper employs the methodology of the USAFE study. Fatalities owing to blast, thermal radiation, prompt radiation or a combination of these are computed. All detonations are assumed to be airburst, so that fallout would not be significant. Omitted are secondary fatalities that may occur owing to disruptions of civil life in the affected areas, as well as long-term fatalities that would be reflected in increases in cancer mortality rates.

*Gregory S. Jones and Zivia Wurtele; The Military Effectiveness and Collateral Fatalities of Alternative Attacks Under the Dual Criterion, MDA903-86-C-0319, Pan Heuristics, March 1988 (Classified).

We investigated the case of weapons that are 80 percent reliable and assumed that to compensate for the loss in reliability exactly two weapons were fired at each aimpoint. Thus, when two weapons are fired at an aimpoint either two, one or zero weapons will detonate. It should be noted, however, that an alternative to this procedure of launching two weapons at each DGZ is to use signals of unreliability at the boost phase in a shoot-look-shoot mode to replace only such vehicles. (It appears that for ballistic missiles most unreliability occurs in the boost phase.) Such identification, disablement and replacement of defective vehicles in the boost phase not only would reduce weapons requirements, but would also reduce collateral damage.

For bias we assumed that the actual weapon aimpoints deviated from the ones designated in the study by given distances (1,000 feet and 2,000 feet), over at least four equally spaced directions. Though the Soviets may plan an attack to satisfy the dual criterion, clearly their attack cannot be expected to come up with exactly the same DGZ's as the ones postulated in the Pan Heuristics study. It is thus of interest to determine how differences in designated aimpoints would affect the military mission and the collateral fatalities. Bias may also arise from other sources, e.g., mapping errors and atmospheric conditions that cause a drift in a given direction.

We discuss reliability deviations first; details are given in Tables 1 and 2. Launching two weapons instead of one against each DGZ more than compensates for the assumed reduction in weapons reliability when results are assessed in terms of performance of the military mission. The average target area destroyed, over all 18 bases, exceeds 80 percent and for no

TABLE 1

Reliability: Average Expected Percent of Target Area Destroyed in Attacks on 18 USAFE bases

| Reliability* | 1000KT | 100KT | 30KT | 10KT | 5KT | 1KT |
|---|---|---|---|---|---|---|
| 0.8 | 96 | 89 | 91 | 87 | 87 | 84 |
| 1.0 | 100 | 89 | 90 | 83 | 83 | 77 |

TABLE 2

Reliability: Expected Fatalities in Attacks on 18 USAFE Bases for Population All Indoors or All Outdoors (000's)

| | 1000KT | | 100KT | | 30KT | | 10KT | | 5KT | | 1KT | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Reliability* | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out |
| 0.8 Total | 1027 | 1826 | 86.6 | 211 | 21.4 | 59.8 | 8.6 | 24.8 | 7.9 | 11.3 | 6.2 | 7.2 |
| 1.0 Total | 779 | 1501 | 64.8 | 149 | 17.2 | 44.4 | 7.4 | 18.8 | 6.9 | 9.8 | 5.5 | 6.4 |
| Ratio | 1.3 | 1.2 | 1.3 | 1.4 | 1.2 | 1.3 | 1.2 | 1.3 | 1.1 | 1.2 | 1.1 | 1.1 |
| 0.8 Average** | 57.1 | 101.5 | 4.8 | 11.7 | 1.2 | 3.3 | 0.5 | 1.4 | 0.4 | 0.6 | 0.3 | 0.4 |
| | 43.3 | 83.4 | 3.6 | 8.3 | 1 | 2.5 | 0.4 | 1 | 0.4 | 0.5 | 0.3 | 0.4 |

* One weapon per aimpoint for reliability = 1; two weapons per aimpoint for reliability = 0.8.

**Average per base.

base is the destruction less than 70 percent. However, launching the additional weapons increases expected fatalities significantly: 20 to 30 percent, on the average, for the 1000 KT yield weapons; 30 to 40 percent for the 100 KT yield; 20 to 30 percent for the 30 KT and 10 KT yields, 10 to 20 percent for the 5 KT yield; and about 10 percent for the 1 KT yield. On no individual base is the increase greater than 50 percent. For the 1,000 KT yield weapons the total increase in fatalaties for all 18 bases is 290 thousand persons. The total increase is about 40 thousand with the 100 KT yield, 10 thousand with the 30 KT yield, 3 and one-half thousand with the 10 KT yield, about 1 thousand with the 5 KT yield and less than 1 thousand with the 1 KT yield.

Not surprisingly the bias excursion tells a very different story: with lower yield weapons the military mission is seriously degraded, but fatalities averaged over the different directions, are generally only slightly higher than for the no bias case. Details are shown in Tables 3 and 4. Bias was specified in terms of distance of the aimpoint from the study's DGZ (1,000 feet and 2,000 feet) and direction. For each distance we assumed at least four equally spaced directions; the initial direction was randomly selected. The purpose of distributing the directions evenly was to obtain a reasonable estimate of the range of fatalities over the possible directions of the bias for each of the distances postulated. With the 30 KT yield weapons the average percent of target area destroyed over the bias directions in the attacks on the 18 bases was reduced from 90 percent to 87 percent for the 1,000 foot deviation and to 80 percent for the 2,000 foot deviation. The corresponding averages were still higher for 100 KT yield weapons and reached 100 percent for the 1,000 KT weapons.

TABLE 3

Bias: Average Expected Percent of Target Area Destroyed in Attacks on 18 USAFE Bases*

| Bias | 1000KT | 100KT | 30KT | 10KT | 5KT | 1KT |
|---|---|---|---|---|---|---|
| 2000 feet | 100 | 85 | 80 | 64 | 59 | 37 |
| 1000 feet | 100 | 88 | 87 | 77 | 76 | 62 |
| 0 feet | 100 | 89 | 90 | 83 | 83 | 77 |

TABLE 4

Bias: Average of Total Fatalities in Attacks on 18 USAFE Bases for Population all Indoors or all Outdoors* (000's)

| Bias | 1000KT | | 100KT | | 30KT | | 10KT | | 5KT | | 1KT | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out |
| 2000 feet | 780 | 1501 | 66 | 150 | 17.8 | 45.5 | 8.1 | 19.6 | 7.7 | 10.6 | 6.2 | 7.2 |
| 1000 feet | 779 | 1501 | 65 | 149 | 17.3 | 44.6 | 7.5 | 19.0 | 7.1 | 10.0 | 5.7 | 6.4 |
| 0 feet | 779 | 1501 | 65 | 149 | 17.2 | 44.4 | 7.4 | 18.8 | 6.9 | 9.8 | 5.5 | 6.4 |

*The average was calculated over four equally spaced directions in all cases except the case of 2,000 foot bias with 1 KT weapons, for which six equally spaced directions were employed.

With 10 KT and 5 KT yield weapons the average percent of target area destroyed was reduced from over 80 percent to over 75 percent for the 1,000 foot deviation and to about 60 percent for the 2,000 foot deviation. With 1 KT yield weapons, however, the averages for the 1,000 foot and 2,000 foot deviations were 62 and 37 percent, respectively, down from 77 percent.

With a 1,000 foot bias, fatalities, averaged over the bias directions, are increased only negligibly over the no bias case--for all weapon yields (i.e., less than 3 percent). With a 2,000 foot bias, this increase is still negligible for the 1,000 KT and 100 KT yield weapons; and it is about 3 percent, 6 percent, 10 percent and 13 percent for the 30 KT, 10 KT, 5 KT and 1 KT yield weapons, respectively.

It is of interest to examine variations in fatalities over the different directions. With 1,000 KT yield attacks, fatalities over the directions assumed deviated from zero bias fatalities by less than 10 percent for the 1,000 foot bias, and deviated by less than 10 percent for 13 bases and at most 17 percent for the remaining 5 bases for the 2,000 foot bias. With 100 KT yield attacks for the 1,000 foot bias, fatalities deviated from the zero bias ones by less than 10 percent for 14 bases and by about 15 percent for the remaining 4 bases; for the 2,000 foot bias, fatalities deviated less than 10 percent for 9 bases, about 20 percent for 5 bases, and up to about 40 percent for the remaining 4 bases. Thus, with these higher yields, we find that, for a few of the bases, 2,000 foot deviations in the DGZs will result in significant variation in fatalities, depending upon direction, although the average fatalities are about equal to those for the zero bias case. With the lower yield weapons, the difference between maximum and minimum fatalities among the different bias

directions are fairly small in magnitude: less than one thousand for 12 of the bases with the 30 KT yield attacks and in the hundreds for all but 4 bases with the 10 KT, 5 KT and 1 KT yield attacks, and in the low thousands for the remaining bases.

In summary, if in the attacks on the 18 USAFE bases postulated in the recent Pan Heuristics study the assumptions about reliability and bias are somewhat relaxed, the following are the effects on target destruction and collateral fatalities:

(1) If weapons are 80 percent reliable rather than perfect and the offense strategy is to compensate for this by launching two weapons instead of one at each DGZ, the military objective of the attacks will be achieved, but fatalities will increase--about 30 percent for the higher yield weapons (1,000 KT, 100 KT, 30 KT and 10 KT) and about 10 percent for the two lowest yield weapons (5 KT and 1 KT).

(2) On the other hand, if the DGZs of the attacks are not those employed in the Pan Heuristics study, but deviate from them by 1,000 feet or 2,000 feet, the military mission will be achieved for higher yield weapons, but will be degraded for the lower yields--significantly so with the greater bias. Thus, with the 2,000 foot bias, 59 percent of the target area, on average, is destroyed for the 5 KT yield weapon attacks and 36 percent for the 1 KT attacks. With the 1,000 foot bias, fatalities averaged over the directions increase negligibly or not at all over the no bias case (i.e., less than 3 percent), for all the weapon yields. With the 2,000 foot bias, however, the fatality increases are negligible for the weapon yield attacks of 30 KT or higher, but 6, 10 and 13 percent, respectively, for the 10 KT, 5 KT and 1 KT weapon yields.