Crisis Management Under Strain

Current and former White House officials say that the system for dealing with international crises is riddled with problems

During a time of strife in the Middle East, unidentified aircraft appeared on Turkish radar, heading south. Roughly a hundred Soviet fighters were detected in Syrian airspace. A nearby British plane was downed. And a Soviet naval task force was observed moving from the Black Sea toward open water, in what appeared to be preparation for a major superpower confrontation.

In *The Command and Control of Nuclear Forces*,* author Paul Bracken notes that when these alarming warning signs were detected in 1956, they created substantial fear and confusion in Washington. U.S. nuclear forces were placed on alert, and disaster seemed imminent. Eventually, these fears were laid to error and coincidence: the aircraft over Turkey were swans; the planes over Syria were fewer in number; the fighter was downed by mechanical trouble; and movement of the Soviet fleet was a long-planned maneuver.

Cool heads prevailed, and U.S. nuclear forces were returned to their initial state of readiness. But the incident neatly illustrates how benign events occurring at the height of crisis can set the stage for accidental war—a topic of increasing concern among weapons analysts and arms control experts. Many believe that the risks of such a war have vastly increased in recent years, as a result of several alarming new military and political developments.

This fear has in turn focused new attention and fresh criticism on the government's ability to anticipate, monitor, and control international crises. Richard Beal, a senior director for crisis management systems and planning at the White House, is himself sharply critical of the government's performance in recent years. Crisis management is an overly polite description of U.S. activities, he says. "What we really have is crisis coping and adaptation."

Public concern has increased for the following reasons:

- The accuracy of both land- and submarine-based missile forces has sharply increased, inevitably increasing pressure to execute a nuclear strike on warning or suspicion of an enemy attack, before one's own forces are destroyed.
- Missile flight times have become much shorter. In response to the recent deployment of U.S. Pershing II missiles in West Germany, roughly 10 to 12 minutes away from Soviet missile silos, the Soviet Union recently deployed additional submarines near the Eastern coast of the United States.
- Both sides have adopted strategies that call for early destruction of military and political command centers. Military analysts in the United States have long accused the Soviets of planning a preemptive attack on key U.S. military command nodes if war seems likely. A U.S. policy of targeting and destroying key Soviet political and command centers is explicitly codified in Presidential Directive 59, approved during the Carter Administration.

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- Both sides have developed new weapons that are capable of both conventional and nuclear missions, an achievement which may make the use of nuclear weapons easier, and create dangerous uncertainty about an opponent's real intentions.
- Both sides have deployed powerful weapons that must be dispersed in order to survive an attack. The Pershing II, the ground-launched cruise missile, and the SS20 are all dispersed from their primary bases in crises. "In the logic of war, the signal communicated by dispersion is not calculated to build confidence," says George Hogenson, an associate professor of organization and management at Yale. "To the contrary, it constitutes precisely the sort of threat posed by the mobilization in 1914."
- Several Third World countries have active nuclear weapons programs under way, and terrorism is on the rise worldwide.

The textbook image of the President suggests that he has virtually limitless information at his disposal in a crisis, neatly summarized in highly readable briefing books. Decisions are made within the context of overall policy goals, and specific actions are selected from a menu carefully prepared by the expert National Security Council (NSC) staff. According to a host of current and former NSC staff members, however, much of the information available in a crisis is useless or incorrect; decision-makers have little or no relevant crisis experience; careful planning is inadequate; and insufficient attention is paid to whether presidential decisions have actually been implemented.

Beal, 38, a former professor of international relations at Brigham Young University, is doing what he can about these problems. On the NSC staff, he has a "generic responsibility for worrying about crises all over the world, for the purpose of ensuring that the President is fully informed"—a job that gives him an extraordinary window on the Administration's decision-making. Short and heavy-set, with sandy-blond hair and large wire-rim glasses, Beal has a high-ceilinged, quiet office on the third floor of the old Executive Office Building next to the White House, with two IBM personal computers and one Digital computer terminal at the ends of his U-shaped desk. Huge mainframe computers emit a gentle hum directly beneath his office floor. Together, the computers are capable of editing and processing cable traffic from around the world at a rate of 2.5 million characters a second. To the left of one terminal sits a glass of water and a bottle of Excedrin.

In an interview with *Science* and in a lecture at the AAAS annual meeting last June, Beal frankly acknowledged that deficiencies exist in many areas of the White House crisis management system. Perhaps the most serious problem is that little or no planning occurs at the highest echelons of the government, Beal says. "National security planning is a myth. You may say, well, it's just this Administration. I've got news for you, I've looked at the documents, it isn't. National security planning is weak. It's even antithetical to the American cultural sense of how we go about things. We're very practical. When you do not have overall national security planning, crisis management is very, very difficult."

A similar view is expressed by Carnes Lord, a political scientist formerly from the University of Virginia who served as an NSC staff member from February

*Paul Bracken, *The Command and Control of Nuclear Forces* (Yale University Press, New Haven, 1983).

1981 to December 1983. "There is an acute lack of political and military planning in the government as a whole, and no mechanism for combining political and military planning in an efficient way at the operational level," says Lord, who also once worked at the Arms Control and Disarmament Agency. "State Department officials, for example, have never liked planning, primarily because they fear that it will restrict flexibility in a crisis. I know it sounds silly, but they really resist planning."

A second crisis management problem, suggested by Alexander George of Stanford University, an expert on U.S.–Soviet crises, is that at the beginning of a President's tenure, White House aides typically have little or no relevant prior experience. "It's a very serious problem—the fact that we do not have an institutionalized group of crisis managers who survive top level changes in the Administration," George says. As a senior member of the NSC staff during the Carter Administration recalls, "the most staggering thing was walking into the White House during our first major crisis, wondering what to do, and then all of a sudden realizing that there are no rules, no books, and no procedures. One of your first thoughts is to ask the President; but the President doesn't know; he only knows what the staff tells him."

Beal agrees that learning on the job is difficult and that the White House staff should have more experience than it does. Crises are "so well documented as idiographic events," he says, "that very few people, including crisis decision-makers, can treat them in any generic sense, and therefore they are lost for what to do to control or manage or attempt to influence significantly most of the crises they are confronted with. [This] means that every single one of them begins anew with an empty yellow pad. There is no, and I repeat no, institutional memory available at the highest levels of government for crisis management. If you were to walk into my office and say, Beal, your job description is crisis management, show us the data base on crisis management, the answer, folks, is that there isn't one. It hasn't been developed; it hasn't been designed. This means that in every single instance—I don't care whether it's the Falklands or Lebanon or Poland—every single one of them begins anew because you can't draw at the highest levels on institutional memory. Now, don't misunderstand me, academics have done a lot of work, there's a lot of research . . . there's a lot of learning that has gone on. But specific mechanisms available to a decision-maker where he sees in generic form the things he might do—that isn't available."

A third problem, Beal says, is the lack of any system for ensuring that presidential orders are followed in a crisis. Such a system would abet not only diplomatic initiatives but also orders to cease threatening activities. During the Cuban missile crisis, for example, President Kennedy ordered the warheads of U.S. missiles in Turkey defused and removed, in order to prevent any mishap. The problem, Beal says, is that "in the normal national security area, presidents and their senior advisers do not have an implementation tracking system. . . . In the main, they don't know what's being implemented . . . so when they get into a crisis it's impossible to know."

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Not only that, but the problem worsens over time, he says. "To prevent micromanagement in the national security area, presidents successively through their term generally lose direct control over the very apparatus that they're supposed to use during a crisis. It doesn't mean that it's wrong to keep the President out of certain activities where you don't want him micromanaging; we don't want a situation like the horrible stories of President Johnson moving [military forces] around in the sandbox of the [White House] situation room."

But the lack of any systematic White House follow-through remains a serious problem, Beal says, particularly on such tasks as the notification of allies before a major new military or political initiative. "In a crisis, 2 hours is the difference between notification and a failure to notify. . . . The problem is that when things start moving fast, some people don't go into a crisis mode right away." Others note that such a system would be particularly useful for terminating a low-level conflict in which the authority to fire nuclear weapons had been delegated to local military commanders. Although it has clearly existed in the past, government officials are vague about the existence of any "predelegation" of nuclear weapons authority today.

A fourth problem identified by Beal is the need for additional people on the White House staff who are skilled at quickly synthesizing data. "There aren't a thousand people in this nation who are good integrators of knowledge. . . . We have those who know all about high-flying exotic X's and nothing about something over here, and what you have in crisis decision-making is not specialized decision-making. It is the integration at the highest level of lots of information and requires people who can, with confidence, span those areas. . . . But if you generally haven't trained people with that capability—and we're a long ways away from training them at the level [of the] White House—you're in for serious trouble."

Finally, Beal says, even a skilled White House crisis manager is frequently confronted with useless, incorrect, or insufficient data. "Information uncertainty is the normal course of a crisis," he says. "I could give you a lot of examples where the problem was information running around in the crisis management structure that couldn't be verified, couldn't be validated, and nobody knew if it was really reliable." During the invasion of Grenada, for example, "there was a period of about 6 or 7 hours when we knew nothing" because of the blackout of communications required to maintain secrecy. The list of recent blunders in U.S. crisis intelligence includes a failure to anticipate the fall of Iran, a failure to anticipate the terrorist bombing of U.S. Marines in Lebanon, and a failure to anticipate exactly how the Soviets would restore order in Poland. The intelligence information available to the President on the downing of the Korean airliner over Kamchatka was, on the other hand, enormously helpful and complete. "The number one piece of information that supported decisions or that led to the ultimate [presidential] decision was the technological confirmation that the data we had, the Japanese also had," Beal says.

Beal, who is temporarily on leave from his job because of recent heart surgery, typically spends his days monitoring about 20 global trouble spots with the help of his computers—which are linked to command centers at the Pentagon, the Central Intelligence Agency, the National Security Agency, and the State Department—and a dozen or so assistants. Throughout much of June and July, for example, he was keeping an especially close eye on the scuttling of oil tankers in the Middle East, by monitoring, collating, editing, and filing cable traffic, intelligence reports, and wire service copy.

Beal believes that many White House crisis management problems can be corrected by the efficient application of modern computer technology. Since appointment to his post in late 1982, he has devoted much of his time to the development of a system for swiftly conveying information to the President in video, not printed form.

"The one technological innovation that we have hit upon that is very important is that we have married two worlds—digital and video," he says. "What that system represents is the following: we take a series of computers and they are very high speed, and their job is to organize information so that, when the President actually sees it, it largely is in composite video form. . . . It's supposed to look like [what] you would see on television if somebody had systematically gotten it ready." Although the screen itself primarily displays text, Beal says that his staff has prepared and stored "state-of-the-art graphics," including symbols depicting such activities as negotiation and fighting, as well as maps and bar graphs.

Beal explains that the primary value of the system is its speed and flexibility. Detailed analysis is impossible during a crisis, he says. "Nobody walks into the [Oval Office] struggling to hold his computer printout. . . . The worst thing that can happen is to pick up on something that is dead at the moment that you tell it. . . . And so you have to use your technology to accelerate the pace." The video system accomplishes this by presenting symbols as well as information about world events, "so that no one tiny bit of it gets lost in the mind."

This is merely the beginning and much more remains to be done before the impediments to successful crisis management are eliminated, Beal says. "It is unfortunate that no truly experienced crisis decision-maker has ever systematically evaluated the information management requirements and decision-making requirements from the top down." Ironically, "the American government will spend literally billions of dollars developing information systems for the bottom and nothing for the top. . . . By top, I mean the National Security Council, the President, and other people."

He is not sanguine about the future. "I have looked at the sequences of crises in the world. . . . The evidence is that the whole international system is heating up again."

"We are going to have more opportunities for crisis management," Beal concludes. "I don't think there's any question."—**R. Jeffrey Smith**

Agent Orange: Guarded Reassurance

A major epidemiological study of Vietnam veterans has turned up some findings that are unlikely to still the debate about the health effects of exposure to the herbicide Agent Orange. The study,* carried out by the Centers for Disease Control (CDC) in Atlanta, found that Vietnam veterans in general do not seem to have an increased risk of fathering children with serious birth defects. However, the study did find a slight increase in the incidence of some birth defects, but an apparent decrease in others, among the offspring of those likely to have been most heavily exposed to the dioxin-contaminated herbicide.

According to J. David Erickson, the senior scientist on the CDC study, "We think we have strong data to show that the Vietnam veterans are not at an increased risk." That conclusion was reached after studying more than 7000 families in the Atlanta area with babies born with major birth defects in the period between 1968 and 1980.

To determine the mothers' exposures to potential causes of birth defects and also the fathers' experiences in Vietnam and their likely exposures to Agent Orange, the researchers conducted extensive interviews with the babies' parents. The indices for exposure used in the study were far from ideal, however. One was based on the father's recollections and the other based on military records of his movements in Vietnam cross-indexed with records of herbicide-spraying missions. Both indices are qualitative, and their degree of accuracy is unknown.

The CDC scientists found that the babies of the Vietnam veterans were more likely than other babies to have certain types of serious birth defects, including spina bifida, various kinds of tumors, and cleft palate. The incidence of those defects corresponds roughly with their fathers' exposure to Agent Orange in Vietnam. However, the study also found that there appears to be a lower incidence of certain other types of birth defects, including some affecting the cardiovascular system, among the children of these veterans.

The CDC scientists argue in their report that although these results are "statistically significant . . . they may not be biologically significant." The correlation with Agent Orange exposure, for example, is by no means proven, and it is difficult to explain the apparent decrease in the incidence of some other birth defects.

Ellen Silbergeld, a neuroscientist with the Environmental Defense Fund who has served as a witness on behalf of Vietnam veterans and others claiming harm from exposure to dioxin, disagrees with certain conclusions regarding dioxin's toxicity. She argues the CDC results are "positive"—indicative of dioxin's peculiar toxicologic specificity. Erickson says, "That's entirely possible. Our study can't rule it out. The findings may represent a real increase in risk or they may be a statistical fluke."

Silbergeld points out that for two categories, spina bifida and cleft palate, similar defects are seen in animal studies of dioxin. However, this apparent correlation of the CDC results with rodent studies is not so straightforward; the animal studies involved exposing pregnant females, not males, to dioxin. There are no animal experiments that directly address the issue of whether exposing males to dioxin will lead to birth defects in their offspring.

Thus, like most other epidemiologic studies of people exposed to dioxin, the CDC study presents a somewhat ambiguous verdict on the chemical's toxicity. Veterans' groups have, however, already reached a tentative settlement with seven former manufacturers of Agent Orange under which the companies will establish a $180-million trust fund for treatment of the medical problems of veterans and their families (*Science*, 25 May, p. 849). Terms of the settlement currently are being aired in a series of public hearings. —**Jeffrey L. Fox**

*The report, "Vietnam Veterans' Risks for Fathering Babies With Birth Defects," was prepared by J. David Erickson, Joseph Mulinare, Philip W. McClain, Terry G. Fitch, Levy M. James, Anne B. McClearn, and Myron J. Adams, Jr. A brief account appears in the *Journal of the American Medical Association*, 17 August, p. 903 [volume 252]: a comprehensive version can be obtained from the authors at CDC in Atlanta.