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from time to time calls attention to published material that might contribute toward clarification or understanding of issues affecting world peace. The accompanying reprints constitute Reprint Mailing No. 73.

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SCIENCE

A Welcome Grace Note

Now that the American and Soviet academies of science have agreed to have joint leadership meetings from time to time, a fragile but promising footbridge is in the process of being assembled on behalf of conflict avoidance. It deserves to be reinforced by support from the scientific and engineering societies, and its weight-bearing characteristics may well turn on the quality of that support.

There are so few chances left to draw away some tension from the animosities that complicate the superpower interface that an understanding between the two great academies, even on limited terms, takes on more than usual significance. Although the academies are anything but strangers to each other, their working relationships have been chilled for 5 years. What brings them back to mutual discourse is the consensus of senior members of both organizations regarding the unacceptable global dangers posed by the escalating arms confrontation. Though solutions may be too much to expect, and none are being promised, there is an element of hope in the utility of the process itself.

There is a strong element of unreality to the best intentioned attempts to isolate a world power in science, even where the provocation is acute and felt deeply. When the two sides are unequal in their capacities for good science, withdrawal of contact has some effect. But when there is scientific parity in most fields, the case is quite different. Even so, it cannot have been an easy matter for the National Academy of Sciences to lift its freeze to the extent of reopening the channels of communication. No unconditional pardon has been issued that absolves the Soviets of past and present insults to scientific freedom and human rights, and there will be no dodging of these issues when the representatives of the respective academies come together. Since sanctions plainly have no visible effects on the activities of a police state, it is worthwhile to try an approach based on good offices and what appears to be a useful back channel for getting the American view across. Viewed in this light, the reapproachment between the academies could bring some measure of overdue relief for the harassed scientists whose plight will now be on the leaders' agenda. Should it turn out otherwise, controversy is likely to make the going rough.

The concept of scientific responsibility has been working its way into the moral framework of American science and its institutions for a considerable time. It seems a straightforward proposition, yet it is beset by dilemmas of choice and values, and the present case is no exception. Although a large cohort of the scientific community cannot find a good word to say for "Star Wars," their academic institutions seem to eye the prospect of sharing in the financial outlays with barely disguised satisfaction. But overall, the growing appeal of scientific responsibility is expressing itself in many ways including environmental sensitivity, self-regulation in medical research, accountability systems such as codes of ethics, concern for overpopulation, technology assessment, modeling studies on the biological and ecological effects of nuclear weapons exchanges, and initiatives to limit destabilizing weapons systems. In all these activities, disputes arise and heat is generated. But so is light.

As science and technology are swept up in the currents of civil and military passion, issues of conscience, values, and ultimately responsibility are forced to the surface, and choices must be made. Thirty years ago a presidential science adviser was heard to remark that his job produced an abundance of brilliant questions for which there were only dusty answers. The dust grows thicker.

However the idea of scientific responsibility may evolve over time, its essential relevance to the mitigation of global tension is unmistakable. This reality is the point from which to view the modest reconciliation of the American and Soviet academies of science. Against a desperate background, it comes as a welcome grace note.—WILLIAM D. CAREY

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IS THERE A WAY OUT?

Forty years ago this summer the birth of a new era was announced not by a star twinkling over Bethlehem but by a mushroom cloud rising over Alamogordo. By miraculous intellectual effort mankind had acquired the power to destroy the earth.

Mass campaigns to ban the bomb arise periodically, often in conjunction with urgent programs to build more and better ones. Such is the case in this anniversary year, but with a critical difference. The proponents of disarmament have been joined in their attacks on nuclear deterrence by the advocates of rearmament, who claim technology has made it possible to render nuclear weapons "impotent and obsolete." Apostles of both the left and the right—the troubled bishop as well as the zealous high-energy physicist—today form an unlikely alliance in challenging the first law of deterrence—that nuclear weapons exist in order to prevent their use.

What is the future of deterrence? Why does the arms race continue to accelerate? Will Star Wars make it possible to eliminate nuclear weapons? In the first of two discussions on international security, *Harper's* invited a group of scientists, strategists, and historians to reflect on the arms race, deterrence, and the chances of escaping the nuclear impasse.

The following Forum is based on a discussion held at the Columbia University School of Law in New York City. It was cosponsored by Harper's *and the Lawyers Committee on Nuclear Policy. Thomas Powers served as moderator.*

THOMAS POWERS
is the author of The Man Who Kept the Secrets: Richard Helms and the CIA *and* Thinking About the Next War, *among other books. He is at work on a history of strategic weapons.*

THEODORE DRAPER
is the author of many books, including American Communism and Soviet Russia *and, most recently,* Present History. *He writes frequently on nuclear issues for the* New York Review of Books.

HERBERT SCOVILLE JR.
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LEON WIESELTIER
is literary editor of the New Republic *and the author of* Nuclear War, Nuclear Peace.

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is a physicist who has served as a consultant to the Defense Department for thirty years, helping design the hydrogen bomb, cruise missiles, and military space systems. He is currently an IBM fellow at the Thomas J. Watson Research Center.

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ROBERT JASTROW
is a professor of earth sciences at Dartmouth College and the author of Astronomy: Fundamentals & Frontiers, *among other books. He writes frequently on nuclear issues for* Commentary.

THOMAS POWERS: We are here to consider the great fact of our age: that the United States and the Soviet Union, each with roughly 10,000 nuclear weapons that are aimed and ready to fire at any moment, could conceivably end the human experiment in a matter of hours. The military relationship between the two countries has long since come to dominate the political relationship. At the moment, the military relationship is one of parity; the nuclear arsenals of the two countries are roughly equal.

Parity has a nice ring to it; the word connotes fairness and justice. Yet parity arouses great anxiety among military strategists on both sides. Even though they are planning wars in which there can be no winner, at least not in the conventional sense of the word, parity introduces an element of doubt about the outcome that makes military men very nervous. Perhaps this is one reason why the present situation is so dynamic. Although many people seem to believe the strategic relationship is essentially stable, a sort of Mexican standoff, in fact it has changed dramatically from one decade to the next. Congress recently voted funds for a new intercontinental missile, the MX. But even more important, the United States is about to spend as much as a trillion dollars on a missile defense system—officially called the Strategic Defense Initiative, or SDI, but more commonly known as Star Wars. If history is any guide, the Soviet Union will follow suit.

I hope we can consider the implications of these changes, while bearing in mind a much larger question: Where is it all leading? The United States and the Soviet Union exist in history. The bitter rivalry between them, already forty years old, strongly resembles the traditional rivalries of great powers. Those rivalries turned out one way or another; so too will this one. And while I do not believe that war is likely to break out over some trifling issue, I do believe that if the enmity between the two countries goes on long enough, we will eventually have the war we are preparing for.

Perhaps we can begin by examining how the present situation came about. How did we come to believe that building 25,000 nuclear weapons would make us more secure?

Second, how will Star Wars and other new weapons programs alter the strategic relationship between the two countries?

Finally, is the present strategic relationship moving toward greater stability or greater fragility? If the latter, is there a way to reverse the movement? Is there a way out? Although we may never live in a world not threatened by war, or even in a world without nuclear weapons, surely we need not live indefinitely in a world that can destroy itself in a few hours. But, just as surely, we must imagine a solution before we can find one. Maybe today we can start.

Theodore Draper, perhaps you could describe how we got where we are today. What exactly is nuclear deterrence?

THEODORE DRAPER: The strategy of deterrence is as old as warfare itself. But nuclear deterrence extends the concept greatly, because the destructive power of these weapons is so massive that war between nations armed with them is bound to be mutually devastating. As long as one nuclear power can retain enough of its forces to retaliate in kind against the other, the notion of achieving "victory" by initiating a nuclear war becomes meaningless. The potential costs are so wildly disproportionate to the possible benefits that there can be no rational reason for using nuclear weapons.

Jacob Viner, then a professor at the University of Chicago, used the word "deterrent" in this way only six weeks after the first atomic bomb was dropped, observing that "retaliation in equal terms is unavoidable and in this sense the atomic bomb is a war deterrent, a peace-making force." As Bernard Brodie, a former student of Viner's, wrote the following year, "Thus far the chief purpose of our military establishment has been to win wars. From now on its chief purpose must be to avert them. It can have almost no other useful purpose."

Previous strategic doctrine had been devoted to the problem of how to win wars or how not to lose them. The strategy of nuclear deterrence is devoted to how *not* to fight a war at all. To deter the other side from launching its weapons, each side must make sure that under all circumstances it will have enough nuclear weapons to retaliate if attacked.

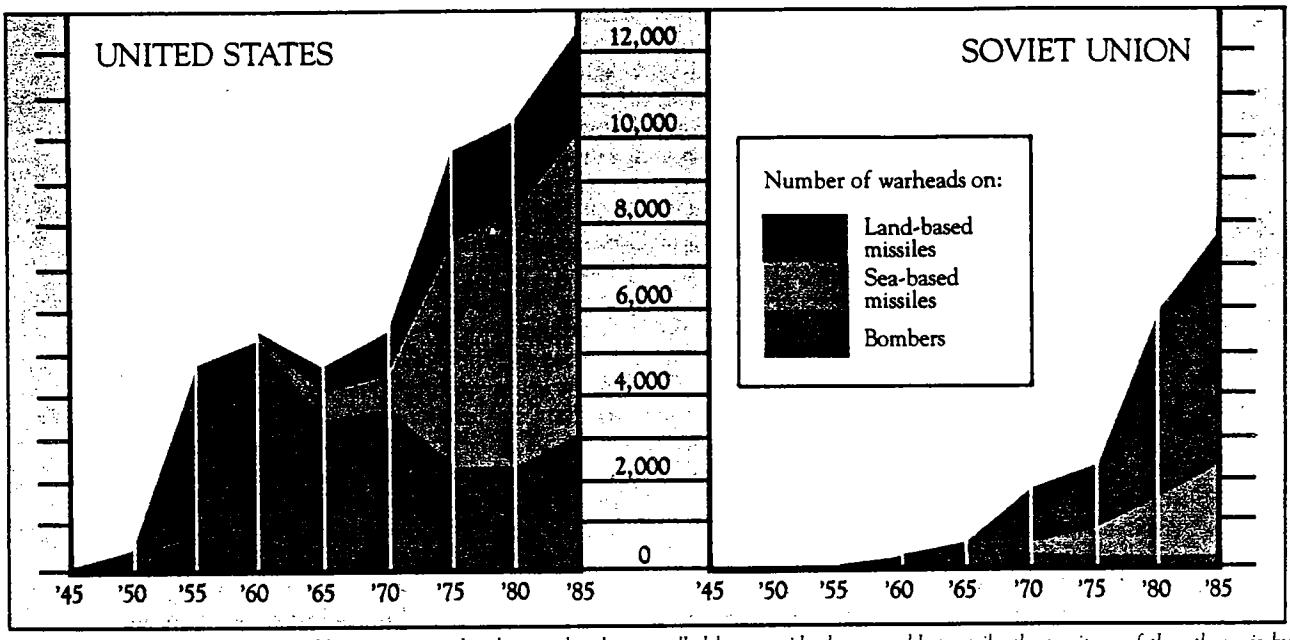
Nuclear deterrence was only an idea, not a fact, until the Russians successfully tested a nuclear device in 1949 and developed nuclear weapons sometime thereafter. The Soviet Union finally achieved equality in nuclear forces, or parity, during the 1960s. Parity seems to reinforce deterrence because both sides can hurt each other in more or less the same way. Yet it is important to note that parity is *not* essential for deterrence. What's crucial is not how many weapons a nuclear power has but how few it needs. If a nation deploys, say, 10,000 weapons, but needs no more than 1,000 to make the risk of nuclear war unacceptable to the other side, then the other 9,000 are redundant.

POWERS: Dr. Scoville, how did we move from the notion of nuclear deterrence to the conviction that we need the enormous and, it would seem, redundant number of weapons we have today?

HERBERT SCOVILLE JR.: The crucial point is that deterrence is not psychologically satisfying as a strategy. Even though it has worked, it causes many people a great deal of anxiety. So the concept has been distorted in order to support arguments for weapons and strategies that have nothing to do with deterrence. For example, many have long argued that the United States must have sufficient weapons to deter an attack at each "level" of escalation. This fuels the arms race, for it means in effect that the United States must match the Soviet Union system for system. More recently, the concept of deterrence has been used to support a twisted argument that the United States must have first-strike weapons—highly accurate missiles that could conceivably destroy the other side's forces in a surprise attack. These weapons are necessary—so the argument runs—to deter a first strike by the other side. This reasoning was used to win support for the MX.

The logic of this escapes me. To argue, in the name of deterrence, that the United States must be able to *destroy* the deterrent of the other side is to blatantly misuse the term. Such a capability would encourage the Soviet Union to try to destroy U.S. forces first. Instead of deterring, these weapons offer an incentive to the other side to launch its missiles in a crisis. But people persist in believing that only greater numbers of more and more sophisticated weapons can increase our security. By twisting the

Charting the Strategic Balance



Estimating the number of deliverable strategic warheads—warheads controlled by one side that are able to strike the territory of the other—is by nature controversial. Bare numbers conceal judgments about the capabilities and purposes of weapons, and thus tend to reflect political perceptions. They also ignore geographical and historical factors. The U.S. total, for example, includes medium-range missiles based in Europe and long-range cruise missiles based at sea, all of which can hit targets in the Soviet Union. The Soviet total does not include weapons targeted against Western Europe and unable to strike the United States. Historically a maritime power, the United States has emphasized ballistic missile submarines, while also maintaining a sizable bomber force. The Soviet Union, a continental power, has emphasized land-based missiles, which are larger and, until recently, were more accurate than submarine-launched missiles. The sharp rise in U.S. forces in 1970 and in Soviet forces in 1975 reflects the introduction of multiple warheads, or MIRVs. (Source: Center for Military Research and Analysis.)

concept of deterrence they offer an attractive, if misleading, argument for buying more weapons.

LEON WIESELTIER: We should distinguish between deterrence, which is a strategy for avoiding a war, and strategies for fighting a war. By definition, deterrence obtains only prior to a war; much of people's dissatisfaction with the concept of deterrence derives from their need to have a strategy for fighting a war. They keep asking: What do we do if deterrence fails? Deterrence offers no answer to that question. While deterrence can be enhanced in a number of different ways—some versions call for the MX, for example, while other versions reject it—it is always a way to *manage* a certain situation and not to *transcend* that situation.

Deterrence is obviously a terrible, repugnant strategy, or anti-strategy. Nobody likes it. The President doesn't like it, which is why he's developed his great Star Wars fantasy. Those in the peace movement don't like it, which is why they campaign for disarmament. But the current debate has too often depended on a willful misreading of deterrence, which has been viewed as synonymous with mutual assured destruction, usually called MAD. MAD has been made a straw man. Generally, it calls for the destruction of Russian cities in direct response to an attack on the United States; yet the drawbacks of such a policy, both moral and military, have been perfectly obvious for a long time. And that partly explains why MAD, at least the version that is usually criticized, never was adopted as a real operational strategy for the use of American nuclear weapons.

But if mutual assured destruction does not correctly describe our strategy, it perfectly describes our condition. There seems no political or technological way to escape this condition. If the United States and the Soviet Union agreed tomorrow to eliminate half their arsenals, both countries would still possess more than enough power to blow up the world. Technological solutions—for example, deploying higher-accuracy, lower-yield weapons to give the United States "flexible options" in responding to an attack—raise the same problem. We can argue about the wisdom of such options for managing deterrence. But the basic dilemma will persist. Adding more rungs to the ladder of escalation will not get us off the ladder.

Deterrence is a detestable thing. Still, it's not *only* a detestable thing. Given the reduced expectations one must have for the species in a world we share with 50,000 nuclear warheads, now is probably not the time to try to abolish the evil in man. The attempt to do so—whether the President's attempt or the peace movement's attempt—could well turn out to be more dangerous than the detestable thing itself.

RICHARD GARWIN: To paraphrase what Churchill said of democracy: Deterrence in the age of nuclear weapons is the worst strategy that has been devised, except for all the others. Even though we may feel a moral repugnance for ensuring our survival by threatening to kill tens of millions of innocent men, women, and children—as President Reagan put it when he first proposed Star Wars—that is no reason to reach out recklessly for something new. Rather, we should continue trying to survive—confidently and morally. If deterrence makes it possible for us to survive year by year, decade by decade, and pass not only the problem but the moral concern on to our children and grandchildren, I think we'll be doing very well indeed.

It is not really true that a nuclear war is inevitable. If the probability of nuclear war this year is one percent, and if we manage each year to reduce the probability to only 80 percent of what it was the previous year, then the cumulative probability of nuclear war for all time will be 5 percent. That's not bad, especially since nothing else has been proposed that could possibly change the deterrent relationship in less than fifteen or twenty years.

How to manage deterrence? Some people say the United States must always seek parity. But it is impossible to achieve parity in the eyes of everyone on both sides, especially when the respective arsenals are so different. A better goal is stability: the Soviet Union and the United States are deterred from starting a nuclear war by comparing their prospective situations after an exchange with their known situations before. For deterrence to work, it need only be made clear to the Russians that they will not survive a nuclear war they begin. Retaliation in kind, matching the Russians at each level of weaponry, is not necessary. The United States need only be able, under any circumstances, to deliver punishment that is immeasurably worse than any gains the Russians could possibly hope to achieve in starting a war.

If deterrence fails, what will we do? Don't we need weapons and a strategy to fight a nuclear war? The answer is no, not if we have prevented nuclear war in the first place. We don't need a cure for the disease if we have an effective vaccine to prevent it. Of course, whatever the Soviet Union does, the United States must retain the ability to strike back and destroy it. But that does not mean that every element of our strategic force need be survivable. By using perhaps six nuclear weapons, the Russians could destroy ten of our nuclear submarines in port at any time, eliminating as many as 2,000 of our warheads. How do they resist doing that? Because they know the United States would respond by launching its remaining 4,000 warheads. So no one ever talks about those "vulnerable" submarines. Yet for the last fifteen years at least, the supposed vulnerability of our *land*-based missiles has been offered as an argument for building weapons that make no difference whatever to the strategic situation.

POWERS: I once talked with Norris Bradbury, who succeeded J. Robert Oppenheimer as director of the Los Alamos laboratory shortly after World War II. On becoming director, Bradbury asked General Leslie Groves, who was in charge of the Manhattan Project, how many nuclear weapons Los Alamos should build now that the war was over. General Groves's answer was simple. First, he asked, how much fissionable material is needed to make a nuclear weapon? Second, how much are we able to produce each year? Now, continued the general, divide the second figure by the first and you will arrive at the number of nuclear weapons the United States "needs."

In other words, the United States needed to make all the nuclear weapons it *could* make.

DRAPER: General Groves was thinking in traditional military terms. At a time when we still had very few nuclear weapons, he saw them as a tool to win a war, not to prevent one. Deterrence goes against the military grain; General Groves was going with the grain, and that mentality persists. Many of the attempts to get around deterrence reflect the influence of traditional military thinking. Thus the present Administration believes that the United States must be prepared to fight and even to "prevail" in a protracted nuclear war. Or it proposes that we develop defenses to protect us from the other side's nuclear weapons.

SAUL H. MENDLOVITZ: I agree that the United States does not develop or deploy most nuclear weapons to enhance deterrence. The United States uses nuclear weapons not only to deter the Soviet Union from attacking but to apply political leverage—for example, to protect Europe from a conventional Russian invasion and to contain the Russians elsewhere in the world. After all, there have been a number of instances of the United States' threatening to use nuclear

weapons—Suez in 1956, Lebanon in 1958, Cuba in 1962, and the Middle East in 1973, to name only the better known—and none of them had to do with deterring the Russians from attacking this country directly.

ROBERT JOHANSEN: Clearly, the United States continues to build all these absurdly redundant weapons in order to gain political, psychological, and strategic advantage. The current buildup arises from U.S. officials' desire to recapture some of the enormous nuclear advantage the United States enjoyed in the 1950s and early 1960s. U.S. policymakers use nuclear deterrence to achieve two purposes: discouraging the Soviet Union from doing things the United States doesn't want—invading Afghanistan, for example—and preventing the Soviet Union from using nuclear weapons against the United States or its allies.

The problem is that when deterrence fails repeatedly in its first purpose, it will inevitably fail in its second. Though deterrence may seem stabilizing in the short run, there *must* be a probability of its failure in the long run—otherwise, it would cease to deter. Repeated threats to use nuclear weapons can remain credible only if the weapons are occasionally used. Otherwise the threats will come to be viewed as a bluff. As long as maintaining a credible nuclear threat remains the driving force behind U.S. security policy, it will be impossible to move away from the unstable deterrent system. When a nation tries to maintain deterrence based on such dynamic technology, there will always be demands for new arms to gain an advantage.

DRAPER: To bring Afghanistan into the discussion is to get altogether away from the question of nuclear deterrence.

MENDLOVITZ: Europe is a better example. Deterrence in Europe has nothing to do with the Russians using their nuclear weapons against us, or against the Europeans, for that matter. The United States has a policy of "first use" of nuclear weapons in Europe precisely to deter the superior *conventional* Russian forces from invading.

DRAPER: Threatening to use nuclear weapons to deter a Soviet conventional attack on Europe was credible, if at all, *before* the Soviet Union had enough nuclear weapons to retaliate in kind. Once that condition had been satisfied, the threat became less and less credible, as de Gaulle was one of the first to realize. In any case, the United States has never been able to use its nuclear power to deter the Russians from any political or non-nuclear military move—not in Eastern Europe, not in Afghanistan, not anywhere.

GREGORY A. FOSSEDAL: Deterrence is simply an attempt to influence human behavior. We don't want the Russians to launch nuclear weapons at us so we try to deter them. Deterrence itself will never go away. However, we can rid ourselves of undesirable *forms* of deterrence, such as mutual assured destruction.

WIESELTIER: But the United States never really had a strategy of mutual assured destruction. With the possible exception of a brief period in the McNamara years, the United States never adopted an operational plan that would begin with the massive destruction of Soviet cities.

FOSSEDAL: If I were trying to deter the communist elite from attacking, I would not make their cities my primary target. The communist elite couldn't care less about losing 50 million people in a war.

ROBERT JASTROW: The Russians have killed 60 million of their own people since the Bolshevik revolution, so I think that's a fair statement.

FOSSEDAL: Our strategists have naturally chosen to threaten those assets the Russians do care about: their factories and military installations, and their leaders hidden in their bunkers.

In any case, there are various ways to deter. One way is to threaten to act if the other party does something you don't want it to do: if you hit me with your club, I'll hit you with my club. This is deterrence by threat, which is the present U.S. policy. One can also deter with complexity or uncertainty: if you hit me with your club, you don't know what I'll do. Perhaps I've put a shield on my arm; perhaps I've learned new techniques for dodging your club; perhaps I've developed laser beams that can destroy your club.

Another way to deter is by making the cost of maintaining a first-strike threat prohibitive. The United States might say to the Soviet Union, in effect: We know you build your weapons because you think you might be able to use them in a first strike against all our retaliatory forces. But although our defenses are not perfect, they can stop 90 percent of your missiles, thereby ensuring that you can never plausibly threaten to destroy our society. So why not stop building those expensive weapons?

At present, the United States does not have a broad-based deterrence strategy. In the 1960s and early 1970s American planners decided that other forms of deterrence were ineffective, unnecessary, or—in the case of missile de-

fense—unworkable. So the United States committed itself to deterrence by threat, a policy that leaders of both parties claimed would eventually encourage the two sides to agree to get rid of nuclear weapons. In fact, however, the two countries have been stuck with this dangerous policy for close to thirty years. Perhaps it's time to try deterrence by complexity.

WIESELTIER: This "deterrence by complexity" ought to be called deterrence by credulity—and the credulity is yours. Before we abandon what you call deterrence by threat, it must be shown that it's possible to dodge an attack successfully. Moreover, why should we believe that if the United States built defenses, the Soviet Union would stop building offenses? Before the ABM treaty was signed, the United States was worried that the Russians would build defenses, and responded in exactly the opposite way: it shifted to MIRVs, which carry multiple warheads. The other side's defensive inclinations encouraged the United States to deploy new offensive technology.

I don't understand your blithe reference to defenses that "are not perfect." That is not a mere detail. If it were somehow possible to defend the population of the United States against nuclear weapons, then we would be able to dispense with deterrence. As soon as you concede the imperfection of the defenses you advocate, you admit that we have not escaped deterrence at all. In fact, the defenses are just another proposal to manage deterrence differently. Why is your idea preferable? The premise behind the imperfect defense—really a defense of military installations—is the old fear of a successful Soviet first strike. But if the Soviet Union can knock out America's land-based missile force without risking real retaliation, why has it not launched its missiles? Why were they not launched in 1978, 1979, or any of the years since?

Finally, the kind of imperfect defense you describe, whatever its uses, certainly does not deserve the moral glamour that the President and other Star Wars advocates have attached to it. The only defense truly deserving of that moral glamour is an effective defense of the men and women and children of the United States.

FOSSEDAL: That any defense must defend either silos *or* cities is an invention of Stars Wars opponents. We can defend both. And the notion that by building defenses we will make the Russians build more missiles goes against everything we know about human behavior. When we discover that one of our weapons can be efficiently countered, we shift to different weapons. The goal is to make the Soviet Union shift to different systems—including defenses of their own, which I hope they keep building.

SCOVILLE: In my view, developing defenses encourages a first strike. Even if every one of the United States' land-based missiles were destroyed, it could still retaliate with the 4,000 or so missiles aboard its submarines. But if the Soviet Union built defenses, U.S. planners would begin to worry that those defenses could stop an American retaliatory strike. This might encourage us to fire first in a crisis.

POWERS: Star Wars strikes me as an attempt to find a technical solution to what is ultimately a political problem. We can't really make ourselves safe all by ourselves anymore. We've got to do it with the Russians. We'll either both be safe or both be threatened.

As Leon Wieseltier mentioned, in 1970 the United States began to deploy MIRVs, after briefly considering banning them in the SALT I negotiations. The Russians followed suit in 1975, and we realized that we'd created a world in which we felt much less safe. We found ourselves debating the vulnerability of our land-based missiles, a vulnerability which became possible only after the Russians began equipping their own heavy missiles with multiple warheads. I wonder if Star Wars may not ultimately have a similar result.

SCOVILLE: Star Wars will make it virtually impossible to limit offensive weapons any further. The Soviet Union will respond by building new missiles and developing countermeasures to penetrate American defenses. After all, a defensive system is intended to render the opponent's strategic missile force impotent. The man who heads the Star Wars program, Lieutenant General James Abrahamson, has said that if the Russians developed defenses, any prudent military officer would feel the need to build offensive weapons that could counter them. Indeed, the Pentagon already has a major research project under way to develop ways to defeat a Russian defense program.

Star Wars will put an end to any hope for progress in arms control. It will also destroy the best arms-control agreement we have, the ABM treaty, which by forbidding defense ensures that every retaliatory warhead is able to reach its target.

WIESELTIER: But if Star Wars *could* conceivably work, the damage to arms control would probably be a price worth paying.

POWERS: It depends what you mean by Star Wars "working." Even if it could stop 100 percent of

incoming missiles, it would bring new dangers into the strategic relationship. There is already a tremendous interest in determining how such a system might be incapacitated, perhaps by means of the anti-satellite weapons both sides are developing. So even if Star Wars did work, it would never be perfect or entirely predictable, and it would bring with it new uncertainties. To "make nuclear weapons obsolete," as the President wants, Star Wars would have to work in a way that things in this world just don't.

DRAPER: Of course, Star Wars would have to be perfectly effective—impossibly effective—to be worth deploying. What counts is not how many missiles it could stop, but how many could get through. If it managed to stop 9,000 missiles out of 10,000—an extraordinary percentage for any defense—the 1,000 that got through would still be utterly devastating. It would be as if none had been stopped.

The Star Wars propaganda suggests a nation can have purely defensive and purely offensive weapons. But in nuclear warfare, as in all warfare, the defense and the offense are intimately linked. To say a nation has developed a better defense is equivalent to saying it has developed a better offense; by making the "offensive" weapons more secure, it has added to their effectiveness.

JOHANSEN: Which is to say that the push for Star Wars is actually a continuation of the movement toward redundancy that has been accelerating throughout the postwar years. Indeed, Star Wars has helped restore legitimacy to nuclear weapons. President Reagan's proposal, couched as it is in highly moralistic terms, helps people accept the arms race—after all, they think, it might one day enable us to abolish nuclear weapons. Reagan was able to tap into the general revulsion against nuclear weapons evident in the freeze movement. Meanwhile, what began as a sales pitch for a technology that would render nuclear weapons obsolete has deteriorated into just another costly escalation of the arms race.

Star Wars is another in a long line of weapons systems intended to give the United States more political leverage. After all, if the goal of U.S. policy is to increase the security of this country rather than to increase the threat to the Soviet Union, why build the MX? It's unquestionably destabilizing. It will be deployed in the supposedly vulnerable Minuteman III silos, and its accuracy and multiple warheads threaten the Russians' land-based missiles. The MX, and other new weapons such as the Trident II and Pershing II missiles, increase the Russians' fear that the United States may soon be able to strike first in a crisis. Whenever we increase the threat to the other side, it is only a matter of time before the threat to us is increased.

MENDLOVITZ: This discussion demonstrates the paucity of imagination with which we approach the problem of nuclear weapons. The Star Wars debate raises a much larger, more important issue: we have entered the post-deterrence age. Deterrence is being vigorously attacked from both the right and the left. It is time to begin thinking about new ways to escape deterrence.

The most obvious way is through demilitarization. I don't mean this as a pie-in-the-sky, utopian notion. It is time for people who are concerned about human life to begin *seriously* discussing how to develop and implement international institutions that can effectively monitor disarmament, the dismantling of weapons, and, above all, the maintenance of peace. How to move toward such a project? This forum is cosponsored by the Lawyers Committee on Nuclear Policy, an organization whose stated goal is to educate the American public about the *illegality* of nuclear weapons. It's important to say that, loudly and repeatedly. After all, the Supreme Court decision in *Brown* v. *Board of Education* that separate but equal facilities are unconstitutional preceded the civil rights movement; the normative order came first. It is apparent that the human race is disgusted with nuclear weapons. Our task is to create a normative order that will legitimize that revulsion and channel it into a true political process. Instead, we sit here talking about Buck Rogers.

WIESELTIER: But no one has come up with a workable answer to the question of *how* to demilitarize. Until you have a concrete way to get us from here to there, it is unfair to criticize proponents of deterrence for a "paucity of imagination." They imagine one thing very vividly: the possibility of nuclear war. Until you idealists find a way out, scorning the realists is unfair.

MENDLOVITZ: You're the idealists. To believe that during the next twenty years or so we can depend on an arms race for our survival without doing ourselves great harm seems very idealistic to me. Realism begins with the conviction that something must be done. I agree with George Kennan, who wrote that the only way to rid the world of nuclear weapons is to dismantle the war system itself. To begin doing that we must take the normative initiative here at home and begin *serious* discussions with the Soviet Union. I believe the Russians are ready for a radical new initiative, and I don't mean Star Wars or extended deterrence.

WIESELTIER: I have no idea why you think the Russians are willing to go ahead with such negotiations; you and I must be living on two different planets. You argue that because civilization might be destroyed at any time, mankind must take great conceptual leaps and "dismantle the war system." But precisely because the stakes *are* so high, we have to be very cautious about fiddling with the rules of the game—for the simple reason that those things might go off.

GARWIN: I reject the dichotomy Dr. Mendlovitz introduced between certain destruction and dismantling the war system. Deterrence doesn't require an arms race. The United States can slow the arms buildup unilaterally simply by ceasing to threaten the strategic offensive forces of the other side. The United States ought to build 400 Midgetmen, the small, not very accurate single-warhead missiles proposed by the Scowcroft commission, and put them in Minuteman II silos. Meanwhile, we should reduce our forces temporarily by 50 percent—send half our submarines to cruise in the Antarctic, pile twenty meters of earth over half our Minuteman silos, and put half our strategic bombers in mothballs. Then we should invite the Soviet Union to follow suit within six weeks, and if it does, we should make the arrangement permanent.

Eventually the U.S. might have 40 submarines, each carrying only two or three missiles. After a decade of that, we'll realize we're paying far too much to deter, and we'll replace those big submarines with smaller ones, carrying a total of 400 warheads. At the same time the 400 Midgetman missiles will remain in their silos, and perhaps 200 air-launched cruise missiles will be deployed on 100 little bombers that won't be able to penetrate the Soviet Union. This adds up to a very cheap and effective deterrent force of 1,000 warheads. Meanwhile, if the Soviet Union prefers to keep its thousand warheads on 100 land-based ICBMs, let it. They will not threaten our retaliatory force.

When both sides are building up, there's no way to propose a big reduction. The main thing is not necessarily to be reducing; the main thing is not to be building. Our goal should be stability, not parity, and certainly not supremacy, which both sides obviously cannot have.

POWERS: What you propose sounds like a fine program. But how do we actually embark on it? I see no groundswell of feeling in Washington that we should eliminate the MX; on the contrary, Congress has just approved it. I see no large movement in favor of a build-down.

MENDLOVITZ: So long as Dr. Garwin's program is confined to the level of strategy—so long as it is not part of a larger vision—it will never muster the widespread support needed to execute it. We will not begin moving in that direction until the paradigm is changed. Only when people begin questioning the validity of nuclear deterrence as part of a general movement toward demilitarization—when they begin building on some of the issues the Catholic bishops have raised, for example—only then will something happen.

GARWIN: Obviously some arms control is necessary for the program to work—strengthening the antiballistic missile treaty, for example. A ban would have to be negotiated on the testing of anti-satellite and space weapons, and on the testing of nuclear explosives.

MENDLOVITZ: But a context already exists for a more comprehensive kind of negotiation. The McCloy-Zorin agreement, signed in 1961, and the two general disarmament proposals tabled at Geneva in 1962, all of which point to the need to dismantle the war system, could be used as starting points. We should breathe new life into them and begin establishing the multinational institutions I mentioned.

DRAPER: You are really talking about a world government.

MENDLOVITZ: It wouldn't scare me. I would prefer that to the present situation.

DRAPER: But is it realistic to talk about a world government that could force the United States and the Soviet Union to do things they might not want to do? Without the force to back it up, the *Brown* decision would never have been implemented. There is a world of difference between what happens within one nation and what happens between different nations, especially antagonistic ones.

MENDLOVITZ: The same kind of imagination that made some kooks in the eighteenth and nineteenth centuries think getting rid of slavery was possible will have to be present if we are ever going to make nuclear weapons illegal. A group of people must take on the task of establishing the institutions—peacekeeping, monitoring, adjudicating—that are the beginnings of government. That process will gradually encourage people to trust in the system, as they have gradually lost trust in the present nuclear system.

JOHANSEN: There are steps the U.S. can take that won't jeopardize its security in the short run, and that may open the door to this kind of

world transformation. First, Congress should refuse to fund any first-strike weapons, such as the MX; such weapons don't increase the security of the United States, regardless of what the Soviet Union does. Second, Congress should refuse to fund any weapons whose numbers cannot be verified. If the United States insists on building long-range cruise missiles, international inspectors should count them as they roll off the assembly line. That way, the Soviet Union couldn't use inflated estimates of U.S. weapons to justify increasing its own deployments, and the Russians would be encouraged to comply with similar inspection. Third, Congress should insist that the United States not test any major system unless the Soviet Union has already tested its own version. Without such a principle the two nations will keep leapfrogging each other into catastrophe. Congress has already applied this principle in delaying testing of our anti-satellite weapon; it should extend its ban on testing ASAT while a treaty is negotiated, and apply the principle to all major weapons systems. Finally, Congress should ensure that the Pentagon stop blurring the line between conventional and nuclear arms. We have been steadily moving to smaller, more accurate weapons that lower the threshold at which a local conflict could escalate into a nuclear war.

FOSSEDAL: These proposals touch on the real case for Star Wars. Arms control, as currently structured, raises tremendous verification problems. There now exist two distinct sorts of weapons: the "stabilizing" sort Dr. Garwin wants to build and the verifiable sort, which are not stabilizing. But the mobile survivable systems aren't verifiable even by on-site inspection; and the systems that *are* verifiable are also vulnerable, which makes them, arguably at least, first-strike weapons. How do we get around that gridlock? With imperfect defenses.

It's true there is no perfect defense against 10,000 Soviet weapons. But it is possible to build a defense that would allow the two countries to mutually disarm. Right-wingers have talked about radical solutions to the nuclear problem: Star Wars has been proposed in conjunction with unilateral disarmament. Once Star Wars is operational, the United States can eliminate a large part of its offensive forces.

This idea of defense in conjunction with a build-down is not original. It is drawn from Andrei Gromyko's speech to the United Nations in September 1962, in which he in effect admitted that the two nations would never conquer the verification problem because it tends to grow more important the fewer arms both sides have. Gromyko proposed that the Soviet Union and the United States draft a timetable for eliminating all offensive weapons. But there was one important proviso: both nations would be permitted to build defenses. Thus, even if they didn't fully trust each other to carry out the agreements, or if they were worried about the nuclear forces of the Chinese or the Libyans or whomever, they could still proceed with disarmament, confident that their defenses would protect them.

I would be delighted to accept Mr. Gromyko's proposal. What do the left-wingers here think of it?

GARWIN: It's fine for Mr. Fossedal to call himself a right-winger, but I happen to be an extreme conservative myself. Mr. Fossedal's fascinating proposal happens to be presaged in a remarkable "strategy" document, entitled "A Proposed Plan for Project on BMD and Arms Control," which was apparently written by John Bosma, then a consultant to Lieutenant General Daniel O. Graham's High Frontier group. The document explains how "we"—those "right-wingers" who want the United States to build Star Wars—have to "capture" the freezers and the arms controllers. One of the suggestions is that "we" talk about Star Wars as a return to the Gromyko proposal of 1962.

In many of the arguments for strategic defense a fancy tune is being played, like that we just heard. President Reagan's call was for a program to render nuclear weapons "impotent and obsolete"—that is, for a program that would be morally preferable to deterrence. But technical studies done after the President's speech hold out little hope that the Russian threat to the United States' survival can ever be eliminated by defense, and *no* hope that the United States could ever abandon its retaliatory weapons. Star Wars is really intended to strengthen deterrence, not replace it.

In the next five years the United States will devote $26 billion to Star Wars research and development, which, if successful, will bring another five years of research projected to cost about $50 billion. After this ten-year $76 billion effort, someone—not President Reagan—will have to decide whether to build the system, which, according to former Secretaries of Defense Harold Brown and James Schlesinger, would cost about a trillion dollars and still not protect this country against destruction by Soviet missiles.

Star Wars proponents like Lewis Lehrman say defenses would largely banish fears of a nuclear war occasioned by something other than a deliberate, all-out attack. But the United States

has already provided itself at very great cost with a large force of retaliatory warheads on submarine-launched missiles, and those submarines are becoming less vulnerable with time. As for reducing the vulnerability of our land-based missiles, the Scowcroft commission recommended that the United States develop a single-warhead missile, the Midgetman. And if protecting the United States against accidental launches of Russian ICBMs is truly important, why wait for an elaborate defense? The United States and the Soviet Union could more easily and cheaply protect themselves against accidental launches by installing the command-destruct radio receivers commonly used in test firings of their operational missiles.

Star Wars, the new "shield of the Republic," as Lehrman dubbed it, seems more a costly and fragile emblem than an effective defense.

POWERS: Discussions about nuclear weapons always seem much more vivid when people are talking about the problem than when they are talking about the solution. I am left with the impression that there's nothing one person or even large groups of people can do about this problem. The situation of the United States and the Soviet Union today is not unlike that of the Allied powers and the Central powers in 1910. Very few Europeans foresaw that Germany would be destroyed in two world wars. What will the world look like in fifty years?

SCOVILLE: Fifty years from now the Soviet Union and the United States will remain at swords' points, each armed with weapons systems that make the other increasingly fearful of a first strike. Many other countries will have nuclear weapons as well. How to deal with such a problem baffles the imagination, for in many ways proliferation is an even more frightening development than the continuing growth of the American and Soviet arsenals.

We have to get over the idea that there is a technological fix that will eliminate the nuclear threat. Developing defenses will not solve the problem. Buying new offensive weapons will not solve the problem. We must stop replacing existing weapons with new ones that offer incentives to attack first in a crisis. The real problem today remains how not to use nuclear weapons; after all, even if we somehow started getting rid of them, it would be a long time before we made any meaningful reduction in the stockpiles.

JASTROW: I think all of us want to see nuclear weapons abolished, at least all of us in this room. But it's not true, as Thomas Powers suggested, that this is really a political problem, because its origin is technical. With the Soviet Union building its Star Wars defenses at the same time as the United States, the two nations could proceed together toward the abolition of nuclear weapons. This would involve parallel deployments of defenses in tandem with the incremental reduction of the two arsenals. I believe that is the road to a nuclear-free world.

FOSSEDAL: I would not want the world to look the way some people predict it will—a perpetual stalemate between the United States and the Soviet Union. Given the unlimited objectives of the Soviet Union, and the unlimited objectives set forth in our Declaration of Independence, which states that all men are created equal—not all white men, not all men in America, but *all* men—it seems to me the conflict will be resolved only through free elections in the Soviet Union, a shift to a world government, or a triumph on the part of one side or the other. If there is any question we should ask ourselves about any of these proposals it is this: Will it advance U.S. democratic interests and strike a blow at Soviet tyranny? The burden of proof is not on those who want to counter tyranny, but on those who oppose them.

WIESELTIER: I would like to see the Soviet Union become weaker and weaker at home and less and less influential abroad, and I would like to see the United States do whatever it can to bring that about without damaging itself. But I don't see how Star Wars will weaken communism; that's demagogy. Since I don't believe technology points the way to abolishing nuclear weapons; since I don't see any institution of human creation abolishing war or the system of sovereign states or eliminating the evil in man; and since I know of no weapon that has never been used, the future fills me with great foreboding.

GARWIN: The Soviet Union may or may not ever have democratic elections. Frankly, I'm more concerned about the United States' continuing to have them. Very often a choice must be made between advancing Western democratic ideals, which we all want to do, and striking a blow against Soviet tyranny. Too many would prefer to hurt the Russians even if it hurts democratic principles at the same time.

Congress today does not represent the people, because the men and women we elect know they will be beaten around the ears by the President, and defeated in the next election, if they refuse to vote for unnecessary and dangerous weapons. Democracy tends to vanish when people are denied information; the SDI office provides propaganda, not information, about

both our own technological capabilities and those of the Russians.

MENDLOVITZ: In 2035 a minimum of 8 billion people will live on the earth—if there is not a major exchange of nuclear weapons. If the world in 2035 does not resemble the chaos and anarchy of Lebanon, or the system of two or three superstates depicted in Orwell's *Nineteen Eighty-four*, then a global society will likely have emerged. Right now the world is going through a change as great and as profound as the transformation from a world of hunters and gatherers to a world of cities and nations. The old structures and paradigms will not carry us through this change. We must intervene to ensure that the world emerges intact. I don't expect people to become "global citizens" overnight. But we do need a new movement to take on the responsibility of promoting global security.

This discussion makes me pessimistic. Until responsible people provide imaginative, courageous leadership, the bleaker scenarios seem much more likely to me than a global society.

JOHANSEN: We can begin to build a more secure world by moving from a system of nuclear deterrence to one of non-nuclear deterrence, and from that to non-military deterrence. The goal is a demilitarized world system in which aggressors are not able to take what they want by force, in which the means used to prevent aggression are political, legal, moral, and economic.

First, we must acknowledge that differences in the numbers of nuclear weapons don't matter much at the present levels of armament. We shouldn't quibble at arms-control negotiations over differences of a few hundred, and we should avoid building first-strike weapons even if the other side does. Second, we must not attempt to use deterrence to attain diplomatic leverage. Third, we must work to change the international code of conduct. A first step could be to establish principles of non-intervention in the Third World and a commitment not to build any new bases there. We must begin to create institutions for international monitoring and enforcement—not because they are a panacea, but because they point the way to a more secure system of international relations.

The only way to enhance security in the nuclear age is to decrease the *role* of military power in world affairs. That obviously can't be achieved by military means. Any use of military force, even in self-defense, reaffirms the legitimacy of military power. The emphasis must be on positive, militarily nonthreatening incentives to encourage nations to change their conduct.

It is moral action that gives purpose to our lives and our political activity. Why else would we marshal arms and go to war, except to defend values that are central to us? It's high time we consider whether nuclear weapons can really defend the values we hold most dear. Nuclear weapons are fundamentally antidemocratic. Can we imagine anything less democratic than a huge arsenal of nuclear weapons under the authority of one man? However evil the Soviet empire might be, I see no moral purpose that would condone U.S. retaliation against the Soviet Union, which would destroy the Russian people for the misdeeds of a government over which they have no control. This willingness to destroy innocent people by the millions is the modern equivalent of tribalism and racism, which denies that another part of the human species is also human.

There is another way to live and to act, and it's no more risky when you consider all the dangers inherent in the use of or threat to use nuclear weapons. In fact, this other way is more prudent, more truly self-interested. It acknowledges that there will either be human security or human insecurity. One nation attaining security all by itself is no longer possible. The new way must emphasize common security—the security of all.

POWERS: I once talked with a fellow who helped write Presidential Directive 59, a document drafted under President Carter that partially established the war-fighting strategies now central to American planning. He told me he had a very difficult time persuading the National Security Council to write such a document; everyone knew it would be a great bureaucratic chore. Nonetheless, he went to General William Odom, who was then military adviser to the National Security Council, and to Zbigniew Brzezinski, who was national security adviser, and told them that the United States absolutely must have that strategy document. Why? The administration was proposing to buy the MX, a new counterforce weapon, and as yet there was no strategy for its use. Unless the administration had a strategy for the missile, it couldn't convince Congress to fund it. That's how the administration was persuaded that the United States needed Presidential Directive 59.

This story is symptomatic of the history of nuclear weapons. From the very beginning the weapons have been telling us what to do. First they told us they could be invented; then they told us they could be numerous; now they're telling us they can be accurate and versatile. My hope is that fifty years hence we will somehow have reversed this relationship, that we will finally have found a way to tell the weapons what to do. My fear is that we won't have. ■

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Los Angeles Times
Wednesday, May 29, 1985

Americans and Soviets *Can* Live in Peace

By JOHN MARKS and DAVID LANDAU

President Reagan and Soviet leader Mikhail S. Gorbachev have agreed to hold a summit meeting, but they cannot seem to set a date for it. The two men have each said that they want better relations with the other, but American-Soviet tensions remain high.

Consider the possibility that Reagan and Gorbachev might break the deadlock by issuing a statement along the following lines:

"We recognize that our two nations possess awesome power and that we hold in our hands not just our own fates but the lives of everyone on the planet as well. We share a single paramount concern, which is that our two nations must never go to war against each other. We must ensure that no crisis anywhere, nor the use of a nuclear weapon by a third power, nor an accident or misunderstanding, will lead to the outbreak of war between us.

"We affirm that we share other common interests. We both wish to keep nuclear weapons out of the hands of third parties. We want to spare our economies from unnecessary military buildup. We have a joint interest in solving such global problems as hunger, poverty and environmental threats.

"We recognize that relations between our countries have been marked by grave mistrust and by the threat of war. Our political systems differ greatly. Our two countries oppose each other in many ways and in many places. We recognize that intense competition and mistrust will be present in our relations for years to come. Even so, we pledge—both for the good of our own nations and for the sake of humanity—that we are committed to avoiding war and to pursuing cooperation in areas where we share goals.

"We resolve, therefore, that henceforth our common interests will take precedence over our disagreements; and that we will not allow the rivalry between us to threaten global destruction."

This statement is naive, perhaps. Yet it almost certainly reflects what most people in both the United States and the Soviet Union would like to see happen.

Such a joint declaration does not ask either nation to weaken its defense, to condone the other's actions or to give ground. It simply asserts that preventing war must be the predominant motive in U.S. and Soviet policy.

There is a precedent for such a sweeping turnaround: the 1972 breakthrough in U.S.-Chinese relations. A Republican President, Richard M. Nixon, and the leaders of a major communist power overturned a quarter of a century of enmity. True, America's rivalry with the Soviets is strategically much more critical than the rivalry with China ever was; still, bad feelings between Americans and Chinese had been as entrenched, as violent and even, at times, as dangerous as those between Americans and Soviets have ever been.

The instrument of Sino-American rapprochement was the Shanghai Communique of 1972. A true "umbrella" agreement, it said, in essence, that policy disagreements would not be allowed to prevent good relations, and it enabled the United States and China to defuse their conflict over Taiwan—an ulcerous problem that had almost led to war. Yet neither country had to renounce fundamental beliefs or to endanger its security. The Shanghai Communique is an excellent model for the kind of joint agreement on which Reagan and Gorbachev might agree.

What would be the actual benefit of an "umbrella" statement by U.S. and Soviet leaders?

It could give new life to the already moribund arms talks; it could prevent the escalation of regional conflicts (while, admittedly, not resolving those conflicts); it could limit the spread of nuclear arms; it could lead to joint action on global problems; at no cost to strategic deterrence it would reaffirm diplomacy as the principal medium of superpower relations. In short, it could change the very framework of U.S.-Soviet relations.

How could this be enforced?

Nothing between the Americans and the Soviets can be enforced today. Superpower relations take place in a barren landscape where no guarantees exist. Some Americans say, "You can't trust the Russians," and similar sentiments are echoed about us in the Soviet Union.

Trust is not the issue. The only sure bets between the superpowers are those that are based on common interest. Such cooperative possibilities must be sought, carefully discussed and actively enhanced. If these common interests are not developed, relations will almost certainly remain close to the nuclear flashpoint. If they are developed, a new relationship may evolve, as happened with the United States and China.

The way to begin the process is for Reagan and Gorbachev to state their commitment to a new framework of relations, and then have their subordinates work out the details.

John Marks is the director of Search for Common Ground, an organization that develops innovative approaches to international issues. David Landau is the author of "Kissinger: The Uses of Power" (Houghton 1972). Both are based in Washington.

"...History shows that any technology, once developed, eventually escapes the control of its developers."

—Comment of Time Magazine's Washington Correspondent Jay Branegan on the problem of nuclear proliferation. (Time Magazine, June 3, 1985, p. 16)

WHY STAR WARS IS DANGEROUS AND WON'T WORK

The following statement by six prominent scientists on the dangers of Star Wars appeared as part of a letter to The Wall Street Journal *on January 2, 1985.*

A nearly impermeable strategic defense system would indeed have the capability to "save lives" rather than to "avenge them," to replace strategic deterrence by defense. But such a system is not in the cards, as even the program's director, General James Abrahamson, readily admits. Anything short of an impermeable system tends to undermine, not improve, US national security. Here are some of the reasons that we consider the Star Wars scheme unworkable and a grave danger to the United States:

—Underflying: Star Wars does not defend against, or even address, low-altitude delivery systems—bombers and cruise missiles, and "suitcase" nuclear weapons. By themselves, they are able to destroy both nations; Star Wars would accelerate their development.

—Overwhelming: The number of strategic warheads in the Soviet arsenal (as in our own) is about 10,000. If even a few percent of these warheads exploded on US territory it would represent an unparalleled human disaster and effective collapse of the United States as a functioning political entity. The Soviets could keep ahead of any American Star Wars system because it is cheaper to build new warheads than to shoot down old ones (and easier to shoot down orbiting defensive systems than incoming missiles).

—Outfoxing: It is cheaper to build countermeasures than to build Star Wars. Some decades in the future when a (still highly permeable) US Star Wars system might be deployed, the Soviets would have added tens or hundreds of thousands of decoys and other penetration aids to their arsenal. Their objective would be to fatally confuse the American Star Wars system, which can never be adequately tested except in a real nuclear war.

—Cost: Former Secretaries of Defense Harold Brown and James Schlesinger, and senior Pentagon spokesmen of this Administration, have all estimated the full Star Wars cost as hundreds of billions to one trillion dollars.

—Soviet preemption: Despite US reassurances, the Soviets perceive Star Wars as part of a US first strike strategy, allowing us to launch a preemptive attack and then to destroy the remnant of any surviving Soviet retaliatory forces. In a time of severe crisis, this may tempt the Soviet Union to make a preemptive first strike against the United States.

—Institutional momentum: When a trillion dollars is waved at the US aerospace industry, the project in question will rapidly acquire a life of its own—independent of the validity of its public justifications. With jobs, corporate profits, and civilian and military promotions at stake, a project of this magnitude, once started, becomes a juggernaut, the more difficult to stop the longer it rolls on.

We do not oppose defense in principle. We are in favor of carefully bounded research in this area, as in many others; we are also concerned that the line between research and early deployment of key Star Wars components not be blurred. Several of us have devoted considerable effort to research on missile defense. Some of us have advocated missile defense for individual missile silos. But we agree with Department of Defense experts who make it clear that cities cannot be so protected. Mr. Schlesinger has said "in our lifetime and that of our children, cities will be protected by forebearance of those on the other side, or through effective deterrence."

Hans A. Bethe
Richard L. Garwin
Kurt Gottfried
Henry W. Kendall
Carl Sagan
Victor Weisskopf

Cornell University
Ithaca, New York

PRESIDENT REAGAN'S INITIAL STATEMENT (WITH CRITICAL COMMENTARY)

"Let me share with you a vision of the future which offers hope. It is that we embark on a program to counter the awesome Soviet missile threat with measures that are defensive. Let us turn to the very strengths in technology that spawned our great industrial base and that have given us the quality of life we enjoy today."

(I.e., turn this missile threat problem over to the military industrial complex rather than to the negotiators as, for example, the freeze would require.)

"Up until now we have increasingly based our strategy of deterrence upon the threat of retaliation. But what if free people could live secure in the knowledge that their security did not rest upon the threat of instant U.S. retaliation to deter a Soviet attack; that we could intercept and destroy strategic ballistic missiles before they reached our own soil or that of our allies."

(The reference to ballistic missiles (only) is revealing because the ability to intercept ballistic missiles alone would not permit us to "live secure" in the knowledge that "retaliation" could be avoided. For that we would need a total defense against bombers and cruise missiles also.)

"I know this is a formidable technical task, one that may not be accomplished before the end of this century."

(In fact it is not a single *technical task to be accomplished in any particular time, but an ongoing challenge to defeat present and future Soviet missile modernization; here also the President simply misconceives the nature of the problem.)*

"It will take years, probably decades, of effort on many fronts. There will be failures and setbacks just as there will be successes and breakthroughs. And as we proceed we must remain constant in preserving the nuclear deterrent and maintaining a solid capability for flexible response."

(In sum, we are not relaxing our abilities to maintain a deterrent and flexible response is the code phrase for maintaing the ability to penetrate Soviet defenses in response to conventional attack in Europe.)

"But is it not worth every investment necessary to free the world from the threat of nuclear war? We know it is!"

(Here again, the President moves from talk of neutralizing ballistic missile attack to freeing the world from "nuclear war"; but obviously, nuclear war could easily occur with or without the existence, even, of ballistic missiles—through bombers, cruise missiles, or tactical nuclear weapons.)

"...I clearly recognize that defense systems have limitations and raise certain problems and ambiguities. If paired with offensive systems, they can be viewed as fostering an aggressive policy and no one wants that."

(Here is the moment of lucidity. Stated but passed over are the dual problems that defensive weapons have limitations and that, if paired with offensive weapons, they can be threatening.)

"But with these considerations firmly in mind, I call upon the scientific community who gave us nuclear weapons to turn their great talents to the cause of mankind and world peace: to give us the means of rendering these nuclear weapons impotent and obsolete."

(Here again is the transposing of neutralizing ballistic missiles on the one hand and making nuclear weapons of all kinds "obsolete" on the other.)

"Tonight, consistent with our obligations under the ABM Treaty and recognizing the need for close consultation with our allies, I am taking an important first step. I am directing a comprehensive and intensive effort to define a long-term research and development program to begin to achieve our ultimate goal of eliminating the threat posed by strategic nuclear missiles."

(Since the ABM Treaty is of indefinite duration and precludes exactly what the research and development program would produce, this is a lawyer-like way of announcing that we intend, at the earliest opportunity, to bolt from the Treaty.)

"This could pave the way for arms control measures to eliminate the weapons themselves."

(But why would nations eliminate weapons that were threatened by the defenses; why not build more of them or others?)

"We seek neither military superiority nor political advantage."

(On January 20, 1985, President Reagan said that the Soviet Union had agreed to return to arms negotiations because: "...they know, as we know, that the choice now is to have some legitimate agreement on reduction of arms or face an arms race." (Wash. Post. Jan 21)

"Our only purpose—one all people share—is to search for ways to reduce the danger of nuclear war.

"My fellow Americans, tonight we are launching an effort which holds the purpose of changing the course of human history."

(Here, again, the promised payoff is raised well above neutralizing ballistic missiles alone.)

"There will be risks, and results take time. But with your support, I believe we can do it."

March 23, 1983

STAR WARS: TO ITS BACKER A TECHNOLOGICAL END RUN

The origins of the effort lie back in the days when I was a military advisor to then-candidate Ronald Reagan. Early in the campaign I was among those insisting that the only viable approach for a new administration to cope with growing military imbalances was to implement a basic change in U.S. grand strategy and make a "technological end-run on the Soviets."

As far as I could determine, all advisors to Mr. Reagan agreed with this conclusion at least in principle at the time.

Lt. Gen. Daniel O. Graham, USA (Ret.)
High Frontier: A New National Strategy

STAR WARS: INDUCED BY SUPERPOWER PECKING ORDER

Observing the superpowers conduct their arms race, a Martian anthropologist would be wise to watch what they do—rather than what they say—and to interpret their actions simply as very human struggles to establish a pecking order as part of a territorial contest.

The Western Alliance and the Soviet Union view each other as competitors for world hegemony. In such tense circumstances, even superiority in militarily irrelevant capability—such as nuclear overkill—can be construed as relevant shows of force, determination, or will.

The Western Alliance, historically dominant in world politics, is especially sensitive to the possibility that an insurgent Soviet Union might, rightly or wrongly, come to believe that a shift in the world balance of power had arisen in its favor. As a consequence, it reacts strongly to any Soviet actions that might be so misconstrued, such as a Soviet first in orbiting a satellite (sputnik), orbital bomb, or space station or emplacement of missiles in a far-off satellite (Cuba) or alliance with a Central American revolutionary state (Nicaragua). Even the achievement of ballistic missiles parity or the revamping and modernization of older theater missiles is seen by the nervous hare as a dangerous advance by the slow-moving tortoise that could presage who knows what.

Only Military Contest At Issue

In the contest to determine which superpower shall be deemed primary, military weapons occupy a special place, not so much because war is likely—it is not—but because, in all other arenas, the West has won the contest easily. There is no other arena to contest. Throughout the world, with minor exceptions that prove the rule, the world population is attracted by things Western and repelled by things Soviet. English, not Russian, is what the world is studying. Western freedoms and western culture are social magnets while Soviet life is repellent even to those who visit it determined to bridge the gap. As one unfortunate consequence of this, the Soviet Union can find no peaceful arena in which to compete effectively. Even its brilliant scientific community is shackled by the restraints put on its exchanges with foreigners and on its ability to function internally.

Thus the West—for the most part not fully aware of Soviet internal weaknesses, and exaggerating Soviet predilections for the use of military weapons—is especially ready to squelch any Soviet military gains.

And the highly technological arms race which has evolved over the last 40 years is perfectly designed to play to Western strengths—so long as it stays a technological contest, rather than a quantitative one, and so long as public support for the requisite expenditures can be maintained. These are two areas in which the Soviets have certain advantages of determination and centrally controlled will.

It is in this context that the Star Wars program has to be understood. The Soviet Union having caught up quantitatively, and the U.S. public being too sophisticated to have the will for still more irrelevant nuclear warheads, a quantitative contest is no longer effective for the West.

On the other hand, a technological contest always looks good to the U.S. military-industrial complex. And one that might erode and neutralize Soviet quantitative gains is, obviously, very much on point. Finally, by letting the entire new round rest on allegedly "defensive" weapons—and on faith in American technology—the necessary public support can be maintained.

In this analysis, whether Star Wars defenses can work is quite irrelevant—something far off in the future that has nothing to do with the Administration enthusiasm for the present program. The quotations given within make this unmistakably clear.

Truce Presumes Pecking Order

Our Martian must conclude that the arms race will not, as so many had predicted and hoped, be saturated by weapons in place, or halted by agreement, unless and until the two parties are ready to agree on which is dominant or to concede a draw. A real and lasting truce in the military area cannot be accomplished in the absence of an understanding on this underlying political conflict. Even the ABM Treaty—an accommodation useful to both sides in saving pointless expenditures—is now threatened by the Western awareness that Star Wars is the one area in which it can reestablish its arms race dominance.

Where will it end? In 1917 the Soviet Union picked a fight with the West which it cannot win. On the other hand, the West has no way to put an end to the contest since, despite hopes on each side, the Soviet economy and society is no more ready to collapse than is the Western economy and society.

As with other intractable problems, only time and new initiatives designed to change the problem have much hope of solving it. In this connection, more contact between the political leaderships of the two sides is essential.

—JJS
(Jeremy J. Stone)

A CANDID CIVIL SERVANT

"With unconstrained proliferation of Soviet missiles, no defensive system will work."

—Richard D. DeLauer, while Under Secretary of Defense for Research and Engineering, May 1, 1983 (New York Times)

We're Not Giving Up Our Deterrent Anyway

"Do we want to abandon deterrence? Even though many critics may state that those of us who advocate strategic defense are calling for such a policy, there is no question that we must retain a specific retaliatory capability...Even if one were to have perfect defenses, an overt no-retaliation posture would have precisely the fatal fascination of the fortress that has proved disastrous throughout history."

—George A. Keyworth, Science Adviser to the President, Issues in Science & Technology, Fall, 1984

So what was President Reagan talking about?

The following appeared in MANAS, May 22, 1985:
(P.O.Box 32112, L.A.,CA. 90032)

In the Mail

A HELPFUL reader has sent us a neatly calligraphed sheet bearing the names—as the heading puts it—of the things that Will Destroy Us, with Gandhi's signature at the bottom of the list. We doubt if the compiler or anyone else could locate exactly in Gandhi's ninety odd volumes where these words appear, but this hardly seems to matter since they are true and Gandhi would surely not disown them. This seems authority equal to precise citation, so we reproduce them here:

SEVEN THINGS THAT
WILL DESTROY US

Politics without Principle
Wealth without Work
Business without Morality
Pleasure without Conscience
Science without Humanity
Knowledge without Character
Worship without Sacrifice

MOHANDAS K. GANDHI

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