

# F.A.S. PUBLIC INTEREST REPORT

Formerly the FAS Newsletter

SPECIAL ISSUE ON  
COUNTERFORCE AND SALT

Vol. 27, No. 2

February, 1974

## SOLUTION TO COUNTERFORCE: LAND-BASED MISSILE DISARMAMENT

Our fixed land-based missiles, in separate silos, will look more and more vulnerable to attack if MIRV and increases in accuracy cannot be prevented. Without determined efforts to control these developments, each land-based force will, in time, be able to largely annihilate the other depending only upon who strikes first. Only submarine based missiles, and airborne bombers, will then provide a reliable deterrent in the style to which we have now become accustomed, viz. a high probability of having hundreds of warheads available for retaliation even after a deliberate, clever attack of the other side.

There will be little purpose to our land-based missiles when this time arrives. They will "draw fire" if war begins. And, if somehow strategic war began with an attack by our side, such a land-based force would be largely devoted to destruction of the other side's land-based force.

All in all, there is considerable advantage, and little disadvantage, in negotiating the disarmament of both land-based missile forces. The advantages are:

1. The Soviet land-based missiles will cease to threaten our cities.
2. The Soviet land-based missiles will cease to threaten a deliberate pre-emptive attack upon our missiles.

3. In case unintended war occurs, the Soviet land-based missiles will no longer have an incentive to strike first against our missiles out of fear of a strike from us. In this regard, our territory will tend not to be in the line of fire.

4. An expensive race to modernize, protect, and improve the ability of each land-based missile force to destroy the land-based missile force of the other side will be aborted.

5. The periodic political outcries of gaps and surprise attack threats—outcries focused on the vulnerability of our back-up land-based missile force—will be avoided.

Increasingly, land-based missiles are at the heart of what concern remains about "stability". In the absence of land-based missiles, MIRV (necessarily at sea) could no longer be considered "destabilizing"

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*Approved by the FAS Executive Committee, this statement was reviewed and endorsed by the following specialists: (See page 2 for credentials).*

Dr. Morton H. Halperin  
Dr. George W. Rathjens  
John M. Lee, Vice Admiral USN (Ret.)  
Dr. Herbert Scoville, Jr.  
Dr. Herbert F. York

## Counterforce Ten Years Later: Plus Ca Change

On January 10, 1974, Secretary of Defense Schlesinger revealed a quiet change in U.S. central war strategy. (See box, page 3). He announced that, several months before, he had begun the process of improving the accuracy of U.S. missiles, that we were now targeting Soviet military targets, and that we were preparing to fight less than all-out nuclear wars. This was a fundamental and far-reaching decision reversing a position which had previously been debated for more than a decade under the heading of "deterrence" versus "counterforce".

Several questions arise. First, why was the decision taken in secret when it is of such importance, and when it seems to contradict policy statements made by President Nixon, Senator John Stennis and others, only a few years ago.

Second, the decision is partly justified on grounds

involving the SALT Agreements limiting missile numbers, but the decision is clearly *not* to be negotiable at SALT.

Third, will the decision encourage limited nuclear war both by acknowledging that we are prepared to fight a controlled nuclear war if initiated by the other side, and by making our own preparations for initiating one? Thus, will the decision enhance or undermine U.S. safety?

Fourth, will the decision make future SALT agreements more or less difficult? In what direction is the arms race now heading?

### Counterforce versus Deterrence

In the early fifties, the United States thought of nuclear war as a prolonged (sixty day) campaign of exhaus-

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since it would not have much in the way of retaliating forces to aim at; indeed, as a way of discouraging antiballistic missile systems, it would be counted "stabilizing."

For these reasons, we propose that each side agree, in principle, to destroy its land-based missiles in a series of negotiated SALT agreements. One-third of the land-based missile force might be dismantled in a first agreement lasting for five years, during which time the destruction of a second one-third of the force would be negotiated, and so on.

Indeed, if the larger Soviet missiles and the MIRVed U.S. missiles were destroyed first, the residual land-based missile force of each side, though part of a smaller force, would become *less vulnerable* to attack from each other.

*There is no stable alternative to our proposal insofar as land-based missiles are concerned. There is no level of Soviet forces and U.S. forces which will guarantee, indefinitely, that each land-based force will be invulnerable to attack by the land-based missile force of the other. Accuracies are approaching zero and limiting them is most unlikely. With pinpoint accuracy, and using multiple warheads, a U.S. and Soviet force of, say, 1,000 missiles each (or 100 missiles each or 10 missiles each) will each be able to destroy (on paper at least) the vast majority of the other side's force.*

On the other hand—if it were agreed in principle that zero land-based missiles were the goal—five-year interim agreements successively lowering the size of land-based missile forces would be entirely feasible.

At the end of such a sequence of agreements, the United States would have only a diad, rather than a triad, of strategic forces. Only sea-based missiles and strategic bombers would remain. But this loss of redundancy would be more than balanced by having eliminated, in the agreements, more than 1500 Soviet land-based missiles—missiles which, in any case, had neutralized our foregone land-based missiles by threatening to destroy them pre-emptively.

We stand now on the brink of a "qualitative" land-based missile race in which each side is about to upgrade the counterforce capability of its missiles. This will put great strain on these SALT interim agreements limiting numbers, and make a mockery of them. It will increase strategic weapons costs. And it will raise unnecessary and unreal fears in the political arenas.

At the same time, we stand at a cross-roads at SALT where we can either begin to move downward through reductions of strategic weapons or we can try to negotiate a freeze which is not, in any case, workable in the long run as technology changes.

Thus both the counterforce problems, and the SALT problem, would be solved best by moving toward land-based missile disarmament. □

### Credentials of Co-Signers of Statement on Page One

Dr. Halperin was Deputy Assistant Secretary for Defense of Arms Control and Policy Planning under President Johnson and Senior Staff Member of the National Security Council under President Nixon.

Dr. Rathjens has served, among other positions, as Deputy Director of the Defense Department's Advanced Research Projects Agency (ARPA) and as Director of the Weapons Systems Evaluation Division of Institute for Defense Analyses (IDA).

Admiral Lee has served, among other positions, as Assistant Director of the Arms Control and Disarmament Agency (ACDA).

Dr. Scoville was Deputy Director for Science and Technology of CIA under Presidents Kennedy and Eisenhower and Assistant Director for Science and Technology of the Arms Control and Disarmament Agency under President Johnson.

Dr. Herbert F. York was Director of Defense Research & Engineering under President Eisenhower, and earlier Director of Livermore Laboratory.

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tion. Both cities and military targets were to be devastated. Later, the United States gradually realized that its preponderance of strategic weapons should be aimed initially at the time-urgent targets that could retaliate against us—a counterforce strategy evolved. Still later, during the missile gap period, the United States was preoccupied with defending itself against counterforce threat-possibilities to its bombers, threats that never materialized.

But by 1962, it was evident that the United States would have far more missiles than the Soviet Union for several years—and more missiles than were necessary to strike Soviet cities. The excess of missiles had been purchased for essentially political reasons — Secretary McNamara did not feel that he could come into Congress with a request for fewer than 1,000 although it was conceded, inside the Administration, that 400 would do for military reasons. (By 1965, the United States had a four-to-one lead over the Russians at about 1,000 to 250, in land-based missiles). In 1962, Secretary McNamara said, in a famous speech at Ann Arbor:

“The U.S. has come to the conclusion that to the extent feasible, basic military strategy in a possible general nuclear war should be approached in much the same way that more conventional military operations have been regarded in the past. That is to say, principal military objectives, in the event of a nuclear war stemming from a major attack on the Alliance, should be the destruction of the enemy’s military forces, not of his civilian population”.

The rationale for this decision was not particularly strong. If we were not going to strike first, it was asked, would we not be aiming at only empty holes? DOD said the Soviets might have a “reload capacity”. In fact, DOD was assuming, as usual, that the war would begin in Europe with a Soviet aggressive act and that the United States might well strike first on the nuclear level. Underlying the arguments and the rhetoric was an excess of missiles for which there simply were not enough civilian targets. Supply produced its own demand.

As the Soviet Union built submarines, Secretary McNamara moved away from this pronouncement. His rhetoric became that of “deterrence” rather than “counterforce”. Undoubtedly, U.S. missiles remained targeted upon Soviet missiles. But the Soviet missile force was growing beyond the ability of the U.S. force to keep up—at least on a missile for missile basis. In the sixties, counterforce became a generally discredited term.

In the research institutes, however, there was a solution: MIRV. It could make each missile count for several. Thus it could make possible a continued economical effort to target many Soviet missiles. Secretary McNamara would not purchase MIRV for this (counterforce) purpose. But he would, and did, buy it to overwhelm any possible Soviet ABM. In this regard, it was the perfect penetration aid, requiring that each “decoy” be destroyed because each was a warhead.

This kept MIRV alive. And much was said about it being defensive only. It was argued that the small (2-10

## QUIET CHANGE IN CENTRAL WAR STRATEGY

### 1970 — President Nixon

In seeking to improve the survivability of our forces, we have deliberately adopted measures designed to demonstrate our defensive intent. Our deployment of MIRV’s serves the same purpose. They do not have the combination of numbers, accuracy and warhead yield to pose a threat to the Soviet land-based ICBM force.

*United States Foreign Policy for the 1970s;  
Richard M. Nixon, Report to Congress,  
February 25, 1971*

### 1973 — Secretary Schlesinger

There is in prospect or there has taken place, to be more precise, a change in the strategies of the United States with regard to the hypothetical employment of central strategic forces. A change in targeting strategy as it were . . . the sizing of our strategic forces depends on SALT. The change in targeting doctrine is separable from that and does not impact necessarily the sizing of our strategic forces.

**Q. Are you going to try to permit the improvement of nuclear accuracy?**

**A. Yes.**

**Q. When was the decision made to improve the accuracy of nuclear targeting?**

**A. To the extent that I have been involved with the Department of Defense it has been since I’ve been at the Department of Defense . . . Now if you are referring to when a piece of paper went forward, I believe that the piece of paper went forward last summer.**

**Q. Was there not a commitment by the President in a letter to Senator Brooke that the Government would not (inaudible).**

**A. No, I don’t believe so. I think that the Government has indicated that it is not seeking a first-strike disarming capability. As I’ve indicated before, that capability is not within our grasp.**

*January 10, 1974, Secretary Schlesinger,  
Overseas Press Club*

times Hiroshima) size precluded use against enemy missile silos only. For President Nixon’s assertions in this regard, see box above.

In fact, however, it was considered inevitable among the more sophisticated observers that the Defense Department could not be prevented from putting high accuracy on these small warheads. There were too many temptations. At that point, DOD would have a really potent counterforce threat.

We had the potential for 3,000 200-kiloton warheads on our 1,000 Minuteman missiles (three such warheads on

each). And we had programmed 5,000 warheads on 31 Polaris submarines (16 missiles with 10 warheads each on each submarine of 50 kilotons each.)

The warheads were relatively small but, in such calculations, accuracy is much more useful than yield. An eightfold diminution in yield (megatonnage, payload capability) can be compensated for by a doubling of accuracy. Thus a giant Soviet missile with 25 megatons and 1/2 mile accuracy is only as effective as a U.S. one-megaton missile with 1/6th mile accuracy. The United States did indeed lead the Soviet Union in accuracy by a factor of two to three. And these accuracies were getting to the point where even with the smallest programmed Hiroshima-type bombs, hardened missile silos could be threatened.

Furthermore, as with Secretary McNamara, when there are too many warheads to target on civilian targets, what can one do or say to prevent the Defense Department from targeting military targets? And once this is conceded, what can one do to prevent the missile targeting from being done with high accuracy? Thus did cynics argue.

People did try. Senator Edward W. Brooke wrote a long series of letters to President Nixon and Secretary of Defense Laird. The responses were favorable in tone but equivocal read literally. The heart of the often repeated response was:

"We have not developed, and are not developing a weapon system having, or which could reasonably be construed as having, a first strike potential".

In addition, the President denied that he was funding a *specific* program for improving accuracy to which Air Force General Ryan had referred with pleasure and anticipation as providing "hard-target" killers. But this was all. The evident loophole ("reasonably be construed") is now being exploited.

Our own MIRV was first tested in August, 1968. By 1970, it was being deployed. It was evident to the same experienced observers that this deployment meant the beginning of the vulnerability of our own land-based force. The Soviet Union would never be stopped from catching up. On August 17, 1973 when the Soviet Union had finally and belatedly tested a MIRV, *five years late*, Secretary of Defense Schlesinger responded to a question about the chances for MIRV controls by saying:

"I think that the minimal point that one can make is that the Soviets are unwilling not to demonstrate a technology that the Americans have demonstrated. The imagery is something that presumably is not particularly appealing in the Kremlin".

If only we had argued this way in 1968 we might have tried harder to negotiate.

Now that our own MIRV is deployed, and the ABM danger has evaporated in a SALT Agreement precluding ABM, the question naturally and predictably arises in the Defense Department of completing the process—putting on the high accuracy.

The rationale being used is partly foreshadowed and partly new. In the foreshadowed part, Secretary Schlesinger argues that the strategic situation is now so stable that a counterforce strategy cannot be considered a "first-strike" potential. After all, the Russians have submarines.

Presumably he does not argue that the Soviet Union will like it. When Secretary McNamara made his speech, Marshall Sokolovskii said "McNamara's statement shows concrete and practical evidence of preparation for a preventive war" (Red Star, July 19, 1962). And when the Defense Department, in 1969, projected similar Soviet capabilities against our land-based force, Secretary Laird said there was no question they were preparing a "first-strike" threat.

Secretary Schlesinger's new argument is based on asserting that the Soviet Union might, in 1980, have a counterforce capability itself if it learns what we know *now*.

"If the Soviets were able to develop these improved technologies presently available to the United States in the forms of guidance, MIRVs, warhead technology, at some point around 1980 or beyond they would be in a position in which they had a major counterforce option against the United States and we would lack a similar option" (January 10, 1973).

He goes on to say that this capability might be used in a novel way. The counterforce option he has in mind is selective, or reasonably all-out, attacks on U.S. land military targets notwithstanding the existence of a secure sea-based force. In effect, he fears that the increasingly stable nuclear balance might permit limited strategic attacks that avoided cities. The U.S. might then be faced with an ultimatum to avoid retaliation lest the Soviet attacks further escalate to cities. Presumably, the Soviet purpose would be a show of force.

These limited attack possibilities are not only feared by Secretary Schlesinger. They are also *welcomed*, as a way of solving a strategic dilemma in Europe. In arguing for flexibility before the Senate Armed Services Committee on June 18, 1973, Secretary Schlesinger said, in support of the plausibility of such attacks,

". . . or to take another example, the United States' pledge to come to the aid of the NATO alliance, which would mean that we would be forced if we had to rely exclusively on the assured destruction options, to destroy Soviet cities and in consequence of this have destruction of American cities".

He would prefer limited strategic attacks instead. Indeed, such demonstration attacks—on a very limited basis—are said to be programmed already in the event of war in Europe.

It seems evident that these apocalyptic considerations are sufficiently important and interesting to the body politic that they should have had much greater airing. As late as two years ago, Senator John Stennis, Chairman of the Armed Services Committee, was arguing in support of the Defense Department against putting high accuracy on our MIRVed warheads. (See Box).

## DOD and Senator Stennis Opposed Counterforce in 1971

On October 5, 1971, Senator James L. Buckley (Conservative—Republican, N.Y.) proposed amendment No. 448 to the Military Procurement Authorization and asked that “not less than \$12,000,000 shall be available only for the purpose of carrying out work in connection with providing counterforce capability for the Minuteman III system.”

Scattered excerpts from the debate follow:

Senator Buckley: The amendments I have offered will not provide us with a first-strike capability for two reasons.

First of all, these are designed only to modify the warheads within existing missiles. We simply do not have enough missiles to mount enough warheads. For a first-strike effort, with the improved accuracy, we should need in excess of 12,000 warheads if we were ever to try a first strike against the Soviet Union . . . [Editor's note: 8,000 are now programmed on missiles alone].

Second, it should be kept in mind that there are innumerable situations where flexibility is urgently desired. Let us assume that either from the Soviet Union or from some other country there are indications that they have acquired the capability for a first strike capacity. Let us assume that their first strike knocks most or all of our strategic weapons. We would then have our submarines and additional weapons. We would then face the choice of aiming those at the civilian population of the enemy, thereby destroying tens of millions of human beings in the Soviet Union or trying to defend ourselves by directing our missiles at a second strike against the remaining weapons held by the enemy.

Senator Stennis: The explanation of this amend-

ment includes the word “counterforce”. Those familiar with these terms know that essentially means a first-strike capability. We have stayed within the terms of deterrence, deterrence, deterrence. That is what we are talking about at the SALT talks.

Here is what [the Defense Department says] in their position paper on proposed Amendments No. 448 and 449.

“The Defense Department cannot support the proposed amendments. It is the position of the United States to *not* develop a weapon system whose deployment could reasonably be construed by the Soviets as having a first-strike capability. Such a deployment might provide an incentive for the Soviets to strike first.”

I stand squarely on that ground. It is not often that the Department of Defense comes out against an amendment that would put more money in a bill.

. . . we do not need this type of improvements in payload and guidance now, the type of improvements that are proposed, in order to have the option of attacking military targets other than cities. Our accuracy is already sufficiently good to enable us to attack any kind of target we want, and to avoid collateral damage to cities. The only reason to undertake the type of program the amendment suggests is to be able to destroy enemy missiles in their silos before they are launched. This means a U.S. strike first, unless the adversary should be so stupid as to partially attack us, and leave many of his ICBM's in their silos for us to attack in a second strike.”

(See pages S15888, 15891, 15893 of Congressional Record, Senate, October 5, 1971).

## Counterforce & SALT

The counterforce decision is put forward by the Secretary as if it had much to do with SALT—in fact, however, it is non-negotiable. He does emphasize that “we cannot permit the other side to have a relatively credible counterforce capability if we lack the same” (January 10). And he emphasizes that the other side might have the capability by 1980 in the form of 7,000 one-megaton warheads. (The U.S. will soon have more than that number of warheads, and, as noted, with the accuracies anticipated these will be quite adequate for target-killing. Indeed, for limited strikes one wants *less* collateral damage; a force of smaller warheads would be better.)

But he notes that the targeting strategy change “has taken place” and that it is “quite distinct” from our SALT position (January 10, 1974 background). In this sense, the current furor about SALT and the Interim Agreement is an irrelevant smokescreen. Even if the SALT Agreement had provided for forces of quite equal size, the Secretary would presumably have wanted this same targeting doctrine and the same accuracy. Why?

It is true that the Secretary puts great emphasis, as do military men, on the political consequences of letting the other side get more than our side possesses in some dimension of armament. It is assumed in such statements that the side with the most megatonnage might be able to frighten the other. (Why the side with the most warheads or accuracy—our side—might not be able to gain the upper hand is never clear.)

Indeed, no measure is sufficient to make much difference. The fact is, and the literature of “limited strategic attacks” reveals it, that shows of force or resolve in a contest where neither side can disarm the other have to do with psychology rather than with weaponry. If one is “chicken” no amount of additional megatonnage will help. If one is bold, and willing to take risks to coerce the other side, no weapon inferiority need matter as long as a secure retaliatory force is maintained.

These facts are much blurred in the declarations of the Secretary of Defense, which are further tied to SALT negotiating strategy. He notes with repeated emphasis:

"We must maintain essential equivalence between the forces available to the Soviet Union and the forces available to the United States. There should be no question in the minds of the Soviets as we negotiate with them of our willingness to achieve that essential equivalence" (January 10).

Even as SALT strategy, this can be questioned. Why should there be "no doubt"? Might we not, just as well, argue that there should be "no doubt" in Soviet minds that the U.S. was not going to try to keep up with the nuclear Jones mindlessly? Obviously, much turns on the felt political relevance of militarily irrelevant force imbalances. Unfortunately, on-going SALT negotiations tend to exacerbate concern about imbalances that would otherwise be seen to be politically irrelevant as well.

### Evolution of Nixon Administration Doctrine

The link between strategic weapons and resolve has long preoccupied this Administration. The link began to be emphasized in the 1970 State of the World Message where the Administration began to take pot-shots at the existing strategic posture. It criticized the theory of "assured destruction" as one which believed:

"deterrence was guaranteed if we were sure we could destroy a significant percentage of Soviet population and industry after the worst conceivable Soviet attack on our strategic forces".

It suggested that the previous Administration believed that, if this criterion were satisfied, "restraint in the build-up of strategic weapons was indicated regardless of Soviet actions."

The Administration called for "strategic sufficiency" which, despite its name, was designed to require more weapons than "assured destruction" under a somewhat cooler label than the discredited "strategic superiority".

There was not—as there had been in the late fifties—concern that the Soviet Union might be able to disarm us. Significantly, the 1970 State of the World expressed concern about the "Soviet threat to the *sufficiency of our deterrent*; the 1971 statement talked of the possibility that the Soviet Union might seek forces that could destroy "*vital elements of our retaliatory capability*" (italics added).

Indeed, the 1970 statement indicated that the overriding purpose of our strategic posture was *political*: "to deny other countries the ability to impose their will on the United States and its allies under the weight of strategic military superiority".

In both the 1970 and 1971 statements, the Administration emphasized that it must not be "limited to the indiscriminate mass destruction of enemy civilians as the sole possible response to challenge" (1971). (It also mentioned, without much conviction, that "sufficiency also means numbers, characteristics and deployments of our forces which the Soviet Union cannot reasonably interpret as being intended to threaten a disarming attack".)

In 1972, the President re-emphasized what he had said in 1971:

"In its broadest political sense, sufficiency means the

maintenance of forces adequate to prevent us and our allies from being coerced. *Thus the relationship between our strategic forces and those of the Soviet Union must be such that our ability and resolve to protect our vital security interests will not be underestimated*" (italics added).

In short, the Administration had shifted the standard for strategic forces from a measurable strategic goal to a goal that was open-ended, depending ultimately on its own sense of psychological vulnerability. It was concerned that its sense of "resolve not be underestimated". But in a balance of terror, as noted, no amount of additional weapons can be certain of satisfying that criterion. Thus, sufficiency, defined this way, was an open ended invitation to weapons procurement.

In short, the decision to change our central war strategy was really quite independent of SALT. It grew out of the Administration's unwillingness to fall behind by any measure, no matter how militarily irrelevant the measure. It grew out of the double standard with which the Administration strategists cannot help but measure what constitutes "essential equivalence". And it grew out of the excessive number of warheads which we have programmed—an excessive number that forces the Administration to targeting and accuracy decisions for Parkinsonian reasons. The problem is simple: *weapons in search of a target*.

### Counterforce and the Likelihood of War

The United States is now legitimizing the notion of limited strategic attacks. In preparing for the possibility ourselves, and in talking of the fear that the Soviet Union might engage in this possibility, we are improving the prospects for limited nuclear war. This assertion can hardly be doubted. It takes "two to play" controlled war and if the other side is clearly not prepared, one would be foolish to try. By advertising our consciousness of the possibility, we are moving a giant step closer to having the Russians try out the ultimatums that we previously shrugged off as an impossible joke. This is not good.

Furthermore, if we plan limited nuclear attacks and talk about it enough, to this extent, we might try such a strategy. This is a dangerous course. The Russians are less likely than we to have invested in, and to be able to rely upon, the command and control that is necessary to play limited nuclear war. They, more likely than we, would just salvo their weapons or not fire at all. If counterforce targeting means kidding ourselves about these facts, then the security of the United States will be undermined by it.

Finally, the Secretary does not plan to purchase just the forces necessary to strike a few Soviet targets as a show of force: this ability we have already had for many years. He plans to purchase high accuracy and install it on the Minuteman and Poseidon MIRVs. The result will be an enormous boost in the capability of our forces to attack all of Soviet land-based missiles.

DOD thinks that by not specifying exactly what mili-

tary targets they are planning to aim at, they can confuse the issue. But once higher accuracy is purchased, it will provide enough capability to attack all of the Soviet retaliatory weapons—obviously these will then be the ones aimed at. And high accuracy is needed for nothing else.

### SALT and Counterforce

The Interim Agreement limits the number of silos in which the two sides can place their missiles. Thus it pins down the targets at which counterforce weapons would be aimed. How long will the two sides be willing to abide by the agreements limiting missile force numbers if these forces become vulnerable?

Growth in missile forces is probably not the answer to their dilemma, of course. New forms of missile deployment would have to be arranged. With each side gaining several thousand target-killing warheads, multiplying the existing forces in number will not seem cost-effective. After all, it is cheaper to buy an attacking new warhead than an entirely new defensive missile.

One answer, of course, is the one FAS provides. Throw away the land-based missiles and they will cease to be aimed at each other, with the benefits described on pages 1 and 2.

It should be noted, however, that this solution will not prevent the targeting of other less important military targets. Nor will it prevent shows of force, limited nuclear war (or limited strategic attacks) or whatever. These could still be carried out by submarine based missiles.

What our solution will provide, however, is a very small difference between the results of striking first and of striking second—in this sense it will increase the stability of the nuclear balance by providing the smallest possible incentive to strike first in a major way.

In the absence of such a solution, there will presumably be land-based missiles in other modes: mobile-based or based in silos under mountains and so on. Nothing could be more ridiculous at this stage of the arms race. But in light of the history summarized in this Report, no arms race procurement possibility can be ruled out as too bizarre. □

### NOMINATIONS FOR COUNCIL SUBMITTED

The Nominations Committee has submitted the following nine names to run for the six Council positions that become vacant in June. These are: Ruth Adams of ACLU; Halton Arp of Cal. Tech.; David Banta of Mount Sinai Hospital; Lester Brown of Overseas Development Council; John Holdren of UC Berkeley; William Higinbotham of Brookhaven National Laboratory; Allen Kneese of Resources for the Future; Jeremy J. Stone, FAS Director; Myron Wegman of University of Michigan.

The elections will take place in April; members who wish to nominate other candidates should submit petitions signed by 10 FAS members.

### Rise and Fall of Nuclear Surprise Attack

Consider the decline of the nuclear surprise-attack scenario. It began in the late fifties when exaggerated estimates of Soviet missile production suggested the USSR would have missiles while the U.S. still had only bombers.

*Scenario (1958-61):* The USSR launches large numbers of missiles at U.S. bombers on their bomber bases, destroying the deterrent.

*Problems:* The attack is hard to effect because the bomber bases in question were all over the world; to hit them at the same instant meant launching the attacking missiles at different times, thereby providing some warning. Also, U.S. had nuclear weapons in Europe and on carriers. (Especially important, the Soviets did not in fact ever have the missiles on which the attack is premised).

But, at least, the USSR attack made sense on paper and in concept.

By the mid-sixties the situation was much different. The United States had 1,000 land-based (Minuteman) intercontinental missiles and a fleet of 41 ballistic-missile-firing (Polaris) submarines, with 16 missiles each, more than half on station at any one time. The Soviet attack scenario became at least ten times less plausible. Here it is.

*Scenario: (mid to late sixties):* The USSR launches missiles attacking not only U.S. bombers but 1,000 U.S. missiles as well. In order to cope with the retaliatory strike from our Polaris submarines, the USSR plans to shoot down hundreds of such missiles with an anti-ballistic missile system.

*Problems:* No sane military or civilian planner in any country would rely upon a ballistic missile defense to shoot down hundreds of missiles. For this reason, this attack did not make sense, even on paper. (Further, the Soviet Union did not have a ballistic missile defense. Still further, the Soviet Union did not have the capacity to destroy even the U.S. land-based targets.)

Notice especially, how much harder this is to believe than the earlier scenario. This plan may make conceptual sense but it does not make practical sense.

In recent years the scenario *further* declined:

*Surprise Attack Scenario: (1969-71):* The Soviets launch large numbers of missiles against our land-based missiles and bombers.

*Problem:* No solution whatsoever is provided for neutralizing our sea-based deterrent. The scenario is baldly incomplete.

Notice that, by this time, the Soviet Union can not even be assumed to have a ballistic missile defense. By 1972, there is even a SALT agreement precluding all but two (strategically irrelevant) missile defense sites. As a result, the surprise attack scenario for this period is simply incomplete—on paper or in concept. In short, by 1970, there was no surprise attack scenario based on current Soviet forces or any proclaimed extrapolation of them!

The result was a new *political* addition to the scenario:



*Surprise Attack Scenario (1973—):* The Soviet Union launches large numbers of missiles against U.S. land-based missiles and then issues an ultimatum against U.S. responses with sea-based ballistic missiles.

*Problems:* The attack on our land-based forces does not significantly change the deterrent situation. Why then would the Soviets risk it?

Our sea-based forces could respond against any Soviet targets they wish, issuing a counter ultimatum—that full scale attacks on U.S. cities would result in a full scale attack on Soviet cities.

Soviet attacks on our land-based forces would inevitably cause widespread fallout and many millions of casualties. No Soviet planner could assume that we would carefully and restrainedly calculate after that. Nor could he be sure that we could distinguish this attack from an all-out attack. Nor could he be sure that we could restrain our sea-based forces with suitable communications once the crisis began or our air-borne bombers.

The entire scenario is bizarre—enormous risks for no point. The enemy disarms his land-based missiles in order to disarm our land-based missiles (with the sole advantage that they are disarmed over our territory rather than over his). Each side retains a deterrent as before, based on sea-based missiles.

One can only imagine that the Joint Chiefs have been smoking pot. The most incisive way to see the flaw in this scenario is to imagine that, some months before the attack, the United States had unilaterally dismantled all of its land-based forces. What would be the significance then of this scenario? We would have removed the targets for the attack but would have retained a totally adequate strategic deterrent.

## Status of the Famous Four Criteria

In 1971, the Administration allowed as it had four secret criteria for determining what strategic forces it needed and how to negotiate. For those who are insufficiently cynical about such things, it is revealing to see how little attention is paid to them.

By 1972 and 1973, these criteria were public. By now they seem to have been all but abandoned. Of course, the first criterion is still with us: "Maintaining an adequate second-strike capability to deter an all-out surprise attack on our strategic forces."

But the fourth criterion "Defending against damage from small attack or accidental launches" was given up when the SALT agreement prohibiting a thin ABM over the entire country was reached.

The third criterion was:

"Preventing the Soviet Union from gaining the ability to cause considerably greater urban/ industrial destruction than the United States could inflict on the Soviets in a nuclear war".

Without doubt the destructive capabilities of each side have reached the point where any differences are irrelevant. But the Administration itself signed an Interim agreement at SALT which did provide the Soviet Union with much greater payload capability.

Finally, the last criterion is very much at issue today:

"Providing no incentive for the Soviet Union to strike the United States first in a crisis".

The only method for doing this today is to get rid of land-based missiles. Indeed, destruction of U.S. Minuteman missiles—whether done unilaterally or as part of a bilateral reduction—would dramatically reduce the difference between a U.S. retaliatory blow before or after a Soviet attack. Thus it would precisely fulfill the criterion above by providing no Soviet incentive to strike first.

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