Strategic Arms Talks: What Is Negotiable?

Strategic arms limitation talks (SALT) between the United States and the Soviet Union begin in earnest on 16 April at Vienna. Both sides are expected to be ready for the first time in these negotiations to propose specific arms control measures. A preliminary "sniffing out" session of SALT, held in Helsinki between 17 November and 22 December, allowed each side to gauge the commitment and interests of the other and resulted in the agreement to meet in Vienna. Predictions of the outcome are remarkably hard to come by because neither side has revealed very much about its objectives.

For the past several months, the Nixon Administration has conducted, in secret, an intensive review of the political and technical issues of strategic arms control. The National Security Council (NSC), an interagency system that advises the President on defense and foreign policy matters, is now piecing together the American position, which will be presented in Vienna by Gerard C. Smith. Smith is director of the Arms Control and Disarmament Agency (ACDA), an arm of the State Department, and is chief of the U.S. delegation to SALT.

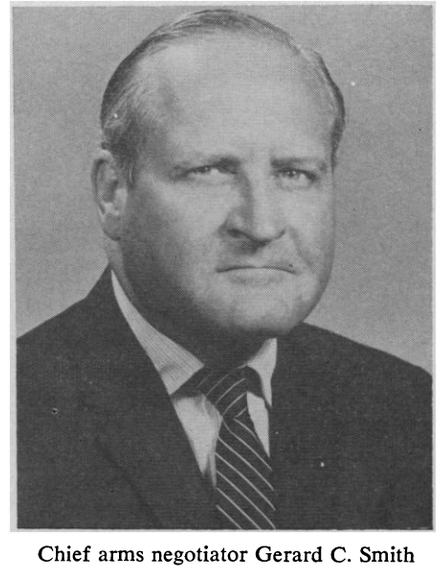
The onset of SALT has renewed the decades-long debate between those scientists and politicians who believe the arms race can and should be stopped cold and those who believe that the national interest or the unstoppable dynamics of technology, or both demand that it be kept alive (*Science*, 28 March 1969).

At first glance it may seem that the decision to engage in SALT settled the question in favor of stopping the arms race. But "arms control may cost more, not less," Thomas Schelling has observed. "It may by some criteria seem to involve more armaments, not less." That umbrella is broad enough to give shelter to almost all views on the question. A Defense Department official recently commented in private that "it isn't so clear that we would save money" on strategic arms control, because "when we get a treaty that limits numbers [of offensive and defensive weapons], both sides may go for quality, and quality costs money."

The preparation for SALT has raised other issues that are allied to the basic question of stopping or merely "controlling" the arms race. The lineup of scientists and politicians on each side of these questions is generally the same as on the major issue.

One issue is timing. New generations of U.S. and Soviet weapons are ready for, or in the process of, addition to the strategic arsenals. These principally include the ABM (antiballistic missile) and the MIRV (multiple, individually targeted reentry vehicle), a system that arms a single offensive missile with several warheads, each capable of attacking a different target. Air Force Secretary Robert C. Seamans, Jr., recently announced that the first U.S. missile armed with MIRV will be deployed in June. Secretary of State William P. Rogers on 17 March contended that the statement by Seamans would come "as no shock" to the Soviet Union and would not hamper SALT.

But those who want to prevent a new stage in the arms race from evolving while negotiations are in process seek a freeze that will prevent MIRV and ABM from being deployed now. They argue that the freeze should be mutual, if agreeable to the Soviet Union, but unilateral if necessary to buy time. The Senate Foreign Relations Committee on 20 March sent to the Senate a resolution calling on the President to propose to the Soviet Union a moratorium on further testing of MIRV's and an immediate suspension of the further deployment of all offensive and defensive strategic nuclear weapons and systems. The freeze would affect MIRV's, ABM's, new land-based and sea-based missiles (such as the Minuteman III and the Poseidon, the Soviet Polaris-type missile submarines, and the large Soviet SS-9 land-based missile) and other weapons on both sides. The resolution was sponsored by Senator Edward M. Brooke (R–Mass.) and Senator John Sherman Cooper (R–Ky.), both of whom were leaders in last year's unsuccessful effort to stop the Safeguard ABM.



Chief arms negotiator Gerard C. Smith

The second allied issue concerns the basic purpose of strategic nuclear deployments. One side of the argument has held for the past 10 years that the United States needs no more than a finite number of missiles because their only conceivable use is the ultimate retaliation against nuclear attack. In 1961 Jerome Wiesner, then President Kennedy's science adviser, proposed that this purpose could be realized with only 200 missiles. The other side of the argument, which the Joint Chiefs of Staff have supported, holds that deterrent forces should be augmented by weapon systems for "damage limitation," on the principle that deterrence may fail and the side which emerges from a nuclear war with the least damage will "win."

During the last decade the U.S. strategic posture has been something more than minimum deterrence and something less than effective damage limitation. But many experts believe the advent of MIRV and ABM will make it possible for both the United States and the Soviet Union to achieve a significant reduction in casualties—although by no means complete protection—by launching a preemptive attack. MIRV's would destroy a large part of the opposing retaliatory force and ABM's would partially block any answering blow. Some arms control specialists believe such a posture would be so unstable that, in times of great crisis, either side might be very strongly tempted to attack in order to escape total destruction.

An allied damage-limitation issue is defense against Communist China. The advocates of simple deterrence say

China will be deterred by American offensive forces when it acquires nuclear weapons. The advocates of ABM protection against China say the politics of China and of the U.S.-Soviet-Chinese triangle make it too risky to rely on deterrence alone. President Nixon himself suggested last year that the United States and the Soviet Union might want to install limited ABM protection against China. Phase II of the Safeguard ABM system, proposed this year, would begin preparations for "area" defense against Chinese missile attack.

It is possible to argue that MIRV's are at present not accurate enough for use as "first-strike" weapons against heavily protected, small targets like opposing missile forces, and are only intended to assure penetration of ABM's set up to protect cities. Similarly, it is possible to argue that ABM protection of offensive strategic missiles, like Safeguard Phase I, strengthens deterrence by making an enemy first strike less likely to succeed.

But opponents of both ABM and MIRV fear the camel's nose under the tent. Furthermore, they argue, it is not possible by unilateral inspection to determine whether a missile is armed with MIRV nor how accurate the warheads will become. Prudence and conservation of scarce resources, they say, demand that deployment of both systems and development of MIRV be halted.

This position is supported by a number of prominent academic scientists who have staked out claims to expertise on arms control questions. They include former Presidential science advisers Wiesner and George B. Kistiakowsky, Marvin Goldberger of Princeton, who was chairman in 1968–69 of the President's Science Advisory Committee's strategic panel, and Wolfgang K. H. Panofsky, director of the Stanford Linear Electron Accelerator. In the Senate, their views find a forum in the Senate Foreign Relations Committee's disarmament panel, headed by Senator Albert Gore (D–Tenn.), who plans to hold open hearings on SALT beginning on 8 April.

The other side of the argument on SALT encompasses a spectrum of views ranging from the belief that ABM and MIRV are required because of China (the ABM to protect the United States and the U.S.S.R. against China, and the MIRV to override the ABM), to the belief that large-scale damage-limitation is a desirable posture that does not invite nuclear attack, to the view that the arms race, as a product of political conflict, is inherently unstoppable. On this side of the argument, SALT is sometimes seen as a useful process for regulating the speed of the competition, a dialogue rather than an effort to achieve a termination of the arms race by treaty. At bottom, proponents of this approach appear to share the view that the arms competition places a greater strain on the Soviet Union than on the United States and thus works to the American advantage. That is, of course, a position with strong appeal to the aerospace industry and to scientists at laboratories heavily engaged in defense work. In the scientific community these views are generally associated with Edward Teller and Willard F. Libby. In the Senate a special subcommittee of the Armed Services Committee, headed by Henry M. Jackson (D–Wash.), is expected to provide a forum for such views.

Nixon Outlines the Options

President Nixon has declared that he is for "a mutually acceptable limitation and eventual reduction of our strategic arsenals." Exactly where that leaves the Administration in the arms control debate is not clear, however. A unilateral moratorium on weapon deployments during SALT is ruled out. But a mutual agreement for a freeze during negotiations may possibly still be in. The possibility has been made to seem slight, however, for reasons that remain obscure. It is possible that the Soviets dismissed that approach at Helsinki. Or it is possible that the Administration is simply determined to keep its hand as private as possible while waiting for play to begin at Vienna. It is also possible that conflicting positions within the Administration have not yet been resolved by decision on a single approach.

In his foreign policy message to Congress on 18 February, President Nixon laid out three possible negotiating strategies that are being examined through the National Security Council process. The first would seek a limitation on the numbers of deployed strategic weapon systems (particularly offensive and defensive missiles and bombers), but would make no effort to restrain qualitative improvements like MIRV.

The second strategy would seek limitations on numbers and capabilities of strategic weapon systems. "The hard issues here center around verification" of quality restrictions, the President noted. Verification problems include a number of important technical issues, such as (i) the capability of the Soviet Union to "upgrade" anti-aircraft missile networks into anti-missile systems by adding improved radars and computers; (ii) the ability of unilateral inspection methods to detect MIRV testing; and (iii) the ability of either side to perfect MIRV techniques without flight-testing weapons systems—for instance, through the development of more precise guidance and reentry mechanisms in the U.S. and Soviet space programs, or through Soviet efforts to develop surveillance satellites similar to American vehicles that eject film capsules for midair recovery over the Pacific, a technique similar to MIRV. These technical issues, particularly the feasibility of upgrading Soviet air defenses, have become subjects of great controversy in the scientific community.

The third strategy outlined by the President is to seek agreement on reducing offensive forces without reference to qualitative improvements, "on the theory that at fixed and lower levels of armaments the risks of technological surprise would be reduced." It is notable that the President did not mention restrictions on defensive weapons such as the ABM in the third approach. One school of strategists, led by Herman Kahn and Donald Brennan of the Hudson Institute, has for several years advocated a "defense race" as a more stable form of arms competition than an offense race.

The National Security Council has established a Verification Committee to review the technical issues of SALT. Members are drawn from the defense establishment, the State Department, ACDA, the intelligence community, the office of President Nixon's science adviser Lee A. DuBridge, and the staff of Henry Kissinger, President Nixon's adviser for national security affairs. Kissinger's staff is at the center of the whole process, organizing studies and summarizing their conclusions for the President.

In the national security field, technical issues are often political issues in disguise. This awareness has evoked considerable interest in both the SALT technical questions themselves and in the bureaucratic system for reviewing them. These subjects will be examined in a subsequent report.

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