

STRATEGIC RESTRAINT, MUTUAL AND ASSURED

by Alton Foss

Secretary of State Cyrus Vance's first mission to Moscow produced mixed results—and mixed emotions. Unrealistic public expectations of a breakthrough toward arms control fed equally exaggerated disappointment when there was no immediate movement toward agreement.

Commentators volleyed speculations back and forth. Brezhnev was too ill to cope with such far-reaching proposals as the Americans presented. The Soviets were stonewalling in order to test the new American president. The president had contrived his proposal not to produce agreement, but to shore up his domestic support by "hanging tough" on an initial position. The administration was acting in the belief that the Soviets needed an agreement more than the Americans and would swallow even disagreeable terms rather than trigger an intensified U.S. arms effort. Carter's public maneuvers on human rights provoked the Soviets into retaliating by a hardline stance on strategic arms.

These and similar interpretations seem too pat for the occasion. The Soviet Union and the United States face serious strategic issues which are quite sufficient in themselves to explain the outcome in Moscow. Differences in the two countries' present force structures, in their strategic requirements, and in their technological potential are intrinsically difficult to harmonize. Surely the basic reason for Moscow's decision not to accept either of the suggested U.S. options—a "comprehensive" plan for reducing strategic forces to 2,000 delivery vehicles or fewer and a "deferral" option for ratifying the Vladivostok Agreement of 1974 (but deferring action on the controversial cruise missile)—is that the Soviet government did not find the alternatives fair or advantageous.

From the American perspective the proposals seemed equitable—and-sensible. The comprehensive plan would have cut authorized forces by 17 per cent to 25 per cent and would have bolstered strategic stability by restraining tests and deployments of counterforce missiles on both sides. The so-called deferral plan would have confirmed those aspects of the Vladivostok Agreement on which the parties could concur, namely, an overall ceiling of 2,400 strategic missiles and bombers with a sublimit of 1,320 MIRV (Multiple Independently Targetable Re-entry Vehicles) launchers. Disputes over the Soviet Backfire bomber and American cruise missiles would be handled in later discussions.

These were plausible points of departure for the negotiations, but the comprehensive plan was bound to cause difficulties for Moscow, particularly given the abruptness which the president advertised and presented it. The difficulties were both strategic and political. Precisely because the Vladivostok

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ceilings were so high, the Soviet Union had been willing. Approved For Release 2009/06/17 : CIA-RDP05S00620R000200600093-2
forward-based systems (FBS), mainly the large number of tactical aircraft based in Europe and capable of delivering nuclear strikes against Western Russia. To cut strategic force levels would enhance the relative weight of these tactical weapons capable of strategic missions. From the Soviet standpoint, lowering the ceilings was certain to revive the FBS issue. Soviet analysts were also wary of the suggested constraints on force modernization and of the idea that they would reduce the number of heavy intercontinental ballistic missiles (ICBMs) from 308 to 150 in return for a U.S. commitment not to proceed with the large MX missile system. In terms of forces already deployed, they saw themselves having to make disproportionately larger cuts than the United States to meet the proposed new ceilings.

Politically, the Soviets' initial encounter with the new administration came amid mounting suspicions that the United States might not be genuinely interested in détente. Not only had the very word become taboo in the Ford administration: a number of agreements between the two nations had been signed but never implemented. The trade arrangements offered by President Nixon in 1972 had died in the uproar over the Jackson amendment. After arduous negotiation and signature of a Threshold Test Ban on nuclear weapons and a Peaceful Nuclear Explosions accord, the United States had declined to submit the agreements for Senate ratification. When months of diplomacy produced a compromise formula to implement the Vladivostok provisions, President Ford had yielded to Pentagon objections and passed up the opportunity, as he later acknowledged with regret.

In this context and faced with a new team on the American side, it was hardly surprising that Brezhnev insisted on pinning down the details of the Vladivostok Agreement before moving on to more ambitious tasks. With the interim agreement on strategic offensive weapons running out in October 1977, there now appears no real option other than to concentrate on a relatively modest agreement within the Vladivostok framework. There remains room for compromise. Although the Soviets did not accept the U.S. plan to exempt cruise missiles, an initial agreement could include only air-launched cruise missiles and count any bombers carrying them as MRV launchers under the Vladivostok ceilings. Action on sea- and ground-launched cruise missiles could await the next phase of negotiations, as could questions concerning the Backfire bomber. Under this arrangement, it would be important to suspend testing and deployment of the latter systems for perhaps three years, while possible limitations are evaluated.

The crucial goal now is to wrap up an agreement quickly in order to regain momentum in the process. The same consideration argues for early ratification of the threshold ban on nuclear weapons tests and the related pact on peaceful nuclear explosions. Even if these outstanding agreements are implemented, however, they will impart only slight impetus to the ponderous process of shapping a stable equilibrium between the two superpowers. To divine a path toward genuine

d conception of the functions and possibilities of negotiations. How we might fashion a more encompassing framework to regulate Soviet and American behavior in future strategic arms negotiations is the subject of this essay. In framing such a conception, three major elements deserve to be considered: (1) the role of strategic forces in crisis management, (2) the need for a common strategic doctrine, and (3) methods for assessing strategic intentions.

Strategic Forces in Crisis Management

1. In the 15 years since the Cuban missile crisis, the Soviet Union and the United States have managed to avoid direct and acute confrontations, although the near-misses in Southeast Asia during 1972 and the Middle East during 1973 were too close for comfort. In this interval, the developing dialogue in the Strategic Arms Limitation Talks (SALT), the Mutual Balanced Force Reduction talks, and elsewhere has proved a useful form of sensitivity training. Yet, paradoxically, this relative success in managing or avoiding crises may have lulled the two sides into underestimating the mounting risks associated with future crises. There is reason to believe that the next major crisis between Moscow and Washington could be more dangerous than any yet experienced.

The reasons for this dire prognosis have much to do with the transformation of the strategic balance. It is a truism that neither side should base its strategic force planning primarily on analysis of the worst case which might arise, but both nations need to recognize that they are veering toward a "worst case" which cries for alert study and joint resolution.

Consider the context of a future crisis in the Middle East, Africa, or in some other arena where the two sides' interests clash. The Soviet Union is bound to enter that engagement with vivid recollections of Khrushchev's demeaning backdown in the 1962 missile crisis. Indeed, some analysts explain much of Soviet behavior in the intervening years as a determined effort to overcome the strategic disadvantages so often cited to explain President Kennedy's success in pressuring the Soviet government to remove the missiles from Cuba.

Having invested a decade and a half and countless billions of roubles to achieve rough equivalence with U.S. strategic might, the Soviet Union may well enter that future crisis with a felt need to demonstrate that its costly nuclear deployments are worth their weight in political leverage. The technical and party bureaucracies which have led the campaign for the massive Soviet build-up will be impelled to demonstrate that all the sacrifices of these years are justified. There will be tremendous pressures on the Soviet leadership not to back down, not to yield, not to accommodate. In short, there is likely to be maximum compulsion on Moscow to extract a political victory from the crisis. This inclination could be even stronger with the succession of a new generation of Soviet leaders more confident of Soviet power and less mindful of the trauma of the Second World War.

But look at the United States' posture when facing such a contingency. Having acknowledged Soviet achievement of stra-

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1 nuclear weapons were being brought into position. It is, after all, extremely improbable that nuclear weapons would be worth very much in a Third World crisis scenario.

Schemes of this nature would require a great deal more analysis than is attempted here. The point is simply that coordination of crisis behavior has become a matter of paramount importance. The dangers which have arisen should be the subject of thorough-going explorations between the two governments. Their objective should be to dampen the tendency to emphasize the strategic nuclear equation in an effort to extract local advantage.

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A Common Strategic Doctrine

2. One of the most serious omissions of the 1972 agreements was the lack of a joint exposition of strategic principles. It is precisely this omission which has amplified suspicion that the Soviet Union is not truly interested in restraint but dedicated to superiority. Without a basic agreement on strategic guidelines to govern their weapons development and deployment activities, the two sides can only grope toward a kind of accidental and possibly temporary coincidence of interest. Activities which might be compatible with a policy of restraint acquire sinister overtones when viewed through a veil of profound uncertainty about the other side's true strategic purposes.

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In this manner, the value of the antiballistic missile (ABM) treaty as an indication that the Soviet Union and the United States had come to accept their mutual vulnerability has steadily diminished because of the lingering obscurity of Soviet motives. Did the treaty signify a commitment to mutual deterrence as the only realistic basis for the relationship? Or was the treaty merely a holding action stemming from Moscow's concern over the United States' lead in ABM technology? Is Moscow's hidden motive actually to gain time for perfecting an improved ABM option, more extensive civil defenses, and an overwhelming war-fighting capability centered on new counterforce systems?

Despite repeated professions of the U.S. acceptance of mutual deterrence, similar questions have arisen regarding American strategic initiatives in recent years. Having justified its multiple warhead (MIRV) missiles as necessary to saturate Soviet defenses, why did the United States proceed to deploy several thousand MIRV warheads after Moscow agreed not to erect an ABM system? Given repeated assurances by the president and secretary of defense that hard-target counterforce MIRV systems would be avoided, lest they be misconstrued as designed for a first strike capability, what significance should be attached to former Secretary of Defense James Schlesinger's shift in doctrine to favor highly accurate and larger-yield warheads? And does the rapid movement toward sophisticated cruise missiles capable of nuclear, as well as conventional, delivery represent a deliberate evasion of the ceiling established in principle at Vladivostok?

Many such questions have spawned a corrosive suspicion that Moscow and Washington remain intent on seeking advantage rather than accommodation. Such issues

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strategic momentum is toward Moscow, Washington. Approved For Release 2009/06/17 : CIA-RDP05S00620R000200600093-2

an outcome which appears to confirm that the shifts in the strategic balance have given the Soviet Union unwanted political leverage. To permit that impression to take hold would only damage the United States' potential influence in other quarters, strengthen the hand of those Soviet figures pressing for an aggressive stance in world politics, and tempt Moscow to further interventions.

If these anticipations are correct, they are a recipe for both sides entering some future crisis with their backs up and with less flexibility than such situations require. This worrisome prospect points to the need for candid discussion of this phenomenon at high levels of the two governments. While the strategic nuclear factor can hardly be eliminated as a background element in any great power crisis, it would be useful for the parties to draft some ground rules to moderate its inflammatory potential. They could usefully build upon the 1973 pact on the prevention of nuclear war, which made a modest start toward codifying the rules of the game.

Two such ground rules commend themselves immediately, and thoughtful diplomacy may devise others. First, Moscow and Washington would do well to avoid any overt invocation of their strategic nuclear power in reference to local crises, particularly those outside their respective zones of alliance. Kennedy's threat during the Cuban missile crisis to order a "full retaliatory strike" against the Soviet Union for any nuclear attack launched from the island, while understandable, is hardly a desirable precedent. Given the altered strategic circumstances to which we have referred, verbal restraint during crises assumes heightened importance. Both sides should try to disconnect so far as possible proximate disputes from the coercion of nuclear intimidation. Pledges of moderate rhetoric are normally of little value, but in this instance they could be quite useful as a sign of both sides' willingness to refrain from seeking political success by means of strategic bluster.

Second, and more concretely, the two governments might offer assurances that they would not introduce nuclear-capable forces in a region where a crisis engages major interests of the Soviet Union and the United States. Here numerous difficulties arise. Such a policy could not apply to NATO, the Warsaw Pact, or certain other allied territories covered by the nuclear umbrellas of Moscow and Washington. The Middle East and the Mediterranean pose special problems, since, whether or not allied to one of the great powers, countries in this area are well within range of the nuclear forces normally deployed between Gibraltar and the Bosphorus. Nevertheless, in many areas of the globe, whether or not covered by formal nuclear-free zones, it would be advantageous for the Soviets and Americans to make arrangements to avoid the movement of nuclear forces during any periods of crisis.

There are significant obstacles to such arrangements, including, especially, the dual capabilities of many naval forces. It would be hard to avoid ambiguity in showing the flag by moving naval vessels toward some theater of crisis, but perhaps discussions could produce some understandings that designated elements of the respective fleets and air forces would be construed as conven-

ention, by most realistic definition of a common strategic doctrine. The specification of such a doctrine, at least in outline, deserves high priority in the next phase of negotiations.

One may be cynical, however, without being doctrinaire. To argue for a doctrinal agreement does not require us to demand in advance that the product comport in all particulars with our doctrine. The naked vulnerability of the Russian and American people to nuclear attack is a technological fact, not a moral ideal. It is a condition with which we must cope, not one from which we can derive satisfaction. Yet the inescapable truth is that, in the fourth decade of the nuclear age, no one has articulated a plausible alternative to mutual deterrence. If the Soviet Union has identified a better basis for the strategic relationship with the United States, it is incumbent on Moscow to present its ideas and persuade Washington that they are mutually beneficial. If, as one surmises, Soviet strategists have no superior analysis in which to anchor the relationship, then both countries must come to terms with the realities which bind our fates together.

One of those realities is that the attempt by either side to alter the stability of deterrence by overcoming its own vulnerabilities is bound to be dangerous. A unilateral quest for escape from the paradox of deterrence is a reckless and counterproductive gesture calculated only to jeopardize both countries' security. If we are to make our way out of the deadly embrace in which Soviets and Americans are entwined, we shall have to act together. Meanwhile, we can only make matters worse by defying the dread logic of deterrence.

Americans remain somewhat divided and anxious over these doctrinal issues, but the burden lies more heavily on the Soviets. They must appreciate that their lack of clarity in these matters has created a festering mistrust in the United States which is feeding back into increased military efforts to counter the Soviet Union. Listen to former Secretary of Defense Donald Rumsfeld, justifying major increases in U.S. defense spending: "The Soviets by their activities indicate that they are not interested in mutual assured destruction. . . . Prudence requires that we take into account the other and darker face presented by the Soviet Union. . . ." A majority of Americans have now turned back toward a preference for greater defense spending and Congress has joined hands with the executive branch to satisfy that demand. Partly because of Soviet reticence to set forth a doctrine of restraint by which their military programs can be evaluated, the fear level has been rising and it threatens to swamp hopes for additional strategic arms agreements.

It is perhaps necessary to underscore the fact that a doctrinal agreement would have direct consequences for appraising particular weapons programs on both sides. In the context of a consensus on mutual deterrence, for example, a number of current strategic programs would be difficult to justify. So long as the AMB treaty remains in force, and so long as security is founded on both sides' awareness that they face assured retaliation for any nuclear strike, U.S. movement toward an excessively accurate MX missile with a larger warhead capable of counterforce strikes would be insupportable. So would

ICBMs. The insistence on both sides should be bent toward reliance on smaller, rather than large, missiles. The fundamental imperative would become not to threaten the other side's strategic forces, but to guarantee the survivability of one's own.

There are other reasons for wishing to launch deeper discussions of strategic doctrine. It would be helpful to raise doctrinal issues to the political level of discourse between the governments. Some discussions of strategic principles took place in the opening months of SALT I, but these matters have received little attention since then. One has the impression, confirmed by many of the corridor conversations connected with the strategic arms limitation talks, that the extreme compartmentalization of the Soviet government has insulated the Foreign Ministry and key elements of the Soviet Presidium from active participation in the refinement of strategic concepts. Although Brezhnev has displayed a keen sense of the hazards of nuclear conflict, strategic doctrine has remained the province of the uniformed military establishment. Evolving in that setting, Soviet strategic thought has retained its classical emphases on heavy defense outlays, hints of pre-emptive attack, and allusions to the inevitability of war.

By engaging the Soviets in a debate on doctrine at the political level, many of the anomalies which appear in Soviet military writings could be highlighted and brought to the attention of the Kremlin leadership. Such discussions might persuade the Soviet Defense Ministry to modify some of its tenets or to reconcile its programs with its premises. In this manner, SALT, already a valuable learning experience, could provide still more useful instruction to all participants. And, should the process generate agreement on explicit strategic principle, the governments would be relieved of the necessity to defend subsequent accords against the charge that they merely disguise fundamental disagreements.

In short, if there is in fact a strategic consensus on which to ground the security of our peoples, then it ought to be stated. A coherent, cooperative doctrine could facilitate negotiations and simplify force planning on both sides.

Assessing Strategic Intentions

3. Now we come to the heart of the case. If SALT is to fulfill its promise, the time has arrived to transform the negotiations from an exclusive focus on strategic capabilities to a broader elucidation of strategic intentions.

The harsh fact is that no one has contrived a persuasive approach—even with the most intrusive inspection schemes imaginable—to eliminate nuclear weapons capabilities from the planet. Notwithstanding Carter's admirable tribute to the ideal of general and complete nuclear disarmament, the goal for our generation and for many to come must be to manage an inventory of horrors which will not go away. The weapons will exist; our objective must be to insure that no government will choose to use them. This will require steps to create the habit of restraint on the part of nuclear powers and a prudent basis for trust among them. It will require, in other words, concerted scrutiny of the intentions of governments. Only if diplomacy can harmonize the

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behavior of regimes which are in conflict will it be : Approved For Release 2009/06/17 : CIA-RDP05S00620R000200600093-2 serious in strategic capabilities and related measures which will move the world toward the ultimate goal of abolishing nuclear weapons.

On this analysis one is led to the familiar —should one say the chronic—dilemma of intelligence: "capabilities versus intentions," as it is so often and so misleadingly stated. The military capabilities of a state are more or less observable, while a nation's intentions tend to elude objective assessment. Optical and electronic surveillance can provide extensive information regarding weapon systems and deployments, but, as Fred Iklé once put it so aptly, not even the best camera can detect an intention from 50,000 feet.

For the understandable reason that intentions are so hard to discern and so easy to alter, capabilities are the preoccupation of intelligence agencies, military planners, and arms control negotiators. Capabilities are crucial, but the central point is that constraints on forces may serve less as physical impediments to nuclear war than as testimony to both sides' common purpose not to wage one.

This perspective dictates a different attitude toward future SALT negotiations than the one which has surrounded the discussions since 1969. The concentration on a small number of highly verifiable numerical limitations needs to be supplemented by what one might call an architectural approach. That is to say, SALT should shift its emphasis from individual building blocks to an awareness of the political and strategic structure in which each element will be imbedded and appraised.

Such an approach becomes all the more essential when one realizes the limited potential of the quantitative restraints which have consumed most of our diplomatic energies during the last decade. That potential is limited in several respects. Only a few categories of weapons are both relevant to the strategic balance and susceptible to meaningful limitations. Without accompanying controls on technological development, quantitative ceilings and reductions may be offset by qualitative changes in the weapons themselves. And of increasing significance is the fact that even quantitative limits on some types of systems may not permit the extremely high standards of verification which have been levied on the first agreements.

The latter point deserves a special comment. Several weapons systems now emerging in the inventories of both countries, especially cruise missiles and mobile ICBMs, compound the verification problem severely.

To be sure, one can conceive of ways to mitigate the verification difficulties, even in these instances. For example, mobile ICBMs might be more observable if they were deployed in trenches of known locations and dimensions, rather than permitted to operate throughout a nation's road or rail network. Similarly, air-launched cruise missiles can be accounted for by identifying the aircraft capable of launching them and assuming that all such aircraft are so equipped. Long-range missiles launched from ships, which could conceal large numbers of such weapons, would pose far tougher problems for detection and monitoring. Verification is likely to become more problematic in the future, especially if we must depend on the

national means which have heretofore been enough to require a rethinking of the verification standards and methods to which the two sides have become accustomed.

In these matters, total certainty is impossible. To assert that verification is inherently probabilistic is not an argument for diminishing efforts to maximize the possibilities of verification. It is, rather, to preface the idea that confidence in an arms control regime may be enhanced by relying more on the breadth of verification than on its depth in any single case. Unless both governments are attentive to this trade-off, the opportunities for strategic restraint may soon run up against unachievable demands for verification of compliance with individual arms controls. This could turn the prolonged deadlock in SALT II into the final defeat of SALT III.

The escape from this diplomatic cul-de-sac may lie through the paradox of complexity. For good and sufficient reasons, negotiators have strived for the utmost simplicity in SALT agreements. At this stage, however, further progress may well depend on substantially complicating the SALT agenda. Instead of relying on a small set of controls geared to the highest feasible levels of verification, the United States and the Soviet Union could derive greater security from a diverse group of controls that are compatible with more modest verification requirements. This is a realm in which art must aid politics in crafting a mosaic of strategic understandings in which the removal of a single piece would not destroy the integrity of the whole.

A principal strength of this approach is its contribution to bridging the capabilities-intentions gap. To build confidence in the good faith of the signatories it is desirable to devise as many tests as practicable for them to demonstrate by action their commitment to strategic restraint and peaceful accommodation. The task is to create an array of constraints, all of which are reasonably verifiable and useful in curtailing activities that tend to generate strategic instabilities, and none of which, if broken, would prove lethal to stability. By diversifying the types and increasing the numbers of controls over development and deployment of strategic systems, one can multiply the indicators of strategic intentions. On this basis, one may hope gradually to create a climate of mutual confidence in which actual reduction of forces may proceed.

Obviously, to rely on multiple undertakings of varied degree of verifiability might produce potential sources of anxiety. Critics of such arrangements might find more points on which to challenge the other side's compliance and to sow doubts about its good faith. This could lead to serious domestic pressures, especially in the United States. But two factors argue against this possibility as a cardinal deficiency. The individual commitments recommended here would be sufficiently verifiable to preclude significant evasions. And, as experience in the Standing Consultative Commission established to monitor the 1972 SALT accords has shown, methods can be found to enable the parties to clarify questionable events and to alleviate suspicions about particular activities. If necessary assurances are not forthcoming, that fact itself becomes a valuable indicator of

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This is all very neat in theory, but, one may ask, can we identify specific elements of this "multiple-indicator" design? Indeed we can, and many of them have already been subjected to careful analysis. Furthermore, there are major precedents in Soviet-American bargains for virtually every indicator to be suggested here. And, most hopefully of all, Carter seems drawn to a more variegated approach to break the stalemate in SALT. His comprehensive proposal included a number of indicators of the types considered here, and several working groups established at the Moscow meeting could contribute to this approach.

A Plausible Mix of Proposals

Let me illustrate a plausible mix of proposals. On the assumption that, even if the two sides eventually wish to frame another doctrine, their immediate interest lies in stabilizing deterrence, at least three types of agreements are appropriate: (1) measures to minimize threats to the survivability of retaliatory forces; (2) measures to ensure the survivability and effectiveness of each side's surveillance capabilities, i.e., "national means of verification"; and (3) measures to moderate the technological competition in order to facilitate movement to a stable balance at lower force levels. Some proposals would serve more than one of these functions.

> One of the most promising ways to diminish threats to the survivability of land-based missiles would be for the Soviet Union and the United States to limit the number of missile tests to a small annual quota; the Carter administration has suggested six tests a year, but the number should be negotiable. This could slow the trend toward hard-target silo killers.

> The parties might usefully restrict such tests to missile systems already deployed or firmly scheduled for deployment in the very near future, e.g., the Trident I missile and the SS-16. New re-entry vehicles designed for the greater accuracies needed to attack missile silos, as well as maneuvering re-entry vehicles, could be prohibited.

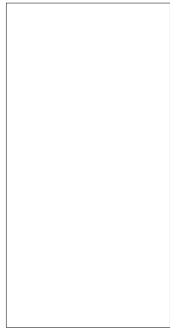
> All tests of ballistic missiles should take place over agreed ranges with prior notification of the launch site, missile type, and impact area.

> To avoid suspicion that space launches may be used to cover clandestine tests, Moscow and Washington should also undertake to exchange information regarding planned space launches, including the time and location of launches, booster configuration, payload, mission profile, and orbital parameters.

> There should also be agreement that no more than one test missile should be fired within a 24 hour period, in order to reduce apprehension about the occasional multiple launches which the Soviet Union has made. If tests are launched from operational sites, as has occurred, the launcher's geographic coordinates should be identified in advance.

> Furthermore, to ward off sneak attacks on bomber bases and other priority targets, neither side should test missiles in a "depressed-trajectory" mode.

Undertakings of this nature would parallel and expand upon the test restrictions accepted by both governments in the ABM treaty, which contains a host of qualitative limitations on antiballistic missile tests. They



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of the 1971 Agreement on Measures to Nuclear War in which each party promised to notify the other of planned missile launches "if such launches will extend beyond its national territory in the direction of the other party." Under this arrangement, the Soviet Union has generally given public notice of missile tests whose impact areas have been in the Pacific Ocean, with the exception of a single missile which seems to have strayed from its intended re-entry over the Kamchatka Peninsula.

It would also be useful to reinforce the already substantial invulnerability of ballistic missile-firing submarines. Although antisubmarine warfare capabilities and operations are frequently multi purpose and ambiguous, one can identify some distinctive schemes to protect strategic submarine (SLBM) fleets.

> There should be no continuous tracking of SLBM boats, particularly by hunter-killer submarines.

> The two sides might also wish to give further study to the creation of possible sanctuaries for such boats into which no antisubmarine warfare (ASW) forces would penetrate.

> A valuable quantitative control would be an agreed ceiling on the number of hunter-killer submarines capable of threatening the missile-launching platforms. Lest some breakthrough in detection and tracking expose SLBM boats to destruction, the ratio of hunter-killer submarines to strategic missile-launching submarines should not exceed two to one.

Admittedly, these suggestions would impose some constraints on conventional ASW capabilities, but their value as strategic indicators should justify their acceptance.

The existing commitment of both sides not to interfere with each others' "national technical means of verification" invites additional assurances on that front.

> Beyond general agreement not to interfere with observation satellites, the governments should consider a flat prohibition on development and testing of "satellite killers." Again, this concern is reflected in the recent U.S. proposals and in one of the working groups created at Moscow.

> They should specifically prohibit a close approach by one country's satellite to that of another without prior notification and full description of the approaching satellite's mission and capabilities.

> It becomes increasingly essential for the two sides not to perform high-energy laser or particle beam tests in outer space.

> Equally important, they should agree not to station in space large nuclear reactors or other power sources capable of generating threatening levels of laser output or particle beams. The purpose here is not only to protect deployed satellites, but to enforce the agreed interpretation of the ABM treaty to seek specific limitations on potential ABM systems "based on other physical principles" than those of interceptor missiles.

At the same time, acting on lines set forth in the 1959 Antarctic Treaty and the 1967 ban on basing weapons of mass destruction in outer space, the United States and the Soviet Union would do well to establish mutual visitation rights to facilities operating in space. For many years they have carried out amicable mutual inspections of their bases on the south polar continent.



proposed rule for joint visits to space stations and other man-made objects orbiting the earth. Here the joint space mission of 1975 is a helpful indication of technical and political feasibility, and the coming space shuttle a suitable vehicle.

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> There should be explicit agreement that during joint visits to satellites, nondestructive external inspections would be permissible.

> Where satellites are inaccessible to visits by joint crews, e.g., in zones of dangerous radiation, procedures should be drawn for remote inspection on an agreed schedule by unmanned satellites equipped for optical, electromagnetic, and other radiation measurements.

Arrangements of this character will involve costs in information which could increase the vulnerability of satellites to countermeasures in time of conflict. Nevertheless, since some of the gravest threats to stability on earth may emerge from development in space, it behooves us to operate there on the principle of maximum disclosure. Ideally, as confidence grows between the parties, a simpler system of pre-launch inspection of all space payloads would be preferable and much less expensive.

Within this framework of interlocking assurances, the so-called Threshold Test Ban on nuclear weapons, signed in 1974 but not yet ratified, takes on a different aspect. Evidently, a comprehensive prohibition on tests holds more promise for promoting antiproliferation policies. Carter's suggestion of a complete Soviet-American nuclear test moratorium for a period of years and his willingness to proceed in this direction whether or not China and France adhere promptly are sound initiatives to discourage further spread of nuclear weapons. However, the threshold ban and related protocol, together with subsequent arrangements on peaceful nuclear explosions, include quite significant provisions for exchange of detailed information regarding the geology and seismic characteristics of specified test sites, as well as calibration data on the yield, time, depth, and coordinates of particular tests. The peaceful nuclear explosions agreement contemplates actual foreign inspection of multiple detonations whose total yield exceeds the threshold of 150 kilotons. These are quite extraordinary precedents, and pending satisfactory arrangements for a comprehensive ban, they justify acceptance of the accords, especially since American procrastination in ratifying the pacts has provoked Soviet suspicion.

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In shaping multiple indicators as a guide to strategic intentions, one's attitude may change regarding the usefulness of limits on bases for certain deployed forces. Analysts have been cautious in weighing such notions as the possibility that the Soviet Backfire bomber, which has been a source of great contention, might be denied an intercontinental potential by confining it to designated zones. Air refueling, it is thought, could still make possible one-way strikes on the United States with recovery of the planes in Cuba. Yet, if the Soviets genuinely wish to demonstrate that the Backfire is strictly a theater weapon, a combination of limits on tanker aircraft capabilities and clear indications that the plane would be based well out of range

Similarly, there are to be mobile land-based missiles or all, the two sides should restrict their ranges and withhold them from areas close enough to threaten the other party.

The incipient deployment of the Soviet Union's SS-21 intermediate-range mobile missile is troublesome, but perhaps manageable. Washington should press Moscow to spell out its full plans for the system, and should determine whether the Soviets plan compensating reductions in older intermediate range ballistic missile forces in Europe. Most importantly, the United States should urge that Moscow confine each missile to an agreed block of territory, possibly 25 to 50 square miles in size and with no fully enclosed revetments. Limited mobility within such sectors would afford ample survivability but could facilitate the accounting necessary for arms control. In addition, to prevent conversion of this missile to intercontinental capabilities, its canister dimensions should be fixed and there should be neither testing nor retrofitting of an additional stage on such rockets. Such schemes are in several respects inadequate as limits on capabilities but, in conjunction with other measures, they could be useful indicators. Any movement of the designated systems into forbidden zones would then provide strategic warning of hostile intentions.

The most important factor in weighing a "multiple-indicators" approach may well lie in an emerging shift in Soviet psychology. As strategic parity has materialized, the major argument for Moscow's resistance to greater disclosure of its capabilities—the persistent fear of exposing its weakness—has surely declined. Thus, one contrasts the traditional Soviet attacks on Western inspection proposals with more recent hints of a willingness to offer necessary assurances for faithful compliance with arms control agreements. Confidence-building measures seem to have become more negotiable, whether one speaks of prior announcements of military maneuvers in Central Europe, arrangements to avoid incidents among naval forces in the open seas, hookups of the two nations' manned spacecraft and visits to key space facilities, exchange of meteorological, geological, and seismic data relevant to military assessments, or even the prospective on-site inspection of certain nuclear explosions. No one should underestimate the psychological advances to which these agreements testify. A concerted effort to fathom strategic intentions may now be both prudent and practical.

Fortunately, the current American president seems instinctively to perceive this fact. He has already alluded to his interest in a number of the proposals mentioned here—limits on missile tests, antisatellite technology, the comprehensive nuclear test ban, and other ideas. Obviously, some of these concepts are more significant than others, some are more verifiable, some more negotiable. But their collective promise outweighs their individual features. The achievement of a sizable fraction of these suggestions would afford unprecedented insights into the likely strategic behavior of coming decades.

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It may be that Carter's distinctive acquaintance with nuclear technology will be the decisive ingredient in this situation. No other president in the nuclear age has had such familiarity with the hardware. Carter seems less intimidated by such issues and perhaps less vulnerable to distorted presentations of the technical intelligence on which national security decisions rest so heavily. He clearly displays a special sensitivity to the dangers of the nuclear age and a firm dedication to meeting them responsibly. These qualities may enable the first president of America's third century to move boldly where others have trod but timidly.

Jack London once wrote of "the menacing truce that marks the meeting of wild beasts that prey." The United States and the Soviet Union have been locked in such a truce for a full generation. It is a fate unfit for human beings. The task for the next generation is to transform that truce into a more affirmative and more secure relationship. To banish fear is too much to expect, but to govern strategic capabilities and to mold compatible intentions are well within our reach.

The goal is to impose mutual assured restraint upon mutual assured destruction. The irony may be that, as another student has put it, we must have both, or we shall have neither.