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(SDI) ALIAS STAR WARS

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TWO ROADS TO SECURITY

In the view of President Reagan, the arms race is a scientific contest which the United States could win, once and for all, with a technological solution that defended the Western world—after which nuclear war with the Soviet Union would no longer be a danger to our Nation or our Alliance. Thus he would lead the Nation down a path seeking a *unilateral* solution to the arms race.

The path on which the Nation had earlier been set—marked by the ABM Treaty of indefinite duration—was one that judged the arms race to be an essentially political problem requiring *bilateral* solutions. In this view, there was no permanent technological solution because the two superpowers possessed scientific communities of sufficiently comparable powers—and sufficiently aware of each other's accomplishments—that neither one could get so permanently and decisively ahead of the other as to produce an impregnable and lasting defense.

As the following Report makes clear, the unilateralists have provided four faces to the Star Wars approach. The astrodome or the near-perfect defense is

the public face. Use of Star Wars research technology to defend missile sites is the fall-back face of Star Wars in which entirely different issues of deterrence, rather than defense, are substituted for the public face in a debaters' shell game.

A third arms-race face of Star Wars is presented to insiders who are assured that the pursuit of the Strategic Defense Initiative will cause the Soviet ICBM force all kinds of difficulties and force its redeployment—nothing is said about the possibility of new additions to it! This face hopes for technological overstrain but all it can achieve is a slowing of the Soviet tortoise's path back to parity.

And, finally, for those who do not take President Reagan's recent assertions at face value, and who like grasping at straws, there is the bargaining-chip face in which all this is being done just to get an agreement on offensive weapons.

However rationalized, the Nation is faced with two roads to national security.

The unilateral approach, unlike the bilateral ap-
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THE FOUR FACES OF STAR WARS: ANATOMY OF A DEBATE

One man can make a difference! When President Reagan announced, without any serious consultation with technical experts, that he proposed to change the basis of American post-war strategy from deterrence to defense, it seemed quixotic. Today, it seems only infeasible, expensive, and dangerous. But it has produced a body of argumentation and has, certainly, ignited the enthusiasm of the military-industrial complex as well as some mixed feelings in parts of the public.

The Star Wars program is defended on four different levels and, on each, it purports to do quite different things. Thus opponents are confronted with "four faces of Star Wars."

The First Face

DEFENSE OF U.S. POPULATION (Save the World from War): On this plane of discourse, the President and his defenders talk of "saving lives rather than avenging them", of "defense" rather than "retaliation", and invoke a higher morality to argue the desirability of the program.

To establish feasibility, they appeal to American faith in American technology ("putting a man on the moon"), deride the scientists themselves for having been wrong ("even Einstein thought there was no chance for nuclear energy"), and argue "Why not try?" as the clincher.

With regard to costs, they argue that the true costs will be known later when the deployment issue is really upon us and the issue can be resolved then. In the meantime, they are asking for \$30 per year for each man, woman, and child to provide \$75 billion to study the matter over ten years. (See pp. 10-11 for our estimate.)

On this level of argumentation, there is nothing "anti-Russian" and nothing relevant to the arms race or deterrence. The proponent ignores the existence of the U.S.-Soviet ABM Treaty, a treaty of indefinite duration, which precludes nationwide defenses. Or he alludes to it by charging that the Soviet Union has violated the Treaty (usually referring to the still-under-construction radar at Krasnoyarsk). Alternatively, or in addition, reference is made to the Soviet ABM system around Moscow (permitted by the ABM Treaty to have 100 interceptors) as if this site has some important strategic significance (in fact, 100 interceptors is not effective in a world with 10,000 strategic warheads at the ready). Or it is observed that the Soviet Union spends large sums for defenses. (This misleading observation arises from the massive Soviet expenditures on defenses against bombers—a strategic irrelevance in the absence of defenses against missiles and one which our bomber force has made more irrelevant by steadily countering it with various countermeasures.)

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proach, threatens to terminate both the ABM Treaty and the SALT II regime and to expose the United States to open-ended arms contests of both defensive and offensive kinds. In these contests, it would be foolish to think that the Soviet Union could not keep pace in the long run. Indeed, in the short, medium, and long run, it has a number of advantages, especially to the extent that the contest turns on numbers and quantity.

The unilateral approach, but not the bilateral approach, threatens to move the arms contest increasingly out of the control of man and into the control of computers. The heart of the Star Wars concept is the interception of Soviet missiles in their first few minutes of boost, eliminating the possibility of human intervention and human controls. As Herbert F. York has eloquently warned, this reliance on computers would be the "ultimate absurdity". And, obviously, it would be dangerous. Indeed, it could give advantages to an aggressor that were not there before, just as a shield and sword can be wielded more effectively than a sword alone.

The unilateral approach, but not the bilateral approach, can be assumed to cost enormous sums of money and enormous amounts of valuable talent, and to divert energies in both superpowers, for a long time, from improving their societies.

Finally, the unilateral, but not the bilateral, approach mistakes entirely the nature of the danger. The real danger has never been the Soviet surprise attack either on our cities or on that 20% of our warheads on land-based missiles. The problem has been attack in Europe and subsequent uncontrollable escalation. Star Wars defenses distract from this problem rather than resolve it.

Worst of all, the unilateral approach, but not the bilateral approach, is a mirage in which our Nation will be endlessly, and pointlessly, pursuing a receding technological horizon. Only in the future, but never in the present, can an effective unilateral military solution be found.

The Strategic Defense Initiative, insofar as it goes beyond prudential research to keep abreast of the impact of new technologies, is misconceived in every possible way. It addresses the wrong problem, gives every indication of making that problem worse, and makes inadvertent escalation in crises more likely rather than less.

The President, a political figure, is calling upon scientists to come up with a technological solution to what is, obviously, a political problem. No doubt many scientists will find it stimulating to work on these problems. No doubt, narrowly conceived, some of the problems put to them will eventually be solvable. But no amount of progress on the wrong road will help us to the right destination. Our goal is a world in which, by treaties and through psychological and political adjustment to the nuclear threat, the danger of nuclear war is moving steadily down rather than up.

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The opponents of this level of argumentation for Star Wars argue the primacy of offensive weapons in an era of nuclear weapons. Here is the President telling us that terrorist successes in Lebanon are inevitable despite the best efforts of U.S. security while advising the nation that 10,000 nuclear warheads in the hands of the Soviet Union can be defended against if only the scientists will try. Star Wars opponents consider it an axiom of life that destruction is easier than protection and that in a contest between equally able groups of scientists the advantage will lie with the ones seeking a deterrent.

Star Wars defenders talk about achieving "it"—the reliable effective defense at issue—as if there would be, thereafter, an end to technological history or the giving up of the Soviet Union of its end of an historic contest to maintain a deterrent. Opponents point to the fact that even when America had the equivalent of a Star Wars defense in the 1945-49 period (i.e., Russia had no atomic bomb and America did), America was unwilling or unable to end the contest (as in pre-emptive war). The Russians were able then, as they could now, to await their assimilation of whatever new technologies were at issue, after which the contest would break out again.

Can An Arms Race Be Won?

To this, Star Wars proponents sometimes speak as if they could "win" the arms race in some decisive way by seizing the high ground, e.g., by installing battle stations in orbit that would establish a kind of Pax Americana in which America would control the airways and spaceways forever. In this vein Edward Teller talks of a combination of free nations seizing the moon as well.

Opponents of Star Wars find it unrealistic to imagine that one superpower could get, and stay, so far ahead as to suffocate the other strategically. Why, for example, could not the weaker superpower shoot down the battle stations when it was ready to? Would we attack its battle stations when they were finally put up? In the struggle for the high ground would there not be simply more grounds for military incidents and even war than there had been before? Is it safe to try to "win" the arms race, or would it not be safer to go for a truce, some kind of freeze, or to permit and encourage the petering out of the contest by avoiding challenges to the deterrent of the other side?

Star Wars opponents recall that, beginning in 1963, a decade-long debate in the two superpowers was finally decided in favor of a treaty banning defensive weapons precisely because the defenses seemed unlikely to work and likely to stir up the arms race unnecessarily. That is, they would be strong enough to encourage the other side into building more missiles yet weak enough not to be relied upon in practice—providing the worst of both worlds.

Why, these opponents argue, is this not still true? An untested and complicated array of systems facing its first real test in a real war is unlikely to work effectively. And, in the meantime, its existence is—if post-war history is any judge—certain to produce reactions and countermeasures, some of which could be dangerous (new weapons,

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Offensive Weapons To Be Kept

"A perfect astrodome defense is not a realistic thing...The point is to get a thoroughly reliable and effective system. What does this mean? We haven't quantified it."

—General James A. Abrahamson, Director, SDI

But if the defense is not perfect then the U.S. would need to retain a deterrent, which means, in particular, that it would be threatening Soviet lives and seeking, perpetually, for ways and means of penetrating a Soviet defense.

The Naivete of Hawks

"Remember that the Russians are afraid of our technology. That is what all this business is about. When they see that we have embarked on a long-term effort to achieve an extremely effective defense, supported by a strong national will, then they will give up on the development of more offensive missiles and move in the same direction."

—General James A. Abrahamson, Director, Strategic Defense Initiative

This is about as naive as anything that has ever been said about the Russians from the left. Why should they just "give up" when all history shows, and virtually all scientists believe, that the offense can prevail? And, if our technology is so much better, what makes us think that their defense will work well enough? They may just argue, as one prominent Soviet space expert told FAS, that we cannot afford a Star Wars defense and so will have to rely only on offensive missile penetration of your defense.

Which Is The Real Caspar Weinberger?

"We know the Soviet Union has been working to achieve these same defensive systems for many years, and we hope that they will continue."

—Caspar Weinberger, April 11, 1983

"I can't imagine a more destabilizing factor for the world than if the Soviets should acquire a thoroughly reliable defense against these missiles before we do."

—Caspar Weinberger, December 6, 1983

"Believe it or not, these are not offensive weapons; these are not weapons that go against people. These are weapons that protect people. I would hope that a lot of the moral problems that people quite understandably have with working on nuclear weapons would not apply in this case, because here we would be trying to destroy weapons of destruction."

—Caspar Weinberger, Omni Magazine, Sept. 1983

If two armies of men armed with naked swords were deterred from attacking each other and someone began handing out shields, he could make all the same arguments, but with the shields they might then fall back to fighting. Sword and shield are used in war quite interchangeably.

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 maintaining 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

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?

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multiplication of weapons, hair-trigger readiness of existing weapons, etc.).

Star Wars proponents rejoin that multiplication of weapons has occurred even after the ABM Treaty (e.g., counterforce capabilities such as high accuracy have encouraged multiplication of missiles anyway.) They argue that the offensive weapons treaty successes hoped for by anti-ABM arms controllers did not materialize (e.g., the U.S. refused to ratify the SALT II Treaty, though both sides respected those limits, and both sides continued to build up under the limits of those agreements, limits which were loose.) Star Wars opponents argue, in turn, that we should simply redouble our efforts to halt offensive weapon procurement and secure subsequent reductions and not add a new pressure against such treaties in the form of a major campaign to secure defenses.

The Second Face

DEFEND U.S. ICBMS (Strengthen Deterrence): Well before the debate over defending U.S. population gets as detailed as the above, Star Wars proponents normally move to arguing the desirability of "reliable" defenses as a way of "detering" war. As Henry Kissinger put it, defenses could "add hugely" to deterrence.

This confuses observers, who ask why the adversary should be more deterred by the (chancy) prospect that America might shoot down his attack than by the highly certain and terrible prospect that America might fire nuclear weapons back in response.

In fact, what has happened is a shift in the debate from defense of population to defense of the deterrent. Here the main object of discussion is the 1,000 U.S. ICBMs (Minuteman missiles) that are now deemed vulnerable to attack from the 1,400 Soviet ICBMs.

This Administration has made much of this "window of vulnerability" which, it argued, arose from ICBM vulnerability to adversary ICBMs. Arms control supporters tend to minimize the significance of the (wholly predicted) vulnerability of one arm of our deterrent to an enemy force that must, perforce, destroy two other arms of the deterrent as well.

But the same school of thought that backs Star Wars felt differently. It argued that the Soviet Union might destroy our land-based missiles and then issue us an ultimatum that if the U.S. responded with attacks on the Soviet Union, it would attack again. In short, this school felt that an American President could be intimidated from retaliation even after thousands of Soviet warheads had landed in our Midwest in an effort to disarm us. So it wants this attack deterred further.

Now it had long been a U.S. technological option to seek to defend the U.S. ICBMs with a missile defense. This was always considered far more feasible than defending cities, for obvious reasons: the missiles were hardened and harder to destroy in the first place and, moreover, protecting only 10% of them would be a success whereas protecting even 90% of our cities might be deemed a failure!

The ABM Treaty prevented either side from using more than 100 interceptors in such an effort, and in time, the

Star Wars and Reductions

Senator Nunn: "Would you tell the President that because the Soviets could knock down 60% or 70% of our missiles, we should reduce them?"

Obviously, this goes to the heart of the issue. Neither side will be more interested in reductions if each weapon has been devalued by a Star Wars defense.

Bomber (Air) Defense Violate the ABM Treaty?

"I've never been a proponent of the ABM Treaty...The real problem with that is, among other things, that the Soviets haven't adhered to the basic concept. They are doing a very great deal to try to defend themselves, and they have in place the one system permitted by that treaty."

Caspar Weinberger—ABC, April 8, 1984

The Soviets have adhered to the basic concept, installing only the one ABM system permitted around Moscow. Neither the Treaty nor the concept of the Treaty required them to give air defenses—i.e., defenses against bombers which were, in any case, irrelevant in the missile age if ABMs were banned.

U.S. gave up any attempt at all to save money. But one fairly plausible way to imagine U.S. defenses being used is to site them in and around the ICBM fields in what is called "site" defense.

Such a deployment would certainly, from a technical point of view, "strengthen deterrence" by adding some defense of our weapons and by complicating any attack on them. But the ICBMs will, of course, soon represent only about 15% of our strategic force—not a major part—with bombers and nuclear-armed submarines making up the rest. The significance of defending them can therefore be argued and, as noted above, the notion of an attack on ICBMs alone was never very plausible.

Why not, however, do it anyway? Star Wars opponents worry that, once any kind of ABM system is built, the hundreds of corporations involved will campaign vigorously for more contracts and U.S. compliance with any ABM Treaty will be hard to maintain. They would prefer, therefore, other methods of strengthening deterrence (if it were necessary, e.g., Midgetman missiles or shifting to sea.)

They see defense of silos as a rerun, in reverse, of a movie they have seen before. The rationales for ABM, in the earlier debate, went from heavy (anti-Soviet) defense (1959-64), to light (anti-Chinese) defense (1964-69), to defense of missile silos (1969-70), to research and development only, and then to bargaining chip—after which the Treaty was ratified. Thus proponents see the site defense as a step toward a light and then a heavy defense as the debate unrolls in the opposite direction.

The Third Face

NEUTRALIZE SOVIET ICBMs (Channel the Arms Race): Soon after the President's March 23rd speech talk-

ed of making nuclear weapons "obsolete", the issue among Administration experts became making Soviet ICBMs obsolete—a much more limited task excluding bombers, cruise missiles, tactical missiles, and other weapons of mass destruction delivered in other ways.

The alleged special significance of ICBMs was stressed: quicker to target than bombers and with high accuracy, they could be instruments of surprise attack (here the debate turned to the above threat to Minuteman).

But the underlying emotional readiness of the Administration to consider a defense against missiles alone was the primacy of ICBMs in the Soviet inventory. As so often happens, the Soviet Union had gone into mass production of a weapon only when the U.S. was ready with a more advanced one. While the U.S. was beginning to emphasize the modern cruise missile, the Soviet Union was deploying ICBMs in fixed and vulnerable silos to the tune of 75% of its force.

These same missiles included ones that were much larger than U.S. missiles—an issue about which much psychological and political debate had centered. Accordingly, neutralizing these missiles, or even forcing the Soviet Union to revamp or redeploy them, had some attractiveness to American hawks.

Thus proponents argue that a Star Wars defense might, at least, force the Soviet side into building many smaller missiles and deploying them at distant locations. This, they argue, would reduce the effectiveness of the Soviet ICBM force. (Opponents argue that the Soviet Union might just keep the old force and add a new force to it!) In fact, Soviet missiles are becoming vulnerable to direct attack from Trident II missiles on submarines in the early nineties. The possibility that, someday, they might be vulnerable to Star Wars attack immediately upon liftoff of their missiles is secondary.

A critical aspect of this Star Wars approach is the ability of the U.S. to "defend the defense". Obviously, if the Soviet Union could shoot out a corridor in the Star Wars defense in advance of firing these same missiles, the U.S. would not have achieved any change in the basic situation.

This rationale for Star Wars is not really well worked out. It gets its motivation from the somewhat obsessive attention focused on large Soviet ICBMs in America and the felt importance of doing something, anything, to break up this threat.

From the point of view of Star Wars opponents, the large Soviet missiles are not so much a threat as a liability; the U.S. can destroy as large a fraction of Soviet warheads as the Soviet Union can destroy of U.S. warheads, precisely because it can attack these heavy ICBMs with their ten warheads each, on which such a high percentage of Soviet warheads sit. In other words, the Soviet preponderance of firepower based on land ICBMs is simultaneously a source of strength and of weakness, depending on who strikes first. It is American policy to threaten such first strikes to deter Soviet conventional attacks on Europe. Accordingly, the Soviets have to see their present deployment as weakness.

Cost-Exchange Ratios Are a Mathematical Fiction

"Abrahamson told the National Aviation Club in Washington, D.C. that cost exchange ratios which favor the defense are the key to developing a viable defense system—which would create "powerful incentives" for the Soviets to follow less destabilizing paths of military development...As long as the relationship favors the defense, he said, proliferation of offensive weapons is unlikely and positive incentives will exist for arms control agreements to limit offensive forces."

But cost-exchange ratios exist only in the context of specific mathematical models of how the war would begin and be fought. New tactics, or entirely new methods of penetrating the defense, invariably suggest entirely different cost-exchange ratios. Indeed, the purpose of the on-going arms race between offense and defense is to change these ratios. Accordingly, there could be one cost-exchange ratio if one struck first, another if one were struck first, still another for a confused war begun simultaneously, another ratio if a clever untested tactic of attacking the defense systems worked, and still another if it did not. Above all, there would be new ratios if developmental ideas worked out in future years, and so on. Under these circumstances, there is no reason to expect the military-industrial complex to give up in the face of a Maginot Line so impressive that no method can be conceived of defeating it.

Cost-Exchange Ratios Must Be Enormous

"(Abrahamson) emphasized that the defense system must be less costly to build than it is for the Soviets to build more missiles."

Defense Daily, August 10, 1984

In fact the defense system must be much less costly, not just less costly, to persuade the Soviet Union to change its program. For example, faced with a Soviet Star Wars defense that could unleash Soviet conventional attack on Europe, the U.S. would spend many times more to neutralize this defense than the Soviets would spend to build it, simply because it would be so important.

The Fourth Face

BARGAINING CHIP: The last refuge of Star Wars supporters is the rationale that, after all, it seems to bother the Soviet Union and, accordingly, should be useful for bargaining. Supporters overlook the impropriety of threatening to abrogate a solemnly ratified treaty unless further concessions are provided. (Faced with this observation, they raise the question of Soviet cheating on the ABM Treaty by invoking the issue of a questionable Soviet radar.) It is also argued that the SALT I agreement on offensive weapons was passed as a companion to the ABM Treaty and that the lapsing of this limited-duration treaty on offensive weapons puts in question the legitimacy of the indefinite-duration ABM Treaty—said by Star Wars supporters to have been agreed only because of hopes for limits on offensive arms.

The bargaining chip argument implicitly rejects the Star Wars arguments that defenses are desirable and unprovocative. As a consequence, rather than undermine the general theme for Star Wars, the bargaining chip argument is asserted quietly. This posture is consistent, also, with the Washington view that a position or weapon put forward for bargaining purposes is, *ipso facto*, undermined in its bargaining value as compared with a position or weapon fully warranted for its own sake.

Star Wars opponents are least in disagreement with the bargaining chip rationale which, in principle at least, would produce reductions of nuclear weapons at the end of the road. And because the Washington political process resembles a school of fish, many feel obliged to salute at least this rationale if not the others.

The danger is that the bargaining chip, as so many have, develops a life of its own. The negotiations being always complicated, one obstacle or another prevents a successful bargain—leaving us with a program that we do not need or want.

The bargaining chip argument has an apples and oranges quality to it, in its original form, since it would seek to trade off U.S. compliance with an existing ABM treaty for unspecified reductions on the Soviet side, probably in heavy missiles. (Perhaps we would offer reductions also).

One potential cure for this, which has been argued by House Armed Services Committee Chairman Les Aspin, is to give up the notion of national defense, and to focus, for the bargaining chip, on the defense of missile sites only. This has the virtue of making the thing to be bargained away (the missile defense of missiles) relevant to the thing bargained for (the reduction in the Soviet threat to those missiles). Thus, the U.S. negotiators could, in this plan, ask for sufficient reduction in the Soviet land-based missile force to make a U.S. site defense of its missiles unnecessary. But this would require, in this age of accurate MIRV, enormous reductions of missiles on the Soviet side. (For example, if two accurate warheads on the Soviet side for each U.S. fixed silo were required to mount a threat to it, only 2,000 warheads would be necessary to threaten the 1,000 silos. Thus 200 missiles with ten warheads each or 300 missiles with seven warheads each would be required. The Soviet land-based force has 1400 missiles, of which 820 have multiple warheads of several to ten warheads.

Bargaining Chip: YES or NO?

Bargaining Chip (YES!)

“We might set as a goal the demonstration of a multi-megawatt pulsed laser whose beam is corrected for atmospheric distortions...such an action would not demonstrate a workable ABM system. But, quite frankly, if I were a Soviet planner, I would quickly put two and two together and realize that an important part of the technology for an ABM system was well in hand—and that development was more a matter of time than breakthroughs at that point. Such a demonstration would pressure the Soviets to take our arms reductions proposals much more seriously than they do now. We should never forget that the President’s overriding objective is drastic reduction of offensive nuclear arms, especially ICBM’s.”

—George A. Keyworth, Science Advisor to the President, Washington, February 29, 1984

In short, we demonstrate a key part of a Star Wars system and then we can have arms control with them more effectively. But the other possibility is that, having been persuaded that a Star Wars system is around the corner, the Soviets will already have set about building more missiles.

“We might even do some trading. We might say, ‘O.K., we won’t put something up for three years if you take out 500 warheads.’ ”

—General James A. Abrahamson, Director, SDI

Bargaining Chip (NO!)

“It’s not a bargaining chip. If we can get it, we would want to have it, and we’re working very hard to get it. It’s not a commercial thing out there on the margins to try to influence them to make reductions in offensive systems.”

—Caspar Weinberger, October 28, 1984

“I don’t want to put these programs in the category of something we do for the sake of bargaining.”

—Secretary of State Shultz, January 10, 1985

The Maginot Line “Line”

“If it works, we will be able, I hope, to eliminate the need to keep, maintain, and continue to modernize offensive weapons. That would be particularly true if the Soviets develop comparable technology, and I assume they will.”

—Caspar Weinberger, Omni Mag. Sept. 1983

Obviously, our military would be interested in continuing to modernize our offensive weapons in the hopes of penetrating the Soviet shield and getting the advantages of superiority, and in any case, they would argue for the importance of this in case the Soviets figure out how to penetrate our impenetrable shield.

And any Soviet reduction to less than a few hundred MIRVed missiles would leave it with a smaller force than ours.)

The bargaining chip theory, like the other theories above, tends to overlook the undesirability, for our strategic forces, of letting the ABM Treaty go by the board. For the same reasons that the U.S. considered a ban on ABMs to be a fair deal by itself, the abrogation of the treaty tends to have negative effects on us. While Soviet technology for defensive systems is not likely to be as highly technological, it would be massive and its inefficiencies made up for by worst-case U.S. analysis. Thus tens of thousands of air defense missiles would be treated by U.S. analysts as fully effective in our analysis even though they might be unlikely to be effective at all. And the security of our sea-based missile force might be considered to be undermined, as would be the penetrability of the French and British deterrent, not to speak of the Chinese, by Soviet ballistic missile defenses.

Can a threat to cut off one's nose to spite one's face be

ALLIES NERVOUS ABOUT SDI

The following excerpts from a Congressional Research Service (CRS) Executive Summary by Paul Gallis, Mark Lowenthal, and Marcia Smith show: the allies opposing "any sudden surge" forward in SDI funding; allied support for SDI thus far being due to their desire to "maintain unity"; European allies fear decoupling of the U.S. deterrent and their remaining vulnerable and, in any case, even if they became invulnerable to nuclear attack, fear their becoming vulnerable to a "re-opening of conventional arms races".

Executive Summary

...Though SDI is a research program designed to explore feasible ballistic missile defense systems that will not be available until the 1990s at the earliest, it has raised concerns among the European allies that those systems will increase, rather than decrease, the likelihood of war.

The ABM Treaty restricts the testing and deployment of ballistic missile defense systems and allows signatories to undertake programs for research. The European allies believe that the United States must proceed with research, for the USSR has undertaken a steadily developing research program of its own. However, at this point the allies oppose any sudden surge forward in the funding of U.S. research for fear that such a surge would touch off a new arms race between the United States and the Soviet Union.

SDI has not yet become a major public issue in European or Japanese political debates. However, several important opposition parties in Western Europe have condemned the Strategic Defense Initiative and are certain to test ruling governments' public support for the program. The support thus far by allied governments for SDI is due in part to a desire to maintain unity within the alliance, and in part to a concern that criticism of the program might imply that they oppose the United States government attempting to shield its population from nuclear attack. Election campaigns in Western Europe during the next two years will test their resolve to continue this support.

an effective bargaining chip? Perhaps only if there is sufficient momentum behind the program to make it credible that it might go forward anyway. But, opponents argue, if the program has that much momentum, it may be hard to stop it if no bargain results.

One returns, here, to the basic problem America finds in its negotiating posture. As a democracy, one needs public support for the weapon system to be used as a bargaining chip but not so much that it cannot be bargained away. The 50-50 Senate vote on the ABM system that underlay the ABM Treaty was a splendid example. The tie vote was broken by the Vice President and gave the ABM system some momentum with which the Soviets had to cope. But, in the absence of the 50 Senators opposed to the system, there would never have been sufficient doubt about the program reaching deployment to put it on the bargaining agenda. Can a Star Wars program, for bargaining purposes, remain long on this narrow balance?

—Jeremy J. Stone

The European allies remain uncertain over the objectives of SDI. Different voices within the Reagan Administration have described SDI in different ways. Some have said its goal must be to lead to the development of technology that will provide a defense for the U.S. population against ballistic missiles; others contemplate a partial, or point defense, of strategic systems as a means to insure a U.S. retaliatory capability in the event of a Soviet nuclear attack. The allies are uncertain that such a defensive system could extend to the European continent, given their geographic proximity to the Warsaw Pact and resulting vulnerability to manned bombers, ground-launched cruise missiles, and other low-trajectory missiles ostensibly able to penetrate an ABM system.

Should both the Soviet Union and the United States one day deploy effective ballistic missile defense systems, the European allies fear that they would find themselves in an uncomfortable middle ground, vulnerable to Soviet attack and saddled with the psychological uncertainty of U.S. support in the event of such an attack. Great Britain and France possess small independent nuclear forces, but each nation might find costly modernization programs necessary in order to assure that their forces could penetrate a Soviet defense.

The NATO allies continue to embrace the doctrine of nuclear deterrence, a doctrine that they believe has provided Europe with a long period of peace. Should SDI one day result in their own protection from nuclear attack, the allies do not believe that their security would necessarily be enhanced. In their view, a return to the era of conventional warfare would invite the re-opening of conventional arms races and the incentive to contemplate the possibility of victory in a European war against an adversary—deployments that nuclear deterrence has largely muted, in their view, for the past three decades. In addition, many officials in allied governments believe that modern conventional warfare could prove as destructive to Europe as nuclear warfare.

THE STAR WARS BUDGET

What follows is a summary of a report by FAS staffer John Pike on the Star Wars budget and released at a press conference jointly sponsored by FAS and the National Campaign to save the ABM Treaty on February 11, 1985.

Total Program Cost

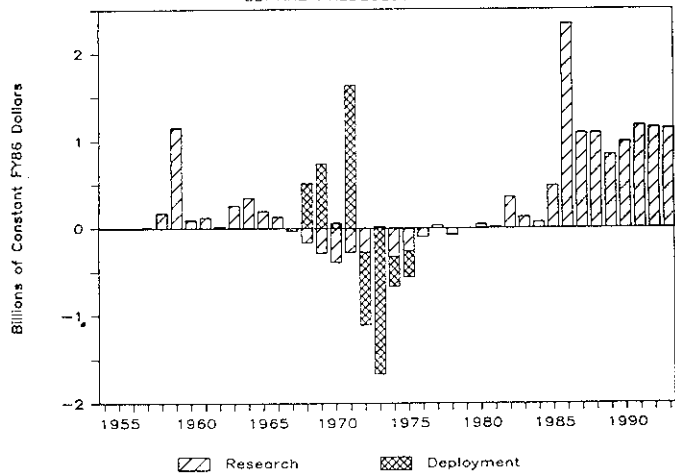
The SDI is frequently referred to as a \$26 billion, five year program. However, this cost and time frame is a product of the Defense Department budget process, which only projects five years into the future. With the new FY1986 budget request, which gives funding figures through 1990, the SDI is now a six year, \$33 billion program.

The SDI is intended to support a deployment decision in the 1993 time frame, as part of the New Strategic Concept that is the basis of the Administration's current arms control policy.

Thus, the initial development phase of the SDI will run through 1993, at a cost of about \$70 billion. Increases of about \$1 billion annually are anticipated for most of this decade. These increases are the result both of dramatic growth in the funding of current projects, as well as the initiation of entirely new projects. Many of these projects will not be completed until the early 1990's.

This estimate of \$70 billion and ten years assumes that the SDI program proceeds according to the present plan, which may be difficult to justify on the basis of historical experience. Norman Augustine, President of Martin Marietta Denver Aerospace, has frequently noted that defense development projects typically take one third longer and cost one third more than is initially estimated. Thus the SDI could possibly become a thirteen year, \$100 billion effort.

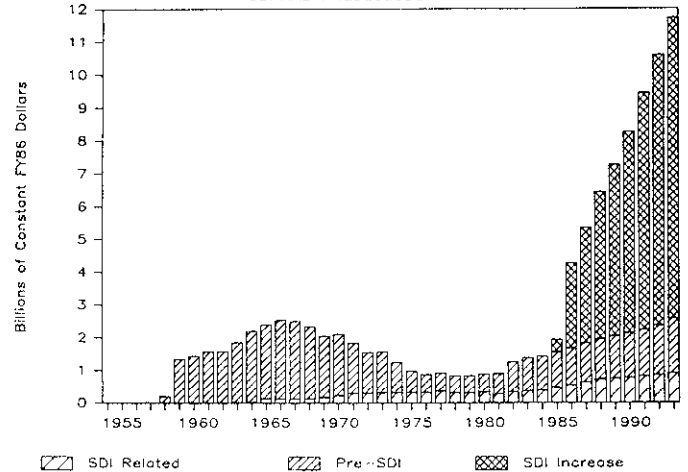
ANNUAL FUNDING CHANGE
SDI AND PREDECESSOR PROGRAMS



Historical Perspective

The SDI proposes to spend as much money on BMD research over the next decade as was spent on BMD work over the preceding three decades. This is a totally unprecedented level of expenditure. The budget request for Fiscal Year 1986 represents the single largest one year increase for anti-missile research in American history, and is twice as large as the increase in funding after Sputnik.

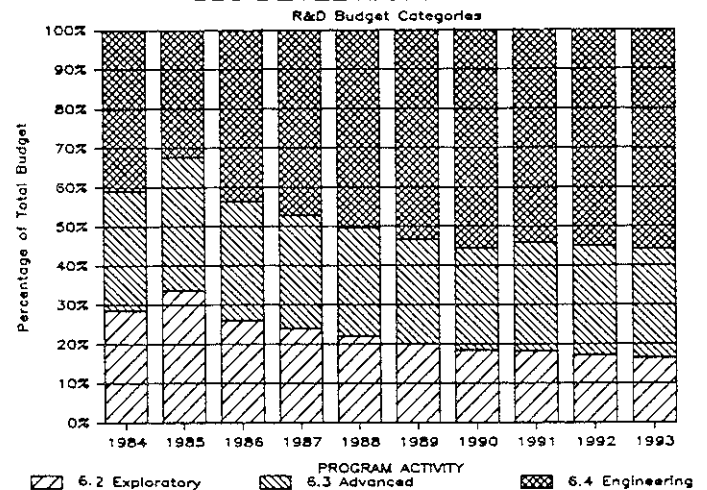
MISSILE DEFENSE RESEARCH
SDI AND PREDECESSOR PROGRAMS



Since the signing of the ABM Treaty, the American program for research on ABM technologies has been funded at between \$500 million and \$1 billion annually in constant dollars, a level of effort that proved adequate to meet the traditional rationales for ABM research. The Strategic Defense Initiative does not seem to be supported by these previously accepted rationales, nor by any new or recent developments.

Research funding for Nike-X reached \$2.5 billion (\$FY86) in 1965. Safeguard procurement, military construction, operations & maintenance, and military personnel brought American BMD spending to its peak of \$5.2 billion (\$FY86) in 1971.

SDI DEVELOPMENT PHASE



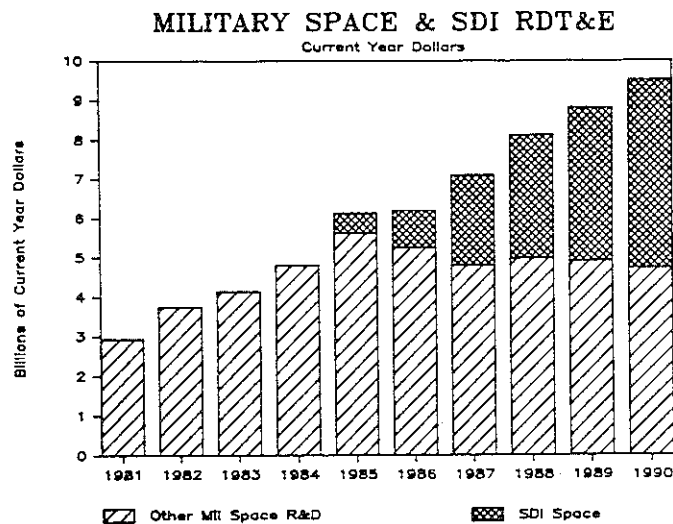
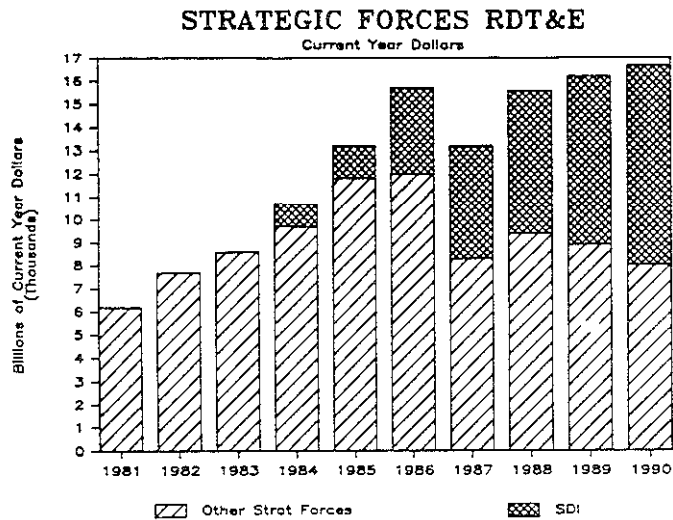
A New Direction—Prototypes

Most of the increase in the budget request of the SDI is due to a premature emphasis on demonstrating prototype weapons. Many of the SDI prototype demonstrations are inconsistent with the provisions of the ABM Treaty.

Many of these prototypes are not new weapons, but have in fact been under development for many years, although for applications other than missile defense. However, these systems were far too advanced for these

other applications, and had failed to receive approval for actual deployment. By incorporating these projects into Star Wars, with its formidable operational requirements, these systems have gained a new lease on life.

In 1975 the Congress directed that no further work should be done on ABM Prototypes. This policy should be continued. Recently, the Defense Department has sought to evade this restriction by calling this work "pre-prototype" development. But this results in program schedules that skip the prototype phase, moving directly from "pre-prototype" to operational procurement.

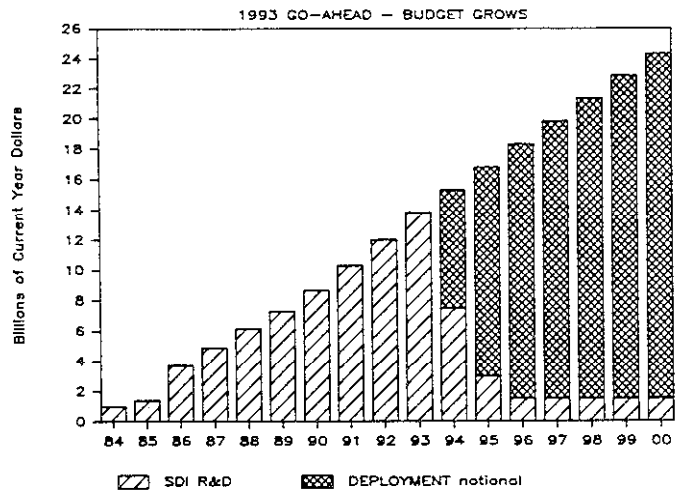


Program Emphasizes Boost-Phase

The budgetary emphasis of the SDI makes it clear that traditional ABM missions will receive decreasing emphasis in coming years. The SDI is not focused on missions such as silo defense, but on a futile effort to protect the American population. For more than a decade, American ABM research has concentrated on the development of systems to intercept enemy warheads as they reenter the atmosphere. This terminal phase technology is applicable to missions such as the defense of missile silos, and defense against tactical and theater ballistic missiles in Europe.

Now the SDI proposes to move away from this traditional area of concentration, and instead focus on more exotic boost phase, post-boost phase, and midcourse interception systems. These systems are much more costly, have higher technical risk and uncertainty, and are not required for traditional ABM missions such as silo defense.

SDI BUDGET FUTURE



Pressures For Deployment

In the absence of Star Wars, much of the military research establishment, which grew as a result of these previous efforts, would find itself without a project to work on. Star Wars fills this void. The further attraction of Star Wars is that there is no immediate danger that the system will actually be deployed, and thus this research can continue for some time to come.

However, by the mid 1990s, there will be a precipitous decline in SDI funding, unless a system is actually deployed. The political difficulties posed by termination of the B-1B bomber program suggest that similar pressures may arise with respect to a future decision on missile defense. Star Wars budget growth could lead to powerful institutional pressures to proceed with deployment of a missile defense system, despite the questionable wisdom of such a move.

Recommendations

Research on ballistic missile defenses should not be directed toward prototype demonstrations, but rather the development of technology and sub-systems to advance the state of the art in such elements as sensors, kinetic and directed energy weapons, and associated systems analysis and support programs. These objectives can be realized with a level of funding considerably less than the Administration request.

—John Pike

The entire 180-page report "The Strategic Defense Initiative Budget and Program" is available from FAS, at a cost of \$15 for individuals and non-profit groups, and \$40 for profit-making corporations. Please contact Vanessa Lide for copies.

DEFECTOR DENOUNCES SOVIET UNION & CHARACTERIZES LEADERS

The highest ranking Soviet official ever to defect, Arkady N. Shevchenko, has now written his story ("Breaking with Moscow," Knopf, \$18.95).

He paints the dismal picture of Moscow life which has been, for some time, known to politically literate Americans.

But Foreign Minister Anatoly Gromyko gets a surprisingly good report:

"I never noticed in Gromyko that kind of hatred toward the United States or its people that many other Soviet politicians of his generation—as well as some younger men—display reflexively. He assesses the United States in terms of its might and its potential as a Soviet rival in world affairs. Like many of his colleagues, Gromyko respects American power. It is not that he is pro-American but that, unlike some other Soviet leaders, Gromyko believes the United States to be not only the Soviet Union's main adversary but also its partner as long as the interests of both nations—whether temporary or more long-term are parallel or coincide."

Gorbachev Gets Good Reviews

Gorbachev, who may replace Chernenko, gets even more favorable reviews:

"Gorbachev is intelligent, well educated, and well mannered. He is a graduate of the Moscow University law faculty, and also studied agriculture at an institute in Stavropol. At his post in Caucasia he earned a reputation as an energetic regional Party leader and manager and as a competent agricultural specialist. He was also known as a reasonable man, with less arrogance than most professional Party apparatchiki...I found him to be open-minded, and to understand the real necessity of moving agriculture and the economy forward."

Finally, Ambassador Anatoly Dobrynin evidently looks the same from the inside as he does from the outside:

"...he is not tricky or wily. He is naturally lively and curious with a penetrating intelligence. Generous and cordial with subordinates or equals, he can also be refreshingly candid with officials of higher rank, especially with

Gromyko whom he once served as an assistant."

Thus at least three key figures in the Soviet leadership seem capable, if they wish and if the Soviet system lets them, of conducting their end of the U.S.-Soviet competition in a civilized fashion even in the appraisal of this disgruntled defector.

Military Exchanges Encouraged

The book has one relevant observation for those 56 Senators and many Administration officials who want exchanges of military officers. Gromyko once told Shevchenko, in reference to arms control: "It's hard to discuss the subject with the military. But the more they know, the more contact they have with the Americans, the easier it will be to turn our soldiers into something more than just martinets."

The importance of getting all Soviet officials to America cannot be exaggerated. Shevchenko criticizes even Gromyko, who has lived here, for ignorance of the system and he says:

"While intrigued by American freedoms, political pluralism, and cultural diversity, the Soviet leadership is unable to comprehend fully the mechanism of the American political system."

On a more personal note, those who rise in the Soviet system—outside of the Soviet Academy of Sciences, where merit is more easily recognized and rewarded in a community of scientists—do seem to have remarkably self-centered qualities. Shevchenko, for example, defects to a waiting car of U.S. intelligence agents, after many months of spying for them, and gives his wife not any warning at all. She is, predictably, picked up by the Soviet security immediately and pressured into returning to Moscow where she commits suicide. If Shevchenko cared for her, as his book suggests he did, he certainly was not prepared to take any risks for her. In these and other ways, the books of high level defectors have a way of inadvertently underlining their accusations against a system in which they, but not others, have risen.

—JJS

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