Barbara S. Romzek
University of Kansas
Patricia Wallace Ingraham
Syracuse University

Cross Pressures of Accountability: Initiative, Command, and Failure in the Ron Brown Plane Crash*

Contemporary political rhetoric and management reforms have highlighted accountability issues for government. A troubling feature associated with these management reforms is a gap between the expectations of management reform and the reality of the American culture of accountability. This culture gap is likely to be particularly evident in organizations that are structured around principles of command and control, such as the military. This article explores the cross pressures individuals face when they are urged to demonstrate initiative and obedience to command while operating within a web of accountability relationships that represent several different behavioral standards against which their performance can be judged.

To conduct this research, the authors interviewed members of the Accident Investigation Board appointed by Major General Ryan, Commander of the United States Air Force Europe (USAFE), to investigate the April 1996 crash in Croatia of the military transport plane carrying United States Secretary of Commerce Ron Brown and his party of distinguished visitors. These personal interviews were supplemented with the official reports of the Accident Investigation Board and transcripts of testimony before the Board. Based on these data, we analyze the accountability dynamics involving the various military officials associated with the "mishap flight." We find that while institutional rhetoric and managerial conditions encouraged entrepreneurial behavior and initiative, the administrative reality still emphasized a risk-averse, rules-oriented approach to accountability when things went wrong.

Introduction

Current management trends emphasize leadership, initiative, and entrepreneurial approaches to administrative duties (Bryson and Crosby 1992; Hesselbein, Goldsmith, and Beckhard 1996; O'Toole 1995). Accompanying and, in part, driving the interest in initiative and entrepreneurial management is a heightened interest in greater accountability of public managers and a recognition that rules and process orientations toward accountability have not fostered sufficient responsiveness on the part of public agencies. In the public sector, these emphases have generated

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Barbara S. Romzek *is a professor of public administration at the University of Kansas where she teaches public management. She has concentrated her research on the issues of accountability, government reform, privatization, and intergovernmental relations. Her work has encompassed a variety of complex work settings, from federal agencies like NASA, Congress, and the U.S. Air Force, to state social service agencies, local governments, intergovernmental collaborations, and nonprofit organizations.*

Patricia Wallace Ingraham *is Distinguished Professor of public administration at the Maxwell School of Citizenship and Public Affairs, Syracuse University. She is the director of the Alan K. Campbell Public Affairs Institute and also directs the Government Performance Project, a comprehensive analysis of the management capacity of all levels of government in the United States.*

much enthusiasm and energy directed at administrative reform (Kettl and DiIulio 1995; Thompson 1993; Ingraham, Thompson, and Sanders 1998).

Contemporary management reforms at the federal, state, and local levels emphasize cutting red tape, empowering workers, streamlining process, and being responsive to one's customers (Osborne and Gaebler 1992; Gore 1993, 1995; Thompson 1993). These trends have extended into all levels of government and permeated even those organizations that one might expect to be somewhat insulated from management fads, namely the United States military. These reforms, which seek to change the management culture, must recognize and accommodate the expectations associated with the culture of accountability that has developed in this country over the years (Romzek 1998).

A troubling dynamic associated with these management reforms is a gap between the rhetoric and expectations of government reform and the reality of the blame-oriented, litigious American political culture. This gap is characteristic of the accountability environment within which public organizations and public managers operate. While management reforms encourage initiative and sometimes even necessitate entrepreneurial behavior—for example, to continue to provide high levels of service with reduced staff and funding—accountability dynamics continue to reinforce risk-averse rules and process orientations. For example, when entrepreneurial activities result in unwelcome outcomes, organizations are often quick to resort to accountability that emphasizes rules and compliance. This culture gap is likely to be particularly evident in organizations structured around principles of command and control, such as the military.

At first glance, accountability in the military is straightforward: a strong hierarchical structure, a widely admired leadership development system, and a critical overarching mission all contribute to clear lines of authority and responsibility. The "can do" attitude of all the services has developed a long tradition of keeping those lines of authority intact in the face of danger, uncertainty, and unknown conditions. Leaders should, and do, demonstrate exemplary action, take responsibility, and accept accountability for their actions and for those in their command.

The clarity and simplicity that the above statements suggest, however, are more myth than reality. As an institution with strong emphasis on rules and a reliance on command and control approaches to management, the military faces a substantial challenge reconciling the many pressures in its administrative culture. These include military/civilian, political/career, and inter-service conflicts and, most recently, the move from a "Cold War fighting machine" to sets of activities related to peacekeeping missions. This article explores the cross pressures individuals face when they are urged (and indeed expected) to demonstrate initiative and obedience to command while also operating within a web of accountability relationships that represent several different behavioral standards against which their performance can be judged.

This article analyzes the accountability dynamics facing various military officials involved with the crash of a military transport plane (the military equivalent of a Boeing 737–200) in Dubrovnik, Croatia on April 4, 1996. The flight carried a group of passengers led by U.S. Secretary of Commerce Ron Brown; the Brown party was visiting potential business contacts and sites in Bosnia–Herzegovina. All 35 people aboard the plane died. In this case, the airlift commanders and the pilots were working to accomplish their mission under difficult circumstances. Officers made some decisions and judgment calls reflecting a "can do" approach to problem solving that they knew were inconsistent with directives from headquarters. The resulting "mishap flight" (as it is characterized by the United States Air Force) provides insight into the cross pressures between initiative, command, and accountability. To conduct this research, the authors interviewed members of the Accident Investigation Board appointed by Major General Ryan, Commander of the U.S. Air Force in Europe (USAFE), to investigate the crash of the air transport carrying Secretary of Commerce Ron Brown and his entourage to Dubrovnik. In addition to interviews with investigators, we reviewed official reports of the Accident Investigation Board and transcripts of testimony before the Board.

Accountability in the Public Sector

Accountability is a fundamental concept in American government and, given the distrust Americans have of government, a central concern in the public management arena. A great deal of rhetoric of elected officials is focused on increasing accountability, and a great deal of public managers' attention has been focused on working within the accountability relationships attendant to public sector jobs. Accountability, in its most fundamental sense, refers to answerability to someone for expected performance. In the American system of governance, those to whom one is answerable must be legitimate sources of control and their expectations for performance must be legitimate as well (Dubnick and Romzek 1991). Without question, however, these expectations are often unclear and frequently in conflict.

Challenges of Accountability

There are numerous challenges associated with accountability, including those of establishing expectations, verifying performance, maintaining responsiveness of agents, assessing blame, sorting out responsibilities, determining who the masters are, and managing under conditions of

multiple accountability systems (Romzek and Dubnick 1998). Some of these challenges are more tractable than others. Of interest to us here is the last challenge, that of managing under conditions of multiple accountability systems. The issue of determining the master or sovereign in an accountability relationship is not an easy one in the United States because public managers in the United States typically work for multiple masters. There are numerous legitimate sources of expectations for public employees, including their immediate supervisors, relevant elected officials, clientele, coworkers, professional associations, and the citizenry at large. Which "masters" are most important and which should be given precedence is a function of the institutional environment, the managerial strategy adopted, and the nature of the administrative task at hand (Romzek and Dubnick 1987).

In the United States, the pattern has been to develop a complicated web of overlapping accountability relationships that reflect both internal and external control strategies (Finer 1941; Friedrich 1940) and vary in the degree of autonomy they afford the accountable manager. The resulting relationships reflect different types of accountability. The two figures that follow summarize the different kinds of accountability relationships that are characteristic of public management in the United States and the behavioral expectations and values that they reflect. The broken lines between cells are intended to convey the permeability of these category boundaries.

Figure 1
Types of Accountability Relationships

		Sources of Expectations and/or Control: Internal	Sources of Expectations and/or Control: External
Degree of Autonomy	Low	Hierarchical	Legal
	High	Professional	Political

Hierarchical accountability relationships are based on close supervision of individuals who have low work autonomy. Rules, regulations, organizational directives, and supervisors are examples of this type. The command system of the military is a classic example of hierarchical accountability.

Legal accountability relationships involve detailed external oversight of performance for compliance with established mandates under which managers are obliged to work, such as legislative and constitutional structures. Court reviews of police procedures, fiscal audits, and legislative oversight hearings are common examples.

Professional accountability systems are reflected in work arrangements that afford high degrees of autonomy to individuals who base their decision making on internalized norms of appropriate practice. These norms can derive from professional socialization, personal conviction, organizational training, or work experience. Under this type of accountability, employees have the discretion to choose the appropriate managerial responses and the organization defers to their expertise and experiences. Employees are evaluated by whether their judgment was consistent with accepted protocols and best practices.

Political accountability relationships afford managers the choice of being responsive to the concerns of key external stakeholders, such as elected officials, clientele groups, the general public, and so on. Managers who work under this type of accountability are expected to anticipate the wishes of key stakeholders. They have the discretion to decide whether and how to respond to key stakeholder concerns. Emphasis on customer service orientations and responsiveness to client needs reflect this type of accountability relationship.

The different values and behavioral expectations emphasized by the various accountability relationships are presented below in Figure 2.

Figure 2 — Values and Behavioral Expectations of Different Accountability Types

Type of accountability	Value emphasis	Behavioral expectation
Hierarchical	Efficiency	Obedience to organizational directives
Legal	Rule of law	Compliance with external mandates
Professional	Expertise	Deference to individual judgment and expertise
Political	Responsiveness	Responsive to key external stakeholders

The pattern is for public agencies and managers to work under one or two of these types on a daily basis with the remaining types being in place but underutilized, if not dormant. In times of crisis or serious failure, these underutilized types are also invoked (Romzek and Dubnick 1987). In times of reform, there is often a shift in emphasis and priority among the different types of accountability (Romzek 1998; Johnston and Romzek 1999). At the same time, there may be an increase in the numbers and types of accountability relationships under which managers may be held to answer for their performance.

The fact that public managers face diverse expectations and work under several accountability relationships simultaneously creates a significant challenge as to how to manage the various accountability systems. Individuals vary, both in how they perceive these relationships and in how actively they manage them. They can be relatively passive, simply reactive, or seek to influence the expectations and accountability standards by which they are judged through adaptive and strategic role activities (Romzek 1996). Aggravating this problem for managers is the shifting emphasis on accountability relationships. As any experienced manager well knows, being answer-

able for one's performance under a professional standard ("I used my best judgment.") may not insulate oneself from sanctions for failure to follow a hierarchical standard ("You didn't follow the rules."). Similarly, giving one's clients or customers what they want (an emerging political accountability standard) can often contradict organizational rules (hierarchical standard) or even the preferences of elected officials.

Accountability in the Military

In the American political system, with its principle of civilian control of the military, answerability for performance is a central tenet for military personnel at all levels of service and the cornerstone of any relationship that involves delegation to act for a sovereign authority. Military personnel assume that they will be answerable for their performance, and, under normal circumstances, these matters are handled by immediate supervisors on a daily basis and within periodic performance and promotion reviews. Under unusual circumstances, accountability issues of military officers become much more public. Such unusual events, while unfortunate, generate sufficient public scrutiny to provide opportunities to examine the dynamics of accountability in the U.S. Air Force.[1]

The Institutional Context of the United States Air Force

As we examine these managerial cross pressures that derive from popular trends encouraging initiative and obedience and simultaneously seeking greater accountability, we cannot ignore some of the unique features of the United States military that derive from its mission and institutional culture. The armed services are complex public organizations that have a distinctive orientation, one which provides for the "possibility of an exchange of fire" on battlefields: "the actual employment of violence in response to violence is sanctioned where national security seems to demand it" (Lang 1965, 839). This unique mission, and the experiences of members of the armed services, have given rise to an institutional culture that constitutes the context within which various cross pressures must be reconciled—or, at least, managed effectively. For the military, these cross pressures include tensions between initiative and command, civilian and military, and between "warrior" and professional.

The United States armed services have undergone dramatic changes in mission and funding since the collapse of the Soviet Union and the end of the Cold War; reductions in force during peacetime is a common practice (Rochlin and Demchak 1991). Some of these changes are due to a shifting sense of the nature of the next military challenge away from a global World War III. Other changes are due to an interest in managerial reform to introduce greater efficiency, such as by reducing slack personnel and shifting to "just in time" supplies. Over one-third of the personnel in Bosnia, for example, were contract and temporary employees.

The flight that crashed with Secretary of Commerce Ron Brown aboard was caught up in these changes.[2] In early 1996, U.S. Air Force Europe (USAFE) and the entire European Theater were struggling with fewer resources and more tasks. Headquarters (HQ) USAFE, other operations at Ramstein Air Base, and other European bases had a pervasive sense of intense tasking tempo, or in the words of one of the former Operations Group commanders of "doing too many things with too few people." At the time of the crash, Ramstein and other European bases were heavily involved in support activities for both the Bosnian and Saudi Arabian military actions. HQ USAFE staff were distracted by preparation for Operation JOINT ENDEAVOR,[3] including the absence of staff due to frequent temporary duty (TDY) commitments (Report 1996, 54). In the crash investigation, one officer described operations tempo as so intense that, "...[sometimes] it outweighed rational thought" (Report 1996, 3333). As one investigator explained it, staff reductions had not been accompanied by infrastructure reductions—in other words, they were expected to do more with less.

Managerial Strategy. The managerial strategies of the United States military are best reflected in the organizational culture of the military, which reflects the pattern of administrative responses and collective beliefs about the most successful ways to meet its internal integration and external adaptation challenges (Schein 1992). The United States military as an institution and the various separate branches of the armed services share an overarching militaristic culture that distinguishes them from the culture of other institutions: one of its key facets is an emphasis on command and control. The military culture "vests considerable authority, responsibility, and accountability with the commanding officer" (Broedling 1981, 91). The military's more recent variant on this cultural facet is known, in military jargon, as "C^3," referring to command, control, and communication (Beaumont 1981).

A key component of military culture, but one that is by no means limited to the military, is an emphasis on a "can do" attitude among its members. Such an attitude is characteristic of individuals who "treat difficulties not as insurmountable hurdles but as opportunities" (Doig and Hargrove 1990). One scholar of military institutions noted that a "can do" attitude is a highly desirable organizational ethic that has both positive and negative consequences; "Military units in particular are encouraged to survive no matter what the circumstances. They tend to innovate around problems locally in ways that are often not formally blessed. Like the

risk averse managers, the members of a deployed unit seek to accomplish the mission in any way possible, despite the burden of the task. These adaptations tend to grow into informal norms and procedures of operation that become crucial to success" (Demchak 1991, 103–4). Such "can do" cultural attitudes and informal norms are not always easily reconciled with a management framework that emphasizes command and control.

Most organizations, and certainly all complex organizations, develop subcultures that represent variations within an organization based on shared experiences (Schein 1992; Wilson 1989). Within the military as an institution, the most obvious subcultures are reflected in the different branches of the armed services (e.g., Army, Air Force, Navy). The separate branches develop some distinct shared assumptions, values, and cultural artifacts that hold meaning to its members. For instance, the culture of the United States Air Force for a long time expressed the primacy of flying combat aircraft, but this dominant culture was challenged by the introduction of missiles. Within the Air Force (AF) fighter pilot culture, units that fly transport, such as the Military Airlift Command, do not carry near the glamour or prestige of fighter planes (Wilson 1989, ch. 6).

The 86th Airlift Wing had undergone a major change in its managerial strategy and mission. In addition to having been downsized and reorganized in the years preceding the April mishap flight, the Wing had been transformed from a fighter to air transport unit and had to adjust to new leadership. Shifting from a fighter pilot to an air transport mission required a shift in operational emphases. Instead of the fighter pilot philosophy, which one officer characterized as "kick ass and take names," the commander of the 86th Airlift Wing focused intense energy on changing the wing's whole philosophy to a greater emphasis on on-time take-offs (Report 1996, 4392–93.) The 76th Squadron was also reorganizing and retooling and adjusting to a new commander.[4]

Part of the professional norms of piloting includes an acceptance that risk is part of the AF pilot job. At its extreme, this mindset has been characterized by some as a "cowboy mentality."[5] Airlift pilots, one investigator noted, "showed no fear" in the face of the unfamiliar and uncertain conditions. Their attitude was "if you can read an approach, you can fly it." Airlifters, in particular, argued that the nature of their mission forced them into unknown airports on a frequent basis, and that this was part of their job description.

The Operations Group Commander (OGC) of the 86th Airlift Wing at the time of the accident had been in place for about one year. He was assigned to the post as part of a very fast tracked promotion process, and, like others judged by Air Force leaders to be the best and brightest, had moved through a series of jobs quickly. The assignment to the 86th was a significant and necessary posting in order to qualify for future promotion slots. The OGC had been promoted about two years ahead of schedule and was a clear example of the general pattern in the military in which "exceptional people are pushed through assignments to keep them on track for promotion."

Administrative Task: Shifting Expectations. To understand accountability one also needs to understand the nature and complexity of the administrative task in question (Thompson 1967; Romzek and Dubnick 1987). The administrative task of the Air Force is a highly technical one. Since the laws of physics cannot be overcome, flying lends itself to a combination of rules and individual judgment. The rules of flight relate to safety considerations, but the Air Force recognizes that there is always need for pilot judgment.

The 86th Wing's transition from fighter wing under Cold War conditions to airlift wing under conditions characterized as "between peace and war" resulted in a shifting task and shifting expectations. Its new task is to airlift material and distinguished visitors to support a complex peacetime mission in Eastern Europe. Many of these flights are to nonroutine locations, including restricted air corridors in Eastern Europe. Aircrews in this theater often flew into airports that were off limits during the Cold War and, hence, unfamiliar to U.S. Air Force pilots. Failure or inability to fly to nonroutine locations, however, would severely constrain their ability to "make mission."

Air Force Accountability Under Normal Circumstances

Accountability and leadership of military officials must be understood within a context characterized by a growing complexity of civilian/military relationships, an intensely public and very political environment, a changing mission, and declining resources. Officers often feel intense pressure to meet their assigned mission regardless of constraints. The institutional culture, professional norms, and career advancement considerations all create pressure on officers to adopt a "can do" approach to problem solving. No one wants to be the officer or the commander who says, "We can't do that." Officers often have too much on their plates. Short staffing limits the resources available for access to necessary information and thorough analysis. Communications can be garbled or misinterpreted as they pass through the hierarchy. Cutting corners may seem to be the right choice; decisions may be postponed until "a better day." Add to these pressures the fact that, in any complex organization, including the armed services, mistakes happen (Perrow 1984). In addition, when mistakes happen, questions of accountability come front and center.

Prior to the mishap flight, Air Force accountability patterns typically emphasized hierarchical and professional standards of accountability, relying on command, organi-

zational directives, and deference to the expertise of the officers on the scene. Within the context of command, officers are expected to exercise leadership and demonstrate initiative related to their assigned missions. Legal accountability patterns are mainly used when accidents happen or charges of inappropriate behavior are made. Political accountability and responsiveness to key stakeholders is relevant to all personnel, but plays a larger role at higher levels of command.

Hierarchical Accountability. The AF command structure reflects typical hierarchical accountability relationships with an emphasis on chain of command and an explicit expectation that rules and supervisory directives are foremost considerations. Where circumstances do not allow supervisors to monitor performance, organizational directives and rules are emphasized.

Flight rules are very much a part of everyday life for airlift personnel. Pilots fly into all airports under either visual or instrument conditions. AF regulations clearly delineate the conditions for safe visual approaches. For instrument approaches and landings, however, there are several sets of directives and guidance available to pilots, which occasionally are in conflict.[6]

How *changes* to rules are accommodated has also changed in the military. The traditional pattern has been to "staff out" proposed changes: staff members clearly responsible for examining proposed changes and their impacts report back to military superiors; decisions follow careful discussion. Of course, this was not always the case in time of war. In peace, however, the military's prodigious analytical abilities were brought fully to bear. Changes in technology changed this "staffing out" pattern. Communication was—and is—instantaneous. Hierarchy and military command can become more tenuous in the face of electronic listserves and forwarding functions. The loss of face-to-face communication can lead to situations where individuals might easily overlook or ignore the central point of a message. And the ease of copying and forwarding messages to superior officers can lead others in the communications network to infer authorization where none has been granted. As the email trail in the appendix illustrates, both authority and clarity can suffer.

Professional Accountability. Regardless of its emphasis on a command structure, the Air Force recognizes the need for individual discretion in meeting organizational objectives. To the extent that the organization defers to commander or pilot judgment and expertise, professional accountability relationships are in use. There are often times when pilot and commander judgments are necessary to reconcile discrepancies between rules and the real-world situations military personnel confront. The Air Force assigns pilots final authority when in flight, and in doing so defers to the expertise of the pilot.

In recognition of the need for individual decision making, the Air Force emphasizes training as a way to develop the necessary skills for discretionary decision making. For pilots, regulations require extensive and continuing training as well as regular check-flights. The 86th Wing's use of peer evaluations for flight check rides represented deference to peer expertise when evaluating pilot skill. The Wing's practice of relying on peer evaluations for flight check rides was an effort to make do with peer judgments (professional) of pilot skill where evaluations by external "black hat" reviewers (legal) would have been preferable. With "in-group" check rides there is a greater susceptibility to informal pressures and slippage in safety standards.

We see evidence of deference to expertise in the operation of the Wing. The OGC's flight experience had been limited to Department of Defense (DoD)-approved approaches; he did not personally have experience flying into airports with Jeppesen approaches.[7] Instead, he deferred to the professional judgment of his former squadron commander regarding Jeppesen approaches. The squadron commander's judgment was that Jeppesen approaches were acceptable because he had never had any problems with them in his 16 years of experience.

Legal Accountability. The Air Force relies on legal accountability relationships for pilots to the extent that it uses external reviewers, pilots from other commands known as black hats, for unannounced check rides to review pilots' knowledge and skills. There was not as much external monitoring of wing pilots as was desirable. Instruction and evaluation of the passenger transport (CT-43A) pilots at Ramstein was hampered by the fact that only two passenger transports (CT-43s) existed and a limited number of pilots were assigned to fly them. There had been no black hat—external or unscheduled—check rides for the passenger transport (CT-43A) since 1994. As noted above, the 86th Wing had adopted the practice of having its passenger transport pilots serve as their own evaluators. This was not a routine practice in the Air Force.[8]

Political Accountability. The issues here are further complicated by the overlay of civilian political accountability structures in the DoD and the military. The secretary of defense is a civilian appointee; the joint chiefs of staff are senior military officers. The civilian personnel structure—directed by civilian appointees—supports the various services commanded by military officers. For the military, political accountability entails anticipation of concerns of both sets of stakeholders and responsiveness to them.

Military officers want and need to be seen as responsive to the concerns of higher-ups and key external stakeholders. Responsiveness to key stakeholders is reflected in officers' recognition that their future promotion prospects depend upon how well they anticipate and meet those

expectations and whether they are perceived to be a team player. Officers seek to avoid situations where they have to tell higher-ups that they cannot accomplish their assigned mission. To do otherwise, to complain about lack of resources or question one's assignment, is to risk being labeled a "whiner" or "not a team player," either of which could hurt one's promotion prospects, or more broadly, damage the image of the service.

The Managerial Cross Pressures Facing Airlift Wing Commanders

Accompanying the shift from fighter wing to airlift duties, the 86th Wing lost wartime (Cold War) urgency as a justification for flying into airports without DoD-approved approach procedures for landing. Prior to this time, the procedures allowed fighter pilots to fly into airports using non-DoD approach procedures when it was deemed necessary. The most widely recognized non-DoD source for local host air traffic control approach procedures is a commercial publishing house, Jeppesen, Sanderson, Inc. Jeppesen reformats, translates, and publishes host nation instrument approach procedures utilized by air traffic controllers in the host nation. Even though all major civilian airlines use Jeppesen approaches (Accardi 1998), Jeppesen procedures were a source of controversy within the Air Force and USAFE.

In 1994, Air Force headquarters deemed there had been too many approach-related close calls and changed the regulations to require only the use of DoD-approved approaches. An Air Force Instruction (AFI 11-206), issued in 1994, directly addressed the use of Jeppesen approach procedures. It clearly stated that, unless an approach is published by the DoD or the National Oceanic and Atmospheric Administration, it requires an additional Terminal Instrument Procedures Review (TERPS) before it can be flown by an Air Force crew. An exception is allowed if visual flight rules are possible.[9]

This created a problem for airlift wings because their distinguished visitor duties often required them to fly into airports previously inaccessible to the American military and thus unlikely to have DoD-approved approaches. The former 76th squadron commander, before his departure, advised his Operations Group wing commander that, in his long experience, he had not seen any problems flying Jeppesen approach procedures. The OGC, who had no personal experience with these types of approaches, took this advice as the best available.

The colonel who served as OGC believed that both the waiver process and the required flight approach review process would severely limit the ability of the Wing to carry out its mission. The flight approach review unit of USAFE was also coping with staff downsizing and task increases, hence they were slow in getting these time-intensive reviews done.

On November 30, 1994, via email to the USAFE director of operations, the 86th Wing's OGC requested a blanket waiver (from AFI 11-206) to allow the 86th to fly Jeppesen procedures to the minimums published in Jeppesen, rather than the more conservative minimums contained in the USAFE supplement. An information copy of the email was sent to the commander of the 17th Air Force, who responded—also via email—"I have not approved. Do not go to USAFE for a flying waiver on anything until I have approved" (Report 1996, Tab CC-1.9/5).

A series of misunderstandings, miscommunications, and decisions to ignore directives followed. (The log of the emails that chronicle them is included as an appendix.) In summary form, for about a three-week period the Wing believed that it had permission to fly unchecked Jeppesen approaches (waive AFI 11-206) and announced that position to pilots. The waiver was, however, denied by USAF Headquarters. When notified of this denial, the Wing's OGC and his staff chose not to rescind the flight control information files, but to continue "ops normal" (meaning that pilots could continue to fly the approaches down to Jeppesen published minimums).[10]

The rationale for the OGC's decision was that not being able to fly Jeppesen approaches would have a severe impact on the unit's ability to accomplish its mission. And since the approaches had been flown successfully for a long time, safety should not be compromised by continuing to do so (Report 1996, 4443–45). This decision effectively continued the practice of placing the airlift pilots, including those on distinguished visitor missions, in the position of flying into airports never flown or reviewed by the Wing or by other Air Force crews. The colonel who served as OGC noted later that "I expected somebody to come back and tell me if that was the wrong approach" (Report 1996, 4442). In other words, since his superiors were kept informed of their actions via email copies, he assumed they tacitly approved his actions.

The Mishap Flight

At the time of the crash, the crew was attempting an instrument landing at an airport without DoD-approved instrument approach procedures. During the attempt, the pilots came in too high, too fast, and without properly configuring the aircraft for landing. The crew had not accurately identified the missed approach point, the aircraft's flaps were not set for landing, and the aircraft was on a heading nine degrees off course (Report 1996, 23). Any one of these errors might not have resulted in the fatal mishap if adjustment had been made in a timely fashion. In fact, earlier on the same day, the pilots had made some of the same mistakes in their approach to Tuzla without tragic

consequences. But this series of errors had deadly results. The operational discrepancies are listed in Table 1.

Table 1
Operational Discrepancies in Mishap Flight

1. The Dubrovnik airport did not have DoD-approved approach procedures. Without these procedures, pilots are only allowed to land when visual landing conditions apply. Weather conditions at the time they landed did not afford visual landing conditions. Weather as the approach began clearly mandated an instrument approach.
2. En route to Dubrovnik, the pilots planned their route through air corridors that were closed due to security reasons. They were required to reroute the flight.
3. The plane was equipped with only one automatic direction finder (ADF), whose purpose is to receive the signal from the non-directional missed approach point beacon. The Dubrovnik approach required an aircraft to have two ADFs.
4. The pilots flew past the final approach fix without Dubrovnik control tower clearance and had to be cleared for final approach after the fact.
5. The crew failed to execute a timely missed approach. Procedures require that, if at the time they reach a missed approach point, pilots cannot see the runway, they are directed to pull out of descent, climb, and come around for another approach.[11]

The plane, which was not on automatic pilot at the time of impact, crashed into a mountain left of the runway and approximately two nautical miles past the missed approach point. The investigation found significant command discrepancies and pilot error. Those findings are listed in Table 2 below.

Table 2
Command Discrepancies

1. The wing commander sought a waiver to the prohibition on use of Jeppesen procedures (in Air Force Instruction 11–206), even though his commanding officer had told him via email that he did not approve the decision to request a waiver.
2. Several flight directives contradicted each other.[12]
3. Because the supplement to AFI 11–206 also conflicted with the AFI, following the guidelines in the supplement required requesting a waiver from AFI 11–206. The waiver request was denied but the commander decided to continue to allow his crews to fly Jeppesen approaches while he appealed the denial.
4. The Air Force was slow in getting information about changes in rules and regulations to the troops.[13]
5. Units were slow to provide training and evaluation "check flights" to pilots of the airlift wing specializing in distinguished visitor flights.
6. The Air Force had difficulty making timely reviews of approach procedures for those airports needing DoD approach approvals.[14]
7. There was inadequate theater-specific pilot training on Jeppesen approach procedures.

Air Force Accountability Reactions to the Mishap Flight

We turn now to an analysis of the Air Force's reaction to the mishap flight to gain insight into the accountability expectations and behavioral standards reflected in its official actions. We expect to see all four types of accountability relationships present, reflecting the different behavioral expectations and different value emphases. Accountability questions that came to the fore in the investigation included: Who did what? Who failed to do what? Where did initiative cross the line into inappropriate action? One investigator summed up a key puzzle of the inquiry in this way: "How could professional pilots fly like amateurs all day long?"

The Air Force Accident Investigation Board concluded that the 86th Wing failed for a variety of reasons, including failure of command to comply with governing directives from higher headquarters, aircrew errors, and improperly designed instrument approach procedures (Report 1996, 71). The Air Force responded to the crash and to these findings in several ways. The Air Force adopted and revised procedures to increase accountability, initiated training and retraining on instrument procedures, adopted new equipment standards, and upgraded equipment aboard passenger aircraft. In addition, the commander of USAFE took a variety of actions to change institutional arrangements that may have contributed to events. The changes were targeted to improve tasking, command, and control of airlift activities, standardization and evaluation procedures, and to clarify responsibility and accountability.

Some changes reflected the availability of institutional supports. For instance, the Air Force ordered the Air Mobility Command to produce worldwide Airfield Suitability Reports and a Summary of Airfield Restrictions publications (which would subsequently become part of the "rules" under which units operated). The Air Force also established minimum equipment standards for all operational support aircraft and reviewed pipeline training of aircrews on instrument approach procedures. And it reprogrammed $264 million in USAF funds to upgrade/accelerate passenger aircraft safety equipment installation to include flight data and cockpit voice recorders and global positioning systems (which would be helpful in any subsequent mishap investigations).

Consistent with our expectations, we found that the Air Force response to the accident reflected the full range of accountability relationships to which it had recourse, with greatest emphasis on hierarchical and legal accountability standards.

Accountability to Sources External to the Air Force

Legal. The accident investigation itself represented an Air Force exercise of legal accountability through detailed, external scrutiny by independent investigators. Oversight hearings or special investigations are not part of everyday accountability in the military but are typically invoked when accidents or mishaps occur.

Within days of the plane crash the commander of USAFE convened an Accident Investigation Board, staffed

with experts in safety, construction, flight standards, air traffic control, theater operations, human factors, propulsion, and so on (Report 1996, 8). The investigation was headed by Major General Charles H. Coolidge, Jr. and, in addition to AF experts, had members of the National Highway Safety Board, Federal Aviation Administration, Boeing Aircraft, and Pratt and Whitney. The Board conducted 150 interviews, obtained over 3,200 pages of testimony, and conducted extensive analyses of radar magnetic tapes and of aircraft instrumentation.

The USAFE reprogramming of $264 million to upgrade/accelerate passenger aircraft safety equipment installation to include flight data and cockpit voice recorders and global positioning systems represents an attempt to facilitate any future investigations (external scrutiny). It also reflects an effort to be responsive to external stakeholders by taking steps to ensure such a mishap does not happen again.

Political. Although initially convened as a safety investigation, the inquiry was quickly changed to an accident investigation before key investigative personnel even arrived on the scene. The importance of going directly to an accident investigation is that it limits candidness because of liability concerns. Portions of safety investigation findings are not subject to public disclosure. The decision to pursue an accident investigation, with its greater public disclosure, represented an effort to be responsive to key external stakeholders: the president, Congress, family members of the crash victims, and the general public. The Air Force determined such an effort to be important for public confidence in their ability to investigate AF officers. The Air Force wanted to display this information to the public because it recognized that this was a high-profile case. This was only the second time the Air Force had bypassed the more confidential safety investigation and gone immediately to an accident investigation. The earlier incident was the friendly-fire shootdown of a Black Hawk jet over Iraq.

Board decision making procedures embodied the principle of responsiveness to key external clientele as well. With a concern that it avoid any appearance of bias, the Board adopted a practice of voting on possible issues for investigation, with the understanding that it had to be demonstrable that an issue was *not* relevant before the Board would dismiss it. The Board did not want to appear to be quick to dismiss possible explanations.

Another way the Air Force showed sensitivity and responsiveness to external stakeholders is by publicly announcing the names of some of the officers punished. While privacy is the norm in such disciplinary matters, the Air Force said that it released the names of those receiving the most significant sanctions to demonstrate the "Air Force's commitment to ensure accountability for, and to learn from, the tragic events of April 3," and added that "the substantial public interest" had shaped the decision to publicly announce the names.

Accountability to Sources Internal to the Air Force

While the accountability emphasis expanded to include legal and political types with their emphasis on the need to be cognizant of external stakeholders, reliance on internal accountability relationships intensified as well. The investigation found flaws in the operation of the command system and in individual officers' judgments, in essence pointing to breakdowns of both hierarchical and professional accountability. The response was to reemphasize the hierarchical command structure.

Hierarchical. The accident investigation found that USAFE did not have an effective system of command and control as it related to air traffic. For example, the investigative board found that, because of poor communications equipment and control systems, HQ USAFE did not know at any one time where all its airplanes were located. Another example of a breakdown of hierarchical accountability was evident in the board's finding that the OGC of the 86th Airlift Wing knew that he was doing something that regulations prohibited, that his boss also knew, and that other officers who had complementary duties failed to meet their command responsibilities as well.

The breakdown of the hierarchical accountability relationships was also evident in the more casual approach to email communications than officers would normally take toward fully staffed and signed reports from a higher up. Email communications typically involved lower level officers communicating with each other and bypassing their commanding officers (COs). The pattern was for subordinates to copy their COs via email to keep them informed, with the expectation that if the CO objected he would surely make those objections known. This practice led officers lower in the hierarchy to believe that decisions had been made by higher authorities when in fact they had not.

One aspect of the Air Force response to the crash involved clarifying standing orders and issuing new ones where needed, and in doing so, reinforcing the hierarchical system of accountability with its emphasis on command and obedience to directives. USAFE commands were directed to ensure strict compliance with Air Force flight directives.[15]

Hierarchical accountability actions are also reflected in the disciplinary actions taken against the various officers found to be responsible for different aspects contributing to the mishap. Major General Michael Ryan, commander of the USAFE and convening authority of the investigation, directed actions against 16 Air Force officers.[16] These reprimands represent judgments by General Ryan that these officers' reliance on their own judgment regarding flying Jeppesens in the Eastern European

theater was inappropriate. In essence, the officers were exercising their professional judgment in choosing to ignore the denial of waiver because they thought it was the best way to accomplish their missions; their superiors considered safety-related directives from the chain of command to have higher priority.

Letters of reprimand were presented to two other officers for failures of hierarchical or command accountability.[17] Twelve other officers faced disciplinary actions. Four colonels received administrative letters of admonishment. Two lieutenant colonels received administrative letters of admonishment. Two lieutenant colonels received administrative letters of counseling. Two majors received administrative letters of counseling. And two lieutenant colonels received verbal counseling.

Professional. To the extent that the pilots did not fly in a manner consistent with established practice and flight safety rules, their errors in judgment represent clear failures of professional accountability. Investigators conjecture that the failure of the plane to be appropriately configured for landing was due to the pilots trying to do too many tasks simultaneously as they approached landing. None of the usual navigation adjustments that are typically the responsibility of the copilot had been done by the time of the crash. Investigators think that the copilot was busy talking on the radio instead. In such circumstances, it would have been prudent to execute a missed approach, get their bearings, and take time to properly configure the plane. As one investigator noted, "I'd just like to know what [the pilots] were thinking and talking about before the crash. How could professional pilots fly like amateurs all day long?"

The fact that the 86th Air Wing did not have any theater-specific formal training for Jeppesen approaches reflects a vulnerability under professional accountability because of the need for training. Although Jeppesen procedures were briefly covered by the squadron and were also included in the Wing's annual refresher courses, the Wing did not require completion of this training before flying a Jeppesen approach. In other words, the pilots were not fully equipped to make sound judgment calls.

Post-mishap efforts by the Air Force to reinforce the professional credentials and expertise of aircrews are reflected in mandates for refresher training on instrument procedures and flight evaluations for operational support aircrews. USAFE commanders were directed to provide theater-specific training with an emphasis on non-DoD approaches, and operational support aircrews in Europe received refresher training on instrument procedures and are receiving flight evaluations. Another example of a vulnerability due to professional accountability is manifested in the improperly designed instrument approach procedure used by air traffic controllers at Dubrovnik. After the mishap both DoD and the Federal Aviation Administration published Notices to Airmen to give appropriate warnings of instrument approach design errors for Dubrovnik.

Summary

The overall Air Force response to the mishap illustrates the working of the range of different types of accountability, instances of breakdowns in accountability according to the various performance standards applied, and the tendency to revert to a hierarchical rule-based accountability orientation when responding to mishaps. When the Air Force geared up the full range of its accountability mechanisms in response to the mishap flight, legal, political, and professional accountability standards were in evidence, but overall the pattern was to vigorously reassert the hierarchical command structure as the predominant standard. The Air Force expected that rules would be followed. Some were not. Continued use of Jeppesen approaches in light of the denial should have been noticed and questioned by commanders. It was not.

The Accident Investigation Board recommended individual officers be sanctioned for failing to follow commands. Disciplinary actions taken against individual personnel represent a combination of different accountability standards. The act of reviewing performance by an outside review board is evidence of legal accountability. The decision to assign disciplinary action is a function of hierarchical accountability, reflecting close supervisory scrutiny of a subordinate's performance.

Conclusion

When the plane crash examined here occurred, the military was responding to a routine civilian request. That request pushed them to areas of uncertainty that exceeded personal, professional, and organizational capacity. In this case we see how Air Force officers can get caught between the cross pressures of initiative and command. The circumstances of this case are not unique to the military. Rather, they are conditions that characterize the American political culture and government management generally. While managerial reform rhetoric touts entrepreneurial management, leadership, and worker empowerment as preferred modes of operation, the reality is that the American political culture continues to emphasize a "gotcha" approach to accountability. The American public, which has never been particularly trusting of government, has shown an increasing intolerance for any missteps in government. This gap between the rhetoric of a "can do" mind set and a "gotcha" culture of accountability means that a single error can be fatal to one's standing or career. This has been the pattern in this case. The mishap was a career-ending incident for at least two commanders. The

general in command of the Airlift Wing retired early. The colonel in charge of the Operations Group of Wing retired at rank of major.[18]

Management reforms in the military, downsizing, reorganizing, and task shifting, have created pressures for entrepreneurial management within the Air Force. The military variation of entrepreneurial management occurs when commanders must figure out ways to be responsive to HQ and get their jobs done. They must do this despite cross pressures between the expectation that they accomplish their mission and operational rules and conditions that severely constrained their ability to fulfill their mission. The wing commanders in this case were caught between regulations that conflicted. The commanders were seeking a way to be responsive to HQ by finding a way to accomplish their mission anyway. In doing so, they used individual discretion to ignore the organizational rules. The commanders of the 86th Wing felt that HQ did not understand the challenges they faced and the conditions under which they worked. Such circumstances often lead to a subculture that views administrative superiors as part of the problem and dismisses their concerns as bureaucratic red tape.

In accountability terms, this case represents an instance where commanders were seeking to be responsive to some of their key stakeholders, the distinguished visitors they were transporting around the arena, and their own superior commanders. From a career officer's perspective, when given a mission to accomplish, no officer wants to be the one to say to USAFE, "We can't do this." Such actions, even when rarely taken, could affect one's own performance appraisals, reputation as a team player, and subsequent prospects for promotion. Instead, individuals and groups find ways to accomplish their mission, even if it means ignoring rules on occasion. In this case, commanders made individual judgment calls to ignore rules that conflicted with their operational needs. The wing commander's judgment was that flying Jeppesen approaches was acceptable until TERPS reviews were completed.

Management reforms, staff cutbacks, and tasking tempo in the Air Force necessitated managerial initiative and entrepreneurial behaviors on the part of commanders if they were to accomplish the mission under existent conditions. The downsizing and high operations tempo of the 86th Wing's mission had the effect of reducing the unit's size without reducing its mission or relaxing the rules and regulations. As such, it created an environment where "pushing the administrative envelope" was seen as the appropriate thing to do. For pilots, this was consistent with the "can do" cultural norm. The officers subject to sanctions due to this mishap flight were trying to do the best job they could under complex circumstances.

Yet the accountability relationships under which these officers worked did not reflect an emphasis on initiative. Entrepreneurial management, which involves cutting red tape (ignoring rules) and pushing the administrative envelope, necessitates standards of accountability that defer to expertise and encourage responsiveness to key stakeholders. When events went awry, entrepreneurial management and leadership rhetoric were downplayed. These officers were judged by whether they had obeyed commands (hierarchical standard) rather than whether their decisions reflected reasonable exercises of their discretion (professional standard). In essence, while the institutional rhetoric and managerial conditions encouraged entrepreneurial behavior, the administrative reality still emphasized a risk-averse, rules-oriented approach to accountability when things went wrong.

While this case has examined accountability as it applies to the Air Force, the accountability issues extend beyond these institutional boundaries. Families of eight victims in the crash filed a lawsuit against Jeppesen, Sanderson, Inc. in U.S. District Court claiming that the Air Force pilots were misguided by the Jeppesen charts used in the Dubrovnik approach.

Inevitably, there are additional, fundamental questions regarding institutional practices that may have played a role in this case but which are beyond the scope of this investigation. We end by raising two. One relates to the speed of promotion and frequent rotation of assignments that are part of standard practice in the military as it seeks to develop its best and brightest officers for future command. In keeping with the Air Force fast tracking system for its best and brightest, the new OGC for the 86th Wing had moved through a series of jobs very quickly. He had been promoted two years early to major and two years early to colonel. His is an example of the general pattern in which exceptional people are pushed through assignments to keep them on the fast track for promotion.[19] As a result, he had little extensive experience in any one job and no experience with the uncertainties associated with flying in the Bosnian theater. This circumstance highlights a challenge all career systems face, but the military more so than most: the need to balance quick career advancement of talented individuals without sacrificing time for seasoning or maturation that comes from experience with one particular position.

A second issue relates to the role of technology, specifically email communications. The speed of communications and the more casual attitude individuals take to email communications may have increased opportunities for miscommunication, and clearly altered the terms of the military hierarchical reporting. The pattern of email, with the widespread use of forwarding and copying functions to any and all relevant units, led to situations where individuals tended to discount (and not read fully or carefully) emails that contained information of importance. The fact that superior officers were copied led to situations where

individuals thought that higher commanders had authorized decisions when in fact they had not. Thus, individuals who might have questioned activity thought to be against AF directives assumed higher command had authorized the activity.

In the final analysis, the crash of the transport flight carrying Secretary of Commerce Brown and his entourage demonstrates conflict among various accountability relationships and the choices individuals face when working under a system of conflicting expectations and accountability standards. Sadly, it demonstrates that under the most intense pressures, the ability to make the right choices may not be present.

Notes

1. Issues of accountability in the military have become increasingly public, receiving greater media scrutiny in the past decade. This has been due in part to the greater willingness of military personnel to speak publicly about their perceptions of bias in accountability within the military justice system based on differences in rank, race, and gender.
2. The aircraft and crew were assigned to the 76th Squadron of the 86th Airlift Wing of the 17th Air Force of the United States Air Force Europe (USAFE) and was based at Ramstein Airbase, Germany. USAFE had been downsized and reorganized in the years preceding the April 1996 mishap flight. In the period from 1991 to 1996, USAFE personnel (active military, DoD civilian, and local national civilian) decreased by half, from slightly over 64,000 to 32,600.
3. Operation JOINT ENDEAVOR got underway in December 1995 as a NATO-led Bosnian peacekeeping force of 60,000 members—one-third of whom are American—from 15 nations. The mission is to enforce a 600-mile-long separation between warring factions.
4. In the days immediately preceding the Dubrovnik crash, the former OGC of the squadron had been forced to retire by the wing commander for allowing lax discipline.
5. Flying into the Sarajevo airport was dangerous. There were several incidents of airlift planes in the Bosnian theater returning to base with bullet holes in the fuselage.
6. There are DoD-approved and local host air traffic controller procedures for flight approach and landing. One is the *Dash 1 Flight Manual*, which is the basic air safety manual; its "bold face" procedures are the most critical and fundamental actions to be taken to ensure the safety of crew members, passengers, and the aircraft. There are also Air Force Instructions (AFIs), which are the highest level provisions regarding minimum conditions for instrument landings and other safety procedures. Multi-command Instructions (MCIs) and Multi-command Regulations (MCRs) provide summaries and interpretations of relevant directives and priority guidance provided aircrews by the command level. There are also Flight Control Information Files (FCIFs) to provide up-to-date information electronically.
7. Jeppesen approach procedures are the most widely recognized non-DoD source for local host air traffic control approaches. Jeppesen, Sanderson, Inc., a commercial publishing house, reformats, translates, and publishes instrument approach procedures utilized by air traffic controllers in the host nation. Jeppesen procedures include terrain data as necessary, but "... do not review or approve adequacy, reliability, accuracy, or safety of the procedures" (Report 1996, 49).
8. In December 1995, the Air Mobility Command recommended that the 76th Airlift Squadron request evaluations from the 17th Air Force or coordinate with other major commands to provide qualified evaluators for its passenger transport (CT–43A) pilots (Report 1996, 55).
9. In late 1995, U.S. Air Force Europe issued a supplement to this Air Force Instruction. This supplement continued to allow non-DoD approaches to be flown without additional review, but included an implied safety standard: non-DoD approaches could be flown only if visual conditions exceeded a 1,500 foot ceiling and 5,000 meters visibility. Because the supplement also conflicted with the Air Force Instruction that it augmented, following the guidelines in the supplement required requesting a waiver from AFI 11-206.
10. There appear to be parallels to this accountability case in the Marine jet that severed the ski lift cable and caused the deaths of 20 people near Cavalese, in northern Italy on February 3, 1998. In addition to the pilot and copilot of the jet being subject to court martial on criminal charges of negligent homicide, four Marine supervisors (two lieutenant colonels and two majors) were subject to administrative hearings on charges of dereliction of duty in overseeing these training flights. While the Air Force had warned its pilots of local flight prohibitions below 2,000 feet above the ground, paperwork on file in the Marine office gave minimum altitudes ranging down to 500 feet. Officers facing administrative charges claim they never received an email that specified key speed restrictions for the training flight (Wald 1998).
11. A "missed approach" point is a mileage mark at which the pilot must make a decision to proceed with the landing or pull out, circle around, and try the landing again.
12. AFI 11–206, issued in 1994, clearly stated that, unless an approach is published by the DoD or the National Oceanic and Atmospheric Administration, it requires an additional Terminal Instrument Procedures Review (TERPS) before it can be flown by an Air Force crew. An exception is allowed if visual flight rules are possible. MCR 55-121, which established procedures for airlift planes in several commands (including USAFE) conflicted with the AFI guidance because it allowed Jeppesen approach procedures without re-

striction. In late 1995, USAFE issued a supplement to the higher level AFI. This supplement continued to allow non-DoD approaches to be flown without additional review, but included an implied safety standard: non-DoD approaches could be flown only if visual conditions exceeded a 1,500 foot ceiling and 5,000 meters visibility.

13. For example, the supplement to AFI 11-206, which was to clarify the discrepancy between AFI 11-206 and MCR 55-21, was ready for release but not officially released, pending receipt of information from AFHQ. The subsequent accident investigation found that the regulation was "sitting in someone's desk drawer" waiting for authorization to release to the units.
14. The reviews themselves took approximately six hours for each airport.
15. Specific post-mishap command and rule-based actions included:

    1) On April 4, 1996, the day after the crash, the 86th Air Wing rescinded the FCIF notice directing crew to continue flying unreviewed Jeppesen approaches.

    2) The Air Force prohibited all non-DoD instrument approaches in the USAFE theater of operations. Additional personnel and resources were made available to accelerate the approach review process.

    3) USAFE commands were directed to ensure strict compliance with Air Force Flight directives and to provide theater-specific training with an emphasis on non-DoD approaches.
16. These actions ranged from punishment under Article 15 of the Uniform Code of Military Justice (UCMJ) to counseling. Two officers received reprimands under Article 15 of the UCMJ. The brigadier general who commanded the 86th Airlift Wing at the time of the crash was punished for dereliction of duty for negligently failing to ensure that non-DoD published instrument approaches were not used unless they had been subjected to terminal instrument procedures (TERPS) review and approval from USAFE. The colonel who was the 86th OGC was punished for dereliction of duty for willfully failing to ensure that USAFE regulations regarding aircrew use of non-DoD published instrument approaches were not used unless prior TERPS had been reviewed and approved by USAFE.
17. The major general who served as director of operations, HQ USAFE, was reprimanded for failing to delineate responsibilities within his organization, failing to exercise effective oversight of AF flight directives, and for not inquiring into the apparent failure of the 86th Airlift Wing to comply with AF directives. The colonel who served as vice commander of the 86th Airlift Wing was reprimanded for failing to ensure that the wing complied with the requirement to have non-DoD published instrument approaches reviewed for safety before they were flown.
18. A reduction in rank was required because the individual was judged not to have performed satisfactorily at rank of colonel.
19. For example, from 1989 to 1998 this individual had been to the Armed Forces Staff College (Norfolk, VA), the U.S. Central Command, the National War College, Squadron Commander, and Deputy Operations Group Command at Reese AFB, Texas, before his assignment to Ramstein's 86th Wing. His longest assignment was a three-year stint at U.S. Central Command, which included a seven-month tour of duty in Riyad, Saudi Arabia. The commander had experience in many jobs, including the Berlin Corridor Airlift operation.

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