On September 25, 1987, former American secretaries of defense gathered in a public meeting in Atlanta, Georgia. Much of the session was devoted to issues, arms control, and Soviet-American relations. A repeated theme was the importance of crisis stability. The issue was put most dramatically by Robert McNamara, who, when asked what advice he would give to the next president, replied, "Push ahead, probe the Soviets' willingness to engage in arms control agreements that will increase crisis stability. And I would include both nuclear agreements and conventional force agreements.

Concern for crisis stability was reflected in 1987 by government action as well. Ten days before that meeting in Atlanta, Secretary of State George Shultz and Soviet Foreign Minister Eduard Shevardnadze signed an agreement establishing nuclear risk reduction centers in Washington and Moscow. The original stimulus for the agreement was a 1982 proposal from Senators Sam Nunn (D-Georgia), John Warner (R-Virginia), and Henry Jackson (D-Washington) for the creation of a joint crisis control center to increase crisis stability. Although the 1987 agreement was a pale version of the original proposal, it did represent a bilateral recognition of the issue's importance.

A more substantial development occurred at the December 1987 summit in Washington when the United States and the Soviet Union signed an agreement to eliminate INF. Some in the United States worried that the INF Treaty would spur preemption to reduce reliance on nuclear weapons for NATO defense still further. There is little doubt, however, that the treaty contributed to crisis stability, particularly from the perspective of the Soviet Union. The American PERSHING II missiles deployed in West Germany had the capability of destroying much of the Soviet command and control with little or no tactical warning. Although command centers in the continental United States were never threatened by Soviet missiles abolished by the treaty, NATO and other European-based military command centers did face such a threat. Thus, crisis stability in Soviet-American Strategic Relations:

Charles F. Hermann
In a future crisis, the United States and Soviet Union may well face an increased risk of war unless strong steps are taken to reverse the trends in evidence in the late 1980s.

The Concept and Its Implications

Frequently crisis stability is regarded as a special case of deterrence stability. As alluded to above, the concept can be seen as the continued belief of both sides that war would be detrimental to their interests. The continued belief of such would imply that a crisis must be resolved in a manner that prevents a shift to war; that no side would gain from it; and that the continuation of a crisis would be harmful to both sides.

The Concept of Crisis Stability

In the context of crisis stability, one must test the conditions and the constraints that are being placed on the sides. The most important of these constraints is the psychological stability of the policymakers involved. Some of the constraints that affect stability are whether the policymakers are really committed to the process of crisis management, whether they have a realistic view of the situation, and whether they are willing to continue the process.

Crisis Stability and Its Implications

Crisis stability is a special case of deterrence stability. As such, it is concerned with the psychological stability of the policymakers involved. The question of whether the policymakers are really committed to the process of crisis management, and whether they have a realistic view of the situation, is important in assessing the stability of a crisis. The question of whether the policymakers are willing to continue the process is also important.

The Reference to Confidence Introduces the Psychological Dimension

The reference to confidence introduces the psychological dimension. Confidence is a belief in the future outcome of a crisis. It is a belief that the crisis will end in a peaceful resolution. Confidence is important because it affects the behavior of the policymakers involved. If they believe that the crisis will end in a peaceful resolution, they are more likely to continue the process.

The Nature of Crisis Stability

Crisis stability is a special case of deterrence stability. It is concerned with the psychological stability of the policymakers involved. The crisis stability is concerned with the psychological stability of the policymakers involved. The crisis stability is concerned with the psychological stability of the policymakers involved.

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Crisis stability is a special case of deterrence stability. It is concerned with the psychological stability of the policymakers involved. The crisis stability is concerned with the psychological stability of the policymakers involved. The crisis stability is concerned with the psychological stability of the policymakers involved.
The threat of an impending nuclear attack will undoubtedly generate severe demands of the highest government officials engaged. Common bureaucratic obstructions can be overcome, and special resources can be mobilized. Nevertheless, as a crisis continues, early August 1914, communications may be regarded as prudent defensive preparations by the initiator. The same actions may be viewed as provocative preparations for attack by an opponent fearsome prospect in a crisis, as demonstrated by the events in Europe in late July and August. The deployment of troops, launching bombers to fail-safe points, and greater security of deployment, may not always be pleasant. Provocative preparations constitute the second condition. In response to a serious threat of a military nature to basic interests, a natural step is to accelerate necessary defensive measures. Actions designed to increase readiness by the generating forces, increasing their alert status, and accelerating intelligence collection may all be motivated by prudent defense requirements. The difficulty arises when these measures are interpreted by the adversary as indicators of a commitment to aggressive action. Forward deployment of troops, launching bombers to fail-safe points, and greater security of communications may be regarded as prudent defensive preparations by the initiator. The same actions may be viewed as provocative preparations for attack by an opponent who responds with accelerated countermeasures. An action-reaction cycle of escalating stages of military alert, in which each side is responding to the other's last step, is a fearsome prospect in a crisis, as demonstrated by the events in Europe in late July and early August 1914.

The last condition is defective policy-making. Crises create stress on the individual policymakers. This does not automatically mean that the quality of decision making must erode, however. In fact, crises may generate circumstances that can actually improve the decision process. The most-qualified individuals will frequently be detailed to the problem from other assignments and will give it undivided attention. With the authority of the highest government officials engaged, common bureaucratic obstacles can be overcome, and special resources can be mobilized. Nevertheless, as a crisis continues, fatigue and other factors can be expected to have an effect. Furthermore, under severe stress, individuals can behave in ways that are clearly dysfunctional to their objective. The threat of an impending nuclear attack will undoubtedly generate severe demands on all who must cope with the problem. In addition, the high degree of uncertainty and the possibility of extremely short time for information collection and verification can mediate situation. Subordinates may previously have understood these problems but may not yet have convinced top civilian or military leaders of their significance, or funds for the necessary corrections may not yet have been appropriated. Alternatively, weaknesses may result from revised intelligence of an adversary's capabilities or deployment. Not until the opponent makes a move during the crisis are the previous errors in intelligence discovered. A crisis concentrates attention. The resulting discoveries may not always be pleasant. Provocative preparations constitute the second condition. In response to a serious threat of a military nature to basic interests, a natural step is to accelerate necessary defensive measures. Actions designed to increase readiness by the generating forces, increasing their alert status, and accelerating intelligence collection may all be motivated by prudent defense requirements. The difficulty arises when these measures are interpreted by the adversary as indicators of a commitment to aggressive action. Forward deployment of troops, launching bombers to fail-safe points, and greater security of communications may be regarded as prudent defensive preparations by the initiator. The same actions may be viewed as provocative preparations for attack by an opponent who responds with accelerated countermeasures. An action-reaction cycle of escalating stages of military alert, in which each side is responding to the other's last step, is a fearsome prospect in a crisis, as demonstrated by the events in Europe in late July and early August 1914.

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continuation of strong disincentives against the initiation of a major strategic attack. Figure 11-1 summarizes the sequence described. Existence of any of the conditions appearing toward the bottom of the figure—loss of confidence in one's own retaliatory force, conclusion that war now seems inevitable, and serious consideration of initiating a first strike—is powerfully corrosive to stability.

Thus it may become increasingly difficult to resist arguments for attacking if war seems inevitable or if it appears one's opponents have reached that conclusion.

It is important to recall that these developments can result from a crisis even if a condition of stability prevailed before the crisis. Thus, in the present relationship between the Soviet Union and the United States, both sides depend to a considerable degree on strategic deterrence to avoid major war with one another. The nuclear deterrent force providing each side with an apparent ability to inflict substantial retaliatory damage even if it is a victim of a disadvantageous nuclear first strike offers stability—the assurance of major disincentives against initiating a major attack. This peacetime stable relation might not last through a crisis.

One of the characteristics of the cold war has been the recurrence of politico-military crises. To recall the history of this superpower antagonism is to take note of the Quemoy-Matsu confrontations, the repeated episodes over Berlin, the outbreak of the Korean War, the rupture over Suez, the collapsed summit after the shooting down of the American U-2, the Cuban missile crisis, and the Arab-Israeli wars (particularly the Soviet-American confrontation during the 1973 war). An examination of Soviet-American relations in the late 1970s and 1980s suggests the continuation of provocations by both sides: the Soviet invasion of Afghanistan, the shooting down of the South Korean airliner, the American proposal to redefine the terms of the ABM Treaty, the American Marine force in Lebanon, and the commitment to supply arms to opposing sides in Angola, Nicaragua, and elsewhere. Despite these continuing disputes, a strong argument can be made that in this time period, the superpowers did not engage in the kind of challenge and escalatory response with the threat or actual use of military forces that characterized many of the earlier crises. Have the United States and the Soviet Union learned to avoid crises or become risk averse in their relationships? Is there a recognition of the dangers of major crises to strategic stability and a tacit agreement to avoid them? Such a conclusion seems premature.

One does not find in the public utterances of the various leaders in the two superpowers references to the extensive danger and mutual harm of crises in a fashion comparable to the rhetoric about the disaster of nuclear war. Nor are the two (crisis and nuclear war) yet viewed as closely linked. Given that both sides have initiated provocations in the past, it would appear that if restraint has been exercised, it occurred primarily because the provoked party chose not to escalate. That cautionary approach cannot always be assumed when vital interests are engaged. It may be appropriate to
speculate that the recent absence of major escalatory crises between the superpowers is more than luck, but it would be foolhardy to conclude that such episodes are now safely consigned to the past and no longer need attention as future possibilities. Crises can reduce an established peacetime strategic stability - not because of semantics (that is, crises are destabilizing by definition) but as the result of the likelihood of a crisis setting in motion perceptions, reconsiderations, and actions that erode the confidence of policymakers in the existence of strong shared disincentives against initiating a major strategic attack. Because this is so, it should follow that the United States, the Soviet Union, and their allies have a powerful interest in minimizing features that could exacerbate the disruptive properties of a crisis. The reality during the period of relative lull in crises over the past decade or so appears strikingly different.

Increasing the Potential for Destabilization in Crises

The process of developing and sustaining a strategic military force and the doctrine and policies for its application are complex and dynamic. It seems unlikely that those responsible for such capabilities on either side have consciously set out to increase crisis instability. Rather, in the effort to pursue other major force objectives, there have been inadvertent negative effects on stability. Some developments in recent years have increased crisis stability, but weighing against those are other changes that run strongly in the opposite direction. Four areas in which serious contributions to crisis destabilization have occurred are (1) characteristics of some new strategic weapons, (2) strategic alerts and force generation, (3) command and control of nuclear weapons, and (4) strategic plans.

Strategic Weapons

The essence of a strategic nuclear weapon is a survivable second-strike capability that has the ability to inflict severe damage without presenting undue provocation. Some recent weapons developments reduce stability by failing to conform to this requirement. Both sides have been engaged in substantial strategic force modernization programs that include large ICBMs, such as the Soviet SS-24 and the U.S. MX, armed with MIRVs. As is now well understood, a large number of accurate warheads in a single vehicle means that multiple targets can be covered with one rocket. The United States and, particularly, the Soviet Union have a substantial portion of their respective retaliatory strategic forces in fixed land-based silos, which comprise most of their rapid counterforce capability. As a result of the deployment of large numbers of accurate MIRVed weapons, these systems have gradually become more exposed. Each side is making some effort to reduce its degree of dependence on fixed-site systems, the Soviet Union by deploying a mobile ICBM (SS-25) and the United States by deploying an SLBM with hard-target kill capability (TRIDENT II D-5). In a future crisis, however, the presence of accurate MIRVed systems will produce greater pressure on policymakers to engage in a preemptive strike or at a minimum to put strategic forces on high alert status to avoid their own vulnerability to first strike. Despite this problem, both sides continue to invest in strategic systems with this hard-target, multiple-target kill...
deployment of SS-20s (slated for elimination under the INF Treaty) had a negative effect. They reduced decision time for European command centers on both sides to almost zero. The Soviet Union's experimentation with close-in stationing of their ballistic missile submarines in the Atlantic poses the same threat to Washington and the East Coast of the United States.\(^7\)

In summary, recent weapon system developments increase the vulnerability of a significant part of the existing retaliatory force, pose a future threat to satellites at the time when both nations are becoming more dependent on them, and reduce the decision time available between the launch and arrival of nuclear weapons. All of these developments illustrate the pressure of new weapons on crisis stability.

**Strategic Alerts and Force Mobilizations**

At the outbreak of a crisis, an obvious and necessary task is to increase the readiness of appropriate military forces, including strategic forces. Ordering forces to a higher state of readiness can serve multiple useful purposes. It provides a signal of resolve to the adversary; it often provides increased intelligence gathering and processing; it can reduce the vulnerability of one's forces to surprise attack; and it increases a country's capability to initiate prompt military action if needed.

There is also a downside to increased alert levels. Steps taken to increase one's own preparedness can trigger what Ned Lebow calls "miscalculated escalation."\(^8\) An adversary can easily read one's own mobilization as highly threatening and feel compelled to respond with a higher alert level.

The United States has increased the alert levels of its worldwide strategic forces three times; the most recent occasion was during the Arab-Israeli War of 1973.\(^9\) The Soviet Union occasionally has put selected units on higher alert but appears not to have done so simultaneously for all of its strategic forces. Despite the fact that there has been no worldwide strategic alert since 1973, this is still an area for concern for at least two reasons. The first results from the changed strategic balance between the United States and the Soviet Union. The second flows from a necessary precaution that both sides may feel compelled to take in future acute crises to ensure that a sudden loss of their highest authorities does not lead to the immobilization of their strategic forces.

Since 1973, the strategic balance between the Soviet Union and the United States has moved to one of essential equivalence or rough parity. Thus, the Soviet Union may no longer be willing to permit the United States to demonstrate unilateral resolve by moving to higher strategic alert levels without responding to deter bluffing and prove its own resolve. Mutual strategic alert escalation in a crisis between the superpowers has not occurred before. Should an increased alert happen in the future, it could trigger the kind of escalatory behavior that sharply weakens confidence in the continued operations of new weapons outside the boat's crew themselves.) The perception of bluffing or miscalculation of the crisis that the other side had widely delegated authority over the use of nuclear weapons could be regarded as extremely threatening.

**Command and Control of Nuclear Forces**

For decades military authorities have recognized that an effective retaliatory posture requires that the weapons themselves be capable of surviving an initial nuclear attack under worst-case conditions. If retaliatory forces had a high likelihood of being rendered retaliatory forces had a high likelihood of being rendered ineffective by dispersing nuclear authority in a crisis. Here we must recognize the other side of the dilemma. Soviet SLBMs off the East Coast of the United States have lifetimes of under twelve minutes, and comparable American Poseidon and Thresher submarines close to the Soviet perimeter pose a similar problem. If the authority to move nuclear weapons remains in the hands of the general secretary or the president and world leaders, it will also be regarded as provocative by an adversary. Because they could not be read in retaliation, an opponent could be justified in assuming their purpose must be the prevention of a first-strike attack. Only in the 1980s was there a broad recognition that the protection of strategic forces for survival that govern nuclear weapon use must also apply to the command and control networks. With respect to crisis stability, there are two problems: the command and control issues: the vulnerability of the top leadership and the vulnerability of physical systems of communication.

Only in the 1980s was there a broad recognition that the same requirements for survival that govern nuclear weapon use must also apply to the command and control networks.

The problem of the exposure of top national authorities to sudden elimination was introduced in the consideration of new problems in force mobilization. There were multiple considerations from one attempt to minimize the risk of rendering retaliatory forces ineffective by dispersing nuclear authority in a crisis. Here we must recognize the other side of the dilemma. Soviet SLBMs off the East Coast of the United States have lifetimes of under twelve minutes, and comparable American Poseidon and Thresher submarines close to the Soviet perimeter pose a similar problem. If the authority to move nuclear weapons remains in the hands of the general secretary or the president and world leaders, it will also be regarded as provocative by an adversary. Because they could not be read in retaliation, an opponent could be justified in assuming their purpose must be the prevention of a first-strike attack. Only in the 1980s was there a broad recognition that the protection of strategic forces for survival that govern nuclear weapon use must also apply to the command and control networks. With respect to crisis stability, there are two problems: the command and control issues: the vulnerability of the top leadership and the vulnerability of physical systems of communication.
line of succession in the event of his incapacitation passes sequentially through a limited number of individuals, then it might be possible to eliminate them all with a small number of rapid and accurate missiles. The retaliatory system would remain intact, but the political authority to use it would be gone or severely disrupted.

Although the relative number of targets might be somewhat larger, the same effect might be achieved by targeting key points in the physical network of command and control of nuclear forces. The general vulnerability of the strategic C4I results from numerous factors. These range from the softness of many elements in the system (such as satellite receiver stations on earth, radars, telephone exchange centers) to the uncertain extent of disruption of nuclear detonations (that is, the electromagnetic pulse) on the performance of electronic equipment and certain radio frequencies; from the increased operational requirements that result from adopting more complicated strategic plans to increased complexity arising from the tight integration of more elements of the defense system. The last-mentioned vulnerabilities result from new C4I requirements that have been imposed on the system in recent years. The potential consequences are clear: a relatively small attack aimed at C4I targets, most of which are at fixed locations, essential for directions of strategic retaliation, could seriously disrupt and limit the effectiveness of a deterrent capability. Realization of such vulnerability clearly undercuts the policymakers’ confidence in the ability of their forces to carry out a second strike.

Changing Strategic Plans

Plans for the use of nuclear forces-as revealed by official statements, documents, and analyses by informed observers-also can affect stability in a future crisis. Explorations of existing declared policies and the discussions of possible modifications or alternatives are a more or less continuous feature of the superpower relationship. These policy assessments are frequently responses to changes in the capabilities or vulnerabilities of weapon systems or their related command and control. In recent years, proposed strategic plans for prompt response and preemptive decapitation have had powerful implications for stability.

With the increasing vulnerability of fixed-site, land-based ICBMs, the strategic plans of both sides appear to have moved to include some form of prompt response option for those systems. The basic concept is to launch such weapons before most of them are destroyed by an incoming first strike aimed at them. Specific options can range from launch on warning of an attack—that is, when tactical warning devices pick up the firing of enemy missiles—to launch from under attack, which assumes the retaliatory ICBM force is activated as the first enemy nuclear detonations occur. Whether there can be a real distinction between these two options in practice depends on a number of considerations, including the lapse of time before warnings can be converted to commands and whether high-altitude nuclear detonations can pin down the retaliatory force.

Although such strategic plans address the weakness of the existing ICBMs they generate new difficulties. Clearly they create almost unimaginable stress on the policymakers who must decide whether to accept the warning of an impending strike as valid and authorize a release in substantially less than thirty minutes. The magnitude of the error if the retaliatory force were released but no incoming attack had occurred would be staggering. Such an authorization would almost surely call for a heavy attack because there would be little point in leaving many of those targeted missiles unspent.

The Dilemma of Increasing Crisis Stability

The dangers sketched here have triggered growing attention among security analysts and policymakers and generated numerous studies and recommendations. Efforts to strengthen crisis stability by elimination of the weapons or activities judged to undermine stability. For example, if ASATs are a problem, then a proposed prohibition of such systems.

Another approach is to address some of the expected adverse effects that policymakers might appear to offer some remote chance, if totally see-through, of avoiding any retaliation at all. Even more than prompt response, the possibility of an adversary being seriously inclined to entertain such a prospect might void a policymaker’s confidence that his own forces would be able to respond in kind. The larger the distance from critical targets and thereby increase the flight time of the missile, the greater would be the policy’s belief that war could be avoided.
would require one top policymaker in the chain of command to be safely away from the capital, and other highly vulnerable places, whenever a crisis erupts. (This could be a political extension of the Looking Glass arrangement that keeps a SAC general officer airborne as a backup military command post.) In general, proposals can be divided between those intended to avoid crisis and those that seek to improve crisis management. (The prohibition of ASATs would presumably be a crisis-avoidance proposal, whereas the protection of a political leader in a crisis would be classified as crisis management.) Proposals for strengthening crisis stability differ as to whether they can be implemented unilaterally or whether they necessitate bilateral or multilateral participation.

Table 11-1 displays illustrative examples of both crisis avoidance and crisis management proposals that are unilateral, bilateral, or multilateral. A number of other recommendations for improving crisis stability have been advanced and new ideas continue to emerge, but the movement from proposals to government action reveals a wide gap.

The steps for improving crisis stability advanced by the U.S. government noted at the outset of this chapter serve as cases in point. Such measures and the pace of action seem exceedingly modest as measured against the variety of recommendations advanced or, more critically, the scale of the problem. The risk reduction centers agreed to by the United States and the Soviet Union bear little resemblance to the more elaborate ideas that emerged from the proposals of Senators Nunn, Warner, and Jackson. In their final form, the centers are little more than communication posts in each nation's capital for the rapid exchange of text and graphic information via satellite. The primary purpose is to transmit information that the superpowers already have agreed to exchange under various confidence-building measures such as the 1971 Accidents Measures Agreement (clarified further in 1985). This agreement requires each side to notify the other in advance about any ballistic missile launch whose expected trajectory goes outside the firing nation's boundaries, as well as requiring reports on various nuclear activities. The risk-reduction agreement leaves open the possibility that other confidence-building initiatives could be reported through the centers, but the Soviets have already demonstrated reluctance to use the centers for such purposes.

The vision of active joint efforts to examine areas of potential future crises, to consider various proposals for tension reduction, and to serve as possible forums for working on the resolution of existing conflicts has been shelved. Although the signed agreement specifies annual meetings of representatives of the two separate national centers, the chances that middle- and senior-level officials on both sides will use the centers as a place promoting substantive dialogue appears remote. There can be little objection to the creation of additional technical channels for government-to-government transmission of information (sort of a nonemergency hot line), but it does not appear to be a vigorous step toward resolving any of the major problems associated with crisis stability.

By contrast, the unilateral efforts of the United States to upgrade its own command and control system address the more significant crisis stability issues of C1 vulnerability. This multiyear program includes a Ground Wave Emergency Network (GWEN) designed to provide a system for transmitting information and orders about a nuclear attack that is resistant to jamming, sabotage, and electromagnetic pulse from high-altitude nuclear bursts. Another element of the improvement program consists of a component on each MILSTAR communication satellite to permit encrypted, two-way communications in an environment in which some nuclear weapons have been deto...
Crisis stability requires that despite substantial provocation, both sides in a confrontation remain confident that each continues to have very strong disincentives against a major military attack on the other. Under the conditions prevailing between the United States and the Soviet Union, the primary disincentives are the strategic nuclear forces that each could use in retaliation against the other. The evidence reviewed in this chapter suggests that during the late 1970s and 1980s, the superpowers weakened crisis stability even while they successfully avoided a major direct crisis.

Conclusions

Crisis stability requires that despite substantial provocation, both sides in a confrontation remain confident that each continues to have very strong disincentives against a major military attack on the other. Under the conditions prevailing between the United States and the Soviet Union, the primary disincentives are the strategic nuclear forces that each could use in retaliation against the other. The evidence reviewed in this chapter suggests that during the late 1970s and 1980s, the superpowers weakened crisis stability even while they successfully avoided a major direct crisis.
trol their numbers in any agreement. Moreover, the development of a new system poses significant financial and other costs that bureaucracies are likely to resist. Additionally, in the United States, mobile ICBMs could create environmental and other difficulties in domestic politics.

The United States faces a basic question: where in the overall configuration of strategic requirements does the need to strengthen crisis stability fit? Are we prepared to say with former Secretary of Defense McNamara that crisis stability should be a fundamental priority? If so, do we agree with his view that arms control should be the initial way we seek to pursue it? Because crises continue to be the most likely events that could trigger war between the superpowers, continued neglect of the impact on stability of our evolving security system sets the stage for a future tragedy. A way must be found to configure security so that it promotes stability in ordinary times and in crises.
under the dual control of the United States and U.S. Federal Republic of Germany, which will be withdrawn in conjunction with the Soviet-American treaty.

16. See Mandelbaum and Talbott, Reagan and Gorbachev, pp. 146-150.

Chapter 11
Crisis Stability in Soviet-American Strategic Relations


2. Desmond Ball et al., Crisis Stability and Nuclear War (Ithaca, N.Y.: American Academy of Arts and Sciences and the Cornell University Peace Studies Program, January 1987), p. 23. This report summarizes the findings of a study group whose full book-length report will be edited by Kurt Gottfried and Bruce Blair and published in 1988 by Oxford University Press.


4. See Lawrence Freedman, chapter 2, for a discussion of the changing nature of Soviet-American crises.

5. There has been some discussion that the window of vulnerability, as the emergence of the threat to silo-based ICBMs is called, has been exaggerated. A coordinated attack on all ICBMs would pose great problems for the aggressor and large uncertainties about success; moreover, other retaliatory systems would presumably remain intact. For example, see the report of the Scowcroft commission (President's Commission on Strategic Forces [Washington, D.C.: U.S. Government Printing Office, April 1983]), which also minimized the vulnerability of such systems while recommending a long-term move away from fixed-based MRVed missiles. Although the "attack out of the blue" threat to ICBMs may well have been exaggerated, the increased exposure contributed an added concern in a crisis, and there can be little doubt that the situation has contributed to pressure for a prompt policy prompt.

6. Paul B. Stares, "Nuclear Operations and Antisatellites" in Ashton B. Carter, John J. Steinbruner, and Charles A. Zraket, eds., Managing Nuclear Operations (Washington, D.C.: Brookings Institution, 1987), draws a distinction between the use of ASATs that might sharply escalate a crisis or cause one and ASAT attacks at the beginning of, or during, a nuclear war. The former class of events are of concern to the problem of crisis stability, but it is the fear of the preemptive use of ASATs to initiate war that poses the more severe problem: "either side may believe-especially if prompt high altitude ASAT systems are developed-that the use of ASATs would limit the extent of the retaliation and improve its chances of prevailing in a nuclear conflict." Stares, "Nuclear Operations and Antisatellites," p. 696.

7. In January and February 1984, after the United States began deployment of the PERSIANG II in Germany, the Soviet Union moved the three ballistic missile submarines normally patrol in the Atlantic closer to the American East Coast. Having demonstrated their point, the Soviets have not left the boats at that closer range. See "Three Soviet Submarines Said to Patrol Atlantic Box," New York Times, October 6, 1986, p. 6.


Chapter 12
International Security Studies

1. I am indebted to the participants of the February 1987 Conference on "The Past and the Future of International Security Studies" held at Harvard Center for Science and International Affairs (CSIA) to help prepare my report for the mid-decade review of the trustees of the Ford Foundation; and to Sean Lynn-Jones who acted as rapporteur of that meeting and coauthor of this paper with me "International Security Studies: Report on a Meeting," International Security (Spring 1988).


7. See the essays in World Politics 30 (October 1985).